Department of Anesthesiology
2012 Annual Report
July 1, 2011 – June 30, 2012
Department of Anesthesiology
The Ohio State University College of Medicine
Columbus, Ohio

Special thanks to Brittany Anderson for designing the annual report cover.
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Overview

For the Department of Anesthesiology at The Ohio State University Wexner Medical Center, 2012 proved to be a landmark year. During this year, we experienced a number of profoundly significant accomplishments, as we continue to establish ourselves as a leading academic department of anesthesiology.

Research

Our research efforts, led by our Vice Chair of Research, Fedias L. Christofi, PhD, AGAF, continue to trend upward. The specific details of our research productivity for this year are well detailed in Dr. Christofi’s departmental research report, found later in this review. The National Institutes of Health (NIH) awards of Dr. Christofi and AJ Cardounel, PhD have caused our NIH funding ranking for anesthesiology departments to leap from 48th to 37th in the nation in the past year, per the latest report of the Blue Ridge Institute for Medical Research.

The total external research funding in the Department exceeded $1.3 million in 2012, marking the third consecutive year that our research funding surpassed $1 million. This places our department at more than twice the national median level of research funding, and inches us nearer the top quartile among academic anesthesiology departments, per the 2012 Society for Academic Anesthesiology Associations’ survey of academic anesthesiology departments.

As the competition for research funding becomes increasingly competitive, successful research programs require collaboration between basic science and clinical research, and across disciplines. Our department benefits greatly from close collaborative relationships with some of OSU’s brightest and most talented researchers, across a growing array of disciplines. We look forward to continuing and further developing such collaborations in the years to come.

Education

Stated simply, 2012 was an unprecedented year for our anesthesiology residency program. The privilege of training residents is one that requires the training program to establish and maintain an environment in which the rigorous requirements set forth by the Accreditation Council for Graduate Medical Education (ACGME) are consistently met.

Early in 2012, we learned that the ACGME granted our residency program continued full accreditation, for the maximum possible five-year cycle. Our residency program had received four year accreditation
cycles several times in the past; this marks the first time our department received a five year accreditation, which is reserved for the truly elite programs in the nation.

Such an accomplishment definitely requires the efforts of everyone in the department. However, the responsibility for coordinating and leading this accomplishment rests largely with two individuals. **Andrew H. Roth, MD** served as program director for three years, and implemented a number of positive changes that led to this tremendous result. **Kenneth R. Moran, MD** served as associate program director and contributed greatly to the efforts required for our residency program to meet and exceed the ACGME’s many rigorous requirements. Shortly after receiving our accreditation notice, Dr. Roth decided to step away from his role as residency program director, to allow him to devote more time to clinical care. Dr. Moran has agreed to step into the role of program director, and is extraordinarily well-suited to assume that role. Our department is indebted to Dr. Roth for his outstanding performance as program director.

Yet again, we successfully filled all our available positions through the National Resident Matching Program. All 12 of our matched applicants show tremendous promise in developing into outstanding anesthesiology residents; each will be an asset to our residency program. At the other end of the residency continuum, 10 of our 13 graduating residents entered fellowships, and 3 entered private practice. Of those pursuing fellowships, an astounding 7 different subspecialties were pursued (cardiothoracic anesthesiology, critical care, pain medicine, pediatric anesthesiology, neuroanesthesia, obstetrical anesthesiology, and regional anesthesiology). Such a diverse array of pursuits underscores the breadth and depth of training that our residents enjoy.

**Faculty Development**

The seeds that are sown with the hiring of new assistant professors require several years of the proper environment if they are to grow and eventually blossom into associate professors and professors. Our department indeed reaped a rich harvest this past year, as five of our best and brightest assistant professors were promoted to the rank of associate professor. On the regular clinical track, **Michael J. Andritsos, MD, Fernando L. Arbona, MD, Babak Khabiri, DO** and **Katja R. Turner, MD** each were promoted to associate professor. On the regular tenure track, **Hamdy Elsayed-Awad, MD** was promoted to the rank of associate professor with tenure. These promotions serve as tangible evidence that a growing number of our faculty members are establishing national reputations in our discipline.

**Clinical Service**

As the volume of clinical service continues to grow across the medical center, it provides opportunity to add additional highly-skilled and well-trained physicians to our department. In the past year, we have added **Dean F. Connors, MD, PhD**, who has served on the faculty of a number of academic centers, most recently St. Louis University. We have also added **John C. Coffman, MD**, who completed residency training at OSUWMC, and a fellowship in OB anesthesiology at University of Alabama-Birmingham. **Antolin S. Flores, MD** came to OSU following completion of his residency and cardiothoracic fellowship at Mayo Clinic. **Michael Kushelev, MD** completed his residency at Northwestern University and a fellowship in regional anesthesia and acute pain at the University of Florida before joining us. We have added two intensivists to our team: **Michael R. Lyaker, MD** completed his residency at Vanderbilt and a fellowship in Critical Care Medicine at the Cleveland Clinic; **Sarah B. Russell, MD** completed her residency and critical care fellowship at Cleveland Clinic. To our growing neuroanesthesia team, we have added **Gurneet S. Sandhu, MD**, who completed his residency and neuroanesthesia fellowship at OSUWMC; more recently, **Wiebke Ackermann, MD** joined us following completion of her residency at Penn State University and her neuroanesthesia fellowship at OSUWMC. We have added **Bryan P. Mahoney, MD** to our obstetrical anesthesiology team; Bryan
completed his residency at Mt. Sinai and his obstetrical anesthesiology fellowship at Brigham and Women’s. Rounding out our more recent faculty additions are Jill A. Faraci, MD, from the University of Nebraska, Qian Z. Fleming, MD from the University of Alabama-Birmingham, and Uma B. Sasso, MD from Northwestern University.

As noted above, our clinical service continues to grow. Our department provided care for over 65,000 cases, including the management of more than 8,000 encounters for patients suffering from acute and chronic pain, more than 3,700 obstetrical procedures, over 1,800 critical care patient encounters, and more than 9,000 preoperative assessments at the OSUWMC Preoperative Assessment Clinic (OPAC). The breadth of services provided at OSUWMC requires the highest level of clinical skill among our faculty; its depth requires a strong work ethic, coupled with a desire to provide consistently outstanding care every hour of every day.

In every regard, this has been a banner year for the Department of Anesthesiology. As The Ohio State University Wexner Medical Center continues to demonstrate its excellence and eminence in clinical care, education and research, I am pleased to be able to provide this report on our department’s increasing engagement in those endeavors.
University Hospital Anesthesiology Administration

Steven S. Smith, MA
Director, Administration

Education

2011 – 2012 Highlights and Accomplishments

In February, Wexner Medical Center at The Ohio State University completed the expansion of its Clinical Skills Education and Assessment Center. Within the lab is a mock-up of an operating room suite with all vital anesthesia equipment and supplies, such as a computerized patient mannequin, GE Aestiva S/5 Anesthesia Machine, anesthesia back stand, and patient monitoring. Michael R. Smith, manager of anesthesia services, has taken advantage of this valuable resource to help educate and train all current and new anesthesia technicians. The ability to simulate possible anesthesia machine malfunctions, malignant hyperthermia procedures/protocols, and difficult airway situations has proven to be invaluable to our anesthesia clinicians to help deliver optimal care to each individual patient.

The Department of Anesthesiology is always looking for new tools to help facilitate our educational practices for our residency program, faculty, and staff members. This past year, we have been fortunate enough to purchase two new Smart Boards for our main anesthesia conference room and Labor & Delivery. The addition of the Smart Boards will allow our faculty and staff to create new ways to deliver stimulating lectures using the latest and greatest technology.

2012 – 2013 Future Goals

Due to the capabilities and resources of our new Clinical Skills Education and Assessment Center, we hope to begin the American Society of Anesthesia Technologists and Technicians (ASATT) certification process for all of our anesthesia technicians within the coming year. The requirements to become an anesthesia technician at our institution will become more selective with the ASATT certification, allowing our entire staff in the Department of Anesthesiology to be recognized as healthcare professionals.

Also, we hope to begin using our University’s educational tool, Carmen, during the coming year. This will help aid our anesthesia technicians’ learning process and communication by allowing them to have access to video lectures, PowerPoint slides, PDF files, etc. Carmen will be available on mobile devices such as the iPhone, iPad, and Android OS devices.

Clinical

2011 – 2012 Highlights and Accomplishments
In October, our facility converted to the new electronic medical record. This monumental conversion process included adding six electronic status boards at our anesthesia scheduling desk. These status boards automatically update the operating room (OR) statuses for our clinicians, and allow our scheduling team to map out the daily schedule. This has helped to improve efficiency by being able to place add-on cases in the ORs faster, and allocating staff resources to where they are most needed.

In August, the Department of Anesthesiology welcomed the addition of the Richard M. Ross Heart Hospital’s five anesthesia technicians. The addition of these technicians will help systematically streamline our anesthesia technician processes throughout both hospitals, making both areas more efficient. Also, with the addition of the new technicians, our department will be able to better staff each area according to the daily OR schedule. This will help ensure that we have optimal coverage each day in both areas to better serve our anesthesia clinicians’ needs.

In May, Chad Barto, lead anesthesia technician, received a 2012 Excellence in Service Award. This award is given to any permanent Wexner Medical Center at The Ohio State University unlicensed staff who demonstrates excellence and high standards in clinical or nonclinical care. This is the highest honor a hospital staff member can receive and everyone within the Department of Anesthesiology is very proud of Chad’s accomplishment.

2012 – 2013 Future Goals

Our main clinical goal for next year is to begin doing deep brain stimulation (DBS) procedures in our magnetic resonance imaging (MRI) unit. This will be led by Ali R. Rezai, MD, in the Department of Neurological Surgery, and Sergio D. Bergese, MD, in the Department of Anesthesiology. Our goal is to purchase an MRI-safe anesthesia machine, and to develop a systematic process that will help deliver outstanding care to our DBS patients effectively, efficiently, and most importantly, safely.
Research

Fedias L. Christofi, PhD, AGAF
Professor, Anesthesiology
Professor, Physiology and Cell Biology
Vice Chair of Research

2011 – 2012 Highlights and Accomplishments

Our department made progress in the past year in publications, new research initiatives, and new funding including support from the National Institutes of Health (NIH) summarized later in this section. Our publications are listed later in this section and represent steady improvements in quality and numbers of both peer-reviewed publications and those published in anesthesia journals. Our research interests and activities are broadly based on cardiovascular diseases, postoperative outcomes (wound healing, ischemic spinal cord injury, postoperative cognitive dysfunction (POCD), delirium, neuroinflammation, pain, neuromodulation, neuroimaging), critical care, device studies, clinical outcome studies, and a multitude of drug studies and clinical trials, many of which are funded by industry. Our research funding is described later, and we are happy to report a continual upward trend in funding, especially in NIH funding this year. Our NIH funded studies are in neurosciences (neuromodulation, neuroinflammation, neuroplasticity, IBD, IBS, autism) and cardiovascular research (cardiovascular diseases).

There are several cardiovascular researchers in our department who are funded by NIH grants as principal investigators (PIs) or co-investigators (co-Is). AJ Cardounel, PhD is currently funded by 1R01HL081734 as PI through NIH/NHLBI investigating methylarginines in vascular injury. Larry Druhan, PhD serves as a major co-I (50% effort) on this project and others with investigators in the DHLI. Dr. Cardounel is co-I on a two-year ARRA supplement to develop novel small molecule inhibitors of DDAH for cancer chemotherapy; he is also a collaborator/significant other investigator on a new R01 DK093499 grant (2012-2016) with Fievos L. Christofi, PhD, AGAF. Dr. Cardounel serves as a permanent member of NHLBI/NIH-AICS study section on atherosclerosis and inflammation until 2015. He also serves as chair of the Myocardial Biology study section of the American Heart Association. Sujatha P. Bhandary, MD has received a Pilot CTSA (Bremmer) grant to study impact of local anesthetics on wound healing after sternotomy for cardiac surgery – this project was initiated by Hamdy Elsayed-Awad, MD in collaboration with investigators in the DHLI. Ravi S. Tripathi, MD is another investigator in this research program.

Our clinical anesthesia research team is growing and is conducting an increasing number of clinical trials and investigator-initiated studies supported by industry and more recently, NIH-linked clinical trial(s) in collaboration with other centers. We are also experiencing growth in basic/translational research in the neurosciences with an NIH K08 investigator and foreign national postdoctoral Fellow doing research on neuroplasticity and functional gastrointestinal disorders (FGIDs), including irritable bowel syndrome (IBS) and autism spectrum disorders. Others are working on gliotransmission with a new R01 planned in 2013 in collaboration with Min Zhou, MD, PhD (Department of Neuroscience faculty member). Another R01 is planned with Kevin Foust, PhD (Department of Neuroscience faculty member) on spinal muscular atrophy in 2013. And, other grants are planned with Kent Williams, MD at Children’s...
Nationwide Institute, including a standardized in vitro model of the human nervous system as a platform for high throughput screening of new neural drugs and study of mechanisms.

**Strategic Plan**

In the next year we plan to continue to support our research infrastructure, as well as emerging new programs in the department such as critical care, cardiovascular and neuroanesthesia. In addition, we are exploring different options to increase the level and availability of biostatistical support and other shared resources to our investigators. Our general targets will be to improve external funding and quality publications with an emphasis on mechanistic studies, translational and clinical impact.

Furthermore, as part of our research strategic planning, we decided to focus on neuroscience and neurological research as our primary target for developing a national identity – specifically, we are putting together the ‘Anesthesia Neuromodulation Plan’ that builds on our existing strengths and NIH-funded research programs to involve basic, translational and clinical studies. This is the area we had the most success in with respect to NIH, other national and industry grants, and have already been recognized at the national level. We are partnering with faculty in the Department of Neuroscience (Chair Randy Nelson, PhD), the Neuroscience Signature Program (NSSP), the Neuromodulation Core (Director Ali Rezai, MD), Neurosurgery, and Nationwide Children’s Hospital Department of Anesthesiology (Chair Joseph Tobias, MD). Fast neuroimaging techniques (with calcium or voltage-sensitive dyes) and brain imaging (fMRI, PET) in humans is a powerful tool to study neural circuit behavior, neuroplasticy, neural connectivity and/or responsiveness to inflammation or pain modulation. We are developing protocols to study the human nervous system in health and disease, and to target the spinal cord or ganglia in an effort to use spinal cord stimulation (SCS/DRG stimulation) to block visceral pain in patients with functional bowel disorders. These studies are in collaboration with investigators in the Anesthesiology Department, Neuroscience Department, NSSP and the IBD Center (Razvan Arsenescu, MD). We are seeking FDA approval for our clinical neuromodulation studies – these IBS patients with visceral pain make up 10-20% of the United States population. Studies can be more broadly applied to patients with abdominal pain from pancreatic cancer, cystitis, inflammatory bowel diseases, and chronic pancreatitis. Besides pain, POCD, delirium and ischemic spinal cord injury (ISCI) are serious complications after surgery and anesthesia – neuroinflammation, altered purinergic signaling or gliotransmission are common mechanisms involved in all these outcomes and mechanisms being investigated.

Overall, potential targets for neuromodulation studies are visceral pain, POCD, ISCI, neurocognitive toxicity of anesthetics, mechanisms of altered neural circuit behavior and neuroplasticy in response to drugs, surgery or disease, which are all relevant to anesthesiologists – we are partnering with investigators in Neuroimaging, Neuromodulation, Neurosurgery, Neuroscience, Nationwide Children’s Institute, the IBD Center, Industry, NIH, and the Cleveland Clinic Anesthesia Institute (number ‘1’ Clinical Outcomes department in the world, Daniel Sessler, MD, chairman). These research initiatives will provide further opportunities for our faculty, students, residents and Fellows to engage in high-level, meritorious research of some relevance to them. The exciting news is that there are plans to create ‘The Brain and Spine Hospital’ at OSU in the near future that is dedicated to neurological disorders. This will undoubtedly further advance neuroscience research, education and patient care in the Neuroscience Signature Program and our Neuromodulation Anesthesia research program.

**Funding** (complete information about funding, names of PIs, co-Is is included elsewhere in the report)

The department received one new NIH R01 grant awarded in 2012 starting May 1, 2012 ($1,350,000) and a sub-contract award as site PI on a clinical trial through NIH NINDS. Two investigators hold three R01 grants as PIs, and one other serves as co-I or co-PI on NIH grants at Ohio State. In addition, one NIH R21 grant was closed out in 2012. Fedias L. Christofi, PhD, AGAF serves as mentor to a faculty member.
from Nationwide Children’s Hospital on a five-year NIH K08 clinical investigator award. The trainee is in the PI’s lab three to four days per week. The total NIH funds for the year, which were awarded in 2012, are about $900,000. Three other small/extramural/national competitive awards total $79,388. Our current national ranking based on NIH funding is 37th among anesthesiology departments. Our goal is to be top 20 in the next five years. Awarded industry/pharmaceutical grants running to 2013 or 2014 total $685,000 (a portion of this represents funds in 2012 and a smaller portion of funds in the last quarter). Clinical research funding for 2012 is nearly an additional $500,000 for the year bringing our total for research to ~$1.4 million for the year. Sergio D. Bergese, MD, our director of clinical trials and neurological research, leads many of our extramural funded clinical studies.

One NIH R21 from a physician scientist was scored, but will not make the cut for funding. Currently, at least 18 grants are funded from NIH, industry and other agencies with PIs in our department. There were an additional nine pending or submitted (not funded) grants, including six NIH/NINDS grants, one FSMA national foundation grant, and two others. One NIH R01 on ischemic spinal cord injury is from a new investigator in our department, but it did not get scored on its first try; one investigator is a site-PI on two pending multi-center clinical trials (NETT Neuro Trial/NINDS, Dexametidine Trial) and the NINDS/NIA trial. A junior physician scientist received a pilot CTSA grant. Data generated from one such pilot NIH CTSA award resulted in an R21 submission with an excellent score, but did not get funded. However, the plan is to submit an R01 after generating additional data.

**Goals in 2013**

1) Continue to support and grow our research infrastructure, support targeted investment(s) in neurosciences and new or emerging areas

2) Further alignments with NSSP and recruitment of key personnel, including NIH-funded neuroscientists

3) Submit several NIH R01 applications on neuromodulation; FDA application

4) Obtain additional lab space and office space to accommodate our growing research activities

5) Further develop fast neuroimaging, patch-clamp, neurophysiology and behavioral core for our ‘neuromodulation’ program

6) Implement an ambitious visiting professor program to invite national academic experts

7) Longer-term goal: obtain T32 and PPG grants in four to five years on ‘neuromodulation’ and other emerging programs (e.g. cardiovascular) to be a top 20 academic anesthesia department in the country

**Awarded NIH Proposals**

1. **New NIH NIDDK R01 grant** (Christof, PI) was funded from 5/1/12 to 4/30/2016 for $1,305,000 (Frankel, Wendy; Harzman, Alan; Arsenescu, Razvan; Cantemir, Carmen; Wunderlich, Jacqueline)

2. **NIH R01 DK44179-S15** 12/1-11 – 11/30-12 (Christof, PI) received a competitive supplement for $112,000 – a new or competing R01 is in preparation

3. **7K08DK078035 Clinical Investigator Award** (Williams, PI) – Williams is in Fievos L. Christof, PhD’s lab four days per week for the duration of the award; Children’s Institute provided funding for equipment/technical support
4. **ARRA, University of Texas Austin**, (Cardounel, PI) subcontract NIH award, $64,613 (100%)

5. **1R01HL081734 NIH/NHLBI** 06/01/10-05/31/14 (Cardounel, PI; Druhan, co-I) ($1,320,000) ($330,000/year)

6. **NIH R21, NHLBI ended in 2012**, (Druhan, co-I; research assistant professor in our department)

7. **R01 (NS061860), NINDS** 2012-2014: Clinical Trial (Bergese, PI OSU site - subcontract from UT) $40,815.00/yr

8. **NIH CTSA pilot Award** 2012-2013 (Bhandaris, PI; co-I, Awad), assistant professor clinical, cardiovascular anesthesiology

**Other Competitive Awards**

9. **UA3MC11054**, 06/1/12 – 05/31/13 National Autism network grant $57,000 to Children’s Institute; Dr. Williams is the PI in Christofi lab (Christofi, mentor)

10. **Research Institute** at Nationwide Children’s Hospital, Subcontract (PI, Christofi) $16,000

11. **Anesthesiology skills laboratory training**, (Gerhardt, PI; Co-I, Monreal) Teleflex Incorp, $6,388

**Awarded Industry/Pharmaceutics Grants (partial list)**

12. **PrA Intl**, 3 trials, 4/10/12 to 4/10/14 (2011W125) (Stawicki / Bergese) $60,000

13. **Duke University**, 4/10/12 to 4/10/14 (Greene-Chandos/Papadimos/Torbey/Tripathi) $50,000

14. **Covidien**, 4/10/12 to 4/10/14 (Giannone/Bergese) $103,244

15. **AcelRx, Pharmaceuticals**, 11/15/11 – 11/15/13 (Bergese/Lumbley/Rankin) $257,573

16. **Covidien**, 06/14/12 to 06/14/13 (Lumbley/oximeter study) $95,000

17. **Purdue Pharma LP** (Evers/Bergese/Swain) $110,000

18. **Cumberland Pharmaceuticals Inc.**, 12/1/11 to 12/1/13 (Arbona/Roth/North/Hamilton) $20,000

**Submitted or Pending Proposals**

- **NeuroWave Systems** 05/22/12 - 05/22/15 (Bergese, EEG monitor) $105,000
- **Research Institute** at Nationwide Children’s 12/1/12 to 11/30/13 $70,119
- **University of Florida** (Cardounel, PI) $70,000
- Families of Spinal Muscular Atrophy (**FSMA**), 01/1/13 to 12/31/15 $143,000
  (Foust, PI; Christofi Co-I)
NIH, NHLBI R21 (Druhan, Co-I)  
$250,000

NIH, NHLBI R21 (Druhan, PI)  
$190,616

NIH R21 SAT, scored but not funded (Roy/Awad, co-Is)  
$201,300

NIH R01 SAT, (Awad, PI) – not scored  
$1,896,000

NETT Neural Trial, NCT01369069, NINDS, (Pending) - OSU site  
(Bergese, OSU site PI)  
$500,000/5 yr

Grant R01 AG029656-01A1/NIA “Dexlerium Project” Mount Sinai sub-contract  
(Bergese, site PI)  
(not avail.)

NIH Investigators

1)  Professor
   a.  2 R01s, 1 K08, 1 National Autism Network grant
   b.  2013 R01 planned submissions
      i.  R01 (gliotransmission)
      ii. R01 NS for spinal muscular atrophy
      iii. IND/FDA approval for neurostimulation study for FGIDs

2)  Research scientist
   a.  1 R01, 1 ARRA grant

3)  Research assistant professor
   a.  Co-PI NIH R01, Co-I R21

4)  Associate professor (RCT)
   a.  NINDS clinical trial subcontract from UT
   b.  2 pending NIA and NETT NEURAL NINDS trials

5)  Associate professor (RTT)
   a.  NIH R21 SAT, scored at ~ 20th percentile, not funded (R01 in prep) - NIH R01 SAT, not scored (plans to resubmit)

6)  Assistant professor clinical
   a.  NIH CTSA Pilot Award
Publications

Peer-Reviewed Journal Articles


ectonucleotide triphosphate diphosphohydrolase-1 protects against murine myocardial ischemic injury. J Mol Cell Cardiol 2011 Dec;51(6):927-935.


Abstracts


with the Symposium on Advanced Wound Care [SAWC Spring], Georgia World Congress Center, Atlanta, Georgia, United States. (April 19-22, 2012)


25. **Hays M, Coffman JC**. Successful management of an obstetric patient with von Willebrand disease type 2N and malignant hyperthermia. Presented at Society for Obstetric Anesthesiology and Perinatology 44th annual meeting, Monterey, California, United States. (May 2-5, 2012)

26. **Honer J, Halim M**. Anesthetic management of a super obese parturient with recent non ST elevation myocardial infarction. Presented at Society for Obstetric Anesthesiology and Perinatology 44th annual meeting, Monterey, California, United States. (May 2-5, 2012)

27. **Honer JJ, Halim M, Li L**. Anesthetic management of a super obese parturient with recent NSTEMI. Presented at Midwest Anesthesia Residents Conference, Chicago, Illinois, United States. (March 16-


32. Lundahl SD, **Cardounel A.** Development of a valved ventriculocoronary shunt for myocardial revascularization. Presented at 11th Annual OSUMC Trainee Research Day, Columbus, Ohio, United States. (April 18-19, 2012)


38. Pensiero AL, Wendt B, Mendell JR, Chicoine L, **Druhan L, Cardounel AJ.** Case study on the effects of Sildenafil to improve strength and function of a woman with Limb Girdle Muscular Dystrophy type 2D. Presented at 11th Annual OSUMC Trainee Research Day, Columbus, Ohio,


Books and Book Chapters


Other Scholarly Contributions


3. Hummel JD, Elsayed-Awad H. Walking the tightrope between deep sedation and general anesthesia: by whom can this safely be done? J Cardiovasc Electrophysiol 2011 Dec;22(12):1344-1345. [editorial]


At The Ohio State University Wexner Medical Center, our anesthesiology residency program’s mission is to produce quality clinicians and scholars that will improve the field of anesthesiology. We are proud to offer exceptional training in addition to the excellent exposure they receive to a vast spectrum of cases. Our residents leave our program prepared to deal with any clinical experience and represent the high standard we expect from residency training at Ohio State. In 2012, our educational efforts were recognized by the Accreditation Council for Graduate Medical Education (ACGME) by giving us a five-year accreditation status, the longest accreditation period awarded by the ACGME at that time. In 2013, we will strive to continue this tradition of excellence in research, education and clinical care.

Research

2011 – 2012 Highlights and Accomplishments

We continued to encourage academic activity this year among our residents and Fellows. We are working to improve each year on the number of presentations and publications that involve trainees. As part of this initiative, each resident is required to present a scholarly abstract/presentation at the Midwest Anesthesia Residents Conference (MARC). This year, 13 residents presented at the MARC in Chicago, Illinois. Three of those presentations received awards in their respective clinical categories:

- Nicole Elsey, MD – 2nd place
- Douglas Maxey, MD – 2nd place
- Jonathan Lipps, MD – 3rd place

Additional abstracts and presentations were given this year at the American Society of Anesthesiologists conference (six residents), The Ohio State University Wexner Medical Center Trainee Research Day (five residents), at the Society for Obstetric Anesthesiology and Perinatology annual meeting (two residents), and at the International Anesthesiology Research Society annual meeting in Boston, Massachusetts (one resident). Our Fellows also gave six presentations at various conferences throughout the nation.

Our residents and Fellows also produced 19 peer-reviewed case reports, letters, and research publications during the 2011-2012 year.

Education

2011 – 2012 Highlights and Accomplishments
This year, our residency program continued to provide both traditional and innovative educational experiences for our residents and Fellows. Some of the highlights from this year include:

- **Simulation Training**: Each week, a group of residents accompany a faculty member to the Clinical Skills Education and Assessment Center for a three-hour simulation session. During their orientation in July, each CA-1 received a total of 12 hours of simulation education to introduce them to the practice of anesthesia.

- **Annual Skills Lab**: Ohio State’s Anesthesiology Department hosts an annual skills lab for CA-1 residents and dental anesthesia residents. The skills lab provides the opportunity for residents to practice a variety of skills, including epidurals, nerve blocks, chest tube placement, vascular access, fiberoptic bronchoscopy with bronchial blocker placement, GlideScope and laryngeal mask airway placement, percutaneous airways, and surgical airway techniques.

- **Cadaver Lab**: During regional anesthesiology rotations and at other times throughout the year, residents will have the opportunity for hands-on training in regional nerve blocks on pre-dissected cadavers.

- **Protected Lecture Time**: Each Friday, one of the residency classes is scheduled to attend three hours of lecture. They are not scheduled in the operating room to protect that time for their education.

- **Project Ear**: Biannually, our department supports a medical mission trip to the Dominican Republic. During each trip, four residents and two faculty accompany ear, nose and throat surgeons from Ohio State to provide anesthesia services for otolaryngology procedures that would otherwise be unobtainable for these patients. The trip is a great educational experience for the residents and allows exposure to different cultures and socio-economic environments.

**Guest Grand Rounds Lecturers**

- July 11, 2011: **Arie Blitz, MD**, director, University Hospitals Case Medical Center; immediate past president, Cleveland Chapter of the American Heart Association; “Heart Transplantation and Mechanical Circulatory Assistance”

- September 15, 2011: **Cynthia A. Wong, MD**, professor and vice chair, Northwestern Memorial Hospital, Chicago, Illinois; “Maintaining Epidural Labor Analgesia: From Bolus to Infusion to Bolus”

- September 22, 2011: **John Downs, MD**, “From IMV to APRV: A Natural Evolution in Protective Lung Strategy”

- October 14, 2011: **Frederico Bilotti, MD**, University of Rome; “Anesthesia and Postoperative Neuro-cognitive Functions”

- May 3, 2012: **Mervyn Maze, MB, ChB, FRCP, FRCA, FMedSci**, professor and chair, Department of Anesthesia and Perioperative Care, William K. Hamilton Distinguished Professor in Anesthesia, University of California San Francisco; “Is Anesthesia As Beneficial As Sleep?”

- April 5, 2012 (Jay J. Jacoby Memorial Lecture): **Stephen Slogoff, MD**, emeritus chair of the Department of Anesthesiology at Stritch School of Medicine, Loyola University
Traditionally, our program has 12 residents allotted for each PGY-2, PG-3 and PGY-4 year. We have seven categorical PGY-1 positions during which the residents spend their first year of general medical training at Ohio State. The remaining five PGY-1 spots are advanced positions in which the resident does an internship at an outside hospital and then starts with us in his/her PGY-2 year.

We offer accredited fellowships in pain medicine and cardiothoracic anesthesiology. In addition, the intensive care fellowship became accredited by the ACGME this year. We also provide non-accredited fellowships in neuroanesthesia and regional anesthesiology. We are currently in the process of obtaining accreditation for our obstetric anesthesiology fellowship.

In the 2012, we graduated 13 residents. Ten of them went on to do fellowships and three entered private practice.

Graduating Residents

- **DanaMarie Aminian, MD**: Boston Children's Hospital for pediatric pain fellowship
- **David Anderson, MD**: OSU pain fellowship
- **Richard Bryant, MD**: OSU regional fellowship
- **Nicole Elsey, MD**: Nationwide Children's Hospital pediatric anesthesiology fellowship
- **Teri Gray, MD**: OSU obstetrical anesthesiology fellowship
- **Michael Hays, MD**: Private practice, Columbus
- **Jeffrey Honer, MD**: Private practice in Dallas, Texas
- **Brian Schloss, MD**: Nationwide Children's Hospital pediatric anesthesiology fellowship
- **Lance Shilliam, MD**: OSU cardiothoracic anesthesiology fellowship
- **Todd Sleeper, MD**: Private practice, Sandusky, OH
- **Andrew Springer, MD**: OSU critical care anesthesiology fellowship
- **Rashmi Vandse, MD**: OSU neuroanesthesia fellowship
- **Dane Yuratich, MD**: OSU regional anesthesiology fellowship

Graduating Fellows

Adult Cardiothoracic Anesthesiology

- **Brenda Christopher, MD**: Private practice in Cincinnati
- **Brian Kelly, MD**: Private practice in Columbus
- **Ravi Sailesh Tripathi, MD**: Academic medicine at Ohio State’s Anesthesiology Department

Multi Disciplinary Pain Medicine
- **Dwight Mosley, MD**: Private practice in Columbus
- **Kenneth Grosslight, MD**: Private practice in North Carolina

**Obstetrical Anesthesiology**
- **Mara Anne Grossman, MD**: Private practice in Columbus

**Regional Anesthesiology and Acute Pain Medicine**
- **Derek Foerschler, DO**: United States Navy

**Neuroanesthesiology**
- **Gurneet Sandhu, MD**: Academic medicine at Ohio State’s Anesthesiology Department

In 2011-2012, we received 877 applications for PGY-1 residency spots. We interviewed 116 candidates and matched all 12 of our positions.

**2012 – 2013 Future Goals**

In the 2012-2013 academic year, we will continue to recruit and train excellent residents. This year, we will place additional focus on the residency recruitment process for the upcoming academic year. While we are very happy with the quality of our current residents, we expect that our new accreditation status will allow us to bring in an even brighter and motivated class of residents.

We will also use the 2012-2013 year as an opportunity to integrate digital resources in new and innovative ways to improve education. This initiative will include giving iPads to incoming residents, and providing digital textbooks. We are developing a centralized online website that will provide announcements, feedback, literature, calendars, video lectures, links to websites, and more. We will also improve communication and reporting through online resources. These tools will be used to improve resident education and contribute to the innovation of education in our field.

**Clinical**

Our residents continue to receive an excellent clinical experience as a direct result of our abundant clinical operating room volume. They easily meet and exceed their case counts each year. Last year’s graduating residents averaged over 1,000 cases each during their PGY-2, PGY-3 and PGY-4 years. We are fortunate to have a wide variety of clinical experiences and cases with varying levels of difficulty.

**2011 – 2012 Highlights and Accomplishments**

The PGY-1 year converted from month rotations to four-week rotations. The extra rotation created by this switch was used to create a new blood bank/ultrasound rotation. This innovative rotation will provide training in transfusion medicine and diagnostic and interventional ultrasound-guided procedures.

We have also begun a new cardiac critical care rotation, which is designed to provide a high degree of educational exposure and teaching.

**2012 – 2013 Future Goals**

We will continue to find new ways to provide clinical experiences to our residents in 2013. The expansion of surgical volume at the medical center and the growth of innovative procedures, such as minimally invasive surgery, robotic procedures and endovascular interventions, provide us with constantly growing
clinical opportunities for our residents and Fellows. This growth will allow us to consider the possibility of increasing the number of residents and Fellows that we train in the upcoming years.
Other Scholarly Contributions

Presentations

1. **Bergese SD**, Presenter. A multimodal approach to acute pain management. Clinical trials update on IV NSAID's and IV acetaminophen. Presented at Samaritan Regional Hospital, Ashland, Ohio, United States. (July 15, 2011)

2. **Bergese SD**, Presenter. Update on post operative nausea and vomiting (PONV) and post discharge nausea and vomiting (PDNV). Presented at Dayton Veterans Administration Medical Center, Dayton, Ohio, United States. (July 21, 2011)

3. **Bergese SD**, Presenter. Update on post operative nausea and vomiting (PONV) and post discharge nausea and vomiting (PDNV): Have we made any progress? Presented at Department of Anesthesiology, Memorial Regional Trauma Center, Hollywood, Florida, United States. (August 9, 2011)

4. **Bergese SD**, Presenter. Update on post operative nausea and vomiting (PONV) and post discharge nausea and vomiting (PDNV): Have we made progress? Presented at Department of Anesthesiology, Hartford Hospital, Hartford, Connecticut, United States. (August 18, 2011)

5. **Elsayed-Awad H**, Presenter. Clinical problem and basic science solution in ischemic spinal cord injury. Presented to Department of Neuroscience, Wright State University, Dayton, Ohio, United States. (October 24, 2011)

6. **Khabiri B**, Presenter. 11th Biannual Ultrasound Guided Regional Anesthesia Workshop. Presented at University of Texas Medical School at Houston, Houston, Texas, United States. (July 31, 2011)


Lectures

1. **Andritsos MJ**, Moderator. Peripheral vascular surgery SSI reduction study by perioperative blood glucose optimization. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 1, 2011)

2. **Andritsos MJ**, Moderator. Aortic arch repair in octogenarians. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 2, 2012)

3. **Andritsos MJ**, Lecturer. Cardiac board review. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 2, 2012)
4. **Andritsos MJ**, Lecturer. Anesthesia for patients with cardiovascular disease. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 25, 2012)

5. **Arbona FL**, Lecturer. Practice management. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 9, 2011)

6. **Arbona FL**, Lecturer. Scope of practice/anesthetic risk, quality improvement. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 15, 2012)

7. **Bergese SD**, Lecturer. EEG and ESEP monitoring. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 27, 2012)

8. **Bergese SD**, Lecturer. Brains at risk. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 27, 2012)

9. **Bergese SD**, Moderator. Neurophysiology and anesthesiology. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 3, 2012)

10. **Bergese SD**, Lecturer. EEG and evoked potentials. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 10, 2012)

11. **Bergese SD**, Lecturers. EEG and evoked potentials. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 1, 2012)

12. **Bergese SD**, Lecturer. PONV update. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 7, 2012)

13. **Bhandary SP**, Moderator. Intra-aortic balloon pump. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 11, 2011)

14. **Bhandary SP**, Moderator. Evaluation of the pulmonary valve. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 13, 2011)

15. **Bhandary SP**, Moderator. Lecture. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 14, 2012)
16. **Bhandary SP**, Lecturer. Morbidity and mortality. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 14, 2012)

17. **Dalton RE**, Moderator. The anesthesia machine. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 29, 2011)

18. **Dalton RE**, Lecturer. Morbidity and mortality. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 25, 2011)

19. **Dalton RE**, Lecturer. Perfusion. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 3, 2011)

20. **Dalton RE**, Lecturer. Anesthesia for pulmonary problems. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 4, 2012)

21. **DeSocio PA**, Lecturer. Regional anesthesia for the non anesthesia provider. Presented to medical students, The Ohio State University College of Medicine, Columbus, Ohio, United States. (January 18, 2012)

22. **DeSocio PA**, Lecturer. Anesthesia for orthopaedic surgery. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 17, 2012)

23. **Dimitrova GT**, Lecturer. Perioperative management of cardiac stents. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 1, 2011)

24. **Dimitrova GT**, Moderator. Congenital cardiac disease in a pregnant patient. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 22, 2011)

25. **Dimitrova GT**, Lecturer. C-section patient with tetralogy of Fallot. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 15, 2011)

26. **Dimitrova GT**, Moderator. Guidelines for coronary artery graft surgery. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 5, 2012)

27. **Dimitrova GT**, Lecturer. CV physiology and anesthesia; CV anatomy and physiology. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 13, 2012)

28. **Dimitrova GT**, Moderator. Morbidity and mortality. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University,
29. **Elsayed-Awad H**, Lecturer. Unplanned extubation in a redo anit-RSFIUX surgery. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 7, 2011)

30. **Elsayed-Awad H**, Lecturer. Paralytics. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 16, 2011)

31. **Elsayed-Awad H**, Moderator. Mitral regurgitation after mitral valve repair. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 17, 2011)

32. **Elsayed-Awad H**, Moderator. Cardiovascular physiology and anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 16, 2011)

33. **Elsayed-Awad H**, Moderator. Lung isolation after head and neck cancer surgery. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 8, 2012)

34. **Elsayed-Awad H**, Lecturer. Cardiopulmonary bypass. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 25, 2012)

35. **Elsayed-Awad H**, Moderator. Morbidity and mortality. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 28, 2012)

36. **Essandoh MK**, Moderator. Perioperative assessment of diastolic function. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 1, 2011)

37. **Essandoh MK**, Moderator. Complications associated with spinal drain placement (catheter fragmentation during insertion). Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 9, 2012)

38. **Essandoh MK**, Lecturer. Vascular anesthesia. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 13, 2012)

39. **Essandoh MK**, Moderator. Journal club. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 7, 2012)

40. **Flores AS**, Lecturer. Emergent airway. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 19,
41. Gerhardt MA, Moderator. Anesthesiology and the academic mission: introduction to peer-reviewed grants and manuscripts. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 7, 2011)

42. Gerhardt MA, Moderator. Lecture. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 10, 2011)

43. Gerhardt MA, Moderator. Heart transplantation and thoracoabdominal aortic aneurysm repair. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 8, 2011)

44. Gerhardt MA, Moderator. Thoracic epidural anesthesia and cardiac surgery. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 23, 2012)

45. Gerhardt MA, Moderator. Hypoplastic left heart syndrome. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 24, 2012)

46. Gutmann BM, Lecturer. Preoperative assessment and management. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 14, 2011)

47. Gutmann RM and Rogers BM, Lecturers. Preoperative evaluation. Presented at Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 17, 2012)

48. Halim M, Lecturer. Obstetric anesthesia. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 9, 2012)

49. Halim M, Lecturer. Maternal changes. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 23, 2012)

50. Halim M, Moderator. Maternal and fetal physiology and anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 18, 2012)

51. Halim M, Moderator. Obstetric anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 18, 2012)

52. Halim M, Moderator. Review. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 8, 2012)
53. **Hamilton CL**, Moderator. Adrenergic agonists and antagonists. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 30, 2011)

54. **Hamilton CL**, Moderator. Hypotensive agents. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 30, 2011)

55. **Hamilton CL**, Moderator. Local anesthetics. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 30, 2011)

56. **Harter RL**, Lecturer. Impaired physician. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 14, 2011)

57. **Harter RL**, Moderator. Inhalational anesthetics. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 19, 2011)

58. **Harter RL**, Lecturer. Presented at Journal Club at his residence, Columbus, Ohio, United States. (September 15, 2011)

59. **Kapoor R**, Moderator. Respiratory physiology: the effects of anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 13, 2012)

60. **Keller JL**, Lecturer. Ambulatory anesthesia. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 14, 2011)

61. **Khabiri B**, Lecturer. Peripheral nerve blockade. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 22, 2012)

62. **Kover AJ**, Lecturer. Perioperative drugs. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 26, 2011)

63. **Kover AJ**, Lecturer. Adrenergic agonists and antagonists/hypotensive agents. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 26, 2011)

64. **Kover AJ**, Lecturer. Tamponade. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 17, 2012)

65. **Lowery DS**, Lecturer. Anesthesia for ophthalmologic surgery. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus,
Ohio, United States. (November 4, 2011)

66. **Lowery DS**, Moderator. Anesthesia for ophthalmic surgery/anesthesia for otorhinolaryngologic surgery. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 3, 2012)

67. **Lumbley J**, Lecturer. Airway management. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 15, 2011)

68. **Lumbley J**, Lecturer. Airway workshop. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 15, 2011)

69. **Lumbley J**, Lecturer. Case presentation. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 6, 2011)

70. **Lyaker MR**, Lecturer. Local anesthetics. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 16, 2011)

71. **Lyaker MR**, Lecturer. Critical care trauma. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 1, 2012)

72. **McKiernan M**, Lecturer. Cardiac arrest during AVF. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 17, 2011)

73. **Meyers LD**, Lecturer. Anesthesia for thoracic surgery. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 4, 2012)

74. **Meyers LD**, Lecturer. Anesthesia for thoracic surgery. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 11, 2012)

75. **Moran KR**, Moderator. Neuraxial anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 21, 2011)

76. **Moran KR**, Moderator. Peripheral nerve blocks. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 21, 2011)

77. **Moran KR**, Moderator. Review. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 21, 2011)
78. **Moran KR**, Moderator. Management of patients with fluid and electrolyte disturbances. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 24, 2012)

79. **Moran KR**, Moderator. Fluid management and transfusion. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 24, 2012)

80. **Moran KR**, Moderator. Anesthetic complications. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 24, 2012)

81. **Moran KR**, Lecturer. Residency update. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 24, 2012)

82. **Norton JA**, Lecturer. Regional anesthesia anatomy lab. Presented at The Ohio State University College of Medicine, Columbus, Ohio, United States. (Autumn 2011)

83. **Norton JA**, Lecturer. Peripheral nerve blockade. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 2, 2012)

84. **Norton JA**, Lecturer. Upper extremity blocks. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 2, 2012)

85. **Norton JA**, Lecturer. Lower extremity blocks. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 2, 2012)

86. **Papadimos TJ**, Lecturer. Critical care medicine. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 12, 2011)

87. **Papadimos TJ**, Lecturer. Disaster preparedness. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 12, 2011)

88. **Paquellen SE**, Lecturer. Acute pain management. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 2, 2011)

89. **Paquellen SE**, Lecturer. Acute pain management. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 2, 2011)

90. **Peralta F**, Lecturer. Molar pregnancy. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 28,
91. **Perez WJ**, Moderator. Update on cerebral oximetry. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 14, 2011)

92. **Perez WJ**, Moderator. Ischemic mitral regurgitation: a review. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 8, 2011)

93. **Perez WJ**, Moderator. Anesthesia for patients with cardiovascular disease. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 16, 2011)

94. **Perez WJ**, Moderator. A VSD following septal myectomy. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 22, 2011)

95. **Perez WJ**, Moderator. TEE guidance for mitral valvuloplasty. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 22, 2012)

96. **Perez WJ**, Moderator. Cerebral protection during deep hypothermic circulatory arrest. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 17, 2012)

97. **Rankin DD**, Lecturer. Airway and airway workshop. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 8, 2011)

98. **Rankin DD**, Lecturer. Rare and coexisting disease. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 23, 2011)

99. **Rankin DD**, Lecturer. Neurophysiology and anesthesia. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 10, 2012)

100. **Rankin DD**, Lecturer. Anesthesia for neurosurgery. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 10, 2012)

101. **Rankin DD**, Lecturer. The American Idol of airway management. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 17, 2012)

102. **Rankin DD** and **Dimitrova GT**, Lecturers. PACU case; cystoscopy. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 23, 2012)
103. **Rankin DD and Elsayed-Awad H**, Moderators. Airway management. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 29, 2012)

104. **Rankin DD and Elsayed-Awad H**, Moderators. Airway workshop. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 29, 2012)

105. **Reilley TE**, Lecturer. Transfusions and colloids. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 26, 2012)

106. **Ristev S**, Lecturer. Respiratory function. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 11, 2012)

107. **Rogers BM**, Lecturer. Experimental design and statistics. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 12, 2011)

108. **Rogers BM**, Lecturer. Preop considerations. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 7, 2011)

109. **Roth AH**, Moderator. Patient monitors. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 29, 2011)

110. **Roth AH**, Moderator. Non-volatile anesthetics. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 19, 2011)

111. **Roth AH**, Moderator. Review. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 19, 2011)

112. **Roth AH**, Moderator. Neuromuscular blocking agents. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 9, 2011)

113. **Roth AH**, Lecturer. Geriatric anesthesia. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 4, 2011)

114. **Roth AH**, Lecturer. Ambulatory outpatient anesthesia. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 23, 2011)

115. **Roth AH**, Lecturer. Endocrine function. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 23, 2011)
116. Roth AH, Moderator. Review. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 13, 2012)

117. Roth AH, Lecturer. Obstetrical anesthesia. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 23, 2012)

118. Roth AH, Lecturer. Review. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 23, 2012)

119. Roth AH, Moderator. Anesthesia for patients with endocrine disease. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 27, 2012)

120. Roth AH, Moderator. Anesthesia for orthopedic surgery. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 27, 2012)

121. Roth AH, Moderator. Bariatric surgery. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 27, 2012)

122. Roth AH, Moderator. Geriatric anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 18, 2012)

123. Russell SB, Moderator. Anesthesia for genitourinary surgery. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 6, 2012)

124. Sandhu GS, Lecturer. Cerebral vasospasm. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 17, 2011)

125. Sandhu GS, Lecturer. Morbidity and mortality. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 22, 2012)

126. Santiago M, Moderator. Effect of aortic valve replacement for aortic stenosis. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 6, 2011)

127. Santiago M, Lecturer. Morbidity and mortality. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 20, 2011)

128. Santiago M, Echo rounds mitral annuloplasty ring dehiscence. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 18, 2012)
129. **Santiago M**, Moderator. Pulmonary artery injury from PC cath. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (February 16, 2012)

130. **Santiago M**, Moderator. Cardiac surgery and anesthesiology. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 15, 2012)

131. **Santiago M**, Moderator. Multiple wedge resections after pneumonectomy. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 26, 2012)

132. **Small RH**, Moderator. Electrical safety. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 29, 2011)

133. **Small RH**, Lecturer. Maternal changes. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 9, 2012)

134. **Small RH**, Lecturer. Fire in the OR. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 10, 2012)

135. **Smith TJ**, Moderator. Cholinesterase inhibitors and anticholinergics. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 9, 2011)

136. **Smith TJ**, Moderator. Adjuncts to anesthesia and review. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 9, 2011)

137. **Speas GJ**, Moderator. Anesthesia for patients with respiratory disease. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 13, 2012)

138. **Speas GJ**, Lecturer. Respiratory physiology. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 4, 2012)

139. **Speas GJ**, Moderator. PACU. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 8, 2012)

140. **Speas GJ**, Moderator. Anesthesia for a trauma patient. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 8, 2012)
141. **Stein EJ**, Lecturer. PACU. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 7, 2011)

142. **Stein EJ**, Moderator. Intravascular volume therapy with colloids in cardiac surgery. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 3, 2011)

143. **Stein EJ**, Lecturer. Cardiopulmonary bypass: what to do if the unexpected happens. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 19, 2012)

144. **Stein EJ**, Lecturer. Anesthesia for cardiac surgery. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 25, 2012)

145. **Stein EJ**, Moderator. TEE rounds. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 21, 2012)

146. **Swain AR**, Lecturer. The anesthesia workstation and delivery systems. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 22, 2011)

147. **Swain AR**, Lecturer. Pain evaluation. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 2, 2011)

148. **Swain AR**, Lecturer. Diagnostic studies. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 9, 2011)

149. **Swain AR**, Lecturer. Anesthesia workstation and delivery systems. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 15, 2011)

150. **Swain AR**, Lecturer. Interventional pain pharmacology. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 23, 2011)

151. **Swain AR**, Lecturer. Chronic pain management. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 2, 2011)

152. **Swain AR**, Lecturer. Axial spine pain – zygapophyseal joint disease, discogenic pain, etc. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 13, 2011)

153. **Swain AR**, Lecturer. Radicular pain syndromes. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus,
154. Swain AR, Lecturer. Myofascial pain/trigger point injections. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (September 27, 2011)

155. Swain AR, Lecturer. Neuropathic pain. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 4, 2011)

156. Swain AR, Lecturer. Headache. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 11, 2011)

157. Swain AR, Lecturer. Orofacial pain. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 18, 2011)

158. Swain AR, Lecturer. Rheumatological aspects of pain. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 25, 2011)

159. Swain AR, Moderator. Pain management. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (November 18, 2011)

160. Swain AR, Lecturer. Chronic pain management. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 2, 2011)

161. Swain AR, Lecturer. Opioids. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 27, 2011)

162. Swain AR, Lecturer. Antidepressants, anticonvulsants and misc drugs. Presented at Pain Medicine Journal Club, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 10, 2012)

163. Traetow WD, Lecturer. Machine practical. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 22, 2011)

164. Traetow WD, Lecturer. Malignant hyperthermia and other inherited disorders. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 22, 2011)

165. Traetow WD, Lecturer. Anesthesia machines practical. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (August 5, 2011)
166. **Traetow WD**, Lecturer. Transplant anesthesia. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 7, 2011)

167. **Traetow WD**, Lecturer. Air embolism. Presented at grand rounds, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (December 1, 2011)

168. **Tripathi RS**, Moderator. Afib for cardioversion. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 21, 2011)

169. **Tripathi RS**, Lecturer. Critical care medicine. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 28, 2011)

170. **Tripathi RS**, Lecturer. Anesthesia for trauma and burn patients. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 28, 2011)

171. **Tripathi RS**, Moderator. Lung protective ventilation in cardiac surgery. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 1, 2012)

172. **Tripathi RS**, Moderator. Acid base balance. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 16, 2012)

173. **Tripathi RS**, Moderator. Renal physiology and anesthesia. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 16, 2012)

174. **Tripathi RS**, Moderator. Anesthesia for patients with renal disease. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 16, 2012)

175. **Tripathi RS**, Lecturer. Cardiac function is thyroid supplementation during cardiac surgery. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 5, 2012)

176. **Tripathi RS**, Lecturer. Transfusion medicine. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (June 1, 2012)

177. **Turner KR**, Moderator. TEE rounds. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 19, 2012)

178. **Turner KR**, Lecturer. Patient monitors. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 20,
179. Turner KR, Lecturer. Cardiovascular monitoring. Presented at CA-2 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 20, 2012)

180. Turner KR, Lecturer. Cardiovascular monitoring. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (March 30, 2012)

181. Turner KR, Moderator. Off-pump or on-pump coronary artery bypass grafting at 30 days. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (May 10, 2012)

182. Turner KR, Moderator. Cardiac protection during cardiopulmonary bypass. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (July 21, 2011)

183. Turner KR, Moderator. VAD management during emergency craniotomy. Presented at cardiac anesthesia subspecialty conference, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (October 20, 2011)

184. Yablok DO, Lecturer. ECT and anesthesia provided at alternative sites. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 6, 2012)

185. Yablok DO, Lecturer. Anesthesia for transplant. Presented at CA-3 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (January 6, 2012)

186. Yablok DO, Moderator. Hepatic physiology. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 6, 2012)

187. Yablok DO, Moderator. Anesthesia for patients with liver disease. Presented at CA-1 lecture, Department of Anesthesiology, Wexner Medical Center at The Ohio State University, Columbus, Ohio, United States. (April 6, 2012)
Clinical Sites

Clinical Operations University Hospitals

Luis A. Lopez, MD
Clinical Associate Professor
Clinical Director for Operation, OSUMC

Our clinical service has had an immense challenge coping with all the demands for anesthesia services in multiple areas. This is due to the growth in the number of cases and working hours at Wexner Medical Center at The Ohio State University, and also the commitment we have to provide faculty and residents with time outside the operating room (OR) to accomplish their plans for research and academics.

Research

1. The clinical Department of Anesthesiology is committed to providing support to all the areas of our department, including research. The department provides allotted time to all the anesthesiologists who are participating in investigations or clinical trials for drugs.

2. For clinical anesthesiologists, we must provide the time for activities like committees and planning/information for the growth of our department and Ohio State’s Wexner Medical Center.

To provide this time off outside the clinical service, the rest of the group has to pick up clinical work and provide proper coverage for all the areas that our service requires. This must be accomplished without disrupting our responsibility of always providing the best patient care. This is where the challenges of the personnel distribution play a large role.

2011 – 2012 Highlight and Accomplishment

Last year, we provided 6% more non-clinical days than the prior year.

2012 – 2013 Goal

Our plans are to continue to provide a fertile environment to stimulate, increase, and encourage the interest in research for all faculty and residents, without sacrificing our commitment to our patients.

Education

Our department is committed to assisting and maintaining the education of our residents. Our responsibility and participation is to have the residents relieved on time to assist with all the lectures and activities they have scheduled for their continual education. This includes the lectures every Friday morning for each class, education activities of the residents in different rotations, participation in Project
EAR (a mission trip to the Dominican Republic, in which a group of faculty and residents are relieved from clinical services), and involvement of residents and faculty in anesthesia simulation education.

Education is our commitment to all of the residents and faculty who participate. It is our intention to continue to facilitate this educational plan; Andrew H. Roth, MD also has plans to give the faculty time to prepare their lectures, as well as to provide time for residents to participate.

Clinical

2011 – 2012 Highlights and Accomplishments

The clinical service has increased tremendously with requests for anesthesia service in a number of areas. Thus, our department has to be in constant evolution and communication with all the areas of the hospital where our services are needed. Covering and scheduling the proper number of personnel has increased in the following ways:

1. The Surgical Outpatient Center, located at Ohio State’s Eye & Ear Institute, where four operating rooms opened and required assignments of three anesthesiologists, five certified registered nurse anesthetists (CRNAs), and a resident in rotation to do the block.

2. Ohio State University Hospital East has increased the number of operating rooms from 10 to 12 or 13, so we have to increase the number of faculty to six and the CRNAs to 12 on a daily basis.

3. In The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, we increased the number of ORs to eight daily.

4. In Ohio State’s Richard M. Ross Heart Hospital, we have a constant volume in the number of cases and hours of surgery. Many days, this hospital has cases going until late into the evening. We are covering two rooms in the EP lab with one CT anesthesiologist.

5. Another place that has been a challenge to provide proper coverage for is The Ohio State University Preoperative Assessment Center (OPAC), where we have to send a faculty and a resident. Then we have to cover vacation and ill time for the rest of the personnel to be able to cope with the volume of patients seen at OPAC.

6. An important part of our organization is the coverage of the off-site services:
   - Gastroenterology (OR 95): Daily service with a full-day schedule of cases.
   - EP lab (invasive cardiology) (OR 96 and 97): Two rooms every day, plus many days we need to open a third room for valvuloplasty done in the same area. We continued discussions to open more rooms to cover the high demand of anesthesia in this area.
   - Pulmonology (OR 98): Every Thursday, and CT the rest of the week, as requested.
   - Pediatric radiation oncology (OR 99): Every day in early morning, then ECT on Monday, Wednesday and Friday. In this same group, after we finished our daily obligations, we continued to do cases for invasive radiology (MRI, TIPPS, coiling, line placement, etc.). We are planning to have better coverage of these areas, to have a schedule day, and to decrease the disruption of the elective scheduled cases in this slot.
The year of 2011 - 2012 has been full of wonderful experiences, since we have seen an incredible growth in our number of cases and hours of surgery.

- University Hospital East has increased the numbers of rooms and cases done.
- Ohio State’s Comprehensive Cancer Center – James Cancer Hospital and Solove Research Institute maintains its high volume.
- Ross Heart Hospital is having an increase in cases and we have been assigning cover for all the rooms.
- University Hospital has increased the hours of time running the operating rooms. Since more rooms cannot be opened, longer hours are run. We are running all of the available rooms, including OR 22 on Thursdays.

Overall, our operations have been running over budget in number of cases and hours of surgery. The type of cases at University Hospital has become more complex and longer since a big part of our outpatients were moved to the Surgery Center. We have been very creative in providing coverage for all the areas needing anesthesia, without compromising patient care.

2012 – 2013 Goals

In the future, we want to increase the number of faculty and CRNAs to provide this coverage without causing delays to the rest of the scheduled cases.

We will continue to use our electronic scheduling program, Spinfusion, for residents, attendings, and CRNAs.

We will continue to work with Integrated Hospital Information System (IHIS) electronic medical records in all of the hospitals. This has been positively accepted by the faculty since we have more information about the patients during the interview.

As we hire more CRNAs, we are hoping that our overtime needs will shrink. However, it is our duty as a department to find a way to cover, on average, 40 sites around University Hospitals on a daily basis. At the same time, we do our best to send CRNAs as needed at University Hospital East and the Eye & Ear Institute on their busier days.

In the near future, we would like to have enough personnel to run this operation, since the demand of our service is continuously increasing. We have an excellent group of anesthesiologists, CRNAs, and anesthesia assistants that make it possible to run this operation smoothly. I am proud to be part of this great and enthusiastic group of people who are committed to give the best to our patients and the Medical Center.
Cardiothoracic and Vascular Anesthesia – Ross Heart Hospital

Research

2011-2012 Highlights and Accomplishments

The Division of Cardiothoracic and Vascular Anesthesia is continuing to progress in areas of research throughout the academic year of 2012. We continue to progress with multiple publications and continued research awards. These include areas of basic science research in spinal cord ischemia, heart failure and remodeling and clinical research in renal injury due to cardiopulmonary bypass, side effects of antifibrinolytic agents, aortic disease, pain management in cardiac and thoracic anesthesia, and right heart dysfunction in cardiac surgery. We continue to make a strong presence as moderators, abstract reviewers and presenters at our Society of Cardiovascular Anesthesiologists’ Annual Meeting held this year in Boston, MA. Additionally, our division sponsored the inaugural Perioperative Echocardiography Conference held this last year, which had a very good and receptive audience. We continue working on future themes and intend to sponsor more Perioperative Echocardiography conferences throughout the upcoming year.

Education

Fellowship

Our cardiovascular fellowship program is headed under the direction of Galina T. Dimitrova, MD. We are undergoing reappointment for Accreditation Council for Graduate Medical Education (ACGME) status. We continue to train two Fellows annually under the ACGME requirements, and have successfully recruited two more candidates to start in July 2013. Our previous Fellows both successfully passed their perioperative transesophageal echocardiogram (TEE) exam and have become certified in perioperative TEE. Both Fellows enlisted in practice outside Ohio State’s Wexner Medical Center and are successfully enjoyed their new employment. We anticipate having an exciting new year with our two new Fellows, one coming from the University of North Carolina and the other from Tulane.

Resident Education

We continue to excel in resident education with high marks in attending scores from resident evaluations. We are particularly proud this year as one of our own in our Division of Cardiothoracic and Vascular Anesthesia, Michael Essandoh, MD, won the Teacher of the Year Award voted upon by our residents. He also won the prestigious OSU COM Excellence in Teaching Award nominated and selected by the OSU College of Medicine medical students.
Clinical

2011-2012 Highlights and Accomplishments

Clinically, we continue to excel in cardiac anesthesiology procedures with contributions to improved patient outcomes and decreased mortality. Over this year, we experienced a steady rise in the number of cardiac cases, averaging approximately 65 open heart cases per month under the direction of Cardiac Surgery Director, Robert S. Higgins, MD. We continue to perform CABG, OPCAB, and CABG-valve surgeries, VAD procedures, heart transplant and thoracoscopic MAZE procedures. We are averaging approximately one to two heart transplants per month. Additionally, our surgical colleagues with a national clinical trial on percutaneous implantation of aortic valves, and we have seen much success in assisting them with its implementation. In thoracic anesthesiology, the volume of lung surgery continues to rise along with VATS procedures and lung volume reduction surgery. In vascular anesthesiology, we are seeing a steady increase in the number of endovascular procedures for abdominal and thoracoabdominal aneurysms, and have participated in the development of the Center of Aortic Excellence under the direction of Patrick S. Vaccaro, MD. We also have become extensively involved in providing anesthesia services for cardiology electrophysiologic procedures including atrial fibrillation ablations, ventricular tachycardia ablations, and pacemaker and defibrillator lead extractions. We also lend ourselves to assist our anesthesiology colleagues in performing intraoperative TEE during liver transplantation.

We have been delighted in our growth of CV anesthesiology faculty with the addition of Antolin S. Flores, MD, a Fellow graduate of The Mayo Clinic, and Michelle Santiago, MD, a Fellow graduate we trained here at Ohio State. With the addition of these recruits, we have enabled ourselves to partake in more clinical responsibilities, bringing out number to a total of twelve cardiothoracic anesthesiologists in our division for FY 2012.

In echocardiography, we continue to perform perioperative echocardiography in 2D and 3D modalities and continue to participate in multiple research endeavors with our cardiology colleagues, implementing 3-D analysis of mitral and aortic valve pathology. Our residency program continues with improving an elective rotation in perioperative TEE with one-to-one instruction on basic perioperative TEE.

Administratively, we are maintaining operating room efficiency at Ohio State’s Ross Heart Hospital, as reported by the Ross Heart Hospital Quality Management Committee. We continue to minimize delays in operating room start times with the best start times among the three hospitals and a reduction of case turnover times. The members of our division also serve the department through extensive representation in multiple administrative committees at the medical center, college, local and national levels. These include the College of Medicine Admissions Committee, OSUMC Practitioner Executive Committee, OSUMC Professionalism Council, OSUMC Medical Documentation Steering Committee, OSUMC Transfusion Committee, Department of Anesthesiology Education Committee, Clinical Competency Committee, Evidence-Based Medicine Committee, and Finance Committee, Ohio Society of Anesthesiologists Committee on Education and Annual Meeting, the American Society of Anesthesiologists Committee on Practice Management, ASA Committee of Young Anesthesiologists, the SCA Membership Committee, Ross Heart Hospital Cardiovascular Services Quality Management Committee, Ross Heart Hospital OR Operating Council, Ross OR Efficiency Committee, Ross Heart Hospital Mortality Reduction Council, and numerous advisory committees.

In summary, the Division of Cardiothoracic and Vascular Anesthesia has seen steady success, in all areas of research, education and clinical and administrative service. We continue to excel in clinical service, as evidenced in our operating room efficiency, patient satisfaction, and steady growth in volume.
Anesthesia Services at Cancer Hospital Research Institute

W. Daniel Traetow, MD  
Assistant Professor Clinical  
Director of Clinical Anesthesia  
James Cancer Hospital and Solove Research Institute

Education

2011 – 2012 Highlights and Accomplishments

We continued to have seminars for the ancillary anesthesia staff to keep them updated on the use of new equipment and procedures.

Clinical

2011 – 2012 Highlights and Accomplishments

During the last year, we initiated the use of liver bypass surgery in conjunction with Mark Bloomston, MD. This procedure isolates the liver for infusion of liver-directed chemotherapy for patients with isolated liver metastasis. To date, we have only performed a handful of cases.

The thoracic anesthesia team did extremely well in performing difficult thoracic cases and put in very long hours.

With the addition of new radiation oncology physicians, the offsite load increased dramatically in the last few months to the point of making this an offsite location on its own.

We continued to look forward to the opening of the new James Cancer Hospital and Solove Research Institute and Critical Care Center building. Most of the planning for the anesthesia design for the new operating rooms was completed.

2012 – 2013 Future Goals

I am stepping down as the clinical director of the James Cancer Hospital and Solove Research Institute to devote more time to my role as the liver transplant directorship. I will continue to work with the people at the James Cancer Hospital on my commitment to implementing new James Cancer Hospital and Solove Research Institute and Critical Care Center along with the new director, Joshua Lumbley, MD. It has been a pleasure to work with the leadership at the James.
Ohio State University Hospital East

Fernando L. Arbona, MD
Assistant Professor Clinical
Clinical Director, Ohio State University Hospital East

Clinical

2011 – 2012 Highlights and Accomplishments

The operating rooms volume at OSU East started slow last summer, with low case volumes in July and August. This trend did not last long, though, as we gradually increased our caseload, and ran significantly above budget for several months during the fall and winter quarters. Near the beginning of the fall quarter of 2011, the OSU East operating rooms (OR) expanded their evening OR hours to allow two operating rooms to schedule cases to run until ~7 PM on Tuesdays, Wednesdays and Thursdays. Seeing as we normally run our ORs to that time or later when cases are scheduled until 5 PM, we saw our evening OR hours extend significantly enough that we were required to add more staffing for late-shift certified registered nurse anesthetists (CRNAs), as well as an additional faculty anesthesiologist (Michael Kushelev, MD) at a 0.5 FTE staffing at OSU East.

As has been the trend over the past few years, we have seen a larger growth in our surgical case hours relative to the total number of cases. This is mainly due to the addition of more involved, longer inpatient cases (eg, back surgeries, total joint replacements) to the OSU East ORs, over the quicker, ambulatory cases. Our block schedule is consistently full, or nearly full, so we expect to maintain this level of business, or grow slightly, over the coming year.

Lastly, this summer one of our full-time OSU East anesthesiologists (Steven Beckley, MD) moved to Minnesota, so we used his 1.0 FTE allocation to increase Andrew H. Roth, MD to a full-time position at OSU East, and added Jake Coffman, MD on as 50% at OSU East. Both are excelling here at OSU East.

Research

2011 – 2012 Highlights and Accomplishments

Several members of the OSU East anesthesiology faculty continued to serve as principal investigators for several investigator-initiated research projects focused on perioperative pain control. Several of the faculty also published case reports related to the practice of regional anesthesiology at OSU East, as well as served on several national committees and as journal editors.

Education

2011 – 2012 Highlights and Accomplishments
OSU East is the main site in which regional anesthesia is performed at Ohio State’s Wexner Medical Center. Because of this, it is also the main site for educating the anesthesiology residents and is the headquarters for the regional anesthesiology fellowship program, which typically enrolls two Fellows per year. Our anesthesiology faculty continue to mentor residents who present abstracts at several national meetings, and lead quarterly journal clubs for residents, Fellows and faculty (from Ohio State and Nationwide Children’s Hospital) focused in the current literature of regional anesthesiology. Additionally, OSU East faculty have been invited to speak and lead workshops at regional and national conferences.

Some key publications from the past year include:

- **Fernando Arbona, MD, Babak Khabiri, DO, and John Norton, DO** authored a book chapter, “Ultrasound Basics for the Busy Novice Practitioner” in *International Anesthesiology Clinics (IAC)*. This was the most downloaded book chapter in this most recent volume of the IAC publication, and the fourth most downloaded chapter in all of the IAC’s publications.

- The textbook, *Ultrasound Guided Regional Anesthesia: a Practical Approach to Peripheral Nerve Blocks and Perineural Catheters*, written by Fernando Arbona, MD, Babak Khabiri, DO, and John Norton, DO and illustrated by Charles Hamilton, MD, received the “Highly Commended” prize by the British Medical Association. This textbook has been sold internationally on several continents, and is also being translated into Chinese by the Peking University Press.

Additionally, both **Dr. Fernando Arbona** and **Dr. Babak Khabiri** were promoted to the level of associate professor this year. There are several more of our faculty who are currently going through the application process, or plan to do so next year, for promotion as well.
Ohio State’s Eye & Ear Institute

John S. Rogoski, DO
Assistant Professor Clinical
Director, Outpatient Surgery Center at Ohio State’s Eye & Ear Institute

Clinical

The Outpatient Surgery Center is an outpatient department of The Ohio State University Wexner Medical Center, which provides services related to elective outpatient procedures in the fields of otolaryngology, ophthalmology, upper extremity orthopedics and plastic surgery. Ohio State’s Wexner Medical Center board of directors and medical staff, in conjunction with the center’s medical director, director, and/or clinical manager, assess, plan, implement, and evaluate the delivery of care and services. The center’s leadership team is responsible for ensuring that the delivery of care provided is consistent with the mission, standards, and policies established for patient care. The center’s leadership team promotes an environment that fosters empowerment through active participation in strategic planning and development of processes that ensure adequacy of services and resources to meet the current and projected community needs, policy establishment, and professional growth.

The objective of The Ohio State University Outpatient Surgery Center is to deliver excellent surgical, procedural, and anesthesia services to those we serve in accordance with the standards set forth by The Joint Commission, Centers for Medicare & Medicaid Services (CMS) Conditions of Participations for Hospitals, and the vision and mission statements of Ohio State’s Wexner Medical Center. The scope of care is designed to provide appropriate care and services for all patients in a timely manner.

Utilizing a multi-disciplinary approach in the delivery of patient care, our services promote continuous quality and performance improvement activities provided in an environment where collaboration and multi-disciplinary approaches to problem identification and resolution are the expectation. Important criteria and thresholds are measured and continuously monitored through our quality and performance improvement process to optimize patient outcomes and ensure the highest level of satisfaction for all of our customers. Results of our quality and performance improvement activities are used to improve patient outcomes and enhance our services and our staff performance.

The center consists of seven operating rooms, preoperative and postoperative patient care areas along with reception and waiting areas located on the first floor of The Ohio State University Eye & Ear Institute. The center is staffed from 6:30 am to 4:30 pm, Monday through Friday, primarily for adult patients requiring surgical intervention under local anesthesia, monitored anesthesia care, regional anesthesia, or general anesthesia. Patients are outpatients and released the day of service. The center does not have the capacity for overnight patient stays. The patients are required to have the ability to understand and carry out their discharge instructions or have a responsible adult who will assist them in fulfilling these needs.

All procedures performed at the Outpatient Surgery Center are part of the core privileges approved by
Ohio State’s Wexner Medical Center.

The following types of procedures are not performed at the center:

- Are associated with the risk of extensive blood loss.
- Require major or prolonged invasion of body cavities.
- Directly involve major blood vessels.
- Are an emergency or life threatening in nature.
- Noted on the CMS inpatient only list. This list will be reviewed and updated annually.

2011 – 2012 Highlights and Accomplishments

Last year, 5,021 cases were performed at the Outpatient Surgery Center.

In September 2011, the center also began providing services to the Department of Urology, which include the following same day urological surgeries:

- Cystourethroscopy
- Stent placement/exchange
- Holmium laser lithotripsy
- Neurostimulator placement
- Vasectomy reversal
- Sperm harvesting
- Prosthesis placement

The Outpatient Surgery Center has consistently met or exceeded Ohio State’s Wexner Medical Center goals in major areas such as patient safety, efficiency, and patient satisfaction. Last year, patient satisfaction scores were 96.5%. The center was also awarded a BRAVO Patient Satisfaction award during the second, third and fourth quarters of fiscal year 2011 for being above 95%.

Additionally, a number of information technology improvements contributed to the success of the Outpatient Surgery Center:

- Launched Integrated Healthcare Information System electronic medical record
- Initiated restaurant-style coaster pagers for patient families to help communicate with clinical staff
- Provided Cisco wireless phones for certified registered nurse anesthetists in the operating rooms

A new Code Blue system was also implemented, and malignant hypothermia education with staff and community emergency medical services was conducted.

2012 – 2013 Goals

A total of seven operating rooms will be staffed in 2013. This will include a newly built cystoscopy room, which will open in July 2012, with a state of the art, built-in Siemen’s cystoscopy bed.
Ohio State University Preoperative Assessment Center (OPAC)

Barbara M. Rogers,  
MD  
Assistant Professor  
Clinical  
Co-director, OPAC

Research  

2011-2012 Highlights and Accomplishments  

Ohio State’s Preoperative Assessment Center (OPAC) collaborated with a variety of researchers for recruitment within the OPAC clinic patient population:  

1. Wexner Medical Center at The Ohio State University Comprehensive Cancer Center Molecular Epidemiology/Head and Neck Program - Genomics Study  
2. Wexner Medical Center at The Ohio State University, Department of Anesthesiology  
3. Wexner Medical Center at The Ohio State University, Department of Surgery - Bariatric Preop Study  
4. Wexner Medical Center at The Ohio State University, Department of Robotic Urological Surgery  

Education  

2011-2012 Highlights and Accomplishments  

- OPAC leadership participated in the annual surgery resident orientation program.  
- OPAC leadership collaborated with Evan W. Dixon, MD in the Division of Cardiovascular Medicine and ED & R. Two electrocardiogram quality in-services were given to all staff this year.  
- OPAC nursing staff provided the following patient education:  
  - Preop skin prep with chlorhexadine gluconate soap distribution and education for all patients  
  - Preop general instruction  
  - Preop type and cross patient instruction that has led to fewer blood bank events  
  - Preop nasal culture screening procedure, indication for and potential treatment of positives  
  - Obstructive sleep apnea risk (condition and sleep study information) education
• Preparation of the known obstructive sleep apnea patient for day of surgery
• Tobacco cessation

Clinical

2011-2012 Highlights and Accomplishments

Annual OPAC patient volumes continue to grow:

- 2009 – 5,371 patient encounters
- 2010 – 7,096 patient encounters
- 2011 – 8,545 patient encounters
- 2012 – on track for > 9,400 patient encounters

OPAC continued with several quality initiatives. Specifically, we receive a report that lists all patients with canceled surgical cases within 48 hours of scheduled surgery who have gone through the OPAC. We have found that less than 2% of these canceled cases were “avoidable” cancels, meaning that the OPAC had the opportunity to impact the patient outcome. This less than 2% avoidable cancel rate is in line with national quality metric expectations.

The OPAC manager is part of the First Case On Time Start Initiative. Each day, on-time starts are reported and each manager or owner of the delay responds to the entire team. Many initiatives have resulted, including early identification of patients who may be a difficult IV, which are entered as anesthesia alerts.

OPAC leadership collaborated with Theodorus N. Teknos, MD and participated in a head/neck team quality initiative which served to increase OPAC access and improve work flow processes between the teams.

OPAC leadership is part of a Periop Quality Blood Banding Initiative where blood bank policies are being revised and work flows from registration to lab are being improved.

The anesthesia alert Integrated Healthcare Information System documentation flow was revised to include documentation within the OPTIME scheduling screens so that better planning could take place during the daily anesthesia/leadership meetings.

OPAC continues to have high customer satisfaction scores of > 90%; patients who rate their overall OPAC experience as being “good” or “very good.”

OPAC quality presentations were made to:

- PQMC
- Periop Quality
- ORSAW
- HSORC

OPAC, along with the periop admin team, visited The Cleveland Clinic Foundation in February to collaborate and share best practices.

OPAC leadership was part of the Difficult Airway Taskforce with Joshua Lumbley, MD. The identified work flow was implemented in the OPAC.
OPAC leadership is collaborating with IM leadership in enhancing the current OPAC model.
Ohio State University Comprehensive Spine Center

Steven A. Severyn, MD, MBA
Assistant Professor Clinical
Director, Pain Medicine Services
Director, Pain Section, The Ohio State University Comprehensive Spine Center
Director, Multi-disciplinary Pain Medicine Fellowship

Research

2011 – 2012 Highlights and Accomplishments

- Institutional review board (IRB) completion and submission for retrospective review of efficacy of intrathecal opioid drug delivery systems for chronic noncancer pain.
- IRB process for prospective study of efficacy of intrathecal opioid drug delivery system for chronic noncancer pain.
- Case report presentation at International Spine Intervention Society (ISIS) 2012 meeting.

2012 – 2013 Future Goals

- Complete IRB process for retrospective review of cooled versus conventional denervation of the lumbar facet joint.
- Complete IRB process for prospective review of cooled versus conventional denervation of the lumbar facet joint.
- Initiate case series for combination of peripheral nerve blocks in combination with desensitization therapy for treatment of complex regional pain syndrome.
- Increase The Ohio State University Wexner Medical Center presentations at national meetings, including American Society of Regional Anesthesia and Pain Medicine (ASRA) and ISIS.

Education

2011 – 2012 Highlights and Accomplishments
Graduated two Fellows: **Dwight Mosley, MD** and **Kenneth Grosslight, MD**.

- Integrated physical medicine and rehabilitation rotation into schedule throughout academic year.
- Expanded Physical Medicine and Rehab ACGME fellowship trained faculty by two.
- Improved resident participation and value of weekly journal club.
- Increased didactic lecture volume by faculty.
- Welcomed visiting scholar from China.

**2012 – 2013 Future Goals**

- Increase Fellow complement to two Fellows permanently.
- Increase Accreditation Council for Graduate Medical Education (ACGME) fellowship-trained anesthesiology faculty.
- Establish web-based educational resources for Fellows and residents.

**Clinical**

**2011 – 2012 Highlights and Accomplishments**

- Increased overall procedural volume at CarePoint East.
- Performed multiple operating room procedures with significant increase in efficiency, including spinal cord stimulator trial, spinal cord stimulator implant, and IDDS implant.
- Increased overall patient volume at CarePoint East

**2012 – 2013 Future Goals**

- Continued expansion of procedure skill set, including vertebroplasty, Kyphoplasty, and MILD procedure.
- Continued increase in patient volume.
- Expand number of clinical providers.
- Implement utilization of physician extenders.
- Establish and enforce policies regarding opioid analgesic medication.
• Patient satisfaction score for division greater than 90%.
Acute Pain Medicine Services

For the academic year 2011-2012, the Inpatient Pain Medicine services was a shared responsibility of a group of four regularly rotating core of fellowship-trained physicians in pain medicine: **Raj Swain, MD, Stephen Paquelet, MD, Hans Miller, MD, and Costantino Benedetti, MD.** Also, members of the team are Acute Pain Nurse Judith Novinc, RN, rotating anesthesiology residents and forth-year medical students.

The Service provides a full spectrum of **inpatient** care for both acute and chronic pain conditions as an active consulting service. Patients with a chronic pain condition admitted to the hospital for an exacerbation of the pain are stabilized during their hospitalization and, if indicated, referred to the outpatient Spine Center for further evaluation and treatment or referred back to their pain specialist or primary care physician.

**Research**

The Service research consisted in collaboration with state and national agencies and organizations involved in evaluating proper opioid use and developments of pain therapy guidelines. A member of the acute pain service team (**Constantino Benedetti, MD**) participated in the following activities:

1. Member of the following national and local committees:
   a. American Pain Society - Public Policy Committee
   b. Member Pain Advisory Panel to the Medical Board of the State of Ohio
   c. National Comprehensive Cancer Network (NCCN)
      i. Adult Cancer Pain Guidelines - panel member
      ii. Palliative Care guidelines - panel member (until February 2012)

**Publication:**

**Future Goals**

- Continue to provide guidance at the local and national level on the improvement of pain therapy.
Education

- One member of the team (Constantino Benedetti, MD) is the director of the DOC 3, four-week elective clinical rotation of pain medicine and therapy; 15 fourth-year medical students took the rotation.

- Fourth-year medical student DOC 3 lectures given:
  - Total 3 hours per month.
  - The lecture on Pathophysiology of Pain was video recorded and placed on the medical school internet for students to see before the two life lectures.
  - The following one-hour lectures were given on 10 different occasions and are mandatory for all fourth-year students:
    1. Pain: The Disease and Its Therapy - Basic Consideration
    2. Basic Concepts of Analgesic Therapy and Case Reports

- Medical student anesthesia rotation lectures, “Introduction to pain medicine,” were given on six different occasions.

Future Goals

Continue to educate medical students and other healthcare professionals on pain medicine and emphasize the need for increasing education regarding the difference of the vital protective function which is the perception of physiological pain versus the malevolent neuropathic disease which is acute and chronic pain.

Clinical

2011-2012 Highlights and Accomplishments

During the academic year 2011-2012, the Acute Pain Service provided the following patient care:

- 3963 in-patient visits:
  - 521 consults
  - 1,297 follow-up consult visits
  - 617 patients received epidural analgesia for acute postoperative or post traumatic pain
  - 2,148 epidural follow-up visits were provided to these patients

Future Goals

- Expand the use of epidural analgesia for postoperative and post traumatic pain.
- Educate primary service physicians on the proper use of equianalgesic opioid dosage conversion to expedite hospital discharge.
Research

2011 – 2012 Highlights and Accomplishments

- “Local anesthetics infiltration for pain management after cardiac surgery: novel roles beyond blocking nerves.” Richard P. and Marie R. Bremer Medical Research Fund and William H. Davis Endowment for Basic Medical Research and The Ohio State University Medical Center for Clinical & Translational Science (CCTS) Pilot Program (Award Number UL1RR025755 from the National Center for Research Resources). $50,000.00. Tripathi RS, Principal Investigator. (June 2011 – May 2012).

- “Endothelial function as a metric for ECMO weaning.” The Ohio State University College of Medicine Medical Student Research Scholarship (MDSRS). $3,000.00. Pedro Pineda, awardee. Tripathi RS, mentor.

- SIRS (Steroids in Cardiac Surgery) trial.

- Extracorporeal Life Support Organization to study ECOM survival of H1N1 virus.

- In process: National Institutes of Health T32 research training grant.

- Established working relationship with APTIMA, Inc. regarding research in endocrinology and trauma.

Publications

- 16 papers; 4 in press/accepted
- 6 book chapters accepted
- 8 abstracts

Editorial Activities/Service

- Thomas J. Papadimos, MD and Ravi S. Tripathi, MD serve as ad-hoc peer reviewers to multiple journals.
• **Thomas J. Papadimos, MD** serves on the following journal editorial boards: *International Journal of Critical Illness and Injury Science, OPUS 12 Scientists, Patient Safety and Surgery*.

• Members of the division sit on over 20 regional, national, and international committees.

• Members of the division have participated in presentations locally, nationally, and internationally.

**Pending**

NIH SBIR Grants.gov Tracking #10750382. Neurowave Corporation, Cleveland, OH. Phase I Proposal “A Novel Alert System for Glycemic Control in the Critical Care Setting (GlyCU™)”: $1,000,000. **Papadimos TJ**: site PI.

NIH SBIR Grants.gov Tracking # 10760817. Neurowave Corporation, Cleveland, OH. “Automated Continuous Brain Function Monitoring in Critical Care (BrainVigil)”**: $150,000. **Papadimos TJ**: co-PI.

NIH SBIR Phase I Grant. Neurowave Corporation, Cleveland, OH. Phase I Proposal “Objective and Unobtrusive Sleep Quality Monitoring of In-Patients (SomnoHeal)”: $269,891. **Papadimos TJ**: site PI, co-PI; Agrawal G, PI.

**Education**

2011 – 2012 Highlights and Accomplishments

• Recruited two Fellows who are in place currently; continued accreditation.

• Recruited three more faculty members.

• Hosted ‘Ethics for an Aging World’ conference.

• Firmly established Ohio State’s Ross Heart Hospital critical care service and added one Fellow per month on the Ross Hear Hospital rotation; 7 of 12 months also had intern participation.

• **Sarah B. Russell, MD** was named associate director, anesthesia critical care fellowship.

• Division faculty delivered numerous local, state, national, and international presentations.

• Established working relationship with APTIMA, Inc. in regards to research in endocrinology and trauma.

• Department travel and research presentations:
  
  o American Society of Anesthesiologists
  
  o Prague
  
  o China
  
  o Ohio Society of Anesthesiologists
  
  o Society of Critical Care Medicine

• Instructor, Cardiac Surgery and Critical Care Medical Student Elective. The Ohio State University College of Medicine, Columbus, Ohio. **Papadimos TJ** (August 2011).
• Judge, 11th Annual Ohio State University Wexner Medical Center Trainee Research Day, The Ohio State University College of Medicine, Columbus, Ohio. Papadimos TJ (April 19, 2012).

2012 – 2013 Goals

• Establish a presence among medical students to capture their interest in anesthesia critical care.
• Implement a critical care ultrasound curriculum for our Fellows.
• A plan is in place to credential critical care faculty in critical care ultrasound.
• Continue fellowship recruitment for the fellowship year 2013-2014.

Clinical

2011 – 2012 Highlights and Accomplishments

• Michael R. Lyaker, MD, assistant professor clinical. Dr. Lyaker works in The Ohio State University’s surgical intensive care unit (SICU), Ohio State’s Ross Heart Hospital and serves as an important member of the transplant team.

• Thomas J. Papadimos, MD, MPH, FCCM, professor clinical, serves as vice chair and critical care division head. Dr. Papadimos is the critical care fellowship director and Ross Heart Hospital critical care director. Dr. Papadimos continues to avidly pursue the academic mission of the department.

• Thomas E. Reilley, DO, associate professor, continues to work in the SICU and supports the general operating room mission.

• Sarah Beth Russell, MD, assistant professor clinical. Dr. Russell is serving as the associate director for the critical care fellowship, and continues work in the SICU and the Ross Heart Hospital.

• Ravi S. Tripathi, MD, assistant professor clinical works in the Ross Heart Hospital critical care unit and provides cardiothoracic anesthesia. Dr. Tripathi is working on several grant-related research projects and Institutional Review Board preparation and publication efforts therein.
2011 – 2012 Highlights and Accomplishments

A total of 48 Institutional Review Board (IRB)-approved research protocols were actively enrolling (2.5% growth in trials over a two-year period), among which 11 were phase-2 or 3, multi-center trials. We had several active grants amounting to over $1 million dollars in the past year. In addition, eight peer-reviewed manuscripts were published (Trials – 1; Aesthet Surg – 1; Internal Med: Open Access – 2; Am J Ther – 1; Discov Med – 1; J Pain Res – 1; Reg Anesth Pain Med – 1) and sixteen abstracts were presented (The Ohio State University Medical Center 11th annual Trainee Research Day – 10, American Society of Anesthesiologists – 3; Midwest Anesthesia Residents Conference – 2, American Society of Regional Anesthesia and Pain Medicine – 1).

We applied for and received a National Institutes of Health (NIH) grant to conduct a clinical trial. We also began collaborating with Fedias L. Christofi, PhD, vice chair of research, in translational science research as well as began collaborating with other departments (Departments of Surgery, Neurology, Internal Medicine, Pediatrics, Neurological Surgery, Obstetrics and Gynecology) to conduct clinical trials/studies.

The size of our clinical research team continued to grow and consisted of two clinical research coordinators, seven post doctoral researchers, two visiting scholars, two clinical research assistants, and several student assistants. The clinical research team also moved to a new office space, which features more work stations for the growing number of staff, is centrally located near the operating rooms, and is easily accessible to principle investigators (PIs).

Additionally, during 2011 – 2012, we worked with 18 of PIs, an increase of 5 PIs.

2012 – 2013 Future Goals

We look forward to increasing our collaboration in clinical research with other departments.

Prospective studies in the fields of anesthesia monitoring, postoperative nausea and vomiting (PONV), and postoperative cognitive dysfunction are awaiting approval for the upcoming year.

Education

2011 – 2012 Highlights and Accomplishments
Two Fellows graduated from the neuroanesthesia fellowship program: Wiebke Ackermann, MD and Gurneet Sandhu, MD. We continued to host weekly neuroanesthesia journal clubs for our faculty, residents, and clinical research staff. Additionally, eight medical students contributed to our clinical research during the summer of 2011, and one medical student conducted full-time clinical research during 2011-2012.

2012 – 2013 Future Goals

We are in the process of developing a clinical research fellowship program, which would provide the basics of clinical research and trial design. The goal would be to attract more experienced basic or clinical research scientists.

Clinical

2011 – 2012 Highlights and Accomplishments

- We continued to grow in the neurostimulation division as well as endovascular.
- We were more active in the interventional treatment of stroke.
- We also increased our case load by 10%.

2012 – 2013 Future Goals

We would like to increase PI-initiated clinical trials, specifically PONV and POCD (postoperative cognitive dysfunction). We are actively pursuing research collaborations with other institutions. We are open to expanding to new members who will introduce new and innovative approaches to research.
Obstetrical Anesthesia

Mona Y. Halim, MD
Assistant Professor Clinical
Director, Obstetrical Anesthesia

The obstetrical (OB) anesthesia subspecialty is unique. There is no other area in medicine except during pregnancy in which mortality/morbidity can be 200%. Hence, our OB anesthesia group has a heightened level of vigilance and responsibility for delivering the safest and fastest possible care to our patients.

This year has been unique in the milestones achieved so that we may contribute to increased safety as we also continue to educate ourselves and all around us on the labor and delivery area.

Clinical

2011 – 2012 Highlights and Accomplishments

- There was a general downward trend in the number of patients in parallel with what was happening in the state of Ohio. We continued to maintain a volume of about 4,000 live births. The actual number of patient encounters, however, was much higher since we continued to perform surgeries on pregnant patients for unscheduled cesarean deliveries. Also, we conducted anesthesia during the postpartum period for tubal ligations, cervical incompetence, retained placenta, and cesarean hysterectomies. In addition, our numbers for endoscopic minimally invasive fetal surgery continued to grow.

- On the labor and delivery floor, we continued to refine our neuroaxial analgesia techniques by using new equipment, performing ultrasound-guided neuroaxial techniques, and by modifying epidural pump settings and troubleshooting breakthrough pain. Our epidural analgesia use was in the range of 85%. Communication about complex cases, especially with consideration of risks and benefits, was clear and refined. High-risk obstetric patients on the floor were evaluated early and proactively such that a plan was developed for both labor analgesia and anesthesia.

- We continued to deliver and monitor cardiac patients who required telemetry on labor and delivery as well as utilized telemetry for obstructive sleep apnea patients after cesarean delivery.

- Patient satisfaction data was on the rise and patient feedback reinforced behavior and good care. Labor and delivery overall achieved 100% compliance with hand washing in May 2012.

- Our OB anesthesia core group and our Fellow performed anesthesia for pregnant patients in the main operating room, The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, and Ohio State’s Richard M. Ross Heart Hospital. Cases included urgent surgical procedures on pregnant patients, concomitant cesarean delivery and surgical procedures for malignancy or open heart surgery, as well as
delivery of very high-risk obstetric patients with severe pulmonary hypertension in the Ross Heart Hospital. Additionally, we arranged the care of a small group of patients with advanced gestational age who required cardioversion at the Ross Heart Hospital.

- Our core OB anesthesia group was re-credentialed at Nationwide Children's Hospital as part of the EXIT team. Newborns who may require delivery to extracorporeal membrane oxygenation or delivery to cardiac catheterization will continue to benefit from such an arrangement.

- Our utilization of simulation as a training and evaluation environment continued to develop with more scenarios and more interactions.

- Crew Resource was introduced to labor and delivery in January 2012 and the development of specific tools has facilitated communication and better team work. Additionally, team training through drills and debriefing reinforced and helped to clarify roles, communication and self-criticism, and education.

- Our STAT OB phone system as well as the pediatric delivery call system allowed mobilization of different team members quickly in emergencies.

- Clinical care of many of our known high-risk patients or unpredictably complicated cases was recognized by the hospital and private practice physicians on several instances throughout the year and was very rewarding and encouraging.

- Utilization of ultrasound-guided transversus abdominis plane (TAP) block increased, particularly in unique chronic pain patient groups.

2012 – 2013 Future Goals

We are eagerly looking forward to acquiring an ultrasound unit of high quality to utilize for teaching and performing neuroaxial procedures with greater precision and less complications. It will be an excellent tool to use for training our residents as well as to use in technically-challenging cases.

Utilizing thromboelastography (TEG) technology to evaluate different aspects of coagulation parameters has been limited secondary to the remoteness of the TEG machine in the Ross Heart Hospital. As the surgical intensive care unit plan to acquire a machine is underway, we hope to explore the value of this additional tool in evaluating our patient population with different coagulation/anticoagulation issues. How this correlates with our ability to perform central neural blockade in some patients who were denied that remains to be explored and decided.

The hospital is looking at new epidural pumps since we will need to replace the Baxter pump we currently use. We aspire to acquire a pump capable of delivering programmed intermittent boluses, rapid rate of delivery of such a bolus, and wireless remote capability. We should be evaluating a pump with those features soon, which will enhance our patient satisfaction with labor analgesia.

With the use of the current Integrated Hospital Information System (IHIS) electronic medical records, Robert H. Small, MD is working with the group in charge to develop many OB anesthesia-related areas: a special OB anesthesia preoperative form, a consult form, and a special postoperative form that would allow us to track labor analgesia and anesthesia as far as quality and complications. We are very excited about these developments for both quality and research.
Education

2011 – 2012 Highlights and Accomplishments

Fellowship:

Mara Grossman, MD was our first OB anesthesia Fellow at Ohio State’s Wexner Medical Center. The fellowship was non-accredited by Council for Graduate Medical Education (ACGME) at the time. However, Dr. Grossman was highly energetic and enthusiastic in going through the fellowship. Prior to starting her fellowship, Dr. Grossman was recognized for her role as part of the team in resuscitation and care of a patient who sustained amniotic fluid embolism in the course of vaginal delivery. Timely delivery of the baby and institution of cardiopulmonary bypass were highlights of the survival of both the baby and mother, who had minimal neurological deficit.

During her fellowship year, Dr. Grossman joined Yun Xia, MD, PhD and a mission group to China for education and lectures. Dr. Grossman will graduate from her fellowship at the end of July and will oversee OB anesthesia private practice opportunity at Mount Carmel East Hospital. Teri Gray, MD has interviewed to fill the OB anesthesia fellowship position in July 2012.

Monthly Didactics:

- As Feyce Peralta, MD and John Coffman, MD joined the department’s core OB anesthesia faculty this year after completing a year of OB anesthesia fellowship, we had the opportunity to organize didactics. We had to settle for a very early start time for lectures since this is the only protected time in which the residents and faculty can be completely dedicated. We developed a monthly didactic lecture schedule three days a week from 6:10 AM to 6:45 AM. The weekly OB anesthesia conference is held on Thursday mornings. Faculty, residents, and certified registered nurse anesthetists are invited and the topics include review articles, published metaanalysis, and interesting cases.

- In addition, we organized OB anesthesia journal clubs for the department and had joint sessions with Maternal Fetal Medicine (MFM) Fellows and faculty.

- An OB anesthesia quiz is conducted on a monthly basis to evaluate and educate trainees.

- The involvement of the OB anesthesia Fellow in MFM conferences and resident didactics and journal clubs has been a unique and welcome mutual experience.

- A great resource on labor and delivery was sharing of knowledge with obstetricians and nurses. Board sign outs and crew resource management tools provided excellent opportunities for such interactions and team work.

2012 – 2013 Future Goals

- We are in the process of obtaining ACGME accreditation of our OB anesthesia fellowship to join 11 other programs that have already obtained accreditation. Our application will be submitted before August 2, 2012. A roster of interesting cases will be part of our recruitment tools for filling the 2013-2014 position.

- Introduce more simulation in our training/evaluation of residents and Fellows.
• **Dr. Bryan Mahoney** is joining our core OB anesthesia faculty after finishing his OB anesthesia fellowship at Brigham Women Hospital in Boston. He will start this August 2012. He is well versed in use of simulation training and has conducted workshops for American Society of Anesthesiologist (ASA) entities. We will plan to take advantage of his experience in that area to allow learning and evaluations in that environment.

• We are working towards obtaining continuing medical education credits for our weekly OB anesthesia conference.

• We aspire to continue organizing didactics and extend one of our Thursdays a month for research proposals and follow ups.

**Research**

*2011 – 2012 Highlights and Accomplishments*

• Epidural catheter migration: a cause of labor epidural failure in morbidly obese. This is an ongoing IRB-approved research that has been adopted by Dr. Grossman in conjunction with OB anesthesia faculty and our new Fellow for 2012 to finalize and publish.

• Dr. Peralta and Dr. Grossman have gathered data on a unique group of obstetric patients maintained in SOBOXONE, looking at pain control, dosages and utility of TAP blocks in addition to intra-spinal narcotics for post cesarean delivery pain.

• A publication on the use of cardiopulmonary bypass in a patient with amniotic fluid embolism has been completed with Michael Firstenberg, MD and our OB anesthesia team as well as cardiac anesthesia colleagues.

• Several case reports were presented at ASA, Society for Obstetric Anesthesiology and Perinatology (SOAP), and Midwest Anesthesia Residents Conference (MARC) meetings:
  
  • **Medically challenging cases (ASA 2010 and 2011):**
    
    • Grossman M, Dimitrova GT, Halim M. Good maternal and neonatal outcome after near fatal amniotic fluid embolism with early transesophageal echocardiography and cardiopulmonary bypass intervention.
    
    • Peralta F. EXIT procedure under regional anesthesia in patient with malignant hyperthermia susceptibility.

  • **SOAP and MARC (2010):**
    
    • Burnett T, Halim M. Local anesthetic infiltration for cesarean section in a patient with spinal muscular atrophy type II. Presented at SOAP (May 2010) (2nd prize) and MARC (February 2010).
    
    • Coffman JC, Halim M. Anaphylactic reaction to chlorbutanol-preserved oxytocin. Presented at SOAP (May 2010) and MARC (February 2010).
• Harris T, Halim-Armanios M. Spinal anesthesia for cesarean section in a parturient with Noonan syndrome and Von Willebrand disease. Presented at SOAP (May 2010).

• Elmore J, Halim-Armanios M. Arnold Chiari type I malformations in parturient with congenital complete heart block. Presented at SOAP (May 2010).

• Anderson D, Halim M. Perioperative management of a patient with Moyamoya disease and pre-eclampsia undergoing cesarean section. Presented at SOAP (May 2010).

• SOAP (May 2012)

• Honer J, Halim M. Anesthetic management of a super obese parturient with recent non ST elevation myocardial infarction.

• Hays M, Coffman JC. Successful management of an obstetric patient with von Willebrand disease type 2N and malignant hyperthermia.

• ASA (October 2011)

• Grossman M, Halim-Armanios M, Small RH. Anesthetic management of a parturient with delta-platelet storage pool deficiency.

• Management of patient with Truncus Arteriosus type II.

• MARC (March 2012)

• Farah NM, Halim-Armanios MY. Cauda equina syndrome subsequent to labor epidural analgesia.

• Shilliam LA, Peralta FM. Combined spinal-epidural anesthesia for delivery in a parturient with Ebstein’s anomaly.

2012 – 2013 Future Goals

• Complete on-going projects and publish.

• Create new research protocols. The area specific to OB anesthesia that we wish to develop during the next year involves leading research studies that can have a significant impact on clinical practice, while maintaining and continuing to improve our high-quality and efficient patient care.

• Concentrate on case series for publications rather than just individual case reports for conferences.
Post Anesthesia Care Unit

Thomas J. Smith, MD
Assistant Professor Clinical
Director, PACU
Section Director, Regional Anesthesia, University Hospital

Research

2011 – 2012 Highlights and Accomplishments

Post anesthesia care unit (PACU) staff and faculty were encouraged to seek out research opportunities and help facilitate ongoing projects by assisting in enrollment and data collection.

2012 – 2013 Future Goals

We are in the beginning stages of submitting a research proposal comparing insufflation devices used during robotic surgeries and how they affect specific patient parameters in the PACU. We will continue to encourage and foster interest among the anesthesia faculty, residents and nurses to pursue research ideas and become active in current and future research projects.

Education

2011 – 2012 Highlights and Accomplishments

Goals and objectives are clearly defined for the residents during their PACU rotation with required reading assignments and journal reviews. An attending anesthesiologist is specifically assigned to cover the PACU to enhance the learning experience through literature reviews, didactics, and bedside teaching. Nursing leadership has presented several didactic lectures this year to educate PACU nurses about the affects and recovery from regional and general anesthesia.

2012 – 2013 Future Goals

We will encourage the residents rotating through the PACU to continue to take an active role in patient care. Residents will be asked to choose a topic of interest pertinent to the recovery unit that can be used to improve patient care and team education utilizing evidence-based medicine.

Clinical

2011 – 2012 Highlights and Accomplishments

With the implementation of Integrated Healthcare Information System, our electronic medical record system, we have been able to adhere closely to the recommended guidelines for beta blocker
administration and postoperative evaluations. Orders for obstructive sleep apnea monitoring and postoperative pain control have also become part of standard order sets to ensure patient wellbeing.

2012 – 2013 Future Goals

We will continue to provide exemplary patient care while improving throughput into stage II of recovery.
Regional Anesthesiology

Babak Khabiri, DO
Assistant Professor
Clinical Director, Regional Anesthesia

John A. Norton, DO
Assistant Professor
Clinical Fellowship Director

Research

2011 – 2012 Highlights and Accomplishments

Several members of the regional anesthesiology faculty continued to serve as principle investigators for investigator-initiated research projects focused on perioperative pain control. In addition to their clinical research projects, the faculty published several case reports related to the practice of regional anesthesiology. Members of the regional anesthesiology faculty also served on national committees and as journal editors in the area of regional anesthesiology.

2012 – 2013 Future Goals

The division of regional anesthesiology hopes to complete ongoing research projects and initiate new projects.

Education

2011 – 2012 Highlights and Accomplishments

The regional anesthesiology faculty continued to teach ultrasound-guided nerve blocks, not only to our residents, but also to national and international audiences. The regional anesthesiology experience was consistently rated very highly by our residents. The residents were exposed to a diverse population of patients, procedures and approaches to clinical problems; a regional anesthesiology anatomy lab led by Charles Hamilton, MD reinforced their strong clinical experience. Faculty also continued to mentor residents who presented at national meetings. Quarterly journal clubs also exposed residents to current literature in the field of regional anesthesiology. Additionally, members of the division served as invited faculty at national meetings and workshops.

Fernando Arbona, MD, Babak Khabiri, DO, and John Norton, DO authored a book chapter, “Ultrasound Basics for the Busy Novice Practitioner” in International Anesthesiology Clinics. The textbook, Ultrasound Guided Regional Anesthesia: a Practical Approach to Peripheral Nerve Blocks and Perineural Catheters, written by Fernando Arbona MD, Babak Khabiri, DO, and John Norton DO and illustrated by Charles Hamilton, MD, received the “Highly Commended” prize by the British Medical Association, and is also being translated into Chinese by the Peking University Press.

Fellowship

The regional anesthesiology fellowship, led by John Norton, DO, continued to attract and educate
Fellows. Due to the strong interest, fellowship positions were expanded from one Fellow per academic year to two Fellows per academic year for the 2012-2013 and 2013-2014 academic years.

2012 – 2013 Future Goals

We hope to continue to build upon our strong educational foundation by continuing to educate residents, Fellows and practicing anesthesiologists.

Clinical

2011 – 2012 Highlights and Accomplishments

The division continued to provide innovative clinical care at multiple locations at Wexner Medical Center at The Ohio State University. The division continued to be a leader in acute postoperative pain management by providing an inpatient and outpatient continuous perineural catheter service. The acute pain service served as a model for anesthesiologists who wish to implement a similar service in their practice.
Transplant Anesthesia

W. Daniel Traetow, MD
Assistant Professor Clinical
Director, Liver Transplant Anesthesia

Education

2012 – 2013 Future Goals

W. Daniel Traetow, MD will assume the role of director of liver transplant anesthesia. Dr. Traetow is planning to attend the International Liver Transplantation Society conference and the Society of Cardiovascular Anesthesiologists’ transesophageal echocardiogram (TEE) conference to learn more about intraoperative imaging.

We will also be having several of the Fellows in the department learn how to do transplants in order to give these critical patients the best possible care. Dr. Traetow also intends to visit some of the more established, high-volume programs to see how we can improve our program.

Clinical

2011 – 2012 Highlights and Accomplishments

We have recently welcomed Michael R. Lyaker, MD and Dean F. Connors, MD, PhD as members of the liver transplant team. We also are using the assistance of our cardiac anesthesiologists to perform intraoperative TEE. This has been very helpful with operative management of these cases. We soon will obtain point of care International Normalized Ratio (INR) and Thrombelastograph (TEG) units to make clotting management more efficient.

We now have a written protocol to serve as a guideline for all that are doing transplants. This includes having the Belmont transfuser available for all cases.
Certified Registered Nurse Anesthetists

Charles E. Martin  
Chief CRNA

Education

2011 – 2012 Highlights and Accomplishments

• Three certified registered nurse anesthetists (CRNAs) were accepted into a Doctorate of Nursing Practice program at various institutions. They will become the first CRNAs at The Ohio State University Wexner Medical Center to complete this advanced degree.

2012 – 2013 Future Goals

• In a new collaboration with Otterbein University, two student registered nurse anesthetists (SRNAs) will come to Ohio State’s Wexner Medical Center for their clinical training beginning in Fall 2012. This will increase the number of SRNA students practicing at Ohio State’s Medical Center on a daily basis to five.

Clinical

2011 – 2012 Highlights and Accomplishments

• The number of CRNAs needed on a daily basis at Ohio State’s Eye and Ear Institute increased to six.

• The total number of CRNAs at Ohio State’s Medical Center increased to 72, including both full- and part-time employees.

2012 – 2013 Future Goals

• The number of CRNAs will be increasing to 80 by Fall 2012. This includes both full- and part-time employees. With the medical center expansion, we plan to continue our recruiting efforts.
Faculty & Staff

Administration

Ronald L. Harter, MD
Jay J. Jacoby, MD, PhD,
Professor and Chair

Fedias L. Christofi, PhD
Vice Chair of Research

Robert H. Small, MD
Vice Chair Administrative
Affairs

Thomas J. Papadimos,
MD
Vice Chairman for
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Steven S. Smith, MA
Director, Administration
Directorships

Michael J. Andritsos, MD
Cardiothoracic and Vascular Anesthesia

Fernando L. Arbona, MD
Ohio State University Hospital East

Sergio D. Bergese, MD
Neuroanesthesia

Mona Y. Halim, MD
Obstetrical Anesthesia

Luis A. Lopez, MD
Director of Clinical Operations

Charles E. Martin, CRNA
Chief CRNA

Thomas J. Papadimos, MD
Critical Care Medicine

Stephen Paquelet, MD
Assistant Professor Clinical
Section Director, Acute Pain
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Fedias L. Christofi, PhD

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Mark A. Gerhardt, MD, PhD
Ernesto Goldman, MD
Thomas E. Reilley, DO

Assistant Professor
Hamdy Elsayed-Awad, MD

Professor Clinical
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Thomas J. Papadimos, MD
Joel M. Weaver, II, DDS, PhD (Emeritus)

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Bhagwandas Gupta, MD
Yun Xia, MD, PhD

Assistant Professor Clinical
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Fernando L. Arbona, MD
Steven A. Beckley, MD
Sergio D. Bergese, MD
Sujatha P. Bhandary, MD
John C. Coffman, MD
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Heather C. Eck, MD
Michael K. Essandoh, MD
Michael F. Evers, DO
Antolin F. Flores, MD
Rebecca M. Gutmann, MD
Mona Y. Halim, MD
James M. Highley, DO
Michael G. Johanson, DO
Ritu Kapoor, MD
Jamie L. Keller, MD
Garrett T. Kelly, MD
Babak Khabiri, DO
Deven Kothari, MD
Alan J. Kover, MD, PharmD
Michael Kushelev, MD
Lin Li, MD
Deborah S. Lowery, MD
Joshua Lumbley, MD
Michael R. Lyaker, MD
Matharbootham Mani, MD
Matthew McKiernan, MD
Lori D. Meyers, MD
Hans B. Miller, MD
John A. Norton, DO
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Katja R. Turner, MD
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Luis A. Lopez, MD

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Faculty Emeritus

Ernesto Goldman, MD
Joel M. Weaver, II, DDS, PhD
Joint Faculty Appointments

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George E. Billman, PhD
Steven I. Ganzberg, DMD
Steven Steinberg, MD
David D. Woods, PhD

Associate Professor
Charles Cook, MD
Furrukh S. Khan, PhD
Gopi A. Tejwani, MD
Fellows

- Weibke Ackerman, MD (neuroanesthesia)
- Brenda Christopher, MD (cardiothoracic anesthesiology)
- Derek Foerschler, DO (regional anesthesiology and acute pain medicine)
- Kenneth Grosslight, MD (pain medicine)
- Mara Grossman, MD (obstetric anesthesiology)
- Brian Kelly, MD (cardiothoracic anesthesiology)
- Dwight Mosley, MD (pain medicine)
- Gurneet Sandhu, MD (neuroanesthesia)
- Ravi Tripathi, MD (cardiothoracic anesthesiology)
Residents

Interns

- William Beeston, DO
- Jarrett Heard, MD
- Matt Jaruwannakorn, MD
- Linden Lee, MD
- Cassidy Schwab, MD
- Michelle Stephens, MD
- Colleen Wirtz, DO

CA-1

- Amar Bhatt, MD
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- Christian Walker, MD

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