

# NURSE ANESTHESIA PROGRAM NEWSLETTER

Saint Mary's University of Minnesota  
Graduate Program in Nurse Anesthesia

Summer Semester  
MAY, 2009

VOLUME 5, ISSUE 1

## Welcome Class of 2011



Thirty four new students started classes on May 11, 2009. This year's class consists of 14 men and 20 women. These new scholars represent, Savage, Cottage Grove, Cloquet, Minneapolis, Bloomington, Rogers, Rochester, Plymouth, Esko, Elysian, Crystal, Dalton, Woodbury, Ham Lake, Waseca, Roseville, Albertville, White Bear Lake, West St. Paul, MN as well as Corpus Christi, TX, Denver, CO, Orem, UT, Waterloo, IA, Grand Island, NE, Mill Creek, WA; Spencer, Madison,

**Student Paper Abstract** Tadd Thorson SRNA and Joshua Ward SRNA

### How are the Current ASA Practice Guidelines For Preoperative Fasting Being Implemented In The Community? A Sampling Of Twenty-Six Hospitals

Practice guidelines for preoperative fasting were published in 1999 by the American Society of Anesthesiologists (ASA) and have been supported by research studies, surveys, and practice. Studies have shown that a long preoperative fasting period causes an increase in patient anxiety, nausea, and the risk of aspiration. Also, intravenous access becomes more difficult when patients fast for extended periods of time.

The authors' objective was to interview twenty-six hospitals in eastern Minnesota and western Wisconsin and identify each facility's preoperative fasting policy. The interviews showed that all twenty-six hospitals have not adopted the current practice guidelines for preoperative fasting. Twenty-one of these hospitals are following the traditional NPO after midnight protocol, as set forth in 1946 by Curtis Lester Mendelson. The remaining five hospitals are using modifications to the 1999 guidelines. When asked about familiarity with the current guidelines, 62% of the interviewees were unaware of them. These findings show that many hospitals follow preoperative fasting guidelines other than those recommended by the ASA.

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#### • Upcoming Events:

- ◇ May 11, Summer Semester begins
- ◇ May 16, Student Paper Presentations
- ◇ May 25, Memorial Day
- ◇ June 7, 11:30 AM Commencement Exercises for the Class of 2009
- ◇ July 3-4, Independence Day holiday
- ◇ July 8, Registration for fall semester
- ◇ August 20, SENIOR STUDENTS GRADUATE, Last day of the Semester: Aug. 22.
- ◇ September 8, fall semester begins

# SMU Graduate Nurse Anesthesia Welcomes Carol Hunter CRNA and Mary Foss Pharm.D to the Academic Faculty



**Carol Hunter** joins the staff as a part-time faculty member. Carol will be teaching in the Principles courses and advising students on their final synthesis papers and presentations. Carol graduated with her M.S. in Nurse Anesthesia from Saint Mary's in 2006. She earned her Bachelor of Science in Nursing from the University of Kansas at Lawrence. Carol is a staff nurse anesthetist at Regions Hospital where she also serves as a clinical instructor for Saint Mary's.



**Dr. Mary Foss** also joins the staff as a part-time faculty member. Mary will continue teaching the pharmacology curriculum. Mary will also be advising students on their final synthesis papers and teach in the Chemistry and Physics course. Mary earned her Doctor of Pharmacy and completed a Post Doctorate Fellowship at the University of Minnesota. She currently works as a Pharmacy Manager for Unity Hospital and Director of the Mercy/Unity Pharmacy Residency Program. She has a long and distinguished teaching career that started with teaching high school chemistry.

## Student Paper Abstract

Pauline M. Zelaya SRNA and Mara Prusak SRNA

### The Role of Preemptive Gabapentin in Reduction of Postoperative Pain and Narcotic Consumption in Lumbar Surgery

Gabapentin is an amino acid analog of gamma amino butyric acid initially approved for antiepileptic use. Recently it has been approved for the treatment of chronic neuropathic pain and is currently being studied for its efficacy in preemptive surgical pain control. Gabapentin binds avidly to the  $\alpha_2\delta$  subunit of the voltage-gated calcium channels located in the central nervous system, increases concentrations of gamma amino butyric acid in the brain, and inhibits excitatory neurotransmitters. Recent studies have established administration of preemptive gabapentin to be efficacious in reducing postoperative pain and narcotic consumption.

This paper reviews the pharmacology, pharmacokinetics, and adverse effects of gabapentin, and describes research on preemptive gabapentin administration in lumbar spine surgeries.



**Student Paper Abstract** Randy Thilgen SRNA and Shawn Overgaard SRNA

### A Review of Serotonin Toxicity and its Relationship with Serotonergic Agents Given During Surgery

Serotonin toxicity is caused by an excess of serotonin (5-hydroxytryptamine; 5-HT) at the 5-HT<sub>1A</sub> and 5-HT<sub>2A</sub> receptors in the central and peripheral nervous systems. The toxicity can be caused by many different medications that possess serotonergic activity, the most common being selective serotonin reuptake inhibitors and monoamine oxidase inhibitors. Fentanyl, meperidine, ondansetron, and methylene blue are medications commonly used in anesthesia and have been implicated in serotonin toxicity. The triad of symptoms characterizes serotonin toxicity is altered mental status, autonomic hyperactivity, and neuromuscular abnormalities. The severity can range from mild to potentially life-threatening. Treatment is supportive after discontinuing the serotonergic medications and administration of 5-HT<sub>2</sub> antagonists for severe cases.

**AANA Sponsor a Student** Please consider sponsoring a student for the Annual Meeting and/or the Banquet. For more information go to: [www.aana.com](http://www.aana.com)



# **Saint Mary's University of Minnesota Student Seminar**

**Perspectives of Anesthesia Providers Communicating with Limited English Proficient Patients**

*Tatiana Ramirez, SRNA and Anthony Sabol, SRNA*

**How is the Current American Association of Anesthesiologists Preoperative Fasting Guideline Being Implemented in the Community? A Sampling of Twenty-Six Hospitals**

*Tadd Thorson, SRNA and Joshua Ward, SRNA*

**Anesthetic Considerations for the Patient with Lambert-Eaton Myasthenic Syndrome**

*Tammy Jost, SRNA and Gary Gauthier, SRNA*

**Tissue Hemoglobin Oxygen Saturation (StO<sub>2</sub>) use in Anesthesia**

*Suzy Whitaker, SRNA and Cory Lusk, SRNA*

**Anesthetic Implications of Single-Ventricle Congenital Cardiac Defects**

*James Kinsey, SRNA and Lt. Steven Faulkner, SRNA*

**Anesthetic Considerations for the Patient with Ehlers-Danlos Syndrome**

*Julius Ajide, SRNA and Chris Schock, SRNA*

**A Review of Serotonin Toxicity and its Relationship with Serotonergic Agents Given During Surgery**

*Randy Thilgen, SRNA and Shawn Overgaard, SRNA*

**The Role of Preoperative Gabapentin in Reduction of Postoperative Pain and Narcotic Consumption in Lumbar Surgery**

*Polly Zelaya, SRNA and Mara Prusak, SRNA*

**Hypertonic Saline, Denufosol, and Dornase Alpha: New Cystic Fibrosis Treatments and Their Role in Anesthesia**

*Anna M. Brabec, SRNA and Brian A. Kawecki, SRNA*

**Orexins and the Emergence from General Anesthesia**

*John Orth, SRNA and John Chauss, SRNA*

**Anesthetic Considerations for the Khat User**

*Nicole Halverson, SRNA and Shannon Minnehan, SRNA*

**Anesthetic Concerns for the Parturient with Marfan's Syndrome**

*Bryan Hested, SRNA and Tracy Maas, SRNA*

**The Anesthetic Treatment Of Von Willebrand's Disease in the Non-Obstetric Surgical Patient**

*Tracy Baxter, SRNA and Andrew Perkins, SRNA*

**Anesthetic Implications for the Williams Syndrome Patient**

*Kristin Paukert, SRNA and David Burton, SRNA*

**Saturday, May 16, 2009**

**0800 – 1600**

**Twin Cities Campus**

**Mother Theresa Hall**

**2440 Park Avenue**

**Minneapolis, MN 55404**

**Cost \$50.00 – CRNA's**

**\$30.00 – Students**

**Continental Breakfast, Coffee, Tea,  
Soft Drinks and Lunch provided**

**This program received prior approval from  
the American Association of Nurse Anesthetists**

**Code Number: 31578**

**Expiration Date: 05/16/2009**

**For additional information or to register contact:**

**vmurphy@smumn.edu or (612)728-5132 (Toll free:  
(866)437-2788 ext. 132)**

## Student Paper Abstracts

### Hemoglobin Oxygen Saturation (StO<sub>2</sub>) use in Anesthesia

Suzy Whitaker, SRNA and Cory Lusk, SRNA

A new noninvasive monitor has been developed that can assess a patient's tissue hemoglobin oxygen saturation (StO<sub>2</sub>). Changes in StO<sub>2</sub> can provide an early warning sign of hypo-perfusion and help the clinician ensure that adequate oxygen is delivered to the tissue. This technology targets microcirculatory perfusion and cellular oxygenation by monitoring tissue at four calibrated wavelengths, using wide gap second derivative near-infrared spectroscopy. StO<sub>2</sub> could be a useful device to evaluate tissue perfusion in the patient undergoing a surgical procedure using general anesthesia.

A review of the literature demonstrated that the monitor has been successfully used in trauma centers and intensive care units, but has not been used with patients undergoing procedures with general anesthesia. The mechanical characteristics and ease of use of the StO<sub>2</sub> monitor would make it an ideal tool for the anesthetist caring for patients with an ensuing shock state. An initial physiological response to shock is peripheral vasoconstriction resulting in decreased tissue saturation. Inadequate cardiac output, cardiac abnormalities, decreased venous return, diminished blood volume, decreased vascular tone, and obstruction to blood flow in the circulation could be easily detected.

Further research needs to be completed to determine how anesthetics such as halogenated gases, induction agents, crystalloids, colloids, and sympathomimetics affect the values and validity of the monitor. The research found that this is a viable monitor that can be used to support assessment of hemorrhagic shock.

### Anesthetic Concerns for the Parturient with Marfan's Syndrome

Bryan Hested SRNA and Tracy Maas SRNA

Marfan's Syndrome is a connective tissue disorder primarily affecting the cardiovascular, skeletal, and ocular systems; it occurs in 2 to 3 per 10,000 patients. Advances in surgical procedures and medical management, including beta blocker therapy, have increased life expectancy among these patients, with many reaching child-bearing age. Parturients with Marfan's Syndrome present special challenges to the anesthesia provider because pregnancy physiology, particularly hemodynamic changes, can have catastrophic consequences in the absence of proper management. Anesthetic management should focus on minimizing aortic root shear forces and wall stress to prevent further aortic root dilatation and aortic dissections. In addition to cardiovascular concerns, unique skeletal, ocular and respiratory considerations for the patient with Marfan's Syndrome will be discussed. This review will describe the anesthetic concerns for pregnant patients with Marfan's Syndrome and provide guidance for safe and effective anesthesia.



## STUDENT SEMINAR RESERVATION FORM

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY / STATE / ZIP: \_\_\_\_\_

AANA NUMBER: \_\_\_\_\_

PLEASE MAKE CHECK OUT TO:

**GRANT ACCOUNT 5309**

Cost \$50.00 – CRNA's

\$30.00 – Students



2500 Park Avenue  
Minneapolis, MN 55404

# News

## Congratulations!

**John Scharine CRNA, MSNA, APNP** on the publication of his article "Bilateral Transversus Abdominis Plane Nerve Blocks for Analgesia Following Cesarean Delivery: Report of 2 Cases" in the April, 2009 AANA Journal. John was a member of the Class of 1994.

## Thank you!

Thank you to **Greg Anderson ('05)** for his donation to the nurse anesthesia program. The new 2009 editions of *Clinical Anesthesia* by Barasch and *Anesthesia* by Miller will be placed in the Twin Cities Campus Library for students and faculty.

## This Semester's Courses

### NEW STUDENTS

- ◆ (NA640) Chemistry & Physics
- ◆ (NA635) Professional Writing for Nurse Anesthetists
- ◆ (NA630) Professional Aspects of Nurse Anesthesia
- ◆ (NA606) Research Design & Statistical Analysis

### JUNIORS

- ◆ (NA781) Synthesis Paper Proposal
- ◆ (NA780) Clinical Integration
- ◆ (NA771) Clinical Practicum II

### SENIORS

- ◆ (NA774) Clinical Practicum V
- ◆ (NA783) Synthesis Paper Presentation

### OTHER EVENTS

- ◆ Student Seminar Saturday May 16
- ◆ Class of 2009 program completion date: August 20, 2009



Marv Lang ('56) recently returned from his work in Cambodia. Marv writes: "The man on my right painted this picture for me. This is the second painting he has given me. The man on my left is his brother who is a student in nursing. He helps support his brother so he can paint and finish high school. The painters name is Phalla. Other paintings are hanging in the background."



## Congratulations!

**Gwen Anderson ('08)** and her husband Lenny were blessed with a baby boy, Graham Christian Anderson, born: December 13, 2008 at 12:15 a.m. Graham weighed in at 8 pounds and was 20.5 inches long.

## Applications for the Class Starting in 2010

The process for reviewing applications and selecting the next class began in April. Out of 175 applications, 84 candidates will be invited to interview. Seven candidates will join the class from the waiting list.

## ATTENTION ALUMNI

**IF YOU HAVE NEWS, EVENTS OR ACCOMPLISHMENTS THAT YOU WOULD LIKE YOUR CLASSMATES TO SEE, PLEASE SEND IT TO:**

**Merri Moody at: [mmoody@smumn.edu](mailto:mmoody@smumn.edu)**

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*There have been 650 GRADUATES from  
1952 through 2008.*

We're on the Web!  
[www.smumn.edu/anesthesia](http://www.smumn.edu/anesthesia)

## Commencement Ceremony: Class of 2009



Please join us on Sunday June 7 at 11:30 a.m. for the graduation ceremony for the Class of 2009. The ceremony is being held at the Zuhrah Shrine Center Auditorium, 2540 Park Avenue, Minneapolis. Parking is available on the street or in the parking lots behind the University. If you are an academic or clinical faculty member and would like to participate in the processional, contact Veronica Murphy at (612)728-5132.

Though the students will not finish until August 20, this is one of the last times they will be together as a group before they start their new careers. The commencement exercises are followed by a reception. Please plan to attend and help our students celebrate!



## TRANSCRIPTS

To get your transcript please send a request to the Assistant Registrar of the Twin Cities Campus. Please include your name, student ID number, the years of attendance, the number of transcripts needed, where you want them sent, and your signature. There is a \$3 charge per transcript. We do not have copies of diplomas.

Assistant Registrar  
Saint Mary's University of MN  
2500 Park Avenue  
Minneapolis, MN 55404-4403

## VERIFICATION OF EDUCATION FOR EMPLOYERS

In accordance with federal regulation, the student/alumni must give permission for any information to be released by the college. Verifications cannot be done over the phone. Please sign a consent form from your employer or send a request with your signature to:

Program Director/Graduate Nurse Anesthesia  
Saint Mary's University of MN  
2500 Park Avenue  
Minneapolis, MN 55404-4403

### Program Staff

**Merri Moody**  
*Program Director*

**Thomas Healey**  
*Clinical Director*

**Steven Kremer**  
*Faculty*

**Wendy Sims**  
*Faculty*

**Carol Hunter**  
*Faculty*

**Scott Schaus**  
*Faculty*

**Mary Foss**  
*Faculty*

**Veronica Murphy**  
*Program Coordinator*