

Emergency Medicine Residency 2010 Annual Report



*Quality, Experience & Stewardship:
Transforming GME to Meet the
IHI's Triple Aim*

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Institute for Medical Education (IME)

The Regions Hospital Emergency Medicine Residency is sponsored by the HealthPartners Institute for Medical Education (IME). The IME was created in 1996 to provide an innovative structure to lead the organization's health professional educational efforts. Today, the IME partners with academic institutions, provides an innovative environment for health-provider education and is an advocate for education that measurably improves patient care. The IME provides professional education through undergraduate and graduate medical education, nursing education, allied health professional education, continuing professional development, medical library services and clinical simulation programs.

The IME has a formal affiliation agreement with the University of Minnesota that guides the educational relationship between the two organizations. Regions Hospital emergency medicine staff enjoy faculty appointments within the department of emergency medicine at the University of Minnesota, and contribute to the teaching of medical students and residents in HealthPartners and University residency programs.



Class of 2013

Letter from the Director



Welcome to the 2010 Regions Hospital Emergency Medicine Residency annual report. I am delighted to highlight some of our residency's accomplishments from this past year. Our activities center around our mission: to incorporate the Institute of Healthcare Improvement's Triple Aim (quality, experience, and stewardship) into our daily practice. Our mission is guided by the Baldrige Educational Criteria for Performance Excellence (www.quality.nist.gov) and includes best practices in leadership, strategic planning, stakeholder focus, measurement, analysis, process management and results.

We salute our residents who were involved in leadership activities in 2010:

- Catie Carlson ('11) was named best oral presenter at the SAEM Regional Meeting in Omaha, NE
- Katie Davidson ('11) continued her work as associate medical director of the EMS Academy (<http://www.ehs.net/emsacademy/>), an intensive Emergency Medical Technician (EMT) and firefighter awareness program designed for low income youth ages 18-21.
- Autumn Erwin ('11) continued her service on ACEP's EMS Committee. She also was named as Most Likely to Change the World in the Regions Hospital 2010 Yearbook based on her work in Haiti.
- Kara Kim ('11) was a recipient of the first annual ACEP Quality Improvement and Patient Safety Section Resident Quality Award. She is also a leader for the Regions' chapter of the IHI Open School and continued her participation in the AIAMC National Initiative Phase II: Linking GME and Quality (<http://www.aiamc.org/ni-phase-ii.php>). She attended ACEP's Leadership and Advocacy conference in Washington, DC.
- Clint Hawthorne ('12) continued to serve on the Board of Directors for the East Metro Medical Society.
- Kate Katzung ('12) continued to serve as residency representative to the AAEM-RSA
- Tolu Oyewo ('13) serves as the resident representative of the HealthPartners IME EBAN emergency medicine project, focusing on healthcare disparities and ED pain management (<http://www.ebanexperience.com/>).

We recruit resident applicants who extend their activities beyond clinical shifts and positively impact their environment. In 2010, 16 residents were co-investigators on nine grants and IRB-approved studies, co-authors of three peer-reviewed articles, and presenters of nine regional and national scientific presentations. Casey Woster ('12) and Wendy Rangitsch ('13) served as faculty for the third international course on acute care in Cochabamba, Bolivia (www.manoamano.org). Katie Davidson ('11) and Autumn Erwin ('11) served in Haiti with Project Medishare (www.projectmedishare.org).

We complement the transfer of knowledge with the transfer of meaning in a connected environment with our extended residency community. The residency held its 2010-2015 strategic planning meeting in April of 2010 (<http://regionsemstrategicplanning.pbworks.com/>). More than 35 stakeholders, including residents, faculty, departmental and hospital leaders, other program directors and community ED leaders participated. Participants reviewed 2005-2010 goals and suggested best practices in outcomes, knowledge translation, procedural competency, non-clinical training, benchmarks and resources for 2010-2015. The 2010 residency retreat focused on using web 2.0 to facilitate education, maximizing healthcare delivery education, integrating resilience training in our residency, and reviewing implementation of quality initiatives that will guide our residency. Residency graduates now can choose from five fellowships offered through our department and the IME: medical toxicology, peds-EM, prehospital/EMS, quality and patient safety, and international emergency medicine.

This year, we matched another competitive class of residents featured in this report. Our goal is to incorporate the highest level of professionalism and humanism into our interactions with patients and members of the healthcare team. We are grateful for the support of our many residency partners and look forward to training the emergency medicine providers of the future.

Felix Ankel, MD
Residency Director

Department Head Update



The Regions Hospital Emergency Center continues to play a critical role in emergency care throughout the Twin Cities east metro and western Wisconsin communities. This significant impact is made possible through the efforts of our dedicated staff and those we teach.

A mission of our department is to incorporate the IHI's triple aim (quality, experience, stewardship) into our daily practice and guide our academic focus. 2010 was another productive year for our ED faculty, who continue to obtain internal and external research grants, present nationally and internationally and publish peer-reviewed manuscripts, electronic publications and book chapters. Faculty are involved in leadership activities within the hospital and community. They have major involvement in national and international specialty societies serving as academic peer reviewers, committee members, board members, ABEM item writers, and oral board examiners. We welcomed Drs. Sam Stellpflug and Brian Peterson as new faculty.

Many faculty members received recognition for their work beyond the confines of our emergency department. Rachel Dahms, MD received the 2010 HealthPartners Excellence in Education award. Joel Holger, MD won the best poster award at the 2010 NACCT meeting. Jessie Nelson, MD received the Best Innovations in Emergency Medicine Education award at the 2010 SAEM annual meeting. Carson Harris, MD, along with Drs. Ankel and Morgan, also led another successful International Acute Care Conference in Cochabamba, Bolivia. Drs. Harris and Morgan also volunteered in Haiti, and Dr. Paul Haller worked in Tanzania.

Quality emergency care in the ED expansion was a priority in 2010. Dr. Drew Zinkel accepted the position of emergency medicine quality director. Under Dr. Zinkel's leadership, Regions has accepted its first emergency medicine quality fellow, Kara Kim, MD ('11), who will start in July 2011. We now have five fellowships open to emergency medicine graduates.

Several ED faculty led multidisciplinary teams that included residents and focused on internal and externally reported quality markers for patient care within the ED.

Our emergency center operations, crisis program, toxicology, EMS, ultrasound, simulation, sexual assault nurse examiner program, and research section continue to be strengths of our educational experience for both residents and medical students. We have a lot to be proud of in 2010. I look forward to leading the emergency department's vision to be the center of excellence for quality emergency care, education and research in 2011.

Kurt Isenberger, MD



Emergency Department Entrance

Emergency Center Operations

The Regions Hospital Emergency Center is a Level I Adult and Pediatric Trauma Center located in St. Paul, MN, serving the east metropolitan Twin Cities area, including western Wisconsin. Today, the emergency department (ED) is comprised of 50,000 square feet of clinical space with 55 treatment rooms. There are an additional 8,000 square feet that house a library, conference space and support service offices.

The emergency department includes private rooms, in-department radiology suite, discharge pharmacy, waiting room and triage area, employee lounge and locker room, three care areas (pods), and an 11-bed care pod for our crisis/behavioral health patients.

Emergency Center figures for 2010:

- 75,826 patient visits (8 percent growth over 2009)
- 7 percent pediatric patients (age 16 or under)
- 9 percent behavioral health patients
- 3,076 trauma admissions
- 774 trauma team activations
- 24 percent admission rate
- 55 percent of all hospital admissions come from the ED

Richelle Jader, BSN, MHA
Administrative Director

Mary Healy, RN, BSN, CEN
Nurse Manager

Eric Peterson, MHA, BA
Sr Manager ED, Finance and Operations

Jeff Fritz
Support Services Manager

Crisis Program

The Crisis Program, a psychiatric crisis intervention service housed in the Regions Hospital Emergency Center, represents a unique collaboration between Regions behavioral health and the emergency department (ED).



Crisis Program

An experienced, committed corps of licensed independent clinical social workers staff the program 24 hours a day, seven days a week. This innovative and cost-effective program has been an integral part of the ED for more than 35 years and serves more than 6,000 patients annually. Approximately 60 percent of all patients who are evaluated by crisis social workers are not hospitalized and instead return to the community with referrals for outpatient services.

A wonderful addition to this program is the availability of psychiatric consultation in the ED during daytime hours.

Patients are seen for a variety of mental health issues including depression, psychosis, anxiety, and substance abuse. The crisis staff works closely with ED physicians, residents, physician assistants and nurses to provide comprehensive psychiatric and psychosocial assessments and to create discharge plans that maximize safety and stabilization in the community or in the hospital.

Maddy Cohen, MSW, LICSW
Manager, ED Crisis Program

Didactic Curriculum

Regions Emergency Medicine Residency Program offers residents a full spectrum of topics in emergency medicine based on *The Model of the Clinical Practice of Emergency Medicine*. This model is the basis of the content specifications of all examinations by the American Board of Emergency Medicine. The core curriculum is designed to repeat itself in its entirety on an 18-month basis. As there are several modalities of learning, the didactic curriculum is set up to cover both the depth and breadth of emergency medicine through traditional as well as innovative and interactive means. Curriculum components include:

- **Critical Case**, a favorite of residents and faculty alike. Critical Case conference provides an interactive forum for discussion of a case of educational value. Case discussion is focused not only on the content of the eventual diagnosis, but also on the decision-making process in evaluating critically-ill patients with limited immediate data. Cases are actual cases from the ED and are chosen by the chief residents.
- **Core Content Lectures** reinforce knowledge that is gained on clinical rotations as well as supplement the clinical experience. Lectures are given by faculty members who are experts in a core content area.
- **Journal Club** is held on a regular basis and facilitates discussion of two or three current practice-changing articles in emergency medicine.
- **Joint Conferences** are collaborative conferences held in conjunction with other departments such as radiology, trauma services, critical care and internal medicine to discuss related areas of interest.
- **Small Group Sessions** encourage interactive learning. Small group simulation days have been incorporated into the curriculum. Residents are divided into three groups and rotate through stations that may include case discussion, simulation or mini-lectures.

- **Forensics** includes a basic forensic medicine didactic curriculum that all residents receive. Additionally, residents are trained in sexual assault examinations.

Our residency encourages experiences outside of the typical EM core content lecture. For example, HealthPartners Institute for Medical Education sponsors a Core Competency Conference Day which is a multi-disciplinary conference focusing on the six core competencies. In February, we held a conference day in the Anatomy Lab at the University of Minnesota, reviewing uncommon procedures such as cricothyrotomy. Last May we had a combined simulation day at the University of Minnesota with the Hennepin County Emergency Medicine residents and staff. In July, we held an orthopedic conference day with EM-specific presentations by our orthopedic surgeons and subsequent hands-on splinting workshop. At our alumni day conference in September, we hosted more than 15 graduates who shared their wisdom with our residents. In October, residents participated in our yearly combined EM/Trauma Update co-sponsored by Hennepin County Medical Center, North Memorial Medical Center, Mayo Clinic and Regions.

Stephanie Taft, MD
Assistant Residency Director



Alumni Day September 23, 2010

Habits of Lifelong Learning



Wendy Rangitsch ('13) Cochabamba, Bolivia

There is no denying that the nature of connections between people is changing. With my grandma, it is best to send a handwritten card. But my elementary age nephew and niece text me from their iPods. One of our current residents wouldn't mind getting all communication through Facebook status updates. In some ways, even writing this 'essay' for a print publication seems old school. Yet, print is not dead, and adaptation to new technology is the name of the game.

As such, the residency is working to adapt (and possibly even lead the way) to the new tools and methods of connecting to our community. While the current residents are always the core of our community, we have a big group of you out there that have a personal connection with the program. The non-exhaustive list includes applicants, alumni, former faculty, non-EM faculty, affiliated community physicians, nurses, hospital staff, and residency benefactors. Beyond this circle, we have our community in which we serve: the patients of the east metro area and western Wisconsin.

So, since our residency serves so many, we must work to reach out and try new things. During 2010, the residency has focused on social media to expand its outreach. While our email list, EMRes, has been active for over 10 years, with 312 subscribers, we now also have 393 people who 'like' us via Facebook.

How many of you are connected with the residency on Facebook? Or are following our tweets (@regionsem)? While these tools are defined as 'social', it is amazing how much medicine you can learn from social media. Our status updates and tweets frequently contain clinical content, not just the latest residency curling outing.

In the true sense of social media, many individuals have gotten into the act. Our Trauma Director, Michael McGonigal, has shared much of his wisdom and opinion through his blog, The Trauma Professional's Blog (regionstraumapro.com). Our Tox service has a nice blog at Twin Cities Toxicology (twincitiestox.tumblr.com) Stephanie Taft has maintained the print version of the EM Shorts newsletter, still posted in EDs around the state by some of our alums. We're experimenting with also putting this information into a blog.

With regard to your personal habits of lifetime learning... how are you doing? Do you have a habit? Have you found a way to keep your clinical edge sharpened? Really, it is all about finding that optimized combination of content and tools to keep you efficiently and continuously processing the tsunami of information that washes upon us daily. How to do this? Here's my suggestion.

First, define your 'tiers of knowledge'.

To review, these are **The Cutting Edge:** a core 10-20 percent of clinical information where you would call yourself 'expert'; **Standard of Care:** This is material you should know for your practice without having to look it up; and **The Limits:** As in: I need to know something exists and how to pronounce the word, but I would need to look up anything beyond that.

Second, for each tier, identify a strategy for information monitoring.

For the cutting edge, I believe you should be monitoring for and reading primary work from peer reviewed journals.

For the standard of care, I'd use a mix of EM journals and some digest service (EM Abstracts, Journal Watch, etc.)

For the limits: watch blogs, non-EM high-impact journals (JAMA, New England Journal, BMJ, etc.)

Third, identify a tool to manage this constantly updating information.

This ideally is something you're going to use every day. For me, it is my home email and RSS subscriptions via Google Reader. It is separate from work email, where I deal with a different deluge of information (e.g. can Epic trim toenails?) For others, it may be audio digests and paper journals. For the new generation of MDs, it may be Facebook and Twitter. (As an aside, I enjoy imagining what is next: downloading and 3D printing your own central line simulator? Sim lab on your Xbox with Kinect? How far are we from direct download of knowledge into our brain?)

Brad Gordon, MD
Director, Residency Technology

Toxicology

The Toxicology Service at Regions Hospital, an integral section of the Emergency Medicine Department, focuses on education, research and clinical evaluations of toxicology patients. The toxicology educational service provides quarterly interdisciplinary conferences (critical care, pediatrics, nephrology), a weekly toxicology journal club, adverse drug reaction, and herbal and toxicology chapter reviews. Other educational events during the year included forensic toxicology case review, toxicology "field trips" to the University of Minnesota Arboretum to learn about toxic plants, and an annual toxic mushroom hunting trip at a rural park.

To augment the education of residents, fellows and students, the toxicology service uses a computer-controlled mannequin for case simulations. New cases are revised and developed throughout the year. The close relationship with the Hennepin Regional Poison Center allows us to share in the educational roles of the Poison Center, participating in their weekly and monthly case conferences and toxicology didactic sessions. During 2010 the clinical toxicology service hosted 2 pediatric emergency medicine fellows, 10 emergency medicine residents from Regions and Mayo; 5 medical students from Minnesota, Iowa, and Wisconsin; and more than 20 PharmD candidates.

Members of Regions toxicology education and clinical service were involved in more than 20 formal presentations at national and regional conferences, local colleges and community hospital grand rounds in Minnesota and Wisconsin in 2010.

Our faculty participated regularly in the toxicology training of critical care fellows, internal medicine residents, and physician assistants. Presentations at a national conference of the Society for Hospital Medicine and participation in the toxicology section review at the Third International Congress on Acute Care in Cochabamba, Bolivia are a few examples of the expanding educational activities of the toxicology service.

The toxicology service averaged approximately 28 formal consultations a month at Regions. In addition we accepted informal educational consults, telephone consults, and consults on pediatric patients at the Minnesota Children's Hospitals and Clinics in Minneapolis and St. Paul. We continue to evaluate in-patients at Regions for herbal-drug and herbal-disease state interaction. Our toxicology clinic received multiple referrals to evaluate new patients with acute, subacute and chronic toxicologic exposures.

Members of the toxicology service participated in toxicology-related clinical and bench-top research. Our research focus continues to be related to treatment of toxin-induced shock with high-dose insulin as an inotropic treatment, and induced hypothermia for the treatment of severe carbon monoxide poisoning. During 2010, our staff and fellows published manuscripts in toxicology, cardiology, and emergency medicine journals. Toxicology faculty also presented at national and international emergency medicine and toxicology meetings.

Carson Harris, MD , FACEP, FAAEM
Director, Toxicology Education & Services

Sam Stellpflug, MD
Assistant Director, Toxicology Education & Services

Kristin Engebretsen, PharmD, DABAT
Clinical Toxicologist



Joel Holger, Heather Ellsworth, Jon Cole, Kristin Engebretsen, Carson Harris, and Lisa Hlavenka (not pictured, Sam Stellpflug)

Since 1997, the Regions Hospital emergency medicine residents have participated in an Emergency Medical Services (EMS) rotation.

Resident Rotation

Emergency medicine residents participate in a 15-day longitudinal rotation in EMS in their G-1 year. Residents participate in direct prehospital care with various EMS agencies, including dual-role services (St. Paul Fire), single-tier services (Lakeview EMS), police/medic services (Cottage Grove Public Safety) and volunteer/paid on-call services (White Bear Lake Fire). Residents also spend time in the Medical Resource Control Center at Regions Hospital, and at the St. Paul Fire Communication Center. Unique experiences during the rotation include a helicopter EMS ride-along with LifeLink III and, during the winter months, working a shift with the National Ski Patrol at Afton Alps Ski Area in Hastings, MN.

In addition to medical direction specific assignments, residents are integrated as active educators within the program and participate in a multitude of training events. Such events include leading critical case reviews and simulation based critical thinking labs with providers. There are also additional teaching opportunities with the paramedic program at Inver Hills Community College.

Associate Medical Directorship

As part of a scholarly project, residents in the G-2 or G-3 year may choose an associate medical directorship with EMS. In 2010 we restructured our formal curriculum for the associate medical director project to better prepare residents who wish to apply to EMS fellowships. Residents are typically assigned to a single service, allowing them relationship-building opportunities. In this role, they are expected to provide feedback on patient care issues, quality assurance activities and critical case review education.

Another type of associate medical directorship offered through EMS is with the paramedic program at Inver Hills Community College. This resident participates in quality assurance for run reviews, creates and delivers curriculum, and acts as an advisor to the paramedic students as well as the program itself.

2010 Associate Medical Directors:

- Katie Davidson, MD ('11); EMS Academy (Inver Hills and St. Paul Fire)
- Kara Kim, MD ('11), St. Paul Fire
- Clint Hawthorne, MD ('12), St. Paul Fire
- Bjorn Peterson, MD ('12), Maplewood Fire
- Ben Watters, MD ('12), Rural EMS



EMS Fellowship

Beginning in July 2010, Regions EMS began offering a 1-year EMS fellowship opportunity for residents interested in expanding their experience in EMS. Dr. Aaron Burnett, a 2010 graduate of the Regions Emergency Medicine Residency program, officially began as the first EMS fellow in July 2010. The goal of the Fellowship is to prepare graduates to sit for the ABEM certification exam which is anticipated to be given in 2014.

Event Medicine

EM residents regularly have the opportunity to participate in mass gathering/large event medicine under the direction of Regions EMS. In 2010, residents provided medical coverage on the course and in the medical aid station at the annual Twin Cities and Stillwater marathons. This year residents provided on site medical care with the St. Paul Fire Dept at the MN State Fair. Residents also serve regularly as crowd physicians during the NHL Minnesota Wild hockey games and during concerts and events held at the Xcel Energy Center.

RJ Frascone, MD
EMS Medical Director

Koren Kaye, MD
EMS Co-Medical Director

Aaron Burnett, MD
Prehospital Medicine Fellow

Josh Salzman
EMS Clinical Care and Research Manager

Shonette Doggett
EMS Education Manager

Educational Objectives:

By the end of the third year of training, residents must demonstrate appropriate knowledge and skill in the use of ED ultrasound. Ultrasound applications that are mastered in emergency residency training are the trauma (FAST) exam, emergency echocardiography, abdominal aortic aneurysm evaluation, examination of undifferentiated hypotension and procedural ultrasound including vascular access, thoracentesis, paracentesis, bladder identification, abscess location, foreign body localization and general aspiration.

Description of clinical experience:

Ultrasound education begins during orientation with a half-day didactic and hands-on instructional session. During the first year, the ultrasound experience is now combined in the emergency department integrated (EDI) months. During the ultrasthesia days of this month, the resident spends the morning intubating in the OR and the afternoon scanning in the ED, completing 10 modules that encompass emergency ultrasound. Residents are encouraged to perform ultrasounds on any patients indicated by clinical presentation. Resident ultrasounds are supervised by the staff emergency attending. EM-2 and EM-3 residents are responsible for ultrasounds during all trauma team activations. An

optional elective in the 3rd year is available to further ultrasound skills and knowledge. A reading list, ultrasound technician observation, and performing emergency department ultrasounds are part of the elective.

Description of didactic experience:

A lecture series covering basic ultrasound physics, focused assessment sonography for trauma (FAST) exam, emergency echocardiography, abdominal aortic aneurysm evaluation, examination of undifferentiated hypotension and procedural ultrasound is covered over an 18-month core content curriculum. Lectures are supplemented with small group, interactive sessions during specific conference days focused on a more interactive learning experience. Prior to residency graduation, residents are given advice on setting up an ultrasound program and getting involved in their new job.

Evaluation process/feedback mechanisms:

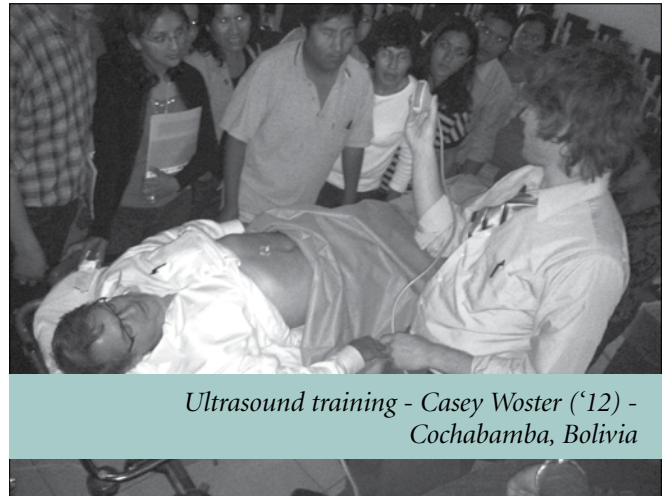
Residents receive immediate feedback on ultrasound technique, image quality and

trouble-shooting techniques by the supervising ED attending. Additionally, ultrasound images are reviewed as part of the quality assurance initiative and feedback is given to the resident and faculty by the ultrasound director. Residents are given a semi-annual report of the number and type of ultrasounds they have done in the ED. This is reviewed during the semi-annual resident evaluation meetings with the program director. Residents are provided an ultrasound credentialing letter upon graduation.

Michael Zwank, MD, RDMS

Peter Kumasaka, MD

Emergency Ultrasound Education



Ultrasound training - Casey Woster ('12) - Cochabamba, Bolivia

Simulation

The Regions Hospital Emergency Medicine Residency has a robust group of faculty with strong interests in simulation-based education. We have worked to integrate simulation and small-group learning as an important part of the residency curriculum. Simulation is also used to augment medical student and faculty education, to address systems-based barriers to quality care and to analyze communication issues.

Drs. Jessie Nelson and Rachel Dahms won the award for Best Innovation

in Emergency Medicine Education at the Society for Academic Emergency Medicine Annual Meeting for their exhibit "Thoracotomy Training without the Live Animal - Development of a Prefabricated Fiberglass Torso for Training EM Residents Multiple Truncal Procedures". This project resulted from the development of a simulated procedural skills lab for residents.

Several residents are pursuing simulation-based projects for their scholarly activity requirements this year, and we look for-

ward to mentoring more residents in this area in the future. Dr. Nelson continues in her role as the physician faculty with HealthPartners Clinical Simulation, and Drs. Hegarty and Binstadt continue as co-directors of emergency medicine and trauma for the University of Minnesota SimPORTAL .

Emily Binstadt, MD, MPH

Cullen Hegarty, MD

Jessie Nelson, MD

Simulation Education & Research

Grants and IRB-Approved Studies:

Burnett AM, Hegarty CB, Gordon BD. HealthPartners IME Grant. Examining the impact of mandatory medical school emergency medicine clerkships on the application rate of students to EM residency programs. (2008-2010)

Carr ME, Engebretsen K. HealthPartners Research Foundation Internal Grant. Identification of Therapeutic Blood and Urine Tetrahydrozoline Levels in Adults. (2010-2011)

Chung WG. Bush Medical Fellowship. Business Innovations Applicable to Medicine. Carlson School of Business Executive MBA Program. (2009-2011)

Chung WG, Frascone RJ, Salzman J, Wewerka S. HealthPartners Research Foundation Internal Grant. ESI for EMS. (2009-2011)

Curl ND, Knopp RK, Nelson JG, Hauge K, **Binstadt ES.** HealthPartners IME Grant. Assessment of Knowledge and Skills Related to Informed Consent Among Emergency Medicine Resident Physicians. (2008-2010)

Erwin AM, Frascone RJ, Kaye K, Salzman J, Wewerka SS, **Holger J.** HealthPartners Research Foundation Discovery Grant. Examining the Feasibility of Sepsis Diagnosis in the Prehospital Environment. (2009-2010)

Frascone RJ, Wewerka SS, Salzman J. International Association of Fire Fighters Burn Foundation. The Effect of Fire Fighter SCBA Use on Carboxyhemoglobin Values During the Overhaul Phase of Fire Fighting. (2009-2011)

Biros M, McGonigal M, Larkins MV, **Frascone RJ,** Snyder B. National Institute of Neurologic Disorders and Stroke. Neurological Emergency Treatment Trials (NETT) Network. (2010-2011)

Hegarty CB, Peterson BK, Dahl EJ. Emergency Medicine Residency Program Interviewee Survey. (2010-2011)

Morgan MW, Engebretsen KM, Holger JS, Flottemesch T, **Vigesaa GS.** HealthPartners Research Foundation Internal Grant. The Addition of an Alpha-Agonist to High-Dose Insulin in the Rescue of Swine Poisoned with a Dihydropyridine Does Not Improve Outcome. (2007-2010)

Nelson JG, Salzman J, Wewerka SS, **Burnett A, Woster C, Frascone RJ.** HealthPartners Research Foundation Internal Grant. Emergency Medicine Evaluation of Video Laryngoscopes in Simulation. (2009-2010)

Stellpflug S, Holger JS, Ellsworth H. HealthPartners Research Foundation Internal Grant. Model Development-Induced Hypothermia Treatment for Severe Carbon Monoxide Poisoning in a Rat Model. (2009-2010)

Cole JB, **Stellpflug S, Holger JS, Engebretsen K.** HealthPartners Research Foundation Internal Grant. High Dose Insulin Dosing Study in Toxic Cardiogenic Shock. (2010-2011)

Zwank M, Carlson CG, Anderson C. HealthPartners Research Foundation Internal Grant. Correlation Between Internal Jugular Vein Dimensions and Congestive Heart Failure. (2008-2010)

Zwank MD, Stoik NE, Ellsworth H, Feist AA. Ultrasound Guided Direct Internal Jugular Venous Catheterization. (2008-2010)

Zwank MD. HealthPartners Research Foundation Internal Grant. Agreement Between Physician and CT Scan High-Energy Mechanism Stable Trauma Patients - A Pilot Study. (2010-2011)

Zwank MD. Improving Patient Comfort in the Emergency Department. (2010-2011)

Zwank MD. Emergency Department Patient Knowledge and Physician Communication Regarding Computed Tomography Scans. (2010-2011)

Program History

Robert Knopp, MD founded the Regions Hospital Emergency Medicine Residency in 1994. Before arriving in St. Paul, he served as the residency director at Valley Medical Center in Fresno, CA for 17 years. The first class of residents at Regions began their training in 1996. Felix Ankel, MD, has been involved with the residency program since its inception and became residency director in July 2000. As of July 2010, the EM residency has graduated 99 residents from 28 medical schools who now practice in 16 states. Regions faculty are graduates of 14 different EM residencies.



Drs. Julie Switzer, winner of 2010 Ian Swatez award & Matt Layman, Anes. rotation liaison

Letter from the Chief Residents

2010-2011 Chief Residents

Welcome to the Regions Emergency Medicine Residency. We're excited about all that is happening here this year.

As our hospital and ED grow, our residency is growing as well. Starting with this year's intern class, we now have 10 residents per class and in 2 years we will have a total of 30 residents. This growth will help ensure we continue to provide excellent care to the growing census our ED is encountering.

We've started a new administrative curriculum that allows residents and medical students a chance to experience the administrative side of emergency medicine. Residents are exposed to administrative meetings and are participating extensively in quality and process improvement projects. This exposure is critical to prepare us to practice quality healthcare in a dynamic system.

We are expanding educational opportunities with focused, "back to the basics" teaching at morning sign-out and by inviting more consultants to participate in Critical Case, our signature interactive teaching session during Thursday morning conference.

We are also continuing the change made last year to the intern schedule where EMS



Retreat 2010 - St. Paul Curling Club

and ultrasthesia (1/2 day of intubating in the OR and 1/2 day of performing ultrasounds in the ED) time is integrated into the ED months. This allows exposure to EMS, intubation and ultrasound throughout the intern year.

We continue to have excellent critical care experience that is a key component of our training. We experience 6 weeks in the SICU every year and 1 month in the MICU 1st and 2nd years, caring for complex critically ill medical and trauma patients.

As always, we have lots of clinical exposure and amazing faculty teaching in an environment that is challenging yet supportive. These experiences allow us to grow and provide excellent health care to our patients in the ED and our community.

We love our experience here and are excited to share about it, so please contact us to find out more!

Katie Davidson, MD

Kara Kim, MD

Eric Roth, MD

2010-2011 Chief Residents



Resident Spotlight: Autumn Erwin, MD

Dr. Erwin was highly recruited into our residency, and we were delighted that she matched with us in 2008. During her residency, Dr. Erwin has continued to engage in her passions of EMS and global health.

As a first year resident, Dr. Erwin did run reviews with multiple EMS services. She was the resident liaison for the Twin Cities Marathon medical aid planning committee. Dr. Erwin successfully secured a HealthPartners Research Foundation discovery grant examining the feasibility of sepsis diagnosis in the prehospital environment. She is currently a member of ACEP's EMS Committee.

Dr. Erwin's other passion is global health and international medicine, specifically leading medical relief missions to Port Salut and Port au Prince, Haiti. While a resident, Dr. Erwin recruited volunteers, organized travel needs, secured donations of supplies and medications, wrote medical protocols and directed medical care. She traveled to Haiti immediately following the earthquake of 2010 and will have traveled to Haiti four times during her residency. She was selected to receive the Mark Bernas Advocacy award for 2010 and was named Most Likely to Change the World in the Regions Hospital 2010 yearbook of accomplishments.

Autumn Erwin will undoubtedly leave her mark nationally and internationally. It's been an honor to train with her, and we wish her the best in her future endeavors.

Class of 2013

Amanda Carlson, MD



- BS Summa Cum Laude - Biomedical Science - University of Minnesota-Duluth
- MD - University of Minnesota
- Phi Kappa Phi Honor Society
- Interests: running, water skiing, snowmobiling, hiking, biking.

Sonali Meyer, MD



- BA - History, Germanic Languages & Literature, Biopsychology - University of Michigan
- MD - University of Minnesota
- Interests: Ballroom, salsa rueda, and salsa dancing, cello performance, cooking, travel

Jodi Deleski, DO



- BS - Biology - University of Minnesota
- BS - Nursing - University of Miami
- DO - Nova Southeastern University College of Osteopathic Medicine
- Interests: ballet, outdoor activities

Adetolu Oyewo, MD



- BS - Biochemistry - University of Minnesota
- MD - Mayo Medical School
- Interests: family and friends, movies, church

Zabrina Evens, MD



- BS - Biochemistry & Physiology - University of Minnesota
- MD - University of Minnesota
- SAEM 2010 Medical Student Excellence award
- Interests: skydiving, p90x, and beach vacations

Wendy Rangitsch, MD



- BA - Nutrition - Arizona State University
- MD - University of Minnesota
- Division I soccer player
- Interests: travel, running, hiking, biking, snowboarding, snowshoeing, Harry Potter

Rebecca Gardner, MD



- BS - Biology - University of Minnesota
- MD - Temple University School of Medicine
- Interests: softball, volleyball, golf, frisbee, indoor rock climbing, traveling

Darcy Rumberger, MD



- BA - Biology - Lewis & Clark College
- MD - University of Florida
- Interests: gardening, tap dancing, skiing

Gary Mayeux, Jr., MD



- BA - Biology - St. John's University
- MD - Louisiana State University
- Interests: weightlifting, running, dogs, eating, Twins games, Minnesota hockey, spending time with family

Joseph Walter, MD



- BS - Ecology, Evolution & Behavior - University of Minnesota
- MD - St. Louis University
- Interests: racquetball, hockey, bicycling, cooking, travel



Faculty Spotlight: Drew Zinkel, MD

Drew Zinkel joined the faculty in August of 2008 after completing his residency at the University of Illinois at Chicago. While a resident, Drew was EMRA president and received the ACEP Heros in Emergency Medicine award. Since joining the faculty at Regions, Dr. Zinkel has implemented a longitudinal

administrative curriculum teaching a systems-based approach to medicine that includes healthcare delivery, advocacy, leadership, and quality.

The longitudinal administrative curriculum spans a resident's three year training and includes scheduled non-clinical shifts (resident of the day – ROD). During ROD shifts, residents attend departmental and hospital committee meetings as an active learner with faculty supervision. They also are assigned a quality pager that alerts them when a STEMI or a tPA candidate for stroke arrives in the ED. During this time, the ROD has an opportunity to observe the case without primary clinical responsibilities and analyze quality markers and standards in a real-time setting.

Under Dr. Zinkel's leadership, our residency has established an ethics and advocacy conference held at the state capitol, located near our hospital. This provides a venue for residents to be informed and involved in efforts to improve the healthcare system. Dr. Zinkel attends ACEP's Advocacy and Leadership conference each year with at least one resident.

Dr. Zinkel was named EM medical director of quality in 2010 and leads quality improvement initiatives within the department, hospital, and health system. Kara Kim, MD ('11), along with Marcella de la Torre, GME performance improvement project manager, and Kelly Barringer, MD, spearheaded the integration of quality improvement and residency training in our department. Residents now co-lead departmental QI project teams in STEMI, CVA, DKA, and vital sign management. Dr. Zinkel is director of the Regions EM medical quality management and patient safety fellowship with the first fellow (Kara Sellung Kim, MD) starting in July, 2011. Future fellows will be introduced to leadership roles in medical quality management, be involved in quality improvement projects both within and outside the emergency department, and will complete a master's in business administration which will prepare them for future leadership positions in medical quality management.

Dr. Zinkel continues his academic involvement on a regional and national level. He is currently a member of the MN ACEP board of directors, the ACEP national quality committee, and immediate past chair of ACEP's young physician section. We predict that he will become a leader in creating academic career pathways in quality development.



Kara Kim ('11) winner of ACEP's QIPS Section Resident Quality Award

New Faculty 2010



Brian Peterson, DO

Undergraduate: North Park University
Med School: Chicago College of Osteopathic Medicine
Residency: Resurrection Medical Center



Samuel Stellpflug, MD

Undergraduate: University of Wisconsin
Med School: University of Wisconsin
Residency: Regions Hospital
Fellowship: Medical Toxicology - Regions Hospital
Interests: Toxicology
Hobbies: Golf, poker

Faculty

Faculty

Felix Ankel, MD
Kelly Barringer, MD
Emily Binstadt, MD, MPH
Mary Carr, MD
Won Chung, MD, MS
Rachel Dahms, MD
RJ Frascione, MD
Jason Gengerke, MD
Bradley Gordon, MD
Paul Haller, MD
Carson Harris, MD
Cullen Hegarty, MD
Keith Henry, MD
Bradley Hernandez, MD
Joel Holger, MD
Kurt Isenberger, MD
Kory Kaye, MD
Kevin Kilgore, MD
Robert Knopp, MD
Peter Kumasaka, MD
Richard Lamon, MD
Robert LeFevere, MD
Matthew Morgan, MD
Jessie Nelson, MD
Levon O'hAodha, MD
Henry Ortega, MD
Brian Peterson, DO
Karen Quaday, MD
Samuel Reid, MD
Martin Richards, Jr, MD
Samuel Stellpflug, MD
Stephanie Taft, MD
Charis Thatcher, MD
Bjorn Westgard, MD
Andrew Zinkel, MD
Michael Zwank, MD

Medical School

University of Wisconsin
Michigan State University
Mayo Medical School
University of Michigan
Albany Medical College
University of Minnesota
University of Minnesota
University of Iowa
Creighton University
University of Minnesota
University of Minnesota
University of Minnesota
University of Minnesota
University of Arizona
University of Iowa
University of Minnesota
Medical College of Wisconsin
University of South Dakota
University of North Dakota
University of Minnesota
University of Rochester
Loma Linda University
Creighton University
Chicago Medical School
University of Minnesota
University of Minnesota
Oregon Health Sciences
Chicago COM
Wayne State University
University of Minnesota
University of Minnesota
University of Wisconsin
East Carolina University
Medical College of Wisconsin
University of Illinois Urbana-Champaign
University of Wisconsin
University of Wisconsin

Residency

University of Illinois
Regions Hospital
Harvard Affiliated
EM/IM Henry Ford Hospital
Harvard Affiliated
Indiana University
FP - St. Paul-Ramsey Medical Center
Michigan State-Grand Rapids
Regions Hospital
IM - University of Minnesota
Brooke Army Medical Center
Regions Hospital
Regions Hospital
Regions Hospital
IM - Abbott Northwestern Hosp.
Regions Hospital
St. Vincent Medical Center -Toledo
Ortho - Creighton University
Valley Medical Center, UCSF-Fresno
Christ Hospital
FP - Loma Linda University
Regions Hospital
Regions Hospital
Regions Hospital
University of Michigan
Peds EM - Columbus Children's Hospital
Resurrection Medical Center
EM/IM Henry Ford Hospital
Peds EM - Children's Hospital St. Paul
Regions Hospital
Regions Hospital
Regions Hospital
Regions Hospital
Hennepin County Medical Center
University of Illinois
Boston Medical Center



2010 Faculty

Staying connected with residents, alumni and colleagues continues to be in the forefront for us. In fact, numerous residency-sponsored events kept us in touch with alumni and allowed them the opportunity to meet and network with our current residents. Our website and Facebook fan page continue their popularity in the EM community, according to our usage stats. Many thanks to our alumni who contribute content and comments.

As members of the Emergency Medicine Association of Residency Coordinators (EMARC), we attended the annual meeting in Orlando, which was part of the 2010 CORD Academic Assembly. It allowed us the opportunity to network with our coordinator colleagues throughout the country. Lori co-chaired the planning committee for the EMARC Track of the Academic Assembly and also presented a class on developing and using wikis.

It was our pleasure to host 105 medical students from 14 medical schools, 23 rotating residents from 5 specialties and 5 EM residents from Hennepin County Medical Center who participated in our 2nd year swap.



Lori Barrett and Pat Anderson

Lori Barrett
Manager, Residency & Education

Pat Anderson
Program Coordinator

Regions Hospital Foundation EM Residency Funds

L134 - Emergency Medicine Residency Education

Gifts to this fund allow the residency to education future emergency practitioners by funding programs such as our procedural skills lab, international rotations, specialty conferences, and much more. In 2010, this fund was provided assistance to three residents to attend national and regional meetings. One received a national award for her quality work, and one was named best oral presenter.

Regions Circle (\$10,000+)

Regions Hospital Emergency Medicine Physicians

Advocate (\$1,000+)

Felix Ankel
Robert LeFevre & Jenny Dahl
Paul Travnicek
Jeffrey & Sarah Young

Builder (\$500+)

Mark & Adina Connelly
Kevin & Abbie Smith

Sponsor (\$100+)

Bradley & Karine Hernandez
Robert Knopp
Jon & Felicia Shultz
Stephanie & Norm Taft
John & Victoria Travnicek

E009 - Mark Bernas Endowment

The Mark Bernas Endowment was established in 1998 after the death of EM resident, Mark Bernas. It's purpose is to provide long term financial resources for the Emergency Medicine Department's library needs and educational projects.

Current Residents

Class of 2011

	Undergraduate	Medical School
Catherine Carlson, MD	University of Colorado	University of Colorado
Katharine Davidson, MD	Cornell University	University of Cincinnati
Autumn Erwin, MD	Southwestern University	University of Minnesota
Alexander Gerbig, MD	Concordia College	University of Minnesota
Kara Kim, MD	University of Minnesota	University of Minnesota
N. Kolja Paech, MD	University of California-Davis	University of California-San Francisco
Eric Roth, MD	Augsburg College	Dartmouth Medical School
Jillian Smith, MD	University of Vermont	Tufts University
Timothy Sullivan, MD	University of Notre Dame	Yale University

Class of 2012

	Undergraduate	Medical School
Peter Baggenstos, MD	University of Notre Dame	Morehouse School of Medicine
Eric Dahl, MD	University of Minnesota	University of Minnesota
Tyler Ferrell, MD	Brigham Young University	Medical College of Wisconsin
Clint Hawthorne, MD	University of Iowa	University of Iowa
Katherine Katzung, MD	Montana State University	University of Minnesota
Bjorn Peterson, MD	Bethel University	Loma Linda University
Jerome Walker, MD	College of the Holy Cross	University of Minnesota
Benjamin Watters, MD	Wheaton College	Loma Linda University
Casey Woster, MD	Creighton University	Creighton University

Class of 2013

	Undergraduate	Medical School
Amanda Carlson, MD	University of Minnesota-Duluth	University of Minnesota
Jodi Deleski, DO	University of Minnesota, University of Miami	Nova Southwestern University COM
Zabrina Evens, MD	University of Minnesota	University of Minnesota
Rebecca Gardner, MD	University of Minnesota	Temple University
Gary Mayeux, Jr., MD	St. John's University	Louisiana State University
Sonali Meyer, MD	University of Michigan	University of Minnesota
Adetolu Oyewo, MD	University of Minnesota	Mayo Medical School
Wendy Rangitsch, MD	Arizona State University	University of Minnesota
Darcy Rumberger, MD	Lewis & Clark College	University of Florida
Joseph Walter, MD	University of Minnesota	St. Louis University

Residency Presentations 2010

The Regions Hospital Emergency Medicine Residency supplements the clinical learning experience with lectures, workshops and procedural skills labs that are open (space permitting) to all residents, faculty, students, alumni, nurses, physician assistants, consultants and others from our residency community to share and discuss new knowledge.

Number of lectures: 223

Hours of attendance: 4700 resident hours

Number of workshops: 47 workshops were taught to 25 rotating residents and 176 medical students and PA students.

Number of labs: 40 residents participated in 17 procedural skills labs

Medical Student Program



Combined sim day with HCMC May 20, 2010

Regions Emergency Medicine Department continues to have a strong interest and commitment to medical student education. Rotations hosted at Regions include our core, required EM clerkship through the University of Minnesota Medical School, our advanced EM clerkship, our toxicology course, and a new elective bedside ultrasound experience.

Our **core rotation** consistently gets top reviews from University of Minnesota students. The highlights of the rotation include the outstanding supervision, education, and feedback to the students from our senior residents, their experience in our weekly resident conferences, and the weekly student focused educational workshops, including a simulation resuscitation workshop. This rotation allows our senior residents to experience daily teaching and supervision, and allows the students a chance to have a close working relationship with our EM residents.

The **advanced rotation** is our sub-internship experience for students from the University of Minnesota as well as other US medical schools. Highlights of this advanced rotation include direct supervision by EM faculty, EMS, ultrasound, and EKG education and experiences, and an informal session with Dr. Ankel focused on the emergency medicine residency application process.

Students taking the **toxicology rotation** here get a well rounded tox experience with our clinical toxicology service. During their four weeks they get to experience ED consults,

inpatient consults and rounds on the toxicology in-patient consultation service, time at the Poison Control Center, and outstanding small group educational sessions.

Our newest EM elective is **bedside ultrasound for the clinician**—a rotation hosted by Dr. Mike Zwank from Regions and Dr. Rob Reardon from HCMC. Students taking this elective get to spend time with an ultrasound technician learning the ins and outs of the ultrasound machine, have focused reading on ultrasound and its EM application, and plenty of hands on, supervised ultrasound time in the ED.

In 2010, Regions Hospital hosted a total of 105 students from 14 medical schools, with 42 of them taking the advanced course. Dr. Hegarty continues in his role as clerkship director for all EM courses through the department of EM at the University of Minnesota in addition to his roles as co-chair of the University of Minnesota Medical School Twin Cities campus curriculum committee, and chair of the clinical education committee at the medical school.

If interested in learning more about our student rotation opportunities, check the 'student program' link on our website (<http://www.regionsem.org/student-program>) or call Lori Barrett at 651-254-3666. Applications are being accepted for the 2011-2012 academic year through the Visiting Student Application Service (<https://services.aamc.org/20/vsas/>).

Cullen Hegarty, MD

Keith Henry, MD

Kevin Kilgore, MD

Lori Barrett

Residency Awards/Recognition/Honors

Star Award - resident teacher selected by medical students

2010 Aaron Feist, MD, Gregory Vigesaa, DO
2009 Adina Connelly, MD, Danielle Jackson, MD
2008 Samuel Stellpflug, MD
2007 Sandy Fritzlär, MD
2006 Nathan Anderson, MD, Martin Richards, Jr., MD,
John Travnicek, MD, Melissa Tschohl, MD
2005 Keith Henry, MD
2004 Robert LeFevere, MD
2003 Lynn Howard, MD
2002 John Bonta, MD
2001 Cullen Hegarty, MD

Apple Award - faculty teacher selected by medical students

2010 Rachel Dahms, MD
2009 Keith Henry, MD
2008 Cullen Hegarty, MD, Kevin Kilgore, MD
2007 Joel Holger, MD, Peter Kumasaka, MD, Michael Zwank, MD
2006 Jeahan Hanna, MD
2005 Rachel Dahms, MD, Robert LeFevere, MD
2004 Cullen Hegarty, MD
2003 Kevin Kilgore, MD
2002 Felix Ankel, MD
2001 Paul Haller, MD

Faculty Teaching Award - EM faculty teacher selected by residents

2010 Bradley Hernandez, MD
2009 Keith Henry, MD
2008 Cullen Hegarty, MD
2007 Rachel Dahms, MD, Jeahan Hanna, MD
2006 Robert Knopp, MD
2005 Felix Ankel, MD
2004 Karen Quaday, MD
2003 Carson Harris, MD
2002 Scott Cameron, MD
2001 Robert Knopp, MD
2000 Joel Holger, MD

Nurse Educator Award - EM nurse teacher selected by residents

2010 Clarice Marsh, RN
2009 Angela Hoepfner, RN
2008 Andrew Hebdon, RN
2007 Lawrence Cochran, RN
2006 Tom Peterson, RN, Karen Poor, RN
2005 Donovan Taylor, RN
2004 Mary Healy, RN

Excellence in EMD Research

2010 Nathaniel Curl, MD
2008 Tara O'Connell, MD
2007 Emily Mason, MD, Ben Peake, MD
2006 Scott Donner, MD
2005 Sandy Fritzlär, MD
2004 Kurt Isenberger, MD
2003 S. Wade Barnhart, MD, Christopher Obetz, MD
2002 Randall Hofbauer, MD
2001 Frank Coughlin, MD
2000 Paul Satterlee, MD, Paul Jewett, MD
1999 Kevin Sipprell, MD, James Parker, MD

Ian Swatez Teaching Award - faculty teacher from outside EM selected by residents

2010 Julie Switzer, MD
2009 Azhar Ali, MD
2008 David Dries, MD
2007 Eric Korbach, MD, Henry Ortega, MD
2006 David Lee, MD
2005 Bruce Bennett, MD
2004 Raj Sarpal, MD
2003 William Mohr, MD
2002 Mari Goldner, MD
2001 David Dries, MD
2000 Ian Swatez, MD

Robert Knopp Humanism Award

2010 Heather Ellsworth, MD
2009 Tara O'Connell, MD
2008 Mark Connelly, MD
2007 Emily Mason, MD
2006 Martin Richards, Jr., MD
2005 Keith Henry, MD, Jon Hokanson, MD

Excellence in EMS Award

2010 Aaron Burnett, MD
2009 Owen Anderson, MD
2008 Joey Peterson, MD, Jonathan Shultz, MD
2007 Heidi Lako, MD

Toxicology Award

2010 Heather Ellsworth, MD

Mark Bernas Advocacy Award

2010 Autumn Erwin, MD

Biros MH, McNeil MA, **Ankel F, Gordon B**, Lindgren KN, Joing S. Interviews with leaders in emergency medicine. *Acad Emerg Med*. 2010 Sep;17(9):e87.

Carr ME, Moettus AL. Developing a policy for sexual assault examinations on incapacitated patients and patients unable to consent. *J Law Med Ethics*. 2010 Sep;38(3):647-53.

Katz ED, **Dahms R**, Sadosty AT, Stahmer SA, Goyal D on behalf of the CORD-EM Remediation Task Force. Guiding principles for resident remediation: recommendations of the CORD remediation task force. *Ann Emerg Med*. 2010 Oct;17:S95-S103.

Engebretsen KM, Morgan MW, Stellpflug SJ, Cole JB, Anderson CP, **Holger JS**. Addition of phenylephrine to high-dose insulin in dihydropyridine overdose does not improve outcome. *Clin Toxicol*. 2010 Oct;48(8):806-12.

Holger JS, Dries DJ, **Barringer KW, Peake BJ**, Flottesmesch TJ, Marini JJ. Cardiovascular and metabolic effects of high-dose insulin in a porcine septic shock model. *Acad Emerg Med*. 2010 Apr;17(4):429-35.

Colletti JE, Flottesmesch TJ, **O'Connell TA, Ankel FK**, Asplin BR. Developing a standardized faculty evaluation in an emergency medicine residency. *J Emerg Med*. 2010 Nov;39(5):662-8.

Stellpflug SJ, Fritzljar SJ, Cole JB, Engebretsen KM, Holger JS. Cardiotoxic overdose treated with intravenous fat emulsion and high-dose insulin in the setting of hypertrophic cardiomyopathy. *J Med Toxicol*. 2010 Dec 21. [Epub ahead of print]

Stellpflug SJ, Cole JB, Harris CR. "I shouldn't have had dessert..." a moonflower seed ingestion. *West J Emerg Med*. 2010 May;11(2):213.

Stellpflug SJ, Harris CR, Engebretsen KM, Cole JB, Holger JS. Intentional overdose with cardiac arrest treated with

intravenous fat emulsion and high-dose insulin. *Clin Toxicol*. 2010 Mar;48(3):227-9.

Stellpflug SJ, Roberts DJ. Which xenobiotic(s) could be responsible for the radiologic findings below? Answer: any proconvulsant xenobiotic, in this case tramadol, bupropion, and nortriptyline. *J Med Toxicol*. 2010 Mar;6(1):72-3.

Schneider SM, Gardner AF, Weiss LD, Wood JP, Ybarra M, Beck DM, Stauffer AR, Wilkerson D, Brabson T, Jennings A, Mitchell M, McGrath RB, Christopher TA, King B, Muelleman RL, Wagner MJ, Char DM, McGee DL, Pilgrim RL, Moskovitz JB, **Zinkel AR**, Byers M, Briggs WT, Hobgood CD, Kupas DF, Kruger J, Stratford CJ, Jouriles N. The future of emergency medicine. *Acad Emerg Med*. 2010 Sep;17(9):998-1003. *Ann Emerg Med*. 2010 Aug;56(2):178-83. *J Emerg Med*. 2010 Aug;39(2):210-5. *J Emerg Nurs*. 2010 Jul;36(4):330-5.

Book Chapters

Ankel F. Aortic Dissection. In Marx, Hockberger, Walls et al (Eds.), *Rosen's Emergency Medicine, Concepts and Clinical Practice 7th Edition* (pp 1088-1092). Philadelphia, PA. Mosby/Elsevier, 2010.

Kilgore KP. Information Technology in Medical Student Education. In Rogers, Moayed (Eds.), *CDEM/SAEM Medical Educators' Handbook 2nd Edition* (pp 218-223). Society for Academic Emergency Medicine, 2010.

Scientific Presentations

Burnett AM, Hegarty CB. An Analysis of Required Medical School Emergency Medicine Clerkships and Their Impact on Residency Application Rates. Poster presentation. CORD Academic Assembly. Orlando, FL. March 2010 and SAEM Annual Meeting. Phoenix, AZ. June 2010.

Carlson CG, Zwank MD. Correlation Between Internal Jugular Vein Dimensions and Congestive Heart Failure. Oral

presentation. Great Plains Regional SAEM Meeting. Omaha, NE. September 2010.

Curl ND, Knopp RK, Nelson JG, Hauge K, **Binstadt ES**. Assessment of Knowledge and Skills Related to Informed Consent Among Emergency Medicine Resident Physicians. Oral presentation. SAEM Annual Meeting. Phoenix, AZ. June 2010.

Aufderheide TP, **Frascone RJ**, Wayne MA, Mahoney BD, Swor RA, Domeier RM, Olinger ML, Holcomb RG, Tupper DE, Yannopoulos D, Lurie KG. Comparative Effects of Standard CPR Versus Active Compression Decompression CPR with Augmentation of Negative Intrathoracic Pressure for Treatment of Out-Of-Hospital Cardiac Arrest: Results from a Randomized Prospective Study. Oral presentation at *European Resuscitation Council*, Porto, Portugal, December 2010.

Aufderheide TP, **Frascone RJ**, Wayne MA, Mahoney BD, Swor RA, Domeier RM, Olinger ML, Holcomb RG, Tupper DE, Yannopoulos D, Lurie KG. Treatment of Out-Of-Hospital Cardiac Arrest with an Impedance Threshold Device and Active Compression Decompression Cardiopulmonary Resuscitation Improves Survival with Good Neurologic Function: Results from the ResQ Trial. *Circulation*, 2010;122:HT2. Oral presentation at Resuscitation Science Symposium: Hot Topics; Orlando, FL. November 2010.

Salzman JG, Wewerka S, **Frascone RJ**, Koenkamp D, **Chung W**. Use of Competency Cases to Assess Provider Knowledge of the Emergency Severity Intex (Version 4): An Item Analysis. Poster presentation. SAEM Annual Meeting. Phoenix, AZ. June 2010.

Russi CS, **Frascone RJ**, Lick C, Conterato M, Wewerka SS, Griffith K, Myers L, Connors J, Salzman J. Is Time to Insertion Different between Standard Endotracheal Intubation and the King LTS-D Supraglottic Airway? Poster presentation at the 2010 National Association of Emergency Medical Physicians Annual Conference, Phoenix, AZ. January 2010.

Frascone RJ, Conners J, Myers L, Salzman J, Griffith K, Conterato M, Lick C, Russi CS, Wewerka SS. The Advanced Airway Research Trial: A Multicenter, Prospective, Randomized Trial Comparing Standard Endotracheal Intubation and the King LTS-D Supraglottic Airway Under RSI Conditions. Oral and poster presentations at the 2010 National Association of Emergency Medical Physicians Annual Conference, Phoenix, AZ. January 2010.

Salzman J, Wewerka SS, Lick C, Conterato M, Meyers L, Conners J, **Frascone RJ**, Russi CS. Effect of Time from Initial Training to Field Placement of the King LTS-D: The Advanced Airway Research Trial. Poster Presentation at the 2010 National Association of Emergency Medical Physicians Annual Conference, Phoenix, AZ. January 2010.

Holger JS, Engebretsen KM, Stellpflug SJ, Cole JB, Harris CR. High dose insulin case series. *Clin Toxicol* 2010;48(6):613. Poster presentation, North American College of Clinical Toxicology. October 2010.

Holger JS, Harris CR, Engebretsen K. High Dose Insulin: A Consecutive Case Series. Poster presentation. Great Plains Regional SAEM Meeting. Omaha, NE. September 2010.

Morgan M, Engebretsen KM, Stellpflug SJ, Vigesaa GS, Dillon CC, Holger JS, Anderson C. The addition of an alpha-agonist to high-dose insulin in the rescue of swine poisoned with a dihydropyridine does not improve outcome. Poster presentation, American College of Medical Toxicology Spring Meeting. March 2010.

Nelson JG, Dahms RA, Ankel FK. Thoracotomy Training Without The Live Animal - Development of a Pre-fabricated Fiberglass Torso for Training EM Residents Multiple Invasive Truncal Procedures. IEME Exhibit. SAEM Annual Meeting. Phoenix, AZ. June 2010.

Peterson BK, Dahl EJ, Hegarty CB. Social Networking Websites and Internet Media As Residency Recruitment Tools. Poster presentation. CORD Academic Assembly. Orlando, FL. March 2010.

Stellpflug SJ, Cole JB, Dolan JA, Setzer SC, Moser KL, **Harris CR.** Life-Threatening Flecainide Overdose Treated with Intravenous Fat Emulsion. *Clin Toxicol* 2010;48(6):612. Poster presentation, North American College of Clinical Toxicology. October 2010.

Stellpflug SJ, Cole JB, Lintner CP, Kwon SK, Roberts DJ. Diethylene Glycol: A Poison Center Review Of 10 Years Of Pediatric Exposures. *Clin Toxicol* 2010;48(6):606. Oral and poster presentations, North American College of Clinical Toxicology. October 2010.

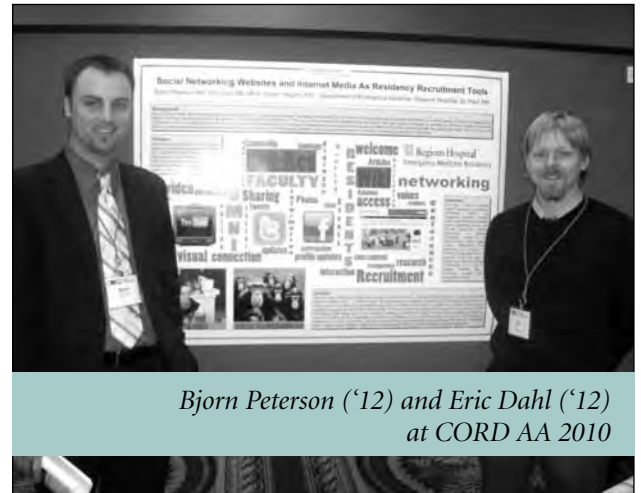
Stellpflug SJ, Fritzlar SJ, Cole JB, Engebretsen KM, Holger JS. Overdose of Diltiazem, Metoprolol, and Amiodarone Treated Successfully with Intravenous Fat Emulsion and High Dose Insulin in an Awake Patient. *Clin Toxicol* 2010;48(6):612. Poster presentation, North American College of Clinical Toxicology. October 2010.

Stellpflug SJ, Cole JB, Bangh SA, Roberts DJ. Potentially Lethal Ingestion of DMT and Syrian Rue. *Clin Toxicol* 2010;48(6):630. Poster presentation, North American College of Clinical Toxicology. October 2010.

Lintner CP, Kwon SK, Brandt R, **Cole JB, Stellpflug SJ.** Parachuting of Water-Extracted Dextromethorphan. *Clin Toxicol* 2010;48(6):617. Poster presentation, North American College of Clinical Toxicology. October 2010.

Cole JB, Stellpflug SJ, Karpas A, Roberts DJ. Ingestion of One Lead Fishing Sinker Resulting in Toxic Lead Levels Within Hours. *Clin Toxicol* 2010;48(6):622. Poster presentation, North American College of Clinical Toxicology. October 2010.

Cole JB, Stellpflug SJ, Moquist KL, Setzer SC, Bilden EF. Massive Hydroxyurea Overdose in a Child Treated with Gastric Lavage and Activated Charcoal. *Clin Toxicol* 2010;48(6):655. Poster presentation, North American College of Clinical Toxicology. October 2010.



Bjorn Peterson ('12) and Eric Dahl ('12)
at CORD AA 2010

Cole JB, Stellpflug SJ, Gross EA, Smith SW. Wide Complex Tachycardia in a Pediatric Diphenhydramine Overdose Treated with Sodium Bicarbonate. *Clin Toxicol* 2010;48(6):655. Poster presentation, North American College of Clinical Toxicology. October 2010.

Cole JB, Stellpflug SJ, Massive Venlafaxine Overdose Resulting in Abdominal Compartment Syndrome. *Clin Toxicol* 2010;48(6):644. Poster presentation, North American College of Clinical Toxicology. October 2010.

Lintner CP, KwonSK, **Stellpflug SJ, Cole JB.** Heating Pad Ingestion with Significant Iron Level Elevation. *Clin Toxicol* 2010;48(6):623. Poster presentation, North American College of Clinical Toxicology. October 2010.

Zinkel AR, Kim KS, Erwin AM, Gapinski LM, Barrett LJ, and **Ankel F.** Integrating Advocacy and Education: Regions' Walk to the Capitol. Poster presentation at ACEP Leadership and Advocacy Conference. Washington, DC. February 2010.

Zwank MD. Ultrasound Guided Direct Internal Jugular Venous Catheterization. Oral presentation. Great Plains Regional SAEM Meeting. Omaha, NE. September 2010.

Zwank MD, Burnett AM. Laboratory Confirmed Gonorrhea and or Chlamydia Rates in Clinically Diagnosed PID and Cervicitis. Poster Presentation. Great Plains Regional SAEM Meeting. Omaha, NE. September 2010.

Emergency Medicine Program Graduates

Name	Medical School	Current Location
Luke Albrecht, MD '08	University of Minnesota	New Ulm Medical Center - New Ulm, MN
Nathan Anderson, MD '06	University of Minnesota	United Hospital - St. Paul, MN
Owen Anderson, MD '09	Medical College of Wisconsin	Fairview Ridges Hospital - Burnsville, MN
Cheri Audrain-Schroeder, MD '01	University of Nevada	Fairview Southdale Hospital - Edina, MN
Kendal Baker, MD '03	Indiana University	Hancock Regional Hospital - Greenfield, IN
Stephen Wade Barnhart, MD '03	Indiana University	Good Samaritan Hospital - Puyallup, WA
Kelly Barringer, MD '08	Michigan State University	Regions Hospital - St. Paul, MN
Bradley Barth, MD '00	University of Minnesota	St. John's Hospital - Maplewood, MN
Marny Benjamin, MD '02	Loyola University	Methodist Hospital - St. Louis Park, MN
Mark Bernas, MD '00	University of Minnesota	Deceased
John Bonta, MD '02	University of Nebraska	Bryan LGH Medical Center - Lincoln, NE
Sandy Fritzlzar Buckman, MD '07	Mayo Medical School	United Hospital - St. Paul, MN
Aaron Burnett, MD '10	SUNY at Syracuse	EMS Fellowship - Regions Hospital - St. Paul, MN
Adina Miller Connelly, MD '09	University of Minnesota	North Memorial Medical Center - Robbinsdale, MN
Mark Connelly, MD '08	University of Minnesota	North Memorial Medical Center - Robbinsdale, MN
Frank Coughlin, MD '01	University of South Dakota	Bryan LGH Medical Center - Lincoln, NE
Susan Zola Cullinan, MD '01	University of North Dakota	Luther Midelfort Hospital - Eau Claire, WI
Nathaniel Curl, MD '10	University of Iowa	Trinity Regional Health System - Bettendorf, IA
Laresa DeBoer, MD '02	University of Minnesota	Ridgeview Hospital - Waconia, MN
Tanya Kleven Decker, MD '04	University of North Dakota	St. Luke's Hospital - Cedar Rapids, IA
Chanah DeLisle, MD '99	University of Minnesota	St. Francis Hospital - Shakopee, MN
Christopher Dillon, MD '09	University of Wisconsin	Mercy Hospital - Coon Rapids, MN
Joseph Dolan, MD '09	University of Iowa	Methodist Hospital - St. Louis Park, MN
Scott Donner, MD '06	University of Kansas	University of Minnesota Medical Center - Minneapolis, MN
Joey Peterson Duren, MD '08	University of North Dakota	North Memorial Medical Center - Robbinsdale, MN
Mary Fehringer Drake, MD '00	University of Nebraska	Bozeman Deaconess Hospital - Bozeman, MT
Roseann Ekstrom, MD '07	University of Minnesota	Fairview Northland Medical Center - Princeton, MN
Heather Ellsworth, MD '10	Medical College of Wisconsin	Toxicology Fellowship - Regions Hospital - St. Paul, MN
Aaron Feist, MD '10	University of North Dakota	Community Medical Center - Missoula, MT
Jared Friedman, MD '05	University of South Dakota	Avera McKennan Hospital - Sioux Falls, SD
Jon Fuerstenberg, MD '04	Mayo Medical School	Abbott Northwestern Hospital - Minneapolis, MN
Leah Gapinski, MD '10	University of Iowa	United Hospital - St. Paul, MN
Jeffrey Geddes, MD '06	University of North Dakota	Altru Hospital - Grand Forks, ND
Shani Go, MD '10	Chicago Medical School	St. John's Hospital - Maplewood, MN
Elizabeth Godin, MD '06	Medical College of Wisconsin	University of Minnesota Medical Center - Minneapolis, MN
Bradley Gordon, MD '02	Creighton University	Regions Hospital - St. Paul, MN
Craig Grorud, MD '99	University of North Dakota	Park Nicollet - Minneapolis, MN
Theresa Gunnarson, MD '00	University of Minnesota	St. Mary's Hospital - Duluth, MN
Cullen Hegarty, MD '01	University of Minnesota	Regions Hospital - St. Paul, MN
Keith Henry, MD '05	University of Arizona	Regions Hospital - St. Paul, MN
Bradley Hernandez, MD '01	University of Iowa	Regions Hospital - St. Paul, MN
Randall Hofbauer, MD '02	University of Minnesota	Deceased
Jonathan Hokanson, MD '05	University of Minnesota	Abbott Northwestern Hospital - Minneapolis, MN
Patrick Holland, MD '02	University of Hawaii	Good Samaritan Hospital - Puyallup, WA
Lynn Howard, MD '03	University of Minnesota	St. Joseph's Medical Center - Brainerd, MN
Kurt Isenberger, MD '04	Medical College of Wisconsin	Regions Hospital - St. Paul, MN
Danielle Jackson, MD '09	University of Minnesota	St. John's Hospital - Maplewood, MN
Paul Jewett, MD '00	St. Louis University	University of Minnesota Medical Center - Minneapolis, MN
Nicholas Johnson, MD '05	Creighton University	Abbott Northwestern Hospital - Minneapolis, MN
Phelps Johnson, MD, PhD '02	Medical College of Wisconsin	St. Mary's Hospital - Duluth, MN

Name	Medical School	Current Location
Todd Joing, MD '05	University of Minnesota	Fairview-Southdale Hospital - Edina, MN
Cynthia Kelmenson, MD '03	University of Pennsylvania	Medical Center of Aurora - Denver, CO
Martin Klinkhammer, MD '07	Mayo Medical School	MaryView Medical Center - Portsmouth, VA
Amy Kolar, MD '99	Creighton University	North Memorial Medical Center - Robbinsdale, MN
Heidi Lako-Adamson, MD '07	University of North Dakota	Sanford Hospital - Fargo, ND
Robert LeFevere, MD '04	Creighton University	Regions Hospital - St. Paul, MN
Karen Lushine, MD '01	University of Minnesota	St. Mary's Hospital - Duluth, MN
Joseph Madigan, MD '07	University of Minnesota	United Hospital - St. Paul, MN
Darren Manthey, MD '05	University of Minnesota	Sanford USD Medical Center - Sioux Falls, SD
Emily Mason, MD '07	University of Wisconsin	Sacred Heart Hospital - Eau Claire, WI
A. Duncan McBean, MD '09	University of Minnesota	Buffalo Hospital - Buffalo, MN
Hal Minnigan, MD, PhD '00	University of Minnesota	Wishard Hospital - Indianapolis, IN
Matthew Morgan, MD '05	Chicago Medical School	Regions Hospital - St. Paul, MN
Jessie Gillund Nelson, MD '04	University of Minnesota	Regions Hospital - St. Paul, MN
Christopher Obetz, MD '03	University of Minnesota	Abbott Northwestern Hospital - Minneapolis, MN
Tara O'Connell, MD '09	University of Minnesota	California Emergency Physicians - Emeryville, CA
James Parker, MD '99	Mayo Medical School	St. Francis Hospital - Shakopee, MN
Lane Patten, MD '07	University of Minnesota	North Memorial Medical Center - Robbinsdale, MN
Ben Peake, MD '08	Mayo Medical School	University of Minnesota Medical Center - Minneapolis, MN
Kelly Rhone, MD '04	University of South Dakota	Bryan LGH Medical Center - Lincoln, NE
Martin Richards, Jr, MD '06	University of Minnesota	Regions Hospital - St. Paul, MN
Jason Roth, MD '99	University of Colorado	St. Anthony Hospital - Denver, CO
Christopher Russi, DO '03	Des Moines University	Mayo Clinic St. Mary's Hospital - Rochester, MN
Paul Satterlee, MD '00	University of South Dakota	Abbott Northwestern Hospital - Minneapolis, MN
Ann Schapiro, MD '05	SUNY at Buffalo	Catholic Health Systems - Buffalo, NY
John Seidner, MD '01	University of Vermont	Elliot Hospital - Manchester, NH
Jonathan Shultz, MD '08	University of Kansas	St. Luke's Hospital - Duluth, MD
Kevin Sipprell, MD '99	University of Minnesota	Ridgeview Hospital - Waconia, MN
Kevin Smith, MD '07	University of Iowa	Mercy Medical Center - Des Moines, IA
Natasha Srb, MD '08	University of North Dakota	University of Minnesota Medical Center - Minneapolis, MN
Samuel Stellpflug, MD '08	University of Wisconsin	Regions Hospital - St. Paul, MN
Nicole Stethem, MD '05	University of South Dakota	Avera McKennan Hospital - Sioux Falls, SD
Nicole Stoik, MD '10	University of Iowa	United Hospital - St. Paul, MN
Stephanie Taft, MD '04	East Carolina University	Regions Hospital - St. Paul, MN
Peter Tanghe, MD '03	University of Minnesota	St. John's Hospital - Maplewood, MN
Charis Thatcher, MD '09	Medical College of Wisconsin	Regions Hospital - St. Paul, MN
Scott Thielen, MD '09	University of Minnesota	Fairview Ridges Hospital - Burnsville, MN
Trenten Thorn, MD '06	University of Utah	Lakeview Hospital - Bountiful, UT
John Travnicek, MD '06	University of South Dakota	Avera McKennan Hospital - Sioux Falls, SD
Paul Travnicek, MD '08	University of South Dakota	Avera McKennan Hospital - Sioux Falls, SD
Melissa Tschohl, MD '06	University of Minnesota	University of Minnesota Medical Center - Minneapolis, MN
Jeffrey Vespa, MD '00	Loyola University	North Memorial Medical Center - Robbinsdale, MN
Gregory Vigesaa, DO '10	University of Virginia COM	Sanford Hospital - Fargo, ND
Joseph Wahlberg, MD '06	University of Minnesota	United Hospital - St. Paul, MN
Brent Walters, MD '10	University of Minnesota	Methodist Hospital - St. Louis Park, MN
Clark Williams, MD '03	University of Wisconsin	Mercy Hospital - Dubuque, IA
Beth Wicklund, MD '07	University of Minnesota	Methodist Hospital - St. Louis Park, MN
James Wood, MD '01	Mayo Medical School	Kaiser Permanente Northwest - Portland, OR
Jeffrey Young, MD '99	University of Minnesota	Mercy Hospital - Coon Rapids, MN
Robert Zeleznikar, MD, PhD '99	University of Minnesota	University of Minnesota Medical Center - Minneapolis, MN

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