

## Physicians Treat Police Officers on Scene at Raid

By Ben Schmitt, Detroit Free Press Staff Writer

Docs and drug busts. Medics and mayhem. Syringes and sheriff's deputies.

There's a new meaning for backup when it comes to police raids and drug busts.

Members of the Wayne County Sheriff's Special Response Team are bringing along doctors to accompany them in situations where there are barricaded gunmen, hostages and bomb scares.

The doctors are part of the St. John Hospital and Medical Center Tactical Emergency Medical Support team, which was formed about a year and a half ago as the brainchild of Dr. Robert Smith.

As part of his residency, Smith, 34, had to come up with a research project. Smith, who previously worked as a reserve police officer in Albion and a paramedic and firefighter for the FarmingtonHills Fire Department, had heard about similar efforts across the country.

He pitched the idea a couple of years ago to a sheriff's deputy during a paramedics training exercise in Wayne County, and it caught Sheriff Warren Evan's attention.

"It made perfect sense to me," Evans said. "If someone goes down and there's a problem out there, I want the officers to have the best treatment as quickly as they possible can."

The staff has responded to 20+ emergency situations thus far.

Officers wear military-style dog tags that provide on-scene doctors easy access to their medical records via laptop computers.

"To me, it's cutting-edge stuff," Evans said.

The program has about 15 doctors, nurses and paramedics from St. John Hospital and Medical Center. They train with the Special Response Team twice a month, learning terminology, tools and tactics.

"It adds another element to the specialty of emergency medicine," said Dr. Deniese Worthy, who is involved in the program.

The program is divided into a tiered system in which Tier 1 doctors and paramedics can accompany officers into a raid, if they want. They must qualify in firearms training.

Currently, Smith and two paramedics are the only Tier 1 responders.

In his training Smith has fired guns ranging from sniper rifles to handguns.

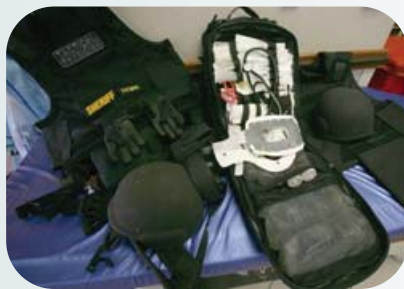
Doctors in Tier II are stationed at a nearby on-site command center and respond to medical emergencies from there. Tier III doctors respond from the hospital.

And what if a criminal suspect is injured?

"We would treat other injuries," said Dr. Patricia Nouhan, a Tier II provider. "But medical support for the sheriff's department is our top priority." ♦



*Dr. Robert Smith, Dr. Deniese Worthy and Dr. Patricia Nouhan.  
Photos by Hugh Grannum, Detroit Free Press.*





## AEM Outstanding Reviewers 2005 Charlene Irvin, M.D.

Congratulations are in order for Dr. Charlene Irvin, who was recently named one of the outstanding reviewers for Academic Emergency Medicine.

The editors of Academic Emergency Medicine offer their sincere thanks to the 479 reviewers who assisted in peer review during 2005. Their generous voluntary participation has helped maintain the high quality of their journal and the medical literature.

From January 1, 2005 to December 31, 2005 AEM received 926 manuscripts (645 new submissions and 281 revised). 1,480 reviews were obtained for new submissions that advanced to peer review, for an average of 4.7 reviews per new submission. For new submissions, turnaround time averaged 25 days to first decision.

Each reviewer received an average of 3.7 requests to review and responded within 3 days. Reviewers took an average of 10 days to complete their reviews.

The AEM would especially like to acknowledge the group of 28 reviewers which provided at least five high quality reviews in a timely fashion. Among the 28 named outstanding reviewers of 2005 is one of our very own, Charlene Irvin, M.D. ♦

## Kristine Sizemore, M.D. Recognized for Heroic Efforts During Auto Accident

By Anthony Southall, M.D., F.A.C.E.P.

Kim Lagerquist (EMS Coordinator for SJH&MC) and Anthony Southall, M.D., F.A.C.E.P. attended the awards ceremony for the City of Roseville and accepted Dr. Sizemore's award in her absence. Several police officers, several EMS personnel, a couple of local civilians and Dr. Sizemore were honored for their activities over the last 12 months.



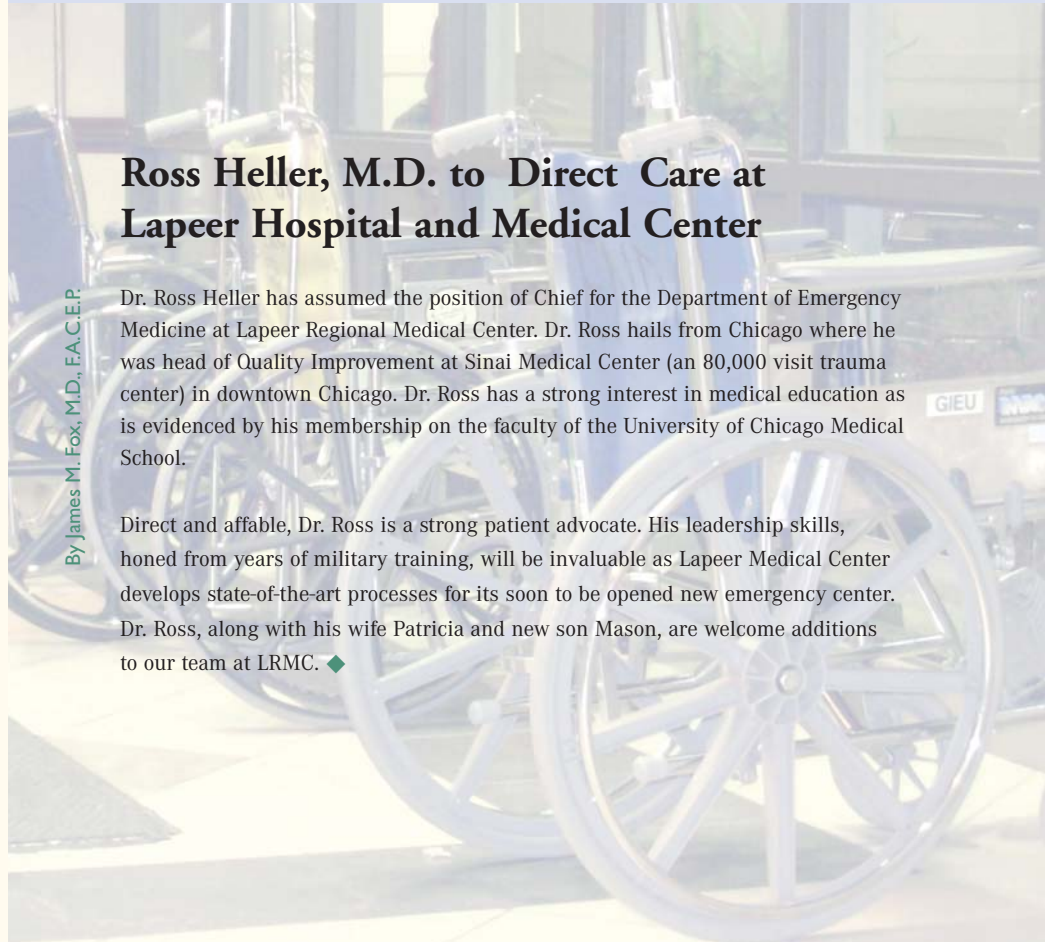
The event was well attended by the mayor, Police Chief, Chief of the Fire Department, Councillors, and the Macomb County Sheriff's department. They spoke very highly of Dr. Sizemore and Captain Mark Turo. They both assisted the Roseville Fire Department on the scene of an auto accident on I-94 where multiple vehicles were scattered over 400 feet. Both Dr. Sizemore and Captain Turo put themselves at great risk to assist with the medical treatment of these persons who suffered multiple traumatic injuries. Dr. Sizemore intubated a victim at the scene after the EMS personnel were unable to intubate. EMS has designated this incident as a Priority I disaster with multiple casualties. ♦

## Ross Heller, M.D. to Direct Care at Lapeer Hospital and Medical Center

By James M. Fox, M.D., F.A.C.E.P.

Dr. Ross Heller has assumed the position of Chief for the Department of Emergency Medicine at Lapeer Regional Medical Center. Dr. Ross hails from Chicago where he was head of Quality Improvement at Sinai Medical Center (an 80,000 visit trauma center) in downtown Chicago. Dr. Ross has a strong interest in medical education as is evidenced by his membership on the faculty of the University of Chicago Medical School.

Direct and affable, Dr. Ross is a strong patient advocate. His leadership skills, honed from years of military training, will be invaluable as Lapeer Medical Center develops state-of-the-art processes for its soon to be opened new emergency center. Dr. Ross, along with his wife Patricia and new son Mason, are welcome additions to our team at LRMC. ♦



## EMS, P.C., Recognizes MCEP Immediate Past President, Keith Wilkinson, M.D.

EMS would like to congratulate Keith Wilkinson, M.D., as he completes a successful term as President of the Michigan College of Emergency Physicians.

Dr. Wilkinson, who recently joined EMS this past spring, becomes the third member of EMS, P.C., to have filled this prestigious office.

Dr. James M. Fox, and Dr. Anthony Southall have both completed terms as MCEP President - Dr. James M. Fox from 1995 - 1996 and Dr. Anthony Southall from 1990 - 1991.

Along with the customary duties of steering college endeavors, countless hours of meetings and multiple articles in the MCEP Newsletter, below summarizes a few of Dr. Wilkinson's unique, individual, accomplishments:

1. Dr. Wilkinson visited 2-3 residency programs per month and provided lectures on evidence based Emergency Medicine. His lectures were followed by an "MCEP" message which endorsed and recognized the work done by the college designed to benefit emergency medicine doctors in our state. These lectures were so well received, he was asked to continue them, even after his presidency has concluded, and has several scheduled in the months ahead.
2. Dr. Wilkinson worked extremely hard lobbying the Michigan House and Senate to vote down the Motorcycle Repeal Law. Though the Repeal Law passed, it was Vetoed by the Governor.
3. Finally, Dr. Wilkinson initiated discussions at board meetings with affiliated emergency department groups, including the Emergency Medicine Physician Assistants Association and the Association of Emergency Nurses. These proactive discussions encouraged improved communication between MCEP and our colleagues in the house of medicine.

I have always believed that Emergency Medicine is not a spectator sport. Whether working clinically, teaching residents, writing research, or, as in this case, leading fellow Emergency Physicians at the state level through difficult times, Dr. Wilkinson has been anything but a spectator. His successes have come as a result of hard work, long hours and hands on involvement designed to maintain our speciality as one of the finest in medicine.

Please help me congratulate Dr. Wilkinson on a job well done! ♦

(Left) Leslie Wilson and Nancy Atkinson, (Below) Mr. Joseph Romain and Nancy.



## Nancy Atkinson Retires After 30 Dedicated Years

Not everyone is lucky enough to work with a wonderful professional who not only performs the functions of her job with dedication and efficiency but also creates an atmosphere of caring, where everyone feels like part of a family. Those of us who had the opportunity to work with Nancy Atkinson over the past 30 years have had just that pleasure.



Nancy showed up every day ready to tackle whatever the day might bring. Even when she was dealing with health issues of her own, she put the job as a priority, even going so far as to show up to work pulling her rolling IV pole. Always professional in appearance and conduct, she has handled everything that a vast array of executives, physicians and staff could possibly throw her way. Mr. Joseph Romain said, " You asked Nancy to do something for you, you asked once and consider it done. Nancy was the best employee I could have ever asked for. I will greatly miss her being in our office."

Nancy took an interest in everyone's family keeping a stack of physician and colleagues family photos and admiring their children as they grew threw the years. She met visitors in the office with a hug and made you feel welcomed. You always knew that if you needed something, and Nancy was able to help, she would and it would be 110%.

It has truly been a pleasure to have Nancy as a colleague and even more so as a friend. We all wish Nancy a wonderful retirement and many days, months and years of golf, yoga, aerobics, gardening, good books and exciting travel! No one could deserve it more. Best wishes! ♦

By Donna Perkins



## Research Update:

### MOA Conference: Dr. Tognacci, Oakland Emergency Department, Wins First Place at The Scientific Research Exhibit

By Elizabeth Bascom, M.D.

The emergency department at Oakland General has had two abstracts accepted for oral presentation at the 16th annual SAEM (Society for Emergency Medicine) Midwestern conference in late September. Dr. M. Nerland and Dr. Elizabeth Bascom drove to the conference in Ohio and presented the power point presentations. The abstracts included *Building Bridges: Breast Cancer Prevention in Emergency Departments by Connecting at Risk Women to Mammography* and *Are Emergency Medicine Residents Adrenaline Junkies? A comparison of Risk Taking Traits and Behaviors Between Emergency Medicine and Family Practice Residents.*

We have also had three research projects accepted for oral presentation at the AOA/ACEOP in Las Vegas. Two research projects were accepted at the ACEP national conference in New Orleans.

## FYI

### The 100 Top Hospitals®: Performance Improvement Leaders—2005

*Solucient Top 100 Hospitals*

*Major Teaching Hospital:*

**St. John Hospital and Medical Center**

**St. John Oakland**

**McLaren Regional Medical Center**

### Raymond R. Rudoni, M.D.

MCEP President-Elect July 2007 - 2008

### Elizabeth Bascom, M.D.

Won best young investigator award for a research study, SAEM.

### St. John Medical Staff / Guild Golf Outing was Sold Out

The event on September 11, 2005 raised much more than expected. Many thanks to everyone that supported the golf outing and raised money for such a good cause.



Congratulations to Dr. Rachelle Tognacci. She won first place at the MOA Conference Scientific Research Exhibit! She Presented her study: *Building Bridges: Breast Cancer Prevention in Emergency Departments by Connecting at Risk Women to Mammography.*

Rachelle has graduated from the EM/IM program this past June. We are very proud of her. There was strong competition at the event. On May 12 she received her award at the MOA Presidents Lunch. In addition to being honored she is accepting a check for \$1,500.00 which will be used for the benefit of the emergency residents.

Dr. Chris Cochran also presented her study on emergency medicine care and the uninsured. ♦



## October EMS Calendar

4)	MCEP, Board of Directors, Chapter Office, Lansing, MI	
10)	St. John Oakland, EM Department Meeting	7:00 AM
10)	St. John Oakland, EM Staff Meeting	8:00 AM
13-14)	MCEP, ACEP Council Meeting, New Orleans, Louisiana	
15-18)	MCEP, ACEP Scientific Assembly, New Orleans, Louisiana	
17)	St. John River District Hospital, General Staff Meeting, Crystal Gardens, Marysville	
25)	St. John Hospital and Medical Center, EM Staff Meeting	8:00 AM, Classroom C
25)	St. John Hospital and Medical Center, EM Faculty Meeting	10:00 AM, Classroom C
19)	McLaren Quality Improvement Meeting,	8:30 AM, ED Conference Room
19)	EM/Surgery Trauma Conference, St. John Hospital and Medical Center	7:00 AM, Lower Level Conference Rm

## November EMS Calendar

2)	Lapeer Regional Medical Center, Staff Meeting	7:30 AM, Dining Rooms A & B
7-8)	MCEP, Ultrasound Course, Chapter Office, Lansing, MI	
9)	McLaren Regional Medical Center, Department Meeting	5:00 PM, ED Conference Room
9)	McLaren Regional Medical Center, General Medical Staff Meeting	6:00 PM, ED Ballenger Auditorium
14)	St. John Oakland, EM Department Meeting	7:00 AM
14)	St. John Oakland, EM Staff Meeting	8:00 AM
16)	McLaren Regional Medical Center, Quality Improvement Meeting	8:30 AM, ED Conference Room
16)	EM/Surgery Trauma Conference, St. John Hospital and Medical Center	7:00 AM, Lower Level Conference Room
22)	St. John Hospital and Medical Center, EM Staff Meeting	8:00 AM, Classroom C
22)	St. John Hospital and Medical Center, EM Faculty Meeting	10:00 AM, Classroom C

## December EMS Calendar

6)	MCEP, Board of Directors, Chapter Office, Lansing, MI	
12)	St. John Oakland, EM Department Meeting	7:00 AM
12)	St. John Oakland, EM Staff Meeting	8:00 AM
21)	EM/Surgery Trauma Conference, St. John Hospital and Medical Center	7:00 AM, Lower Level Conference Rm
21)	McLaren Regional Medical Center, Quality Improvement Meeting	8:30 AM, ED Conference Room
27)	St. John Hospital and Medical Center, EM Staff Meeting	8:00 AM, Classroom C
27)	St. John Hospital and Medical Center, EM Faculty Meeting	10:00 AM, Classroom C

# Trauma in Pregnancy

By Krissada Solomon, M.D.

In the practice of emergency medicine, one needs to become comfortable with the medical management of the traumatized pregnant patient. Motor vehicle accidents are the cause of most injuries. Domestic violence, penetrating trauma, and head injuries are also seen. Trauma is the leading cause of nonobstetric morbidity and mortality in pregnancy. It has been estimated that trauma complicates approximately 6% to 7% of all pregnancies. Understanding the physiological changes of pregnancy and pregnancy-specific injuries can significantly improve chances of a successful outcome for both mother and fetus.

## Physiologic Changes of Pregnancy

During pregnancy, there are many physiologic changes that take place. Heart rate increases 10 to 15 beats per minute above baseline, cardiac output increases by 30 to 50 percent and then levels off at the end of the second trimester. Total peripheral resistance is decreased by progesterone-related smooth muscle relaxation. Blood volume increases by 50%, while red blood cell volume only increases by 30%. This dilution is often referred to as "physiologic anemia".

Due to increased metabolic demands and oxygen delivery to the fetus, there are also changes that occur in acid-base and pulmonology. Oxygen consumption increases by 15% to 20%. Hyperventilation and respiratory alkalosis is seen secondarily to progesterone stimulation of the medullary respiratory center. Minute

ventilation and tidal volume increases approximately 40%. Due to the elevated diaphragm, functional residual capacity is decreased by 25%. These changes leave the pregnant patient with diminished oxygen reserve and buffering capacity.

Other significant changes to keep in mind are the increased risk of aspiration, susceptibility of genitourinary structures, and lack of physical findings. Due to decreased gastric tone, delayed gastric emptying, increase in gastric acid production, and cephalad displacement of abdominal organs, the risk of aspiration is great. Genitourinary injuries are more likely to occur in a pregnant patient because the bladder becomes an intra-abdominal organ, secondarily to its displacement by the uterus, and the renal pelvis and ureters are greatly dilated. Physical exam findings -abdominal tenderness, rebound and guarding may be absent due to desensitization of the peritoneal cavity.

## Prehospital Care

As with all trauma patients, the initial assessment begins with the ABCs of resuscitation directed at the mother. For patients that are beyond 20 weeks of gestation and need to be immobilized, care should be made to place them on a backboard at a 15 degree angle to the left. This relieves some of the compression of the inferior vena cava by the uterus. Approximated gestational age should be ascertained, if at all possible. Every attempt should be made to get the patient to a trauma center. Advanced notification to

the receiving facility should be done so that appropriate personnel and equipment are available.

## General Management

The best care for a pregnant trauma patient is to use a team approach. The emergency physician should involve the obstetrician and trauma surgeon early on. The perinatologist may also prove to be an integral part of the team. The initial management of resuscitation should be geared towards the mother because the most common cause of fetal death is maternal death.

As in any other trauma, the emergency physician should begin with the primary survey. When assessing the airway, keep in mind the increased risk of aspiration. One may consider early endotracheal intubation (ETT) because hypoxia is a major cause of fetal distress. If ETT is done, use the lower end dose of succinylcholine. Both depolarizing and nondepolarizing paralytics cross the placenta which may result in a flaccid, apneic infant. If placing a chest tube thoracostomy, go 1 to 2 intercostal spaces above the usual to avoid diaphragmatic injury. Remember to place patients that are greater than 20 weeks in the left lateral decubitus position. Do not hesitate to administer crystalloid fluids with 2 large bore peripheral intravenous catheters early during resuscitation. Aggressive transfusion of blood products can provide volume and improve oxygen carrying capacity. Doppler fetal heart tones should be considered as an additional vital sign. When evaluating disabilities, the presence of seizures should raise the concern for eclampsia. As always, exposure, full body evaluation, and environmental concerns (hypothermia) should be included in the primary survey.

Ascertaining a pregnancy history, if at all possible, should be done quickly during the secondary survey. At this time a thorough fetal assessment, including cardiotocographic monitoring (CTM) should also be done.

## CME Questions

CTM should be performed for a minimum of 4 hours. A pelvic exam, using a sterile speculum, yields valuable information. Vaginal bleeding can be detected. Vaginal fluid can be tested to distinguish amniotic fluid- ferning and blue discoloration of nitrazine paper, from urine. The cervix should be carefully inspected to look for dilation and effacement. Laboratory tests should include hemoglobin, hematocrit, type and cross, urine analysis, lactate, and bicarbonate level. A fibrinogen level should be done to look for disseminated intravascular coagulation.

### Diagnostic and radiographic studies

Diagnostic studies should be obtained to identify maternal injuries and evaluate fetal well being. Radiographic studies should not be omitted because of concerns about radiation exposure. The trauma-X-rays, cervical spine, chest, and pelvis should be done as usual. When interpreting these films, the emergency physician should keep in mind the pregnancy related changes that usually are considered normal. In normal pregnancy, the mediastinum is slightly widened, there is mild cephalization of the pulmonary vasculature, and the AP diameter is increased. Similarly, there may be widening of the sacroiliac joints and pubic symphysis on pelvis radiographs.

The focused abdominal sonogram of trauma (FAST) has proved to be very sensitive in identifying peritoneal fluid. Advantages of using this technique is that it is quick, relatively easy to perform, and noninvasive. If a pregnant trauma patient has an equivocal FAST exam, a diagnostic peritoneal lavage (DPL) may be done rather than exposing the patient to large amounts of radiation. This technique may help differentiate a massive peritoneal bleed from an ureteroplacental bleed. If a DPL is performed on a pregnant patient, the supraumbilical approach with an open-technique is indicated.

Other diagnostic studies, including computed tomography (CT) and rapid ultrasound are often used to diagnose injuries. The head and chest CT should be used whenever indicated with uterine shielding. On the other hand, the abdominal CT should be avoided in early pregnancy due to the high doses of radiation and the availability of alternative diagnostic modalities. The rapid ultrasound can be used to obtain an accurate gestational age, a biophysical profile, fetal non-stress test, and identify placental abruption.

### Summary

Caring for the traumatized pregnant patient can be both intimidating and complex. Give tetanus toxoid and Rhogam as needed. The chance of a successful outcome is highly dependent on aggressive resuscitation of the mother. Remember that fetal outcome is directly related to maternal outcome. ♦

1. **What is the most common cause of trauma in the pregnant patient?**

- a. Domestic Violence
- b. Motor Vehicle Accidents
- c. Penetrating Trauma
- d. Burns

2. **Which is a physiologic change during pregnancy?**

- a. Decrease in tidal volume
- b. Respiratory acidosis
- c. Decrease in gastric acid
- d. Increase in cardiac output

3. **True or False. Cardiocographic monitoring should be done for a minimum of 2 hours.**

4. **Which diagnostic modality should be avoided in late pregnancy?**

- a. Diagnostic peritoneal lavage
- b. Focused abdominal sonogram
- c. Abdominal computed tomography
- d. Rapid ultrasound

5. **Which of the following should be considered an additional vital sign?**

- a. Doppler fetal heart tones
- b. Pulse oximetry
- c. Temperature
- d. Central venous pressure

### References:

American Board of Emergency Medicine web site. Emergency Medicine Continuous Certification (EMCC)

St. John Hospital and Medical Center, an organization accredited by the MSMS Committee on Continuing Medical Education Accreditation, certifies that this activity meets the criteria for a maximum of one credit hour in Category I towards the requirements for Michigan licensure and of the Physician's Recognition award of the AMA provided it is completed as designated.



## Provides expert billing services for your emergency physician group at reasonable pricing.

**James M. Fox, M.D., F.A.C.E.P.**  
Managing Director, MES, LLC.

*Over two decades of emergency medicine  
third-party reimbursement experience*

**Joseph L. Romain**  
Managing Director, MES, LLC.

*30+ years experience in emergency medicine management*

**Sandy A. Steele, CPC**  
Manager, Coding and Billing, MES, LLC  
*Over 25 years of emergency medicine coding and billing experience*

### **Specializing in:**

- CPT coding for physicians and hospitals
- Professional billing
- APC Compliant Facility Coding
- Template documentation systems for emergency departments and urgent care centers
- Coding review for compliance with federal regulations

### **Midwest Emergency Services, LLC**

42536 Hayes Road, Suite 800  
Clinton Township, Michigan 48038-6767

**( 8 0 0 ) 5 3 1 - 5 7 8 8**

***We work for you!***

***Our compliance plan meets the Office of Inspector General's (OIG) standards.  
Non-compete guarantee is written in all contracts.***

786.50 99291 493.92 31500 845.00 36556 786.50 99291 493.92 31500 845.00 36556 786.50 99291 493.92 31500 845.00 786.50 99291 493.92 31500 845.00 36556

**HPI ROS PFSH EXAM MDM HPI ROS PFSH EXAM MDM**

## Questions and Comments

Emergency Medicine Specialists, P.C. is comprised of health care professionals who are committed to providing the highest level of medical care. EMS has specialized in emergency medicine, urgent care and after hours care for over thirty years. As a self-reliant professional corporation, EMS has become one of the industry leaders in southeast Michigan.

If you have any questions or comments regarding this publication or suggestions, please contact us at:

**Editor: Cathy Vretta, M.D., M.P.H.**  
18161 W. 13 Mile Road, Suite A-2  
Southfield, Michigan 48076  
[www.emspecialists.com](http://www.emspecialists.com)  
P: 248.642.9893 F: 248.642.5075

The information contained within this journal is not intended to establish the standard of care for any physician or employee of EMS, or St. John Health, but only to provide generalized education with respect to healthcare issues which arise in our profession.

GRAPHIC DESIGNER: MAUREEN WILSON • GOTTAAVEITGRAPHICS@GMAIL.NET



18161 W. 13 Mile Road, Suite A-2  
Southfield, Michigan 48076

FIRST CLASS PRSRT  
U.S. POSTAGE  
PAID  
PERMIT NO. 498  
SOUTHFIELD MI