

# **2014 Gathering of Eagles**



## **Indoctrinating the Docs: Medical Student EMT Program**

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UNIVERSITY OF  
**SOUTH CAROLINA**  
School of Medicine  
Greenville

# Historical Perspective

## Expansion Medical Schools

- 2009 - 2013
  - 15 new medical schools established  
1800 students / year
  - Total: 141
    - Matriculants: 19,517 (46% female)
    - Graduates: 17,341

# Historical Perspective

## Expansion Medical Schools

### Arizona

University of Arizona College of Medicine-Phoenix

### California

University of California-Riverside College of Medicine

### Connecticut

Frank H. Netter, MD School of Medicine at Quinnipiac

### Florida

University of Central Florida College of Medicine

Charles E. Schmidt College of Medicine at Florida Atlantic University

Florida International University Herbert Wertheim College of Medicine

# Historical Perspective

## Expansion Medical Schools

### Michigan

Central Michigan University College of Medicine

Western Michigan University School of Medicine

Oakland University William Beaumont School of Medicine

### New Jersey

Cooper Medical School at Rowan University

### New York

Hofstra North Shore-LIJ School of Medicine

### Pennsylvania

The Commonwealth Medical College

# Historical Perspective

## Expansion Medical Schools

### South Carolina

University of South Carolina School of Medicine Greenville

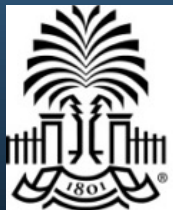
### Texas

Texas Tech University Health Sciences Center Paul L. Foster School of Medicine

### Virginia

Virginia Tech Carilion School of Medicine

# USC School of Medicine Greenville



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# **USC School of Medicine Greenville**

## **Clinical Courses**

### **Clinical Diagnosis and Reasoning**

**Performing history and physical exams**

**Laboratory testing**

**Radiological imaging**

**Medical procedures**

**Integration of cases into core competencies:**

**Medical Knowledge**

**Patient care**

**Communication**

**Professionalism**

**Systems based practice**

**Practice based learning**

# USC School of Medicine Greenville

## Clinical Courses

Medicine and Society

Ethics

Culture and Diversity

Professionalism

Communication

Interprofessional Health

Biostatistics and evidence based medicine

Research

***Emergency Medical Technician training***

# Medical Student EMT Program

## EMT Program Requirements

Full 200+ hour EMT program completion

Certification - SC EMT (NREMT)

Maintenance of certification

One 12-hour shift / month

Patient write-up / semester



# Medical Student EMT Program

## EMT course

| <u>Totals</u>      | <u>2012 (Charter)</u> |
|--------------------|-----------------------|
| Weeks              | 6                     |
| Hours              | 218                   |
| On-Line            | 13                    |
| Patient encounters | 5                     |
| Examinations       | 9                     |
| Integration        | None                  |

# Medical Student EMT Program

## EMT course

| <u>Totals</u>      | <u>2012 (Charter)</u> | <u>2013</u> |
|--------------------|-----------------------|-------------|
| Weeks              | 6                     | 14          |
| Hours              | 218                   | 250         |
| On-Line            | 13                    | 13          |
| Patient encounters | 5                     | 10          |
| Examinations       | 9                     | 6           |
| Integration        | None                  | Anatomy     |

| WEEK 5 | 8/26                                    | 8/27                                  | 8/28  | 8/29  | 8/30                                  |
|--------|---|---------------------------------------|---|---|---------------------------------------|
| TIME   | MONDAY                                  | TUESDAY                               | WEDNESDAY                                       | THURSDAY  | FRIDAY                                |
| 8:00   | EMT:<br>Fundamentals of Trauma          | Bleeding & Shock                      | ANAT:<br>0700-0900<br>Introduction to Radiology | EMT:<br>Cardiovascular Emergencies              | EMT LAB:<br>Basic Life Support Course |
| 9:00   |   |                                       | ANAT:<br>Thoracic Wall & Breast                 |   |                                       |
| 10:00  | ANAT:<br>Back & Spine                   | EMT:<br>Injuries to the Head & Spinal |   | ANAT:<br>Mediastinum, Heart, & Lung             |                                       |
| 11:00  | ANAT:<br>Spinal Cord & Nervous System   |                                       | EMT:<br>Pharmacology & Medications              |   |                                       |
| 12:00  | LUNCH                                   | LUNCH                                 | LUNCH   | LUNCH   | LUNCH                                 |
| 1:00   | ANAT LAB:<br>Back Muscles & Laminectomy | EMT LAB:<br>Spinal Immobilization     | EMT:<br>Respiratory Emergencies                 | ANAT LAB:<br>Thoracic wall, Heart Great Vessels | EMT LAB:<br>Basic Life Support Course |
| 2:00   |   |                                       |   |   |                                       |
| 3:00   |   | EMT LAB:<br>Trauma Patient Assessment |   |   |                                       |
| 4:00   |   |                                       |   |   |                                       |

| WEEK 7 | 9/9  | 9/10                                      | 9/11  | 9/12  | 9/13             |
|--------|--|---|---|---|------------------|
| TIME   | MONDAY   | TUESDAY                                   | WEDNESDAY   | THURSDAY  | FRIDAY           |
| 8:00   | CDR  | EMT:<br>Acute Abdominal<br>Emergencies    | ANAT:<br>0700-0800 Abd I  | ANAT:<br>0700-0800 Abd II                               | Written Exam 3   |
| 9:00   |  |   | CDR   | ANAT:<br>Urinary System,<br>Posterior Abdominal<br>Wall |                  |
| 10:00  | ANAT:<br>Anterior Abdominal<br>Wall, Stomach, Liver,<br>Gall Bladder, Spleen     | EMT:<br>Injuries to the<br>Abdomen        | EMT:<br>Immunology and<br>Infectious Disease                                    |   | Practical Exam 3 |
| 11:00  |  |   |   |   |                  |
| 12:00  | LUNCH  | LUNCH                                     | LUNCH   | LUNCH   | LUNCH            |
| 1:00   | ANAT LAB:<br>Mesenteries, Celiac,<br>Stomach, Liver, Bile<br>Duct, Portal System | EMT LAB:<br>Medical Patient<br>Assessment | ANAT LAB:<br>Superior & Inferior<br>Mesenteric Arteries<br>Pancreas, Intestines |   |                  |
| 2:00   |  |   |   |   |                  |
| 3:00   |  | EMT LAB:<br>Trauma Patient<br>Assessment  |   |   |                  |
| 4:00   |  |   |   |   |                  |

# EMT Functional Exercise

## Capstone

4 groups (13 students / group)

4 hours (2 scenarios / 2 hours)

# EMT Functional Exercise

## Capstone

4 groups (13 students / group)

4 hours (2 scenarios / 2 hours)

### Motor vehicle crash



# EMT Functional Exercise

## Capstone

4 groups (13 students / group)

4 hours (2 scenarios / 2 hours)

### Motor vehicle crash



### Active shooter MCI



# EMT Functional Exercise



# EMT Functional Exercise



# EMT Functional Exercise



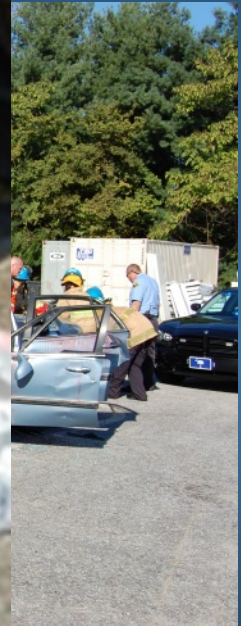
# EMT Functional Exercise



# EMT Functional Exercise



# EMT Functional Exercise



# EMT Functional Exercise



# EMT Functional Exercise



# EMT Functional Exercise



# Results

## NREMT Practical Exam Results

| Description                    | 2012            | 2013            |
|--------------------------------|-----------------|-----------------|
| Students                       | 51              | 53              |
| Pass (1 <sup>st</sup> attempt) | 20 (39%)        | 17 (32%)        |
| Pass (2 <sup>nd</sup> attempt) | 22 (43%)        | 32 (60%)        |
| Pass (3 <sup>rd</sup> attempt) | 3 (6%)          | 2 (4%)          |
|                                | <b>45 (88%)</b> | <b>51 (96%)</b> |
| Pass (4 <sup>th</sup> attempt) | 4 (8%)          | 2 (4%)          |
| Pass (5 <sup>th</sup> attempt) | 2 (4%)          |                 |

# Results

## NREMT Written Exam Results

| <u>Description</u>             | <u>2012</u> | <u>2013</u> |
|--------------------------------|-------------|-------------|
| Students                       | 51          | 53          |
| Pass (1 <sup>st</sup> attempt) | 50 (98%)    | 51 (96%)    |
| Pass (2 <sup>nd</sup> attempt) | 1 (2%)      | 2 (4%)      |

# Results

## **NREMT Repeat Practical Exam Results**

**32 weeks post course**

**Cardiac Arrest Management / AED:**

**Patient Assessment / Management - Medical:**

# Results

## NREMT Repeat Practical Exam Results

32 weeks post course

### Cardiac Arrest Management / AED:

Pass 25 (48%)

Fail 27 (52%)

### Patient Assessment / Management - Medical:

Pass 8 (15%)

Fail 44 (85%)

# Costs

## Program Costs

Greenville Technical College  
Fingerprinting and background check  
Books

| <u>Class</u> | <u>Cost / Student</u> | <u>Other</u> | <u>Exercise</u> | <u>Total</u>    |
|--------------|-----------------------|--------------|-----------------|-----------------|
| 2012         | \$1362                | \$120        | \$2040          | <b>\$80,480</b> |
| 2013         | \$1438                | \$120        | \$4310          | <b>\$88,334</b> |

# Medical Student EMT Program

## Future Challenges

Expanded class size

2014: 75 (82)

2015: 100 (110)

Ambulance ride time

Additional adjunct faculty

Equipment

Functional Exercise

# Medical Student EMT Program

## Future Challenges

| <u>Totals</u> | <u>2012</u> | <u>2013</u> | <u>2014</u>                           |
|---------------|-------------|-------------|---------------------------------------|
| Weeks         | 6           | 14          | 13                                    |
| Hours         |             |             |                                       |
| Lecture / Lab | 218         | 250         | 181                                   |
| On-Line       | 13          | 13          | 33                                    |
| Examinations  | 9           | 6           | 4                                     |
| Integration   | None        | Anatomy     | Anatomy<br>Embryology<br>Clinical Med |

# **Medical Student EMT Program**

## **Program Benefits**

**Early clinical experience**

**First introduction to interprofessional health**

**Scholarly activity**

# Medical Student EMT Program

## Program Benefits

Early clinical experience

First introduction to interprofessional health

Scholarly activity

\* **Appreciation of societal realities**



# Medical Student EMT Program

## Clinical Reflections

Required twice / semester

### Topics

- Personal or family member illness

- Anatomy Lab

- Other student topics

- Teamwork / relationships

- Clinical experience

- Leadership and responsibility

- Other (garden, public health, shyness)

- ★ ***EMT experience***

# Medical Student EMT Program

## Clinical Reflections

### ★ EMT experience

2012

| Semester | Tot           | Pos | Neg |
|----------|---------------|-----|-----|
| 1 - mid  | 10 / 53 (19%) | 8   | 2   |
| 1 - end  | 21 / 52 (40%) | 15  | 6   |
| 2 - mid  | 20 / 52 (39%) | 17  | 3   |
| 2 - end  | 17 / 52 (33%) | 15  | 2   |

# Medical Student EMT Program

## Clinical Reflections

### ★ EMT experience

| 2012     |               |     |     | 2013          |     |     |  |
|----------|---------------|-----|-----|---------------|-----|-----|--|
| Semester | Tot           | Pos | Neg | Tot           | Pos | Neg |  |
| 1 - mid  | 10 / 53 (19%) | 8   | 2   | 28 / 54 (52%) | 12  | 1   |  |
| 1 - end  | 21 / 52 (40%) | 15  | 6   | 10 / 54 (19%) | 7   | 3   |  |
| 2 - mid  | 20 / 52 (39%) | 17  | 3   |               |     |     |  |
| 2 - end  | 17 / 52 (33%) | 15  | 2   |               |     |     |  |

# Medical Student EMT Program



## Charter Class of 2016



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