

ОСТРА СЪРДЕЧНА НЕДОСТАТЪЧНОСТ В СПЕШНОТО ОТДЕЛЕНИЕ

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ACUTE CONGESTIVE HEART FAILURE EMERGENCY MANAGEMENT

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It is Friday night in the ED....



4 AM

- The worried voice of the triage nurse over the intercom:

“Level 2 cardiac – to the back!”

VITAL SIGNS?

- The patient is too sick for vital signs in triage – straight back
- O2
- IV
- Monitor
- Call: Lab, EKG, X-rays

HOW DID THIS PATIENT GET HERE?

- Private vehicle
- EMS
- Air
- Across The Bridge...









POINT OF CARE

- BGL
- EKG
- Portable X-rays
- Bedside ultrasound
- Laboratory

POC LABORATORY

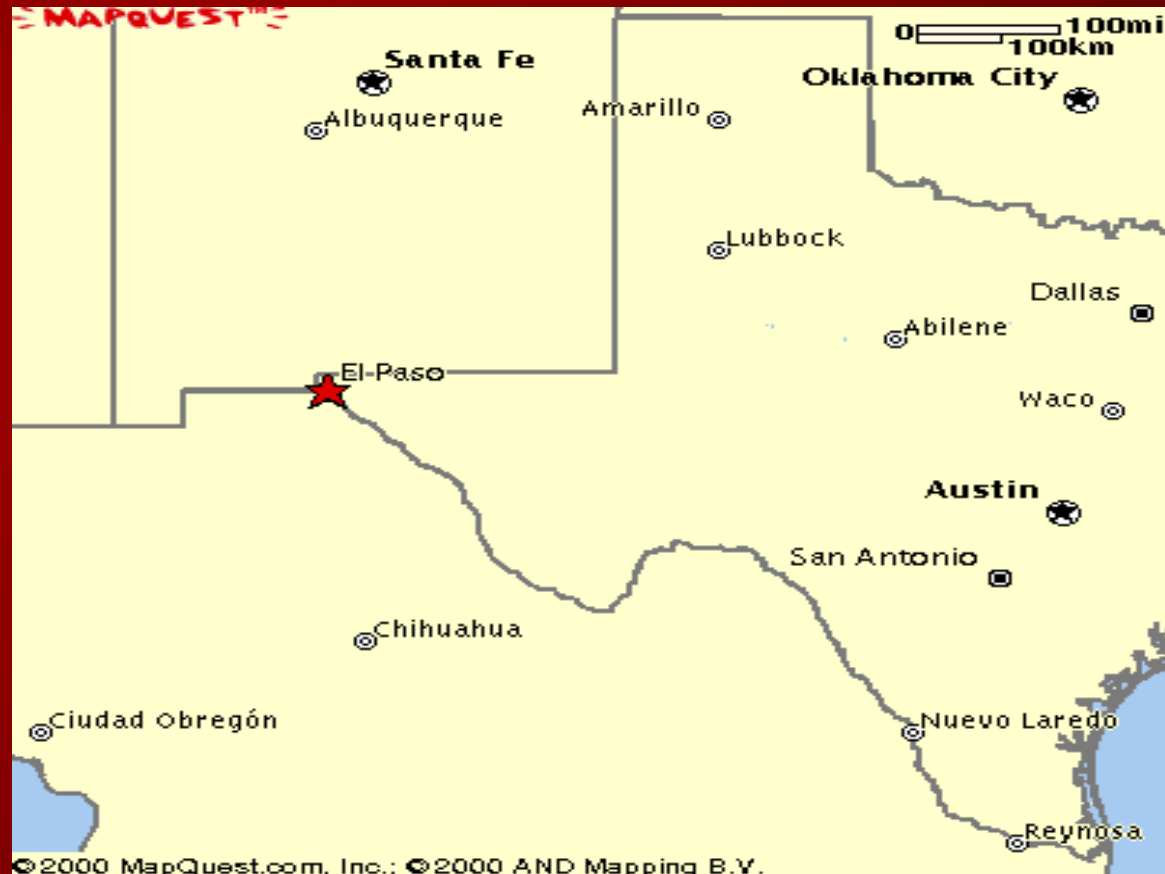
- Chem 8:
 - Hgb
 - Hct
 - Glucose
 - Na
 - Cl
 - HCO₃
 - K
 - BUN
 - Creatinine

POC LABORATORY

- Troponin
- BNP
- PT
- PT INR
- Lactic acid

WHERE THE HECK IS EL PASO , TEXAS?

- Population
 - El Paso county
 - ~1,000,000
 - Cd. Juarez across the Rio Grande river
 - >>1,000,000





El Paso ranked one of America's best cities to raise kids



- POSTED: Tuesday, January 7, 2014 - 7:46pm
- UPDATED: Wednesday, January 8, 2014 - 9:44am
- El Paso is one of the best cities in the country to raise kids.
- National real estate company Movoto has ranked the Sun City the third best place in all of America to raise kids, beating out other Texas cities like Austin, San Antonio, and Houston.
- Rankings were based upon seven criteria, including cost of living, public school ranking, park space, crime, and commute times.
- Omaha, Nebraska was named best city in the country to raise kids. Albuquerque, New Mexico came in fifth.

ACUTE CHF IN THE EMERGENCY DEPARTMENT

- Initial stabilization:
 - Treat life threatening conditions
 - Rapid Sequence Intubation
 - BiPap
 - Delayed sequence intubation
 - Cardioversion
 - Risk stratify

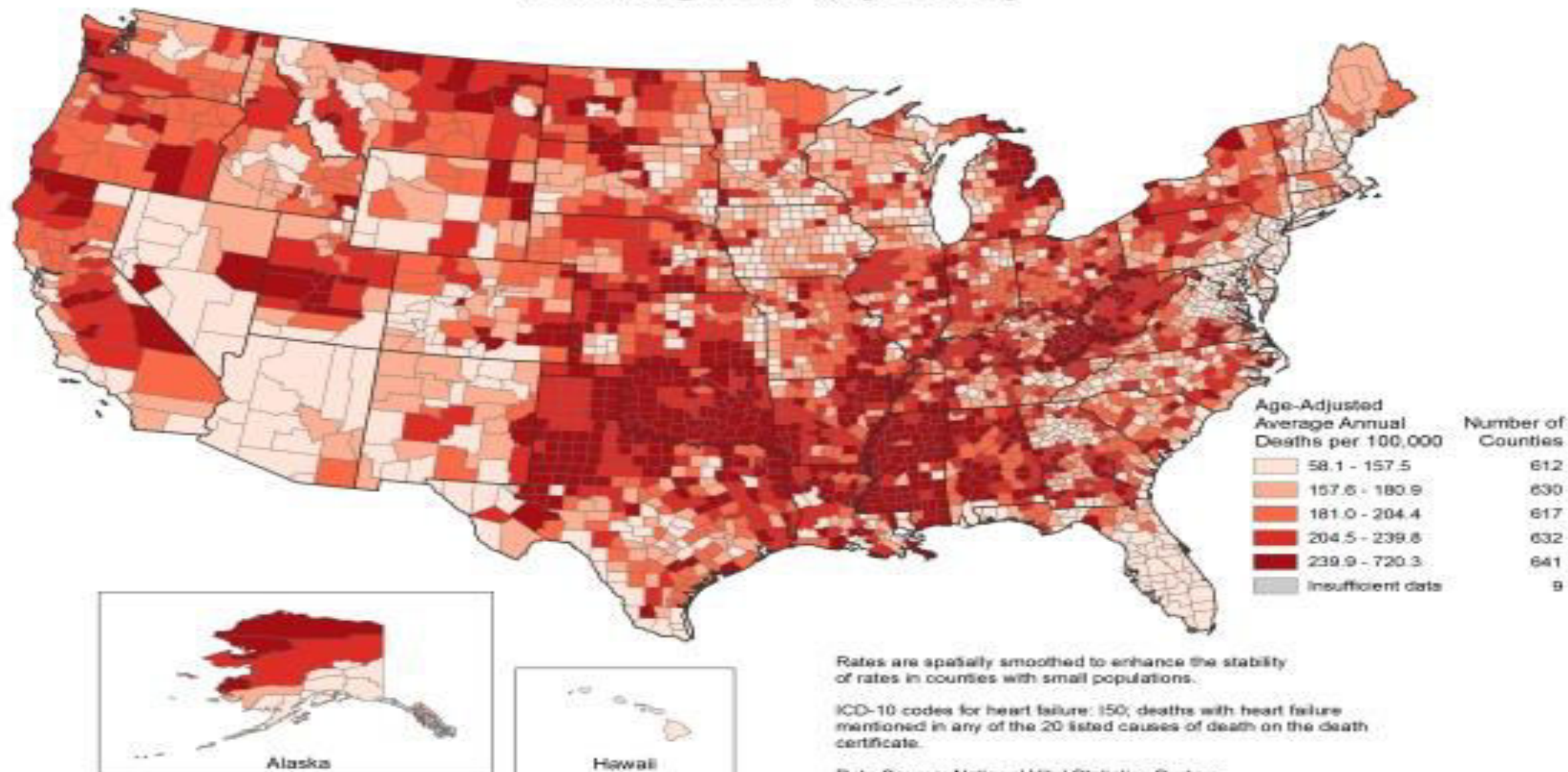
ACUTE CHF IN THE EMERGENCY DEPARTMENT

- Evaluation:
 - EKG
 - Lab
 - Imaging
- Disposition:
 - ICU
 - Telemetry/medical floor
 - Home

EPIDEMIOLOGY

- An epidemic in the United states
- About **5.1 million** people have CHF
- Approximately 550,000 new patients each year
- The leading cause of hospitalization among those >65 years
- Nearly 1,000,000 hospitalizations annually
- About half die within 5 years of diagnosis.
- The impact of heart failure is expected to increase
- The annual costs in the U.S. - > 32 billion U.S. dollars

Heart Failure Death Rates, 2007-2009 Adults Ages 35+, by County



Rates are spatially smoothed to enhance the stability of rates in counties with small populations.

ICD-10 codes for heart failure: I50; deaths with heart failure mentioned in any of the 20 listed causes of death on the death certificate.

Data Source: National Vital Statistics System and the U.S. Census Bureau

EPIDEMIOLOGY

- Most common causes seen in the ER
 - Myocardial ischemia: acute and chronic
 - Cardiomyopathy
 - Systemic hypertension
 - Cardiac dysrhythmias

EPIDEMIOLOGY

- Systolic vs diastolic
 - Systolic dysfunction (EF <40%)
 - most commonly from ischemic heart disease
 - Diastolic dysfunction
 - Chronic hypertension
 - Left ventricular hypertrophy
 - Coronary artery disease

PRECIPITANTS OF AN ACUTE HEART FAILURE

MOST COMMON:

- Excess salt
- Medication noncompliance
- Rapid atrial fibrillation
- Acute coronary syndrome or acute myocardial infarction
- Renal failure (especially missed dialysis)

EMERGENCY MEDICINE RESIDENCY

- Begun in 1982
- 3 year program (12 residents/year)



TTUHSC AT EL PASO

- Residency Programs

- Emergency Medicine
- Internal Medicine
- General Surgery
- Pediatrics
- Obstetrics and Gynecology
- Orthopedic Surgery
- Family Medicine
- Psychiatry
- Radiology

- PLFSOM Medical students; GGHSON students



TTUHSC AT EL PASO GOES UP

Medical Education Building



Basic Science Building

OTHER SPECIALTIES PROVIDED AT UNIVERSITY MEDICAL CENTER

- Trauma
- General Surgery
- Orthopedic Surgery
- Neurosurgery
- Plastic Surgery
- OMFS
- Pediatric Surgery
- Neonatology/NICU
- Ophthalmology
- OB/Gyn
- Radiology
- Internal Medicine
- Pediatrics
- Family Medicine
- Cardiology: Adult & Peds
- Gastroenterology
- Pulmonary/Critical Care
- Infectious Disease: Adult & Peds
- Hematology/Oncology
- Anesthesiology
- Interventional Radiology

UNIVERSITY MEDICAL CENTER

- Primary training site
- 400 certified beds
- 45 ED beds
- ED census : 80,000 annual visits (UMC and EPCH)
- Level I Trauma center with 2600 Trauma admits yearly
 - Private aeromedical services
 - Helicopter and fixed wing
 - Serves all west Texas and Southeastern New Mexico
- 5500+ deliveries , many high risk
- Border location gives diverse and sick IM case load



NEW CATH LABS



RESIDENCY CURRICULUM

*LOGITUDINAL ROTATIONS

PGY-1	PGY-2	PGY-3
EM	EM	EM
EM	EM	EM
EM	EM	EM
EM	EM	EM
EM	EM	EM
MICU	EM	EM
SICU	EM	EM
Toxicology	EM	EM
Anesthesia	SICU/ Trauma	**Peds EM
2 weeks OB/Gyn 2 weeks Ophthalmology	**EMS/Research	**Resuscitation
Orthopedics	Cardiology/ CCU	Administration
Elective	Ultrasound	Elective

FIRST INTUBATION IN NEW RESUSC AREA



CURRICULUM SPECIFICS

- EM rotation
 - 12 hour shifts
 - 19/18/17 shifts per month



RESIDENCY TRAINING

- Ultrasound program
- Medical Control for El Paso EMS
- Evidence Based Medicine and Research training throughout the 3 year curriculum
- Board Review
- ACLS, ATLS, APLS, and ACLS instructor certifications

PROCEDURES CLASS OF 2012

PROCEDURE	AVERAGE	RRC TARGET
Adult Med Resusc	87	45
Adult Trauma Res	77	35
Ped Med Resusc	25	15
Ped Trauma Res	35	10
Cardiac Pacing	3 (4)	6
Central Lines	35 (9)	20
Chest Tubes	26 (4)	10

PROCEDURES CLASS OF 2012

PROCEDURE	AVERAGE	RRC TARGET
Conscious Sedation	26	15
Cricothyrotomy	2 (2)	3
Reduce dislocation	20	10
Endotracheal Intubations	74 (6)	35
Lumbar Puncture	20 (8)	15
Pericardiocentesis	3 (6)	3
Vaginal Delivery	11	10

SIMULATION



- Group and individual training
- Allows for low-volume, high yield clinical situations and procedures
- Interdisciplinary training

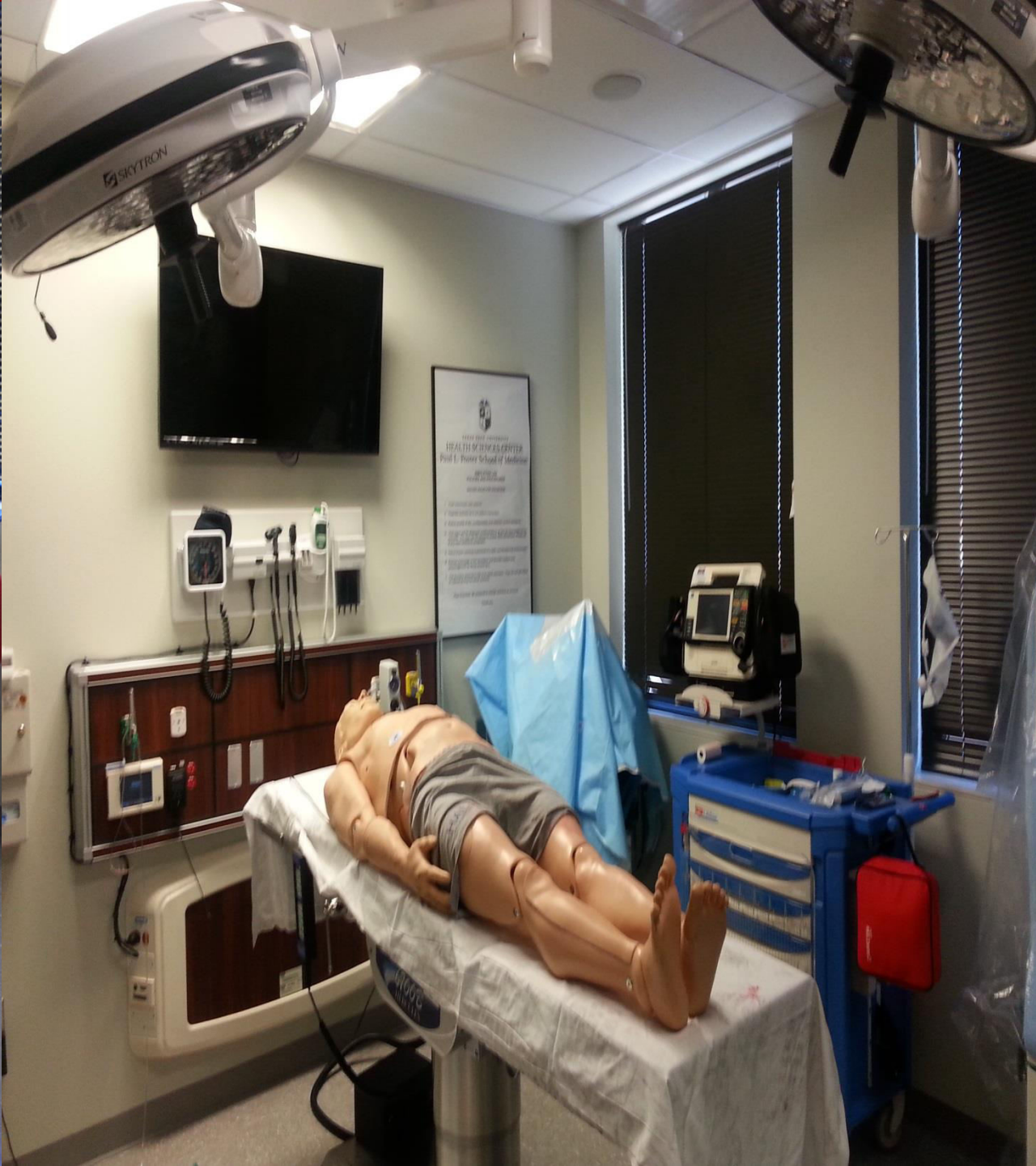
JULY PROCEDURE DIDACTICS LAB



JULY PROCEDURE DIDACTICS LAB











SIMULATED DISASTER DRILL OCTOBER 31, 2013









WHEN YOU'RE NOT WORKING!!





RUIDOSO, NM



WHITE SANDS, NEW MEXICO



CARLSBAD CAVERNS

