

# Mission Hospital Paramedic Services Quarterly Newsletter



## Special points of interest:

- Hypoglycemia
- Incident Summary
- Top 4 Educational Opportunities
- Education offered at Mission Viejo and Laguna Beach Campus's

## Best Treatment Option for Hypoglycemia

Hypoglycemia usually occurs when blood sugar falls below 50 mg per 100ml of blood. The signs and symptoms of hypoglycemia can be divided into two categories, those caused by altered cerebral function and those related to activation of the autonomic nervous system. Because the brain relies on blood glucose as its main energy source, hypoglycemia causes behaviors related to altered cerebral function. At the onset of hypoglycemic episode, activation of the parasympathetic nervous system causes hunger. The initial parasympathetic response is followed by activation of the sympathetic nervous systems; this causes anxiety, sweating, and constriction of the skin vessels.

The elderly population may not display the typical autonomic response that are associated with hypoglycemia but frequently develop signs of impaired function of the central nervous system, including mental confusion and bizarre behavior. Life-threatening hypoglycemia is when the blood sugar falls below 30 mg/dl which can lead to brain damage. The brain is unable to extract oxygen adequately, resulting in hypoxia and eventually coma. Intravenous dextrose has demonstrated that the duration of hyperglycemia following its administration is transient and lasts only about 30 minutes. In normal subjects, intravenous glucose induces

a rebound hypoglycemia 1 to 2 hours following the bolus, presumably due to pancreatic insulin release. Glucagon should not be used as empiric therapy for hypoglycemia except in specific cases. Since the action of glucagon is to mobilized glycogen stores, those patients who are glycogen-depleted (e.g., alcoholics, children the malnourished, or elderly) may not improve with glucagon. The treatment option for this patient should have been intravenous dextrose 50% and transport to the nearest paramedics receiving center.

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## Good Job! From Hospital to Field

Grace Ang (night MICN) would like to say "Thank you" to Dennis Ratcliffe and Scott Arthur for their patience and for giving a great report on September 17th at 01:40.

Kim Hudnall (day MICN) would like to say "Excellent Assess-

ment) to Shane Allen and Jason Engh. 76 y.o. female who wanted to be at SMMCLH. She fell forward without breaking her fall. Admitting diagnosis: C1-C2 fracture.

Good Job, Gentlemen!



## Field Administration of Stroke Therapy—Magnesium Phase 3 Clinical Trial or FAST-Mag:

The central aim of this study is to demonstrate that paramedic initiation of the neuroprotective agent magnesium sulfate in the field is an efficacious and safe treatment for acute stroke. The study design is a multicenter, randomized, double-blind, phase 3 clinical trial, using intention to treat analysis, of magnesium sulfate versus placebo among ambulance-transported patients with acute stroke, with study agent initiated in all individuals within two hours of stroke onset. Successful conduct of the trial will serve as a pivotal test of stroke, and will also demonstrate for the first time that field enrollment and

treatment of acute stroke patients is a practical and feasible strategy for phase 3 stroke trials, permitting enrollment of greater numbers of patients in hyperacute time windows.

Paramedics will initiate a loading dose of 4 grams magnesium sulfate IV over 15 minutes or matched placebo, followed after hospital arrival by a maintenance infusion of 16 grams magnesium sulfate IV over 24 hours or matched placebo. All patient consents and follow up will be managed by the Clinical Coordinating center and the Neuroimaging analysis Center at UCLA Medical Center and the Data Man-

agement Center will be coordinated through Stanford University

There are roughly 40 centers in Los Angeles County participating. In Orange County there are two centers enrolling patients—St. Jude and St. Joseph which has enrolled seven patients to date.

In south Orange County Saddleback Memorial Medical Center, Laguna Hills and Mission Hospital, Mission Viejo have been added to the list.

Orange County Fire Authority field personnel were trained in 2010 and

are under going a refresher course.

Mission Hospital base station involvement will be for the MICN to document “Possible FAST-MAG patient” on the base hospital report or reason paramedics do not call enrolling MD. MICN will also document modified Los Angeles Paramedics Stroke Scale (mLAPSS).

Saddleback Memorial Medical Center, Laguna Hills will begin accepting patient. Mission Hospital, MV will accepting patients once training is complete.

## Mission Base Hospital SNRC statistics

*Paraesthesia: any subjective sensation, as numbness, tingling, or a “pins and needles: feeling = Trauma*

Totals 2011  
1st Qtr—61  
2nd Qtr—72  
3rd Qtr—79  
Total— 212

Gender  
1st Qtr. Male— 34; Female—21  
2nd Qtr Male— 36; Female-35  
3rd Qtr Male—36; Female—43  
Total Male -106 Female -99

SNRC  
1st Qtr SMMC—20; MH-40  
2nd Qtr SMMC-26; MH-46  
3rd Qtr SMMC-24; MH-55  
Total—211  
SMMC— 70  
MH—141  
St. Joe—1



## Incident Summary—OC EMS Policy 385.00

This policy defines the process used by the Base Hospital to identify and report variations in practice from Orange County EMS policies, protocols, treatment guidelines and documentation standards, and outline the actions to be followed for problem resolution, performed as a part of the hospital’s comprehensive quality improvement

(CQI) plan.”  
1st Qtr—245  
2nd Qtr—137  
3rd Qtr—187  
Total - 569 or < 2% educational opportunities

## Top 2 EMS & MICN Educational Opportunities

### Field Providers:

**I-40-vs–Base hospital Contact/Report/Transport/Escort.** Vital signs fell outside the parameters for ALS no-contact criteria.

**I-40->meds– Base Hospital/Contact/Report/Transport/Escort.** Medic gave more than single dose med or treatment; outside of the parameters for ALS no-contact criteria. (Does not include 1 ASA or 1 Nitro)

Reminder: All patients going to a specialty center require base hospital contact.

### MICN

**Incomplete documentation**—Missing treatment codes, PRC identification, and initial assessments

**Congratulations. The Top 4 Educational Opportunities have been decreased to the Top 2. Good Job Field Providers and Nurses.**



## Mission Hospital Education Opportunities

Paramedic Inservice—Mission Hospital Laguna Beach—09:00—10:00

November 23, 2011

RPAC 09:00—10:00 All with paramedics inservice to follow meeting—February 10, 2012;

Mission Hospital Emergency Department Conference—March 29, 2012

Emergency Care: No Fear Conference—May 2012

## OC EMS Trauma Triage Guidelines

**Base Contact is required for all patient who have vital signs, injuries and/or mechanism of injury or special circumstances.**

You are contacting the base hospital for destination and treatments. If the base hospital physician doesn't feel this patient is a trauma then they will send you closest PRC.

Total Traumas designated by Mission Base January - September 2011

Total Calls - 533

IFT	January to March 2011	April to September 2011
	POV — 6	POV—4
	BLS — 1	BLS—4
	ALSNC - 2	ALSNC—1
	ALS / CC — 0	ALS / CC—4

Congratulations! 96% of all trauma patients are triaged to the correct receiving center. Good Job!

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*“Don't measure yourself by what you have accomplished, but by what you should have accomplished with your ability.”*  
 ~John Wooden



Chato



Advance Care. Advance Caring



c/o Prehospital Care Services  
27700 Medical Center Road  
Mission Viejo, Ca 92691

Phone: 949-364-7753  
Fax: 949-364-4961  
E-mail: maggie.sullivan@stjoe.org

*Mission Hospital is a member of the St. Joseph Health System, sponsored by the St. Joseph Health Ministry. Our mission is to extend the healing ministry of Jesus in the tradition of the Sisters of St. Joseph of Orange by continually improving the health and quality of life of people in the communities we serve. Our vision is to provide compassionate care, promote health improvement and to create healthier communities.*

## What grade would you give this concussion?

**Case Study:** Mason 14 year old male active in baseball was hit in the head by line drive baseball then dazed post event. Primary all within normal limits including vital signs Secondary show dazed after hit with no LOC, right ear and occipital hematoma but otherwise normal. Transported to PRC via ambulance no contact.

**Concussion**, a common consequence of trauma to the head in contact sports, can also occur from collisions or falls in all forms of athletic activity. Repeated concussions can cause cumulative brain injury in an individual injured over months or years. The problem faced by the medical community has been developing a consensus on managing athletes with these injuries. The definition of concussion is “trauma-induced alteration in mental status that may or may not involve loss of consciousness. Confusion and amnesia are the hall marks of concussion.” Frequently observed features of concussion are vacant stare, delayed verbal and motor responses, confusion and inability to focus attention, disorientation, slurred or incoherent speech, gross observable incoordination,

emotions out of proportion to circumstances, memory deficits and any period of loss of consciousness. These symptoms can be divided into two categories early (minutes and hours) and late (days or weeks). Early symptoms of concussion are headache, dizziness or vertigo, lack of awareness of surrounding, nausea or vomiting.

Concussions are graded on a scale of 1 to 3. Grade 1 has transient confusion, no loss of consciousness and concussion symptom or mental status abnormalities on examination resolve in **less than 15 minutes**. Grade 2 has transient confusion, no loss of consciousness and concussion symptoms or mental status abnormalities on examination **last more than 15 minutes**. Grade 3 any loss of consciousness, either brief (seconds) or prolonged (minutes),

Recommendations for treatment and/or follow up are different for each grade. Grade 1 concussions should be removed from activity, examined immediately and at 5 minute intervals for the development of mental status abnormalities or post-concussive symptoms at rest and with exertion. The athlete should not return to that sport for the remainder of the day and have 1 week of rest and no exercise. Grade 2 concussions should have the same exam as above but by a physician who will determine

need for immediate CT or MRI followed by no exercise only rest for 2 weeks following event. Grade 3 concussions should be removed from the field and immediately transported to nearest emergency department especially if the patient is unconscious.

Mason’s outcome was admission to the pediatric intensive care unit with blunt head trauma with intracranial petechial hemorrhage. He was observed over night then discharged home in the afternoon of the following day.