**On August 1, 2015 REMAC Protocol revisions take effect. See page 2 for details**

**From the Editor**

To ensure the highest-possible quality of patient care in NYC, REMAC has raised CME and exam requirements for all re-certification and new candidates.

**All candidates must now meet CME requirements**

- All REMAC paramedics and candidates should review Certification & CME Information on page 3 journal and plan accordingly.
- All upcoming exam candidates, see registration instructions at the bottom of the last page of this journal.
- Candidates who will not have a CME letter at the time of their REMAC exam must email Christopher.Swanson@fdny.nyc.gov ASAP.

**The exam format has changed for all candidates**

- Early testing is strongly encouraged, there is no loss of certification time.
- Study Tips – to pass the exam, candidates MUST:
  - memorize the REMAC GOP, BLS and ALS protocols, and appendices
  - interpret 3 and 12-lead ECGs
  - calculate drug doses based on patient weight
- 120 question multiple-choice exam with a 3-hour time limit
  - 20 Scenario questions: two new intensive patient-care scenarios
    - one adult and one pediatric, 10 questions each
    - similar to past REMAC Orals and Scenario exams
    - testing the candidate’s ability to integrate history, physical exam, ECG interpretation, diagnosis, treatment using the NYC REMAC protocols
  - 100 General questions: the same format and content as past REMAC exams, on protocol content and patient care
- Passing score is 80%. Exam failure permits a retest the same month.
** On August 1, 2015 REMAC Protocol revisions take effect **

**REMEMBER: the protocols on the street are the protocols on the exam!**

Beginning August 1, 2015, protocols revisions are in effect in the field

and on REMAC certification exams

Always see nycremsco.org for the current approved protocols

Outline of August 2015 NYC REMAC protocol changes
see REMAC Advisory 2015-03 at nycremsco.org

**General Operating Procedures**

- Pediatric Patients
  - Changes age parameters
- Prehospital Sedation
  - Removes etomidate administration rate for intubation
  - Increases etomidate maximum dose for cardioversion
- IO Administration
  - Limits number of attempts
- Pre-existing Central Venous Catheter
  - New GOP section

**BLS Protocols**

- 407 – Wheezing & 410 – Anaphylaxis
  - Changes note to not delay transport
  - Changes OLMC contact requirements
- 430 – Excited Delirium
  - Changes name of protocol
  - Language changes to criteria & procedures

**ALS Protocols**

- 500-A – Smoke Inhalation & 500-B – Cyanide
  - Changes blood drawing to “if available”
  - Changes age requirement
  - Changes bottle use of hydroxocobalamin
  - Deletes Table 2
- 530 – Excited Delirium
  - Changes name of protocol
  - Standing Orders:
    - adds midazolam IM/IN
    - add normal saline rapid infusion
  - Medical Control Options:
    - reorganized as a table
    - adds ketamine IM/IN
    - removes IV lorazepam & midazolam
    - reduces IN lorazepam & midazolam
  - Adds QA component

**Appendices**

- Appendix P – CPAP
- Removes pregnancy as contraindication
REMAC Exam Study Tips

REMAC candidates have difficulty with: REMAC Written exams are approximately:
* 12-lead EKG interpretation 10% BLS 15% Adult Trauma
* ventilation rates for peds & neonates 10% Adult Arrest 15% Pediatrics

Certification & CME Information

- By the day of their exam, all REMAC paramedics and candidates must present a letter from their Medical Director verifying fulfillment of CME requirements.

- Upcoming candidates without a CME letter ASAP must email Christopher.Swanson@fdny.nyc.gov

- FDNY paramedics, see your ALS coordinator or Division Medical Director for CME letters.

- CME letters must indicate the proper number of hours, per REMAC Advisory # 2007-11:
  - 36 hours - Physician Directed Call Review
    - ACR Review
    - QA/I Session
    - Emergency Department Teaching Rounds - Maximum of 18 hours
  - 36 hours - Alternative Source CME - Maximum of 12 hours per venue
    - Online CME (see examples below) - Clinical rotations
    - Lectures / Symposia / Conferences - Associated Certifications – 4 hours each:
    - Journal CME

- Failure to maintain a valid NYS EMT-P card will suspend your NYC REMAC certification until NYS is recertified.

REMAC certification exams are held monthly for new and expired candidates, and for currently certified paramedics who may attend up to 6 months before their expiration date.

REMAC CME and Protocol information is available and suggestions or questions about the newsletter are welcome. Call 718-999-2671 or email Christopher.Swanson@fdny.nyc.gov

www.EMINET.com  statenislandem.com
FDNY ALS Division Coordinators

Citywide ALS 718-999-1738  Division 4 718-281-3392
Lt. Evan Suchecki  Mike Romps

Division 1 212-964-4518  Division 5 718-979-7175
William Meringolo  Marissa Crocco

Division 2 718-829-6069  Bureau of Training 718-281-8325
Kornelia Haynes  Hector Arroyo / Lisa Desena

Division 3 718-968-9750  EMS Pharmacy 718-571-7620
Gary Simmonds  Cindy Corcoran

----------------------------------------------------------------------------------

FDNY EMS Medical Directors

Dr. Nikolaos Alexandrou 718-999-0124  Dr. Dario Gonzalez 718-281-8473
Field Response Division 3  Field Response Division 2
OLMC Director  USAR/FEMA Director, OEM Liaison

Dr. Glenn Asaeda 718-999-2790  Dr. Doug Isaacs 718-281-8428
Chief Medical Director  Field Response Division 1
REMAC Coordinator  EMS Fellowship & Rescue Medic Director

Dr. David Ben-Eli 718-999-0404  Dr. Bradley Kaufman 718-999-1872
Field Response Division 4  QA, EMD & EMS Training Director
Haz-Tac, PASU & EMS Resident Director

EMS Fellows - Field Response Division 5
Dr. Benjamin Zabar 718-999-0364  Dr. Jason Zimmerman 718-999-0351

----------------------------------------------------------------------------------

FDNY OLMC Physicians and ID Numbers

<table>
<thead>
<tr>
<th>Name</th>
<th>ID</th>
<th>Name</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandrou, Nikolaos</td>
<td>80282</td>
<td>Jacobowitz, Susan</td>
<td>80297</td>
</tr>
<tr>
<td>Asaeda, Glenn</td>
<td>80276</td>
<td>Kaufman, Bradley</td>
<td>80289</td>
</tr>
<tr>
<td>Barbara, Paul</td>
<td>80306</td>
<td>Lai, Pamela</td>
<td>80311</td>
</tr>
<tr>
<td>Bayley, Ryan</td>
<td>80314</td>
<td>Munjal, Kevin</td>
<td>80308</td>
</tr>
<tr>
<td>Ben-Eli, David</td>
<td>80298</td>
<td>Redlener, Michael</td>
<td>80312</td>
</tr>
<tr>
<td>Freese, John</td>
<td>80293</td>
<td>Rotkowitz, Louis</td>
<td>80317</td>
</tr>
<tr>
<td>Friedman, Matt</td>
<td>80313</td>
<td>Schenker, Josef</td>
<td>80296</td>
</tr>
<tr>
<td>Giordano, Lorraine</td>
<td>80243</td>
<td>Schneitzer, Leila</td>
<td>80241</td>
</tr>
<tr>
<td>Gonzalez, Dario</td>
<td>80256</td>
<td>Silverman, Lewis</td>
<td>80249</td>
</tr>
<tr>
<td>Hansard, Paul</td>
<td>80226</td>
<td>Soloff, Lewis</td>
<td>80302</td>
</tr>
<tr>
<td>Hegde, Hradaya</td>
<td>80262</td>
<td>Van Voorhees, Jessica</td>
<td>80310</td>
</tr>
<tr>
<td>Hew, Phillip</td>
<td>80267</td>
<td>Williams, Alan</td>
<td>80316</td>
</tr>
<tr>
<td>Huie, Frederick</td>
<td>80300</td>
<td>Zabar, Benjamin</td>
<td>80323</td>
</tr>
<tr>
<td>Isaacs, Doug</td>
<td>80299</td>
<td>Zimmerman, Jason</td>
<td>80824</td>
</tr>
</tbody>
</table>
Concussion

Brain injuries are a major cause of morbidity and mortality. Even though the brain is protected by the hard skull and shock absorbing cerebrospinal fluid, traumatic injuries often result. On average, FDNY EMTs and Paramedics care for 100 to 200 patients each month who have suffered from a blunt trauma to the head. Trauma to the brain can lead to bleeding, tearing, and swelling of this critical organ.

Concussions, or mild traumatic brain injury (MTBI), are a common brain injury that may be difficult to visualize on physical exam or even with advanced imaging studies. In the past decade, emergency department visits for sports-related traumatic injury have increased by nearly 60%.

Below is an excerpt from an article about concussions that was published on the Medscape website.

Author - David T Bernhardt, MD, Director of Adolescent and Sports Medicine Fellowship, Associate Professor, Department of Pediatrics/Ortho and Rehab, Division of Sports Medicine, University of Wisconsin School of Medicine and Public Health.

Background

Concussion has many different meanings to patients, families, and physicians. One definition of concussion is a condition in which there is a traumatically induced alteration in mental status, with or without an associated loss of consciousness (LOC). A broader definition for concussion is a traumatically induced physiologic disruption in brain function that is manifested by LOC, memory loss, alteration of mental state or personality, or focal neurologic deficits. Concussions usually result in relatively temporary impairment of neurologic function.

Epidemiology

The incidence of head injury varies with the sport and the age of the participants; many head injuries are likely unreported due to their supposed mild nature; mild concussions may go unnoticed by teammates, coaches, and even the athletes themselves. An athlete's fear of medical disqualification may also lead to underreporting. Studies of high school athletes show the rate of concussions per 1000 exposures as follows: 0.59 for football (boys), 0.25 for wrestling (boys), 0.18 for soccer (boys; 0.23 for girls), 0.09 for field hockey (girls), and 0.11 for
basketball (boys; 0.16 for girls). The data from one study noted that concussions account for nearly 15% of all sport-related injuries in high school athletes.

Among National Collegiate Athletic Association (NCAA) soccer players, the rate of injury has been reported as 0.4-0.6 per 1000 athlete exposures; 72% of these injuries were described as mild and were almost always secondary to direct contact with an opponent. None of the injuries in this group of Atlantic Coast Conference (ACC) soccer players was noted to be a direct result of heading the ball. In contrast, boxing is the sport with the highest rate of head injuries and has more deaths than any other organized athletic activity. At the professional level, many of the boxing bouts end with a technical knockout (i.e., brain injury).

Sports activities that place the athlete at high risk for a head injury include boxing, football, ice hockey, wrestling, rugby, and soccer.

**Impact Expectation by Sport**

The mechanisms of brain injury may differ among sports activities. Possible mechanisms of injury include **compressive forces**, which may directly injure the brain at the point of contact (coup); **tensile forces** produce injury at the point opposite the injury (contrecoup) because the axons and nerves are stretched; finally, **rotational forces** may result in a shearing of axons. Therefore, the direct force at the point of contact may not be solely responsible for the severity of an injury if a **high rotational component** with a significant shear effect occurs.
History

Athletes with an MTBI often appear acutely with a confused or blank expression or blunted affect. Delayed response to simple questioning may be demonstrated, along with emotional lability (mood swings). The emotional lability may become more evident as the athlete attempts to cope with their confusion. Many athletes report an associated headache and dizziness. Visual complaints may include seeing stars, blurry vision, or double vision.

Both pretraumatic (retrograde) amnesia and posttraumatic (antergrade) amnesia may be present. Usually, the duration of retrograde amnesia is quite brief, with a more variable duration of posttraumatic amnesia (seconds to minutes), depending upon the injury.

A history of persistent vomiting may suggest a significant brain injury with associated elevated intracranial pressure. Other signs of increased intracranial pressure include worsening headache, increasing disorientation, and changing level of consciousness. Possible causes of increasing intracranial pressure include subdural hematomas, epidural hematomas, or some other type of intracranial hemorrhage.

Assessment tools

The Glasgow Coma Scale (GCS) is routinely used to assess head injuries. This 15-point scale is used to assess eye (spontaneous opening = 4 to no response = 1), motor (obeys commands = 6 to no response = 1), and verbal responses (oriented = 5 to no response = 1) in an attempt to quantify the patient's level of consciousness.

Classification

Many different classification schemes have been proposed over the last 2 decades. No one classification system is necessarily better than another classification system. No scientific basis for any of the classification systems exists.

Regardless of the classification scheme that is used, all concur with the ultimate recommendation: Do not allow the concussed athlete to return to play until the patient is completely asymptomatic. The athlete must be free of headache, dizziness, amnesia, blunted affect, and delayed verbal or ocular responses, and all cognitive functioning must have returned to normal.

Physical

The initial evaluation should focus on airway, breathing, and circulation for any unconscious patient. Assume all unconscious or mentally impaired patients have sustained an injury to their cervical spine until proven otherwise.

The initial clinical examination should include:

- A careful inspection of the athlete's general appearance.
- Palpating the head and neck is important when looking for an associated skull or cervical injury.
- Palpate the facial bones and the periorbital, mandibular, and maxillary areas after any head trauma.
- Open and close the mouth to help in the evaluation of possible temporomandibular joint (TMJ) pain, malocclusion, or mandible fracture.
- Inspect the nose for deformity and tenderness, which may indicate a possible nasal fracture.
- Persistent rhinorrhea or otorrhea (clear) indicates a possible associated skull fracture.
- Perform a careful detailed neurologic examination to include examinations of the visual fields, extraocular movements, pupillary reflexes, and level of the eyes.
• Assess upper-extremity and lower-extremity strength and sensation.
• Assess coordination and balance. Concussed patients often have difficulty with the finger-nose-finger test and will use slow, purposeful movements to complete the task.
• A previous concussion is a significant risk factor for sustaining a concussion.

One study reported that the risk of sustaining a concussion was 4-5 times higher in patients who had at least one concussion in the past. Another study reported that athletes with a history of three or more previous concussions were three-fold more likely to have a concussion than players who had no history of concussion.

Other risk factors for sustaining a concussion that have been suggested but not proven include not wearing mouth guards, poor fitting helmets, and genetic predisposition. Research in all of these areas continues.

Approach Considerations

In March 2013, the American Academy of Neurology (AAN) updated its 1997 guidelines on the evaluation and management of sports concussion. A major change is the removal of return-to-play recommendations. The current recommendation for athletes who have sustained a concussion is immediate removal from play. Return to play should not be allowed until after assessment by a healthcare professional. Young athletes should be managed even more conservatively; their symptoms and neurocognitive performance take longer to improve after a concussion.

Highlights from the revised recommendations include the following:

• No evidence exists that medication improves recovery after concussion
• Risk for concussion is greatest in football and rugby, followed by hockey and soccer; for young women and girls, the risk is greatest in soccer and basketball
• Athletes with a history of 1 or more concussions are at greater risk for being diagnosed with another concussion
• The first 10 days after a concussion appears to be the period of greatest risk for being diagnosed with another concussion
• The use of helmets may prevent concussion versus no helmet, but there is no clear evidence that one type of football helmet can better protect against concussion over another kind of helmet
• Licensed health professionals trained in treating concussion should look for ongoing symptoms, history of concussions, and younger age in the athlete
- Risk factors linked to chronic neurobehavioral impairment in professional athletes include prior concussion, longer exposure to the sport, and having the ApoE4 gene
- Symptom checklists, the Standardized Assessment of Concussion (SAC), neuropsychological testing (paper-and-pencil and computerized), and the Balance Error Scoring System may be helpful tools in diagnosing and managing concussions, but should not be used alone for making a diagnosis
- Although an athlete should immediately be removed from play after a concussion, there is insufficient evidence to support absolute rest after concussion

**Medical Issues/Complications**

Most of the complications listed below probably already existed when the athlete sustained the initial head injury; in other words, they are not caused by an MTBI. These conditions may be associated with what was thought of as an MTBI. Therefore, the reader should not think of these conditions as a complication of an MTBI but must consider these other conditions when evaluating an athlete with a head injury.

A **subdural hematoma** is a rare injury in the athlete who presents with a presumed concussion. The classic presentation of a subdural hematoma is an acute and persistent LOC associated with the initial injury.

No association between **epidural hematoma** and brain injury exists. This condition classically presents with a brief period of unconsciousness, followed by a lucid period, and then a subsequent deterioration over 15-30 minutes. Tearing of the middle meningeal artery secondary to an associated temporal skull fracture is the usual cause of an epidural hematoma.

**Subarachnoid bleeding** may also occur with a head injury of any type. Worsening headache and other signs of increasing intracranial pressure will gradually grow after the initial event.

**Second impact syndrome** (SIS) has been described in many review articles. In this condition, fatal brain swelling occurs after minor head trauma in individuals who still have symptoms from a previous minor head trauma. Thus far, all cases of second impact syndrome have been described in relatively young patients (age < 20 y). Significant controversy exists over the etiology of this condition, although it is thought to be secondary to loss of autoregulation of cerebral blood flow in an already injured brain.

**Postconcussive syndrome** consists of prolonged symptoms that are related to the initial head injury. Unfortunately, the severity of the concussion does not necessarily predict who will experience prolonged symptoms. Similarly, the number of concussions is not necessarily predictive of future problems. Symptoms usually consist of persistent recurrent headaches, dizziness, memory impairment, loss of libido, ataxia, sensitivity to light and noise, concentration and attention problems, depression, and anxiety.

A retrospective case-control study indicated that children with a personal or family history of mood disorders who sustain a sports-related concussion have a significantly increased risk for developing postconcussive syndrome.

Most patients with MTBI recover in 48-72 hours, even with detailed neuropsychologic testing, and are headache free within 2-4 weeks of the injury.

**Medication Summary**

Overall, no medical therapy is usually prescribed for patients after an acute brain injury. Pain control is usually achieved with over-the-counter medications, such as acetaminophen. Avoid narcotics so that clouding of the patient's mental status or neurologic examination does not occur.
Return to Play

Return-to-play criteria are controversial. Similar to classification guidelines, several different guidelines regarding return to play following MTBI have been established. No scientific evidence exists to justify one criterion versus another criterion. The main criteria for an athlete’s return to play include complete clearing of all symptoms, complete return of all memory and concentration, and no symptoms after provocative testing. Provocative testing includes jogging, sprinting, sit-ups, or push-ups - in other words, some type of exercise that raises the athlete's blood pressure and heart rate.

The rules are the same for athletes who have a concussion that prohibits return to play during competition. Only after all symptoms have cleared both at rest and with exertion should an athlete even consider returning to practice or competition. In addition, the athlete has to show complete resolution of any emotional lability, mood disturbance, attention, or concentration difficulty. Relatively minor concussions may have more prolonged neurologic deficits. Therefore, the most important aspect of all published guidelines is the concept of an athlete not being allowed to return to play until he/she is completely asymptomatic.

Prevention

Injury prevention methods are currently being studied. In the past, rule changes that barred spearing in football and teaching football players not to lead with their head have significantly reduced the frequency of severe head injuries in American football.

Equipment and environmental changes can also prevent injury. Soccer goals must be anchored to the ground because many deaths secondary to head injury in soccer have been the direct result of a goal tipping over onto a player.

There is controversy regarding possible helmet wearing in soccer. Although helmets have been shown to clearly reduce the risk of head injury in recreational bicycle riding, no clear evidence exists that the type of headgear proposed for youth soccer will prevent acute or chronic head injury among soccer players. Long-term studies that examine soccer players over time and that compare the players to themselves in a longitudinal fashion have not been completed. Thus far, studies that suggest long-term damage from heading have been methodologically flawed by comparing soccer players to other athletes, and these studies have not been able to distinguish heading from previous concussions. Most concussions in soccer are the result of direct contact rather than heading of the ball.

Also on a positive note, wireless sensors are now available to measure the g-force of a hit that an athlete’s helmet receives from a collision or blunt force. These tools send data via Bluetooth to a smart phone or laptop computer of an athletic trainer, coach or parent on the sideline, triggering an alert when the athlete suffers a head impact that may of sufficient force to be concussive. Computer applications are also available that provide standard concussion assessment tools for athletic trainers and medical personnel.

Prognosis

Most patients with an MTBI are able to return to full competition without complication. Because many patients may not report minor head injuries to the
athletic trainer, emergency department (ED), or a primary care physician, the overall prognosis of many head injuries is unclear.

At the SUNY Buffalo Concussion Clinic, patients are run through a battery of tests that aid in the evaluation process following concussion.

**Chronic postconcussive syndrome** can be quite severe, with the most dramatic presentation including *dementia pugilistica*, which is associated with boxing. This Alzheimer-like condition has a reported incidence of 15% among professional boxers. Fortunately, this condition is rare in most other sports. Hopefully, more frequent, detailed neuropsychologic testing will decrease the frequency of postconcussive syndrome among elite and professional athletes by detecting more subtle injuries earlier.

**Summary**

Concussion, or mild traumatic brain injury (MTBI), is common among contact and collision sports participants. EMTs and Paramedic will often encounter patients with injuries related to sports or from blunt trauma to the head. Severity can range for short-term symptoms to chronic debilitating consequences. While the concussion historically has been undertreated, recent guidelines have changed to a more conservative approach for the safety and future health of young athletes. Attention to mechanism of injury and ongoing assessment during patient care will ensure that these patients receive appropriate care through the course of their emergency management and beyond.

1. [http://www.cdc.gov/traumaticbraininjury/get_the_facts.html](http://www.cdc.gov/traumaticbraininjury/get_the_facts.html)
2. PBS documentary, *"The Smartest Team: Making Football Safer."*

Written by: **Dr. Bradley Kaufman**, First Deputy Medical Director  
**Lt. Joan Hillgardner, EMT-P**, FDNY Office of Medical Affairs

---

**CME JOURNAL 2015 QUIZ J6-7: CONCUSSION**

All 10 questions for ALS and BLS Providers

1. Concussions are always associated with a loss of consciousness.  
   a. True  
   b. False

2. Concussions account for nearly 15% of all sport-related injuries in high school athletes.  
   a. True  
   b. False
3. The following sports place athletes at high risk for a head injury, except:
   a. Soccer
   b. Football
   c. Baseball
   d. Boxing

4. The first 10 days after a concussion are the period of greatest risk for another concussion.
   a. True
   b. False

5. In addition to headache and dizziness, symptoms of concussion may include:
   a. confusion
   b. blank expression
   c. mood swings
   d. all of the above

6. Examination of the eyes should include all of the following, except:
   a. Extraocular movements
   b. Visual fields
   c. Pupil reactivity
   d. Intraocular pressure measurement

7. Persistent rhinorrhea or otorrhea could indicate an associated skull fracture.
   a. True
   b. False

8. Postconcussive syndrome may typically include all of the following symptoms, except:
   a. Recurrent syncope
   b. Ataxia
   c. Depression
   d. Headaches

9. An athlete should not be allowed to return to play until he/she is completely asymptomatic.
   a. True
   b. False

10. Dementia pugilistica is associated with which sport?
    a. Football
    b. Soccer
    c. Baseball
    d. Boxing
Based on the CME article, place your answers to the quiz on this answer sheet. Respondents with a minimum grade of 80% will receive 1 hour of Online/Journal CME.

Please submit this page only once, by one of the following methods:
• FAX to 718-999-0119 or
• MAIL to FDNY OMA, 9 MetroTech Center 4th flr, Brooklyn, NY 11201

Contact the Journal CME Coordinator at 718-999-2790:
• three months before REMAC expiration for a report of your CME hours.
• for all other inquiries.

Monthly receipts are not issued. You are strongly advised to keep a copy for your records.

Note: if your information is illegible, incorrect or omitted you will not receive CME credit.

check one: EMT Paramedic other

Name

NY State / REMAC # or “n/a” (not applicable)

Work Location

Phone number

Email address

Submit answer sheet by the last day of July 2015

<table>
<thead>
<tr>
<th>June – July 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>CME Quiz</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
</tbody>
</table>
| 5.               | Questions 1-10 for all providers
| 6.               |
| 7.               |
| 8.               |
| 9.               |
| 10.              |
Regional CME – Sessions are subject to change. Please confirm through the listed contact.

See other opportunities at [www.nycemSCO.org](http://www.nycemSCO.org) under News & Announcements

**Note:** A plentiful source of Call Review is E.D. Teaching Rounds (maximum of 18 hours)

See any hospital E.D. Administrator for availability (especially HHC hospitals)

<table>
<thead>
<tr>
<th>Borough</th>
<th>Facility</th>
<th>Topic</th>
<th>Location</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK</td>
<td>Kingsbrook</td>
<td>contact to inquire →</td>
<td>ED Conference Room</td>
<td>Aaron Scharf 718-363-6644</td>
</tr>
<tr>
<td></td>
<td>Lutheran</td>
<td>contact to inquire →</td>
<td>Inquire →</td>
<td>Dale Garcia 718-630-7230 <a href="mailto:dgarcia@lmcmc.com">dgarcia@lmcmc.com</a></td>
</tr>
<tr>
<td>MN</td>
<td>Lenox Hill &amp; Health Plex</td>
<td>contact to inquire → Call Review</td>
<td>Inquire →</td>
<td>Brian Lynch 512-589-9128 Lenox Hill Hospital EMS</td>
</tr>
<tr>
<td></td>
<td>Mt Sinai Hosp</td>
<td>contact to inquire → Call Review, Lecture</td>
<td>Inquire →</td>
<td>Eunice Wright <a href="mailto:eunice.wright@mountsinai.org">eunice.wright@mountsinai.org</a></td>
</tr>
<tr>
<td></td>
<td>NY Presbyterian</td>
<td>contact to inquire →</td>
<td>Inquire →</td>
<td>Steven M. Samuels 212-746-0596</td>
</tr>
<tr>
<td></td>
<td>NYU School of Medicine</td>
<td>contact to inquire → Call Review, Lecture</td>
<td>Inquire →</td>
<td><a href="mailto:danielle.milbauer@nyumc.org">danielle.milbauer@nyumc.org</a> <a href="http://cme.med.nyu.edu/course">http://cme.med.nyu.edu/course</a></td>
</tr>
<tr>
<td>QN</td>
<td>Elmhurst Hosp</td>
<td>Call Review: Trauma Rounds</td>
<td>A1-22 Auditorium 1st Wednesdays, 1300-1400</td>
<td>Anju Galer, RN 718-334-5724 <a href="mailto:galera@nychhc.org">galera@nychhc.org</a></td>
</tr>
<tr>
<td></td>
<td>Mt Sinai Qns</td>
<td>Call Review, Lecture</td>
<td>25-10 30 Ave, conf room last Tuesdays, 1800-2100</td>
<td>Donna Smith-Jordon 718-267-4390</td>
</tr>
<tr>
<td></td>
<td>NYH Queens</td>
<td>contact to inquire →</td>
<td>East bldg, courtyard flr</td>
<td>Mary Ellen Zimmermann RN 718-670-2929</td>
</tr>
<tr>
<td></td>
<td>Queens Hosp</td>
<td>Call Review</td>
<td>Emergency Dept 2nd &amp; 4th Thurs 1615-1815</td>
<td>Maria Jones or Julia Fuzailov 718-883-3070</td>
</tr>
<tr>
<td></td>
<td>St John’s University</td>
<td>contact to inquire → Call Review</td>
<td>175-05 Horace Harding Expwy</td>
<td>718-990-8436 <a href="http://www.stjohns.edu/ems/cme">www.stjohns.edu/ems/cme</a></td>
</tr>
<tr>
<td></td>
<td>St John’s Episcopal</td>
<td>contact to inquire → Lecture</td>
<td>1st floor Board Room</td>
<td>Michelle Scarlett <a href="mailto:mscarlet@ehs.org">mscarlet@ehs.org</a></td>
</tr>
<tr>
<td>SI</td>
<td>RUMC</td>
<td>contact to inquire → Call Review, Lecture</td>
<td>Inquire →</td>
<td>Tony McKay NRP <a href="mailto:amekay@rumcsi.org">amekay@rumcsi.org</a></td>
</tr>
<tr>
<td></td>
<td>SIUH North &amp; South</td>
<td>contact to inquire → Call Review</td>
<td>Inquire →</td>
<td>718-226-5032 <a href="http://www.statenislandem.com">www.statenislandem.com</a></td>
</tr>
</tbody>
</table>
### 2015 NYC REMAC Examination Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>Registration Deadline</th>
<th>Refresher exams¹</th>
<th>Basic exams²</th>
<th>NYS/DOH Written³</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>1/1/15</td>
<td>1/12 @18:00</td>
<td>1/15 @18:00</td>
<td>1/14 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/15 @10:00</td>
<td>1/21 @10:00</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>2/1/15</td>
<td>2/18 @10:00</td>
<td>2/18 @18:00</td>
<td>2/11 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2/19 @18:00</td>
<td>2/23 @18:00</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>3/1/15</td>
<td>3/18 @10:00</td>
<td>3/18 @18:00</td>
<td>3/16 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3/23 @18:00</td>
<td>3/26 @10:00</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>4/1/15</td>
<td>4/22 @10:00</td>
<td>4/23 @18:00</td>
<td>4/20 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/23 @18:00</td>
<td>4/27 @18:00</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>5/1/15</td>
<td>5/15 @18:00</td>
<td>5/18 @18:00</td>
<td>5/13 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5/20 @10:00</td>
<td>5/20 @18:00</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>6/1/15</td>
<td>6/17 @10:00</td>
<td>6/17 @18:00</td>
<td>6/15 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6/19 @18:00</td>
<td>6/22 @18:00</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>7/1/15</td>
<td>7/17 @18:00</td>
<td>7/20 @18:00</td>
<td>7/15 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7/22 @10:00</td>
<td>7/22 @18:00</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>8/1/15</td>
<td>8/17 @18:00</td>
<td>8/19 @10:00</td>
<td>8/24 @18:00</td>
</tr>
<tr>
<td>September</td>
<td>9/1/15</td>
<td>9/16 @10:00</td>
<td>9/16 @18:00</td>
<td>8/21 @18:00</td>
</tr>
<tr>
<td>October</td>
<td>10/1/15</td>
<td>10/15 @18:00</td>
<td>10/19 @18:00</td>
<td>10/14 @18:00</td>
</tr>
<tr>
<td>November</td>
<td>11/1/15</td>
<td>11/18 @10:00</td>
<td>11/18 @18:00</td>
<td>11/16 @18:00</td>
</tr>
<tr>
<td>December</td>
<td>12/1/15</td>
<td>12/11 @18:00</td>
<td>12/14 @18:00</td>
<td>12/9 @18:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12/16 @10:00</td>
<td>12/16 @18:00</td>
<td></td>
</tr>
</tbody>
</table>

¹ **REMAC Refresher examination** is offered for paramedics who meet CME requirements and whose REMAC certifications are either current or expired less than 30 days. To enroll, go to the REGISTER link under “News & Announcements” at nycremsco.org before the registration deadline above. Candidates may attend an exam no more than 6 months prior to expiration. Early testing is strongly encouraged; there is no loss of certification time.

² **REMAC Basic examination** is for initial certification, or inadequate CME, or certifications expired more than 30 days. Seating is limited. Registrations must be postmarked by the deadline above. Exam fee by $100 money order to NYC REMSCO is required. **All Basic candidates must meet new education requirements.** Email Christopher.Swanson@fdny.nyc.gov for instructions.

³ **NYS/DOH exam dates** are listed for information purposes only. Scheduling is through your paramedic program or contact NYS DOH for more information.