

NH EMS MEDICAL CONTROL BOARD

NH Fire and EMS Academy
Concord, NH

MINUTES OF MEETING

July 16, 2009

Members Present: Donavon Albertson, MD; Tom D'Aprix, MD; Patrick Lanzetta, MD; Jim Martin, MD; Joseph Mastromarino, MD; Douglas McVicar, MD; William Siegart, DO; Norman Yanofsky, MD; Sue Prentiss, Bureau Chief

Members Absent: Chris Fore, MD; Frank Hubbell, DO; John Sutton, MD; Jeff Johnson, MD;

Guests: Chandler Cooper; Shawn Riley; Chuck Hemeon; Tim McGinley; Mary Reed; Steve & Jeanne Erickson; Aaron McIntire; Mark Hastings; Mathurin Malby, MD; Michael Pepin; David Tauber

Bureau Staff: Rick Mason, Director; Vicki Blanchard, ALS Coordinator; Chip Cooper, Quality Management and Research Coordinator; Clay Odell, Trauma Coordinator;

I. CALL TO ORDER

McVicar welcomed all to the meeting. Introductions were made.

EMS Community. Prentiss reported that as sad as the news can be, it is important that we recognize those members of the EMS community who have passed. Prentiss recognized the following EMS providers who have recently died:

Sarah Jane (Edmunds) Hubbird, RN, EMT-I, Wilton-Lyndeborough-Temple Ambulance & St. Joseph Hospital

Tom Head, EMT-B, Amherst – First Responder for 13 years and EMT 8 years, Tom got his EMT while in his 70s!

Greg Castillo, EMT-I with Rockingham, Amherst, & Goffstown Fire Department. Started as an Explorer with Amherst in 2000, got his Basic in 2002 EMT & Intermediate in 2006.

Dale Long, of Vermont, a line-of-duty death.. Long was with Bennington Rescue and South West Regional Vermont Medical Center. Additionally, Senator Patrick Leahy (D-Vermont) is introducing a Line of Duty Death bill on the Federal Level in Long's name, "Dale Long EMS Provider Act."

On a happy note, Prentiss reported that she recently heard from Michael Schnyder, who was recently elected president of his Class in PA school!

Acceptance of Minutes. D'Aprix moved to accept the May 21, 2009 minutes, Albertson 2nd.

Vote: Unanimously approved

II. DISCUSSION AND ACTION PROJECTS

Item 1. Wilderness EMS

McVicar explained that the Bureau of EMS had received an email from a concerned instructor stating he had students coming to him after completing a wilderness course with extended back country skills. McVicar then referred to Prentiss for elaboration.

Prentiss verified that we have received an inquiry from an instructor concerned with where the line is drawn between prehospital EMS and back-country/wilderness care. Prentiss stated that our wilderness expert, Dr. Hubbell, was away in Africa and was unable to make the meeting today. Prentiss stated she would like to defer the discussion until Hubbell returned and was present. She stated she has sent him an email, and will share his reply with the Board when she gets it.

Prentiss asked the board to think about these questions, for a future discussion: Where are lines between conventional prehospital EMS and wilderness EMS? What can be done when you are thirty-plus minutes away vs a traditional EMS street response?

Discussion: McVicar noted that it has always been Dr. Hubbell's position that providers must stay within the law and only use the protocols approved for their level of licensure. McVicar asked D'Aprix if he felt it was realistic for the protocol subcommittee to review the wilderness protocols. D'Aprix replied that given the amount of work involved in revising the existing protocols and the time allotted for the task, he felt there should be a separate committee to look at it.

Albertson noted that the concept of extended scope of practice potentially includes 14 different categories including wilderness medicine, treat and release protocols, event medicine, tactical medicine, industrial and corporate environments and others. He asked how wilderness medicine fits into the broader issue of extended scope of practice. He suggested that the various categories might be prioritized in terms of patient needs so that the most important ones could be tackled first.

Prentiss suggested that a subcommittee could be developed to work on basic issues of responsibility and legality, it should include coordinating board Members as well as MCB members.

Decisions: No vote; it was decided to defer until September when Dr. Hubbell will be in attendance. Prentiss stated she would talk to the Coordinating Board to discuss the legalities of the topic.

Item 2. Pediatric Defibrillation

McVicar introduced the topic by stating a communication had occurred between Eric Jaeger and the Bureau of EMS. Jaeger had discovered that the User's Manual for the LifePak12® states, "In AED mode, this defibrillator is not designed or tested to interpret pediatric rhythms or administer energy at pediatric joule settings."

Prentiss then spoke and stated that she wanted everyone to know straight up that when we received this information we forwarded it onto our listserve to notify the EMS Community, as

we frequently do when advised of potential equipment concerns. It was not done to intentionally pick on one manufacturer. We received a notice we felt should be shared with the EMS Community and did so.

Blanchard then stated that since the notification from Jaeger she has been able to investigate further. She stated she learned from Physio-Control that the reason the LifePak12 does not attenuate down to a pediatric joule setting, is because the units are intended for the ALS providers. Physio-Control AEDs do have attenuated pediatric pads, but the LifePak12 does not. The reason for not offering attenuated pediatric pads on the LifePak12 is as follows: if a Basic were to use the attenuated pads, then a paramedic arrived on scene, the medic would have two choices. Either the medic could remove and replace the attenuated pads with the regular pads and then calculate the joule settings per PALS. Or the medic could chose not to remove attenuated pads and calculate the machine joule setting from the PALS dose, adjusted by a factor of four to make up for the attenuation. Either way, Physio-Control feels critical time would be wasted. Also, during the stress of a pediatric code, there would be a possibility of error. Additionally, we were reminded that the fully functional units were designed for ALS providers.

Blanchard said that her investigation has revealed that all of the most commonly used fully functional cardiac monitor/defibrillators, including certain Zoll and Phillips units do not have attenuated pediatric pads.

Blanchard then presented the board with the following data from TEMSIS:

From January 1, 2007 – July 15, 2009 there were 37 reported cases children 12 years of age and under in the TEMSIS system where the provider impression was “cardiac arrest”.

Of the 37 cases:

- 17 occurred in 2007
- 15 occurred in 2008
- 5 so far for 2009

- 26 documented rhythm of asystole
- 3 documented rhythm of PEA
- 3 documented sinus rhythm
- 1 documented rhythm of IVR
- 3 cases had no documented rhythm
- 1 documented rhythm of VF plus
- 3 documented defibrillations: 2 with AEDs and 1 with a manual defibrillator. (After defibrillation, the two AED cases were later documented in asystole, and the manual case documented sinus brady.)

Discussion: McVicar stated that our averages are similar to the National figures. McVicar said that our protocol, as currently written and published is completely in agreement with the American Academy of Pediatrics position paper, *Ventricular Fibrillation and the Use of Automated External Defibrillators on Children*, by Markenson, et al, [*Pediatrics* Volume 120, Number 5, November 2007]. Therefore EMS providers who follow their protocols will have no problem.

McVicar noted this specific language from the AAP position paper: “. . . if an AED with a pediatric-attenuating system is not available, the responder should use a standard AED rather than delay the delivery of a potentially life-saving intervention.”

Jeanne Erickson asked Chandler Cooper, a representative from Physio-Control, if there were any attenuated pediatric pads. Cooper answered, yes there were, for the LIFEPAK® 500 and LIFEPAK® 1000. The pads can be plugged into the LifePak12, but this would be an off-label use which the company could not support.

McVicar questioned Cooper on the ability of Physio-Control automated defibrillators to read VF in pediatric patients. Cooper replied they have a 99.5% specificity for non-shockable rhythms. Cooper also noted that automated defibrillators are coming in the near future that will be able to recognize a pediatric patient and automatically adjust to the proper joule setting.

D'Aprix asked if were possible to approved the attenuated pads as an off-label use. After some discussion, the Board decided this would add confusion to an already stressful scene. Further, off-label use of attenuated pads, if unrecognized, could result in under-dosing. The board agreed that under-dosing a pediatric patient who needs defibrillation is far more dangerous than over-dosing. So the board will not recommend or allow this off-label use.

McVicar suggested the board send a letter out to the EMS Community. He thought that the letter should make four points: EMS providers should follow their protocols, the AAP position paper should be cited specifically, we are not recommending additional equipment or training, and this applies to equipment of all manufacturers.

McVicar acknowledged the Board's debt to Janet Houston who researched this issue and sent the applicable national standards.

Decision: Yanofsky moved, "the MCB write a letter to the EMS Community, stating in essence: That if EMS providers do not have an AED equipped with pediatric attenuated defibrillation pads or a paramedic is not available to use the defibrillator in manual mode, the EMS provider may use the pediatric pads found with the defibrillators and if no pediatric pads are available, to follow the cardiac arrest protocol as written: "If pediatric AED pads are unavailable, providers may use adult AED pads, provided the pads do not overlap." D'Aprix 2nd. Motion passed unanimously.

Item 3.Dosing beyond Broselow

D'Aprix reported that since the statewide protocols were introduced, we have always defined a pediatric patient (medically, not legally) as a person who fits on a length-based resuscitation tape (Broselow® tape). This has generally worked well. But now he has become aware of some problems, some sentinel cases. Two cases have occurred where pediatric patients minimally longer than the tape were given a single adult dose of methylprednisolone (Solu-Medrol®) in the field, resulting in steroid-induced hyperglycemia. There was no permanent harm, but there was a prolonged stay in the hospital. D'Aprix added that this got him wondering what other medications could be a potential problem for children who get an adult dose because they are a little too big for the length-based resuscitation tape? D'Aprix then went through the protocols and compiled a list of medications (see attached).

D'Aprix then reviewed the medications on the list, one by one, and provided his assessment of the safety of each for these big children/small adults. Members of the board made several

comments. In the end the group decided to reconsider the dosages of methylprednisolone and midazolam

McVicar commented that the rationale for prehospital steroid use is weak, and asked if the board should drop steroids out of the 2011 Protocols. Mastromarino commented that he felt steroids can be helpful over time, and may therefore be worthwhile starting in the field. Mastromarino went on to suggest that if the board doesn't want to create a whole additional set of pediatric doses, nor reconsider the difficult question of how to define a child and what to do with the child just a little longer than the tape, a practical solution would be to simply reduce the adult dose to 62.5 mg. This dose could be easily administered as it is exactly half of a prefilled syringe. Lanzetta said the prehospital use of steroids was well established, and he uses prehospital steroids frequently. Albertson stated he would lean toward keeping the medication, but is more comfortable with the reduced dose of 62.5 mg. Additionally, Albertson added that he found D'Aprix's research generally reassuring. Yanofsky also thought the reduced dose would provide safety.

McVicar asked the board if they wanted to change the dose of methylprednisolone now or wait until the 2011 Protocols. McVicar stated that if the group felt that the board should act now, we could put it on the September agenda, although he personally felt the need to urgently revise did not rise to the level of a black box warning, or the level of danger that in the past has moved us to change protocols in mid-cycle. Yanofsky stated he thought we should change the methylprednisolone dose now, since we have sentinel cases where following the protocol as it is resulted in harm. He did not think we should wait until September. D'Aprix agreed, and said that there was no need to get the protocols committee involved, as the decision would ultimately have to be made by the MCB. McVicar asked for a motion.

Decision: Albertson moved to change the maximum dose of methylprednisolone for adults and children to 62.5 mg. Yanofsky 2nd. Vote: Yes 7, No 1, Abstained 1 – Vote passed.

Discussion continued for midazolam. All were referred to the seizure protocol 2.13 & 2.13P. The pediatric dose is higher than the adult dose in this case, and there is a potential that the young patient who is just taller than the tape could be underdosed during a seizure. It was pointed out that the protocol allows the adult dose to be repeated if needed. Albertson stated he felt this was adequate. McVicar concluded that these protocols did not need to be changed for the 2009 edition of the protocols and should be reconsidered for 2011. The board concurred.

Item 4. Weight-based dosing for all

McVicar stated that this was a good time to segue into our next topic of weight-based dosing for all patients. Flat dosing has great advantages in speed, and probably prevents errors. But our population generally, and certain individuals in every town specifically, are rapidly increasing in weight. McVicar asked J. Martin, if he would speak on the topic, as he had mentioned it at the May meeting and suggested further discussion this month.

J Martin said that although he initially thought it would be interesting to look at, when he thought further he began to realize that it would not be as practical as it might sound at first. McVicar agreed adding that emergency medicine is all about two things: speed and accuracy. Weight-based dosing would militate against both of those. McVicar agreed with J Martin that weight-based dosing would be burdensome to the provider. McVicar suggested that a more

practical idea is already built into the protocols: re-dosing. Lanzetta agree that re-dosing allows the amount of medication to be accurately titrated to effect for each individual patient.

Martin and Yanofsky pointed out that emergency physicians themselves rarely use weight-based dosing in adults.

The group expressed no interest in pursuing this further.

Item 4.STEMI System

McVicar and Prentiss have been participating in an American Heart Association sponsored STEMI System planning group. The AHA has a template very close to what McVicar circulated to the group last month. In September, McVicar, D'Aprix, and Blanchard will be attending a meeting in Springfield, MA that will address rural STEMI issues. McVicar said that we will continue to work with the AHA, and when it is clear what is best for New Hampshire, the Board can make protocol changes to support the evolving STEMI system. The system may also require some rule changes, in which case we would work with the Coordinating Board.

Discussion: Dr. Malby commented that he, from Frisbie Hospital, had met with the Portsmouth Cardiologist and was told of new guidelines requiring 90 minutes not from door to balloon, but from EMS arrival to balloon. He felt this could cause some concern in the rural areas. Yanofsky agreed, saying that the best care depends on geography and also on onset of symptoms. McVicar stated that in terms of rural units, it would be more helpful to have standardized intervals that start with the more biologically meaningful time of onset of pain or symptoms, rather than EMS contact.

Prentiss added that in the strategic plan we are working on addressed "specialty systems" including not only STEMI, but stroke systems and pediatric medical. She stated that in the next two years as we work on the 2011 protocols we will continue to look at STEMI and Stroke care in a coordinated effort to move the patient to the most appropriate facility. Additionally, Prentiss added that we will be looking at physician groups and their hospital relationships and how that affects patient transports. We need collaboration from these groups so a patient is not transported past a hospital with cath lab capabilities to be taken to an equally capable facility further away just due to pre-existing physician or hospital relationships.

Decision: None.

Break

Item 5: Therapeutic Hypothermia

McVicar stated a straw poll of state EMS Medical directors showed that of 22 states participating in the survey, 17 allow post-resuscitation therapeutic hypothermia. Is this something we would like to have in the 2011 protocols? McVicar also noted that he did a quick literature survey and found an often-cited study by Kim, et al [*Circulation* 2007;115;3064-3070]. McVicar's feeling is that the paper is weak. The study data did not demonstrate any significant differences with pre-hospital hypothermia.

Discussion: D'Aprix stated that he too had looked further into the topic and found that the data for prehospital cooling was very limited, and the window for initiation of cooling is not all that critical. Times of initiation vary, up to six hours, so he did not feel we should address it in the field.

Yanofsky asked what the average change in temperature was in Kim's study. McVicar replied that all of the patients in the study were mildly hypothermic, and the patients in the study group who had induced hypothermia were 1 degree Celsius colder

McVicar suggested that they continue to watch the literature "as it ripens" and reconsider the issue later in this protocol cycle if the literature warrants.

Prentiss suggested since there are several active hypothermia programs in Massachusetts, we might invite a representative from Mass. who could discuss their experiences. McVicar stated this would probably not be helpful at this point, since we are trying to base protocol on data, not anecdote, even anecdote from our good friends in Massachusetts. When compelling data appears – from whatever area -- it will surely be refereed and published.

Reed wanted the group to know that the *JEMS* webinar on hypothermia is available on line. This webinar goes over information that supports the concept.

Decision: None

Item 6: Rehab Best Practice

Michael Pepin, member of the Coordinating Board (CB), came before the MCB with the CB's Rehab Best Practice to ask for their opinion of the vital sign limits set forth in the document. Micheal then presented the Board with the section of the document that outlines what vital signs would be assessed, what limits were established for those vital signs, outside of which a firefighter would be selected for a period of more careful monitoring. Pepin explained that the committee that developed the document had reviewed various guidelines, especially the new U.S. Fire Administration *Emergency Incident Rehabilitation* report which was released in 2008. (USFA is an entity of FEMA, the Federal Emergency Management Agency) The Coordinating Board basically adopted this document with changes here and there.

Pepin stated that one addition the coordinating board made was to address blood pressure. Of all the standards they looked at, only the Hazardous Material guidelines addressed blood pressure. The Coordinating Board decided to put in blood pressure.

Discussion: There was much discussion surrounding the specific vital signs and values to include for the temperature, heart rate, respiratory rate, and particularly the blood pressure.

There was a lengthy discussion about an appropriate blood pressure, both systolic and diastolic. Yanofsky pointed out that the board has no evidence-based material available that specifically addresses this situation. Without this Yanofsky questioned how the board could comment on the guidelines. Lanzetta said it was difficult to pick numbers without national standards.

After the Board considered and rejected many specific limits, McVicar asked for a more limited motion.

Decision: J. Martin moved for the board to endorse the document with a recommendation to change the return to duty heart rate to strike the heart rate of 100 and use only the 60% predicted heart rate table. The board also asked Pepin to take back to the CB the various comments by members of the Board regarding the blood pressure.

Vote: Passed unanimously

III. INCUBATING PROJECTS & SUBCOMMITTEE REPORTS

ACEP: No report.

Bureau and Division Update: Can be found within Prentiss's Bureau Report.

Critical Care Paramedic: Can be found within Prentiss's Bureau Report.

Medical Control Physician Training Video: Can be found within Prentiss's Bureau Report. Additionally, Chip Cooper reported that through funds from Rural Health we are working on an online program for physicians to go online and take a course on medical control, some of the program is New Hampshire specific and the rest is in general information. The program will be worth 12 credits. Additionally, they will be adding on pediatric and geriatric modules.

Coordinating Board: No report

Legislative Update:

Director Mason reported that the Legislature increased the motor vehicle record fee from \$8 to \$12.00, which will probably be adequate for 3 – 4 years. Our budget generally has been approved sufficient to support our programs.

TEMSIS Report: Can be found within Prentiss's Bureau Report

NH Trauma System: Can be found within Prentiss's Bureau Report.

Other Business:

Yanofsky asked if any efforts had been made toward building appropriate STEMI data fields into TEMSIS. Prentiss replied that there are already appropriate fields, but we have to make more of an effort to get people to use them when they document their run.

IV. ADJOURNMENT

Motion by Siegart moved to adjourn, Albertson 2nd. Motion passed unanimously.

VI. NEXT MEETING: July 16, 2009, location to be announced.

Respectfully Submitted,
Suzanne M. Prentiss, Bureau Chief, EMS
(Prepared by Vicki Blanchard, ALS Coordinator)

MEMORANDUM

TO: NH EMS Medical Control Board
NH EMS & Trauma Services Coordinating Board

FROM: Sue Prentiss, BA, NREMT-P, CMO, Chief
FST & EMS
Bureau of EMS

RE: Division of Fire Standards and Training and Emergency Medical Services (FST & EMS)
– Bureau of EMS Report

DATE: May 20, 2009

On behalf of the New Hampshire Department of Safety, Division of Fire Standards and Training and Emergency Medical Services (FST & EMS) I would like to welcome you back to the Division Headquarters for our May 2009 meeting. I would also like to wish you all a Happy EMS Week and take this opportunity once again thank you for all the work you do for the NH EMS Community. Listed below is an update on our activities.

As of May 20, 2009, the Bureau licensing numbers are:

Apprentice	17
First Responders:	267
NH EMT-B	72
NREMT-B	2124
EMT-I	1240
EMT-P	745
TOTAL:	4465

There are 298 (164 transporting and 136 non-transporting) licensed Units. We have 126 I/Cs, including 7 Provisional. Licensed and inspected vehicles to date 425.

Bureau of EMS Report: During EMS Week our staff is attending events throughout the state including Portsmouth, New London, Peterborough, Brookline, Milford, Nashua, Brentwood and Rochester. We are also following the NH members of the National EMS Memorial Bike Ride, Jennifer Frenette, Doug Martin and Mike Kennard. Tony Maggio from Barrington EMS rode with the group over the weekend. Updates from Mike Kennard are posted on the list-serve. This is not only a week to celebrate what good work EMS does, but to honor those lives lost in the line of duty – thank you Muddy Angels.

We are looking at changing the Epping Office to a part-time status and basing Karen Louis, and coverage for the Seacoast and Central aspects of NH, out of the Concord office. Epping Fire, for many years has been gracious enough to provide space for a staff member to work out of their station for only the costs of our equipment, communications, etc. We have been paying for a storage area for equipment but have no room for support staff, which the other Field Offices that have an Educational Specialist do. Karen continues to do good work for her areas and the Bureau, however, with the

centralization of the training records and the difficulty presented when you are not routinely with staff support have us seriously evaluating the situation. There would be NO change in service to the Seacoast in particular, just the routine base of operations. We would, Epping Fire Department willing (which they are), like to keep a space available for part-time operations, like I do with the Lebanon Field Office. We will also save some money, but that is not the primary reason. Will keep you posted.

Mike Schnyder resigned and has become a full-time student again. He is enters Physician's Assistant School on June 11, 2009. We have made an offer to the top candidate and are working out some of the terms. As you know Tammy Fortier retired after 20 plus years of state service, 17 with the Bureau. We are preparing to post her position.

NH EMS Response to Swine-Origin Influenza A (H1N1): FST & EMS has been engaged with the state's response to H1N1 situation since April 25, 2009 (yes, I returned from a week away to this!). Since that time the Director and I have participated in 3 Department Head meeting with Governor Lynch, met with the Commissioner and coordinated the following activities:

- Used the list-serve to update EMS on the situation, sometimes daily, including clinical considerations and manpower planning for a protracted response to this situation.
- Collaborated with DHHS on the review of the "Interim CDC" guidance for EMS and First Responders, and ultimately endorsed this and forwarded it along to EMS Units.
- Used our Website to set-up a "most current" happenings section on the front page with important links to guidance documents and information on the All Health Hazards Region information.
- Updated its Airborne Pathogens Protection educational module, which has been available on the website since 2005. In addition a version of the PowerPoint presentation with audio was developed and placed on NHOODLE in the "Just-in-Time" training section.
- Posted an ambulance disinfection video that meets the CDC requirements on NHOODLE.

The intensity of the situation has shifted, however the importance has not. Using some grant funds through HSEM – Hospital Bio Terrorism, I am bringing on a person on a temporary basis to help finalize the EMS Pandemic Flu Operations Guidance document I developed last year. This person will complete the peer review, and will conduct Regional EMS Pandemic Flu Operations training in each EMS Region over the summer. As noted in Vicki's report, we are ramping up the Immunizations Training also. All efforts focused on next flu season and what it might bring.

Advanced Life Support: Vicki was fortunate enough to travel to 23 hospitals around the Granite State during the awakening of springtime to deliver the 2009 NH Patient Care Protocol Rollout(s). The rollouts were quite a success having Vicki introduce the changes to over 450 providers. As expected there were questions to be answered and suggestions for change. All of the ideas and comments have been recorded and will be brought forward to the Medical Control Board for further consideration in the 2011 Protocols.

We continue to work with Jon Politis on the Medical Directors' Training project. Currently we are putting the final touches on the scripts and collecting images for the presentation. I invite anyone who has EMS shots or picturesque photographs that they are willing to share for this project to email them to me. vicki.blanchard@dos.nh.gov.

Now more than ever we are planning to re-introduce the Immunization program AKA: EMS Vaccine Program this summer. I am currently updating the material to include the H1N1 information and establishing a network to more efficiently deliver the training. Please stay tuned. Having more Paramedic level services trained prior to next flu season is a priority and many more are interested now in light of H1N1.

Clay and Vicki continue to work with the Critical Care Transfer Committee. See the Trauma Report for further information.

With the EMT-I changes in the 2009 Protocols Vicki has been working closely with Eric Perry, not only on the development of the models but on the rollout to I/Cs. More to follow in the Education report.

Education Section Update: Highlights from Education below:

- **Alternative Refresher Program (ARP):** To date, eight ARP programs have been authorized and a majority of them are currently in progress. Four of the programs are being held in Region IV, three in Region II, and one in Region I. The feedback from instructors about this new format has been mostly positive and the Education Section continues to work with the instructors to make improvements to the process.
- **National EMS Education Standards:** There is a level of uncertainty with the timeline to implement the National EMS Education Standards. NH was originally targeting April 2010 to start implementation, but it appears we would be significantly ahead of the rest of the nation, which in theory sounds great, but would leave us without adequate educational support materials, textbooks and potentially certification exams. 2010 was truly an optimistic target and it now appears that 2011 is a more realistic target.
- **2009 EMT-Intermediate Transition Programs:** We have completed six 2009 Intermediate Transition Instructor Orientations. There were 110 instructors eligible to take the program with 73 attending. This is a much higher percentage of attendance than most of our instructor offerings. We are in the process of scheduling an additional two programs, one summer, one fall.
- **Summer Projects:** The non-refresher season time of April to August is when the Education Section takes time to catch up on projects, work on the administrative process for courses and exams as well as preparing for the busy fall season. Examples of this summer's projects are as follows:
 - Full review of EMT-Basic station scenarios. The two new scenarios have been in use for a full year and we will be reviewing the comments from our Exam Coordinators, Instructors and Candidates.
 - Reviewing the Bleeding, Wounds and Shock skills station for the First Responders to evaluate the need of adding tourniquets to the skills station.
 - Creating minimum requirements for practical exam personnel (patients, assistants, etc.).
 - Creating an annual calendar with dates of key instructor programs that take place throughout the year such as; I/C Enrichments, New Instructor Orientation, PEETE Instructor Orientation, etc..
 - Creating an evaluator newsletter to keep our BLS evaluators current on any exam changes or administrative process.
 - Planning two additional 2009 Intermediate Transition Instructor Orientation Programs.

Research and Quality Management (RQM)/TEMSIS: Brad has been doing a great job holding down the fort in the Research & Quality Management Section with the Coordinator's vacancy. One item very important to this section is that grant funding from Highway Safety. I am the point person between Highway Safety, the Office of Information Technology (OIT) and our Counsel. The funds have come through the Governor and Council Process to Safety, now we are working on the complexities of the contract with ImageTrend, which will need to go to Governor and Council.

The RQM Section has been hosting "Rescue System Administrator" programs. To date their have been 3 classes with a total of 29 participants. These have been mostly heads of Units and/or local QM contacts. The program is divided into two sessions. The first session focuses on the TEMSIS platform and how to administer TEMSIS such as, how to get providers into or out of TEMSIS, re-setting passwords and customizing certain settings to suit the service to include auto call numbering. The second session aims at querying the service's TEMSIS data and placing the data into Excel and formatting it so that is easy to use and understand. This includes the use of a training query, an accompanying Excel template, and pivot tables. Query building and Excel formulas are also discussed.

We have been working with the Department of Health and Human Services (DHHS) on Swine-Origin Influenza A (H1N1) surveillance since April 26, 2009. To date we have completed and submitted 23 reports (not including Rockingham Regional Ambulance addenda) Date Range: 4/26/09 - 5/18/09 Total number of records reviewed from the queries: 875.

Since the first of the year, we have 49, 012 records entered into TEMSIS with a total since going on-line of 401,000,000. Throughout the next few months the RQM section, specifically Brad, will be working on:

- NHOODLE
- Finish up Rescue Service Administrator Programs
- Continuing to work with services to start reporting to TEMSIS
- Continuing to work with services using third party reporting software to report to TEMSIS
- Working with services to establish Quality Management programs

Trauma System Report: At the May meeting of the Trauma Medical Review Committee (TMRC), attendees began working on the pediatric component to the NH Trauma Plan. The EMS for Children Program under Janet Houston had drafted a document for consideration by the TMRC. Following considerable discussion the TMRC reaffirmed plans to have pediatric care as a third section of the NH Trauma Plan. The first two sections of the NH Trauma Plan were approved by the Emergency Medical and Trauma Services Coordinating Board at the April 2009 meeting. The TMRC hopes to have the pediatric section completed by the end of summer.

The Air Medical Transport Utilization Review Committee met on April 22, 2009. The group reviewed cases from April and May of 2008. The committee reviewed flight records and EMS Patient Care Reports from TEMSIS. The group suggested that future meetings include EMS reports that were not in TEMSIS and trauma registry data. The next meeting is scheduled for June 3, 2009.

Based on a request from the NH Hospital Association, the TMRC has established a subcommittee to consider issues related to imaging studies for trauma patients. The intent of this project is to establish guidelines that hospitals may use regarding what kinds of imaging studies (plain film x-rays and CT scans) are recommended for certain categories of trauma patients.

The NH Trauma Sim Program has been to Cheshire Medical Center this season and is working on some dates with LRGHealthcare in Laconia and Parkland Medical Center in Derry.

Doreen Gilligan, RN has been nominated by the TMRC as that Board's representative to the Emergency Medical and Trauma Services Coordinating Board. Doreen is the Clinical Coordinator for Emergency Services at Lakes Region General Hospital and serves as the trauma nurse representative on the TMRC.

At the April meeting, the Critical Care Study Committee (CCT) had an opportunity to meet with Jay Bradshaw, Director of EMS for the State of Maine to discuss that state's experience developing a training program for paramedic interfacility transport, which they call PIFT. The committee met last week to further discuss the Maine model, and to determine what kind of conditions a PIFT level provider would be able to handle versus a true critical care transport provider. The group discussed developing a decision tree document to delineate PIFT vs. CCT. Once that task is done and approved the group would begin to develop an educational program. The group discussed the need to add a critical thinking skills component to the training, as they anticipate there will never be a "black and white" division between PIFT and CCT.

Field Services (FS): With the Licensing Coordinator (LC) position vacant, the remaining Field Services Staff has jumped into action and, on a rotating basis, are covering the Licensing "desk" at the main office. Christy Dewey, the Division's part time PEETE Coordinator and Licensing back-up, has been able to schedule three days each work week to fill-in and keep the ball rolling. On her days away from the office, Shawn Jackson, Liza Burrill and Kathy Doolan are taking care of the LC duties. Although, because of the coverage by multiple staff members, there may be a slower response to some matters, all licensing issues are well in hand and moving along. We all agree that we are grateful to Tammy Fortier for not retiring from this position during the height of the re-licensing "season".

The LC direct phone number (223-4218) remains intact and operational with voice mail if someone is not at the desk when a call is received. All email is being automatically forwarded so that nothing will be missed, and notifications have gone out over the Bureau's List Serve and via email auto response.

We are hoping to have this position filled by the middle of this summer.

All other Field Services responsibilities are being maintained and we look forward to answering all requests that come to us. As always, the Field Services Staff is available for inquiries and assistance if operational questions arise from EMS Providers and Unit Leaders. Asking questions ahead of time is much better than being counseled after a violation has occurred.

As always, thanks for all that you do and for all your dedication and support for NH EMS. If we can be of assistance, please do not hesitate to call me at (603)223-4212.

Pediatric Protocol Review

Tom D'Aprix, MD

16 July 2009

Potential medication dosage conflicts based on current definition of a child as pt who fits on broselow tape.

2.0 - Allergic reaction

- a. Benadryl – pedi max = 40mg, adult range= 25-50. Worst case, might get 10mg extra.
- b. refractory anaphylaxis – OK – would get adult max of 0.1mg which would be reached at 10kg
- c. Solumedrol – suggest max 60mg or deletion from protocol

2.1 - Asthma/RAD

- a. solumedrol – suggest max 60mg or deletion from protocol

2.6 - Hypothermia

- a. defib dose listed only for adults.

2.10 - Pain mgmt

- a. fentanyl: could get 40 kg dose = 20, then jumps to adult dose of 25-50
- b. morphine: 40kg dose = 4mg, adult dose = 5mg

2.12 – poisoning/substance abuse/overdose

- a. Beta-Blocker+ Ca Channel Blocker: Glucagon- Max pedi dose is 2mg, adult dose is 2-5mg
- b. max dose is 800mg for pedi, adult dose range = 1-2 grams
- c. Benadryl pedi max = 20mg, adult 25-50
- d. 2PAM maximum pedi IV dose missing.

2.13 – Seizures

- a. midazolam: pedi max =4mg IV/IM, 6mgIN, adult max = 2.5mg

2.15 – Cyanide

- a. sodium nitrite: pedi max = 12ml, adult max 10ml
- a. Cyanokit – pedi max 2.8gms, adult 5gms.

3.0 – Bradycardia

- a. epi 1:10,000 – any pedi greater than 40kg would get adult infusion @ 2-10 ug/min as opposed to PALS max of 1mg every 3-5min.
- b. atropine – OK 40kg = 0.8mg vs adult dose 0.5mg
- c. Midazolam – pedi 40kg = 2mg, adult max =2.5mg
NOTE: Pedi does not allow for repeat dosing, but, adult does.
- d. valium – same dose, repeat allowed for adults

3.1 – Tachycardia

- a. amiodarone for VT with pulse: 40 kg = 200mg, protocol for pedi specifies max of 300mg, adult max = 150 with repeat in 10 minutes to get to max of 300
- b. lido wt based for adult and pedi
- c. adenosine – same max dose as adults
- d. amiodarone for PSVT (max dose should be 300mg, 150mg is listed in pedi)

3.4 – Cardiac Arrest

- a. Mg Same adult max, but, mg not listed on adult cardiac arrest, its in the tachycardia protocol

5.9 – IO

- a. lidocaine: pedi max = 20mg, adult = 20-50mg