

**NH MEDICAL CONTROL BOARD**

**NH Fire Academy  
Concord, NH**

**MINUTES OF MEETING**

**September 20, 2007**

**Members Present:** Donavon Albertson, MD; Tom D'Aprix, MD; Chris Fore, MD; Frank Hubbell, DO; Jim Martin, MD; Douglas McVicar, MD; William Siegart, DO; Norman Yanofsky, MD; Sue Prentiss, Bureau Chief

**Members Absent:** Jeff Johnson, MD; Patrick Lanzetta, MD; Joseph Mastromarino, MD; John Sutton, MD

**Guests:** Jeanne Erickson, Doug Martin, Janet Houston, Michael Pepin, Steven Achilles, Jonathan Dubey, David Dubey, Christopher Dubey, Janet Houston, David Tauber, Fran Dupuis, Al Burbank, George Patterson

**Bureau Staff:** Vicki Blanchard, ALS Coordinator, Clay Odell, Trauma Coordinator; Eric Perry, Education Coordinator, Kathy Doolan, Field Services Coordinator

**I. CALL TO ORDER**

**Item 1.** McVicar called the meeting of the NH Medical Control Board (MCB) to order on September 20, 2007 at the New Hampshire Fire Academy, Concord, NH. 09:00 AM.

**II. ACCEPTANCE OF MINUTES**

**Item 1.** **July 19, 2007 Minutes** were previously approved via the email procedure established in March 2005.

**III. DISCUSSION AND ACTION PROJECTS**

**Item 1. EMS Bulletins**

Blanchard reported to the board that a new means of EMS communication has been instituted in the form of "EMS Bulletins"

The bulletins are brief informative matters pertaining to protocols or operational issues from the NH Medical Control Board, Coordinating Board and/or the Division Fire Standards and Training and Emergency Medical Service's Bureau of EMS. The bulletins are posted on the NH Division of Fire Standards and Training and Emergency Medical Services website and can be accessed via the Emergency Medical Services page under "What's New."

The bulletins are accessed through links. These links will be numbered, contain a brief description, and dated in reversed chronological order.

It was asked if the web pages had hit counters. Perry answered that although there is not a visible hit counter on the site, we do have access to that information. For example there are about 18,000 downloads of course and exam schedule per month.

## **Item 2. The State of the Art – EMS in NH:**

**Use of nitroglycerin in NH** Schnyder was asked to investigate the use of nitroglycerin and adverse blood pressure events, in the anticipation of discussing adding nitroglycerin to the Intermediate's approved medication list.

In Schnyder's absence, Blanchard reported on the attached document, "Investigation of Nitroglycerin Administration and Adverse Blood Pressure Events,"

The report summarized the 1339 patients in TEMSIS who received nitroglycerin over a six month period (January 1 – June 30, 2007). Of these 1339 patients, 38 or 3% of them had a systolic blood pressure drop of greater than 20% to less than 100 mmHg. None of these patients received dopamine nor did their status deteriorate into cardiac arrest.

There was discussion as to the accuracy of the data due to inconsistent documentation practices.

Yanofsky reported that he sees Vermont Intermediates at Dartmouth where nitroglycerin was given prehospitally, because nitroglycerin is an approved medication at the Intermediate level in Vermont. He continued to state he was not aware of any adverse reaction from these services, however there were only a couple of units using nitroglycerin in his catchment area, and those services also have paramedics. He does not have any data on actual Vermont EMT-I nitroglycerin administration.

Yanofsky continued to state that he felt nitroglycerin is certainly helpful and commented on an OPALS study which supported his opinion.

Albertson pointed out we are lacking data regarding patients who suffered an increase in the extent of their myocardial infarction due to the drop in pressure.

D'Aprix commented that he sees quite a few patients who receive nitroglycerin who did not need it, referring to an example of a 17 year old with musculoskeletal chest pain. He is not in favor of the change.

J. Martin echoed D'Aprix opinion, stating it is "roll creep."

Yanofsky agreed that he too struggles with roll creep and advocated the restriction of Intermediate medications.

J Erickson pointed out to the board that the National Highway Traffic Safety Administration's (NHTSA) National Scope of Practice has recommendations which will be put into effect in the future.

Prentiss stated that the new National Educational component of the National Scope of Practice is due out 2009 – 2010.

Blanchard will send the board the link to the National Scope of Practice.

McVicar summed up the consensus of the group: at this time the idea of adding nitroglycerin to the EMT-I approved medication list will be tabled. If it is strongly recommended in the National Scope of Practice, or if someone brings it up again, we will reconsider it.

**Flumazenil:** As requested by the board, Blanchard used TEMSIS to research flumazenil use in order to determine if it was being used appropriately. Since the protocol rollouts only one incident of flumazenil use was documented in TEMSIS. This case involved a cardiac arrest and did not meet the indication for flumazenil use. This TEMSIS report also revealed that prior to the rollouts there were 8 cases in TEMSIS and all 8 of them were used inappropriately in overdose cases.

The board concluded that the rollouts were effective in educating the paramedics in the appropriate use in flumazenil and therefore no action to remove the medication from the approved medication list is needed at this time.

**Rapid Sequence Intubation (RSI)** Blanchard reported on the 2007 second quarter RSI use. (See attached report) Units reporting were Concord Fire Department, Derry Fire Department and Frisbie Memorial Hospital EMS. Due to a change in personnel DHART did not have its reports ready.

Of the reporting Units the following notes of interest were reported:

- 7 total cases
- 6 cases ETT 1st attempt
- 1 case ETT 3rd attempt
- 5 cases report capnography
- Average on scene time: 27 minutes
- Reason for RSI documented less than 50% of cases
- 1 case succinylcholine given, no etomidate

Blanchard concluded that the NH RSI program continues to be successful and suggests the Medical Directors and Unit leaders review with the providers the required documentation elements.

Yanofsky inquired if we knew the patient outcome. Blanchard replied we did not have that information. D. Martin commented that it was his experience, as a Frisbie Memorial Hospital paramedic, that patient outcomes were predictable.

Yanofsky questioned if we would be able to determine if there is a decrease in the need for RSI with the addition of CPAP to the protocols. Blanchard will look into this.

Fore stated that he believe the rate of RSI in Concord has decreased with the use of CPAP.

**Medication Assisted Intubation (MAI)** Blanchard also reported on medication assisted intubations. This report was also requested by the board which voted one year ago not to change the protocols to make MAI a permitted procedure. Using TEMSIS Blanchard found 18 cases which met the screening criteria of benzodiazepine use but no succinylcholine. On closer examination only 4 cases were actually MAI. The results of the MAI cases were quite poor – 3 were unsuccessful and the 4<sup>th</sup> was successful only after 3 attempts. The board felt this report strongly supported the decision not to permit MAI.

The question then arose of what should be done about the squads that violated protocol by performing MAI. Should they be reprimanded? Prentiss pointed out that our use of TEMSIS at this time was not that of an individual provider watch dog but as a tool for clinical and operational overview.

There was a lengthy discussion regarding the topic of medical oversight of EMS activities. What is the role of the board? What is the role of the Bureau? Is policing EMS practice for violations an appropriate use of TEMSIS? It was concluded that Prentiss would consult with our legal department, and McVicar and J Martin would draft a memo to remind medical directors that medicated assisted intubations are not in protocol.

### **Item 3. Protocols**

#### **Wilderness Protocols**

Hubbell began by thanking all for their kind and humorous cards he received during his recent bout with prostate cancer. Hubbell stated that he had been diagnosed with prostate cancer, and is happy to report that he “had” cancer, however is now recovered. He particularly appreciated the humorous cards EMS folks sent him.

Hubbell recapped from the July 2007 MCB meeting that wilderness medicine skills are being taught and are out there being used by mostly unlicensed people. These include summer camp staff, non-rescue services, ski patrol, ad hoc incident responders, etc. The bulk of pediatric trauma in NH may be ski area injuries.

Hubbell then handed out copies of SOLO’s 2007 – Extended Care Practice Guidelines. Hubbell briefly summarized the document as follows:

- Environmental Emergencies are not a huge challenge for EMS personal due to their close proximity to hospitals, whereas in the wilderness setting, there are many challenges. The average back-country rescue is 6 hours. The suggested practices in this document address these issues.
- Trauma: There are some long-term treatment modalities in the document. The controversies involved in wilderness trauma treatments continue to shifts back and forth.

- Medical: This is the area of least change and fewest differences from our current protocols.

Hubbell pointed out to the Board that the document is copyrighted.

Hubbell asked the Board to take the time to look over the document. He stated that it is not 100% complete, barotrauma and high altitude sickness are not included at this point.

McVicar inquired as to Hubbell's source. Hubbell briefly noted major scientific sources; some of the material is being originated at SOLO.

There were questions regarding who could or could not administer the medications within the documents. Hubbell stated that these protocols do not trump state law, or revise established scope of practice. For example there is no exception for medication administration: just because an EMT Basic is in the back country, does not mean the EMT can give medications.

There was discussion regarding the integration of these guidelines into the NH Patient Care Protocols. McVicar pointed that we have a protocol process in which D'Aprix and Blanchard work with the protocol subcommittee to review and develop protocols. It was agreed that they should bring this forward to the committee for review.

McVicar also felt there could be some overlap between these protocols and the tactical medic protocols currently being developed and suggested there might be opportunity to integrate the two. D'Aprix stated that there was going to be overlap between the two, however there was still a long way to go before any of this would be ready for statewide implementation. He proposed that all review the document with an eye to how it is all going to fit together.

Prentiss pointed out that that currently, providers are licensed by Unit affiliation. That may not necessarily be the case for these back country situations. This could represent a change in licensing procedures which would need to be reviewed by the Bureau and the Coordinating Board.

In conclusion, the board and protocol subcommittee were to take the next few months and review the document.

### **Intermediate Medication**

McVicar explained to the board, that during the protocol rollouts the question was raised regarding updating the Intermediates medication list to include diphenhydramine. D'Aprix stated that as part of the protocol review process. J Erickson did literature research on this issue and found no supporting evidence for diphenhydramine use at the Intermediate level. A patient in anaphylaxis is in a true life threatening emergency and needs epinephrine, not diphenhydramine. Whereas the patient who is experiencing an simple allergic reaction, for example an itchy rash, might benefit from diphenhydramine, but could certainly wait on the treatment until reaching the hospital.

“Roll creep” again came into the conversation. The sense of the board is that adding diphenhydramine, which is only useful for non-emergent purposes, would be a form of inappropriate “roll creep” at the intermediate level.

### **2009 NH Patient Care Protocols**

Copies of the suggested protocol changes were handed out to the board and projected on the wall for review.

D’Aprix reported for the protocol subcommittee. They have met twice since the July MCB meeting and have progressed through the first seven protocols with the following updates:

**Routine Patient Care:** This protocols was reviewed, grammatical and formatting errors were corrected. D’Aprix asked the board to consider adding tourniquets to bleeding control as a last resort when all over efforts have been exhausted. The board agreed to added tourniquets to bleeding control as long as there was appropriate additional training.

Additionally under Routine Patient Care, the Apparent Life Threatening Event sections was pulled out and is being prepared as its own separate protocol. It is in draft form at this time, however the subcommittee has not had an opportunity to review, so will not present it today.

**Status Determination and Transport Decision:** Odell explained to the Board that under the current protocols status determination does not line up with the air medical transport protocol. The subcommittee updated the protocol by adding definitions to the status categories as well as modifying the examples to reflect the updated definitions.

There was no further discussion on this protocol, all agreed with the update.

The following five protocols were reviewed and it was determined that no changes were necessary:

- Air Medical Transport
- Communication
- Communication Failure
- Anaphylaxis – Adult
- Anaphylaxis - Pediatric

### **Individual Patient Care Protocols:**

Next D’Aprix reported that at the last protocol subcommittee meeting, Tom Lawrence from Rhode Island EMS made a presentation on Specialized Care Protocols. These are protocols developed for patients with unique medical conditions. In RI it is for pediatric patients only, but D’Aprix does not see a need to limit it to pediatrics. D’Aprix continued to explain to the Board that with the specialized care protocol, the patient’s specialist or sub-specialist would assist in

creating the patient's individualized protocol. There would be a process (not yet determined) where the protocol would be approved and EMS Units would be contacted.

There was overall support from the Board to investigate this option further. Yanofsky stated that he had been approached in past for similar type requests. Hubbell thought it made sense. Albertson stated that it is a topic they have spoken about in the past and felt it still deserved investigation. Albertson also stated that E911 should be integrated into the process.

J Houston noted that this is not SKIP, as the agenda suggest, this is an individual patient care protocol that is new and different from the existing voluntary, non-protocol SKIP program previously presented to the board.

McVicar noted that this is a complete change in the concept of what a protocol is. Protocols today are statewide and used by all providers. This suggestion would create protocols for single patients, for local use by only certain providers. McVicar is concerned about how this can be done under NH statute and rule. There would also be enormous practical and liability problems keeping track of all these protocols and keeping them updated.

Prentiss stated that the legal issues need to be looked at, providers would need to be educated. There was a lot to look at.

J Martin stated he did not see any downside to the idea, except perhaps legal issues within our rules.

D'Aprix asked the Board if this was something they wanted the protocol subcommittee to look at or not. The Board did want it to be further investigated. Prentiss will get together an exploratory meeting with legal counsel. D'Aprix, McVicar and Houston asked to attend.

#### **Item 4: TEMSIS**

Schnyder, having returned from another meeting, reported on the attached document, "Research and Quality Management Section Overview."

There was an inquiry as to whether or not we are able to determine the actual number of non-transport calls versus the number that get reported in TEMSIS. This figure might be determined with the assistance of E911. Schnyder will look into to this.

**Item 5: OPALS Study** In the interest of time, this discussion was tabled.

## II. INCUBATING PROJECTS & SUBCOMMITTEE REPORTS

**ACEP:** Fore reported that NH-ACEP is presenting a program on November 8, 2007 on Management of Medical Emergencies. Fore also encouraged all to join NH ACEP

**Coordinating Board:** (See attached unapproved minutes)

Achilles reported that a subcommittee met this morning to discuss, "what is a patient?" This is a topic they will be looking into more closely.

Additionally, Achilles reported that earlier this month the Coordinating Board, Bureau of EMS and Kathy Bizzaro from the NH Hospital Association hosted a Hospital Diversion Summit, where diversions were discussed. The summit allowed open discussion on diversion concerns.

Finally, Achilles stated that the Coordinating Board has prioritized the Institute of Medicine Report and would like to work with the Medical Control Board with national vocations and destinations for a strategic plan.

It was asked if the Coordinating Board had looked into the use of lights and sirens and insurance company's requirements. Achilles answered that there was a best practice group that looked into this. There is an RSA that outlines the parameters for lights and siren use, however the best practice is a guideline which Unit should implement.

There seemed to be a belief/myth that if a patient is in the back of an ambulance, you must, by insurance requirement, run lights and sirens. Burbank, of the Local Government Center, stated that the Municipal Trust does not say you have to use lights and sirens if a patient is in the back of the ambulance.

Prentiss asked Burbank if he would look at other carriers to see what the industry standard is.

D Martin inquired on the status of the Paramedic Re-Entry Policy. Blanchard answered, following the last meeting, the draft policy went out to the Coordinating Board and paramedic training institutions for comment and feedback. After receiving this input the final draft was completed and put into place. It can be found on the website under Advanced Life Support.

**Bureau and Division Update:** See attached report.

**Legislative Update:** None

**Intersections Project:** None

**NH Trauma System:**

Odell presented the Board with an overview from his last Trauma Review Committee meeting. He reported that the committee was currently reviewing the trauma standards for hospital designation. At the current time the American College of Surgeon (ACS) hold the standards for designation, however in New Hampshire we set the bar a little lower. The problem New Hampshire faces is

with the Level II hospitals. The bar began to lower at the Level II facilities with neurosurgery, where compensation had to be made; then issues in ortho, cardio, etc. began to present themselves until there grew a gap between our standards and that of the American College of Surgeons. The question was asked, can we still call them Level II, and what are the risks? The committee is in discussion over these items at this time.

Odell next presented the board with a matrix suggesting a possible change in the NH Hospital designations. Odell was careful to point out that this was a suggestion only and not anything written in stone. In the proposed matrix the hospitals would be broken out into 4 possible categories: Trauma Mecca (similar to ACS level 1), Regional Trauma Center (similar to ACS level II), Community Trauma Center (similar to our NH's current level II) and Trauma Access hospital (similar to ACS level III).

D Martin inquired as to why they did not just stay with the ACS levels, if the current level II had to be re-designated level III then they had to be level III.

Odell explained that if at the current NH level II you needed neurosurgery part time, but you bumped them down to ACS's level III, you would now have no neurosurgery. They want to hold to a higher standard.

Albertson stated that in the seacoast area, hospital designation has long been discussed, and concluded he saw no use in the categorizations, and this showed why. He felt trauma care was the domain of the hospitalist consults then turned over to surgeons or what have you.

Finally discussion centered around the nationwide change in cultural commitment problem. Albertson stressed you could not "whip" neurosurgeons into this, but how we improve the culture, he did not have the answer.

The Board thanked Odell for his update.

In closing Odell reported that the Annual Trauma Conference will be held November 28, 2007 and invited the MCB to the next Trauma Review Committee meeting on October 24, 2007.

#### **IV. ADJOURNMENT**

**Motion** by D'Aprix, seconded by Martin to adjourn. Approved. Meeting adjourned at 12:25

#### **VI. NEXT MEETING**

November 17, 2007 at the NH Fire Academy, Concord, NH.

Respectfully Submitted,

Suzanne M. Prentiss, Bureau Chief, EMS

(Prepared by Vicki Blanchard, ALS Coordinator)

## **Investigation of Nitroglycerin Administration and Adverse Blood Pressure Events**

**Introduction:** The purpose of this report is to determine the feasibility of allowing EMT-Intermediates serving patients within the State of New Hampshire to administer nitroglycerin in the prehospital realm. The author reviewed cases to look for possible adverse vital signs reactions as a result of administering prehospital nitroglycerin.

**Methods and Results:**

-All EMS incidents entered into the TEMSIS system entered from January 1, 2007 through June 30, 2007 were reviewed (Approximately 44,000 reports).

-All EMS incidents where patients received sublingual nitroglycerin were reviewed. There were approximately 2,180 incidences of nitroglycerin administration covering 1,339 patients.

-Significant systolic blood pressure drops (>20% or greater) where the reading fell below 100 mmHg were noted. Approximately 38 cases were noted to fit this category. This represents 3% of the 1,339 patients.

-The average drop in systolic blood pressure for the 38 cases was 32.5% while the median was 29.4%

-None of the 38 cases were noted to have a subsequent absence of vital signs (i.e. cardiac arrest).

-None of the 38 cases were noted to have received Dopamine as a result of the adverse event.

-There were 9 cases (of the 38 or 23%) where there was no documented recovery of the systolic blood pressure above 90 mmHg.

**Limitations:**

-Most likely there are cases where nitroglycerin were given and no documentation was provided.

-The vital signs measurements are subject to issues. Therefore there may be typos and incidences where the vital signs were not taken.

-A total of five (5) cases had initial sets of vital signs that was close to the 100 mmHg threshold. It was determined by the author that a drop in systolic blood pressure below 100 mmHg was deemed "normal" in accordance to these baseline vital signs and thus not added to the list of 38 "adversely affected" patients.

**Conclusion:** While adverse events do occur, the overall percentage represents a small minority of the total number of patients receiving nitroglycerin in the prehospital realm. EMT-Intermediates should be capable of performing this procedure as long as adequate training is provided to monitor for adverse events along with different recovery techniques.

RSI Summary  
Q2 2007

Units reporting: Derry Fire, Concord Fire, Frisbie

<u>Unit</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>ALL</u>
# RSIs	1	3	3	7
Males	0	2	0	2
Females	1	1	3	5
Trauma	0	0		0
Medicals	1	3	3	7
Reported Reason for RSI	100%	0%	67%	43%
1 <sup>st</sup> Attempt	100% (1)	100% (3)	67 (2)	86% (6)
2 <sup>nd</sup> Attempt	0	0	0	0
3 <sup>rd</sup> Attempt	0	0	1	14% (1)
4 <sup>th</sup> Attempt	0	0	0	0
Failed	0	0	0	0
Documented Failed attempts	NA	NA	0	100%
Airway Grading	0%	100%	100%	86%
Avg Scene Time	21	24	32	27

Note: The ordering of the columns A,B,C does not represent the order of the Units in the title.

## Research and Quality Management Section Overview

1. TEMSIS Modifications
  - a. Data Entry Portion: NH Document complete and Imagetrend is using the document to make changes to the system for a November rollout. (No list of the items have been provided to NH)
    - i. We will be making modifications to the system in accordance to what Imagetrend cannot work into their immediate schedule
  - b. Server Upgrade: Imagetrend upgraded their servers which has resulted in faster screen-to-screen navigation
  - c. Quality/Reporting System: A companion document is in the works which will outline a streamlined/improved process to run the local agency's quality management processes while using TEMSIS. Targeted deadline for the document is end of September.
  - d. We are still continuing to training and support the day-to-day operations of the TEMSIS system.
2. Hiring a replacement for Michelle Duchesne
  - a. Interviews will be taking place later this month. Chief Prentiss should be able to provide a detailed overview any interested party.
3. Patient Care Report survey has been launched and only a small amount of results have been received.
  - a. We are still pushing forward to rework the printed patient care report
4. Data Linkage: The Bureau will be participating on the Seat Belt Commission by providing EMS data that has been linked to Hospital data.
  - a. We are attending the second meeting focused on data on September 20 where we will be presenting seat belt data corresponding to hospital costs and length of hospital stay.
5. Other:
  - a. Division document management (the storage of data)
  - b. Investigations Performance Improvement Team.
  - c. Working with the Traffic Records Coordinating Committee on the rewrite of the Police Crash Report (Will link to the EMS system)
  - d. Working with DHHS on Falls Injuries prevention (Provided report using TEMSIS data)
  - e. Working with the EMS Protocol Committee on providing TEMSIS data to assist them in making decisions.