State of Illinois

EMS Education Committee Report

October 27, 2014; Updated 11/21/14; 12/9/14; 1-23-15

In July, the education committee discussed that in defining effective teaching there are two components:

- Teacher practices: How well they do the art and science of teaching
- Results: What teachers accomplish – *how well students learn*

Point 3 of the Action Agenda for the July meeting:

3. Work with Jack to plan and schedule educator workshops around the state that will focus on the Danielson domains of teaching; curriculum development and design; creating and using lesson plans; writing goals and objectives; evaluation of faculty and students; and measurement of learning. These workshops would key off of and expand upon the content presented in the NAEMSE IC1 course that serves as the initial course for lead instructors. We will also include time at each workshop for networking and sharing creative ideas among participants.

   Item writing workshops were held at the following locations:

   September 29, 2014 - Mt. Vernon
   October 3, 2014 - ICEP Headquarters in Downers Grove
   October 10, 2014 - Springfield

The root cause analysis continues…

Over 120 educators and IDPH reps attended the workshops and there was great discussion relative to current practice. We continue to discover important issues relative to the exam results.

Program/instruction-related
• It was very encouraging to see that without exception, every program that sent representatives to the workshops were interested in providing the best educational experience possible based on their situations. The IDPH reps were also very engaged and supportive of the process. There were large variations in the challenges, but all were dedicated to comparing their current practice against brain-based, evidence-based teaching and measurement strategies. Many are doing a great job with good outcomes and they will reinforce what they are doing now. Others expressed appreciation for the information and will review their program and consider need for change based on their local resources.
• The large majority of participants do not currently create their quizzes or exams from blueprints that are mapped to specific, measureable, attainable, realistic, and timely (SMART) objectives that are written to higher levels of the cognitive domain. This could result in course exams that are not valid (test what they are intended to test in a well-balanced way across all the critical points in a particular content area). All paramedic educators were encouraged to use a sample final blank exam blueprint and table of specifications to map their own finals to see where gaps may exist.
• A fairly large percentage of participants indicated that they create their quizzes and exams from publisher's question banks, often without editing or revision. These questions are sometimes written at very low levels of mastery (recall and understanding) and may not satisfactorily prepare the students to take a high-stakes exam unless they are carefully edited to add complexity that requires the student to apply knowledge to field situations, problem solve, and think critically. High stakes exams often start item difficulty at application and work up to synthesis and evaluation. Students should not be required to define terms or state isolated facts on a final summative exam.
• A large number of programs do not (or did not) give cumulative final exams after the student had successfully completed all course components (classroom, hospital clinical, and field internship). This resulted in the students being finished with the academic work for a long time without any focused review prior to taking the state exam. Programs accredited by CoA shared that this was an area of citation for them and they now offer cumulative finals.
• A large percentage indicated that all of their quizzes and exams are still given in a written format using pencil and paper. Few used Scantron sheets to rapidly grade multiple choice exams or complete an item analysis. This puts the students at a disadvantage when they must take a computer based test as they are not used to the format and could explain some of the score erosion. Educators were encouraged to familiarize their students with taking questions on a computer using commercial programs or those they create internally.

Exam-related
• A fair number expressed frustration with being **unable to register their students to take the state exam in a timely manner,** especially if the CTS representative was on vacation or away from the office. This has resulted in long lag timed after a student is finished of six to eight weeks for some. The National Registry published findings several years ago that show test scores drop remarkably if a student is three months out from class. The actual cause of this is not known – whether Resource Hospitals have failed to send signed rosters to CTS in a timely manner, registration forms have been inappropriately completed and fees not paid in a timely manner, or CTS has not responded to them in a timely manner – however, it should be explored.
• One possible root cause to be explored is the **item difficulty rating currently in place**. The original subject matter experts (SMEs) that wrote and edited the current exam bank may have rated a question as easy or of medium difficulty, when student performance shows that it is hard and fewer numbers are answering it correctly. This could mean that there are very good questions, but the exam is skewed to a higher difficulty level than intended. • Dr. Rodgers is doing an analysis of the items to identify those that 30% or more are missing. • IDPH will convene **second panels of SMEs** that were NOT involved in the original writing groups to do a blind review of those items to rate their difficulty so we can check for inter-rater reliability.
• It also appears that the **reporting of exam scores may be misleading**. Rather than combining all attempts into the cumulative pass rates, it would be clearer if the data were separated and reported by 1st, 2nd, and 3rd attempts before rolling it up into all attempts. Many programs report that their pass rates on FIRST attempt are rather good. However, is a student fails a second time, they are also likely to fail the third and/or subsequent times. These small numbers of repeat failures skew the statistics. Stu and Jack are looking at how the scores will be reported.
• Programs continue to report frustration that they **do not get meaningful statistics** on how their graduates perform on the exam. Rather global statistics are reported to the Resource Hospitals, but that is not always forwarded to the class program sites. Instructors should be able to see for their programs (site codes) the pass percentages for each exam area. Without this information, they do not know their strengths and weakness, so it is impossible to plan accurately to improve particular areas of instruction. Given that this is simple data reporting from the CTS databanks, this seems a reasonable request that we respectfully ask to be explored.
• We **do not currently have a refresher course template** or sample curriculum for state examinees who fail three times. There is a refresher curriculum for the NREMT exams. Something to consider.
• We **do not currently have a program review/remediation plan** in place that consistently evaluates sites with performance that fails to meet a defined standard. Thus, in some cases, programs continue to have passing challenges, but they are not mentored effectively to improve. This is routinely done for nursing programs and would be helpful if implemented for EMS.

If anyone was unable to attend one of workshops and would like the handout, please contact Connie Mattera at CMATTERA@NCH.org and one will be sent to you.

Exam score results (7/1 - 9/30/14) announced at EMS Council meeting on November 19, 2014

	1st attempt	2nd attempt	3rd attempt
EMT-B	69%	32%	20%
EMT-I	>80%	50%	50%
EMT-P	75%	28%	31%

The practice tests created by CTS from inactive questions in the item banks have been taken by 317 candidates since their implementation. They appear to be a successful strategy to improve test scores.

Still working on the following Action Agenda items from July:

1. Ask CTS if they can give us a breakdown of how the items are performing that are a carryover from the old bank (used prior to the transition to computer-based testing) as contrasted to how the newly written items are performing. (Done: Analysis reported at Dec. SME meetings)
2. See if it is possible to mirror our processes to those of the National Registry with respect to piloting several items in each exam that do not count towards the applicant's score, but are used to collect data on how it is performing before rolling it into the active test bank. (Under analysis-not in current CTS contract, will need to explore how this might be done)

Report from subject matter expert meetings December 2-3, 2014

- December 2 spent on EMT-B exam; December 3 on paramedic exam. The two groups consisted of different SMEs from all over Illinois (north, central, south; large/small programs; municipal and private).

- Dr. Rodgers started with an overview of CTS exams in Illinois and the program history of the EMS exams. He also provided a reference for testing standards in the nation which were last updated in July, 2014 (Illinois EMS exams fully meet). He provided data on current test references, specifications for both levels, how questions are validated and how items are selected for review. He also provided statistical reports on EMT and paramedic exam performance prior to and after implementing the new question bank using computer based testing. The data analysis also included performance at precepted and non-precepted testing sites to determine if there was a performance difference between the two (no major difference). Interestingly, the new questions are performing better than the old on the EMT-B exam and almost identically on the paramedic exam. He also provided data on EMS programs with 10 or more computer testing attempts stratified by their 1st, 2nd, and 3rd attempt pass rates for both levels of the exams. We have many programs with greater than a 70% pass rate on the first attempt which is the designed level of performance but that is offset by programs with less than that. **Take away point**: Statistical averages on total exam performance are being brought down by a high percentage of students that fail the exam 2 or more times. **Possible solution:** State-wide remediation packets to assist those learners.

- Data was provided on student performance on the **practice tests** that were implemented in Sept. Interestingly, with a very small sample size, the practice exam does not appear to be helping the candidates pass the real exam. The total cause of this is unknown, although the SMEs expressed possible causes. When the numbers are larger, the data will be more stable and we'll see if the initial trends hold true or are reversed.

- The majority of each day was spent reviewing 92 questions on the EMT exam and 92 questions on the paramedic exam that met the threshold for review. It did not imply in any way that the items were poorly constructed or not valid. In most instances, they were difficult questions that discriminated well.

- Both SME groups provided thoughtful and deliberate feedback with uniform consensus on a small group of items to either: (1) modify the stem of the question; (2) modify one or more distractors; (3) rescore the item to allow more than one correct answer with a rewrite of that question); or (4) recommend that an item be removed from the current exam/item pool and substituted with another item.

- **Outcomes:** CTS has agreed to complete the exam rescores using the same process followed in February of 2014 after the initial SME group review of early data. This will be completed as soon as possible (hopefully by the end of 2014). It will take into early 2015 to revise the exam fully with installation at all the computerized testing sites. In the interim, immediate feedback on exam passing scores may be withheld on day of testing, so all exams can be fairly graded before releasing the scores.

What is the consensus preference for next Educator workshop topic? (Group voted for bolded options)

1. ***Curriculum design and development – creating lesson plans; writing goals and objectives; implementing student-centered learning activities**
2. Student teaching and evaluation in the psychomotor domain: Use of skill sheets, practical exams
3. Student teaching and evaluation in the affective domain: Emotional and social intelligence; how to measure the affective objectives
4. ***Preceptor education and mentoring; Field internship models and measuring student competency**
5. How to design and implement meaningful continuing education that is new, novel, and tied to standards
6. *Others???*

OTHER NEWS:

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<tr><td>EMS Scope of Practice Surveys</td><td>

Stages 1 and 2 are completed and returned from the EMS MDs. IDPH staff is tallying the results.
They will complete the process once the Rules addressing the new education standards are sent up to the Governor’s office for review and approval.
The Education Committee will be tasked with creating educational modules (bridge and for entry level learners) to assist in implementing the new scopes of practice academic content.

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<tr><td>National Registry direct data Imports</td><td>IDPH continues to work with the NR to accomplish a direct download of testing scores to facilitate and shorten the time for a passing candidate to achieve licensure in Illinois. The IDPH goal is to have an on-line payment option in place in 2015 for those candidates who seek Illinois licensure after passing the NR exam.</td></tr>
<tr><td>National Registry exam fees to increase in 2017</td><td>The NREMT will be increasing the initial certification fees effective January 1, 2017.
The NREMT Board of Directors approved the fee increase effective 2017 following a ten-year price freeze (2007 -2017). The 2017 fee increase reflects the renewed relationship between the NREMT and Pearson VUE. The fee increase is as follows:
NREMT Initial Certification Fees effective January 1, 2017
<table>
<tr><th>NREMT Level</th><th>Current Fees</th><th>Fees Effective 1/1/17</th><th>Change</th></tr>
<tr><td>EMR</td><td>$65</td><td>$75</td><td>$10</td></tr>
<tr><td>EMT</td><td>$70</td><td>$80</td><td>$10</td></tr>
<tr><td>AEMT</td><td>$100</td><td>$115</td><td>$15</td></tr>
<tr><td>Intermediate/99</td><td>$100</td><td>$125</td><td>$25</td></tr>
<tr><td>Paramedic</td><td>$110</td><td>$125</td><td>$15</td></tr>
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</td></tr>
<tr><td>National Registry requirement to test within 90 days of approval to test eff. 1/1/15</td><td>Effective January 1, 2015, Authorizations to Test (ATT) for National EMS Certification will be valid for up to 90 days from the date of issuance, provided all other requirements for National EMS Certification are met. Candidates who do not complete their cognitive examination prior to the expiration date will be required to complete a new application, including payment of the application fee. Program directors are advised to inform their candidates of the updated policy as no refunds will be issued for expired Authorizations to Test. Please refer to the updated policy on our website at https://www.nremt.org/nremt/downloads/RefundPolicyATTReceived.pdf for additional information.</td></tr>
<tr><td>Education Standards rules being drafted; approval process</td><td>A group of subject matter experts from northern, central, and southern Illinois have been working with Jack and Paula every week to draft the rules.
Process of adoption

Draft created by IDPH reps and selected SMEs
Approved by IDPH legal – sent to Gov. Office
Once approved, they become “official” and all feedback to IDPH must be recorded
Sent to Council for 90 days seeking comments
Council comments considered by IDPH; accepted changes sent to JCAR
Rules filed for 2 comment periods before becoming ratified

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<tr><td>EMS for Children Protocols</td><td>Will be finalized in 2015 based on national evidence-based guidelines. Educators should be prepared to implement these concepts into their programs.</td></tr>
<tr><td>Burn Surge Annex published
Tabletop exercises announced</td><td>A table top exercise to evaluate our capacity to flex up to accommodate large numbers of burn patients will be held in Northern Illinois on 3/10/15 and for Central/Southern Illinois on 3/24/15. It would be a great if EMS CE could be preparing our personnel relative to burn management and the contents of the Burn Surge Annex prior to those tabletops so we stay synchronous with the hospital planning for these events.</td></tr>
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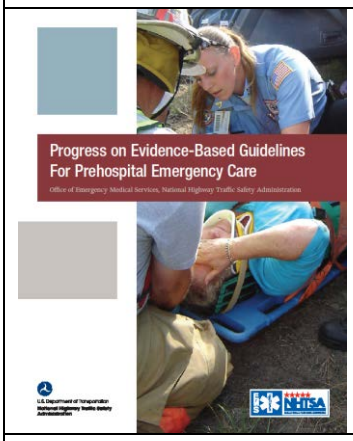
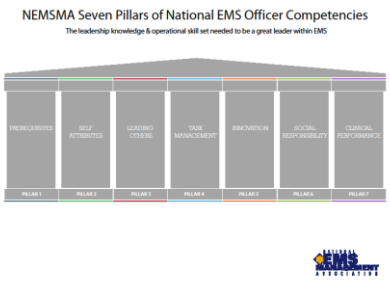
Pediatric and Neonatal Surge Annex	Also published. While mostly directed to hospital preparedness, the Annex addresses transfer of children and roles at Resource Hospitals. Please review and incorporate into EMS CE as you believe is needed for your service area.
Commission on Accreditation of Allied Health Education Programs (CAAHEP) 20th Anniversary 2014 Annual Report	To view report: Go to www.caahep.org – see publications and governing documents.
NAEMSE receives grant from US DOT to hire principle investigator writer to produce Military to paramedic bridge programs	Project deliverables: 1. Complete an assessment that identifies and documents the functional characteristics and promising practices of EMS educational bridge programs for service members and veterans that addresses gaps between military training programs and national educational standards, expedites requirements and/or waives prerequisites in preparing students for national certification as paramedics. 2. The detailed narrative of findings must satisfy the deliverable obligated under the US Department of Transportation Contract Number DTNH22-11-H-00338/0006 Veterans to Civilian EMS. Applications were due on January 20th and we expect to hear t soon who will be named the PI.
	Since 2008, the National Highway Traffic Safety Administration (NHTSA) Office of Emergency Medical Services and the Emergency Medical Services for Children (EMSC) Program (Health Resources and Services Administration), have been working with EMS stakeholders to create and pilot test a model for developing and implementing **evidence-based guidelines (EBGs)** for prehospital emergency care. NHTSA has published the progress (Appendix A) of the project with the EMS community. To access full report go the NHTSA's website: www.ems.gov , or see the link on the Northwest Community EMS System website (www.nwcemss.org) under Committees and/or breaking news on the home page.
	The National EMS Management Association published the **Seven Pillars of National EMS Officer Competencies** in October 2014. This document is the product of years of input by multiple EMS disciplines and organizations and has interesting applications to EMS education programs especially with respect to preceptor education. Good read. https://www.nemsma.org/images/pdfs/NEMSMA-EMS-Officer-Competencies.pdf

NAEMSE Instructor 1 and 2 Courses in Illinois for 2015 are being finalized.
First IC1 course for 2015: MARCH 13-15 at Parkland College in Champaign.
Go to www.naemse.org/instructor-course for registration information regarding upcoming courses all over the US.

Do not get the NAEMSE Course required as a pre-requisite for Lead Instructor licensure in Illinois confused with the National Association of EMT's educator course that is offered as a much shorter class on-line. The NAEMT course was designed specifically for those that teach NAEMT courses and is not an approved substitute for gaining IDPH Lead Instructor status.

2015 EMS Education Committee meetings:

January 26, 2015	10:30 am – 12 noon
April 27, 2015	10:30 am – 12 noon
July 27, 2015	10:30 am - 12 noon
October 26, 2015	10:30 am - 12 noon

All meetings are teleconferenced at the following sites:

ICEP Offices: 3000 Woodcreek Drive, Suite 200; Downers Grove, IL 60515-5429
630.495.6400 Ext. 222

Parkland College, Champaign, IL
Contact: Rick Thompson Phone: 217-353-2269

Illinois Central College North Campus at 5407 N. University in Peoria (Cedar Building, Room C105), Peoria, Illinois 61635-001; Office - 309-999-4667; Mike Dant; Fax - 309-673-9626

Marion Regional Office (State of Illinois IDPH)

EMS/Bell Building, Springfield (State of Illinois IDPH)

Respectfully submitted:

Connie J. Mattera, MS, RN, EMT-P
Chair, IDPH EMS Education Committee