EDUCATOR UPDATE
oct 2021 | fall issue

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The NEMSEC Exam is Now Online!

Exciting news! The NEMSEC Exam is now online! View the NEMSEC application, upcoming exam dates, eligibility requirements, testing procedures, and more by visiting naemse.org.

“Students indicated that questions in the review app mimicked those on the NREMT exam and helped them successfully pass!

As a result, we've purchased access to the app for all our current EMT students and weaved it into the program as quizzes and tests.”

- Marina Proektor
EMT Program Director, Conejo Valley Adult Education

LimmerEducation.com
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NAEMSE Wraps up its 26th Annual EMS Educator Symposium and Trade Show in Orlando, Florida!

The 26th annual NAEMSE symposium wrapped up on August 8th in Orlando, Florida, at the Omni ChampionsGate hotel. NAEMSE thanks all those who attended and helped make this symposium a great success. Over 325 attendees, faculty, and exhibitor representatives gathered in Orlando over six days to bring back the in-person NAEMSE symposium.

NAEMSE took the lead and put on its first-ever Cultural Humility Summit on Thursday, August 5th. NAEMSE board of director Sahaj Khalsa lead the summit. Attendees include Dr. Jon Krohmer, along with representatives from IAFF, NREMT, CoAEMSP, NAEMT, and many other symposium attendees.

At this year’s symposium, we acknowledged three board members that left after serving their terms as NAEMSE board members: Dr. Lindi Holt, Linda Abrahamson, and Bill Robertson. NAEMSE thanks them for their hard work and dedication while serving on the board. We also welcomed new board members seated at the annual membership meeting: Connie Mattera, Art Heish, Dr. Scott Lancaster, and Gina Riggs.

NAEMSE held its annual award ceremony after the Welcoming and Opening General Session, presented by Dr. Jeffrey Beeson. Award recipients were Dr. Gordon Kokx for the Legends award, Dr. Whitney Morgan for the James O. Page Award, and Linda Abrahamson for the Lifetime Achievement award. Additionally, the Education Standards Development team received a plaque for all their work on the standards updates.

The exhibit hall had 30 vendors interacting over three days with hundreds of attendees. NAEMSE extends a special shout-out to the many volunteers that assisted during symposium week: Deb Akers from Virginia, Shawn, Jacob, and Caleb Treloar from Florida, and the numerous student volunteers from the Orlando Medical Institute.

We thank all of you who chose to advance your skills as an educator by attending the 2021 EMS Educator Symposium and Trade Show. As Kory Lane from PreMed Training Group in East Bend, North Carolina, stated: “Great conference! Can’t wait for next year”.

Look out for information on the call for submissions and other exciting opportunities for next year’s 27th symposium in Louisville, KY, at the Omni Louisville hotel from August 2-7, 2022.

We will save a seat for you!
Writing a good stem

Divide up into groups of two or three

Write a stem for a multiple-choice type item that
shows understanding of the material in your classroom
answered without additional information.
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Instructor Course 1
- Offered both in person and virtually from the comfort of your home
- Provide tools and resources to educators to accelerate their growth as effective learning coaches
- Provide contemporary information on the teaching and learning process so EMS educators help their students to achieve their learning goals
- Provide opportunities for networking with other educators, mentoring by experienced educators, and a catalyst for personal growth

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  - Lesson Planning
  - Program Evaluation
  - Social Intelligence
  - Research
  - Presentation Technologies
  - Leadership
  - Administrative Issues

Skills Instructor Course
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NEMSEC Exam
- Offered virtually from the comfort of your home
- NEMSEC, through leadership and a valid certification process, will advance the standard competence for EMS educators worldwide
- Assesses the knowledge and skills associated with competent, relevant and structurally sound educational practices

To view all upcoming courses and exams, please visit naemse.org/events/event_list.asp

Spring 2022 Courses are now open for registration!
Ten Steps to Use When Teaching Sepsis and Other Specialty Subjects

By Rommie L. Duckworth BS, LP

Education of any kind must begin and end with objectives. Teaching must focus on what you want the students to be able to do at the end of the lesson that they could not when they entered your classroom. Whether you seek to guide students to improve their attitudes about a topic (affective domain), expand their understanding about a topic (cognitive domain) or increase their skills in an area (psychomotor domain), you need to make sure you are constantly focused on how the students will be different when they leave the classroom. Examples may include implementing a new regional sepsis treatment protocol, using a new sepsis screening tool, or achieving an overall performance improvement with a goal of fewer sepsis cases missed by EMS clinicians.

When it comes to sepsis, we know that EMS-specific education improves patient outcomes. This is not simply a matter of EMS clinicians being able to identify sepsis or not. Every hour of delay can increase mortality by 8% for sepsis patients. This means that EMS educators must help EMTs and paramedics bring their best assessment skills to every subtle patient presentation or risk a critical missed opportunity. We can refine our objectives as we go, but we have to have something concrete in mind to begin our lesson.

Once your objectives are selected, the audience needs to be considered. Not merely their level of certification or licensure, but their experience, confidence, competence, and prior education in sepsis care or whatever the topic happens to be. This will help guide the resources you use and the way you use them. Consider, for example, if this is an audience that will benefit from a deep dive into the structure and function of the immune response, or would a better approach be just to give an overview.
Next, consider how you will answer three key questions that students will ask about virtually any topic you teach. First, “what is this?” Your answer should be a clear, concise, and compelling definition of what you are teaching. For example, sepsis is the body’s overwhelming and life-threatening response to infection, which can lead to tissue damage, organ failure, and death. This definition is broadly accepted, evidence-based, and allows the educator to expand on key points. Sepsis is a response to infection, much like anaphylaxis is a response to an allergen. Also, sepsis can lead to tissue damage, organ failure, and death, meaning that there are several stages of sepsis where EMS may have a chance to intervene, but these stages are all significant.

The next question you must be able to answer is, “Why should I care?” Here the educator should consider using a balance of startling facts and compelling stories. For example, sepsis is the leading cause of death in hospitals and the leading cause of hospital re-admission. Sepsis kills more people in the United States annually than prostate cancer, breast cancer, and AIDS combined. These facts and figures should not cause students to disconnect from the fact that they will be using what you teach to help real people living real lives. Compelling case studies from real sepsis victims and survivors called the “faces of sepsis” can be found at www.sepsis.org.

The third key question students will ask can be phrased many ways but is essentially, “Is this going to be on the test?” Students will want to know if this specialty topic is simply “nice-to-know” icing on the educational cake, or is this “need-to-know” content on which they will be tested. Similarly, in in-service and continuing education classes, students will want to know how what they have learned will be incorporated into quality assurance or performance review criteria. The real question that you must answer for your students is, “What is this supposed to mean for me?” When considering how you will address these questions, you may need to modify your objectives. Know that it is ok to refine your objectives away from “what I want to teach,” steering them more towards “what they need to be able to do.”

Keep in mind as you work that you rarely have to re-invent the wheel. Take a look at what trusted resources are already available for information or even fully-formed education programs in your chosen topic. When it comes to sepsis, the Sepsis Alliance is a fantastic resource at Sepsis.org. Additional resources can be found at the Society for Critical Care Medicine’s Surviving Sepsis Campaign at www.sccm.org/SurvivingSepsisCampaign/Home as well as via the Center for Disease Control and Prevention (CDC) at https://www.cdc.gov/sepsis/. For a perspective outside of the United States, you can find resources from the UK Sepsis Trust at www.sepsistrust.org.

When it comes to specialty subjects, consider any recent events that may have significantly changed or otherwise affected how we understand the topic or provide care. For example, the COVID-19 pandemic brought up many of the limitations of our understanding of sepsis and related issues. This was highlighted in May of 2020, with potential connections between COVID-19, Kawasaki disease, and sepsis discovered in a small number of pediatric patients. This example may bring up questions about how relevant a rare disorder may be to EMS providers. The answer may be that EMS providers may not need to understand the issue in great depth but should know enough to identify when concern is warranted and discuss the topic with in-hospital partners and concerned parents.
Specialty topics bring up the opportunity to make connections with core topics and other specialty topics. For example, having discussed the immune system in previous continuing education programs about sepsis, you may be able to answer questions about “cytokine storms” when the topic is raised related to COVID-19.\textsuperscript{9,10} If lactate measurement is something with which providers are already generally familiar, the same can be done for a discussion about lactate clearance in patients in shock.\textsuperscript{11-13} When teaching specialty topics, it can be easy to jump down a rabbit hole and leave your students behind. Still, EMS educators should keep an eye out for opportunities to help students build on prior knowledge to reach for new understanding.

Relevance is key for any adult education program.\textsuperscript{14} EMS educators should strive to customize their program to increase personal relevance to their audience. For example, when it comes to sepsis, any local sepsis identification protocols, alerts, and treatment pathways should be identified. You may choose to discuss ideas and options that are beyond what is currently available to your students, but you have to acknowledge the resources that are available locally and the tangible ways your students may be able to use them. For example, you may mention other services currently administering prehospital antibiotics that are not available for use by your students, but you should give students the opportunity to practice identifying patients with sepsis using their local protocols and activating a sepsis alert/code sepsis with their local receiving hospitals.\textsuperscript{15-20}

Be sure to end your program with a formal or informal assessment of your established objectives. This assessment does more than check to see if your education accomplished its goal, although that would be reason enough. A restatement and evaluation of the objectives emphasizes the critical learning points to students and, for those that achieve the objectives, reinforces not only their competence but their confidence.

As the late, great Steve Jobs would often add to his keynote presentations, EMS presenters should consider “one more thing” at the end of the program. Students should know what’s next. How do other clinicians see this topic? Where can one go to learn more? What might be coming in the near or far-flung future? EMS educators really stick the landing when they give their students clear next steps.

Every educator must follow-up and follow through. When teaching specialty topics, educators will often encounter perspectives they had not considered or questions they cannot answer. As programs are taught, they should be evaluated by both students and educators for improvement. The educator’s job is not over when the class has ended. Good educators take notes as they go, but most importantly, great educators follow-up with student concerns and questions and follow-through on continuous improvement. In this way, whether teaching core topics, specialty topics, or anything else, the best EMS educators contribute to individual provider knowledge and constant improvement to our industry in general.
References
17. 4 steps to prepare forprehospital antibiotic administration. (2015).
NAEMSE's webinar series is a collection of one-hour educational presentations from highly experienced EMS Educators. The series addresses a wide range of topics, from degree requirements and lesson planning to simulation solutions and bias in EMS education. The webinar series keeps you up to date on the latest in EMS Education.

- **Webinar length:** 1 hour
- **CEUs offered:** 1
- **Price to register:** FREE
- **Certificate:** FREE FOR MEMBERS

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New webinars through 2022 are open for registration!

Interested in presenting a 2022 webinar with NAEMSE? Please email rio.grassmyer@naemse.org with your presentation information.

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NAEMSE Symposium presentation submissions are peer-reviewed by Program Committee members who perform a blind review on all submissions with rankings within a category. Submissions receiving high review scores are approved by the members of the Program Committee and presented at the symposium.

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Intended Audience:

- EMS Medical Directors
  - Those looking to increase the quality of education in their EMS system
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  - Medical directors of EMS training programs
  - Leaders in EMS education of residents/medical students

- EMS Professional Members
  - Training program directors
  - Education coordinators
  - EMS instructors

Dates:

- The cohort will run from January 2022 – August 2022, culminating in the presentation of work at the NAEMSE Conference.
- While submission of work to the NAEMSE is a requirement, attendance at the conference participation is encouraged, but not required.

Program Highlights:

- Structured monthly discussions around aspects of curriculum development
- Mentorship and networking with EMS educational leaders across the country
- Development of an educational product that will be presented at a national conference

Sign me up!

- Registration will be available Fall 2021
- To be notified when registration opens or for other questions about the cohort, e-mail TGrawey@gmail.com
The evolving field of emergency medical services (EMS) requires professional educators who are knowledgeable about teaching and learning strategies; classroom management; assessment and evaluation; technology in learning; legal implications in education; program infrastructure design; and administering programs of excellence to meet state and national accreditation guidelines. Foundations of Education: An EMS Approach, Third Edition provides EMS educators with the tools, ideas, and information necessary to succeed in each of these areas.

The content reflects how current educational knowledge and theory uniquely apply to EMS students, educators, and programs.

This textbook is used in the NAEMSE Instructor Courses, and is an excellent reference for all EMS educators, as well as educators in allied health professions.

This textbook is required for the Level 2 Instructor Course and can be purchased during the registration process. You can purchase this textbook through the NAEMSE website, during the registration process for an IC2 course, or directly from the Public Safety Group website.

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Looking Your Best in a Virtual Classroom, Its all About the Lighting

Bob Matoba, MEd, EMT-P

Introduction

With the advent of Covid, many educators are finding themselves teaching within virtual classrooms. When teaching in virtual classrooms it is important your students not only see your instructional slides, but it is also beneficial for them to see the instructor while information is being delivered. From the author’s perspective, having to look at a video box of myself while teaching in a virtual classroom has been a little disturbing. We all desire to look our best and there are various ways to improve how you visually appear on the other end of a video computer screen. The use of lighting is one of the most direct methods for improving your appearance within a virtual environment.

Elements of Lighting

There is a reason why movie directors use specific lights while filming their movies. One of the more effective methods to create a certain ambiance while focusing viewer attention is through the use of lighting. You do not need to invest in expensive studio lights to accomplish this effect, but there are three basic types of lighting you should consider integrating into your virtual teaching studio.

The three elements of lighting in your studio will be a key light, fill light, and back light (Figure 1). When using this type of lighting setup, it is recommended you attempt to eliminate and/or minimize natural light and other sources of light within your teaching studio. This makes you less dependent upon inconsistencies of light in regard to time of day, weather, cloud cover and other uncontrollable variabilities associated with natural and unnecessary lighting.
"Key lighting is the most important source of light within your teaching studio. The purpose of this light is to highlight form and dimension of the presenter. It focuses the viewer on the presenter and not so much on the environment around you."

Key Lighting

Key lighting is the most important source of light within your teaching studio. The purpose of this light is to highlight form and dimension of the presenter. It focuses the viewer on the presenter and not so much on the environment around you.

The key light should be placed in front of the presenter and set off to one side. It will be set behind the webcam and should be the brightest light within the setup. If you decide to utilize a single lighting source, key lighting is the one you should use. In the case of using a single key lighting source, the light should be placed more center of the presenter and only slightly off to the side.

Fill Lighting

In television and filming, fill lighting is used to reduce the contrast of a scene and creates a more normal look for the viewer. The goal for fill lighting is to help prevent dark voids that frequently occur on faces around the cheeks, nose, and eyebrows. This allows the viewer to see more natural facial expressions as the presenter is speaking.

The fill light should also be placed on the opposite side of the key light and behind the webcam. It should be dimmer than the key light to help avoid creating a dimensionally flat appearance of the presenter’s face.

Back Lighting

As the designation implies, back lighting is illuminating the presenter from behind. It helps separate the presenter from the background. The goal for back lighting is to create a three-dimensional appearance of the presenter. Without back lighting the presenter will have a flat two-dimensional appearance. The back light should be placed behind the presenter off to one side. It should also be on the same side as your key light. This will help create the three-dimensional look we are attempting to achieve.
"There can be various challenges for those who make the transition from teaching within a physical classroom into a virtual environment. Creating a visual environment where students focus on the presenter in conjunction with instructional content is important."

**Light Sources**

The lights you use can come from many sources. They do not have to be photography quality lights, but there are advantages to using photography lights because you can control the shade and brightness of the lighting. Photography panel lights come in a variety of styles starting from approximately $30. The author of this article saved expenses by repurposing two old table lamps for the key and back lighting sources. Brightness of these lights is controlled by utilizing higher and lower wattage lightbulbs. Plain copier paper taped onto walls have been used to direct and diffuse the key light without diminishing the overall effect. (Figure 2)

**Figure 2**

**Three-point lighting setup**

<table>
<thead>
<tr>
<th>Light Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back Light</td>
<td>Illuminate presenter from behind</td>
</tr>
<tr>
<td>Key Light</td>
<td>Highlight form and dimension of presenter</td>
</tr>
<tr>
<td>Fill Light</td>
<td>Reduce the contrast and create a more normal look for the viewer</td>
</tr>
</tbody>
</table>
Summary

There can be various challenges for those who make the transition from teaching within a physical classroom into a virtual environment. Creating a visual environment where students focus on the presenter in conjunction with instructional content is important. The integration of a three-point lighting system is a good first step toward looking your best within a virtual classroom.
Save the Date

2022 NAEMSE EMS Educator Symposium & Trade Show

Date: August 2-7, 2022
Location: Omni Louisville Hotel - Louisville, KY

Join us for the 27th annual EMS Educator Symposium & Trade Show in Louisville, Kentucky! We're looking forward to a week full of workshops, presentations, and networking, surrounded by a city with a rich history that has something for the whole family. Equipped with a splendid speakeasy, and beautiful rooftop pool, the Omni Louisville is also conveniently located near Main Street, close to many popular distilleries.

We can't wait to see you there! Registration opens in spring 2022.