ADDENDUM B

EDUCATION AND CERTIFICATION MATRIX
Sources, Tools and Examples of Evidence

Recommendations

It is important that the education and training of all transport members reflect the mission and scope of service of the transport program.

The Educational and Certification Matrix below contains a listing of the current national and international courses and certifications that are available for educational preparation and completion of certification by transport teams. In addition, the supporting associations are listed. These associations have web sites where additional information can be obtained.

CAMTS will accept appropriate equivalent courses. However, these courses must meet the following criteria:
- Measurable learning objectives
- Equivalent hours to the course that is being replaced
- Documentation of completion of the course

The CAMTS Board strongly suggests that programs who would like to use equivalent courses should submit them for review before the site survey.

A certification must come from a recognized professional body, for example, the Board of Certification of the Emergency Nurses Association (BCEN). This assures that the exam has been developed from a focused body of knowledge, has validity and reliability and is administered in a secure environment.

I. Explanation of the Matrix

In general:

The courses in the matrix that can be used as equivalent to ATLS or TNATC (excluding Column “C. Medical”) are:

- ITLS, PHTLS, TNCC, CATN, ATLS for Nurses. “No” (under the specific components) means this component is not included and must be supplemented in order to be equivalent.

- ASHI (American Safety & Health Institute) and AHA courses are considered equivalent

The STABLE Course may be used as an additional source of information for the neonatal patient, but it cannot be used in place of NRP.

The courses in the matrix that can be used as equivalent to PALS or APLS are:

- PEPP and ENPC “No” (under the specific components) mean this component is not included and must be supplemented in order to be equivalent.
**Headings across top of the matrix are defined as follows:**

**A. Name of Course (ATLS, ITLS, etc.) in Column 1 - Included with course in the next 5 columns as follows:**

1) **Patient Assessment** - *includes:*

   Primary and Secondary Assessment of the Ill or Injured Patient *according to the focus of the setting and personnel the course was designed to address* (i.e. emergency department, prehospital, critical care).

2) **Basic Skills** - *includes:*

   - BLS, Preparation for Transport and Safety
   - Needle Decompression
   - AED Application and Use

3) **Advanced Skills** *“The numbers in this column correspond to the numbered skills listed in the chart and represent the specific Advanced Life Support Procedures that are taught in each course.”*

   1. Clinical Decision Making
   2. Advanced Airway Management
   3. Rescue airway management
   4. Chest Tube Insertion
   5. Pericardiocentesis
   6. Pacing (external and transvenous pacing management)
   7. Central Line Access
   8. Seldinger Technique

4) **Basic Physiology**

5) **Advanced Physiology**

**B. Trauma** – *the course is based on current principles and practices of trauma*

**C. Medical** – *the focus of the course is medical – not trauma*

**D. Who Can Attend the Course? (RNs, MDs, EMT-Ps etc.)**

**E. What Does It Meet - Course meets compliance with the CAMTS definitions of:**

   - BLS
   - ALS
   - Critical Care
### CAMTS Education Matrix

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ITLS</td>
<td>Prehospital</td>
<td>Yes</td>
<td>No 1, 2, 8</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>EMT, EMT-P RN MD, RT</td>
<td>BLS ALS</td>
</tr>
<tr>
<td>PHTLS</td>
<td>Prehospital</td>
<td>Yes</td>
<td>No 1, 2, 8</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>EMT EMT-P RN MD, RT</td>
<td>BLS ALS</td>
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<tr>
<td>ATLS</td>
<td>Emergency Dept.</td>
<td>Yes</td>
<td>Yes 1, 2, 3, 4, 5, 7, 8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>MD May be audited by others</td>
<td>BLS ALS Critical Care</td>
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<tr>
<td>TNCC</td>
<td>Emergency Dept.</td>
<td>Yes</td>
<td>No 1, 2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>RN May be audited by others</td>
<td>BLS ALS Critical Care with an Invasive Skills Lab</td>
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<tr>
<td>TNATC</td>
<td>Prehospital Emergency Dept. CCU</td>
<td>Yes</td>
<td>Yes 1, 2, 3, 5, 7, 8</td>
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<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>RN, EMT-P</td>
<td>BLS ALS Critical Care</td>
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<tr>
<td>ATCN</td>
<td>Prehospital Emergency Dept. CCU</td>
<td>Yes</td>
<td>Yes 1, 2, 3, 5, 7, 8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>RN May be audited by others</td>
<td>BLS ALS Critical Care with invasive skills</td>
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<tr>
<td>ACLS</td>
<td>Prehospital Emergency Dept. CCU</td>
<td>Yes</td>
<td>Yes 1, 2, 6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Open to all</td>
<td>BLS ALS Critical Care</td>
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<tr>
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</tr>
<tr>
<td>PEPP Basic</td>
<td>Yes</td>
<td>No – Care of Special Needs Children is included in this course. 1, 2</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>EMT</td>
<td>EMT-P, RN, MD, RT</td>
<td>BLS, ALS Critical Care</td>
</tr>
<tr>
<td>PALS AHA and ASHI</td>
<td>Yes</td>
<td>Yes 1, 2, 7, 8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>EMT-P RN MD, RT</td>
<td>MD, EMT-P, RT (audit)</td>
<td>BLS, ALS Critical Care</td>
</tr>
<tr>
<td>APLS</td>
<td>Yes</td>
<td>Yes 1, 2, 7, 8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>MD RN, EMT-P, RT (audit)</td>
<td>RN May be audited by others</td>
<td>BLS, ALS Critical Care</td>
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<tr>
<td>ENPC</td>
<td>Emergency Dept.</td>
<td>Yes</td>
<td>Yes Pediatric Resuscitation Pediatric Skills 1, 2, 3,</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>RN May be audited by others</td>
<td>BLS, ALS Critical Care</td>
<td></td>
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<tr>
<td>NRP</td>
<td>Neonatal</td>
<td>Yes 1, 2, 7</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>MD RN RT</td>
<td>MD RN RT</td>
<td>BLS, ALS Critical Care</td>
</tr>
<tr>
<td>ASHI - ACLS</td>
<td>Adult</td>
<td>Yes 1, 2, 6</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Open to all</td>
<td>BLS, ALS Critical Care</td>
<td></td>
</tr>
</tbody>
</table>
**Sponsoring Agencies**

**Air and Surface Transport Nurses Association**

- Transport Nurse Advanced Trauma Course (TNATC)
- Transport Nurse Advanced Trauma Course Advanced Provider

**American Academy of Pediatrics**
- Prehospital Emergency Pediatric Preparation (PEPP Basic and Advanced)

**American College of Emergency Physicians**
- Advance Pediatric Life Support Course (APLS)

**American College of Surgeons**
- Prehospital Trauma Life Support (PHTLS)
- Advanced Trauma Life Support (ATLS)

**American Academy of Pediatrics**
- Neonatal Resuscitation Program (NRP)
- Advanced Life Support (ACLS)
- Pediatric Advanced Life Support (PALS)

**American Heart Association**
- Advanced Cardiac Life Support (ACLS)
- Pediatric Advanced Life Support (PALS)

**American Heart Association and American Academy of Pediatrics**
- Neonatal Resuscitation Program (NRP)
- Advanced Life Support (ACLS)
- Pediatric Advanced Life Support (PALS)

**American Safety & Health Institute**
- ASHI-ACLS
- ASHI-PALS

**Emergency Nurses Association**
- Trauma Nursing Core Course (TNCC)
- Emergency Nursing Pediatric Course (ENPC)

**Society of Trauma Nurses**
- Advanced Trauma Care for Nurses (ATCN)

**International Trauma Life Support (ITLS)**
- International Trauma Life Support Course (ITLS) (Advanced)

### II. Medical Director Education (Suggested Sources)

Emergency Medical Services at the National Fire Academy. Additional information can be obtained: [http://www.usfa.fema.gov/fire-service/nfa/nfa.shtm](http://www.usfa.fema.gov/fire-service/nfa/nfa.shtm).

Fellowship in an accredited program in EMS. Information about this can be obtained from Society for Academic Emergency Medicine: SAEM link: [http://www.saem.org/awards/fellins/htm](http://www.saem.org/awards/fellins/htm).

AMPA Medical Director Core Curriculum Parts I, II and III. Information about this course can be obtained from: [http://www.ampa.org](http://www.ampa.org).

National Association of EMS Physicians Online Medical Directors Course. Information about this can be obtained from: [http://www.naemsp.org](http://www.naemsp.org)
III. Educational Tools

A. **On-line courses**: Most courses now offer didactic information on-line, for example, ASHI – American Safety & Health Institute offers ACLS. If this type of education is used, it is imperative that the clinical components of the course, for example Mega code, are conducted and documented.

B. **Human Patient Simulators** - Human Patient Simulators may be considered a substitute for human or cadaver experience requirements if the simulators are dynamic (able to reflect physiologic changes resulting from a performed procedure) and not static. The Human Patient Simulator (HPS) must meet the following criteria to demonstrate compliance with intubation skills and/or invasive procedures and/or if used to access clinical competency. The dynamic changes that the simulator performs are to be controlled by an operator without the user being aware of what is being changed. The results must be critiqued by a trained operator. **All scenarios that are to be used for competency evaluation MUST be reviewed by the CAMTS Board.**

**For airway competency in initial training to meet the 5 live or cadaver intubation requirement:**

- Must be capable of real time changes in difficult airway scenarios including a surgical airway.

- Must allow realistic pharmacologic/pharmodynamic responses to drug interventions.

- Must allow for realistic learner interventions in terms of all aspects of airway intervention (i.e. Use of bag-valve mask, oropharyngeal airway, nasal-pharyngeal airway, laryngeal mask airway, endotracheal tube and other rescue airway devices), CPR, pacing and defibrillation.

- Must allow for real time feedback to the user in regards to actions taken, such as changes in vital signs, cardiac rhythm, breath sounds, pulses, pulse ox, end tidal CO2 etc.

**For invasive skills**

- HPS is capable of simulating same skills as listed in ATLS or TNATC curriculum and as consistent with the program’s mission and scope of care.

**For ongoing clinical experience** – Simulator experiences must be approved by the CAMTS Education Committee. **Submit according to the 4 Step Process below:**

**Step One**

Complete the Gap Analysis to assess your current work with simulation learning

(Highlight the number that best reflects your current status)
**Simulation Learning Gap Analysis**

<table>
<thead>
<tr>
<th>1</th>
<th>Simulation equipment is available, which can include human patient simulators, task trainers, airway trainers, OB manikins. Scenarios used are basic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Simulation education plan in place with identified learning objectives and appropriate paid time devoted to training. Scenarios used incorporate advanced learning objectives and particularly emphasize high risk low volume clinical skills.</td>
</tr>
<tr>
<td>3</td>
<td>Simulation educator(s) has documented experience and proficiency with the techniques of simulation and is actively involved with the broader educational needs of the program. Documented educator experience can include completion of formal degree programs related to simulation, CE from simulation organization conferences and educational offerings, and on the job mentorship. Checklist of specific interventions, evaluation, and debriefing are demonstrated.</td>
</tr>
<tr>
<td>4</td>
<td>Simulation program is mature in that scenarios include not only clinical points but integrate team training, aviation/ground environment, and communication skills. Well written criteria checklists are documented and a post debriefing is completed. Community outreach is used to bring in EMS, transferring and receiving facilities, and other stakeholders into the scenario development and training.</td>
</tr>
<tr>
<td>5</td>
<td>Simulation educators and other stakeholders link educational objectives to specific patient outcomes, track simulation effectiveness, and share their findings by publishing and presenting.</td>
</tr>
</tbody>
</table>

**Step Two**
Submit the Learning Objectives and Outline for each scenario you are utilizing.

**Step Three**
Submit a video of an actual simulation training that includes the debriefing session (Choose any scenario if you have more than one.)
This does not need to be professionally filmed – a home video or phone camera is adequate.)

**Step Four**
Submit the qualifications of the simulation educator(s).

This information can be submitted electronically or mailed on a jump drive or CD to the CAMTS office as follows:

Email to: eileen.frazer@camts.org
or send to: CAMTS, PO Box 130, Sandy Springs, SC 29677
  c/o Education Division
General guidelines for use of simulation:

- Pre-designed readings should be assigned to introduce the concepts that the training will provide. (For example: pathophysiology, selected skills).

- The participants should be provided with a course introduction and review of all the conceptual materials to be covered.

- Participants should be allowed time to become familiar with the simulator. The environment in which the procedure may have to occur should be reviewed. (For example: airway management in the air and ground environments, different aircraft sizes, etc.)

- Patient scenario modules based on the type of patients transported.

- Multifaceted, complex, realistic simulations should be written out and used for documentation of education.

IV. Examples of Evidence for Education

A. Copies of documents that demonstrate current completion of national or international courses based upon the scope and mission of the transport program. These can be reviewed during the site visit.

B. If an equivalent course is used by the transport program, an outline must include:

1. Objectives
2. Didactic component
3. Skills component
4. Measurement tool
5. Evaluation tool
CERTIFICATION

EXAMPLES OF CERTIFICATION EXAMS AND RESOURCES

All of the listed resources have web sites where additional information about the specific examinations, requirements to take the exams, and where the exams are administered.

American Association of Critical Care Nurses (AACN Certification Corporation)

CCRN: Adult, Neonatal and Pediatric Acute/Critical Care Nursing Certification
CSC: Cardiac Surgery Subspecialty Certification
ACNPC: Acute Care Nurse Practitioner

Board of Certification for Emergency Nursing (BCEN)

CEN: Certified emergency nurse
CPEN: Certified pediatric emergency nurse
In conjunction with the Air and Surface Transport Nurses Association
CFRN: Certified flight registered nurse
CTRN: Certified transport registered nurse

Board for Critical Care Transport Paramedic Certification (BCCTPC)

FP-C: Certified flight paramedic
CCP-C: Certified critical care paramedic

National Board of Respiratory Care

ACCS: Adult Critical Care Specialist

National Certification Corporation

C-NPT: Certified Neonatal Pediatric Transport