Instructions to Course Director

1. Course Objectives

At our institution all third year students receive a week long orientation prior to starting their clinical rotations. As part of the program the students are required to participate in a half-day course called “How to Save a Life”. The main objective of the course curriculum was to teach life saving techniques that would support a critically ill patient for the first several minutes of a cardiac or airway emergency. Our curriculum was designed with the ultimate objective to teach life saving techniques that would support a critically ill patient for the first several minutes of a cardiac or airway emergency. Students should be able to institute life saving maneuvers effectively for airway compromise, lethal arrhythmias, or a choking patient. If these maneuvers cannot be instituted effectively, the patient will not survive past those first 4-6 minutes. Content validity was set by a group of educators at our institution. Our curriculum was based on national life support courses and internal expertise. The specific objectives of the curriculum included:

- Recognition and defibrillation of ventricular fibrillation/ unstable ventricular tachycardia
- Basic airway management skills (open airway, use of airway adjuncts, apply a bag-valve-mask for respiration)
- Adult cardiopulmonary resuscitation
- Automatic external defibrillator use
- Management of the choking child

At our institution we have incorporated this course into orientation to the third year of medical school since 1997 and it has been directed and taught by Emergency Medicine faculty. Evaluations from the course have routinely been positive with the students particularly liking the hands on experience and focused teaching by an experienced clinician. The personal anecdotes that are passed along by the faculty add flavor to these small group teaching sessions.

At Emory we have researched the utility of this course. In our initial study we recorded an increase in self-perceived comfort with the life-saving clinical skills that was maintained over the course of a year. In our second study we aimed to determine competency. Using a checklist and global rating evaluation tool as the students were assessed for competency after review of the individual skill sets. We showed that procedural competency in these basic life saving clinical skills could be achieved through an intensive hands-on small group training model. Students achieved perfect scores on the checklists demonstrating their ability to perform critical actions for a selected group of life saving skills. In addition this study adds to previous work suggesting that students developed a sense of comfort with these important skills. Finally, in an effort to determine retention of these skills we reassessed competency in a subset of our students and noted a decrease in competency in particular in skills not routinely seen as part of routine clinical care in medical school.
References: (Appendices A,B,C)


2. Organization of Course

I have included the outline that we use to organize the course. It includes a map to the facility, the agenda for the half-day course, and how students are divided for the skill stations. (Appendix D)

We currently use a large auditorium for the initial presentation to the group. Students are pre-divided into groups of 4-6. They receive a rotation schedule and rotate through 5 clinical skills stations. We use small classrooms for these stations.

Each station has a list of required equipment. In addition, although I email the scenarios to the faculty and resident instructors I include the scenarios at each station. Pre-printed assessment checklists are at each station.

3. Lecture (Appendix E)

The lecture is designed to give the student a brief overview of the various life saving skills and their importance. It is taught to a large group of students (approximately 50). I attempt to make it somewhat interactive. The PowerPoint can be modified for different skills depending on the objectives of the course. The lecture is organized by skill, includes clinical vignettes to make it more interesting, but also includes evidence based medicine. At the conclusion of the lecture students receive instructions on the organization of the skill stations and the evaluation process. The signed assessment form is used for attendance purposes and to document competency. The completed form becomes part of their permanent record.

4. Clinical Skill Stations

The clinical skill stations are small group sessions with 4-6 students to one faculty. The clinical skill stations are typically divided into 4 parts including review of a clinical scenario, skill demonstration, hands-on practice, and competency assessment.

a. For each station we have developed a small clinical vignette (Appendix F). This can be adapted based on location, needs, and the skills being taught. It is typically used in association with the skill demonstration by the instructor. We have kept them relatively simple but could be expanded if needed.
b. We ask our instructors to demonstrate the clinical skills. Each of the clinical skills has a checklist as part of the assessment tool that can be used as a guide for the instructor.
c. Under the direction of the instructor each student is given the opportunity to practice the clinical skill.
d. After each student has had the opportunity to practice the clinical skill they are individually assessed for competency. The evaluation form we use (Appendix G) has two components. The checklists assess for specific psychomotor skills and we use a global rating scale to assess overall competency.
Medical student attitudes toward life-saving clinical skills

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Running Title: Clinical Skills

Key Words: Medical Education, Clinical Skills, Education.

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Clinical Skills

The Emory University School of Medicine implemented a program designed to introduce clinical skills during the first week of third year. The goal of the course was to improve the medical students’ ability to perform basic clinical skills prior to their clinical rotations. We studied the success of our program designed to teach life-saving clinical skills.

Each session opened with a lecture-format presentation including airway management, oxygen therapy, and basic life support. Students participated in skill stations of airway management, dysrhythmias recognition, basic life support, and oxygen therapy. Each student had an opportunity to observe, perform and receive feedback under the supervision of an Emergency Medicine faculty. A survey documenting students’ comfort which each skill was administered prior to the training, immediately after the training, and one year later. As this work was done in conjunction with an educational program our Institutional Review Board determined that it did not require written consent.

Data were analyzed using EPI INFO 6.04. Pre- and post-training mean scores and mean units of improvement were calculated for each of the eight questions. 95% confidence intervals around the mean units of improvement were calculated to indicate the significance of the change in students’ attitudes relative to each skill. 95% confidence intervals around the difference in the follow-up mean scores and the initial pre-training mean scores were calculated for the group.

104 of the 105 medical students who attended the Emergency Medicine program were enrolled and completed the first two parts of the survey. Significant improvement in medical student comfort with all life-saving clinical skills was noted. (Table 1)

The degree of improvement was substantial for certain skill sets. An improvement of 2 units occurred in identifying life-threatening arrhythmias, the use of airway adjuncts, and recognizing oxygen sources among 44.2%, 40.4%, and 40.4%, of the students, respectively. Three units of improvement were achieved in airway adjunct use, ventilating a patient using a bag-valve mask, and technique of endotracheal intubation among 23.1%, 22.1%, and 15.4% of the students, respectively.

One year later, 94 of the original 104 medical students who completed both parts of the initial survey completed the survey again. Significant improvement was still noted in most areas compared to the initial survey. The exceptions were the treatment of life-threatening arrhythmias and in opening and maintaining an airway. (Table 2) Overall comfort was still maintained above the pre-training scores.

The course was developed to address a perceived deficiency in knowledge and skill prior to the clinical rotations. Literature supports the absence of critical skills at this juncture in a medical student’s education and further cites this perceived deficiency as a limitation in obtaining these same skills during the students’ clinical years. It has been noted that a significant portion of students may not participate in cardiopulmonary resuscitation or endotracheal intubation as well as many other life-saving procedures during their clinical years.¹⁻⁴

The course was divided into three parts: didactic, expert demonstration, and supervised practice and feedback. Results from our study reveal that students entered their third year of training generally uncomfortable with many of the skills. All the
Clinical Skills

students successfully completed the course and demonstrated a significant improvement in their comfort with the clinical skills.

One year later, after completion of all the required clinical clerkships at our medical school, students remained more comfortable with these skills than prior to training. Obviously it is difficult to determine if this was due to lasting effects of the training or related to the clerkships and additional training received. Improvement was not retained in two areas: treating arrhythmias and opening and maintaining an airway. The decline in comfort for treating arrhythmias may be secondary to the lack of reinforcement during the clinical clerkships and the lack of involvement of a third year medical student in those decisions. The decline in comfort with opening and maintaining an airway may be secondary to semantic problems with the questionnaire. There might have been some uncertainty as to what was meant by “maintaining” an airway. The data indicates that while a greater percentage of students reported that they “strongly agree” and a lower percentage “disagreed”, more students were “undecided” and fewer “agreed”. These differences resulted in lowering the mean overall.

Medical students at our institution enter the third year uncomfortable with many skills that every clinician would agree are required and potentially life-saving. Many of the skills that we taught are recommended within the Association of American Medical Colleges Medical Student Objectives Project. Our program successful trained rising third year medical students basic airway techniques, basic life support, dysrhythmias recognition, and oxygen sources. Comfort levels with these skills improved and comfort with most skills were maintained one year later. Future work is necessary to translate comfort into competence. Our training program can be used as a prototype for similar courses.
Clinical Skills

ACKNOWLEDGEMENTS:

The authors wish to thank the faculty, residents, and physician assistants of the Department of Emergency Medicine of Emory University School of Medicine for volunteering their time and expertise for this course.
REFERENCES:


Table 1

<table>
<thead>
<tr>
<th>Question: I am comfortable with the following life-saving clinical skills</th>
<th>Pre</th>
<th>Post</th>
<th>Mean units of improvement</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of arrhythmias</td>
<td>2.34</td>
<td>3.75</td>
<td>1.41</td>
<td>(1.23,1.60)</td>
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<td>Treatment of arrhythmias</td>
<td>2.20</td>
<td>3.39</td>
<td>1.19</td>
<td>(1.00,1.38)</td>
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<tr>
<td>Performance of chest compressions</td>
<td>3.56</td>
<td>4.37</td>
<td>0.81</td>
<td>(0.64,0.98)</td>
</tr>
<tr>
<td>Opening and maintaining an airway</td>
<td>3.36</td>
<td>4.31</td>
<td>0.95</td>
<td>(0.76,1.15)</td>
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<tr>
<td>Use of airway adjuncts</td>
<td>2.36</td>
<td>4.14</td>
<td>1.79</td>
<td>(1.59,1.99)</td>
</tr>
<tr>
<td>Use of bag-valve-mask</td>
<td>2.71</td>
<td>4.29</td>
<td>1.58</td>
<td>(1.36,1.80)</td>
</tr>
<tr>
<td>Recognition of oxygen sources</td>
<td>2.28</td>
<td>3.40</td>
<td>1.13</td>
<td>(0.93,1.32)</td>
</tr>
<tr>
<td>Technique of endotracheal intubation</td>
<td>2.06</td>
<td>3.65</td>
<td>1.60</td>
<td>(1.38,1.81)</td>
</tr>
</tbody>
</table>

CI, confidence interval.
Clinical Skills

Table 2

<table>
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<tr>
<th>Question: I am comfortable with the following life-saving clinical skills</th>
<th>Pre</th>
<th>Followup</th>
<th>Mean units of improvement</th>
<th>95% CI</th>
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<td>0.559</td>
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<td>3.42</td>
<td>1.136</td>
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<td>2.67</td>
<td>0.602</td>
<td>(0.252,0.952)</td>
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</tbody>
</table>

CI, confidence interval.
Feasibility of a Life Saving Clinical Skills Curriculum and Competency Assessment
Douglas S. Ander, MD, Katherine L. Heilpern, MD, Fred Goertz, MD, and Sophia Khan, MD
Department of Emergency Medicine, Emory University School of Medicine

Background:
Several life saving clinical skills should be mastered by all students graduating medical school. These skills are particularly important as students enter the critical years of their training. Many organizations including the AAMC, LCME, ACGME, and SAEM highlight the importance of medical students mastering certain life saving clinical skills in. In addition the ACGME stresses competency assessment using a variety of evaluation tools, including checklists.

Previous work at our institution revealed that teaching life-saving clinical skills to medical students entering the clinical clerkships (N = 104) improved their perceived comfort with these skills.

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<td>1.60</td>
<td>(1.38,1.81)</td>
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Methods:
Prospective observational trial of 115 third year medical students. The students participated in a half day course during orientation to the third year of medical school. Students were randomly divided into two groups and further divided into small groups of 4-6 students for the skill stations.

We designed specific curricular goals for this course that included:
- Recognition and defibrillation of ventricular fibrillation/ unstable ventricular tachycardia
- Basic airway management skills (open airway, place nasal trumpet, apply a BVM (for respiration)
- Adult CPR
- Automatic external defibrillator (AED) use
- Management of the choking child

The course included a 30 minute overview lecture to all participants. This was a case based presentation that highlighted the key principals for life-saving clinical skills. This was followed by a small group rotation schedule to each of the (5) skill stations.

Results:
115 third year students participated in this training program. Data was available on 104 students. Initial demographics revealed that 96% of the students had previous experience with basic life support. A minority of students had previous training that included First Aid, Life Guard training, Advanced Cardiac Life Support, Emergency Medical Technician, Advanced Pediatric Life Support, Advanced Trauma Life Support, and other training. Experience with use of airway adjuncts, bag-valve-mask ventilation, defibrillation, and AED using mannequins was limited, 65%, 75%, 38%, and 55%, respectively.

The purpose of this study was to assess the feasibility of a brief course to teach and evaluate third year medical students’ competency with life-saving clinical skills.

Methods:
Each skill station was supervised by either an Emergency Medicine faculty member and/or a third-year Emergency Medicine resident. Critical resuscitation actions were reviewed and demonstrated by the instructor using case based scenarios and mannequins.

The skill station instructor then evaluated individual students performing the clinical skill using a standardized checklist. Each checklist specified the critical actions necessary to properly perform the procedure.

Outcome measures included: 1. procedural competency, defined as “pass” and 2. student comfort with each skill. Demographic information included students’ previous courses and experiences with mannequins and patients. Due to the educational nature of this project it was exempt from IRB consent.

Results:
Data was analyzed on 101 of 115 students (88%) who had completed checklists for procedural competency. The student pass rate was 100%, defined as “meets expectations” using a global assessment measure.

After the training sessions, students rated their overall comfort with the procedures the mean score was 4.52 ± 0.13 on a 1-5 Likert scale. (1 = not comfortable to 5 = very comfortable)

Discussion:
Medical students entering the clinical component of their medical school education have little experience with life-saving clinical skills. A short, ‘hands-on’ course can be an effective modality to teach and learn these skills. In this study, competency was assessed using a ‘critical actions’ checklist. The use of ‘critical actions’ has been demonstrated and validated during Oral Board examination performed by the American Board of Emergency Medicine. As certifying bodies seek to enhance competency assessment, the use of standardized checklists may become a standard for clinical teaching and evaluation.

Conclusion:
Procedural competency in basic life saving clinical skills can be achieved through an intensive hands-on small group training model. Students achieved perfect scores on the checklists. In addition this study adds to previous work suggesting that students developed a sense of comfort with these important skills. Longitudinal study will help determine if the students retain these skills during their third and fourth year of medical school and whether this translates into improved clinical care.
Objective: Assess the competency and comfort of third year medical students in life saving skills and to determine skill retention 18 months later. Methods: We conducted a prospective, before and after study. Each student participated in a course that consisted of a half-hour lecture on life saving skills followed by 5 small group skill sessions taught by an EM faculty or resident. First, critical resuscitation skills were demonstrated using case based scenarios and mannequins, then using a standardized checklist, the instructor evaluated each student. Each checklist specified the critical actions necessary to properly perform the procedure. Procedural competency was measured using a global assessment (pass/fail). Self efficacy was measured for each skill using a 1-5 Likert scale. The same skills were assessed approximately 18 months later using a random subset of the original group. Without notification or additional training students were assessed on the same skills using the identical scenarios and outcome measures. Results were analyzed using descriptive statistics. Results: 115 students participated in the initial training and complete data was available on 106 students. Competency in the initial group for each skill was 100% with a mean self efficacy of $4.43 \pm 0.42$. 34 students were assessed in the retention subset. Competency in the retention subset for CPR, AED, basic airway, recognition and defibrillation of ventricular fibrillation, and management of the choking child, were 100%, 91%, 88%, 47%, and 62%, respectively. Self efficacy declined to $3.90 \pm 0.56$. During the interval period students participated in a required ACLS course but received minimal interim clinical exposure to these skills. Conclusion: A short course in life saving clinical skills is an effective means to teach third year medical students. There will be a decline in competency over time particularly in several techniques not routinely seen on real patients.
HOW TO SAVE A LIFE

Date:
Place:
Students:
Total: 110 students
Students are divided into a morning (AM) and afternoon (PM) sessions and then divided further into two rotating groups (I and II). Each individual teaching group will be 4-6 students who rotate through the 5 stations as a team.

Stations:

<table>
<thead>
<tr>
<th>AM Rotation I &amp; II</th>
<th>Room</th>
<th>Faculty AM (I)</th>
<th>Room</th>
<th>Faculty AM (II)</th>
<th>Equipment</th>
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<tr>
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<td></td>
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<td>CPR</td>
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<td>2 CPR mannequins</td>
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<tr>
<td>Airway</td>
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<tr>
<td>Choking child</td>
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<td></td>
<td></td>
<td></td>
<td>2 child mannequins</td>
</tr>
<tr>
<td>AED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 AED trainers and mannequins</td>
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</table>

<table>
<thead>
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<th>PM Rotation I &amp; II</th>
<th>Room</th>
<th>Faculty PM (I)</th>
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<td>2 defibrillators, 2 Chris clean</td>
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Agenda:

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<tr>
<th>AM Times</th>
<th>Event</th>
<th>PM Times</th>
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<tr>
<td>8:30-8:50</td>
<td>Introduction to Life-Saving Skills</td>
<td>1:00-1:20</td>
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<tr>
<td>8:50-8:55</td>
<td>Disperse</td>
<td>1:20-1:25</td>
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<tr>
<td>9:00-9:30</td>
<td>Skill Station</td>
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<td>9:35-10:05</td>
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<tr>
<td>11:50-12:00</td>
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<td>4:20-4:30</td>
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Last printed 1/17/2007 4:25:00 PM
Objectives

✓ By the end of this course you will feel comfortable with the recognition and immediate resuscitation of several life-threatening conditions

✓ Cardiac arrest
✓ Respiratory arrest
✓ Choking child
✓ Recognition and treatment of ventricular fibrillation
✓ AED and Defibrillation
You have just returned from a trip. As you walk through the airway concourse you see a man collapse in front of you. What do you do?
Early CPR

For every minute of delay from collapse to CPR/defibrillation increase chance of death by 10% (Valenzuela 1997)

Delay of CPR for >10 min renders defibrillation ineffective (Valenzuela 1997)

Tripled chance of survival and halved the risk of brain death (Herlitz 1994)

Early vs. Late CPR (>4min) showed survival benefits in 16 of 17 studies (Odds ratio ranging from 1.9-11.5) (Cummins 1990)

Valenzuela TD et al. Circ 1997;96:3308-3313
Herlitz et al. Circ 1994;65:258-265
Cummins et al. American Heart Association 1990
Why is early defibrillation so important?

Most cases of out of hospital cardiac arrest are caused by VF/VT.

When CPR is started within 4 minutes and ACLS is started within 8 minutes, 43% of victims can survive.

Odds of success fall by 2-10% with each minute defibrillation is delayed.
Critical Early Minutes of SCD

Survival Rate (percent)

Time to Defibrillation (minutes)

Survival reduced by about 10% each minute defibrillation delayed

Hallstrom et al. NEJM 2004;351:637-646
Priming the Pump

Immediate Defibrillation vs. 3 Minutes of CPR

AED Key Points

- If it is available get it first
  - Exceptions: suspected hypoxic arrest or infants and children
- Two rescuers
  - One should get the AED/Help and the other should start CPR
- If unwitnessed arrest 5 cycles of CPR prior to shock
- Immediately after shock start compressions for 5 cycles then reassess rhythm
You are at Turner Stadium and a fan sitting next to you complains that he is feeling dizzy from the heat. Within seconds he slumps over in your lap. What do you do first?

a) Do the wave and let him fall to the floor
b) Act as if strangers normally fall into your lap
c) Wipe the drool of your legs
d) Call for help
SCREAM for HELP
CPR Key Points

- Head Tilt Chin Lift
- Assess for adequate breathing
- No breathing with pulse
  - 10-12 breaths per minute (1 breath every 5-6 seconds)
- No breathing and no pulse
  - Start compressions
  - 30:2 compression-to-ventilation ratio
  - PUSH HARD, PUSH FAST (100 per minute)
  - Minimize interruptions
  - Rotate compressors every 2 minutes
The crowd around you now knows you as the life saving medical student. Three innings later a mother of an infant rushes up to you with a limp child screaming that the child is choking on a peanut.

What do you do first?

a) Tell mom you just lost you scholarship and can’t help her
b) Ask to see their insurance information
c) Grab infant by its feet and shake
d) Call for help
SCREAM for HELP
Next help the infant

- Assess responsiveness
- Open airway
- Perform rescue breathing
- Reposition infant and reattempt breathing
- Back blows (4)
- Chest thrusts (4)
- Removal of foreign body
- Attempt rescue breathing
Key Points

- Infants and children typically have respiratory arrest
- 12-20 breaths per minute (1 breath every 3 to 5 seconds)
- Start chest compressions if <60 bpm
- Use heel of 1-2 hands, lower half sternum
- Infant 2 thumb-encircling hands technique
- 30:2 ratio
  - 15:2 for 2-rescuer
You are in the hospital doing your first real history and the your patient Mr. Harvey gets pale, diaphoretic, and then he suddenly stops breathing, collapses in bed and turns blue.

What do you do now?

a) Pray
b) Look up diaphoretic in the dictionary
c) Cry
d) Acupuncture
e) Scream for help (call a code)
SCREAM for HELP
Bag-Valve-Mask
Defibrillation Key Points

- Witnessed or <4-5 minutes immediate defibrillation
- Two rescuers no pauses for ventilation (rate 8-10 per minute)
- One shock followed by 2 minutes of CPR prior to reassessing rhythm
QUESTIONS?
Appendix F
INSTRUCTIONS TO FACULTY AND RESIDENTS

Topic: How to Save a Life

Date: Wednesday, July 26, 2006

Time: See attached schedule

Place: WHSCAB building (See attached for specific room assignments)

General Instructions:

“How to Save a Life” is a course that our department provides for the incoming third year medical students. With the exception of a one year hiatus we have sponsored this course for the past 8 years. This course is part of a third year orientation.

Because these are third year students who have limited clinical experience and are about to be placed in the clinical arena the objective of the course is simple: SAVE A LIFE. We are going to provide the students with basic skills to save a life in the hospital or public setting. These basic skills include how to open an airway, use airway adjuncts, ventilate with a bag-valve-mask, recognize ventricular fibrillation and defibrillate, perform adult CPR, manage a choking infant, and correctly use an AED.

I have integrated many of the revisions to both BLS and ACLS that were published in 2005. If you are unfamiliar with these new guidelines please see the attached document from the American Heart Association.

Lunch will be provided for all faculty, residents, and mid-level providers who participate in the course.

Specific Stations:

Students will arrive to each station according to the attached schedule in groups of 4-6. Most stations will have between 1-2 faculty and/or residents/mid-levels to assist in the teaching and assessment. Thirty minutes have been allocated to each station. Assistants will be making announcements when 5-minutes are remaining. Please try to remain on schedule.

When students arrive at your station the first task is to demonstrate the proper technique. For each station you will be provided with a clinical scenario. Each student will then be required to demonstrate competency in the technique. A checklist has been developed for each technique. The student will provide you with the checklist which must be completed.

AED:

Scenario: Witnessed sudden cardiac death at Hartsfield International Airport. The student who is alone must assess for responsiveness, call for help and immediately get an AED. The student must successfully place the AED and defibrillate the patient.

If you want to adapt this case you can have two students present. One should initiate CPR while the other calls for help, gets the AED, and applies the AED to the patient.
**Choking Child:**
Scenario: The student is at Turner Stadium. A mother runs up to them with an unresponsive 18 month old child. The student must assess for responsiveness, call for help, and begin BLS. They should be told that the rescue breaths meet resistance. They should then reposition the head and reattempt the rescue breaths, still meeting resistance. Next steps should include back blows, chest thrusts, look in the mouth, and reattempt at rescue breaths.

**CPR:**
Scenario: While walking in downtown Atlanta they note a big crowd of people around a person laying supine on the street. The student must assess for responsiveness, call for help, and institute BLS. When they check for pulses and breathing after the two rescue breaths they will be informed that there is no pulse and no spontaneous respirations. They should then institute CPR.

The new guidelines for CPR are: a 30:2 compression-to-ventilation ratio, rate of 100 per minute, “push hard, push fast, and allow the chest to recoil after each compression” for about 5 cycles or 2 minutes then reassess. They stress the importance of limited interruptions (< 10 seconds) and rotating compressor role every 2 minutes.

**Airway:**
Scenario: They are in the hospital late at night doing rounds on their patient, when a nurse grabs them by the short white coat and pulls them into a patient room. They see a patient laying in bed cyanotic in respiratory distress. The conscientious nurse has brought airway supplies to the bedside. The student should call for help. The student should place the patient on oxygen. Whether done appropriately or not, tell them the patient is not breathing. The student should open the airway and attempt to use the BVM. They should be told that they are unable to ventilate well. They should use an oral or nasal airway to establish a better airway. If they are struggling, you can hand them an oral airway. When placed correctly they should be able to successful ventilate the patient with a BVM.

**Vfib/Defib:**
Scenario: It is your first month on the medicine service and you are in the blue zone admitting a patient. You are in one of the critical care rooms talking to your patient when he slumps over and becomes unresponsive. The patient is now blue and not breathing. The crash cart is right behind you. The student should call for help but no one responds (everyone is in the break room eating). The student should assess responsiveness, check for breathing and pulse, place the patient on the monitor, recognize ventricular fibrillation, and successful defibrillate (360 joules) the patient. With the new guidelines they should follow defibrillation with 2 minutes of CPR prior to reassessing the rhythm.
## AED CHECK LIST

### ASSESS PATIENT RESPONSIVENESS

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**CALLS FOR HELP and GET AN AED IMMEDIATELY IF AVAILABLE**  
(Hypoxic arrest or unwitnessed infant and children “CPR first”)

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### ABC SURVEY  
(Head Tilt Chin Lift and check for adequate breathing)

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### DELIVERS SHOCK  
(If unwitnessed arrest or >4-5 minutes until delivery of shock perform CPR for 5 cycles prior to delivering shock)

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### INITIATES CPR  
(30:2 compression-to-ventilation ratio, rate of 100 per minute, “push hard, push fast, and allow the chest to recoil after each compression”)

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### DEFIBRILLATION SAFETY

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### OVERALL ASSESSMENT

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* Comments:
## BASIC AIRWAY MANAGEMENT CHECK LIST

### CALLS FOR HELP

- NOT PERFORMED
- INCORRECTLY PERFORMED
- CORRECTLY PERFORMED

### PLACES PATIENT ON OXYGEN

- NOT PERFORMED
- INCORRECTLY PERFORMED
- CORRECTLY PERFORMED

### OPEN AIRWAY (Tell them that the patient becomes apnic)

- NOT PERFORMED
- INCORRECTLY PERFORMED
- CORRECTLY PERFORMED

### BAG-VALVE-MASK VENTILATION

- HAND PLACEMENT
- INCORRECTLY PERFORMED
- CORRECTLY PERFORMED

#### PROPER VENTILATION OF PATIENT

- **ONE PERSON:**
  - INCORRECTLY PERFORMED
  - CORRECTLY PERFORMED

- **TWO PERSON:**
  - INCORRECTLY PERFORMED
  - CORRECTLY PERFORMED

### ORAL and NASAL AIRWAY

- MEASUREMENT
- CORRECT
- INCORRECT

- PLACEMENT
- CORRECT
- INCORRECT

### OVERALL ASSESSMENT

- PASSED
- FAILED*

- INSTRUCTOR NAME:

- INSTRUCTOR SIGNATURE:

* Comments:
CPR CHECK LIST

ABC’s

ASSESSED RESPONSIVENESS

NOT PERFORMED  INCORRECTLY PERFORMED  CORRECTLY PERFORMED

CALLS FOR HELP
(No AED available for this case, start CPR)

NOT PERFORMED  INCORRECTLY PERFORMED  CORRECTLY PERFORMED

OPENS AIRWAY (no breathing)
(Head Tilt Chin Lift and check for adequate breathing)

NOT PERFORMED  INCORRECTLY PERFORMED  CORRECTLY PERFORMED

PERFORMS RESCUE BREATHING
(2 Rescue Breaths)

NOT PERFORMED  INCORRECTLY PERFORMED  CORRECTLY PERFORMED

DETERMINES PULSELESSNESS (no pulse)

NOT PERFORMED  INCORRECTLY PERFORMED  CORRECTLY PERFORMED

PERFORMS EXTERNAL COMPRESSIONS
(30:2 compression-to-ventilation ratio, rate of 100 per minute, “push hard, push fast, and allow the chest to recoil after each compression” for about 5 cycles or 2 minutes then reassess)

NOT PERFORMED  INCORRECTLY PERFORMED  CORRECTLY PERFORMED

OVERALL ASSESSMENT

PASSED _____ FAILED* _____  INSTRUCTOR NAME: ____________________

INSTRUCTOR SIGNATURE: ____________________

* Comments:
# PEDIATRIC CHECK LIST

## ABC’s

### ASSESSED RESPONSIVENESS

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### CALLS FOR HELP

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### OPENS AIRWAY

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### PERFORMS RESCUE BREATHING

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### REPOSITION AND ATTEMPT RESCUE BREATHING

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### PERFORMS BACKBLOWS (4)

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### PERFORMS CHEST THRUSTS (4)

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### MANUAL REMOVAL OF FOREIGN BODIES

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

### PERFORMS RESCUE BREATHING

- **NOT PERFORMED**
- **INCORRECTLY PERFORMED**
- **CORRECTLY PERFORMED**

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### OVERALL ASSESSMENT

- **PASSED_____**
- **FAILED* _____**

**INSTRUCTOR NAME:**

**INSTRUCTOR SIGNATURE:**

*Comments*
**VENTRICULAR FIBRILLATION CHECK LIST**

**ASSESS PATIENT RESPONSIVENESS**

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**CALLS FOR HELP**

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**ABC SURVEY**

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**PLACES PATIENT ON MONITOR**

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**RECOGNIZE VENTRICULAR FIBRILLATION**

YES  NO

**DELIVERS SHOCK (360 joules)**

(If unwitnessed or >4-5 minutes perform 5 cycles CPR before defibrillation)

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**DEFIBRILLATION SAFETY**

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**PERFORMS EXTERNAL COMPRESSIONS**

(30:2 compression-to-ventilation ratio, rate of 100 per minute, “push hard, push fast, and allow the chest to recoil after each compression” for about 5 cycles or 2 minutes then reassess)

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**REASSESSES RHYTHM**

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**OVERALL ASSESSMENT**

PASSED_______ FAILED* ______  INSTRUCTOR NAME:  ____________________

INSTRUCTOR SIGNATURE:  ____________________

**Comments:**
**“HOW TO SAVE A LIFE”**

**EVALUATION FORM**

Overall value of this session?

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Value of case based learning during skill lab stations?

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Value of hands on training?

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Value of competency checklists?

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Value of faculty teaching at the airway skill stations?

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**Individual faculty? (Rate 1 worst to 5 Best)**

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**Overall comments on airway skills lab or faculty?**