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Rescuer Round Up

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One of the primary goals of clinical education is to prepare students to make good clinical decisions. Ideally, students are allowed the opportunity to improve their decision-making skills through authentic patient encounters. Working with patients in a clinical setting not only affords students the chance to practice clinical skills learned in the classroom, but also teaches them how to properly interact and care for patients; however, current research indicates that scenarios or simulations comprise a large part of the athletic training students’ clinical education.1,2 The use of scenarios in athletic training education provides students with valuable opportunities to develop clinical skills and can be an effective teaching tool for an instructor.3 Athletic training (AT) students are not always presented with the chance to practice clinical skills and decision-making skills on patients who have sustained a real injury. Of particular concern are the limited opportunities for AT students to perform these tasks in an emergency situation in the clinical setting.4 AT students need to be prepared to handle emergency situations. The need to respond quickly, think on their feet, rapidly make decisions, and provide proper care are essential skills of athletic trainers. Providing students with educational opportunities that are realistic and encompass skill practice and decision making in emergency situations are necessary in the overall development of AT students. Affording students these supervised experiences, whether authentic or contrived, allows them to learn from their mistakes without adversely affecting patient safety or patient outcomes.5 Therefore, the purpose of this report is to present a teaching technique that not only encourages students making clinical decisions under pressure and enhancing emergency care skills, but also reflects on their performance and the performance of their peers.

**Rescuer Round Up Overview**

“Rescuer Round Up” is a teaching technique ideally utilized in clinical practicum or clinical instruction courses within the athletic training education program. This technique may be used weekly or monthly throughout the semester and involves the use of scenarios to allow students opportunities to practice handling emergency situations. For the purposes of this paper, a scenario or simulation is defined as a clinical experience where an athletic training student performs an evaluation on a mock patient who is acting out a particular injury or condition.2 The “rescuers” are the AT students participating in the clinical courses.

As the rescuers arrive to class, they are “rounded up” outside the classroom door. The AT students do not know ahead of time that they will encounter a scenario for class,
which adds an element of surprise and an emphasis on coming to class prepared. When all AT students arrive, the instructor verbally describes a scenario to the students in which they must respond to immediately (Table 1 provides examples of opening scenarios). Inside the classroom, a standardized patient has been prepped. The instructor designates one student to take the lead role in providing care to his/her standardized patient and the other students in the class/group must observe the care administered. After 2-3 minutes, the instructor calls on a different AT student to assume patient care where the initial AT student left off. The AT students do not know who the instructor may call on to assume patient care, therefore requiring all students to be attentive and actively engaged in the scenario. This sequence is repeated 2-3 more times until either appropriate care of the patient has been provided or the instructor feels like the scenario needs to be stopped.

Debriefing occurs immediately afterwards, allowing the AT students to identify what actions/decisions worked well and what did not work well.

**Activity Preparation**

**Designing Scenarios**

Several factors should be considered when designing scenarios, including experience and knowledge of the student, educational needs of the student, and resources needed to carry out the scenario.\(^5\)\(^6\) When creating scenarios for students, emphasis should be placed on what skills or knowledge the students possess at that point in the athletic training curriculum. (Table 1 and Table 2 provide examples of scenarios for AT students with different levels of experience.) Novice AT students develop expertise by learning and

### Table 1. Examples of Scenarios Designed for AT students

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Designed for a First Year AT Student</th>
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<tbody>
<tr>
<td>What is read to the student</td>
<td>A snowboarder missed a landing while performing a McTwist and fell in the half pipe at the X-games event you are covering. She appears to be in a lot of pain.</td>
</tr>
<tr>
<td>Clinical findings on exam</td>
<td>The standardized patient is fully dressed in snowboarding attire with legs locked into bindings on a snowboard. The patient presents with right forearm pain and left lower leg pain. Upon examination, there is an open both bone forearm fracture with numbness on the dorsal aspect of the thumb. The patient also presents with a distracting injury, which is a lower leg contusion. The patient really focuses on the leg pain in an attempt to pull the AT students into concentrating on that injury. Significant bruising of the lower leg is present on exam along with decreased range of motion and strength.</td>
</tr>
<tr>
<td>Moulage needed</td>
<td>To create bruising on the lower leg, use brown and blue makeup. First apply brown makeup to the injured area, followed by blending in a hint of blue makeup (Figure 1). Halloween is a great time to purchase the makeup. To create the open both bone forearm fracture, a fake wound is needed. This can also be purchased around Halloween or at a costume shop. Use an adhesive to hold the wound in place. Tape adhesive, mastisol, or even Tegaderm works well. Once the wound is secured in place, fake blood may be spread in and around the wound to create bleeding (Figure 2).</td>
</tr>
<tr>
<td>Critical steps the AT students should perform</td>
<td>The AT student should do a quick primary assessment to determine if there are any life-threatening injuries present. A thorough secondary assessment should be completed to reveal the forearm fracture and the leg contusion. This requires the students to expose injured areas, and clothing removal or cutting should be discussed. The forearm fracture should be dressed and splinted appropriately, ensuring that circulation, sensation, and movement are assessed prior to and post splint application. The leg contusion should be assessed and the student may consider splinting until a fracture is ruled out. The students should also determine how this snowboarder is going to be transported from the half-pipe for further evaluation and treatment.</td>
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(continued)
Scenario 2: Designed for a Second Year AT Student

What is read to the student
A football player was caught between two opponents in a collision on kickoff return during practice. He is found supine on the field.

Clinical findings on exam
The standardized patient presents with difficulty breathing and confusion. There is bruising on the chest wall, indicating possible rib fractures. He demonstrates inadequate breathing that is shallow and rapid. He is also presenting with signs and symptoms of a head injury (headache, dizziness, nausea, and tinnitus). The patient is relatively coherent early in the examination, but his condition deteriorates as questioning persists. Battle’s sign is noted on exam. About three or four minutes into the examination, the patient begins to seize and vomit.

Moulage needed
To create bruising on the chest wall and Battle’s sign, use brown and blue makeup. First apply brown makeup to the injured area, followed by blending in a hint of blue makeup. The patient should have a small amount of food in the mouth to create “vomit” a few minutes into the scenario. Rice crispy treats or a small piece of candy works well for this.

Critical steps the AT students should perform
The AT students should recognize that this patient is presenting with a “B” problem and EMS should be activated immediately. This should be established by taking a respiratory rate and a thorough examination of the chest wall to discover the bruising. With the possibility of rib fractures, the chest wall should be stabilized or the student can consider a side-lying position with the affected side down. Facemask removal and oxygen administration should be considered. The AT students should also recognize the high probability of a significant head injury with the presence of Battle’s sign, seizures, and vomiting. The students should be sure to perform a controlled roll of the patient when vomiting and should gutter the mouth to clear the airway.

Educational needs of the student should also be addressed when designing scenarios for this teaching technique. Clinical courses are often used as time to practice or review athletic training skills. By observing the AT students’ practice skills in the classroom, the instructor may identify specific weaknesses of the students, and incorporating these skills into the scenarios allows for additional practice. Additionally, the AT students may express to the instructor that they do not feel competent in a particular skill (i.e., spine boarding a prone patient), and the instructor can integrate that skill into a scenario.

Lastly, when designing a scenario, resources needed to carry out the scenario must be considered. To create a realistic scenario, the use of moulage (artificial injuries created with makeup) and standardized patients are often beneficial. Using moulage creates a believable scenario as well as provides visual feedback for the athletic training student when caring for patients. For example, if the student is caring for a patient with a potential head injury and bruising is found behind the ears, this can provide students with critical feedback on the scenario to make appropriate care decisions (Table 1 provides examples of the use of moulage for specific scenarios). Another point to emphasize in the design of scenarios is the selection and preparation of the individuals who will serve as mock patients. Standardized patients are widely used in the education of health care professionals; students who encounter standardized patients show evidence of providing better care. The instructor should meet
Table 2. More Examples of Opening Scenarios Used

<table>
<thead>
<tr>
<th>AT Student Level</th>
<th>Coursework Completed</th>
<th>Opening Scenario Provided</th>
<th>Clinical Findings/Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year AT</td>
<td>First aid and CPR; prevention and care of athletic injuries</td>
<td>A gymnast fell from the balance beam on an outstretched arm. She is found on the mat screaming hysterically.</td>
<td>Inferiorly dislocated shoulder that presents with the right arm stuck in shoulder flexion and unable to move; decreased capillary refill time and diminished pulse.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Three cheerleaders are practicing stunts before class to get ready for the state competition. One of the cheerleaders fell during a stunt because her partner was light-headed and dropped her.</td>
<td>Cheerleader 1 (who fell) presents with significant lateral ankle pain with apparent bruising over the distal fibula and decreased range of motion indicating a possible distal fibula fracture. Cheerleader 2 (light-headed) is a Type 1 diabetic who did not take her insulin that morning because she was running late. She is extremely irritable and a little disoriented.</td>
</tr>
<tr>
<td>Second year</td>
<td>Upper and lower extremity evaluation, general medical conditions</td>
<td>A trail runner stumbled off the trail after her dog kicked over a bees nest on the trail.</td>
<td>Runner presents with medial sided knee pain, walks with an antalgic gait, has full range of motion and no swelling, indicating a Grade I MCL sprain. During the knee evaluation, she will begin to itch and scratch at her chest and breathing becomes labored. When the chest is exposed, hives are present. Further questioning reveals an allergy to bees (she was stung on the trail).</td>
</tr>
<tr>
<td>AT student</td>
<td></td>
<td>A student was slack lining in front of the education building and fell approximately 10 feet and hit a sharp edge of a nearby rock.</td>
<td>Student is standing by the tree holding his neck and complaining of neck pain and radiating pain down both arms indicating a possible neck injury (students must determine how to spine board from a standing position). In addition the student is having difficulty breathing; a thorough “B” check reveals a small puncture wound to the chest wall indicating a potential punctured lung.</td>
</tr>
</tbody>
</table>

with standardized patients ahead of time to adequately prepare them for the scenarios. In this meeting, the standardized patient receives a handout containing the scenario that will be read to the AT students, clinical findings, and instructions on how to respond based on the care they receive (i.e., if the care provided is not deemed appropriate, the patient’s condition worsens). Walker and Weidner recently published a template designed specifically to train standardized patients and is a useful tool for the instructor when designing scenarios. The standardized patient is instructed to arrive to class approximately 10-15 minutes ahead of the scheduled class time to allow for final preparations and moulage application if needed.

Class Day

Students arrive to class and are not allowed in the classroom until further instruction is received. Once all AT students have arrived for class, the instructor meets them outside the classroom and randomly selects a student to take the lead first on the scenario that day. The instructor verbally provides the AT students with background information on the scenario. Students are instructed to treat this as a real situation, and students
are advised that all clinical findings and actions taken should be verbalized out loud. This provides the instructor with insight on the decision-making skills of the AT student as well as the student’s ability to recognize significant clinical findings (this is especially helpful if moulage is present to ensure that the student is actually discovering critical information pertinent to the scenario). The AT students are provided with a pre-packed first aid kit and sent “on scene” (in the classroom) to begin the scenario.

Once the assigned lead student initiates contact with the standardized patient, the instructor uses a stopwatch to begin timing the scenario. Other students in the class watch the lead student conduct his/her evaluation and are strictly instructed to remain quiet during the scenario. After 2-3 minutes of the lead student on scene, the instructor randomly selects a student from the class to jump in and resume patient care where the first student left off. The second student continues care from that point for the next 2-3 minutes. After the second student provides patient care for a couple minutes, a third student is selected at random from the class to continue care for the standardized patient. At this point, depending how the scenario is progressing, it is up to the instructor to determine if it is appropriate to stop the scenario at this point or to select another student to continue care. For example, if a standardized patient has received proper care and all injuries have been assessed and treated, then the scenario should be stopped. Conversely, if the standardized patient has received inappropriate care or the scenario is just not progressing due to misdiagnosis or poor clinical decision making, the scenario should be stopped. Throughout the scenario, the instructor may provide additional information that the standardized patient cannot simulate or information not directly related to clinical findings. For example, if the student says, “I am going to wait for the ambulance” and they are not providing care to the patient, the instructor may respond, “the ambulance is at least 30 minutes out.” This encourages the student to take action and make a decision on the appropriate care for the patient. Another example might be if the student says, “Pulse rate is 50 beats per minute” and the scenario is designed so that the standardized patient is supposed to be in shock; since the standardized patient is unable to alter his/her vital signs, the instructor may prompt the student with “pulse rate is 120, weak, and thready.”

**Debriefing**

Once the scenario is stopped by the instructor, debriefing of the scenario takes place. Debriefing is a critical step that should not be overlooked with this teaching.
Technique. It encourages reinforcement of the positive aspects of the patient care administered and allows for reflective learning. Prior to using Rescuer Round Up in the classroom, the instructor should discuss the concept of debriefing with AT students. The instructor needs to outline the “rules” of participation and what is expected of the students. In addition, a safe, positive learning environment should be emphasized, allowing students to openly reflect and critically analyze their thoughts and actions. Debriefing consists of three phases: a reactive phase, analysis phase, and summary phase. The reactive phase allows the students directly involved in patient care to express their emotional reactions to the scenario they encountered. The analysis phase focuses on the actions completed and decisions made throughout the scenario to determine if there were any gaps in performance. Lastly, the summary phase highlights lessons learned from the scenario that will improve the students’ clinical practice.

Using this debriefing model, steps are outlined below to guide the discussion immediately following the scenario. The students who provided care throughout the scenario are instructed to critique their own performance in handling the scenario, which is accomplished through open discussion (reactive phase). The first student on scene describes his or her patient encounter and the decision-making process for the actions taken. The student is instructed to identify actions that were performed correctly and to reflect on what he or she would do differently. The second student follows with a critique of his or her own performance and so on until all students involved provide their self-critique.

After the students are allowed the opportunity to voice their critique on their performance, the standardized patient and remaining students not directly involved in the scenario provide feedback as to what went well in the scenario and what did not go well (analysis phase). Specific questions may include, “What went well?” “What actions/decisions would you repeat in the future?” “What would you do differently if presented with a similar scenario in the future?” Subsequently, the floor is open for the students to discuss how the situation was handled and what lessons they have learned from the experience (summary phase). Using this debriefing technique is a form of peer-assisted learning, which has been shown to improve communication skills as well as clinical reasoning skills. The instructor may also provide feedback but should try to merely facilitate the conversation rather than drive the discussion.

Feedback On Rescuer Round Up Technique

After using Rescuer Round Up for several years now, the author has received constructive feedback from the AT students about this teaching technique. Students felt that running these scenarios and creating situations for students to react under pressure forced them to continually think about how they would handle different situations. Oftentimes, students said that they never knew what to expect for a scenario because each day was so different, and they would spend a great deal of time prior to class reviewing their emergency care skills. They found that the skills stretched their thinking, because more often than not, the focus was not always on the traditional sports setting such as football, basketball, etc. The AT students felt that another benefit to using this activity was that it forced them to pay attention to each other’s actions and to learn from each other’s mistakes. In addition, it allowed the students to learn new ways of handling situations. Lastly, the debriefing portion of the activity allowed students to critically reflect on their own actions and provide constructive feedback to one another.

Challenges

A few challenges arose after using this teaching technique over the years. First, this activity tends to work well for smaller class sizes or groups of students (less than 10 students). For larger classes, the instructor may try using multiple groups of students to run the same scenario (groups of four to five students per patient). Second, instructors should consider selecting standardized patients with whom the AT students are not familiar. Initially when using this technique, patients were recruited from the same department or athletic training education program. Since the students were familiar with one another, some students did not take the scenario seriously, thus decreasing the effectiveness and quality of care for the patient.

Summary

Rescuer Round Up is an effective teaching tool that enhances the students’ preparedness for handling emergency care scenarios. Several ingredients are essential to maximizing the effectiveness of this
technique. These include designing scenarios that are appropriate to the level of the student, properly preparing standardized patients, and integrating moulage to provide visual cues. Last but not least, the most important ingredient of this technique is creativity to design fun, challenging scenarios for the students.

References


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First-ever functional testing compilation for sport, fitness, and occupational settings

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