RECRUIT SUSTAINMENT PROGRAM
SOLDIER TRAINING READINESS MODULES
First Aid (Perform First Aid for Bleeding Extremity & Splinting a Fracture)
1 September 2012

SECTION I. ADMINISTRATIVE DATA

Lesson Plan Series

Task(s) Taught

Academic Hours

The academic hours required to teach this lesson are as follows:

Resident Hours/Methods

0 hrs 50 mins / Conference / Discussion

0 hrs 00 mins / Practical Exercise (Performance)

Test 0 hrs 00 mins

Test Review 0 hrs 00 mins

Total Hours: 0 hrs 50 mins

References

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<th>Number</th>
<th>Title</th>
<th>Date</th>
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<tr>
<td>FM 5-19</td>
<td>Composite Risk Management</td>
<td>21 Aug 2006</td>
<td></td>
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<tr>
<td>STP 21-1-SMCT</td>
<td>Soldier's Manual of Common Tasks, Warrior Skills, Level 1</td>
<td>02 May 2011</td>
<td>pp. 3-56 thru 3-74</td>
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Student Study Assignments

None

Instructor Requirements

a. 1 Instructor per 35 Soldiers

b. Be familiar with this Training Support Package (TSP)

Equipment Required

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Materials Required

Instructor Materials:

a. This Training Support Package (TSP)

Student Materials:

a. Other materials as directed by RSP Unit SOP
NOTE: Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and the identified reference material.

Even though this class is heavy in instructional guidance, it will not be as effective unless the students immerse themselves into the lesson by demonstration and follow-up. You must be prepared to demonstrate each technique and observe the students doing the same. It is time intensive therefore you will need to be alert as to the amount of time spent on each learning activity.

NOTE: Procure training aids such as a field dressing, an emergency trauma dressing, splints and cravats, and a “SAM” (splint, aluminum, malleable) from medical personnel. Use these training aids to demonstrate techniques as you describe them in the lesson plan.

If enough training aids are available observe each student as apply the procedural steps taught. You may have to divide the class into groups to complete this lesson in a timely manner.

The talking points in the this lesson plan are written as a reminder of the steps to follow and techniques to apply, however this lesson plan comes to life when personal stories or experiences are introduced during the presentation.
SECTION II. INTRODUCTION

NOTE: SHOW Slide 1 (STRM)

Method of Instruction: Conference / Discussion
Instructor to Student Ratio is: 1:35
Time of Instruction: 5 mins
Media: Slide Presentation

Motivator

We have learned that performing lifesaving measures on a fellow human being is one of the best examples of the Army Values. We know that it is our Duty to learn lifesaving measures, and our duty to provide lifesaving measures to others. We know that whenever we provide lifesaving measures to any other person, we are living up to the Army Value of Honor. To stop a victim from bleeding requires us to put our hands in contact with another person and, if needed, with another person's blood. To treat a victim of an arm or leg fracture requires us to put our hands in contact with another person's injured body. This requires Selfless Service for us to put the needs of others before our own.

Terminal Learning Objective

NOTE: SHOW Slide 2 (Terminal Learning Objective)

NOTE: Inform the students of the following Terminal Learning Objective requirements.

At the completion of this lesson, you [the student] will:

| Action | Control Bleeding of an Extremity & Splint a Suspected Fracture |
| Conditions | Given a casualty who has a bleeding wound of the arm or leg or has an arm or leg that you think is broken. The casualty is breathing. A first aid packet, emergency trauma dressing, and wadding material are available |
| Standards | Describe how to properly control the bleeding of an extremity and splint a suspected fracture |

Safety Requirements

Conduct a safety brief prior to training as needed and IAW unit and installation policies.

Risk Assessment Level

Low - Risk Assessment to be produced locally IAW FM 5-19, August 2006.

Evaluation

None

Instructional Lead-In

If we were to ask a group of senior NCOs if they had ever used any of the techniques we are about to cover to assist someone in a medical emergency, you might be surprised to find a large number had followed these medical procedures in both their civilian and military life.
SECTION III. PRESENTATION

1. Learning Step / Activity 1. Control Bleeding of Extremities
   Method of Instruction: Conference / Discussion
   Instructor to Student Ratio: 1:35
   Time of Instruction: 20 mins
   Media: Slide Presentation

NOTE: Show Slide 3 (Apply a Field Dressing)

a. Apply a Field Dressing.
   (1) If at all possible, expose the wound first by pushing or cutting away loose clothing. This will enable you to view the extent of the injury.

NOTE: Clothing or anything else stuck to the wound should be left alone to avoid injury. DO NOT attempt to clean the wound. If there is an object extending from the wound (impaled injury), do not remove the object. Apply a dressing around the object and use additional improvised bulky dressings made from the cleanest material available to build up the area around the object. This will stabilize the object and help to prevent further injury. Apply a supporting bandage over the bulky materials to hold them in place.

NOTE: DO NOT remove protective clothing in a chemical environment. Apply dressings over the protective clothing.
   (2) Remove the first aid dressing from its wrapper.
   (3) Grasp olive drab tails of the dressing with two hands.
   (4) Hold the dressing directly over the wound with the white side down.
   (5) Pull the dressing open and place directly over the wound.

NOTE: Hold the dressing directly over the wound with the white side down. DO NOT touch the white (sterile) side of the dressing. DO NOT allow it to come into contact with any surface other than the wound.
   (6) With one hand, hold the dressing in place; use the other hand to wrap one of the tails around the injury.

NOTE: If the casualty is able, ask him/her to hold the dressing in place while you wrap the tails.
   (7) Wrap the other tail in the opposite direction until remainder of dressing is covered and secured to the body.

NOTE: Tie the tails into a non-slip knot over the outer edge of the dressing. DO NOT tie the knot over the wound. Dressing should be tied firmly enough to secure the dressing, but without stopping the normal circulation to the hand or foot (acting as a tourniquet).
   (8) Check to see if you can detect a pulse below the bandage.
   (9) If blood circulation is impaired, loosen and retie the tails; then check the circulation again. If circulation is not restored, evacuate the casualty as soon as possible. Medical treatment may be needed to save the limb.
NOTE: When practical, apply direct manual pressure over the dressing for 5-10 minutes to help control the bleeding. The casualty can be asked to do this if he or she is conscious and can follow instructions.

(10) After you have applied the field dressing to the injury, elevate the injured extremity above the level of the heart to lessen the bleeding. A blanket, shelter half, poncho, log, or any other available material can be used to elevate the injury. Keep injured extremity elevated.

NOTE: If the bleeding continues, put on a pressure dressing.

NOTE: While it is fresh on their minds, have the students follow the procedures as you talk them through it. If necessary write the steps on a whiteboard or flip chart.

NOTE: Show Slide 4 (Apply a Pressure Dressing)

b. Apply a pressure dressing.

(1) Place a wad of padding directly over the wound and on top of the original dressing.

(2) Place an improvised dressing over the wad of padding and wrap it tightly around the limb.

(3) Tie the ends in a nonslip knot directly over the wound to secure the extra padding.

(4) Check to make sure that the dressing is tight, but not tight enough to act as a tourniquet. It must be loosened if the skin beyond the injury becomes cool, blue, or numb.

(5) If the bleeding stops, watch the casualty closely for life-threatening conditions and check other injuries, if necessary. If the bleeding continues, you might have to apply a tourniquet.

NOTE: The emergency trauma dressing is a new item that can be used on any bleeding wound. It can be used both as a field dressing and as a pressure dressing.

NOTE: Show Slide 5 (Apply an Emergency Trauma Dressing)

c. Apply an emergency trauma dressing.

(1) Remove emergency bandage from pouch.

(2) Place pad on wound white side down and wrap the elastic bandage around limb or body part.

(3) Insert elastic bandage into pressure bar.

(4) Tighten elastic bandage.

(5) Pull back forcing pressure bar down onto the pad.

(6) Wrap elastic bandage tightly over pressure bar and wrap over all edges of the pad.
(7) Secure hooking ends of closure bar into elastic bandage. DO NOT create a
tourniquet-like effect.

NOTE:  Chitosan (ki’ to san) is a naturally occurring substance found in shrimp shells. It has
been incorporated into a dressing that will effectively stop arterial bleeding. When
chitosan comes in contact with blood or other body fluids, it becomes extremely
adhesive and works like super-glue to plug the holes in the injured blood vessels. It
does not cause the blood to clot. Apply the chitosan dressing using the following
steps.

NOTE:  Show Slide 6 (The Chitosan Dressing)

   d. Apply a chitosan dressing.

NOTE:  The chitosan dressing is used to control serious arterial bleeding. The chitosan
dressing is not used for wounds with minimal to moderate bleeding. The chitosan
dressing can be used in conjunction with a tourniquet to control severe arterial
bleeding.

   (1) Hold the foil over-pouch so that the instructions can be read and the unsealed
edges are at the top.

   (2) Grasp the unsealed edges.

   (3) Peel open the over-pouch by pulling the unsealed edges apart.

   (4) Use your hand and thumb to trap the dressing between the bottom foil and the
green/black polyester backing.

   (5) Hold the dressing by the nonabsorbent green/black backing and discard the
foil over-pouch.

NOTE:  DO NOT let moisture from your hand come into contact with the dressing before you
apply the bandage. The moisture could cause the sponge to become sticky.

   (6) Apply the light-colored sponge portion directly over the wound and apply
pressure to the green/black backing with your fingers.

NOTE:  DO NOT let the bandage come into contact with the casualty’s eyes.

   (7) Apply manual pressure and maintain the pressure until the dressing adheres
and the bleeding stops (usually 2 to 4 minutes). DO NOT try to reposition the
bandage once it is applied.

NOTE:  If the bleeding does not stop within 4 minutes, remove the chitosan dressing, apply
another chitosan dressing, and apply manual pressure again. DO NOT apply a new
chitosan dressing over an old one. The old chitosan dressing must be removed so
that the sponge portion of the new chitosan dressing can come into contact with the
blood and fluids from the wound.

   (8) Apply a field dressing or a cravat to secure the chitosan dressing and to
prevent contamination.

NOTE:  For smaller wounds, you may want to cut the chitosan dressing before applying it to
the wound. In this way, you will have a second dressing to apply if the first dressing
is not sufficient to stop the bleeding or to use on another wound (entrance and exit wound, for example)

NOTE:  Check on Learning.

QUESTION:  What is the leading preventable cause of death on the battlefield?
ANSWER:  Bleeding.

QUESTION:  Why should you push away any loose clothing near a casualty's open wound before applying a field dressing?
ANSWER:  To see the extent of the wound.

QUESTION:  A casualty is bleeding from a wound in the leg.  Part of the trouser material next to the wound is stuck to the wound.  What should you do?
ANSWER:  Tear or cut around the stuck material so as to not pull the material from the wound.

QUESTION:  What part of the field dressing should be applied directly over an open wound?
ANSWER:  White side of the dressing.

QUESTION:  You have applied a field dressing, manual pressure, and elevation to a wound on the casualty's thigh, but blood is still leaking from the dressing.  What should you do now?
ANSWER:  Apply a pressure dressing.

QUESTION:  The "wad" of a pressure dressing is placed where, with respect to the dressing?
ANSWER:  On top of the field dressing and over the wound.

QUESTION:  When applying a pressure dressing, the tails should be tied where, with respect to the wound?
ANSWER:  Directly over the wound.

2.  Learning Step / Activity 2.  Splint a Suspected Fracture
Method of Instruction:  Demonstration/Practical Exercise (Performance)
Instructor to Student Ratio:  1:35
Time of Instruction:  20 mins
Media:  Slide Presentation

a.  Your bones perform many functions.  The bones in your spine, your arms, and your legs provide the framework for your muscles.  Your rib cage and pelvis, in addition to supporting muscles, protect the organs in your chest and abdomen.

b.  The end of each bone is typically wider than its shaft, and capped with cartilage surfaces that interface with the bone next to it.  Each bone is connected to another bone with ligaments.  The places where two bones meet form a joint.  Your joints may be relatively fixed, like where your tailbone meets your pelvic bone, or they may be mobile, like your elbow.

c.  When a bone is fractured the nerve supply typically sends pain signals to the brain.  The nerves may be torn or cut, resulting in loss of feeling to the hand or foot.  Additionally the blood vessels surrounding the bone can be ruptured and lose blood into the space around the fracture.
NOTE: Show Slide 7 (Apply an Arm Splint)

d. Locate the site of a suspected fracture.

   (1) Ask the casualty about the location of the suspected fracture (i.e., pain, tenderness, inability to move).

   (2) Look for unnatural positions of the extremities and for a protruding (sticking out) bone.

NOTE: Unless there is immediate life-threatening danger (i.e., fire, explosions, etc.), DO NOT MOVE THE CASUALTY WITH A SUSPECTED BACK OR NECK INJURY. Movement may cause permanent paralysis or death. Do not remove any protective clothing or boots in a chemical environment. Apply the dressing over the clothing.

   (3) Reassure the casualty if he/she is conscious and able to understand. For example, tell the casualty that you will be taking care of him/her.

   (4) Check circulation below the site of the injured area by completing these checks:

      (a) Check light-skinned persons for pale white or bluish-gray color of skin.

      (b) Check dark-skinned persons by depressing the toe/fingernail beds and observing how fast the color returns. A slower return of color to the injured side when compared to the uninjured side indicates a problem with circulation.

      (c) Check to see if the injured arm or leg feels colder than the uninjured one. Use your hand to compare temperature. Poor circulation is indicated by the coldness of the body area below the injury. Check to see if the casualty can feel you touching them below the suspected fracture site. Also check to see if the casualty can wiggle the fingers or toes on the side of the injury.

      (d) Question the casualty about the presence of numbness, tightness, or cold sensation.

   (5) Remove all jewelry from the affected limb and place it in the casualty’s pocket. Tell the casualty that you are doing this to prevent further injury if swelling occurs later.

NOTE: A casualty with impaired circulation should be evacuated as soon as possible to prevent loss of the limb.

NOTE: Show Slide 8 (Apply a Leg Splint)

e. Splint or immobilize a suspected fracture.

NOTE: If it is an open fracture (i.e., there is an injury to the skin at the same site as the suspected fracture), control the bleeding prior to splinting an open fracture. DO NOT ATTEMPT TO PUSH THE BONE BACK UNDER THE SKIN.

   (1) As a rule, splint the fracture in the position found.

   (2) If there is no circulation below the fracture site, or if the limb is grossly angulated and you cannot effectively splint it, you may need to gently re-align the limb to effectively splint the fracture site.
(3) With one hand supporting the fracture site, use the other hand to grasp the part of the limb farthest from the fracture and gently place traction on it (pull in the direction of the long axis of the bone, like extending a telescope).

(4) Re-alignment of the limb may help to restore circulation.

(5) Select splints that are long enough to reach beyond the joints, above and below the fracture site.

(6) Position the splints and apply padding between splints and where they touch any bony part of the body (i.e., elbow, hips, knees, ankles). Also protect the crotch and armpit areas.

**NOTE:** The Soldier may have access to a universal splint, or “SAM” (splint, aluminum, malleable). This splint is coated with a synthetic padding and does not require additional padding.

**NOTE:** Show Slide 9 (The SAM)

(7) Take four improvised (or actual) cravats (used to tie the splints together around the fracture) and push cravats through and under the normal body curvature.

**NOTE:** Insure minimal amount of movement of the injured area.

(8) Tie all four improvised (or actual) cravats on the splint, two above and two below the fracture, to secure the splint.

(9) Tie non-slip knots on the splint, on the side that is away from the injury.

(10) Recheck circulation, sensation and ability to move the fingers or toes after splinting.

(11) Check splint for looseness. Properly secured splints cannot be moved easily.

(12) Check splint for tightness. Cravats should be tight enough to hold the splints in place, without impairing circulation.

**NOTE:** Show Slide 10 (Apply a Sling)

f. Apply a sling.

(1) Make the sling from any non-stretching material such as the tail of a coat or shirt, or pieces of cloth torn from clothing and blankets.

(2) The sling should place the supporting pressure on the casualty’s uninjured side.

(3) The supported arm should have the hand positioned slightly higher than the elbow.

(4) Apply the sling as follows:

(a) Insert the splinted arm in the center of the sling.
(b) Bring the ends of the sling up and tie them at the side (or hollow) of the neck on the uninjured side.

(c) Twist and tuck the corner of the sling at the elbow.

g. Apply swathes.

**NOTE:** Tell the students that swathes immobilize the splinted arm against the body wall so that it does not move easily and cause further injury.

1. Apply swathes to an injured leg by wrapping the swathes around both legs and tying the swathes on the uninjured side.

2. When splints are unavailable, swathes can be used to immobilize an injured extremity.

   a) Tie an arm fracture to the chest wall. Use improvised swathes, such as a belt or strips of cloth.

   b) Tie a leg fracture to the uninjured leg.

h. Dislocations and Sprains

1. A dislocation is the displacement of a bone end from the joint. The surrounding ligaments and other soft tissue always suffer some injury.

2. Sprains are injuries to the soft tissues surrounding joints. The ligaments and blood vessels are stretched and occasionally torn or partially torn.

**NOTE:** Splint a suspected dislocation or a sprain in the same manner as a closed fracture.

**NOTE:** Check on Learning.

**QUESTION:** What would cause you to suspect a fractured arm or leg?

**ANSWER:** If the casualty reports pain, tenderness, or inability to move the limb; or if you see unnatural position of the extremity, or protruding bone.

**QUESTION:** If there is no immediate life-threatening danger, what precaution should you take before moving the casualty?

**ANSWER:** Determine that the casualty does not have a back or neck injury.

**QUESTION:** How can you check for circulation below the site of injury?

**ANSWER:** Look for pale white, or bluish-gray, skin; press on the toenail or fingernail to see if the color returns.

**QUESTION:** What should you do with the casualty's jewelry, if present?

**ANSWER:** Remove it, if possible, and place it in the casualty's pocket.

**QUESTION:** What should you do if there is no circulation below the fracture site, or if the limb is grossly angled and difficult to splint?

**ANSWER:** Use one hand to support the fracture site, and the other to grasp the farthest end of the limb, placing traction lengthwise (like extending a telescope).

**QUESTION:** How long should the splint be, and how should you prepare the splint?

**ANSWER:** It should extend beyond the joint on either side of the suspected fracture, and you should pad a splint that is not already padded.
NOTE: SHOW Slide 11 (Terminal Learning Objective)

**TERMINAL LEARNING OBJECTIVE**

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<th>ACTION</th>
<th>Control Bleeding of an Extremity &amp; Splint a Suspected Fracture</th>
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<td>CONDITIONS:</td>
<td>Given a casualty who has a bleeding wound of the arm or leg or has an arm or leg that you think is broken. The casualty is breathing. A first aid packet, emergency trauma dressing, and wadding material are available.</td>
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<td>STANDARDS:</td>
<td>Describe how to properly control the bleeding of an extremity and splint a suspected fracture</td>
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SECTION IV. ASK FOR QUESTIONS AND SUMMARY

Method of Instruction: Discussion
Instructor to Student Ratio: 1:35
Time of Instruction: 5 mins
Media: None

a. Ask students if they have any questions.
b. Answer all questions or agree to get back to students with a complete or appropriate answer.

NOTE: SUMMARY

Remember that a casualty should be continually monitored for development of conditions which may require the performance of necessary, basic lifesaving measures such as maintaining the airway and controlling bleeding. Perform these measures prior to splinting a suspected fracture.
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## Appendix A - Viewgraph Masters

### VIEWGRAPHS

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Appendix B - Test(s) and Test Solution(s) (N/A)
Appendix C - Practical Exercises and Solutions

Built into Lesson Plan
Appendix D - Student Handouts (N/A)