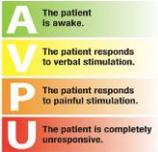
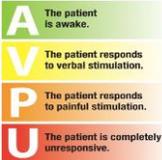


<p>1.</p>	<p>Tactical Combat Casualty Care for All Combatants August 2017 (Based on TCCC-MP Guidelines 170131)</p>  <p>Tactical Field Care</p>	<p>Tactical Combat Casualty Care for All Combatants August 2017</p> <p>(Based on TCCC-MP Guidelines 170131)</p> <p>Tactical Field Care</p>	<p>Next we'll be moving into the Tactical Field Care phase of TCCC.</p>
<p>2.</p>	 <p>OBJECTIVES</p> <ul style="list-style-type: none"> • STATE why a casualty with an altered mental status should have weapons and comms gear removed. • DEMONSTRATE the correct application of a CoTCCC-recommended hemostatic dressing. • DESCRIBE airway control techniques that can be used in the Tactical Field Care phase. 	<p>Objectives</p> <ul style="list-style-type: none"> • STATE why a casualty with an altered mental status should have weapons and comms gear removed. • DEMONSTRATE the correct application of a CoTCCC-recommended hemostatic dressing. • DESCRIBE airway control techniques that can be used in the Tactical Field Care phase. 	<p>Read the text.</p>
<p>3.</p>	 <p>OBJECTIVES</p> <ul style="list-style-type: none"> • DESCRIBE the management of penetrating eye injuries in TCCC. • DESCRIBE battlefield assessment for hemorrhagic shock. • DESCRIBE how to prevent hypothermia in combat casualties. • DISCUSS the importance of giving antibiotics soon after a casualty is wounded. 	<p>Objectives</p> <ul style="list-style-type: none"> • DESCRIBE the management of penetrating eye injuries in TCCC. • DESCRIBE battlefield assessment for hemorrhagic shock. • DESCRIBE how to prevent hypothermia in combat casualties. • DISCUSS the importance of giving antibiotics soon after a casualty is wounded. 	<p>Read the text.</p>
<p>4.</p>	 <p>OBJECTIVES</p> <ul style="list-style-type: none"> • EXPLAIN why cardiopulmonary resuscitation (CPR) is not generally used for cardiac arrest in battlefield trauma care. • DESCRIBE the procedure for documenting TCCC care with the TCCC Casualty Card. 	<p>Objectives</p> <ul style="list-style-type: none"> • EXPLAIN why cardiopulmonary resuscitation (CPR) is not generally used for cardiac arrest in battlefield trauma care. • DESCRIBE the procedure for documenting TCCC care with the TCCC Casualty Card. 	<p>Read the text.</p>

<p>5.</p>	<p> Tactical Field Care</p> <ul style="list-style-type: none"> • Distinguished from Care Under Fire by: <ul style="list-style-type: none"> – A reduced level of hazard from hostile fire – More time available to provide care based on the tactical situation • Medical gear is still limited to that carried the medic or corpsman and unit members (may include gear in tactical vehicles) 	<p>Tactical Field Care</p> <ul style="list-style-type: none"> • Distinguished from Care Under Fire by: <ul style="list-style-type: none"> – A reduced level of hazard from hostile fire – More time available to provide care based on the tactical situation • Medical gear is still limited to that carried the medic or corpsman and unit members (may include gear in tactical vehicles) 	<p>Now the shooting has stopped – or enemy fire is ineffective. This does not mean that the danger is over – the tactical situation could change to Care Under Fire at any time.</p>
<p>6.</p>	<p> Tactical Field Care</p> <ul style="list-style-type: none"> • May consist of rapid treatment of the most serious wounds with the expectation of a re-engagement with hostile forces at any moment, <i>or</i> • There may be ample time to render whatever care is possible in the field. • Time to evacuation may vary from minutes to several hours or longer. 	<p>Tactical Field Care</p> <ul style="list-style-type: none"> • May consist of rapid treatment of the most serious wounds with the expectation of a re-engagement with hostile forces at any moment, <i>or</i> • There may be ample time to render whatever care is possible in the field. • Time to evacuation may vary from minutes to several hours or longer. 	<p>This phase of care may be very prolonged.</p>
<p>7.</p>	<p> Tactical Field Care Guidelines</p>  <p>1. Establish a security perimeter in accordance with unit tactical standard operating procedures and/or battle drills. Maintain tactical situational awareness.</p>	<p>Tactical Field Care Guidelines</p> <p>1. Establish a security perimeter in accordance with unit tactical standard operating procedures and/or battle drills. Maintain tactical situational awareness.</p>	<p>Read the guideline.</p> <p>(Note: All of the slides entitled “Tactical Field Care Guidelines” - as this one is - should be read verbatim.)</p> <p>Security practices are prescribed in tactics, techniques, and procedures manuals. Know yours.</p>
<p>8.</p>	<p> Tactical Field Care Guidelines</p> <p>2. Casualties with an altered mental status should have weapons and communications equipment taken away immediately.</p>	<p>Tactical Field Care Guidelines</p> <p>2. Casualties with an altered mental status should have weapons and communications equipment taken away immediately.</p>	<p>Read the guideline.</p> <p>Weapons and radios do not mix well with shock or narcotics!</p>

<p>9.</p>	 <p>Altered Mental Status</p> <ul style="list-style-type: none"> Refers to an abnormal responsiveness, awareness, orientation, or behavior. <ul style="list-style-type: none"> It can affect speech, thought, mobility, memory, attention span, or alertness. It can range from slight confusion to complete unresponsiveness (<i>coma</i>). Can result from a serious underlying medical condition, trauma, treatment with mind-altering medications, or great psychological stress. 	<p>Altered Mental Status</p> <ul style="list-style-type: none"> Refers to an abnormal responsiveness, awareness, orientation, or behavior. <ul style="list-style-type: none"> It can affect speech, thought, mobility, memory, attention span, or alertness. It can range from slight confusion to complete unresponsiveness (<i>coma</i>). Can result from a serious underlying medical condition, trauma, treatment with mind-altering medications, or great psychological stress. 	<p>Rapid medical evaluation and treatment is necessary for casualties who have an altered mental status.</p>
<p>10.</p>	 <p>Assessing Responsiveness</p> 	<p>Assessing Responsiveness</p> 	<p>Part of assessing a casualty’s mental status is getting a measure of how responsive he is. Responsiveness is, in turn, a measure of the casualty’s level of consciousness. In the field, the AVPU scale is a system you can use to measure and record a casualty’s responsiveness. The four possible recordable outcomes are:</p> <p>Alert: The casualty is fully awake (although not necessarily oriented). This patient will have spontaneously open eyes, and will respond to your voice. Bodily motor function is pretty much normal where there are no injuries.</p> <p>Voice: The casualty makes some kind of response when you talk to him, which could be in any of the three component measures of eyes, voice or movement - e.g. casualty’s eyes open on being asked "Are you OK?". The response could be as little as a grunt, a moan, or slight movement of a limb when you vocally prompt him.</p> <p>Pain: The casualty makes some response on any of the three component measures when you apply a painful stimulus, such as rubbing a knuckle into his sternum or squeezing his fingers. The casualty may respond by using his voice, moving his eyes, or moving part of his body (including abnormal posturing).</p> <p>Unresponsive: The casualty is basically unconscious. This outcome is recorded if the casualty gives no eye, voice or motor response to voice or pain prompts.</p> <p>In TCCC, an AVPU score of anything less than A constitutes an altered mental status, and is an indication to get medical help.</p>

<p>11.</p>	 <p>Disarm Individuals with Altered Mental Status</p> <ul style="list-style-type: none"> • A combatant with an altered mental status may use his weapons or radio inappropriately. • Secure the long gun, pistols, knives, grenades, explosives, and communications gear. • Possible causes of altered mental status include Traumatic Brain Injury (TBI), shock, hypoxia, and pain medications. • You might say to the casualty: “Let me hold your weapon for you while the doc checks you out.” 	<p>Disarm Individuals with Altered Mental Status</p> <ul style="list-style-type: none"> • A combatant with an altered mental status may use his weapons or radio inappropriately. • Secure the long gun, pistols, knives, grenades, explosives, and communications gear. • Possible causes of altered mental status include Traumatic Brain Injury (TBI), shock, hypoxia, and pain medications. • You might say to the casualty: “Let me hold your weapon for you while the doc checks you out.” 	<p>A casualty’s mental status is a description of how well his brain is functioning. It includes things like his intellectual capacity, mood, behavior, orientation to the environment, judgment, memory, problem-solving ability, and contact with reality. Someone whose mental status is not his or her norm may behave in ways that are not rational, including misuse of firearms. Conditions that may lead to altered mental status include things like loss of a lot of blood, a head injury, pain medications given by a medic or corpsman, or lack of sufficient oxygen (hypoxia) due to difficulty breathing as you might see in a casualty with a chest wound. So any casualty who is not behaving normally for the circumstances should be relieved of his weapons and radio.</p> <p>A casualty with altered mental status may not want to give up his weapons, especially since he is still on the battlefield. The proposed comment in the last bullet may help him to better accept you taking his weapons away.</p>
<p>12.</p>	 <p>Tactical Field Care Guidelines</p> <p>3. Massive Hemorrhage</p> <p>a. Assess for unrecognized hemorrhage and control all sources of bleeding. If not already done, use a CoTCCC-recommended limb tourniquet to control life-threatening external hemorrhage that is anatomically amenable to tourniquet use or for any traumatic amputation. Apply directly to the skin 2-3 inches above the bleeding site. If bleeding is not controlled with the first tourniquet, apply a second tourniquet side-by-side with the first.</p>	<p>Tactical Field Care Guidelines</p> <p>3. Massive Hemorrhage</p> <p>a. Assess for unrecognized hemorrhage and control all sources of bleeding. If not already done, use a CoTCCC-recommended limb tourniquet to control life-threatening external hemorrhage that is anatomically amenable to tourniquet use or for any traumatic amputation. Apply directly to the skin 2-3 inches above the bleeding site. If bleeding is not controlled with the first tourniquet, apply a second tourniquet side-by-side with the first.</p>	<p>Read the guideline.</p> <p>In Care Under Fire, limb tourniquets may have been quickly applied to control life-threatening bleeding. Now it’s time to make sure that all life-threatening bleeding is controlled.</p>

<p>13.</p>	 <p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • Damage to an arm or leg is rare if a tourniquet is left on for less than two hours. • Tourniquets are often left in place for several hours during surgical procedures. • In the face of massive extremity hemorrhage, it is better to accept the small risk of damage to the limb than to have a casualty bleed to death. • ALWAYS HAVE A MEDIC OR CORPSMAN EVALUATE EVERY TOURNIQUET PLACED ON A CASUALTY TO SEE IF IT IS REALLY NEEDED, AND IF SO, IF IT IS WORKING EFFECTIVELY! 	<p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • Damage to an arm or leg is rare if a tourniquet is left on for less than two hours. • Tourniquets are often left in place for several hours during surgical procedures. • In the face of massive extremity hemorrhage, it is better to accept the small risk of damage to the limb than to have a casualty bleed to death. • ALWAYS HAVE A MEDIC OR CORPSMAN EVALUATE EVERY TOURNIQUET PLACED ON A CASUALTY TO SEE IF IT IS REALLY NEEDED, AND IF SO, IF IT IS WORKING EFFECTIVELY! 	<p>Tourniquets have historically been frowned upon in civilian trauma settings. In combat settings, they are the biggest lifesaver on the battlefield! They are NOT A PROBLEM if not left in place for too long.</p>
<p>14.</p>	 <p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • All unit members should have a CoTCCC-approved tourniquet at a standard location on their battle gear. • – It should be easily accessible if wounded – DO NOT bury it at the bottom of your pack • Tourniquets should be left in their protective packaging until needed to treat casualties. <ul style="list-style-type: none"> – Harsh environments may contribute to tourniquet failure if not left in packaging 	<p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • All unit members should have a CoTCCC-approved tourniquet at a standard location on their battle gear. <ul style="list-style-type: none"> – It should be easily accessible if wounded – DO NOT bury it at the bottom of your pack • Tourniquets should be left in their protective packaging until needed to treat casualties. <ul style="list-style-type: none"> – Harsh environments may contribute to tourniquet failure if not left in packaging 	<p>Each soldier having a tourniquet at the unit’s standardized location is critical, and this should be a pre-mission inspection item.</p>
<p>15.</p>	 <p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • Training tourniquets should never be used as mission tourniquets! • Repetitive applications of a tourniquet may cause it to fail. 	<p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • Training tourniquets should never be used as mission tourniquets! • Repetitive applications of a tourniquet may cause it to fail. 	<p>Only tourniquets within their shelf life and still in their original packaging should be issued for mission use.</p>

<p>16.</p>	<p> Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • When a tourniquet has been applied, DO NOT loosen it intermittently to allow circulation to return to the limb. <ul style="list-style-type: none"> – Causes unacceptable additional blood loss – This HAS happened in the past, and was responsible for at least one near fatality. 	<p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • When a tourniquet has been applied, DO NOT loosen it intermittently to allow circulation to return to the limb. <ul style="list-style-type: none"> – Causes unacceptable additional blood loss – This HAS happened in the past, and was responsible for at least one near fatality. 	<p>Periodically loosening the tourniquet to allow intermittent flow to the limb is a practice that was advised in the past. It is an unnecessary practice in the first place, and allows further blood loss in a casualty who cannot afford it. For combatants, if you put a tourniquet on, only a medic, PA, or doctor should remove it or convert.</p>
<p>17.</p>	<p> Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • There may be reasons to loosen or replace a tourniquet. • You won't loosen or remove a tourniquet. • A medic, PA, or doctor will. 	<p>Tourniquets: Points to Remember</p> <ul style="list-style-type: none"> • There may be reasons to loosen or replace a tourniquet. • You won't loosen or remove a tourniquet. • A medic, PA, or doctor will. 	<p>Reasons a tourniquet should be loosened or removed: It wasn't really needed. It would have been better in a different place on the limb. It has been on so long that another form of bleeding control is needed so that the tourniquet can be removed.</p>
<p>18.</p>	<p> Tourniquets: Points to Remember</p> <p>Tightening the tourniquet enough to eliminate the distal pulse will help to ensure that all bleeding is stopped, and that there will be no damage to the extremity from blood entering the extremity but not being able to get out.</p> 	<p>Tourniquets: Points to Remember</p> <p>Tightening the tourniquet enough to eliminate the distal pulse will help to ensure that all bleeding is stopped, and that there will be no damage to the extremity from blood entering the extremity but not being able to get out.</p>	<p>When a tourniquet occludes blood flow through the veins in an arm or a leg (or part of an arm or a leg), but still allows flow through the higher-pressure arteries, blood can flow into the arm or leg distal to the tourniquet but cannot flow back out. The rising pressure in the arm or leg will eventually cause stagnation of blood flow resulting in hypoxic damage to the tissues involved. This condition is called Compartment Syndrome, and it can cause unnecessary loss of the extremity. If you put a tourniquet on, put it on correctly!</p>
<p>19.</p>	<p> Removing the Tourniquet</p> <ul style="list-style-type: none"> • Tourniquets can be replaced in the field if bleeding can be controlled by other methods. • Only a combat medic/corpsman/PJ, a PA, or a physician should loosen tourniquets. 	<p>Removing the Tourniquet</p> <ul style="list-style-type: none"> • Tourniquets can be replaced in the field if bleeding can be controlled by other methods. • Only a combat medic/corpsman/PJ, a PA, or a physician should loosen tourniquets. 	<p>It may become advantageous during TFC to try to use other methods of hemorrhage control, and to try to loosen the tourniquet. Reasons to consider transitioning to less restrictive bleeding control options include:</p> <ul style="list-style-type: none"> - Evacuation times will be delayed beyond two hours. - Tourniquet pain is difficult to treat.

<p>20.</p>	 <p>Tactical Field Care Guidelines</p> <p>3. Massive Hemorrhage (continued)</p> <p>b. For compressible (external) hemorrhage not amenable to limb tourniquet use, use Combat Gauze as the CoTCCC hemostatic dressing of choice.</p> <ul style="list-style-type: none"> • Alternative hemostatic adjuncts: <ul style="list-style-type: none"> - Celox Gauze or - ChitoGauze or 	<p>Tactical Field Care Guidelines</p> <p>3. Massive Hemorrhage (continued)</p> <p>b. For compressible (external) hemorrhage not amenable to limb tourniquet use, use Combat Gauze as the CoTCCC hemostatic dressing of choice.</p> <ul style="list-style-type: none"> • Alternative hemostatic adjuncts: <ul style="list-style-type: none"> - Celox Gauze - ChitoGauze 	<p>Read the guideline.</p>
<p>21.</p>	 <p>Tactical Field Care Guidelines</p> <p>3. Massive Hemorrhage</p> <p>b. (continued)</p> <ul style="list-style-type: none"> • Hemostatic dressings should be applied with at least 3 minutes of direct pressure. Each dressing works differently, so if one fails to control bleeding, it may be removed and a fresh dressing of the same type or a different type applied. 	<p>Tactical Field Care Guidelines</p> <p>3. Massive Hemorrhage</p> <p>b. (continued)</p> <ul style="list-style-type: none"> • Hemostatic dressings should be applied with at least 3 minutes of direct pressure. Each dressing works differently, so if one fails to control bleeding, it may be removed and a fresh dressing of the same type or a different type applied. 	<p>Read the guideline.</p>
<p>22.</p>	 <p>About Direct Pressure</p> <ul style="list-style-type: none"> • Can be used as a temporary measure. • It works most of the time for external bleeding. • It can stop even carotid and femoral bleeding. • Bleeding control requires very firm pressure. • Don't let up pressure to check the wound until you are prepared to control bleeding with a hemostatic agent or a tourniquet! • Use for 3 full minutes after applying a hemostatic dressing. • It is hard to use direct pressure alone to maintain control of big bleeders while moving the casualty. 	<p>About Direct Pressure</p> <ul style="list-style-type: none"> • Can be used as a temporary measure. • It works most of the time for external bleeding. • It can stop even carotid and femoral bleeding. • Bleeding control requires very firm pressure. • Don't let up pressure to check the wound until you are prepared to control bleeding with a hemostatic agent or a tourniquet! • Use for 3 full minutes after applying a hemostatic dressing. • It is hard to use direct pressure alone to maintain control of big bleeders while moving the casualty. 	<p>Even just a firmly applied thumb may work with big bleeders in small wound tracts.</p> <p>One combat medic has used a thumb successfully in two casualties - one had carotid bleeding; the other had femoral bleeding.</p>

<p>23.</p>	 <p>CoTCCC-Recommended Hemostatic Agents</p> 	<p>CoTCCC-Recommended Hemostatic Agents</p>	<p>Hemostatic dressings can be used to control bleeding from wounds in places where a tourniquet cannot be effectively applied, or to control bleeding when a tourniquet must be removed in a prehospital setting because evacuation will take longer than two hours.</p>
<p>24.</p>	 <p>CoTCCC-Recommended Hemostatic Agents</p>  <p>Combat Gauze Celox Gauze ChitoGauze</p>	<p>CoTCCC-Recommended Hemostatic Agents</p> <p>Combat Gauze Celox Gauze ChitoGauze</p>	<p>These are the three hemostatic dressings recommended in the TCCC guidelines.</p>
<p>25.</p>	 <p>Combat Gauze</p> <ul style="list-style-type: none"> • Tested in the ISR safety model • Widely fielded in the DoD • Reports from use on the battlefield and in the civilian sector: <ul style="list-style-type: none"> – CG is effective at stopping bleeding – No safety issues reported • Recommended by CoTCCC as first choice for hemostatic dressing 	<p>Combat Gauze</p> <ul style="list-style-type: none"> • Tested in the USAISR safety model • Widely fielded in the DoD • Reports from use on the battlefield and in the civilian sector: <ul style="list-style-type: none"> – CG is effective at stopping bleeding – No safety issues reported • Recommended by CoTCCC as first choice for hemostatic dressing 	<p>The CoTCCC recommends QuikClot Combat Gauze as the hemostatic dressing of choice.</p>

<p>26.</p>	 <p>Alternative Hemostatic Agents</p> <ul style="list-style-type: none"> • Celox Gauze • ChitoGauze • Either may be used if Combat Gauze is not available. • Active ingredient is chitosan, a mucoadhesive. <ul style="list-style-type: none"> – Function is independent of the body’s clotting mechanisms – There are case series that report that chitosan dressings have stopped bleeding in surgical patients with life-threatening bleeding and severe clotting disorders. – Does not cause reactions in persons allergic to shellfish. • In lab studies, they are as effective at controlling bleeding as Combat Gauze. 	<p>Alternative Hemostatic Agents</p> <ul style="list-style-type: none"> • Celox Gauze • ChitoGauze • Either may be used if Combat Gauze is not available. • Active ingredient is chitosan, a mucoadhesive. <ul style="list-style-type: none"> – Function is independent of the body’s clotting mechanisms – There are case series that report that chitosan dressings have stopped bleeding in surgical patients with life-threatening bleeding and severe clotting disorders. – Does not cause reactions in persons allergic to shellfish. • In lab studies, they are as effective at controlling bleeding as Combat Gauze. 	<p>Read the text.</p> <p>Chitosan will seal sites of bleeding even if the casualty’s blood will not clot normally. Chitosan comes from shrimp shells.</p>
<p>27.</p>	 <p>Alternative Hemostatic Agents</p> <ul style="list-style-type: none"> • Neither ChitoGauze nor Celox Gauze have been tested in the USAISR safety model, <u>but</u> • Chitosan-based hemostatic dressings have been used in combat since 2004 with no safety issues reported. 	<p>Alternative Hemostatic Agents</p> <ul style="list-style-type: none"> • Neither ChitoGauze nor Celox Gauze has been tested in the USAISR safety model, <u>but</u> • Chitosan-based hemostatic dressings have been used in combat since 2004 with no safety issues reported. 	<p>Read the text.</p>
<p>28.</p>	 <p>Combat Gauze NSN 6510-01-562-3325</p> <ul style="list-style-type: none"> • Combat Gauze is a 3-inch x 4-yard roll of sterile gauze impregnated with kaolin, a material that causes blood to clot. • Found (in lab studies and actual use) to be safe and effective in controlling bleeding that would otherwise be fatal. 	<p>Combat Gauze NSN 6510-01-562-3325</p> <ul style="list-style-type: none"> • Combat Gauze is a 3-inch x 4-yard roll of sterile gauze impregnated with kaolin, a material that causes blood to clot. • Found (in lab studies and actual use) to be safe and effective in controlling bleeding that would otherwise be fatal. 	<p>Read the text.</p>

<p>29.</p>	<p>Combat Gauze Directions (1) Expose Wound & Identify Bleeding</p> <ul style="list-style-type: none"> • Open clothing around the wound. • If possible, remove excess pooled blood from the wound while preserving any clots already formed in the wound. • Locate the source of the most active bleeding. 	<p>Combat Gauze Directions (1) Expose Wound & Identify Bleeding</p> <ul style="list-style-type: none"> • Open clothing around the wound. • If possible, remove excess pooled blood from the wound while preserving any clots already formed in the wound. • Locate the source of the most active bleeding. 	<p>Read the text.</p>
<p>30.</p>	<p>Combat Gauze Directions (2) Pack Wound Completely</p> <ul style="list-style-type: none"> • Pack Combat Gauze tightly into the wound and directly onto the source of bleeding. • More than one gauze may be required to stem blood flow. • Combat Gauze may be re-packed or adjusted in the wound to ensure proper placement. 	<p>Combat Gauze Directions (2) Pack Wound Completely</p> <ul style="list-style-type: none"> • Pack Combat Gauze tightly into wound and directly onto the source of bleeding. • More than one gauze may be required to stem blood flow. • Combat Gauze may be re-packed or adjusted in the wound to ensure proper placement. 	<p>Pack CG into wound just like you would plain gauze. If more than one roll is needed, pack in more CG until the wound is full.</p>
<p>31.</p>	<p>Combat Gauze Directions (3) Apply Direct Pressure</p> <ul style="list-style-type: none"> • Quickly apply pressure until bleeding stops. • Hold continuous pressure for at least 3 minutes. • Reassess to ensure bleeding is controlled. • Combat Gauze may be repacked or a second gauze used if initial application fails to provide hemostasis. 	<p>Combat Gauze Directions (3) Apply Direct Pressure</p> <ul style="list-style-type: none"> • Quickly apply pressure until bleeding stops. • Hold continuous pressure for at least 3 minutes. • Reassess to ensure bleeding is controlled. • Combat Gauze may be repacked or a second gauze used if initial application fails to provide hemostasis. 	<p>Although the Combat Gauze may become saturated during the initial application process, continue to hold firm pressure for at least three minutes. The kaolin will continue to leach into the wound area and help form a clot even though the bandage is soaked through.</p>
<p>32.</p>	<p>Combat Gauze Directions (4) Bandage over Combat Gauze</p> <ul style="list-style-type: none"> • Leave effective Combat Gauze in place. • Wrap pressure dressing to effectively secure the Combat Gauze on the bleeding site.  <p>Although the Emergency Trauma Bandage is shown in this picture, the wound may be secured with any compression bandage, Ace wrap, roller gauze, or cravat.</p>	<p>Combat Gauze Directions (4) Bandage over Combat Gauze</p> <ul style="list-style-type: none"> • Leave effective Combat Gauze in place. • Wrap pressure dressing to effectively secure the Combat Gauze on the bleeding site. <p>Although the Emergency Trauma Bandage is shown in this picture, the wound may be secured with any compression bandage, Ace wrap, roller gauze, or cravat.</p>	<p>Carefully observe for blood continuing to flow from under the gauze to determine if bleeding has been controlled. Once you are sure the bleeding has stopped, apply a pressure dressing over the Combat Gauze.</p>

<p>33.</p>	 <p>Combat Gauze Directions (5) Transport & Monitor Casualty</p> <ul style="list-style-type: none"> • Reassess frequently to monitor for recurrent bleeding. • Evacuate casualty to next level of medical care as soon as possible. 	<p>Combat Gauze Directions (5) Transport & Monitor Casualty</p> <ul style="list-style-type: none"> • Reassess frequently to monitor for recurrent bleeding. • Evacuate casualty to next level of medical care as soon as possible. 	<p>Re-check the dressing frequently, especially while moving the casualty. Watch for re-bleeding.</p>
<p>34.</p>	 <p>Wound Packing with a Hemostatic Dressing</p> 	<p>Wound Packing with a Hemostatic Dressing</p>	<p>Click on the photo to play the video.</p>
<p>35.</p>		<p>Questions?</p>	
<p>36.</p>	 <p>Hemostatic Dressing Practical</p> 	<p>Hemostatic Dressing Practical</p>	<p>(Break into small groups for practical.) (Use the module pertaining to the dressing you are training.)</p>

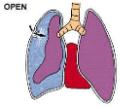
<p>37.</p>	 <p>Junctional Hemorrhage</p> <ul style="list-style-type: none"> • Term is used to include: <ul style="list-style-type: none"> – Groin – Buttocks – Armpits and shoulders – Base of the neck 	<p>Junctional Hemorrhage</p> <ul style="list-style-type: none"> • Term is used to include: <ul style="list-style-type: none"> – Groin – Buttocks – Armpits and shoulders – Base of the neck 	<p>Let’s talk briefly about wounds in areas where a regular limb tourniquet like the C.A.T. can’t be applied. The areas where the neck and the limbs join the torso are “junctional” areas. Bleeding from wounds in these areas is called junctional hemorrhage.</p>
<p>38.</p>	 <p>IEDS Iraq vs Afghanistan</p> <ul style="list-style-type: none"> • Iraq <ul style="list-style-type: none"> – Large amount of explosives – recycled 155 shells – Command or vehicle-detonated – Designed to destroy vehicles • Afghanistan <ul style="list-style-type: none"> – Smaller amount of explosives – Homemade explosives – Personnel pressure-detonated – Designed to maim 	<p>IEDS Iraq vs Afghanistan</p> <ul style="list-style-type: none"> • Iraq <ul style="list-style-type: none"> – Large amount of explosives – recycled 155 shells – Command or vehicle-detonated – Designed to destroy vehicles • Afghanistan <ul style="list-style-type: none"> – Smaller amount of explosives – Homemade explosives – Personnel pressure-detonated – Designed to maim 	<p>Junctional hemorrhage is most commonly seen in wounds caused by IEDs. IEDs were configured and used differently in the two theaters. In Afghanistan, they were aimed at soldiers on dismounted patrol.</p>
<p>39.</p>	 <p>Wounds that May Result in Junctional Hemorrhage</p>  <p>Typically caused by dismounted IED attacks</p>	<p>Wounds that May Result in Junctional Hemorrhage</p> <p>Typically caused by dismounted IED attacks</p>	<p>Dismounted IED attacks often cause injuries in the groin area that produce junctional hemorrhage. These casualties need advanced treatment by medics using devices called Junctional Tourniquets. Until the medic gets to this casualty, you can try to slow the bleeding from wounds like these with Combat Gauze and direct pressure.</p>

<p>40.</p>		<p>Questions?</p>	
<p>41.</p>	<p> Tactical Field Care Guidelines</p> <p>4. Airway Management</p> <p>a. Unconscious casualty without airway obstruction:</p> <ul style="list-style-type: none"> - Chin lift or jaw thrust maneuver - Nasopharyngeal airway - Place casualty in recovery position 	<p>Tactical Field Care Guidelines</p> <p>4. Airway Management</p> <p>Unconscious casualty without airway obstruction:</p> <p>Chin lift or jaw thrust maneuver</p> <p>Nasopharyngeal airway</p> <p>Place casualty in recovery position</p>	<p>Read the guideline.</p>
<p>42.</p>	<p> Tactical Field Care Guidelines</p> <p>4. Airway Management</p> <p>b. Casualty with airway obstruction or impending airway obstruction:</p> <ul style="list-style-type: none"> - Chin lift or jaw thrust maneuver - Nasopharyngeal airway - Allow a conscious casualty to assume any position that best protects the airway, to include sitting up. - Place an unconscious casualty in the recovery position. - If the previous measures are unsuccessful, refer to a medic immediately. 	<p>Tactical Field Care Guidelines</p> <p>4. Airway Management</p> <p>b. Casualty with airway obstruction or impending airway obstruction:</p> <ul style="list-style-type: none"> - Chin lift or jaw thrust maneuver - Nasopharyngeal airway - Allow a conscious casualty to assume any position that best protects the airway, to include sitting up. - Place an unconscious casualty in the recovery position. - If the previous measures are unsuccessful, refer to a medic immediately. 	<p>Read the guideline.</p>

<p>43.</p>	<p> Nasopharyngeal Airway</p> <ul style="list-style-type: none"> • The “Nose Hose,” “Nasal Trumpet,” “NPA” • Excellent success in GWOT • Well tolerated by the conscious patient • Lube before inserting • Insert at 90 degree angle to the face NOT along the axis of the external nose • Tape it in 	<p>Nasopharyngeal Airway</p> <ul style="list-style-type: none"> • The “Nose Hose,” “Nasal Trumpet,” “NPA” • Excellent success in GWOT • Well tolerated by the conscious patient • Lube before inserting • Insert at 90-degree angle to the face NOT along the axis of the external nose • Tape it in 	<p>The NPA is fairly secure once properly taped in place, and it is not likely to cause gagging.</p>
<p>44.</p>	<p> Nasopharyngeal Airway</p>  <ul style="list-style-type: none"> • Lubricate! • Insert along floor of nasal cavity • If resistance met, use back-and-forth motion • Don't Force – Use other nostril • If patient gags, withdraw slightly 	<p>Nasopharyngeal Airway</p>  <ul style="list-style-type: none"> • Lubricate! • Insert along floor of nasal cavity • If resistance met, use back-and-forth motion • Don't Force – Use other nostril • If patient gags, withdraw slightly 	<p>Lubricate the tube before you insert it! Gently insert the NPA with rotary or back and forth motion. Don't start a big nosebleed. Some people have a deviated nasal septum – try the other side if it doesn't go in the first side of the nose you try.</p>
<p>45.</p>	<p> Nasopharyngeal Airway</p>  <p>What's wrong with this NPA insertion?</p>	<p>Nasopharyngeal Airway</p> <p>What's wrong with this NPA insertion?</p>	<p>This nasopharyngeal airway is being inserted towards the brain and may end up there if there are craniofacial or basilar skull fractures! The correct angle for insertion is 90 degrees to the frontal plane of the face. NOT along the ridge of the nose.</p>
<p>46.</p>	<p> Nasopharyngeal Airway</p> 	<p>Nasopharyngeal Airway</p>	<p>This is a more correct insertion angle for the NPA. It will track along the base of the nasal cavity, and will not track upward toward the brain.</p>

<p>47.</p>	<p> Maxillofacial Trauma</p>  <p>• Casualties with severe facial injuries can often protect their own airways by sitting up and leaning forward. • Let them do it if they can!</p>	<p>Maxillofacial Trauma</p> <ul style="list-style-type: none"> • Casualties with severe facial injuries can often protect their own airways by sitting up and leaning forward. • Let them do it if they can! 	<p>It would be impossible to put an NPA in a casualty with this kind of injury, especially on the battlefield at night. If his larynx and trachea are intact, he may do well. This casualty was treated with an emergency surgical airway. The only way they got this casualty alive to the ER was to let him sit up and lean forward.</p>
<p>48.</p>	<p> Airway Support</p> <p>Place unconscious casualties in the recovery position after the airway has been secured.</p>  <p>Figure 1-1</p>	<p>Airway Support</p> <p>Place unconscious casualties in the recovery position after the airway has been secured.</p>	<p>The recovery position helps to protect against inhaling vomit if the casualty throws up. Note here, as we did in Care Under Fire, that C-spine stabilization is not required in penetrating head and neck trauma.</p>
<p>49.</p>	<p><u>Airway Practical</u></p> 	<p><u>Airway Practical</u></p>	<p>(Use the Airway skill sheet.)</p>
<p>50.</p>	<p> Tactical Field Care Guidelines</p> <p>5. Breathing</p> <p>a. In a casualty with progressive respiratory distress and known or suspected torso trauma, consider a tension pneumothorax and refer to a medic as soon as possible.</p>	<p>Tactical Field Care Guidelines</p> <p>5. Breathing</p> <p>a. In a casualty with progressive respiratory distress and known or suspected torso trauma, consider a tension pneumothorax and refer to a medic as soon as possible.</p>	<p>Read the guideline.</p>

<p>51.</p>	 <p>Tactical Field Care Guidelines</p> <p>5. Breathing b. All open and/or sucking chest wounds should be treated by immediately applying a vented chest seal to cover the defect. If a vented chest seal is not available, use a non-vented chest seal. Monitor the casualty for respiratory distress. If it develops, you should suspect a tension pneumothorax. Treat this by burping or temporarily removing the dressing. If that doesn't relieve the respiratory distress, refer to a medic.</p>	<p>Tactical Field Care Guidelines</p> <p>5. Breathing b. All open and/or sucking chest wounds should be treated by immediately applying a vented chest seal to cover the defect. If a vented chest seal is not available, use a non-vented chest seal. Monitor the casualty for respiratory distress. If it develops, you should suspect a tension pneumothorax. Treat this by burping or temporarily removing the dressing. If that doesn't relieve the respiratory distress, refer to a medic.</p>	<p>Read the guideline.</p> <p>Respiratory distress means difficulty breathing, in other words, the casualty is struggling to get air in or out, or his breathing is too weak to be effective.</p> <p>Chest seals with one-way vents are preferred because the vent helps to reduce the risk of tension pneumothorax. Non-vented chest seals are still in the supply system, and can be used. Any casualty who has a chest (or abdominal) injury must be monitored for respiratory distress, no matter what kind of covering is applied to the wound, if any.</p>
<p>52.</p>	 <p>Pneumothorax</p>  <p>A pneumothorax is a collection of air between the lung and chest wall due to an injury to the chest and/or lung. The lung then collapses as shown.</p>	<p>Pneumothorax</p> <p>A pneumothorax is a collection of air between the lung and chest wall due to an injury to the chest and/or lung. The lung then collapses as shown.</p>	<p>Normally the lung fills up the entire chest cavity. With an injury to the lung or the chest wall, air may get between the chest wall and the lung and allow the elastic lung to collapse. Air is supposed to be INSIDE the lung. Here the air is inside the chest but OUTSIDE the lung – and this does not help get oxygen to the body.</p>
<p>53.</p>	 <p>Tension Pneumothorax</p>  <p>A <u>tension</u> pneumothorax is worse. Injured lung tissue acts as a one-way valve, trapping more and more air between the lung and the chest wall. Pressure builds up and compresses both lungs and the heart.</p>	<p>Tension Pneumothorax</p> <p>A <u>tension</u> pneumothorax is worse. Injured lung tissue acts as a one-way valve, trapping more and more air between the lung and the chest wall. Pressure builds up and compresses both lungs and the heart.</p>	<p>As a tension pneumothorax develops, every breath adds more air to the air space inside the rib cage and outside the lung. The air can't be exhaled because it's outside the lung – there's no way for it to escape – so the pressure inside the chest builds up.</p>

<p>54.</p>	<p> Tension Pneumothorax</p> <ul style="list-style-type: none"> • Tension pneumothorax is another common cause of preventable death encountered on the battlefield. • It's easy to treat. • Tension pneumo may occur with entry wounds in the abdomen, shoulder, or neck. • Blunt (motor vehicle accident) or penetrating trauma (GSW) may also cause it. 	<p>Tension Pneumothorax</p> <ul style="list-style-type: none"> • Tension pneumothorax is another common cause of preventable death encountered on the battlefield. • It's easy to treat. • Tension pneumo may occur with entry wounds in the abdomen, shoulder, or neck. • Blunt (motor vehicle accident) or penetrating trauma (GSW) may also cause it. 	<p>Two things about a tension pneumothorax:</p> <ul style="list-style-type: none"> - It is a common cause of preventable death on the battlefield. - It can be effectively treated by combat medics, corpsmen, and PJs. <p>You can recognize this condition and get medical attention for the casualty.</p>
<p>55.</p>	<p> Tension Pneumothorax</p> <ul style="list-style-type: none"> • Both lung function and heart function are impaired with a tension pneumothorax, causing respiratory distress and shock. • Treatment is to let the air trapped under pressure escape. • Medics do this by inserting a needle into the chest. 	<p>Tension Pneumothorax</p> <ul style="list-style-type: none"> • Both lung function and heart function are impaired with a tension pneumothorax, causing respiratory distress and shock. • Treatment is to let the air trapped under pressure escape. • Medics do this by inserting a needle into the chest. 	<p>One collapsed lung should not kill you, but the elevated air pressure OUTSIDE the collapsed lung in a tension pneumothorax can impair the function of the good lung and the heart by preventing them from expanding normally. This CAN kill the casualty.</p>
<p>56.</p>	<p> Sucking Chest Wound (Open Pneumothorax)</p>  <p>It takes a hole in the chest the size of a nickel or bigger for this to occur.</p>	<p>Sucking Chest Wound (Open Pneumothorax)</p> <p>It takes a hole in the chest the size of a nickel or bigger for this to occur.</p>	<p>In a sucking chest wound, air enters the pleural space through a wound in the chest wall. The elastic lung deflates and pulls away from the chest wall. On inspiration, the air now enters the chest THROUGH THE HOLE instead of INTO THE LUNGS through the trachea. The affected lung cannot be fully re-inflated by inhalation.</p>
<p>57.</p>	<p> Open Pneumothorax</p> 	<p>Open Pneumothorax</p>	<p>In this wound you can see into the chest cavity.</p>

<p>58.</p>	 <p>Sucking Chest Wound</p> <ul style="list-style-type: none"> • May result from large defects in the chest wall and may interfere with ventilation. • Treat by applying a vented chest seal completely over the defect during expiration. • Monitor for possible development of subsequent tension pneumothorax. • Allow the casualty to adopt the sitting position if breathing is more comfortable. 	<p>Sucking Chest Wound</p> <ul style="list-style-type: none"> • May result from large defects in the chest wall and may interfere with ventilation. • Treat by applying a vented chest seal completely over the defect during expiration. • Monitor for possible development of subsequent tension pneumothorax. • Allow the casualty to adopt the sitting position if breathing is more comfortable. 	<p>Apply the chest seal during expiration. At this point in the breathing cycle, there is relatively less air in the pleural space.</p>
<p>59.</p>	 <p>Sucking Chest Wound (Treated)</p>  <p>Key Point: If signs of a tension pneumothorax develop – lift one edge of the seal and allow the tension pneumothorax to decompress (“burping” the seal). Alternatively, remove the seal for a few seconds to accomplish the decompression, then re-apply.</p>	<p>Sucking Chest Wound (Treated)</p> <p>Key Point: If signs of a tension pneumothorax develop – lift one edge of the seal and allow the tension pneumothorax to decompress (“burping” the seal). Alternatively, remove the seal for a few seconds to accomplish the decompression, then re-apply.</p>	<p>Once the wound has been occluded with a chest seal, air can no longer enter (or exit) the pleural space through the wound in the chest wall. The injured lung will remain partially collapsed, but the mechanics of respiration will be better. After you apply the chest seal, you have to be alert for the possible development of tension pneumothorax because air can still leak into the pleural space from the injured lung. Monitor these patients for any future difficulty in breathing.</p>
<p>60.</p>	 <p>Video: Sucking Chest Wound</p> 	<p>Video: Sucking Chest Wound</p>	<p>(Click on the photo to start the video.) This is a video of a sucking chest wound. Again, note the large open hole in the chest wall.</p>
<p>61.</p>	 <p>Video: Sucking Chest Wound (Treated)</p> 	<p>Video: Sucking Chest Wound (Treated)</p>	<p>(Click on the photo to start the video.) Negative pressure during inhalation retracts the dressing over the wound. The lung now has a better chance of re-inflating.</p>

<p>62.</p>		<p>Questions?</p>	
<p>63.</p>	<p> Tactical Field Care Guidelines</p> <p>6. Circulation a. Bleeding</p> <ul style="list-style-type: none"> Reassess every tourniquet that was applied earlier. Expose the wound and determine if the tourniquet is controlling the bleeding. Any tourniquet that was applied over the casualty's uniform should be replaced by medical personnel with another tourniquet applied directly to the skin 2-3 inches above the wound, if possible. 	<p>Tactical Field Care Guidelines</p> <p>6. Circulation a. Bleeding</p> <ul style="list-style-type: none"> Reassess every tourniquet that was applied earlier. Expose the wound and determine if the tourniquet is controlling the bleeding. Any tourniquet that was applied over the casualty's uniform should be replaced by medical personnel with another tourniquet applied directly to the skin 2-3 inches above the wound, if possible. 	<p>Read the guideline.</p> <p>Tourniquets placed hastily over uniform items may be less effective than tourniquets applied directly to the skin. During reassessment, if a tourniquet needs to be repositioned, remove sufficient uniform materiel to place another tourniquet directly to the skin and tighten it. The initial tourniquet can then be slowly released to assess for continued bleeding control by the replacement tourniquet. Let your medic perform this step.</p>
<p>64.</p>	<p> Tactical Field Care Guidelines</p> <p>6. Circulation a. Bleeding</p> <ul style="list-style-type: none"> Ensure that bleeding is stopped. If there is no traumatic amputation, check for pulses further out on the limb than the tourniquet. If bleeding persists or a distal pulse is still present, consider additional tightening of the tourniquet or the use of a second tourniquet side-by-side with the first to eliminate both bleeding and the distal pulse. 	<p>Tactical Field Care Guidelines</p> <p>6. Circulation a. Bleeding</p> <ul style="list-style-type: none"> Ensure that bleeding is stopped. If there is no traumatic amputation, check for pulses further out on the limb than the tourniquet. If bleeding persists or a distal pulse is still present, consider additional tightening of the tourniquet or the use of a second tourniquet side-by-side with the first to eliminate both bleeding and the distal pulse. 	<p>Read the guideline.</p> <p>A distal pulse is a pulse in the limb to which a tourniquet has been applied that is farther out on the limb than the tourniquet. If you placed a tourniquet above a casualty's elbow, for instance, you should expect to find no pulse at the wrist below that elbow if the tourniquet was properly applied.</p>
<p>65.</p>	<p> Tactical Field Care Guidelines</p> <p>6. Circulation a. Bleeding</p> <ul style="list-style-type: none"> Expose and clearly mark all tourniquets with the time of tourniquet application. Use a permanent marker to mark on the tourniquet and the casualty card. 	<p>Tactical Field Care Guidelines</p> <p>6. Circulation a. Bleeding</p> <ul style="list-style-type: none"> Expose and clearly mark all tourniquets with the time of tourniquet application. Use a permanent marker to mark on the tourniquet and the casualty card. 	<p>Read the guideline.</p>

<p>66.</p>	 <p>Tactical Field Care Guidelines</p> <p>6. Circulation</p> <p>b. Hemorrhagic Shock</p> <ul style="list-style-type: none"> Assess for hemorrhagic shock (altered mental status in the absence of brain injury and/or weak or absent radial pulse). If the casualty is not in shock: <ul style="list-style-type: none"> No IV fluids are immediately necessary. Fluids by mouth are permissible if the casualty is conscious and can swallow. If the casualty is in shock or develops shock, refer to a medic. 	<p>Tactical Field Care Guidelines</p> <p>6. Circulation</p> <p>b. Hemorrhagic Shock</p> <ul style="list-style-type: none"> Assess for hemorrhagic shock (altered mental status in the absence of brain injury and/or weak or absent radial pulse). If the casualty is not in shock: <ul style="list-style-type: none"> No IV fluids are immediately necessary. Fluids by mouth are permissible if the casualty is conscious and can swallow. If the casualty is in shock or develops shock, refer to a medic. 	<p>Read the guideline.</p>
<p>67.</p>	 <p>Casualty Not In Shock</p> <ul style="list-style-type: none"> If the casualty is not in shock, then any abnormality in mental status is due to some cause other than blood loss. Radial pulse is normal. Fluid resuscitation is not needed: <ul style="list-style-type: none"> Blood loss, if any, is not so large that it threatens the casualty's life. Medic doesn't have to start an IV or give any kind of resuscitation fluids. 	<p>Casualty Not In Shock</p> <ul style="list-style-type: none"> If the casualty is not in shock, then any abnormality in mental status is due to some cause other than blood loss. Radial pulse is normal. Fluid resuscitation is not needed: <ul style="list-style-type: none"> Blood loss, if any, is not so large that it threatens the casualty's life. Medic doesn't have to start an IV or give any kind of resuscitation fluids. 	<p>Remember that we are talking about hemorrhagic shock – shock due to blood loss.</p> <p>Prevention of shock is much better than treatment for shock, so any source of bleeding must be controlled if possible. Internal bleeding from blunt trauma or penetrating trauma to the chest or abdomen may not be controllable, and continued bleeding from an internal source may cause shock to develop later. (Note: there are some things a medic can do to mitigate this risk.) If a casualty is not in shock, then he doesn't need treatment for shock, but should be watched carefully for the development of shock if he has been seriously injured. It is a good idea to let those casualties who are not in shock and are able to swallow drink water or other fluids. Dehydration is common on the battlefield and is not good for casualties. Any casualty not in shock, but who has lost some blood will benefit from oral rehydration.</p>
<p>68.</p>	 <p>Blood Loss and Shock</p> <p><u>What is "Shock?"</u></p> <ul style="list-style-type: none"> Inadequate blood flow to the body tissues Leads to inadequate oxygen delivery and cellular dysfunction May cause death Shock can have many causes, but <u>on the battlefield, it is typically caused by severe blood loss</u> 	<p>Blood Loss and Shock</p> <p><u>What is "Shock?"</u></p> <ul style="list-style-type: none"> Inadequate blood flow to the body tissues Leads to inadequate oxygen delivery and cellular dysfunction May cause death Shock can have many causes, but <u>on the battlefield, it is typically caused by severe blood loss.</u> <u>Hemorrhagic shock is the leading cause of preventable death on the battlefield</u> 	<p>As mentioned earlier, shock due to severe blood loss is called hemorrhagic shock. Inadequate blood volume inside the circulatory system results in inadequate oxygen delivery to the body's cells. As cells cease to function, tissues cease to function, then organs cease to function, and eventually the organism (or the whole body) will fail and death follows.</p>

<p>69.</p>	 <p>Blood Loss and Shock</p> <p>Question: How does your body react to blood loss?</p> <p>Answer: It depends on how much blood you lose.</p>	<p>Blood Loss and Shock</p> <p>Question: How does your body react to blood loss?</p> <p>Answer: It depends on how much blood you lose.</p>	<p>Let's talk about blood loss and what happens when it occurs.</p>
<p>70.</p>	 <p>Normal Adult Blood Volume 5 Liters</p> 	<p>Normal Adult Blood Volume 5 Liters</p>	<p>For the purpose of demonstration – this slide shows 5 liters of simulated blood. This is tomato juice in five 1-liter bottles.</p>
<p>71.</p>	 <p>500ml Blood Loss</p> <p>4.5 Liters Blood Volume</p> 	<p>500ml Blood Loss</p> <p>4.5 Liters Blood Volume</p>	<p>So – here we have lost the first 500ml of blood. This is what you lose when you donate a “pint” or a unit of blood at the blood bank.</p>
<p>72.</p>	 <p>500ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Alert • Radial Pulse: Full • Heart Rate: Normal or slightly increased • Systolic Blood pressure: Normal • Respiratory Rate: Normal • Is the casualty going to die from this? <p style="text-align: center;">No</p>	<p>500ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Alert • Radial Pulse: Full • Heart Rate: Normal or slightly increased • Systolic Blood pressure: Normal • Respiratory Rate: Normal • Is the casualty going to die from this? <p style="text-align: center;">No</p>	<p>There is no danger from this level of blood loss.</p> <p>Keep in mind that factors such as exertion, fear, and pain may affect heart rate and breathing rate, and these factors will affect anyone engaged in combat, especially someone who has been wounded. You have to consider these things when treating casualties on the battlefield. For this demonstration, though, we are ignoring these factors, so the physiologic changes you see listed here are what you would expect from the blood loss alone.</p>

<p>73.</p>	 <p>1000ml Blood Loss</p> <p>4.0 Liters Blood Volume</p> 	<p>1000ml Blood Loss</p> <p>4.0 Liters Blood Volume</p>	<p>So let's say the casualty loses another 500ml of blood. How is he doing now?</p>
<p>74.</p>	 <p>1000ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Alert • Radial Pulse: Full • Heart Rate: 100 + • Systolic Blood pressure: Normal lying down • Respiratory Rate: May be normal • Is the casualty going to die from this? <p style="text-align: center;">No</p>	<p>1000ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Alert • Radial Pulse: Full • Heart Rate: 100 + • Systolic Blood pressure: Normal lying down • Respiratory Rate: May be normal • Is the casualty going to die from this? <p style="text-align: center;">No</p>	<p>The casualty is still basically OK. His heart rate may be up a little.</p>
<p>75.</p>	 <p>1500ml Blood Loss</p> <p>3.5 Liters Blood Volume</p> 	<p>1500ml Blood Loss</p> <p>3.5 Liters Blood Volume</p>	<p>The casualty loses another 500ml of blood. He's down to 3.5 liters remaining in his circulatory system. How is he doing now?</p>

<p>76.</p>	 <p>1500ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Alert but anxious • Radial Pulse: May be weak • Heart Rate: 100+ • Systolic Blood pressure: May be decreased • Respiratory Rate: 30 • Is the casualty going to die from this? <p>Probably not</p>	<p>1500ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Alert but anxious • Radial Pulse: May be weak • Heart Rate: 100+ • Systolic Blood pressure: May be decreased • Respiratory Rate: 30 • Is the casualty going to die from this? <p>Probably not</p>	<p>At this point, the casualty is showing some clear symptoms from his blood loss. Still, he probably would not die from this.</p>
<p>77.</p>	 <p>2000ml Blood Loss</p> <p>3.0 Liters Blood Volume</p> 	<p>2000ml Blood Loss</p> <p>3.0 Liters Blood Volume</p>	<p>The casualty loses another 500ml of blood. On the battlefield, this would represent ongoing uncontrolled hemorrhage. How is the casualty doing now?</p>
<p>78.</p>	 <p>2000ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Confused/lethargic • Radial Pulse: Weak • Heart Rate: 120 + • Systolic Blood pressure: Decreased • Respiratory Rate: >35 • Is the casualty going to die from this? <p>Maybe</p>	<p>2000ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Confused/lethargic • Radial Pulse: Weak • Heart Rate: 120 + • Systolic Blood pressure: Decreased • Respiratory Rate: >35 • Is the casualty going to die from this? <p>Maybe</p>	<p>Not so good. At this point, it is quite possible that he could die from the blood loss. He has an altered state of consciousness and a weak radial pulse. This is “hemorrhagic” or “hypovolemic” (meaning “not enough blood volume”) shock.</p>

<p>79.</p>	 <p>2500ml Blood Loss</p> 	<p>2500ml Blood Loss</p> <p>2.5 Liters Blood Volume</p>	<p>So let's take away another 500ml of blood from our simulated casualty. He is now in big trouble.</p>
<p>80.</p>	 <p>2500ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Unconscious • Radial Pulse: Absent • Heart Rate: 140+ • Systolic Blood pressure: Markedly decreased • Respiratory Rate: Over 35 • Is he going to die from this? <p>Probably</p>	<p>2500ml Blood Loss</p> <ul style="list-style-type: none"> • Mental State: Unconscious • Radial Pulse: Absent • Heart Rate: 140+ • Systolic Blood pressure: Markedly decreased • Respiratory Rate: Over 35 • Is he going to die from this? <p>Probably</p>	<p>At this point – the casualty has lost HALF of the blood in his body. This level of hemorrhage is likely to be fatal. YOUR JOB IS NOT TO LET THEM LOSE THIS MUCH BLOOD! Treating the blood loss after the fact is not as good an option as preventing the blood loss in the first place.</p>
<p>81.</p>	 <p>Recognition of Shock on the Battlefield</p> <ul style="list-style-type: none"> • Warriors (and medics) need a <u>fast, reliable, low-tech</u> way to recognize shock on the battlefield. • The best TACTICAL indicators of shock are: <ul style="list-style-type: none"> – <u>Decreased state of consciousness</u> (if casualty has not suffered TBI, for instance) and/or – <u>Abnormal character of the radial pulse</u> (weak or absent) 	<p>Recognition of Shock on the Battlefield</p> <ul style="list-style-type: none"> • Warriors (and medics) need a <u>fast, reliable, low-tech</u> way to recognize shock on the battlefield. • The best TACTICAL indicators of shock are: <ul style="list-style-type: none"> – <u>Decreased state of consciousness</u> (if casualty has not suffered TBI, for instance) and/or – <u>Abnormal character of the radial pulse</u> (weak or absent) 	<p>These are the signs of shock that you can reliably identify on the battlefield. Note: Medications can also cause an altered state of consciousness (e.g. - if the medic gives the casualty pain meds).</p>

<p>82.</p>	 <p>Shock Resuscitation Strategy</p> <ul style="list-style-type: none"> • If signs of shock are present, CONTROL THE BLEEDING FIRST, if at all possible. • Hemorrhage control takes precedence over resuscitation with IV fluids. • Your medic will handle IV resuscitation. 	<p>Shock Resuscitation Strategy</p> <ul style="list-style-type: none"> • If signs of shock are present, CONTROL THE BLEEDING FIRST, if at all possible. • Hemorrhage control takes precedence over resuscitation with IV fluids. • Your medic will handle IV resuscitation. 	<p>It is better to prevent shock with hemorrhage control than to treat it. Even if shock is already present, though, the first step in treating it is to control the bleeding. What you can do with direct pressure, hemostatic dressings and tourniquets where indicated is the most critical thing to accomplish in the treatment of shock, and should be accomplished as soon as possible. Your medic will take care of IV resuscitation, but you can save him a lot of time if he doesn't have to apply a tourniquet or Combat Gauze.</p>
<p>83.</p>	 <p>Tactical Field Care Guidelines</p> <p>7. Hypothermia Prevention</p> <ol style="list-style-type: none"> Minimize the casualty's exposure to the elements. Keep protective gear on or with the casualty if feasible. Replace wet clothing with dry if possible. Get the casualty onto an insulated surface as soon as possible. Apply the Ready-Heat Blanket from the Hypothermia Prevention and Management Kit (HPMK) to the casualty's torso (not directly on the skin) and cover the casualty with the Heat-Reflective Shell (HRS). 	<p>Tactical Field Care Guidelines</p> <p>7. Prevention of hypothermia</p> <ol style="list-style-type: none"> Minimize the casualty's exposure to the elements. Keep protective gear on or with the casualty if feasible. Replace wet clothing with dry if possible. Get the casualty onto an insulated surface as soon as possible. Apply the Ready-Heat Blanket from the Hypothermia Prevention and Management Kit (HPMK) to the casualty's torso (not directly on the skin) and cover the casualty with the Heat-Reflective Shell (HRS). 	<p>Read the guidelines.</p>
<p>84.</p>	 <p>Tactical Field Care Guidelines</p> <p>7. Hypothermia Prevention (continued)</p> <ol style="list-style-type: none"> If an HPMK is not available, the previously recommended combination of the Blizzard Survival Blanket and the Ready Heat Blanket may also be used. If the items mentioned above are not available, use dry blankets, poncho liners, sleeping bags, or anything that will retain heat and keep the casualty dry. 	<p>Tactical Field Care Guidelines</p> <p>7. Prevention of hypothermia (cont)</p> <ol style="list-style-type: none"> If an HPMK is not available, the previously recommended combination of the Blizzard Survival Blanket and the Ready Heat blanket may also be used. If the items mentioned above are not available, use dry blankets, poncho liners, sleeping bags, or anything that will retain heat and keep the casualty dry. 	<p>Read the guidelines.</p>
<p>85.</p>	 <p>HPMK</p>	<p>HPMK</p>	<p>This is the Hypothermia Prevention and Management Kit with a Ready-Heat Blanket and a Heat Reflective Shell. The HRS will help to retain the heat produced by the Ready-Heat blanket. It has an incorporated hood and Velcro closures down each side to allow exposure of an arm or a leg. Such exposure allows the medic to attend to IVs and tourniquets.</p>

<p>86.</p>	 <p>Ready-Heat Blanket</p> 	<p>Ready-Heat Blanket</p>	<p>The Ready-Heat blanket generates heat when it's exposed to the air. It can produce temperatures reaching 104°F for up to 8 hours. You should not place it in direct contact with the casualty's bare skin because thermal burns are possible. Place it over the casualty's t-shirt or blouse.</p> <p>Ready-Heat blankets may not work as well at high altitudes. The lower partial pressure of oxygen at high altitudes may not be enough to sustain the chemical reaction required to generate heat.</p>
<p>87.</p>	 <p>Repeat</p> <ul style="list-style-type: none"> • Do NOT place the Ready-Heat Blanket directly on the skin. • There have multiple reports of skin burns resulting from this practice. • Keep cammie top or T-shirt on the casualty • Place the Ready-Heat Blanket over the fabric of the shirt. 	<p>Repeat</p> <ul style="list-style-type: none"> • Do NOT place the Ready-Heat Blanket directly on the skin. • There have multiple reports of skin burns resulting from this practice. • Keep cammie top or T-shirt on the casualty • Place the Ready-Heat Blanket over the fabric of the shirt. 	<p>Read the text.</p>
<p>88.</p>	 <p>Hypothermia Prevention</p> <ul style="list-style-type: none"> • Key Point: Even a small decrease in body temperature can interfere with blood clotting and increase the risk of bleeding to death. • Casualties in shock are unable to generate body heat effectively. • Wet clothes and helicopter evacuations increase body heat loss. • Remove wet clothes and cover the casualty with hypothermia prevention gear. • Hypothermia is much easier to prevent than to treat! 	<p>Hypothermia Prevention</p> <ul style="list-style-type: none"> • Key Point: Even a small decrease in body temperature can interfere with blood clotting and increase the risk of bleeding to death. • Casualties in shock are unable to generate body heat effectively. • Wet clothes and helicopter evacuations increase body heat loss. • Remove wet clothes and cover the casualty with hypothermia prevention gear. • Hypothermia is much easier to prevent than to treat! 	<p>Here we're not talking about hypothermia in the usual sense, which is a body temperature lower than normal do to cold exposure. Here we are talking about keeping the casualty's blood clotting system working!</p> <p>Hypothermia is a problem for casualties with hemorrhagic shock even with warm ambient temperatures. Prevention of hypothermia is the key; once established it is difficult to reverse.</p>

<p>89.</p>	 <p>Tactical Field Care Guidelines</p> <p>8. Penetrating Eye Trauma</p> <p>a. If a penetrating eye injury is noted or suspected:</p> <ul style="list-style-type: none"> • Cover the eye with a rigid eye shield (NOT a pressure patch.) • Ensure that the 400 mg moxifloxacin tablet in the Combat Wound Medication Pack (CWMP) is taken if the casualty can swallow. If she can't, refer to a medic for IV or IM antibiotics. 	<p>Tactical Field Care Guidelines</p> <p>8. Penetrating Eye Trauma</p> <p>a. If a penetrating eye injury is noted or suspected:</p> <ul style="list-style-type: none"> • Cover the eye with a rigid eye shield (NOT a pressure patch.) • Ensure that the 400 mg moxifloxacin tablet in the Combat Wound Medication Pack (CWMP) is taken if the casualty can swallow. If she can't, refer to a medic for IV or IM antibiotics. 	<p>Read the text.</p>
<p>90.</p>		<p>Corneal Laceration</p>	<p>This is a laceration of the cornea of the eye – the clear part in front. Eye contents can leak out if you have an injury like this and bacteria can get into the eye and cause an infection. EITHER of these two things is very bad.</p>
<p>91.</p>		<p>Small Penetrating Eye Injury</p>	<p>Note the dark spot at 10 o'clock in the circle where the clear part of the eye and the white part of the eye come together. The dark spot is a bit of iris, one of the pigmented parts from inside the eye, that is trapped in the penetrating wound.</p>
<p>92.</p>		<p>Protect the eye with a SHIELD, not a patch!</p>	<p>A rigid shield will protect the eye from pressure. Pressure could force the interior contents of the eye to come out – this is a BAD THING! Rigid eye shields are in IFAKs and medical sets.</p>

<p>93.</p>	 <p>Eye Protection</p>  <ul style="list-style-type: none"> • Use tactical eyewear to cover an injured eye if you don't have a shield. • Using tactical eyewear in the field will generally prevent the eye injury from happening in the first place! 	<p>Eye Protection</p> <ul style="list-style-type: none"> • Use tactical eyewear to cover an injured eye if you don't have a shield. • Using tactical eyewear in the field will generally prevent the eye injury from happening in the first place! 	<p>Tactical eyewear can be used to protect the eye if no eye shield is available. Use of tactical eyewear is an excellent way to prevent this type of injury from happening in the first place.</p>
<p>94.</p>	 <p>The Value of Eye Shields</p> 	<p>Video: The Value of Eye Shields</p>	<p>(Click on the photo to start the video.)</p>
<p>95.</p>	 <p>Eye Shields</p> <ul style="list-style-type: none"> • When only one eye has been injured, <i>do not</i> place a shield over the uninjured eye to prevent eye movement. <ul style="list-style-type: none"> – Movement has not been shown to worsen the outcome for the injured eye. – Blindness makes an otherwise ambulatory casualty a litter patient. – Blindness is psychologically stressful. 	<p>Eye Shields</p> <ul style="list-style-type: none"> • When only one eye has been injured, <i>do not</i> place a shield over the uninjured eye to prevent eye movement. <ul style="list-style-type: none"> – Movement has not been shown to worsen the outcome for the injured eye. – Blindness makes an otherwise ambulatory casualty a litter patient. – Blindness is psychologically stressful. 	<p>Read the text.</p> <p>Rigid eye shields should be placed over both eyes only when you are sure, or at least strongly suspect, that both eyes have been injured.</p>
<p>96.</p>	 <p>Penetrating eye injuries can result in eye infections that cause permanent blindness – GIVE ANTIBIOTICS!</p>	<p>Penetrating eye injuries can result in eye infections that cause permanent blindness – GIVE ANTIBIOTICS!</p>	<p>Infection inside the eye is also a BAD THING! Do you want your buddy's eye to look like this? If not, then when he has an eye injury, make sure he takes the moxifloxacin tablet in his combat pill pack if he is able to swallow. If he can't swallow for some reason, the medic will have to give him antibiotics by IM injection or IV.</p>

<p>97.</p>	<p> Tactical Field Care Guidelines</p> <p>9. Pain relief on the battlefield: a. For mild to moderate pain that will not keep the casualty out of the fight: - Combat Wound Medication Pack:  <ul style="list-style-type: none"> - Tylenol - 650-mg bilayer caplet, 2 PO every 8 hours - Meloxicam - 15 mg PO once a day </p>	<p>Tactical Field Care Guidelines</p> <p>9. Pain relief on the battlefield: a. For mild to moderate pain that will not keep the casualty out of the fight: - Combat Wound Medication Pack: <ul style="list-style-type: none"> - Tylenol - 650-mg bilayer caplet, 2 PO every 8 hours - Meloxicam - 15 mg PO once a day </p>	<p>Read the guideline.</p> <p>Two large, slow-release Tylenol caplets and one long-lasting meloxicam tablet are in the Combat Wound Medication Pack. This combination can give significant pain relief, and will not alter the casualty's mental status. This is a good option when the casualty's pain and wounds are not severe enough to keep him out of the fight.</p>
<p>98.</p>	<p> Meloxicam</p> <ul style="list-style-type: none"> • Non-steroidal anti-inflammatory (NSAID) • Preferred to other NSAIDs <ul style="list-style-type: none"> - Does not interfere with platelet function needed for clot formation. - Other NSAIDs should be avoided by deployed personnel. 	<p>Meloxicam</p> <ul style="list-style-type: none"> • Non-steroidal anti-inflammatory (NSAID) • Preferred to other NSAIDs <ul style="list-style-type: none"> - Does not interfere with platelet function needed for clot formation. - Other NSAIDs should be avoided by deployed personnel. 	<p>Popular NSAIDs include ibuprofen, naproxen and aspirin. These interfere with the role of platelets in clot formation, and this interference may contribute significantly to your risk of bleeding to death if you are wounded in combat. Meloxicam does not alter platelet function, and is the preferred NSAID for personnel who may see combat in the next 7-10 days.</p>
<p>99.</p>	<p> Tactical Field Care Guidelines</p> <p>10. Pain relief on the battlefield: If the casualty's pain is severe enough to interfere with his ability to fight, refer him to a medic for treatment.</p>	<p>Tactical Field Care Guidelines</p> <p>9. Pain relief on the battlefield: b. If the casualty's pain is severe enough to interfere with his ability to fight, refer him to a medic for treatment.</p>	<p>Read the guideline.</p> <p>If the casualty has wounds or pain severe enough to render him unable to fight, then the medic has other options for more serious pain relief. Giving these meds will generally require that the casualty be disarmed because they can alter the casualty's mental status.</p>
<p>100.</p>	<p></p>	<p>Questions?</p>	

<p>101.</p>	 <p>Tactical Field Care Guidelines</p> <p>10. Antibiotics: recommended for all open combat wounds</p> <p>a. If the casualty can swallow:</p> <ul style="list-style-type: none"> • Moxifloxacin (from the CWMP), 400 mg by mouth once a day <p>b. If the casualty can't swallow (shock, unconsciousness):</p> <ul style="list-style-type: none"> • Refer to a medic for treatment. 	<p>Tactical Field Care Guidelines</p> <p>10. Antibiotics: recommended for all open combat wounds</p> <p>a. If the casualty can swallow: Moxifloxacin (from the CWMP), 400 mg by mouth once a day</p> <p>b. If the casualty can't swallow (shock, unconsciousness): Refer to a medic for treatment.</p>	<p>Read the guidelines.</p> <p>Moxifloxacin is in the Combat Wound Medication Pack in the casualty's IFAK. It is a pill taken orally, it is effective against most bacteria, it has few side effects, and it is relatively inexpensive. For these reasons, it is the TCCC oral antibiotic of choice.</p>
<p>102.</p>	 <p>Outcomes: <u>Without</u> Battlefield Antibiotics</p> <ul style="list-style-type: none"> • Mogadishu 1993 • Casualties: 58 • Wound Infections: 16 • Infection rate: 28% • Time from wounding to Level II care – 15 hrs. <p><i>Mahry et al J Trauma 2000</i></p> 	<p>Outcomes: <u>Without</u> Battlefield Antibiotics</p> <ul style="list-style-type: none"> • Mogadishu 1993 • Casualties: 58 • Wound Infections: 16 • Infection rate: 28% • Time from wounding to Level II care – 15 hrs. 	<p>Why bother giving antibiotics? Why not just wait until the casualty gets to the hospital? ANTIBIOTICS MUST BE GIVEN EARLY TO PREVENT WOUND INFECTIONS. WOUND INFECTIONS CAN KILL THE CASUALTY OR DELAY HIS RECOVERY. This scenario from the Battle of Mogadishu is the first of three examples we'll look at.</p>
<p>103.</p>	 <p>Outcomes: <u>With</u> Battlefield Antibiotics</p> <p>Tarpey – AMEDD J 2005:</p> <ul style="list-style-type: none"> • 32 casualties with open wounds • All received battlefield antibiotics • <u>None</u> developed wound infections 	<p>Outcomes: <u>With</u> Battlefield Antibiotics</p> <p>Tarpey – AMEDD J 2005:</p> <ul style="list-style-type: none"> • 32 casualties with open wounds • All received battlefield antibiotics • <u>None</u> developed wound infections 	<p>In this scenario where all the casualties received antibiotics on the battlefield, there was a huge improvement over the wound infection rate seen in Mogadishu.</p>
<p>104.</p>	 <p>Outcomes: <u>With</u> Battlefield Antibiotics</p> <ul style="list-style-type: none"> • MSG Ted Westmoreland • Special Operations Medical Association presentation 2004 • Multiple casualty scenario involving 19 Ranger and Special Forces WIA as well as 30 Iraqi WIA • 11-hour delay to hospital care • Battlefield antibiotics given • No wound infections developed in this group. 	<p>Outcomes: <u>With</u> Battlefield Antibiotics</p> <ul style="list-style-type: none"> • MSG Ted Westmoreland • Special Operations Medical Association presentation 2004 • Multiple casualty scenario involving 19 Ranger and Special Forces WIA as well as 30 Iraqi WIA • 11-hour delay to hospital care • Battlefield antibiotics given • No wound infections developed in this group. 	<p>Lesson learned: GIVE antibiotics on the battlefield!</p>

<p>105.</p>	 <p>Battlefield Antibiotics</p>  <p>Recommended for all open wounds on the battlefield!</p>	<p>Battlefield Antibiotics</p> <p>Recommended for all open wounds on the battlefield!</p>	<p>Even wounds much less severe than this warrant antibiotic coverage. Any significant break in the skin should be treated with antibiotics as soon after the wound is sustained as possible.</p>
<p>106.</p>	 <p>Battlefield Antibiotics</p> <p>If casualty can take PO meds</p> <ul style="list-style-type: none"> • Moxifloxacin 400 mg, one tablet daily <ul style="list-style-type: none"> – Broad spectrum – kills most bacteria – Few side effects – Take as soon as possible after life-threatening conditions have been addressed – Delays in antibiotic administration increase the risk of wound infections 	<p>Battlefield Antibiotics</p> <p>If casualty can take PO meds</p> <ul style="list-style-type: none"> • Moxifloxacin 400 mg, one tablet daily <ul style="list-style-type: none"> – Broad spectrum – kills most bacteria – Few side effects – Take <u>as soon as possible</u> after life-threatening conditions have been addressed – Delays in antibiotic administration increase the risk of wound infections 	<p>Moxifloxacin – chosen after a careful review of available choices. It is the best choice of antibiotics in pill form for use in combat trauma.</p>
<p>107.</p>	 <p>Combat Wound Medication Pack</p>  <p><small>In the event of open combat wound swallow all four pills with water.</small></p> <p><small>Meloxicam 15mg Tylenol ER 650mg, 2 caplets Moxifloxacin 400mg</small></p> <p><small>Pain Management and Infection Control For Combat Operations "Just Got Easier To Swallow"</small></p>	<p>Combat Wound Medication Pack</p> <p>Meloxicam 15mg Tylenol ER 650mg, 2 caplets Moxifloxacin 400mg</p>	<p>So here's the best plan - pre-packaged oral pain meds and antibiotics in a foil pouch. These meds should be carried by EVERYONE in the unit and self-administered as soon as possible after sustaining a wound.</p>
<p>108.</p>	 <p>Battlefield Antibiotics</p> <ul style="list-style-type: none"> • Casualties who cannot take PO meds should receive IM or IV antibiotic treatment from a medic. • NOTE: Every member of the unit should be screened for allergies to medications. The medic will make other arrangements for those who should not take the meds in the combat pill pack. 	<p>Battlefield Antibiotics</p> <ul style="list-style-type: none"> • Casualties who cannot take PO meds should receive IM or IV antibiotic treatment from a medic. • NOTE: Every member of the unit should be screened for allergies to medications. The medic will make other arrangements for those who should not take the meds in the combat pill pack. 	<p>Read the text.</p>

<p>109.</p>	<p> Tactical Field Care Guidelines</p> <p>11. Inspect and dress known wounds. 12. Check for additional wounds.</p> 	<p>Tactical Field Care Guidelines</p> <p>11. Inspect and dress known wounds. 12. Check for additional wounds.</p>	<p>Read the guidelines</p> <p>When a casualty has a major and obvious wound, it is easy to miss lesser wounds. Even the casualty may be unaware of them. As time and the tactical situation permit, make sure all the casualty's wounds are identified and treated.</p>
<p>110.</p>	<p> Tactical Field Care Guidelines</p> <p>13. Burns a. Facial burns, especially those that occur in closed spaces, may be associated with toxic or thermal injury to the airways and lungs. Aggressively monitor the casualty's airway status and refer to a medic as soon as possible. b. Cover the burn area with dry, sterile dressings. For extensive burns, consider placing the casualty in the Heat-Reflective Shell or Blizzard Survival Blanket from the Hypothermia Prevention Kit in order to both cover the burned areas and prevent hypothermia. c. Refer any casualty with extensive or severe burns to a medic as soon as possible.</p> 	<p>Tactical Field Care Guidelines</p> <p>13. Burns</p> <p>a. Facial burns, especially those that occur in closed spaces, may be associated with toxic or thermal injury to the airways and lungs. Aggressively monitor the casualty's airway status and refer to a medic as soon as possible.</p> <p>b. Cover the burn area with dry, sterile dressings. For extensive burns, consider placing the casualty in the Heat-Reflective Shell or Blizzard Survival Blanket from the Hypothermia Prevention Kit in order to both cover the burned areas and prevent hypothermia.</p> <p>c. Refer any casualty with extensive or severe burns to a medic as soon as possible.</p>	<p>Read the guidelines.</p>
<p>111.</p>	<p> Tactical Field Care Guidelines</p> <p>14. Splint fractures and recheck pulses.</p> 	<p>Tactical Field Care Guidelines</p> <p>14. Splint fractures and recheck pulses.</p>	<p>Read the guideline.</p>

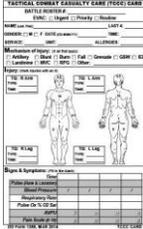
<p>112.</p>	<p> Fractures: Open or Closed</p> <ul style="list-style-type: none"> • <u>Open Fracture</u> – associated with an overlying skin wound • <u>Closed Fracture</u> – no overlying skin wound <p>Open fracture  Closed fracture </p>	<p>Fractures: Open or Closed</p> <ul style="list-style-type: none"> • <u>Open Fracture</u> – associated with an overlying skin wound • <u>Closed Fracture</u> – no overlying skin wound 	<p>Open fractures present a major threat of serious infection.</p>
<p>113.</p>	<p> Clues to a Closed Fracture</p> <ul style="list-style-type: none"> • Trauma with significant pain AND • Marked swelling • Audible or perceived snap • Different length or shape of limb • Loss of pulse or sensation distally • Crepitus (“crunchy” sound) 	<p>Clues to a Closed Fracture</p> <ul style="list-style-type: none"> • Trauma with significant pain AND • Marked swelling • Audible or perceived snap • Different length or shape of limb • Loss of pulse or sensation distally • Crepitus (“crunchy” sound) 	<p>These are the warning signs that an arm or leg might be fractured.</p>
<p>114.</p>	<p> Splinting Objectives</p> <ul style="list-style-type: none"> • Prevent further injury • Protect blood vessels and nerves <ul style="list-style-type: none"> - Check pulse before and after splinting • Make the casualty more comfortable <p></p>	<p>Splinting Objectives</p> <ul style="list-style-type: none"> • Prevent further injury • Protect blood vessels and nerves <ul style="list-style-type: none"> - Check pulse before and after splinting • Make the casualty more comfortable 	<p>Why do we take the time to splint fractures?</p>
<p>115.</p>	<p> Principles of Splinting</p> <ul style="list-style-type: none"> • <u>Check for other injuries</u> • Use rigid or bulky materials • Try to pad or wrap if using rigid splint • Secure splint with ace wrap, cravats, belts, duct tape • Try to splint before moving the casualty 	<p>Principles of Splinting</p> <ul style="list-style-type: none"> • <u>Check for other injuries</u> • Use rigid or bulky materials • Try to pad or wrap if using rigid splint • Secure splint with ace wrap, cravats, belts, duct tape • Try to splint before moving the casualty 	<p>Here are some of the things that you want to do when splinting a fracture.</p>

<p>116.</p>	 <p>Principles of Splinting</p> <ul style="list-style-type: none"> • Minimize manipulation of extremity before splinting • Incorporate joint above and below • Arm fractures can be splinted to shirt using sleeve • Consider traction splinting for mid-shaft femur fractures • Check distal pulse and skin color before and after splinting 	<p>Principles of Splinting</p> <ul style="list-style-type: none"> • Minimize manipulation of the extremity before splinting. • Incorporate one joint above and below the fracture. • Arm fractures can be splinted to the shirt using the sleeve. • Consider traction splinting for mid-shaft femur fractures. • Check distal pulse and skin color before and after splinting. 	<p>Note that traction splinting is something the Combat Life Saver or medic should do.</p>
<p>117.</p>	 <p>Things to Avoid in Splinting</p> <ul style="list-style-type: none"> • Manipulating the fracture too much and damaging blood vessels or nerves • Wrapping the splint too tight and cutting off circulation below the splint 	<p>Things to Avoid in Splinting</p> <ul style="list-style-type: none"> • Manipulating the fracture too much and damaging blood vessels or nerves • Wrapping the splint too tight and cutting off circulation below the splint 	<p>You can do harm with splinting, so be careful.</p>
<p>118.</p>	 <p>Commercial Splints</p> 	<p>Commercial Splints</p>	<p>This pneumatic splint and this flexible splint are a couple of the many commercial splints available.</p>
<p>119.</p>	 <p>Field-Expedient Splint Materials</p> <ul style="list-style-type: none"> • Shirt sleeves/safety pins • Weapons • Boards • Boxes • Tree limbs • ThermoRest pad 	<p>Field-Expedient Splint Materials</p> <ul style="list-style-type: none"> • Shirt sleeves/safety pins • Weapons • Boards • Boxes • Tree limbs • ThermoRest pad 	<p>Remember to pad rigid splints. If you use a weapon as a splint – don't forget to unload and safe it first!</p>

<p>120.</p>	 <p>Don't Forget!</p>  <p>Pulse, motor and sensory checks before and after splinting!</p>	<p>Don't Forget!</p> <p>Pulse, motor and sensory checks before and after splinting!</p>	<p>The most important aspect of splinting is to splint in a way that does not harm the nerves or blood vessels in the splinted extremity. Check for this by assessing circulation and motor and sensory status before and after splinting. Circulation: check pulses distal to the splint. Motor: ask the casualty to move the body parts distal to the splint, e.g. – fingers or toes. Sensory: see if the casualty can feel a gentle touch on the body parts distal to the splint.</p>
<p>121.</p>	 <p>Splinting Practical</p> 	<p>Splinting Practical</p>	
<p>122.</p>	 <p>Tactical Field Care Guidelines</p> <p>15. Communicate</p> <ol style="list-style-type: none"> Encourage and reassure the casualty. Explain to the casualty what you are doing to help him/her. 	<p>Tactical Field Care Guidelines</p> <p>15. Communicate</p> <ol style="list-style-type: none"> Encourage and reassure the casualty. Explain to the casualty what you are doing to help him/her. 	<p>Read the guidelines.</p>
<p>123.</p>	 <p>Tactical Field Care Guidelines</p> <p>15. Communicate (continued)</p> <ol style="list-style-type: none"> Communicate with tactical leadership as soon as possible and throughout casualty treatment as needed. Communicate with the evacuation system (the Patient Evacuation Coordination Cell) to arrange for TACEVAC. 	<p>Tactical Field Care Guidelines</p> <p>15. Communicate (continued)</p> <ol style="list-style-type: none"> Communicate with tactical leadership as soon as possible and throughout casualty treatment as needed. Communicate with the evacuation system (the Patient Evacuation Coordination Cell) to arrange for TACEVAC. 	<p>Read the guidelines.</p>

<p>124.</p>	 <p>Tactical Field Care Guidelines</p> <p>16. Cardiopulmonary resuscitation (CPR)</p> <p>a. Resuscitation on the battlefield for victims of blast or penetrating trauma who have no pulse, no ventilations, and no other signs of life will not be successful and should not be attempted.</p>	<p>Tactical Field Care Guidelines</p> <p>16. Cardiopulmonary resuscitation (CPR)</p> <p>a. Resuscitation on the battlefield for victims of blast or penetrating trauma who have no pulse, no ventilations, and no other signs of life will not be successful and should not be attempted.</p>	<p>Read the guideline.</p>
<p>125.</p>	 <p>CPR</p>  <p><u>NO</u> battlefield CPR for combat trauma victims.</p>	<p>CPR</p> <p><u>NO</u> battlefield CPR for combat trauma victims.</p>	<p>Why not???</p>
<p>126.</p>	 <p>CPR in Civilian Trauma</p> <ul style="list-style-type: none"> • 138 trauma patients with prehospital cardiac arrest and in whom resuscitation was attempted. • <u>No</u> survivors • Authors recommended that trauma patients in cardiopulmonary arrest not be transported emergently to a trauma center even in a civilian setting due to large economic cost of treatment without a significant chance for survival. <p><small>Rosemurgy et al. J Trauma 1993</small></p>	<p>CPR in Civilian Trauma</p> <ul style="list-style-type: none"> • 138 trauma patients with prehospital cardiac arrest and in whom resuscitation was attempted. • <u>No</u> survivors • Authors recommended that trauma patients in cardiopulmonary arrest not be transported emergently to a trauma center even in a civilian setting due to large economic cost of treatment without a significant chance for survival. <p><i>Rosemurgy et al. J Trauma 1993</i></p>	<p>Because CPR done for trauma patients in cardiac arrest DOES NOT WORK!</p> <p>CPR may work SOMETIMES for cardiac patients without trauma – but not for trauma patients.</p>
<p>127.</p>	 <p>The Cost of Attempting CPR on the Battlefield</p> <ul style="list-style-type: none"> • CPR performers may get killed • Mission gets delayed • Casualty stays dead 	<p>The Cost of Attempting CPR on the Battlefield</p> <ul style="list-style-type: none"> • CPR performers may get killed • Mission gets delayed • Casualty stays dead 	<p>In combat, futile attempts at CPR may interfere with caring for casualties who have a chance to survive and may interfere with the unit's ongoing mission.</p>

<p>128.</p>	 <p>CPR on the Battlefield (Ranger Airfield Operation in Grenada)</p> <ul style="list-style-type: none"> • Airfield seizure operation • Ranger shot in the head by sniper • No pulse or respirations • CPR attempts unsuccessful • Operation delayed while CPR performed • Ranger PA finally intervened: "Stop CPR and move out!" 	<p>CPR on the Battlefield (Ranger Airfield Operation in Grenada)</p> <ul style="list-style-type: none"> • Airfield seizure operation • Ranger shot in the head by sniper • No pulse or respirations • CPR attempts unsuccessful • Operation delayed while CPR performed • Ranger PA finally intervened: "Stop CPR and move out!" 	<p>Here is a real-world example. A very large-scale operation could have been compromised by a tactical medicine mistake.</p>
<p>129.</p>	 <p>CPR in Tactical Settings</p> <p>Only in the case of cardiac arrests from:</p> <ul style="list-style-type: none"> - Hypothermia - Near-drowning - Electrocutation - Other non-traumatic causes <p>should CPR be <i>considered</i> prior to the Tactical Evacuation Care phase.</p>	<p>CPR in Tactical Settings</p> <p>Only in the case of cardiac arrests from:</p> <ul style="list-style-type: none"> - Hypothermia - Near-drowning - Electrocutation - Other non-traumatic causes <p>should CPR be <i>considered</i> prior to the Tactical Evacuation Care phase.</p>	<p>There are some notable exceptions to this rule. Individuals with these disorders have a better chance of survival. Keep in mind, though, that it's pretty rare for combat troops to have heart attacks in the middle of an op.</p>
<p>130.</p>	 <p>Questions?</p> 	<p>Questions?</p>	
<p>131.</p>	 <p>Tactical Field Care Guidelines</p> <p>17. Documentation of Care</p> <p>a. Document clinical assessments, treatments rendered, and changes in the casualty's status on a TCCC Card (DD Form 1380). Forward this information with the casualty to the next level of care.</p>	<p>Tactical Field Care Guidelines</p> <p>17. Documentation of Care:</p> <p>a. Document any care given and changes in the casualty's status on a TCCC Casualty Card (DD Form 1380). Forward this information with the casualty to the next level of care.</p>	<p>Read the guideline.</p>

<p>132.</p>	 <p>TCCC Casualty Card</p> <ul style="list-style-type: none"> • Designed by combat medics • Used in combat since 2002 • Replaced old DD Form 1380 • Only essential information • Can be used by hospital to document injuries sustained and field treatments rendered • Heavy-duty waterproof or laminated paper 	<p>TCCC Casualty Card</p> <ul style="list-style-type: none"> • Designed by combat medics • Used in combat since 2002 • Replaced old DD Form 1380 • Only essential information • Can be used by hospital to document injuries sustained and field treatments rendered • Heavy-duty waterproof or laminated paper 	<p>Medical documentation may be difficult to accomplish in tactical settings, but it is so important to the casualty’s subsequent care that every effort should be made.</p>
<p>133.</p>	 <p>TCCC Casualty Card</p> <ul style="list-style-type: none"> • This card is based on the principles of TCCC. • It addresses the initial lifesaving care provided at the point of wounding. • Filled out by <i>whoever</i> is caring for the casualty. • Filling it out is simple with a circle or “X” in the appropriate block. 	<p>TCCC Casualty Card</p> <ul style="list-style-type: none"> • This card is based on the principles of TCCC. • It addresses the initial lifesaving care provided at the point of wounding. • Filled out by <i>whoever</i> is caring for the casualty. • Filling it out is simple with a circle or “X” in the appropriate block. 	<p>Read the text.</p>
<p>134.</p>	 <p>TCCC Casualty Card Front</p> 	<p>TCCC Casualty Card Front</p>	<p>This is the front of the TCCC Casualty Card.</p>
<p>135.</p>	 <p>TCCC Casualty Card Back</p> 	<p>TCCC Casualty Card Back</p>	<p>And this is the back.</p>

<p>136.</p>	 <p>Instructions</p> <ul style="list-style-type: none"> • A TCCC Casualty Card should be in each Individual First Aid Kit. • Use an indelible marker to fill it out. • When used, attach it to the casualty's belt loop, or place it in their upper left sleeve, or the left trouser cargo pocket. • Include as much information as you can. 	<p>Instructions</p> <ul style="list-style-type: none"> • A TCCC Casualty Card should be in each Individual First Aid Kit. • Use an indelible marker to fill it out. • When used, attach it to the casualty's belt loop, or place it in their upper left sleeve, or the left trouser cargo pocket. • Include as much information as you can. 	<p>Read the text.</p>
<p>137.</p>	 <p>Documentation</p> <ul style="list-style-type: none"> • Record each specific intervention in each category. • If you are not sure what to do, the card will prompt you where to go next. • Simply circle the intervention you performed. • Explain any action you want clarified in the remarks area. 	<p>Documentation</p> <ul style="list-style-type: none"> • Record each specific intervention in each category. • If you are not sure what to do, the card will prompt you where to go next. • Simply circle the intervention you performed. • Explain any action you want clarified in the remarks area. 	<p>Read the text.</p>
<p>138.</p>	 <p>Documentation</p> <ul style="list-style-type: none"> • The card does not imply that every casualty needs all of these interventions. • You may not be able to perform all of the interventions that the casualty needs. • The next person caring for the casualty can add to the interventions performed. • This card can be filled out in less than two minutes. • It is important that we document the care given to the casualty. 	<p>Documentation</p> <ul style="list-style-type: none"> • The card does not imply that every casualty needs all of these interventions. • You may not be able to perform all of the interventions that the casualty needs. • The next person caring for the casualty can add to the interventions performed. • This card can be filled out in less than two minutes. • It is important that we document the care given to the casualty. 	<p>Read the text.</p>

<p>139.</p>	 <p>TCCC Card Abbreviations</p> <ul style="list-style-type: none"> • DTG = Date-Time Group (e.g. – 160010Oct2009) • NBC = Nuclear, Biological, Chemical • TQ = Tourniquet • GSW = Gunshot Wound • MVA = Motor Vehicle Accident • AVPU = Alert, Verbal stimulus, Painful stimulus, Unresponsive • Cric = Cricothyroidotomy • NeedleD = Needle decompression • IV = Intravenous • IO = Intraosseous • NS = Normal Saline • LR = Lactated Ringers • ABX = Antibiotics 	<p>TCCC Card Abbreviations</p> <ul style="list-style-type: none"> • DTG = Date-Time Group (e.g. – 160010Oct2009) • NBC = Nuclear, Biological, Chemical • TQ = Tourniquet • GSW = Gunshot Wound • MVA = Motor Vehicle Accident • AVPU = Alert, Verbal stimulus, Painful stimulus, Unresponsive • Cric = Cricothyroidotomy • NeedleD = Needle decompression • IV = Intravenous • IO = Intraosseous • NS = Normal Saline • LR = Lactated Ringers • ABX = Antibiotics 	<p>Review the abbreviations.</p>
<p>140.</p>		<p>Questions?</p>	
<p>141.</p>	 <p>Tactical Field Care Guidelines</p> <p>18. Prepare for Evacuation</p> <ol style="list-style-type: none"> a. Complete and secure the TCCC Card (DD 1380) to the casualty. b. Secure all loose ends of bandages and wraps. c. Secure hypothermia prevention wraps/blankets/straps. d. Secure litter straps as required. Consider additional padding for long evacuations. 	<p>Tactical Field Care Guidelines</p> <p>18. Prepare for Evacuation</p> <ol style="list-style-type: none"> a. Complete and secure the TCCC Card (DD 1380) to the casualty. b. Secure all loose ends of bandages and wraps. c. Secure hypothermia prevention wraps/blankets/straps. d. Secure litter straps as required. Consider additional padding for long evacuations. 	<p>Read the guidelines.</p> <p>Here are some things you should take care of to make the casualty ready for transport off the battlefield.</p>

<p>142.</p>	 <p>Tactical Field Care Guidelines</p> <p>18. Prepare for Evacuation (continued) e. Provide instructions to ambulatory patients as needed. f. Stage casualties for evacuation in accordance with unit standard operating procedures. g. Maintain security at the evacuation point in accordance with unit standard operating procedures.</p>	<p>Tactical Field Care Guidelines</p> <p>18. Prepare for Evacuation (continued) e. Provide instructions to ambulatory patients as needed. f. Stage casualties for evacuation in accordance with unit standard operating procedures. g. Maintain security at the evacuation point in accordance with unit standard operating procedures.</p>	<p>Read the guidelines.</p>
<p>143.</p>	 <p>Further Elements of Tactical Field Care</p> <ul style="list-style-type: none"> • Reassess regularly. • Minimize removal of the uniform and protective gear, but get the job done. • Replace body armor after care, or at least keep it with the casualty. He or she may need it again if there is additional contact. 	<p>Further Elements of Tactical Field Care</p> <ul style="list-style-type: none"> • Reassess regularly. • Minimize removal of the uniform and protective gear, but get the job done. • Replace body armor after care, or at least keep it with the casualty. He or she may need it again if there is additional contact. 	<p>Here are a few final points.</p>
<p>144.</p>	 <p>Further Elements of Tactical Field Care</p> <p>Casualty movement in TFC may be better accomplished using litters.</p> 	<p>Further Elements of Tactical Field Care</p> <p>Casualty movement in TFC may be better accomplished using litters.</p>	<p>Remember that we used carries and drags in Care Under Fire. We did it that way to get the casualty to cover as quickly as possible. Now we have time to use litters. Litters are often better for moving casualties over a long distance. Casualties do NOT have to be placed supine on a litter. The litter exists only to facilitate casualty movement. The casualty can be placed in the best position that facilitates his care and comfort. The casualty must, however, be secured to litter prior to movement.</p>
<p>145.</p>	 <p>Litter Carry Video</p> <ul style="list-style-type: none"> • Secure the casualty on the litter • Bring his weapon 	<p>Litter Carry Video</p> <ul style="list-style-type: none"> • Secure the casualty on the litter • Bring his weapon 	<p>(Click on the photo to start the video.)</p> <p>Remember - Don't let the casualty fall off the litter!</p>

<p>146.</p>	 <p>Summary of Key Points</p> <ul style="list-style-type: none"> • Still in hazardous environment • Limited medical resources • Hemorrhage control • Airway management • Breathing • Hypothermia prevention 	<p>Summary of Key Points</p> <ul style="list-style-type: none"> • Still in hazardous environment • Limited medical resources • Hemorrhage control • Airway management • Breathing • Hypothermia prevention 	<p>TFC takes place in a hazardous environment. The enemy may be close, and medical support may be far away. There is more time here than in Care Under Fire, but still, you should do only those aspects of care that are really important. Remember that your unit may have to move quickly at short notice.</p>
<p>147.</p>	 <p>Summary of Key Points</p> <ul style="list-style-type: none"> • Shield and antibiotics for penetrating eye injuries • Pain control • Antibiotics • Reassure casualties • No CPR for combat trauma victims • Documentation of care 	<p>Summary of Key Points</p> <ul style="list-style-type: none"> • Shield and antibiotics for penetrating eye injuries • Pain control • Antibiotics • Reassure casualties • No CPR for combat trauma victims • Documentation of care 	<p>Review these points from the guidelines.</p>
<p>148.</p>	 <p>Questions?</p>  <p>Wear your body armor!</p>	<p>Questions?</p> <p>Wear your body armor!</p>	
<p>149.</p>	 <p>Management of Wounded Hostile Combatants</p>	<p>Management of Wounded Hostile Combatants</p>	<p>When you are taking care of casualties who were recently fighting for the other side, there are a few additional things to remember.</p>

<p>150.</p>	 <p>Objective</p> <ul style="list-style-type: none"> • DESCRIBE the considerations in rendering trauma care to wounded hostile combatants. 	<p>Objective</p> <ul style="list-style-type: none"> • DESCRIBE the considerations in rendering trauma care to wounded hostile combatants. 	<p>Read the text.</p>
<p>151.</p>	 <p>Care for Wounded Hostile Combatants</p> <ul style="list-style-type: none"> • No medical care during Care Under Fire • Though wounded, enemy personnel may still act as hostile combatants <ul style="list-style-type: none"> –May employ any weapons or detonate any ordnance they are carrying • Enemy casualties are <u>hostile combatants</u> until they: <ul style="list-style-type: none"> –Indicate surrender –Drop all weapons –Are proven to no longer pose a threat 	<p>Care for Wounded Hostile Combatants</p> <ul style="list-style-type: none"> • No medical care during Care Under Fire • Though wounded, enemy personnel may still act as hostile combatants <ul style="list-style-type: none"> – May employ any weapons or detonate any ordnance they are carrying • Enemy casualties are <u>hostile combatants</u> until they: <ul style="list-style-type: none"> – Indicate surrender – Drop all weapons – Are proven to no longer pose a threat 	<p>Remember that wounded hostile combatants still represent a lethal threat.</p>
<p>152.</p>	 <p>Care for Wounded Hostile Combatants</p> <ul style="list-style-type: none"> • You should not attempt to provide medical care until you are sure that the wounded hostile combatant has been rendered safe. • Restrain with flex cuffs or other devices if not already done. • Search for weapons and/or ordnance. • Silence to prevent communication with other hostile combatants. 	<p>Care for Wounded Hostile Combatants</p> <ul style="list-style-type: none"> • You should not attempt to provide medical care until you are sure that the wounded hostile combatant has been rendered safe. • Restrain with flex cuffs or other devices if not already done. • Search for weapons and/or ordnance. • Silence to prevent communication with other hostile combatants. 	<p>These are just VERY BASIC prisoner handling guidelines.</p>
<p>153.</p>	 <p>Care for Wounded Hostile Combatants</p> <ul style="list-style-type: none"> • Segregate from other captured hostile combatants. • Safeguard from further injury. • Care as per TFC guidelines for U.S. forces after the steps above are accomplished. • Speed to the rear as medically and tactically feasible 	<p>Care for Wounded Hostile Combatants</p> <ul style="list-style-type: none"> • Segregate from other captured hostile combatants. • Safeguard from further injury. • Care as per TFC guidelines for U.S. forces after the steps above are accomplished. • Speed to the rear as medically and tactically feasible 	<p>Once the hostile combatants have been searched and secured, the care provided should be the same as for U.S. and coalition forces per the Geneva Convention.</p>

<p>154.</p>		<p>QUESTIONS?</p>	
<p>155.</p>	<p>Convoy IED Scenario</p> <ul style="list-style-type: none"> Recap from Care Under Fire Your last medical decision during Care Under Fire: <ul style="list-style-type: none"> Placed tourniquet on left stump You moved the casualty behind cover and returned fire. You provided an update to your mission commander 	<p>Convoy IED Scenario</p> <ul style="list-style-type: none"> Recap from Care Under Fire Your last medical decision during Care Under Fire: <ul style="list-style-type: none"> Placed tourniquet on left stump You moved the casualty behind cover and returned fire. You provided an update to your mission commander 	<p>OK – let’s go back to our scenario that we started in Care Under Fire. Your element was in a five-vehicle convoy moving through a small Iraqi village when a command-detonated IED exploded under the second vehicle. Your only medic sustained bilateral mid-thigh amputations. He had heavy arterial bleeding from the left stump, and the right stump was only mildly oozing blood.</p>
<p>156.</p>	<p>Convoy IED Scenario</p> <p>Assumptions in discussing TFC in this scenario:</p> <ul style="list-style-type: none"> Effective hostile fire has been suppressed. Team Leader has directed that the unit will move. Pre-designated HLZ for helicopter evacuation is 15 minutes away. Flying time to hospital is 30 minutes. Ground evacuation time is 3 hours. Enemy threat to helicopter at HLZ estimated to be minimal. 	<p>Convoy IED Scenario</p> <p>Assumptions in discussing TFC in this scenario:</p> <ul style="list-style-type: none"> Effective hostile fire has been suppressed. Team Leader has directed that the unit will move. Pre-designated HLZ for helicopter evacuation is 15 minutes away. Flying time to hospital is 30 minutes. Ground evacuation time is 3 hours. Enemy threat to helicopter at HLZ estimated to be minimal. 	<p>Read the text.</p>
<p>157.</p>	<p>Convoy IED Scenario</p> <p>Next decision (Command Element)?</p> <ul style="list-style-type: none"> How to evacuate casualty? <ul style="list-style-type: none"> Helicopter <ul style="list-style-type: none"> Longer time delay for ground evacuation Enemy threat at HLZ acceptable 	<p>Convoy IED Scenario</p> <p>Next decision (Command Element)?</p> <ul style="list-style-type: none"> How to evacuate casualty? <ul style="list-style-type: none"> Helicopter <ul style="list-style-type: none"> Longer time delay for ground evacuation Enemy threat at HLZ acceptable 	<p>What’s the next decision? CASEVAC by air is chosen because it is significantly faster than ground CASEVAC in this scenario.</p>

<p>158.</p>	<p> Convoy IED Scenario</p> <p>Next decision (Command Element)?</p> <ul style="list-style-type: none"> • Load first and treat enroute to HLZ or treat first and load after? <ul style="list-style-type: none"> – Load and Go – Why? <ul style="list-style-type: none"> • You can continue treatment enroute • Avoids potential second attack at ambush site 	<p>Convoy IED Scenario</p> <p>Next decision (Command Element)?</p> <ul style="list-style-type: none"> • Load first and treat enroute to HLZ or treat first and load after? <ul style="list-style-type: none"> – Load and Go – Why? <ul style="list-style-type: none"> • You can continue treatment enroute • Avoids potential second attack at ambush site 	<p>Read the text.</p> <p>Get the unit off the X – the enemy now knows where you are.</p>
<p>159.</p>	<p> Convoy IED Scenario</p> <p>You put the casualty on a litter. Ten minutes later, you and the casualty are in a vehicle enroute to HLZ.</p> <p>Next action?</p> <ul style="list-style-type: none"> • Reassess casualty <ul style="list-style-type: none"> – Casualty is now unconscious! – No bleeding from first tourniquet site – Other stump noted to have severe bleeding 	<p>Convoy IED Scenario</p> <p>You put the casualty on a litter. Ten minutes later, you and the casualty are in a vehicle enroute to HLZ.</p> <p>Next action?</p> <ul style="list-style-type: none"> • Reassess casualty <ul style="list-style-type: none"> – Casualty is now unconscious! – No bleeding from first tourniquet site – Other stump noted to have severe bleeding 	<p>Read the text.</p>
<p>160.</p>	<p> Convoy IED Scenario</p> <ul style="list-style-type: none"> • Next action? <ul style="list-style-type: none"> – Place tourniquet on 2nd stump • Next action? <ul style="list-style-type: none"> – Remove any weapons or ordnance that the casualty may be carrying. • Next action? <ul style="list-style-type: none"> – Place nasopharyngeal airway • Next action? <ul style="list-style-type: none"> – Make sure he's not bleeding heavily elsewhere – Check for other trauma 	<p>Convoy IED Scenario</p> <ul style="list-style-type: none"> • Next action? <ul style="list-style-type: none"> – Place tourniquet on 2nd stump • Next action? <ul style="list-style-type: none"> – Remove any weapons or ordnance that the casualty may be carrying. • Next action? <ul style="list-style-type: none"> – Place nasopharyngeal airway • Next action? <ul style="list-style-type: none"> – Make sure he's not bleeding heavily elsewhere – Check for other trauma 	<p>Read the text.</p>
<p>161.</p>	<p> Convoy IED Scenario</p> <ul style="list-style-type: none"> • What is the clinical situation? <ul style="list-style-type: none"> – The casualty is unconscious due to blood loss. This is hemorrhagic shock. – He will need resuscitation with IV fluids. 	<p>Convoy IED Scenario</p> <ul style="list-style-type: none"> • What is the clinical situation? <ul style="list-style-type: none"> – The casualty is unconscious due to blood loss. This is hemorrhagic shock. – He will need resuscitation with IV fluids. 	<p>Read the text.</p>

<p>162.</p>	<p> Convoy IED Scenario</p> <ul style="list-style-type: none"> • What else can you do for the casualty? <ul style="list-style-type: none"> – Hypothermia prevention • Anything else? <ul style="list-style-type: none"> – Make sure all you've done is noted on the TCCC card. 	<p>Convoy IED Scenario</p> <ul style="list-style-type: none"> • What else can you do for the casualty? <ul style="list-style-type: none"> – Hypothermia prevention • Anything else? <ul style="list-style-type: none"> – Make sure all you've done is noted on the TCCC card. 	<p>Read the text.</p>
<p>163.</p>	<p> Remember</p> <ul style="list-style-type: none"> • The TCCC guidelines are not a rigid protocol that must be followed to the letter. • The tactical environment may require some modifications to the guidelines. • Think on your feet! 	<p>Remember</p> <ul style="list-style-type: none"> • The TCCC guidelines are not a rigid protocol that must be followed to the letter. • The tactical environment may require some modifications to the guidelines. • Think on your feet! 	<p>Every tactical scenario will have some features that are unique and that may require some change to your casualty treatment plan.</p>
<p>164.</p>	<p> Questions?</p> 	<p>Questions?</p>	