UN FIELD MEDICAL ASSISTANT

Instructor Handbook

First Edition 2022

Reviewed 07/2022

Prologue

Based on scientific Joint Trauma System ® and Tactical Combat Casualty Care ® (TCCC) principles, adapted to United Nations' needs this course aims to enhance the medical emergency support in the field.
Since the number of professional medical personnel among the peacekeepers in UN-missions is limited, additional measures have to be taken to urgently treat casualties within the first minutes after an incident. These first minutes are considered as "platinum 10 minutes" because they are essential for the survivability of wounded patients.
So, this becomes a task for the peacekeepers.
As a first step every peacekeeper has to attend a mandatory pre-deployment Buddy First Aid Course. But there remains still a gap between First Aid and professional medical emergency treatment.
To fill this gap a United Nations Field Medical Assistant Course (UNFMAC) has been developed. Selected peacekeepers will be trained on enhanced measures to rescue wounded, ill or injured casualties even under the life-threatening conditions in robust missions in the fields.
Therefore, this course not only contains medical/technical approaches but also takes into consideration the "tactical" needs in certain field-situations which peacekeepers might face.
This instructor handbook aims to help the trainers to receive a common understanding of UN principles in the rescue chain in order to provide a proper training to the students. The Principles are based on the open Joint Trauma System, TCCC, and Deployed Medicine sources which are developed by U.S. military and are Evidence Based.
As this is a living document it shall be adjusted to the latest scientific results for emergency medicine measures.

We hope that based on the information given in this document a successful training based on common UN emergency medicine principles will be conducted to enhance the survival rate of ill, injured or wounded UN personnel.

New York, July 11th,, 2022

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Cpt Pedro Montoliu Garcia – Medical Trainer Nurse Educator
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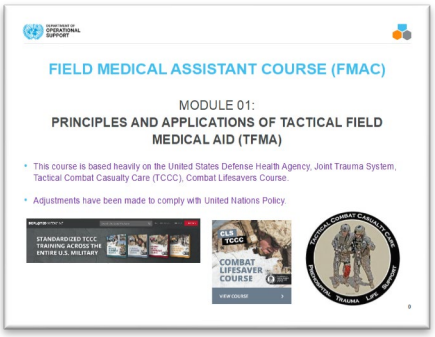
MODULE 1

Principles and Application of Tactical Field Medical Aid (TFMA)

These comprehensive speaker notes provide a script for the trainer to use in delivering this TFMA-FMA didactic presentation. The notes include key points that should be emphasized throughout the presentation.

SLIDE 1 – TITLE SLIDE

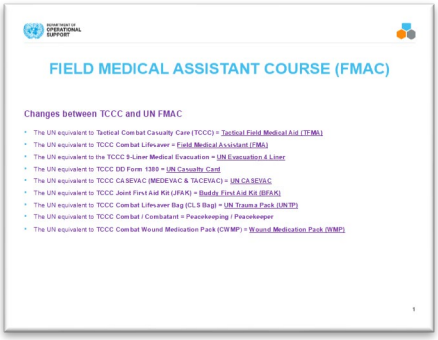


Good morning. Welcome to the Tactical Field Medical Aid (TFMA) Field Medical Assistant (FMA) Course.

My name is **(insert name**), and I am the lead trainer for this course. I am joined by other trainers who will assist with the hands-on portion of the training. (**Introduce other trainers as appropriate**.)

Explain JTS, TCCC, CLS and UN Equivalent Terminology and Qualifications.

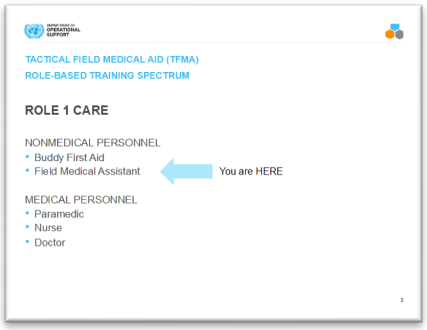
SLIDE 1b – ADJUSTMENTS



Adjustments are as follows:

- The UN equivalent to **Tactical Combat Casualty Care (TCCC)** = **Tactical Field Medical Aid (TFMA)**
- The UN equivalent to **TCCC Combat Lifesaver** = **Field Medical Assistant (FMA)**
- The UN equivalent to the **TCCC 9-Liner** Medical Evacuation = **UN Evacuation 4 Liner**
- The UN equivalent to **TCCC DD Form 1380** = **UN Casualty Card**
- The UN equivalent to **TCCC CASEVAC/MEDEVAC/TACEVAC** = **UN CASEVAC**
- The UN equivalent to **TCCC Joint First Aid Kit (JFAK)** = **Buddy First Aid Kit (BFAK)**
- The UN equivalent to **TCCC Combat Lifesaver Bag (CLS Bag)** = **UN Trauma Pack (UNTP)**
- The UN equivalent to **TCCC Combat / Combatant** = **Peacekeeping / Peacekeeper**
- The UN equivalent to **TCCC** Combat Wound Medication Pack (CWMP) = **Wound Medication Pack (WMP)**

SLIDE 2 – TFMA ROLES



Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

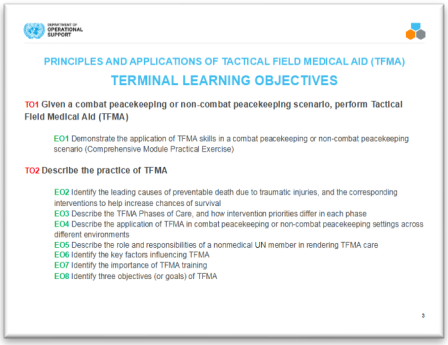
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLOs/ELOs



Students need to understand the basis for the course, and the expected learning outcomes.

The TFMA-FMA course is built on a foundation of learning objectives. These objectives lay out the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

This module has two Terminal Learning Objectives, or TLOs. Each TLO is supported by a series of Enabling Learning Objectives, or ELOs.

This module has one performance objective: to demonstrate the application of TFMA skills in a combat peacekeeping or non-combat peacekeeping scenario.

This module has seven cognitive learning objectives. They are to:

1. Identify the leading causes of preventable death due to traumatic injuries and the corresponding interventions to help increase chances of survival
2. Describe the TFMA Phases of Care and how intervention priorities differ in each phase

3. Describe the application of TFMA in combat peacekeeping and non-combat peacekeeping settings across different environments

4. Describe the role and responsibilities of a nonmedical UN member in rendering TFMA care

5. Identify the key factors influencing TFMA

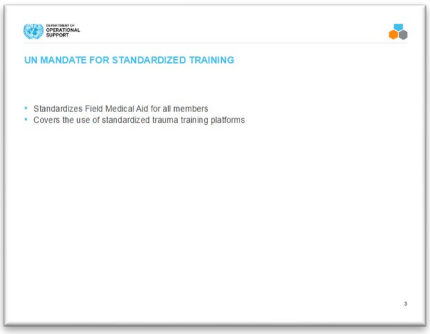
6. Identify the importance of TFMA training

7. Identify the three objectives (or goals) of TFMA.

SLIDE 4 – CONGRESSIONALLY MANDATED STANDARD

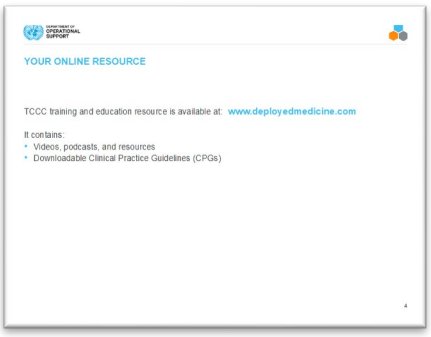
Standardized Field Medical Aid training for all members is mandated by the UN.

TFMA is the standard of care in prehospital battlefield medicine.



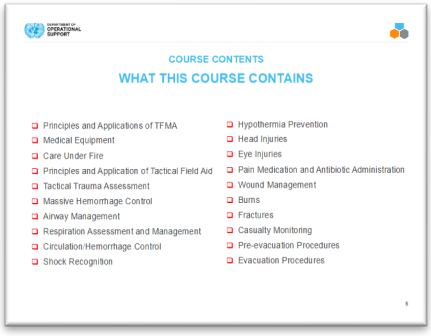
SLIDE 5 – ONLINE RESOURCES

The Deployed Medicine site (DeployedMedicine.com) and phone app from the Defense Health Agency (DHA) leverage technology to provide access to on-demand multimedia content. This content supports continuous lifelong learning and access to real-time updates in TCCC training and education.



SLIDE 6 – COURSE CONTENT

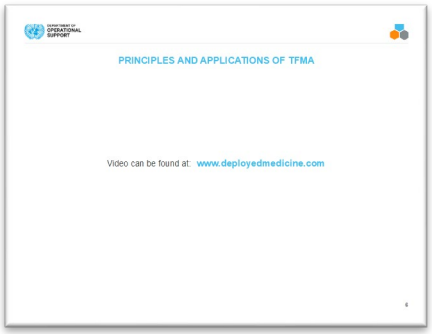
This course will reinforce the principles of TFMA and teach the knowledge and skills needed to save lives and improve outcomes for combat casualties.



SLIDE 7 – WELCOME TO TCCC (VIDEO)

Trainer: Play video. The course starts by playing a motivational video or scene setter to launch the course.

TCCC Training Overview Video. This video describes the genesis and evolution of TCCC and the critical role it plays in saving lives on the battlefield and improving outcomes for the combat wounded.



SLIDE 8 – ROLES AND RESPONSIBILITIES OF FMA

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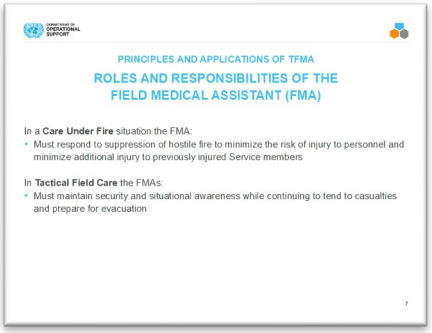
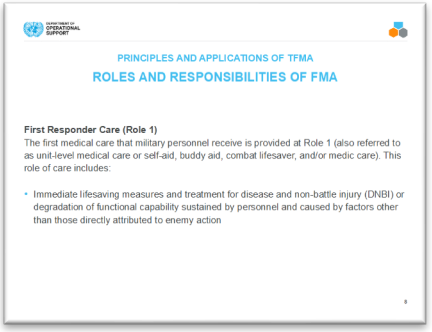


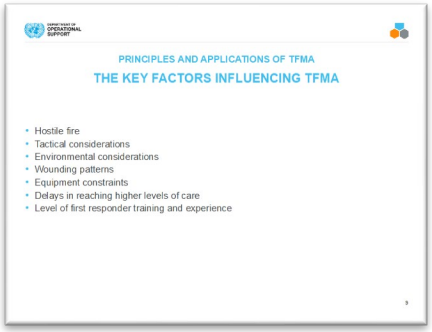
SLIDE 9 – ROLES AND RESPONSIBILITIES OF FMA (CONT.)

Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

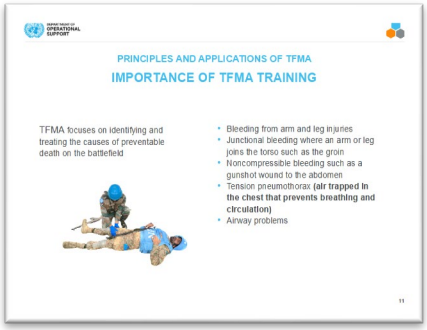


SLIDE 10 – THE KEY FACTORS INFLUENCING TFMA

Several key factors influence how prehospital care is provided in the combat versus the civilian setting. Factors influencing TFMA are: hostile fire, tactical and environmental considerations, wound patterns, equipment constraints, delays reaching higher levels of care, and level of first responder training and experience. These factors will be discussed more within this module and throughout the training.



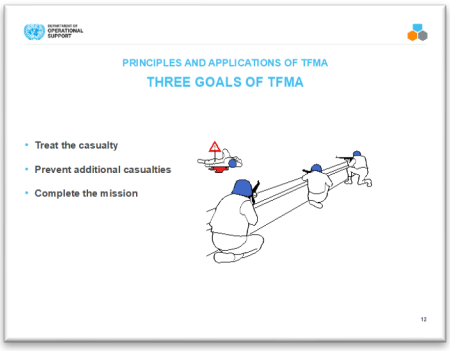
SLIDE 11 – IMPORTANCE OF TFMA TRAINING



Approximately **90 percent** of combat casualty deaths occur before the casualty reaches a higher level of care (surgeon, etc.). Prehospital care, including the care provided by FMA, is critical to the survival of those wounded in combat. Multiple research studies and casualty data from Iraq and Afghanistan highlight the causes of preventable death on the battlefield.

TFMA training focuses on identifying and treating these most common causes of preventable death on the battlefield: hemorrhage/bleeding, injuries resulting in tension pneumothorax, and airway issues.

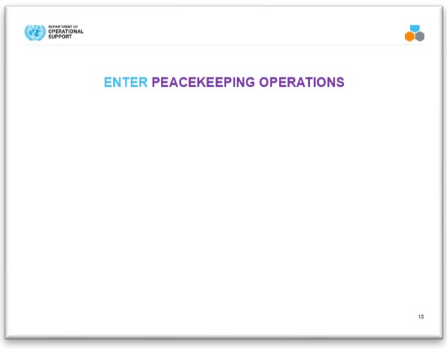
SLIDE 12 – THREE GOALS OF TFMA



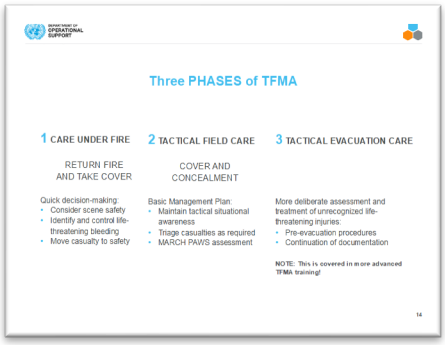
The three goals of TFMA are to:

1. Treat the casualty
2. Prevent additional casualties
3. Complete the mission

SLIDE 13 – ENTER PEACEKEEPING OPERATIONS



SLIDE 14 – THREE PHASES OF TFMA

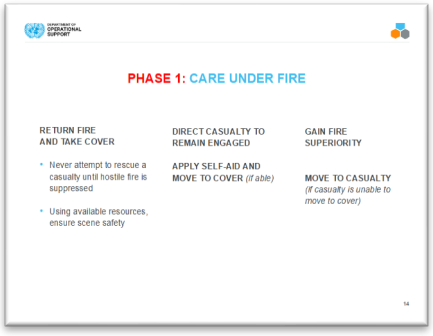


TFMA is organized into Phases of Care that start at the point of injury. These phases are relevant to combat peacekeeping and non-combat peacekeeping combat trauma scenarios:

1. **Care Under Fire, or Care Under Threat**, is the aid rendered at the trauma scene while the threat is still active. Available medical equipment is limited to that carried by an individual or found in a nearby first aid kit. Massive bleeding is the only medical priority that requires your attention during this phase, as you are actively dealing with an ongoing threat in a potentially chaotic and dangerous situation.
2. **Tactical Field Care (TFC)** is the care provided once the threat has been neutralized and/or the scene is safe or the casualty has moved/been moved out of the immediate threat situation. During this phase, a rapid casualty assessment should be performed. Bleeding control should be assessed/reassessed, and airway/breathing issues addressed. Other injuries such as burns, fractures, eye trauma, and head injuries should now be identified and treated. Medical equipment is still limited. Time to arrival of medical personnel or evacuation may vary considerably, depending on the tactical situation, etc.
3. **Tactical Evacuation Care** is the care rendered during and once the casualty has been moved by an aircraft, vehicle, or other mode of transportation for evacuation to a higher level of care. Additional medical personnel and equipment are typically available in this phase of casualty care.

Remember: The goal of the FMA in TFMA is to rapidly assess casualties to identify and treat potentially life-threatening injuries to keep them alive long enough to reach a higher level of medical care.

SLIDE 15 – PHASE 1: CARE UNDER FIRE



Care Under Fire is the care rendered by the first responder/FMA at the scene of the injury while still under effective hostile fire. Available medical equipment is limited to that carried by the individual responder or casualty (Buddy First Aid Kit (BFAK) or a UN Trauma Pack (UNTP)). Remember: Always use the **casualty's BFAK first**.

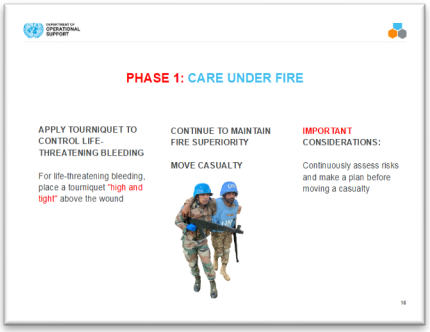
The critical feature of CUF is that the casualty and responder/FMA are still under effective hostile fire.

The mission does not stop just because there is a casualty. Most battlefield casualty scenarios involve making medical and tactical decisions rapidly. In the combat environment, there is no "time-out" when casualties occur. Good medicine can sometimes be bad tactics; doing the RIGHT thing at the WRONG time can get you and your teammates killed or cause the mission to fail.

Order of initial actions will be dictated by the tactical situation. Little time is available to provide casualty care while under effective enemy fire. Suppressing hostile fire and gaining fire superiority should be the priority to minimize the risk of injury to other personnel and minimize additional injury to the casualty while completing the mission. Personnel may need to assist in returning fire instead of stopping to care for casualties (this includes the casualty if still able to fight). Wounded UN members who are exposed to enemy fire should be directed to continue to return fire, move as quickly as possible to any nearby cover, and perform self-aid, if able.

Remember: Do not become a casualty! Assess the situation and the risk. Suppress enemy fire and gain fire superiority first. Communicate with the casualty (return fire, move to cover, self-aid), and develop a plan before moving to care for a casualty under fire.

SLIDE 16 – PHASE 1: CARE UNDER FIRE CONT. (EARLY CONTROL OF SEVERE HEMORRHAGE IN CARE UNDER FIRE IS CRITICAL)



In CUF, your **#1 priority** is to recognize and stop massive bleeding and get yourself and the casualty to cover and out of hostile fire. Massive bleeding can be identified by a pulsing or steady bleeding from a wound or traumatic amputation of an extremity.

Apply a tourniquet without delay if indicated. Injury to a major vein or artery can result in shock or death from blood loss in minutes. Extremity (arm or leg) hemorrhage is a leading cause of preventable combat death. Using tourniquet(s) to stop the bleeding is essential to the survival of casualties with these types of injures.

Permanent skin, muscle, and blood vessel damage to the limb is rare (tourniquets are often left in place for several hours during routine surgical procedures). Applying a tourniquet promptly to stop life-threatening bleeding saves lives and may allow the injured UN members to continue to fight while awaiting further care and evacuation. It is imperative that all UN members with access to BFAK, etc. be trained in tourniquet use.

Remember: Both you and the casualty remain in grave danger under threat of enemy fire while applying a tourniquet in the CUF phase. Quickly place the tourniquet high and tight on the affected limb. Treatment of non-life-threatening bleeding should be deferred until the Tactical Field Care phase.

SLIDE 17 – PHASE 2: TACTICAL FIELD CARE MARCH PAWS

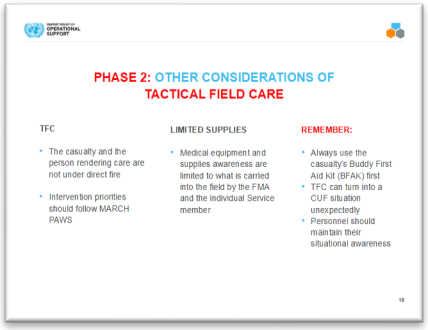
Tactical Field Care is the care rendered by a first responder/FMA once the responder and casualty are no longer under direct threat from effective enemy fire. This allows for the time and the relative safety for a more deliberate approach to casualty assessment and treatment.

Casualty assessment and management in TFC follow an approach known as **MARCH PAWS**.

Massive bleeding
Airway
Respiration/breathing
Circulation
Hypothermia/**H**ead Injuries
Pain
Antibiotics
Wounds
Splinting

This is a helpful pneumonic for remembering how to systematically approach casualty assessment and management to ensure that life-threatening injuries are identified and treated promptly, saving lives on the battlefield and reducing preventable combat death.

SLIDE 18 – OTHER CONSIDERATIONS OF TACTICAL FIELD CARE



The critical feature of Tactical Field Care is that the casualty and responder/FMA are no longer under effective hostile fire.

However, the FMA must maintain security and situational awareness at all times while continuing to treat casualties and preparing for handoff to medical personnel/evacuation assets.

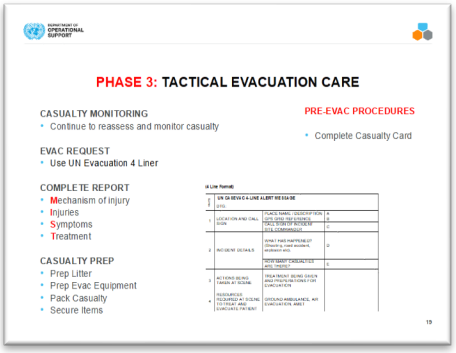
The tactical situation is often fluid and can change rapidly and revert to a CUF scenario at any time.

Your available medical equipment is still limited to that carried into the field by the casualty (BFAK), the FMA, and other first responders (BFAKs, UNTP or the Medic in their aid bag. Remember to use the supplies within the casualty's BFAK first before using your own supplies.

The TFC phase allows more time, and relatively more safety, for you to provide further medical care. You may need to continue treatment until medical personnel arrive and then assist medical personnel with continued treatment and preparation for evacuation. Anticipated time to evacuation to the next higher level of care may vary depending on the tactical situation. The FMA must be prepared to reengage the enemy and continue the mission.

Medical personnel will be focused on casualty treatment, so you and unit leaders must coordinate, and request evacuation assets based on the operational situation.

SLIDE 19 – PHASE 3: TACTICAL EVACUATION CARE (TEC)



Tactical Evacuation Care is the care rendered once the casualty has been **picked up** by an aircraft, ground vehicle, or other evacuation platform. It continues the care for the casualty started in the earlier phases of care.

Tactical Evacuation Care is similar to TFC in many ways. However, the extra medical personnel and equipment on the evacuation asset may enable provision of additional care in this phase of casualty management.

The term "CASEVAC" means evacuation from Point of Injury to a Medical Treatment Facility (MTF). The term "MEDEVAC" means transport between MTF's. Nonmedical first responders or FMAs are not expected to care for casualties during evacuation. However, if it does happen, the approach (MARCH PAWS) and skills learned for CUF and TFC apply.

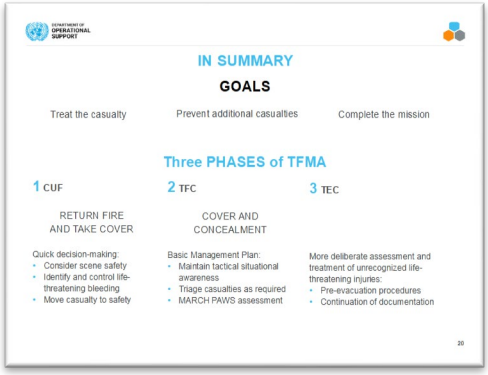
The key principle in Tactical Evacuation Care is that monitoring with appropriate assessment and treatment MUST be continued until the casualty is handed off to medical personnel or arrives at a higher level of care.

Pre-evacuation procedures include ensuring that all assessment and care rendered in CUF and TFC have been documented by the first responder or FMA on the Casualty Card.

An evacuation request using the 4-line format is communicated per unit Standard Operating Procedures to initiate CASEVAC. The 4-line CASEVAC request includes a **MIST** (**M**echanism of injury, **I**njuries, **S**ymptoms, and **T**reatment) report.

Before evacuation, **the casualty must be packaged for evacuation**, items (weapons, equipment, etc.,) secured, litter and evacuation equipment prepared, etc.

SLIDE 20 – IN SUMMARY



The GOALS of TFMA are to:

1. Treat the casualty (provide lifesaving care to the injured combatant)
2. Prevent additional casualties
3. Complete the mission

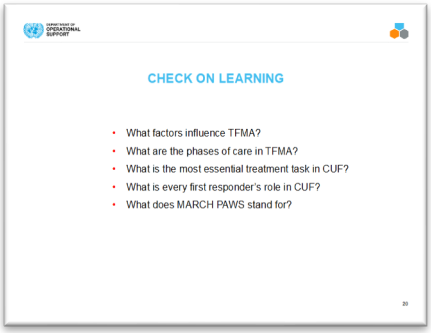
The three phases of TFMA are:

1. Care Under Fire
   - Take cover, return fire, and gain fire superiority
   - Address life-threatening hemorrhage with tourniquets/move to cover

2. Tactical Field Care
    - Cover and conceal
    - MARCH PAWS
    - Prepare for evacuation Casualty Card, 4-line CASEVAC Request, MIST)
3. Tactical Evacuation Care (TEC)
    - Continue monitoring and care (additional medical personnel/equipment) until handoff at a higher level of care

Remember that bleeding is the number one cause of preventable prehospital combat death:
• Remain tactically vigilant and maintain security at all times, or you could become a casualty.
• Document all assessment and care on the Casualty Card.

SLIDE 21 – CHECK ON LEARNING



Ask questions of the learners referring to key concepts from the module.
Now for a check on learning.

1) What are factors that influence TFMA?
    - Hostile fire
    - Wounding patterns
    - Equipment constraints
    - Delays in reaching higher levels of care
    - Level of first responder training and experience

2) What are the phases of care in TFMA?
    - Care under Fire (CUF)
    - Tactical Field Care (TFC)
    - Tactical Evacuation Care (TEC)

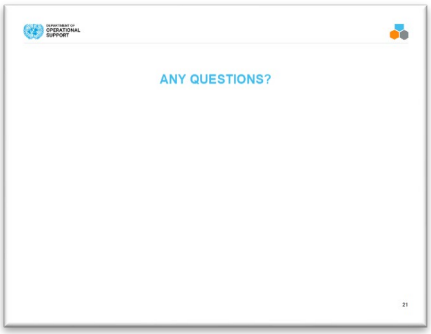
3) What is the most essential treatment task in Care Under Fire?
    - Tourniquet (TQ) application to stop massive bleeding

4) What is every first responder's role in Care Under Fire?
    - To treat the most immediate life-threatening injuries with TQ application on the battlefield

5) What does MARCH PAWS stand for?
    - M – Massive Bleeding (Hemorrhage)
    - A – Airway
    - R – Respiration
    - C – Circulation
    - H – Hypothermia/Head Injuries
    - P – Pain

- A – Antibiotics
- W – Wounds
- S – Splints

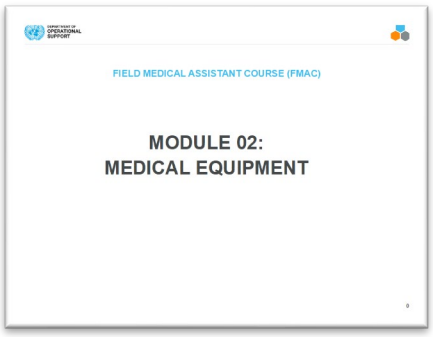
SLIDE 22 – QUESTIONS



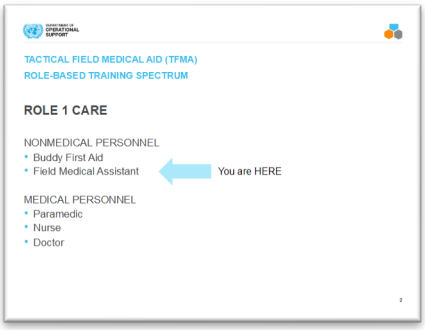
MODULE 02
MEDICAL EQUIPMENT

NOTE TO TRAINERS: Pass out appropriate kits so the students can have them in hand during the discussion.

SLIDE 1 – TITLE SLIDE



SLIDE 2 – TFMA ROLES



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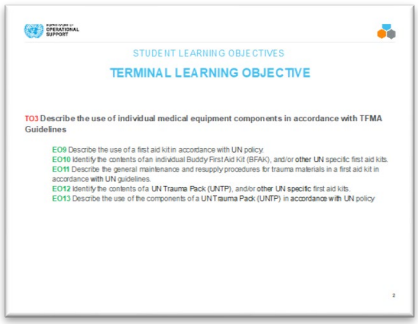
The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO



The Medical Equipment module has **five cognitive learning objectives**. The cognitive learning objectives are to:

1. Describe the use of the first aid kit in accordance with UN policy
2. Identify the contents of the Buddy First Aid Kit and/or other UN specific first aid kits
3. Describe the general maintenance and resupply procedures for trauma materials in the first aid kits
4. Identify the contents of a UN Trauma Pack (UNTP) and/or other UN-specific first aid kits
5. Describe the use of the components of a UN Trauma Pack (UNTP) in accordance with UN Policy

The critical aspects are to be familiar with the contents, use, and maintenance/resupply of the BFAK, UNTP, and/or other UN specific first aid kits used by a FMA to provide aid and save a life.

SLIDE 4 – MEDICAL SUPPLIES YOU WILL NEED TO PROVIDE AID AND SAVE A LIFE

Peacekeepers in the UN carry a large array of equipment, and survival depends heavily on the ability to properly use that equipment.

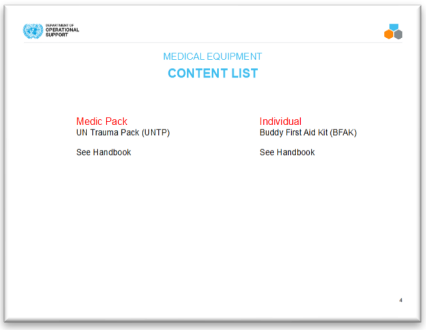
One piece of critically important equipment is the Buddy First Aid Kit (BFAK).

Every piece of equipment chosen for the BFAK is evidence-based (lessons learned from the recent overseas contingency operations in Afghanistan and Iraq) and serves a distinct purpose for the individual UN member; knowing how to properly use what is in the BFAK can save a life. Remember, when treating a casualty, use the items that are in the casualty's BFAK first. The UN member's BFAK should be reserved for self-aid whenever possible.

Every item in your BFAK supports provision of TFMA per the current guidelines. This lesson provides an opportunity to get a hands-on introduction to the kit and its contents. The equipment discussed supports the provision of TFMA per the current guidelines and enables the first responder/FMA to address issues identified in CUF, TFC, and TEC (MARCH PAWS).

Trainer Note: While items are being explained, students should be given the opportunity to open wrappers and prepare their equipment for upcoming lessons.

SLIDE 5 – CONTENT LIST



Medic Pack: UN Trauma Pack (UNTP) - See Handbook

Individual: Buddy First Aid Kit (BFAK) - See Handbook

SLIDE 6 – CONTENT OVERVIEW (M-MASSIVE HEMORRHAGE AND C-CIRCULATION)

Tourniquet – The UN-recommended tourniquet is used to control massive or severe hemorrhage (bleeding) of an extremity (arms and legs). This is the most important lifesaving item in the BFAK and should be kept easily accessible and ready for use.

Hemostatic Dressing – The UN-recommended type of dressing, called a hemostatic (helps with blood-clotting) dressing, contains a chemical that bonds to another chemical in blood and causes clots to form at the source of bleeding. Use of a hemostatic dressing is called for when severe bleeding is observed from a wound that is in a junctional or other area where a tourniquet cannot be used (groin, neck, underarm wounds) or when a wound is not severe enough to warrant a tourniquet.

Remember, hemostatic dressings cannot be used inside the abdomen or chest (use an emergency bandage or other trauma dressing for these areas).

Emergency Bandage/Trauma Dressing – This elastic bandage can be used as a standard dressing for most wounds and can be used for wounds not bleeding enough for a tourniquet. This dressing can also be used alone or along with other forms of hemorrhage control (hemostatic dressing, etc.) to enhance effectiveness in controlling bleeding by providing pressure to the wound.

SLIDE 7 – CONTENT OVERVIEW (A-AIRWAY AND R-RESPIRATION)

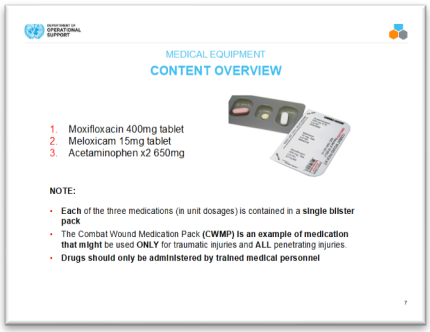
Nasopharyngeal Airway (NPA) with Lubricant – This is a nonsterile, rubber tube-shaped device that is inserted into the casualty's nostril. It acts as a wedge to keep the airway open by keeping the tongue from falling back into the space behind the mouth leading to the windpipe. Only a 32 French NPA is found within standard-issue

BFAKs, sizing the NPA before insertion is not necessary. The lubricant is a water-based substance that assists in device insertion into the nose.

Chest Seal – This vented (preferred) self-adhering chest seal is used for treating sucking chest wound/open pneumothorax.

Catheter-over-needle Device – This 10- to 14-gauge 3." catheter-over-needle device is used to treat tension pneumothorax.

SLIDE 8 – CONTENT OVERVIEW – (P-PAIN AND A-ANTIBIOTICS)



Wound Medication Pack (WMP) – The WMP is an example of a pre-packaged medication packet with drugs and dosages specifically chosen for use in combat casualty care. The WMP contains drugs for mild to moderate pain (meloxicam and acetaminophen) and an antibiotic specific for penetrating wounds (moxifloxacin).

The WMP should be used only for traumatic injuries and is not for routine use. **Drugs should only be administered by trained medical personnel.**

SLIDE 9 – CONTENT OVERVIEW (W-WOUNDS)

Compressed Gauze/Gauze Rolls – Gauze rolls are used to stop minor bleeding, cover wounds/burns, pack wounds, act as bulky material for pressure dressings, or pad pressure points in splinting.

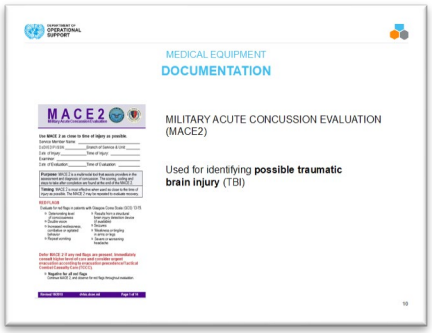
Elastic Bandage – Elastic bandages are used to hold dressings or splints in place or can be applied more tightly to apply localized pressure on a wound.

SLIDE 10 – CONTENT OVERVIEW (H-HYPOTHERMIA)

Hypothermia Prevention Kits/Blankets – Hypothermia prevention kits (active) and blankets (passive) used for preventing/treating hypothermia.

SLIDE 11 – CONTENT OVERVIEW (H-HEAD INJURY/DOCUMENTATION)

MACE Card (MACE2)

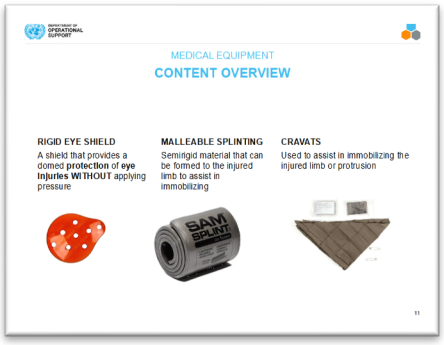


SLIDE 12 – CONTENT OVERVIEW (W-WOUNDS)

Rigid Eye Shield – This plastic or metallic eye shield provides a domed protection of eye injuries without applying pressure. It may be self-adhering or require tape.

Malleable Splint – Read slide.

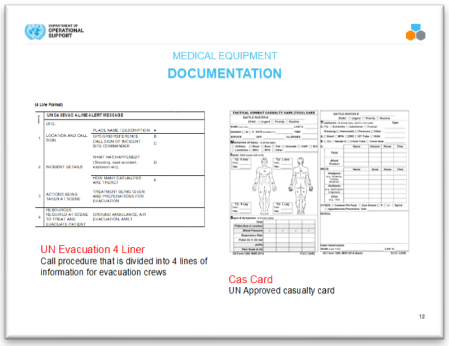
Cravat – The cravat can be used to secure a splint or to create a sling/swath.



SLIDE 13 – DOCUMENTATION

Casualty Card – This is the UN-approved for official casualty care documentation (of all assessment and treatment outlined by the TFMA guidelines) to be completed on every casualty before handoff to another provider and/or evacuation to a medical treatment facility.

NOTE: This documentation should remain with the casualty throughout the prehospital evacuation system and become part of the casualty's medical record upon reaching a medical treatment facility. The data from the Casualty Card will also be noted on the casualty's medical record.



NOTE: Many *commercially available* casualty cards **do not replicate all information** requirements of the Casualty Card. While the Casualty Card may be reproduced locally, it should be on waterproof paper or laminated with a means of attaching it to the casualty. It is best to have an indelible/permanent marker available for writing on the Casualty Card.

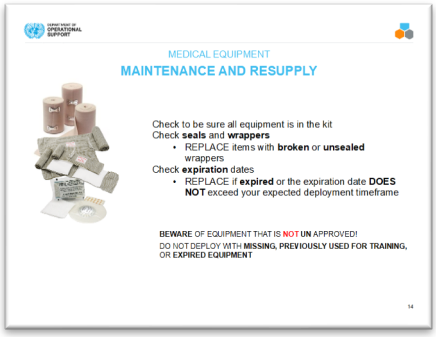
CASEVAC Request Form/Template – This form is used in many units as a template to assist in preparing and sending a 4-line CASEVAC request.

SLIDE 14 – MAINTENANCE AND RESUPPLY

Pre-Deployment readiness checks are critical for every piece of equipment a UN member carries and/or uses.

For the BFAK, UNTP, or service-specific first aid kit, your life or your buddy's life may depend on the readiness and serviceability of the contents. It is critical that you frequently inspect equipment before, during, and after all training events and combat missions. Resupply when needed!

SLIDE 15 – MAINTENANCE AND RESUPPLY (CONT.)



Inventory – Make sure all required/applicable equipment is in the kit.

Seals and wrappers – Items with broken or unsealed wrappers should be replaced. If an item was vacuum sealed tightly when issued and is no longer sealed upon inspection, it should be replaced.

Check expiration dates – Medications and many medical-grade materials such as hemostatic dressings have an expiration date and lot number. Check all medications and medical-grade items for expiration date and replace if expired or the expiration date does not exceed your expected deployment timeframe.

Generally, items such as tourniquets do not have an expiration date, but check to ensure the devices are approved by the UN, are serviceable, and reflect the current generation (have not been replaced with a newer model, etc.).

BEWARE OF UNAPPROVED EQUIPMENT! Only a few items within the BFAK require specific recommendation from the UN. UN recommendations are based on scientific studies, evidence-based medicine, field-use testing, and lessons learned from the battlefield. Always check to ensure your kits are stocked only with UN-recommended/approved items and beware of unapproved equipment.

BEWARE OF FAKES! There are *fraudulent manufacturers* around the world that produce fake, misleading, or substandard pieces of medical equipment, especially those used in the BFAK (tourniquets and hemostatic dressings).

Check unit-specific evacuation equipment. Litters should be inspected for proper functioning and serviceability; litter straps should be checked for locking functions and placement; special evacuation equipment should be checked in accordance with manufacturers' or unit guidelines/standards.

SLIDE 16 – UN TRAUMA PACK

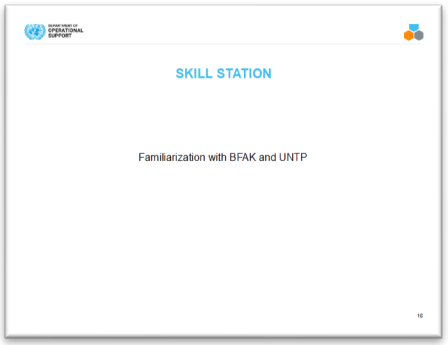
Available medical equipment includes the UNTP and the BFAK. ***Always access the BFAK from the casualty first.***

When supplies are exhausted from the casualty's BFAK, resort to using supplies from the UNTP.

SLIDE 17 – SKILL STATION

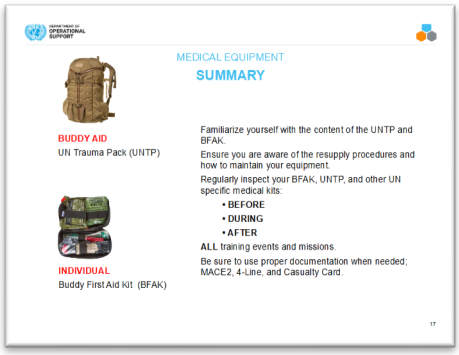
At this time, we will break into skill stations to practice the following skills:

- Familiarization with BFAK & UNTP



SLIDE 18 – SUMMARY

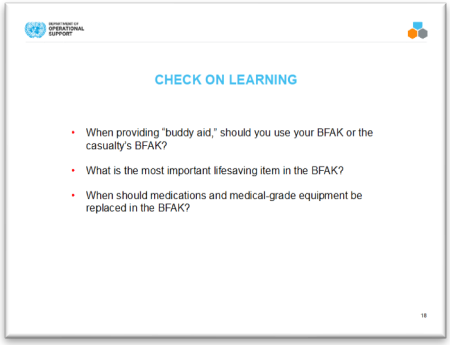
In this module, we discussed medical equipment that Field Medical Assistants use to provide aid and save lives on the battlefield. We described the use of the first aid kit in accordance with UN policy, identified the contents of the Buddy First Aid Kit and other unit specific first aid kits, described general maintenance and resupply procedures for trauma materials in the first aid kits, identified the contents of a UN Trauma Pack, and described how to use the components of a UN Trauma Pack in accordance with UN policy.



SLIDE 19 – CHECK ON LEARNING

Trainer. *Ask questions of the learners, referring to key concepts from the module.*

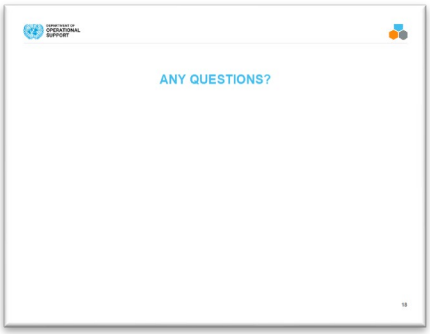
Now for a check on learning.



1. When providing "Buddy Aid," should you use your BFAK or the casualty's BFAK?
    - The casualty's BFAK
2. What is the most important life-saving item in the BFAK?
    - Tourniquet
3. When should medications and medical-grade equipment be replaced in the BFAK?

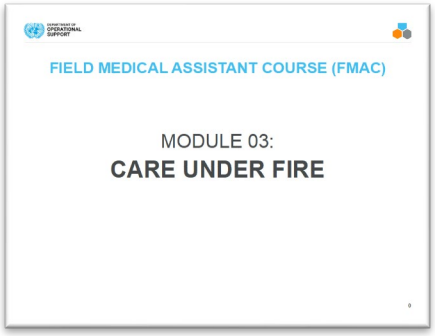
- All medications and medical-grade items should be replaced if expired or the expiration date is before your expected deployment timeframe.
- Items such as tourniquets do not have an expiration date, but the device may have been replaced by a new generation of the device with improvements. You should seek to replace with newer-generation items, if possible.

SLIDE 20 – QUESTIONS

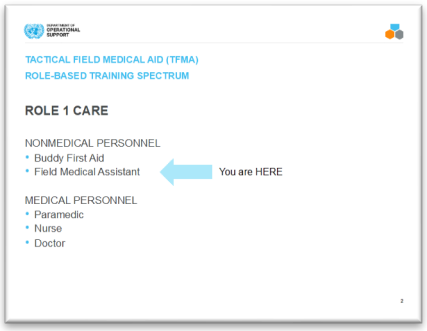


MODULE 03
CARE UNDER FIRE

SLIDE 1 – TITLE SLIDE



SLIDE 2 – TFMA ROLES



Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

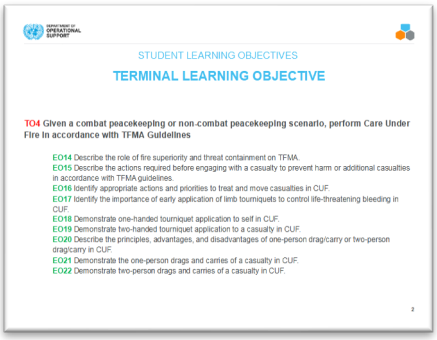
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO



The Care Under Fire (CUF) module has five cognitive learning objectives and four performance learning objectives. The cognitive learning objectives are to:

1. Describe the role of fire superiority and threat containment and the impact of the tactical environment on Tactical Field Medical Aid (TFMA)

2. Describe the actions required before engaging with a casualty to prevent harm or additional casualties in accordance with TFMA guidelines

3. Identify appropriate actions and priorities to treat and move casualties in CUF

4. Identify the importance of early application of limb tourniquets to control life-threatening bleeding

5. Describe the principles, advantages, and disadvantages of one-person drag/carry or two-person drag/carry in CUF

The four performance learning objectives are to:

1. Demonstrate the one-handed tourniquet application to self in CUF

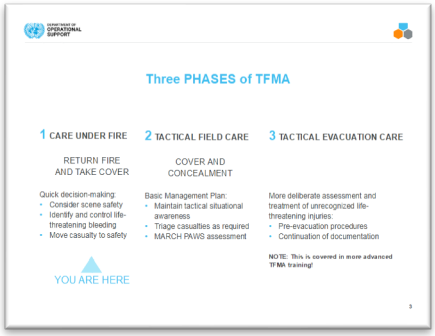
2. Demonstrate the two-handed tourniquet application to a casualty in CUF

3. Demonstrate the one-person drag/carry of a casualty in CUF

4. Demonstrate the two-person drag/carry of a casualty in CUF

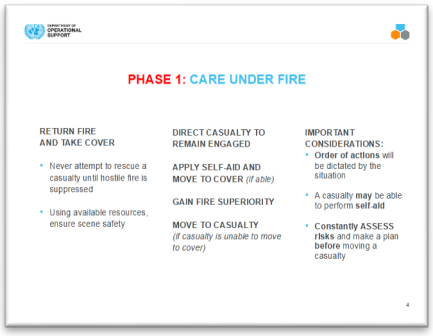
The initial priority of CUF is to return fire, suppress the enemy, and gain fire superiority. Treatment priorities while still under effective enemy fire/threat are addressing massive hemorrhage with tourniquets and moving the casualty to cover.

SLIDE 4 – THREE PHASES OF TFMA



CUF is the first of three phases of TFMA. It is the lifesaving care provided while still under active enemy fire or threat. Actions are prioritized to suppress enemy fire, gain fire superiority to prevent further harm or additional casualties, identify and control life-threatening bleeding, and move the casualty to cover.

SLIDE 5 – PHASE 1: CARE UNDER FIRE



CUF is the care rendered by the first responder/FMA at the scene of the injury while still under effective hostile fire. Available medical equipment is limited to that carried by the individual responder or casualty (Buddy First Aid Kit (BFAK) or a UN Trauma Pack (UNTP). Remember: Always use the casualty's BFAK first.

The critical feature of CUF is that the casualty and responder/FMA are still under effective hostile fire.

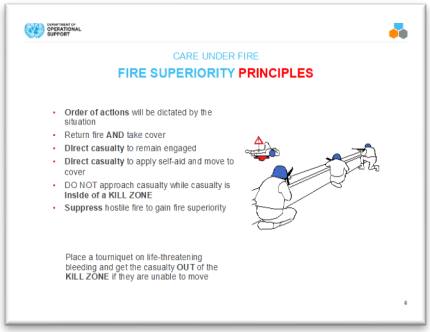
The mission does not stop just because there is a casualty. Most battlefield casualty scenarios involve making medical and tactical decisions rapidly. In the combat environment there is no "time-out" when casualties occur. Good medicine can sometimes be bad tactics; doing the RIGHT thing at the WRONG time can get you and your teammates killed or cause the mission to fail.

Remember: Do not become a casualty! Assess the situation and the risk. Suppress enemy fire and gain fire superiority first. Communicate with and direct the casualty to return fire, move to cover, apply self-aid, and develop a plan before moving to care for a casualty under fire.

SLIDE 6 – ROLE OF FIRE SUPERIORITY

Remember to return fire and take cover. **The best medicine on the battlefield is fire superiority!**

SLIDE 7 – FIRE SUPERIORITY PRINCIPLES



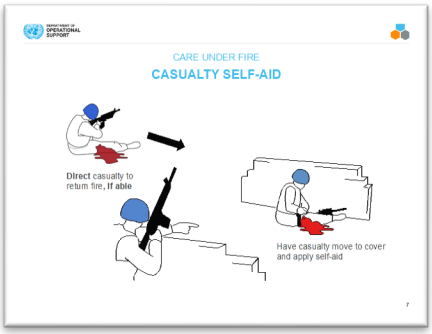
Order of initial actions will be dictated by the tactical situation.

Little time is available to provide casualty care while under effective enemy fire. Suppressing hostile fire and gaining fire superiority should be the priorities to minimize the risk of injury to other personnel and minimize additional injury to the casualty while completing the mission. Personnel may need to assist in returning fire instead of stopping to care for casualties (this includes the casualty if they are still able to fight).

Wounded UN members who are exposed to enemy fire should be directed to continue to return fire, move as quickly as possible to any nearby cover, and perform self-aid if able.

SLIDE 8 – CASUALTY SELF-AID

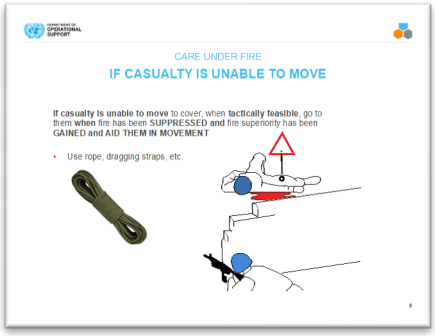
If the casualty is responsive and able, the first responder/FMA should direct the casualty to return fire, apply self-aid (tourniquet), re-engage, and move to cover (if possible).



SLIDE 9 – IF CASUALTY IS UNABLE TO MOVE

If a casualty is responsive but can't move, a rescue plan should be devised and executed if tactically feasible.

Do not put two people at risk if it can be avoided. If cover is not available or the wounded UN member cannot move to cover, they should lie flat and motionless.

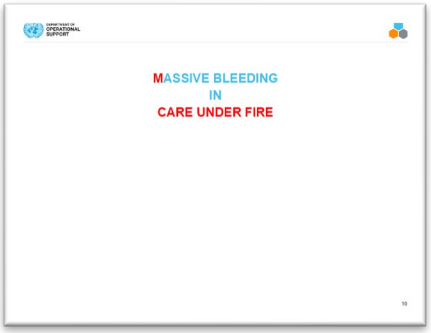


SLIDE 10 – PHASE 1: CARE UNDER FIRE

If the casualty cannot apply self-aid or move to cover, devise and execute a rescue plan to reach the casualty. Apply a tourniquet "high and tight" as quickly as possible to stop bleeding (within 1 minute, ideally) and move the casualty to cover. A casualty can bleed to death in as little as 3 minutes. The faster you apply a tourniquet, the better the outcome and the less chance of shock and death.

SLIDE 11 – MASSIVE BLEEDING IN CARE UNDER FIRE

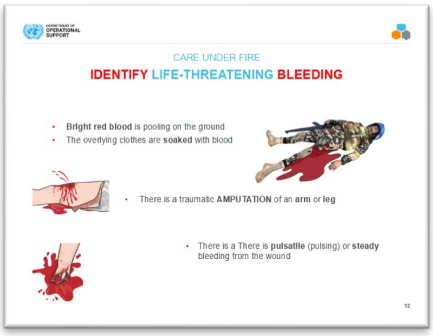
Remember: If you can do only ONE thing for the casualty, it should be to identify and stop life-threatening bleeding, and keep them from bleeding to death.



SLIDE 12 – CARE UNDER FIRE OVERVIEW – BLEEDING CONTROL (VIDEO)

Play the video.

SLIDE 13 – IDENTIFY LIFETHREATENING BLEEDING



The following are examples of when bleeding is considered life-threatening: 1) there is a traumatic amputation of an arm or leg; 2) there is pulsing or steady bleeding from the wound; 3) blood is pooling on the ground; 4) the overlying clothes are soaked with blood; 5) bandages or makeshift bandages used to cover the wound are ineffective and are steadily becoming soaked with blood; 6) there was prior bleeding, and the patient is now in shock (unconscious, confused, pale). If you see any of these examples, it means that a tourniquet is needed to stop life-threatening bleeding.

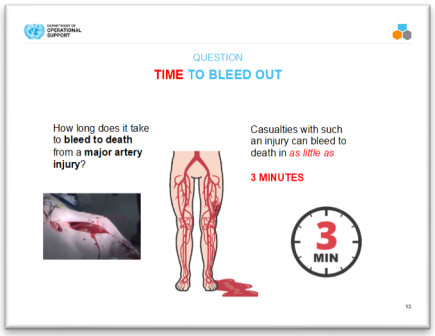
You may not really know if hemorrhage is life-threatening until the Tactical Field Care phase when the wound can be exposed and evaluated. If a life-threatening hemorrhage is suspected, you should treat it immediately.

Remember during CUF the only medical intervention is applying a tourniquet to stop life-threatening bleeding from an extremity injury. Other wounds (neck, armpit, groin, or abdomen) are not treated during CUF. If the casualty is able, direct them to apply pressure to the wounds as self-aid. Airway and other issues are also not treated until the TFC phase.

Notes about the tourniquet:

- Constricting band placed around an arm or leg to stop bleeding
- Typically, 2 inches wide
    - Width reduces tissue damage
- Quick to apply and can stop life-threatening extremity bleeding
- High and tight during CUF
- 2–3 inches above the wound during TFC
- Do not document the tourniquet time during CUF; document during TFC

SLIDE 14 – TIME TO BLEED OUT



The number one medical priority in CUF is early control of severe bleeding. Extremity hemorrhage is the most frequent cause of preventable battlefield deaths. Over 2,500 deaths occurred in Vietnam secondary to hemorrhage from extremity wounds. A large number of deaths in Iraq and Afghanistan were also seen from hemorrhage. Injury to a major vessel can quickly lead to shock and death. Only life-threatening bleeding warrants intervention during Care Under Fire. Casualties with injuries to large central blood vessels (like the femoral artery in the groin, the axillary artery in the arm, or the carotid artery in the neck) can bleed to death in as little as 3 minutes.

Play video of Care Under Fire Bleeding Video.

SLIDE 15 – KNOW YOUR ACCESS TO A TOURNIQUET

All personnel on peacekeeping missions should have a TFMA-recommended tourniquet readily available (standard location on their battle gear) and be trained in its use. Casualties should be able to easily and quickly reach and apply their own tourniquet. Tourniquets should **NEVER** be at the bottom of the pack. Always use the casualty's tourniquet (BFAK) first.

SLIDE 16 – ONE-HANDED TOURNIQUET SELF-APPLICATION

Casualty may need to apply one-handed tourniquet to an upper extremity when applying self-aid. Onehanded tourniquets are used to apply self-aid for bleeding from an injury to the upper arm or forearm.

SLIDE 17 – ONE-HANDED WINDLASS TOURNIQUET APPLICATION (VIDEO)

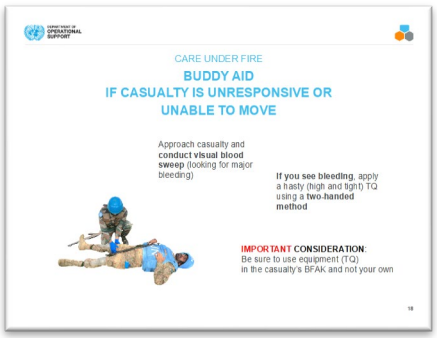
Play the video.

SLIDE 18 – ONE-HANDED TOURNIQUET APPLICATION CRITICAL POINTS

All personnel on combat missions should have a TFMA-recommended tourniquet readily available (standard location on their battle gear) and be trained in its use. Casualties should be able to easily and quickly reach and apply their own tourniquet.

SLIDE 19 – BUDDY AID IF CASUALTY IS UNRESPONSIVE OR UNABLE TO MOVE

If a casualty is unresponsive and/or unable move, a rescue plan should be devised and executed if tactically feasible. Do not put two people at risk if it can be avoided. If cover is not available or the wounded UN member cannot move to cover, they should lie flat and motionless. Quickly perform a blood sweep (looking for major bleeding). Apply a hasty tourniquet high and tight on the injured extremity and get to cover as quickly as possible. Be sure to use equipment (tourniquet) in the casualty's BFAK and not your own. Do not put a tourniquet directly over the knee or elbow or over a holster or cargo pocket that contains bulky items.



SLIDE 20 – TWO-HANDED (WINDLASS) TOURNIQUET APPLICATION (VIDEO)

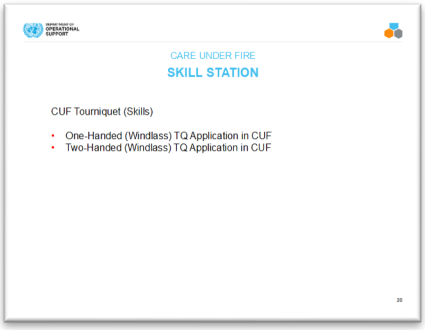
Play the video.

SLIDE 21 – SKILL STATION

At this time we will break into skill stations to practice the following skills:

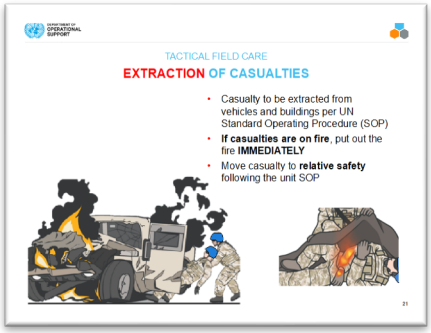
• One-Handed (Windlass) TQ Application in CUF

• Two-Handed (Windlass) TQ Application in CUF



SLIDE 22 – EXTRACTION OF CASUALTIES

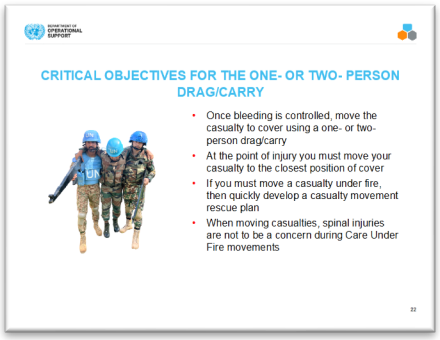
Follow UN standard operating procedures for removing/extracting casualties from vehicles. If the casualty is on fire, put out the fire, address life-threatening bleeding with a tourniquet if indicated, and move to cover as quickly as possible.



SLIDE 23 – CRITICAL OBJECTIVES FOR THE ONE- OR TWO-PERSON DRAG/CARRY

Remember: Once a tourniquet has been applied, the priority is to get the casualty to the nearest cover and out of effective enemy fire/threat.

Carries and drags will enable the first responder/FMA to do this as quickly as possible without causing further harm to the casualty.



SLIDE 24 – ONE-PERSON DRAG/CARRY

A variety of effective carries can be used depending on the casualty's level of consciousness, enemy threat level, terrain, etc.

Here are some examples of the one-person drag/carry: support carry (for a conscious casualty), neck drag (helps limit exposure from enemy fire based on low crawl of rescuer), kit/arm drag (rescuer pulls casualty backwards to safety), and cradle-drop, which allows rescuer to move the casualty short distances.

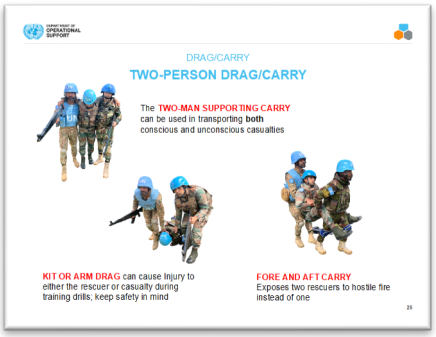
SLIDE 25 – ONE-PERSON CASUALTY DRAG/CARRY (VIDEO)

Play the video.

SLIDE 26 – TWO-PERSON DRAG/CARRY

A variety of effective carries can be used, depending on the casualty's level of consciousness, enemy threat level, terrain, etc.

Some examples of the two-person drag/carry include: two-man supporting carry (casualty is carried between two rescuers), kit/arm (two rescuers drag the casualty by their drag handle), and fore/aft (casualty is carried between two rescuers moving forward in unison).



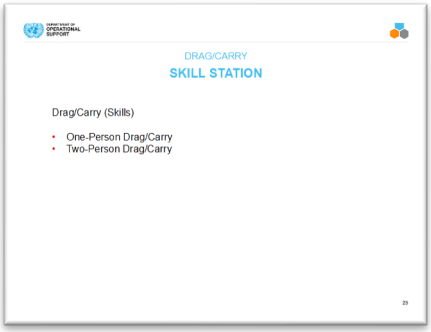
SLIDE 27 – TWO-PERSON DRAG/CARRY (VIDEO)

Play the video.

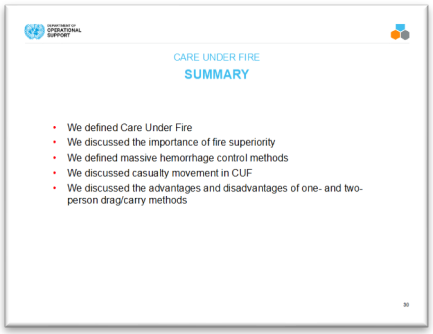
SLIDE 28 – SKILL STATION

At this time, we will break into skill stations to practice the following skills:

- One-Person Drag/Carry
- Two-Person Drag/Carry



SLIDE 29 – SUMMARY



Care Under Fire is the care rendered by the first responder/FMA at the scene of the injury while still under effective hostile fire.

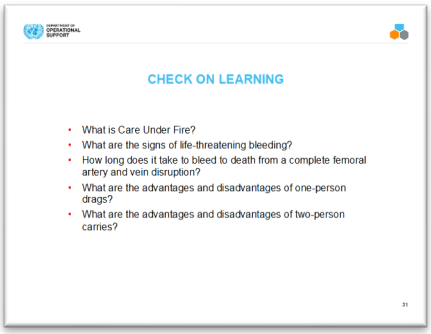
Remember to return fire and take cover. **The best medicine on the battlefield is fire superiority!**

If you can do only **ONE thing for the casualty**, identify and stop life-threatening bleeding, and keep them from bleeding to death by using a TFMA-recommended tourniquet.

Once a tourniquet has been applied, the priority is to get the casualty to the nearest cover and out of effective enemy fire/threat.

Drag/carry will enable the first responder/FMA to do this as quickly as possible without causing further harm to the casualty.

SLIDE 30 – CHECK ON LEARNING



Ask questions of the learners, referring to key concepts from the module.

Now for a check on learning.

1) What is Care Under Fire?

- Care Under Fire is the care given by the first responder at the scene of the injury while they and the casualty are still under effective hostile fire or near the threat. Available medical equipment is limited to that carried in the individual UN member's BFAK.

2) What are the signs of life-threatening bleeding?

- Bright red blood is pooling on the ground

- The overlying clothes are soaked with blood

- There is a traumatic AMPUTATION of an arm or leg

- There is pulsatile (pulsing) or steady bleeding from the wound

3) How long does it take to bleed to death from a complete femoral artery and vein disruption?

- 3 minutes

4) What are the advantages and disadvantages of a one-person drag?

- Advantages: No equipment required and only one rescuer is exposed to enemy fire.

- Disadvantages: Relatively slow to move the casualty; does not allow optimal body position for dragging the casualty; can be tiring for the first responder if the patient is heavy or wearing a lot of gear.

5) What are the advantages and disadvantages of a two-person carry?

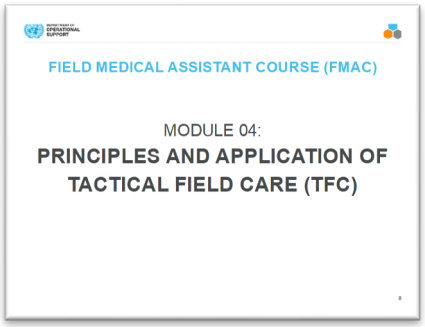
- Advantages: May be useful in situations where drags do not work well; less painful for the casualty than dragging; quicker than most one-person carries.

- Disadvantages: Causes the rescuers to have a higher silhouette than most drags, exposing them to possible hostile fire; hard to accomplish with the rescuer's and/or the casualty's equipment being worn.

SLIDE 31 – QUESTIONS

MODULE 04
PRINCIPLES AND APPLICATION OF TFC

SLIDE 1 – TITLE SLIDE



SLIDE 2 – TFMA ROLES

Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

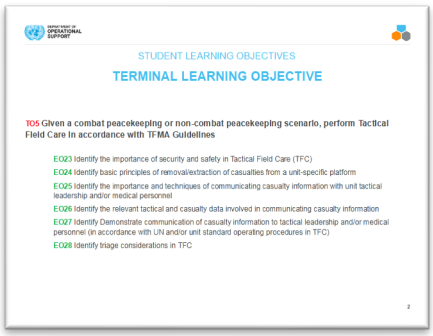
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO



Principles and Applications of Tactical Field Care module has five cognitive learning objectives and one performance learning objective. The cognitive learning objectives are to identify:

1. The importance of security and safety in Tactical Field Care
2. Basic principles of removal/extraction of casualties from a unit-specific platform

3. The importance and techniques of communicating casualty information with unit tactical leadership and/or medical personnel

4. The relevant tactical and casualty data involved in communicating casualty information, and identify triage considerations in Tactical Field Care

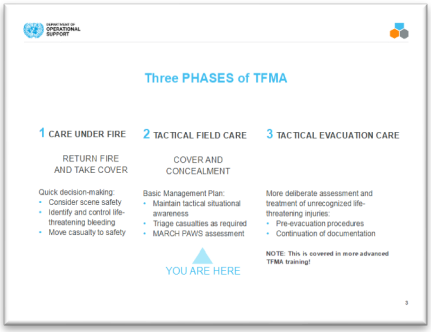
The performance learning objective is to demonstrate communication of casualty information to tactical leadership and/or medical personnel (in accordance with UN and/or unit standard operating procedures in TFC).

It is critical to identify the importance of maintaining situational awareness during TFC, as the tactical situation is fluid and may revert to CUF at any time.

SLIDE 4 – THREE PHASES OF TFMA

TFC is the second of three phases of TFMA.

It is the care provided once the responder and casualty are no longer under direct threat from effective enemy fire.



SLIDE 5 – CASUALTY AND RESPONDER NO LONGER UNDER EFFECTIVE ENEMY FIRE OR THREAT

TFC is the care rendered by a first responder/FMA once the responder and casualty are no longer under direct threat from effective enemy fire.

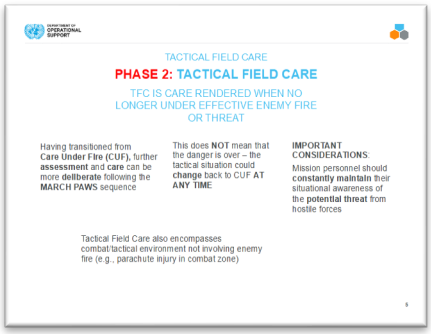
This allows for the time and the relative safety for a more deliberate approach to casualty assessment and treatment.

SLIDE 6 – PHASE 2: TACTICAL FIELD CARE

Casualty assessment and management in TFC follows a more deliberate approach known as MARCH PAWS:

Massive bleeding
Airway
Respiration/breathing
Circulation
Hypothermia/Head Injuries

Pain
Antibiotics
Wounds
Splinting



This is a helpful pneumonic for remembering how to systematically approach casualty assessment and management, ensuring that life-threatening injuries are identified and treated promptly to save lives on the battlefield and reduce preventable combat deaths.

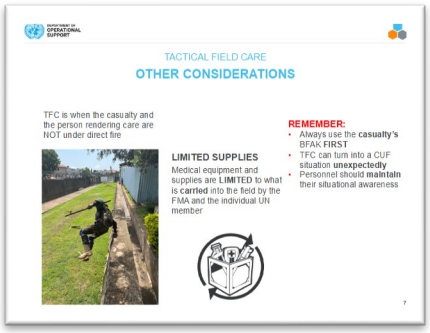
Keep in mind, even when you are in the TFC phase, it does not mean that the danger is over. The tactical situation could change back to CUF again at any time. FMAs must maintain security and situational awareness while continuing the assessment, treatment, and preparation of casualties for handoff to medical personnel/evacuation while remaining prepared to engage the enemy and continue the unit mission at any time.

SLIDE 7 – SECURITY AND SAFETY IN TACTICAL FIELD CARE

Establish a security perimeter in accordance with unit tactical standard operating procedures and/or battle drills.

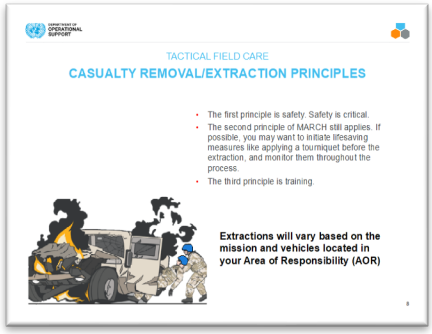
Maintain tactical situational awareness. Casualties with altered mental status should be disarmed, have communications secured, and have sensitive items redistributed.

SLIDE 8 – OTHER CONSIDERATIONS OF TACTICAL FIELD CARE



In TFC, medical equipment that is available will be limited to that carried into the field by the casualty (their BFAK), the first responder/FMA (BFAK or UN Trauma Pack UNTP), or a responding medic (aid bag, etc.). Remember, whenever possible, use the casualty's BFAK supplies first.

SLIDE 9 – CASUALTY REMOVAL/EXTRACTION PRINCIPLES



Although the types of extractions you may encounter will vary based on your unit mission and the vehicles you use or locations you encounter, a couple of principles have universal application and can apply to most extraction situations.

The first principle is safety. The worst outcome would be to have additional casualties during an extraction attempt, and almost all extraction scenarios have some compromised safety; whether that is from fires at the removal site, vehicle rollovers that are unstable, condemned buildings that are structurally compromised, or some other scene issues.

The second principle is that the concept of MARCH still applies, and the treatment priorities do not change because the casualty is in a position that is difficult to access. If

lifesaving treatments like limb tourniquet application can be done before extraction, they should be completed and monitored throughout the extraction process. If the casualty is in a position where access to provide those treatments can't be accomplished, then they need to be moved as quickly as is safely possible. To that end, if a cervical spine injury might be suspected, the delay to immobilize the spine may lead to a bad outcome and shouldn't be prioritized over accessing the casualty to perform other lifesaving interventions.

The third principle is that is it important to spend time training, before deployments and during deployments, on how to extract and remove casualties from the unit assets and

tactical environments that you are most likely to encounter while performing your unit mission. The unit medical team may organize these, but as a combat lifesaver it is also your responsibility to ensure the unit is properly trained to help support you if an extraction is needed.

SLIDE 10 – MARCH PAWS

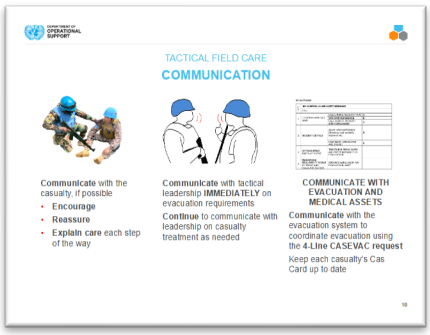
When you are in Tactical Field Care, follow the MARCH PAWS sequence in assessing the casualty.

A full tactical trauma assessment should follow the MARCH PAWS sequence.

Massive bleeding
Airway
Respiration/breathing
Circulation
Hypothermia/Head Injuries

Pain
Antibiotics
Wounds
Splinting

SLIDE 11 – COMMUNICATION



FMAs will continue treatment until handoff with medical personnel and should communicate with:

1. The casualty throughout assessment and treatment
2. Tactical leadership about casualty status and evacuation requirements
3. The evacuation system (CASEVAC), including 4-line CASEVAC request/MIST
4. Medical providers about casualty assessment and treatment (Casualty Card)

Communicate with the casualty throughout care. Being physically wounded may generate significant anxiety and fear above and beyond the psychological trauma of combat. Talking frankly with the casualty about their injuries and offering reassurance by describing the treatments being rendered and emphasizing that everything possible is being done on their behalf and that they will be well taken care of will help to counter their anxiety. **Be honest about the**

injuries sustained but maintain a positive talking through procedures helps maintain your own confidence and the casualty's confidence in you.

Communicate with tactical leadership ASAP and throughout casualty treatment. Tactical leadership needs to understand the impact on the mission. For example, tactical leadership may need to know:

- How many casualties were inflicted?
- Who is down as a casualty?
- Can the casualty still fight?
- Has the enemy threat been eliminated?
- Are weapons systems down or fields of fire not covered because the unit has taken casualties?
- Is it necessary to have others fill in the casualties fighting positions? Or do the casualties need to be moved?

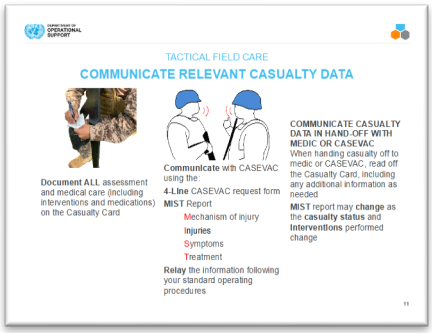
Communicate with the evacuation coordination cell to arrange for CASEVAC. Communicate with medical providers about details of the casualty injuries. This includes 4-line communication and ongoing MIST reports.

Medical leadership may need to know:

- What injuries were sustained?
- What is the mental and physical status of each casualty?
- What treatments were needed and rendered?
- Does the medic need to triage multiple casualties?
- Should the medic move to a casualty, or should the casualty be moved to the medic?
- Does the unit need to break out litters or extraction equipment?

SLIDE 12 – COMMUNICATE RELEVANT CASUALTY DATA

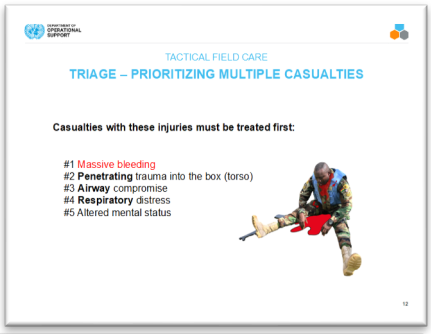
Document all assessment and care provided (including medications and interventions) on the Casualty Card. Communicate with CASEVAC using a **4-line** CASEVAC request and **MIST Report.**



SLIDE 13 – TRIAGE – PRIORITIZING MULTIPLE CASUALTIES

FMA should consider these priorities (following MARCH) to decide how to prioritize treatment of multiple casualties in the TFC phase of care:

#1 Massive bleeding
#2 Penetrating trauma
#3 Airway
#4 Respiratory distress
#5 Altered mental status

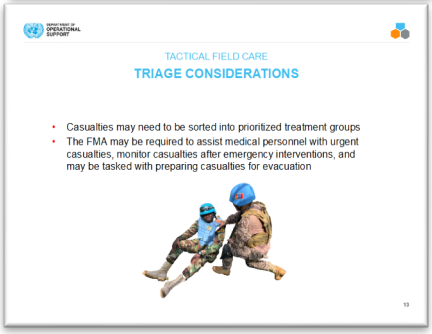


SLIDE 14 – TRIAGE CONSIDERATIONS

"Triage Considerations" means casualties may need to be sorted into prioritized treatment groups.

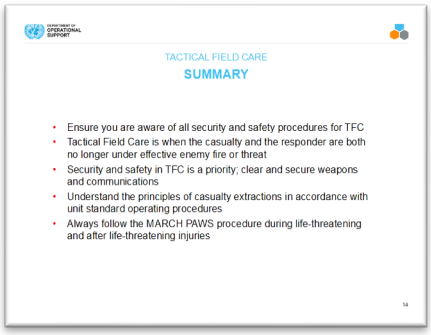
The FMA may be required to assist medical personnel with urgent casualties.

The FMA may be assigned to monitor casualties after emergency interventions; the FMA may be tasked with preparing casualties for evacuation.



SLIDE 15 – SUMMARY

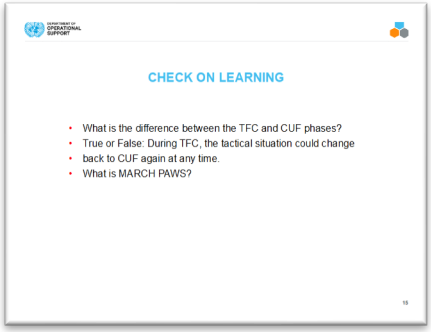
In this module, we discussed the principles and applications of TFC, emphasizing the need to maintain situation awareness. We identified the importance of security and safety in TFC, the basic principles of casualty removal and extraction from a unit-specific platform, techniques for communicating casualty information with unit tactical leadership and medical personnel, relevant tactical and casualty data involved in communicating casualty information, and triage considerations.



SLIDE 16 – CHECK ON LEARNING

Ask questions of the learners referring to key concepts from the module.

Now for a check on learning:



1) What is the difference between the TFC and CUF phases?

- TFC is distinguished from CUF by a reduced level of threat from hostile fire (the shooting has stopped – or enemy fire is ineffective), and relatively more time available to provide care, depending on the tactical situation and available medical equipment (still limited but often includes additional equipment carried in the UNTP, medic bags, or in medical kits in tactical vehicles).

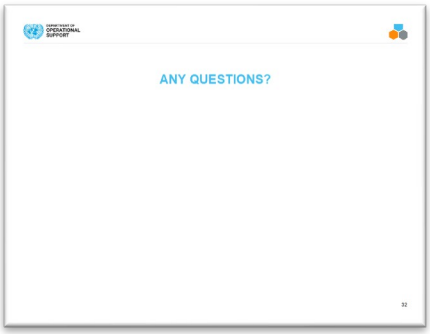
2) True or False: During TFC, the tactical situation could change back to CUF, again at any time.

- True

3) What are MARCH PAWS?

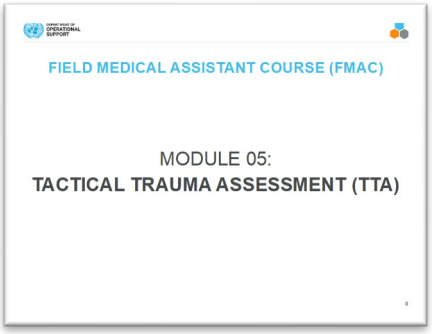
- The MARCH PAWS sequence is the pneumonic for TFMA assessment and treatment of casualties, which enables systematic identification and intervention of life-threatening injuries that could result in preventable combat deaths.

SLIDE 17 – QUESTIONS



MODULE 05
TACTICAL TRAUMA ASSESSMENT

SLIDE 1 – TITLE SLIDE



This module is an overview of tactical trauma assessment (TTA). The skills practice will take place near the end of the course after you have learned ALL of the skills.

SLIDE 2 – TFMA ROLES

Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

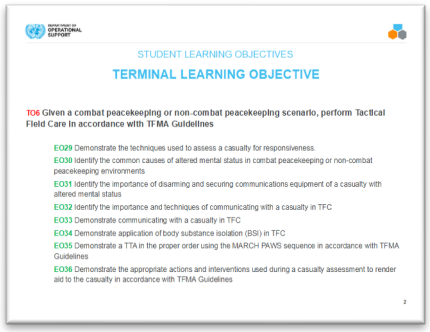
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO



The Tactical Trauma Assessment (TTA) module has three cognitive learning objectives and five performance learning objectives. The cognitive learning objectives are to identify the:

1. Common causes of altered mental status in combat or noncombat environments
2. Importance of disarming and securing communications equipment of a casualty with altered mental status
3. Importance and techniques of communicating with a casualty in TFC

The performance learning objectives are to demonstrate:

1. Techniques used to assess a casualty for responsiveness
2. Communication with a casualty in Tactical Field Care
3. Application of body substance isolation (BSI) in TFC
4. TTA in the proper order using the MARCH PAWS sequence in accordance with TFMA guidelines
5. Appropriate actions and interventions used during a casualty assessment to render aid to the casualty in accordance with TFMA Guidelines.

The critical aspects are to identify the importance of and demonstrate the systematic approach for assessment and interventions in providing lifesaving care to a casualty following the MARCH PAWS sequence in accordance with the TFMA guidelines.

SLIDE 4 – MARCH PAWS

A full tactical trauma assessment should follow the MARCH PAWS sequence.

Massive bleeding
Airway
Respiration/breathing
Circulation
Hypothermia/Head Injuries

Pain
Antibiotics
Wounds
Splinting

We will cover the interventions and procedures of MARCH PAWS in more detail in later modules.

SLIDE 5 – TACTICAL TRAUMA ASSESSMENT HOW-TO (VIDEO)

Play video

Pay attention to this video. You will be expected to perform a full TTA upon completion of this training.

SLIDE 6 – COMBAT SPEED TTA "FIRE FIGHT CONSCIOUS CASUALTY" (VIDEO)

Play video

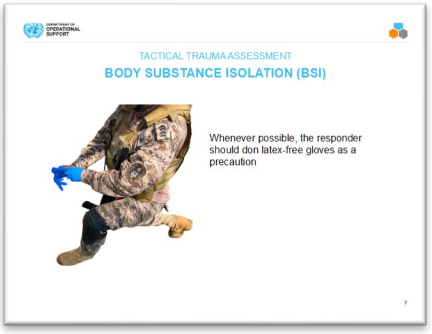
SLIDE 7 – COMBAT SPEED TTA" EXPLOSION" UNCONSCIOUS CASUALTY (VIDEO)

Play video

SLIDE 8 – BODY SUBSTANCE ISOLATION (BSI)

Whenever possible, the responder/TFA should don latex-free gloves as a BSI precaution.

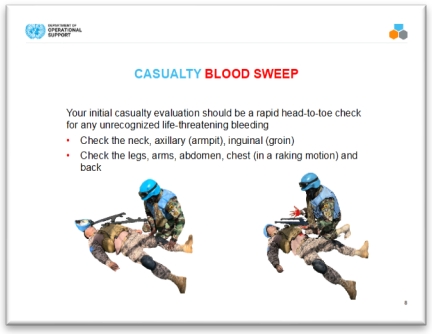
Gloves are provided in the BFAK and UNTP bags.



SLIDE 9 – CASUALTY BLOOD SWEEP

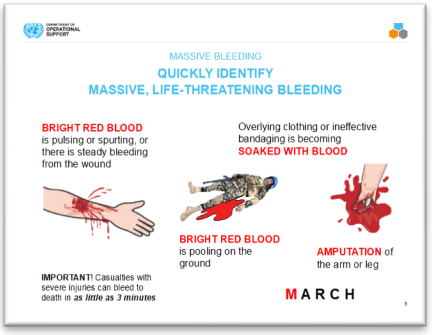
Your initial casualty evaluation should be a rapid head-to-toe check for any unrecognized life-threatening bleeding (a blood sweep).

This blood sweep should include a visual and hands-on (palpation) inspection of the front and back of the casualty from head to toe, including neck, armpits, groin, etc.



SLIDE 10 – QUICKLY IDENTIFY MASSIVE, LIFE-THREATENING BLEEDING

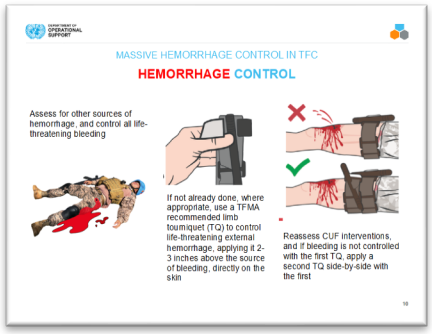
This blood sweep is a systematic way to ensure rapid identification of any unrecognized life-threatening bleeding.



SLIDE 11 – HEMORRHAGE CONTROL

If you identify life-threatening bleeding that was missed in the Care Under Fire phase, immediately apply a tourniquet or hemostatic dressing, and/or pressure dressing.

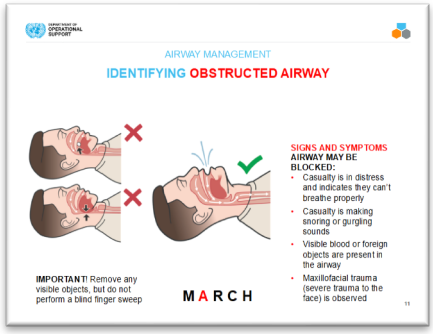
If a tourniquet was previously applied but bleeding is not controlled, apply a second tourniquet side-by-side with the original tourniquet, preferably higher on the injured limb, if possible, to control the bleeding. This is the "**M**" of MARCH PAWS.



SLIDE 12 – IDENTIFYING OBSTRUCTED AIRWAY

Evaluate the casualty's airway and ensure the airway is open. **LOOK** (for rise and fall of the chest), **LISTEN** (for sounds of breathing), and **FEEL** (breath on your cheek) for indications of trouble breathing, snoring or gurgling sounds, visible objects obstructing the airway, and any severe trauma to the face.

Do not do a blind finger sweep.



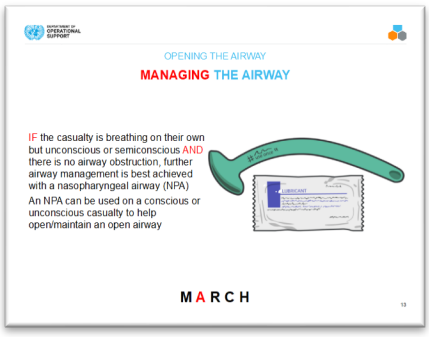
SLIDE 13 – IN A CASUALTY WITHOUT AN AIRWAY OBSTRUCTION, YOU CAN PERFORM THE FOLLOWING MANEUVERS TO OPEN THE AIRWAY

If a casualty is unconscious, the tongue may have relaxed, causing an airway blockage. Use the head-tilt chin-lift or jaw-thrust method to open the airway. **Important note**: If a neck or spinal injury is suspected, use the jaw-thrust method to open the airway.

This is the first "**A**" of MARCH PAWS.

NOTE: Once the airway has been opened using one of these manoeuvres, the casualty may require repeated/continued manoeuvres to maintain an open airway.

SLIDE 14 – MANAGING THE AIRWAY



If the casualty is unconscious or semiconscious but breathing on their own AND you do not identify an airway obstruction, you may be able to better support airway management through the use of a nasopharyngeal airway (NPA). This can help open/maintain a conscious or unconscious casualty's airway.

Note any clear fluid coming from the nose or ears. This may be cerebrospinal fluid, which indicates a possible skull fracture. Do not attempt to place an NPA if clear fluid is coming from the nose or ears.

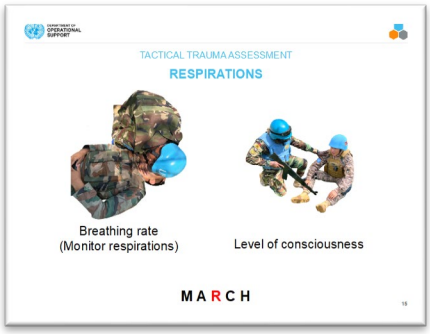
If airway maneuvers and nasopharyngeal airway are ineffective at opening or maintaining an open airway, notify medical personnel.

SLIDE 15 – MANAGEMENT/RECOVERY POSITION

If the casualty is **conscious**, allow them to assume any position that best protects the airway and allows them to breath easily, including sitting up.

Place an **unconscious casualty** in the recovery position. If an NPA was inserted into the right nostril, place the casualty on their right side, if possible.

SLIDE 16 – RESPIRATIONS



LOOK (for rise and fall of the chest), **LISTEN** (for sounds of breathing), and **FEEL** (breath on your cheek) for indications of trouble breathing (as noted for airway previously).

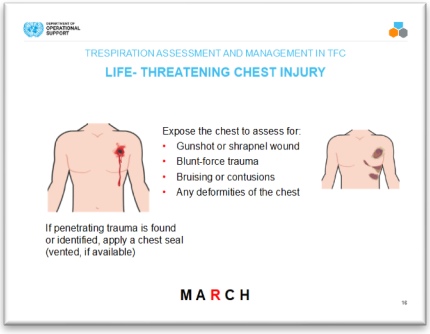
Respiration rate (breaths per minute) and quality (shallow, laboured, etc.) should be noted.

Indications of respiratory distress include:

- Breathing that is progressively difficult
- Decreased breathing sounds
- Distended neck veins
- Opposed to "progressive" respiratory distress
- Hunched over; they need to be in the "position of comfort"
- Agitation due to a lack of oxygen
- High pulse

This is the "R" of MARCH PAWS.

SLIDE 17 – LIFE-THREATENING CHEST INJURY



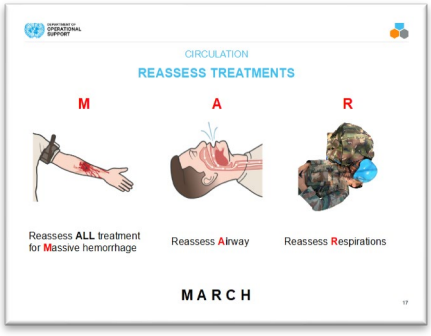
Common causes of chest injuries include gunshot, stab, or shrapnel wounds to chest and blunt-force trauma.

Note obvious signs of penetrating trauma, bruising, swelling, crackling/popping (on palpation), or other deformities of the chest. **Check** the casualty's respiration and ability to breathe. All open and/or sucking chest wounds should be treated by immediately applying a vented chest seal to cover the defect.

For respiratory distress not resolved by a chest seal or in a casualty with known or suspected chest or back trauma without an open and/or sucking chest wound, consider a tension pneumothorax, and perform a needle decompression of the chest.

Injuries to the chest are very serious and can be life-threatening. The casualty's condition can change quickly with a chest injury.

SLIDE 18 – REASSESS TREATMENTS



This is the "**C**" in MARCH PAWS. The casualty should be reassessed for life-threatening hemorrhage (including effectiveness of prior interventions-TQs, pressure bandages, etc.).

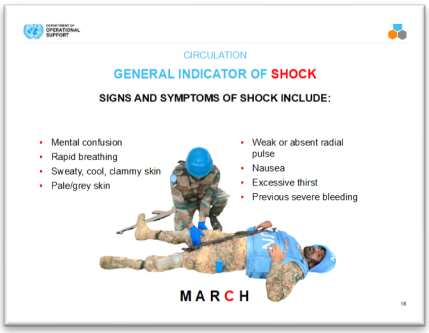
Is there an obvious pelvic or femur fracture? If so, a medic should be informed immediately. Assess the radial pulse.

If the pulse is absent or weak, shock should be suspected and a medic should be informed immediately.

SLIDE 19 – GENERAL INDICATOR OF SHOCK

The TFA should be familiar with the signs/symptoms of shock. In the combat environment, shock is assumed to be due to blood loss.

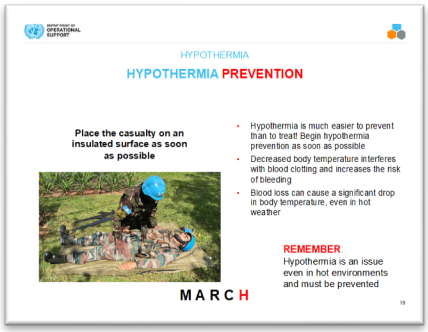
If untreated, shock could lead to death. If shock is suspected, a medic should be informed immediately.



SLIDE 20 – HYPOTHERMIA PREVENTION

Prevent hypothermia by minimizing the casualty's exposure to the elements and applying active hypothermia prevention measures, when possible.

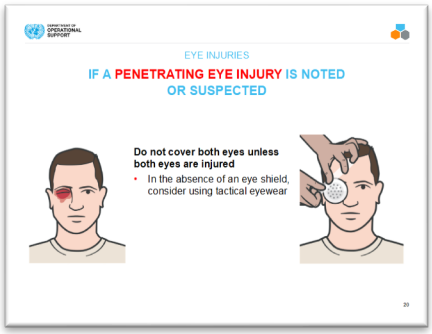
If no rewarming equipment is available, then use dry blankets, poncho liners, sleeping bags, or anything that will retain heat and keep the casualty dry. Make sure you assess for hemorrhagic shock and ensure bleeding is controlled.



SLIDE 21 – IF A PENETRATING EYE INJURY IS NOTED OR SUSPECTED

Perform rapid field test of visual acuity (e.g., read Meals Ready to Eat (MRE) label, or name tag).

If the casualty has any penetrating injuries, they should take the antibiotic in the Wound Medication Pack (WMP). Cover eye with rigid shield, not pressure patch. **Do not** cover both eyes unless both are injured and you are sure the casualty will not return to the fight.

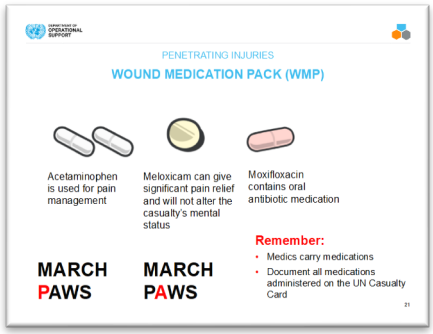


SLIDE 22 – WOUND MEDICATION PACK

The WMP contains drugs for mild to moderate pain (meloxicam and acetaminophen) and an antibiotic specific for penetrating wounds (moxifloxacin).

A WMP can give significant pain relief for mild to moderate pain and will not alter the casualty's mental status. It also includes antibiotics for preventing/treating infections after traumatic injuries, such as penetrating wounds, eye injuries, and burns.

This is the "**P**" and "**A**" of MARCH PAWS.



SLIDE 23 – INSPECT AND ADDRESS ALL KNOWN WOUNDS

This is the "**W**" in MARCH PAWS.

All other wounds (burns, fractures, other soft tissue wounds, etc.) should be addressed with splinting, dressings, etc. as appropriate. This will be covered in more detail in a later module.

Note: Reassess pulses after all dressings are placed to ensure that they are not too tight. Do not ever apply one and forget it!

SLIDE 24 – BURN CARE

Stop the burning process by extracting the casualty from the source, and cover the burned areas with dry, sterile dressings.

If the burn is caused by **white phosphorus**, submerse the affected area in water, if possible; otherwise, the dressing must be wet. Advise medical personnel immediately.

Remember to prioritize assessing MARCH before addressing burns. This is part of the "**W**" of MARCH PAWS.

SLIDE 25 – ASSESS FOR A FRACTURE

Assess for **any fractures**, and if present, splint the fracture using whatever materials are available, making sure to immobilize the joint above and the joint below the fracture.

Check pulse(s) before and after applying splints. Treat open fractures with meds (for pain and to prevent infection) with meds from the CWMP.

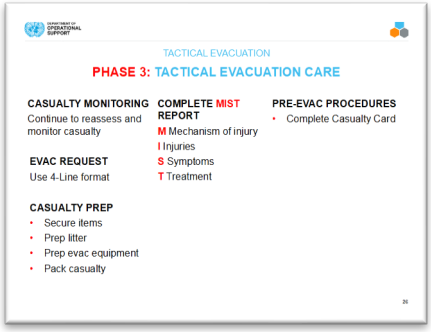
This is the "**S**" of MARCH PAWS.

SLIDE 26 – COMMUNICATION AND DOCUMENTATION

Communicate with the casualty by reassuring them and telling them about procedures being performed.

Communicate with medical personnel and your **tactical leadership**, and relay casualty status and evacuation needs.

SLIDE 27 – PHASE 3: TACTICAL EVACUATION CARE

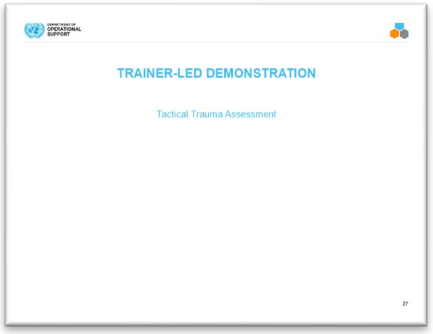


Document all assessment and care on a Casualty Card. Every UN member will carry their own Casualty Card in their BFAK. If possible, use a permanent marker (such as a Sharpie) to make entries on the card. When rendering care or assisting medical personnel, include as much information as you can on the card.

This is the official record of the care provided and should go with the casualty when care is handed off to a medic or at the time of evacuation.

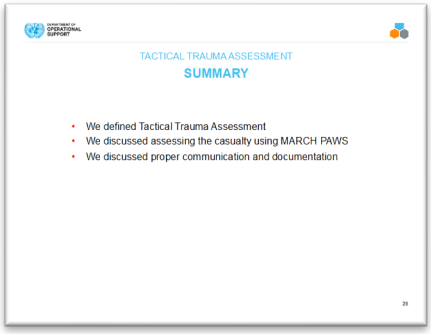
Communication includes the **MIST report** and **4-line CASEVAC request**.

SLIDE 28 – SKILL STATION



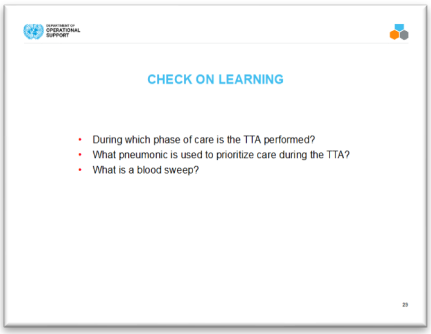
At this time, we will break for a trainer-led demonstration on TTA.

SLIDE 29 – SUMMARY



In this module, we discussed the TTA. We identified the common causes of altered mental status in combat or noncombat environments, the importance of disarming and securing the communications equipment of a casualty with altered mental status, and techniques for communicating with a casualty in TFC. We also demonstrated techniques for assessing a casualty for responsiveness, applying body substance isolation, conducting a TTA in the proper order using the MARCH PAWS sequence, and using appropriate actions and interventions in a casualty assessment to render aid in accordance with TFMA Guidelines.

SLIDE 30 – CHECK ON LEARNING

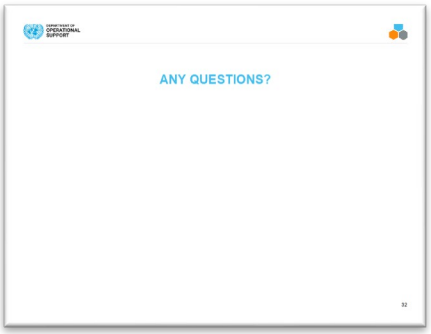


Ask questions of the learners referring to key concepts from the module.

Now for a check on learning:

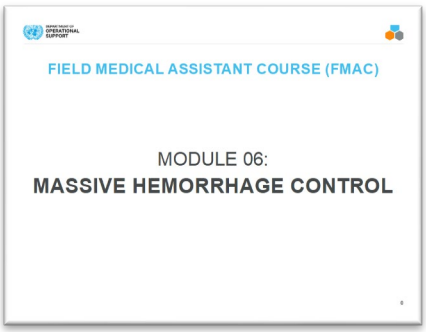
1. In which phase of care is the TTA performed?
    - TFC
2. What pneumonic is used to prioritize care in the TTA?
    - MARCH PAWS
3. What is a blood sweep?
    - A blood sweep is your initial casualty evaluation. It should be a rapid head-to-toe check for any unrecognized life-threatening bleeding.

SLIDE 31 – QUESTIONS



MODULE 06
MASSIVE HEMORRHAGE CONTROL IN TFC

SLIDE 1 – TITLE SLIDE



Good morning/afternoon, my name is (insert here) and I will be your lead trainer for Module 6: Massive Hemorrhage control in the Tactical Field Care (TFC) environment.

Before we get started are there any questions?

SLIDE 2 – TFMA ROLES

Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

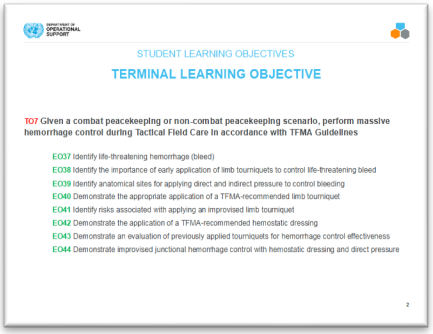
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO



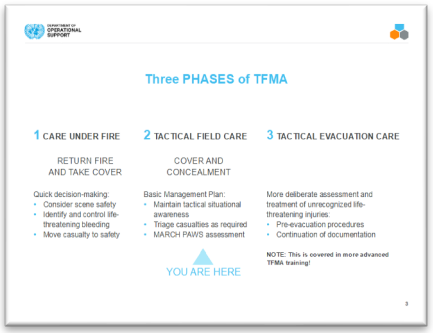
The TFMA-FMA course is built on a foundation of learning objectives. These objectives lay out the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

The module has one Terminal Learning Objective, or TLO. The TLO is supported by a series of Enabling Learning Objectives, or ELOs which include identifying:

- Life-threatening hemorrhage (bleeding)
- Importance of early application of limb tourniquets to control life-threatening bleeding
- Anatomical sites for applying direct and indirect pressure to control bleeding
- Appropriate application of a TFMA-recommended limb tourniquet
- Risks associated with applying an improvised limb tourniquet.
- 2. Application of a TFMA-recommended hemostatic dressing
- Evaluation of previously applied tourniquet(s) for hemorrhage control effectiveness
- Improvised junctional hemorrhage control with hemostatic dressing and direct pressure

The critical aspects are to identify life-threatening hemorrhage and the importance of prompt intervention and to demonstrate the appropriate interventions for life-threatening hemorrhage in accordance with the TFMA guidelines.

SLIDE 4 – THREE PHASES OF TFMA



TFMA is organized into Phases of Care that start at the point of injury. These phases are relevant to combat and noncombat trauma scenarios:

1. **Care Under Fire or Care Under Threat** is the aid rendered at the trauma scene while there is still an active threat. Available medical equipment is limited to that carried by an individual or found in a nearby first aid kit. Massive bleeding is the only medical priority that requires your attention during this phase, as you are actively dealing with an ongoing threat in a potentially chaotic and dangerous situation.

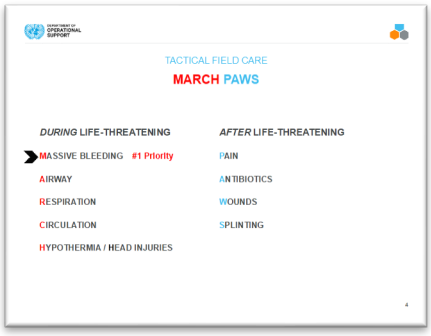
2. **Tactical Field Care** is the care provided once the threat has been neutralized and/or the scene is safe or the casualty has moved/been moved out of the immediate threat situation. During this phase a rapid casualty assessment should be performed. Bleeding control should be assessed/reassessed, and airway/breathing issues addressed. Other injuries such as burns, fractures, eye trauma, and head injuries should now be identified and treated. Medical equipment is still limited. Time to arrival of medical personnel or evacuation may vary considerably, depending on the tactical situation, etc.

3. **Tactical Evacuation Care** is the care rendered during and once the casualty has been moved by an aircraft, vehicle, or other mode of transportation for evacuation to a higher level of care. Additional medical personnel and equipment are typically available in this phase of casualty care

Remember: The goal of TFMA and the role of the FMA is to rapidly assess casualties to identify and treat potentially life-threatening injuries to keep them alive long enough to reach a higher level of medical care.

SLIDE 5 – MARCH PAWS

Massive bleeding assessment and management is the "**M**" in the MARCH PAWS sequence and the **#1 priority**.



SLIDE 6 – HEMORRHAGE OVERVIEW IN TFC (VIDEO)

Play video

Summary:

1. Use TFMA-approved limb TQ
2. Use hemostatic dressings
3. Use junctional TQs
4. Use pelvic compression device
5. REASSESS all interventions
6. DO NOT apply a TQ and forget it

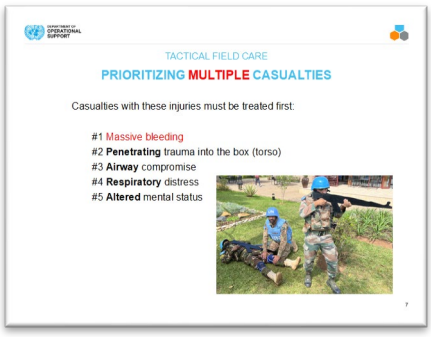
SLIDE 7 – SECURITY AND SAFETY IN TACTICAL FIELD CARE

Remember to maintain **security** and tactical situational **awareness** during TFC.

Casualties with altered mental status (due to shock, head injury, or medications) who can no longer fight effectively should have weapons and sensitive items secured so they do not cause harm to themselves, their teammates, or the mission.

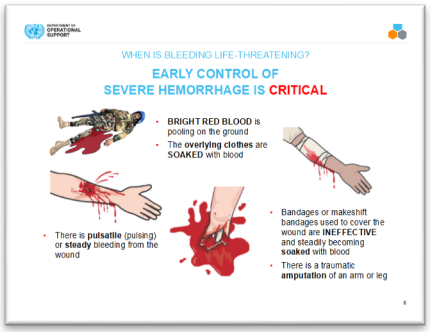
SLIDE 8 – PRIORITIZING MULTIPLE CASUALTIES

When you come upon a casualty, multiple injuries may need interventions. However, remember **M**assive bleeding is the **#1 priority**!



SLIDE 9 – WHEN IS BLEEDING LIFETHREATENING? EARLY CONTROL OF SEVERE HEMORRHAGE IS CRITICAL

This slide show signs of ongoing life-threatening bleeding that ***may not have been noted or appropriately*** addressed in CUF.



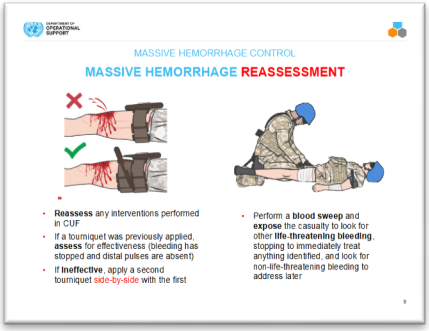
SLIDE 10 – MASSIVE HEMORRHAGE REASSESMENT

The TFC phase allows the time and relative safety for a more deliberate assessment and treatment (MARCH PAWS). All casualties should be reassessed with a full tactical trauma assessment.

Assessment for massive hemorrhage includes a visual and manual blood sweep of the front and back of the casualty from head to toe (including neck, armpits, and groin).

Any massive hemorrhage identified (newly identified or ineffectively treated during CUF) should be addressed **immediately**.

All tourniquets placed during CUF should be reassessed for effectiveness, tightened if needed, and/or a second tourniquet placed adjacent (side-by-side) to the first to ensure bleeding is effectively stopped.



SLIDE 11 – TOOLS TO CONTROL LIFE-THREATENING HEMORRHAGE

Describe items on the slide and their use.

Direct Pressure: After packing the wound with hemostatic dressing or gauze, hold pressure for 3 minutes.

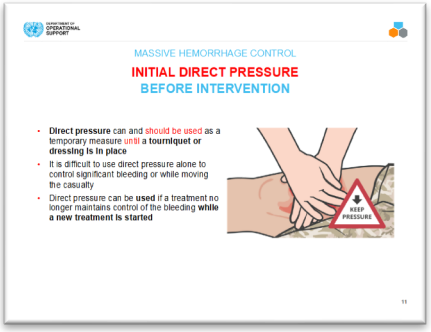
Gauze/Other Dressings & Pressure Bandages: These items are all TFMA-approved hemostatic dressing, etc.

TFMA Recommended TQ: They are either windlass or ratchet but have been proven effective in use.

Pressure Delivery Device: A PDD is made using improvised materials, such as a shoe/boot, full water bottle, or canteen, and applies additional pressure to the wound after it has been packed.

Hemostatic Dressing: TFMA-recommended hemostatic dressings are safe and contain active ingredients that assist with blood clotting at the bleeding site. Non-TFMA-recommended supplies may be available; however, they have not been shown to be effective in controlling massive hemorrhage.

SLIDE 12 – INITIAL DIRECT PRESSURE BEFORE INTERVENTION



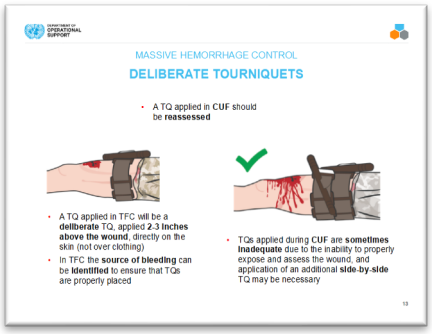
Direct pressure can and should be used as a temporary measure until a tourniquet or dressing is in place. It is difficult to use direct pressure alone to control significant bleeding or while moving the casualty. While packing a wound, maintain constant, direct pressure at the source of bleeding to be effective.

SLIDE 13 – TOURNIQUETS

Remember: A tourniquet is a ***one-time*** use device.

Never deploy with or use a tourniquet that has been used previously in training, as there is an increased risk of device failure.

SLIDE 14 – DELIBERATE TOURNIQUETS



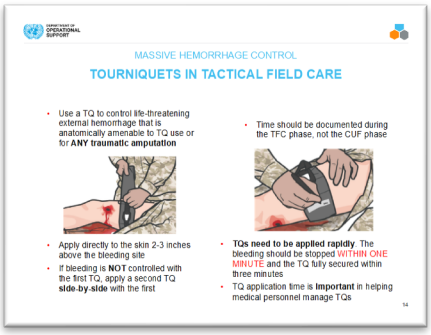
In TFC, there is more time to expose the wound and determine the actual site of bleeding.

All tourniquets applied during TFC should be deliberate tourniquets, **applied 2 to 3 inches above the wound** and directly on the skin. This maximizes the effectiveness of the TQ in stopping bleeding and minimizes the amount of healthy tissue that might be impacted by a TQ unnecessarily placed too high on the limb.

Reassess any tourniquets that were applied in CUF for effectiveness. These tourniquets are rapidly applied and may have been placed "high and tight" (for example, high on the leg when the actual site of bleeding is near the ankle), and this will need to be addressed by medical personnel as they respond.

Remember: DO NOT put tourniquets over the knee, elbow, holster, or cargo pocket containing bulky items, as the tourniquet will be inadequate.

SLIDE 15 – TOURNIQUETS IN TACTICAL FIELD CARE



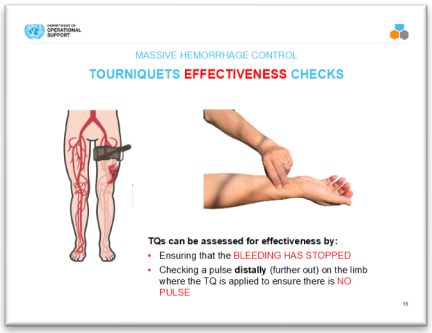
Tourniquets applied during TFC should be **deliberate tourniquets**. They are anatomically amenable to a TFMA approved tourniquet.

If bleeding is **not controlled** with the first tourniquet, apply a second tourniquet side-by-side with the first, which is further away from the wound.

Remember: Bleeding should be **stopped** within ***1 minute*** and the tourniquet was fully **secured** within **3 minutes**.

The time the tourniquet was placed should be documented on the tourniquet itself and on the **Casualty Card** in TFC (not during CUF). This is important for medical personnel as the casualty is moved to higher echelons of care.

SLIDE 16 – TOURNIQUET EFFECTIVENESS CHECKS



Check for circulation below the tourniquet by feeling for **distal pulse** (a pulse below the tourniquet).

If bleeding continues or you detect a distal pulse, **tighten the existing tourniquet** further or apply a second tourniquet next to the first.

SLIDE 17 – TWO-HANDED WINDLASS TOURNIQUET APPLICATION IN TFC (VIDEO)

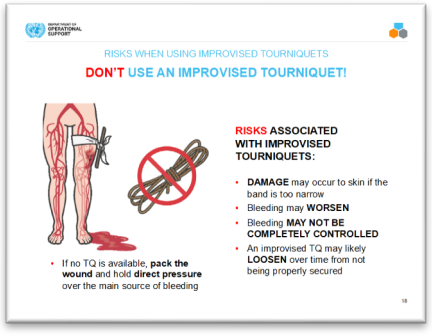
Play video(s)

1. C-A-T buddy looped
2. C-A-T buddy routed

SLIDE 18 – TOURNIQUET PITFALLS/MISTAKES

1. The longer you wait to apply a tourniquet the more blood the casualty loses.
2. If you do not pull all the slack out, you will not be able to tighten the tourniquet effectively.
3. Tourniquets should be tight and **will hurt a lot** when applied properly.
4. If one tourniquet is not effective, apply a second. This may be necessary in casualties with large extremities.
5. When in doubt, apply a tourniquet. However, the need for a tourniquet should be reassessed as soon as possible.
6. In CUF, a tourniquet is placed 'high & tight' but in TFC the tourniquet should be placed 2-3 inches above the wound.
7. **DO NOT loosen!**
8. Leave the tourniquet in place even if loosened by medical personnel. You DO NOT want to have rebleeding occur and not have a tourniquet available.
9. **DO NOT** put tourniquets over joints…they DO NOT work over joints. If the wound is directly below a joint, place the tourniquet 2-3 inches above the joint.

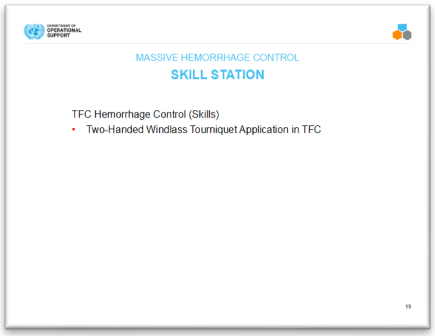
SLIDE 19 – IMPROVISED TOURNIQUETS



Remember: DO NOT use an improvised tourniquet except as an **absolute last resort** when there is no **other option** to control life-threatening bleeding. If no tourniquet is available, pack the wound and use direct pressure. Improvised tourniquets can cause damage to skin if they are too narrow (less than 2 inches), they may loosen, and may not completely control bleeding. Improvised tourniquets that are 2 inches wide may be more successful in controlling bleeding.

Continue to check the tourniquet, as improvised tourniquets are prone to loosening due to (but not limited to) casualty movement, shift fluid, and quality of improvised material.

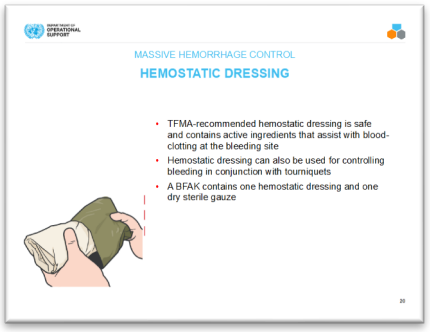
SLIDE 20 – SKILL STATION



At this time, we will break into skill stations to practice the following skills:

- Two-Handed Windlass Tourniquet Application in TFC

SLIDE 21 – HEMOSTATIC DRESSING



Familiarize yourself with the items in your BFAK.

A BFAK contains one hemostatic dressing and one dry sterile gauze.

TFMA-recommended hemostatic dressings are safe and contain active ingredients that assist with blood clotting at the bleeding site.

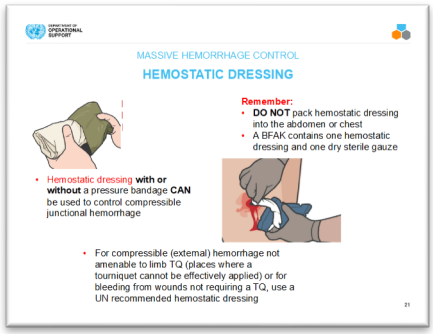
Dressings include:

- **Combat Gauze®,** a 4-yard-long roll of gauze about 3 inches wide, used to control hemorrhage. The material has a chemical in it that causes a clot to form when it comes into contact with blood. This action, along with packing it into a bleeding wound and applying manual pressure, forms a clot and stops the bleeding.
- **Celox gauze**, with Celox granules bonded to its surface. Celox granules are Chitosan-based products that absorb fluid from blood, swell, and form a binding gel. The adherent gel plug seals the wound.
- **ChitoGauze**, a Chitosin-based hemostatic dressing that binds red and platelets on the dressing's surface, which provides clotting at the point of bleeding.

Note: Although Chitosin is a shellfish derivative, it will **NOT** cause an allergic reaction in casualties with a shellfish allergy.

Note: When packing larger wounds, more than one hemostatic dressing and/or gauze may be needed to control bleeding. If bleeding has not stopped, remove prior hemostatic packing material and repack with a new hemostatic dressing, if available. Apply additional gauze and pressure (for at least 3 minutes) until bleeding has stopped. Watch for rebleeding.

SLIDE 22 – HEMOSTATIC DRESSING (CONT.)

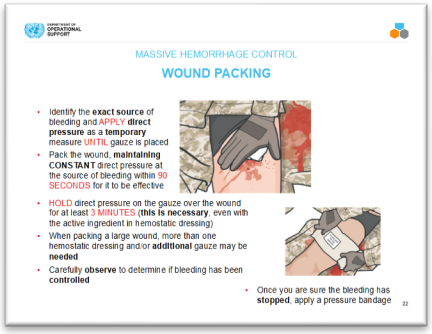


While hemostatic dressings should be packed into wounds of the limbs, when the source of bleeding is too high on limb for tourniquet application such as **neck**, **armpit**, and **groin**, they should **NOT** be packed into the **abdomen** or **chest**.

For compressible (external) hemorrhage **not amenable to limb tourniquet**, places where a tourniquet cannot be effectively applied like **neck**, **armpit**, and **groin** areas, use a TFMA-recommended hemostatic dressing.

Even with the active hemostatic agents in hemostatic dressings, direct pressure **must be applied** for at least 3 minutes.

SLIDE 23 – WOUND PACKING

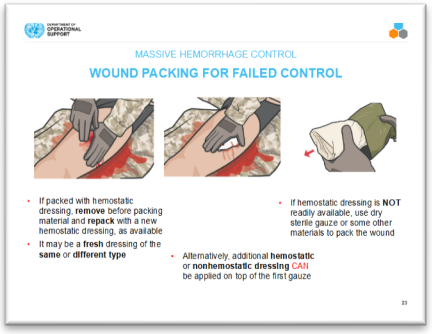


DO NOT blindly pack a wound.

Try to locate the source of bleeding and immediately apply direct pressure while retrieving gauze.

While packing a wound with gauze, maintain **constant**, direct pressure at the source of bleeding within 90 seconds. Once the dressing is applied, hold direct pressure on the gauze over the wound for **at least 3 minutes**. Then, 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 bandage over the hemostatic dressing.

SLIDE 24 – WOUND REPACKING FOR FAILED CONTROL

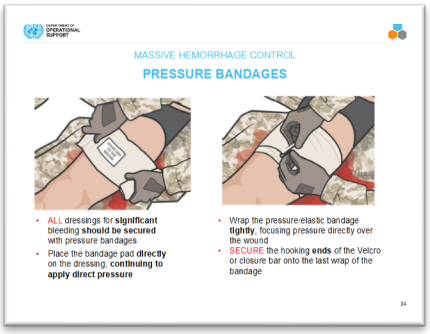


If bleeding has not been stopped, **remove the hemostatic dressing/packing material**. Immediately, repack with a new hemostatic dressing, if available. Each dressing works differently, so if one fails to control bleeding, it may be removed and a fresh dressing of the same type or a different type applied.

Alternatively, additional hemostatic or non-hemostatic dressings can be applied on top of the first dressing. Apply additional gauze and pressure **for at least 3 minutes**, until bleeding has stopped. Watch for rebleeding.

NOTE: When packing larger wounds, more than one hemostatic dressing and/or gauze may be needed to control bleeding.

SLIDE 25 – PRESSURE BANDAGES

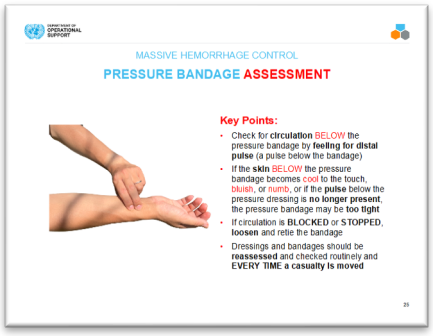


Once bleeding has been controlled with a hemostatic dressing/packing material you must maintain pressure on the wound.

Place the pressure dressing directly on top of the hemostatic dressing/packing material and wrap around the limb, ensuring you cover all the wound and gauze previously applied.

Be sure to secure the pressure dressing tail either by hooks or with a knot. Tape both to ensure they do not come loose.

SLIDE 26 – PRESSURE BANDAGE ASSESSMENT



1. Pressure bandages should not have a tourniquet effect.
2. If there is no pulse below the pressure bandage, it has been applied too tightly and will need to be loosened and retied.
3. Another sign the pressure bandage has been applied to tightly is the colour of the skin will have a bluish tint, the skin may be **cool to touch** or the casualty will complain of **numbness** in the extremity below the bandage.

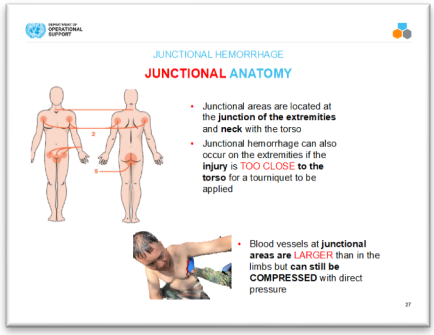
Remember: REASSESS any and all bandages after the casualty has been moved.

SLIDE 27 – MASSIVE HEMORRHAGE CONTROL PRESSURE BANDAGE (VIDEO)

Play video

SLIDE 28 – JUNCTIONAL ANATOMY

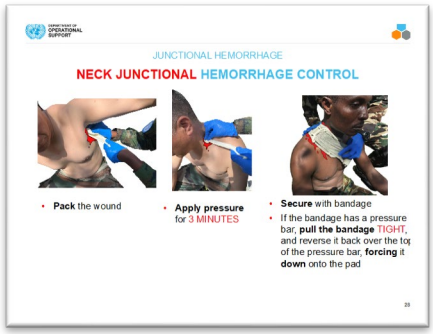
This is a key concept for the FMA learner to understand.



Areas **NOT** amenable to extremity tourniquets are neck, axilla (arm pit), groin, and perineal. These areas are known as '***JUNCTIONAL'*** areas and are difficult to stop bleeding even though the vessels are larger than in the extremities.

**Have the students locate the junctional areas on each other.

SLIDE 29 – NECK JUNCTIONAL HEMORRHAGE CONTROL



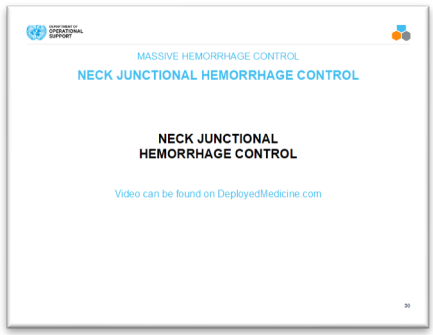
Carefully pack the wound with hemostatic dressing using your fingers to ensure that the gauze is packed in all parts of the wound.

The wound should be packed sufficiently to ensure that the **gauze extends 2-3 inches above skin surface**. Maintain direct pressure continuously **for 3 minutes**, and maintain pressure throughout the application of the dressing. Apply a pressure dressing on top of the gauze.

Wrap the tail under the armpit of the non-injured side, continue to wrap around the arm on the injured side. Finally, the last wrap should be tied to the tails of the bandage on the neck for pressure.

NOTE: If the bandage has a pressure bar, pull the bandage tight, and reverse it back over the top of the pressure bar forcing it down onto the pad.

SLIDE 30 – NECK JUNCTIONAL HEMORRHAGE CONTROL (VIDEO)



Play video

SLIDE 31 – AXILLARY JUNCTIONAL HEMORRHAGE CONTROL

If there is a suspected 'axillary' wound, compressible (external) hemorrhage ***not amenable to limb tourniquet***:

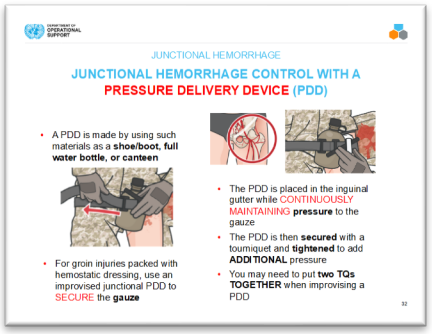
1. Expose the wound to assess it (Remove only the gear you need to).
2. Try to locate the source of bleeding and immediately apply direct pressure while retrieving gauze.
3. Carefully pack the wound with hemostatic dressing using your fingers to ensure that the gauze is packed in all parts of the wound. **DO NOT blindly pack a wound**.
4. While packing a wound with gauze, maintain **constant**, direct pressure at the source of bleeding within 90 seconds. The wound should be packed sufficiently to ensure that the **gauze extends 2-3 inches above skin surface**.
5. Once the dressing is applied, hold direct pressure on the gauze over the wound for **at least 3 minutes**.
6. Then, carefully observe for blood continuing to flow from under the gauze to determine if bleeding has been controlled.
7. Once you are sure the bleeding has stopped, apply a pressure bandage over the hemostatic dressing and wrap the long end around the injured shoulder twice ensuring the gauze underneath is completely covered, next wrap the elastic bandage across, back and under the opposite armpit, anchoring around the opposite shoulder in a "figure 8" pattern.
8. Finally, secure the bandage. This will depend on the type of bandage used (either a closure bar or tie tails) and wrap tape a minimum of 1ó times.
9. Swath the upper arm on the injured side to the side of the chest to add pressure to the dressing.

SLIDE 32 – AXILLARY JUNCTIONAL HEMORRHAGE CONTROL (VIDEO)

Play video

1. SAM Junctional Tourniquet

SLIDE 33 – JUNCTIONAL HEMORRHAGE CONTROL WITH A PRESSURE DELIVERY DEVICE (PDD)



A **Pressure Delivery Device** may be needed to apply additional and targeted pressure to control inguinal/groin hemorrhage.

For groin injuries packed with hemostatic dressings, use an improvised junctional PDD to secure the dressing.

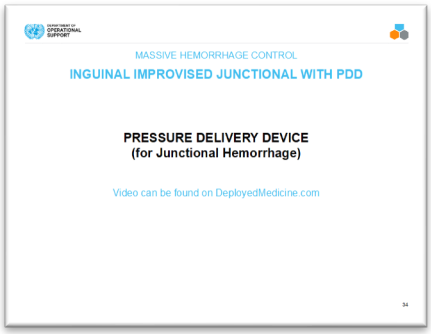
A PDD is made using improvised materials, such as a shoe/boot, full water bottle, or canteen, and applies additional pressure to the wound after it has been packed.

The PDD is placed in the inguinal gutter while continuously maintaining pressure to the dressing.

The PDD is then secured with a tourniquet, which is wrapped over the hips with the windlass or ratchet placed directly over the improvised device and tightened to add additional pressure. You may need to put two tourniquets together when improvising a PDD.

Remember: These are larger blood vessels requiring more pressure (and targeted pressure) than can be applied with a pressure dressing alone.

SLIDE 34 – INGUINAL JUNCTIONAL HEMORRHAGE CONTROL WITH IMPROVISED PRESSURE DELIVERY DEVICE (VIDEO)



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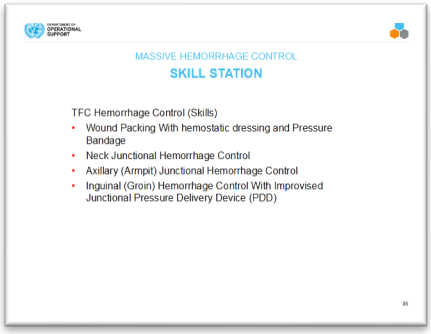
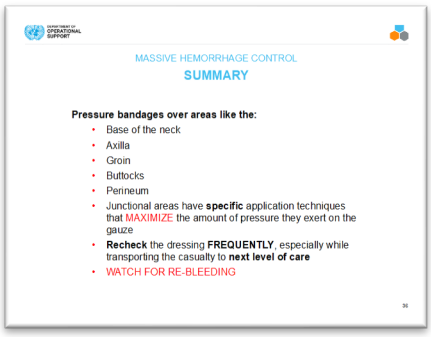
SLIDE 35 – SKILL STATION



At this time, we will break into skill stations to practice the following skills:

1. Wound Packing with Hemostatic dressing and Pressure Bandage
2. Neck Junctional Hemorrhage Control
3. Axillary (Armpit) Junctional Hemorrhage Control
4. Inguinal (Groin) Hemorrhage Control with Improvised Junctional Pressure Delivery Device (PDD)

SLIDE 36 – SUMMARY



TFMA is broken up into four roles of care.

We covered four Cognitive ELOs, and four Performance ELOs that taught you how to control massive hemorrhage control in TFC.

REMEMBER, **M**assive bleeding is your #1 priority in treating casualties.

Some of the tools you have available to you are

1) direct pressure, 2) gauze/other dressings, 3) TFMA-recommended tourniquets, 4) Pressure Delivery Devices, and 5) hemostatic dressing, and pressure bandages.

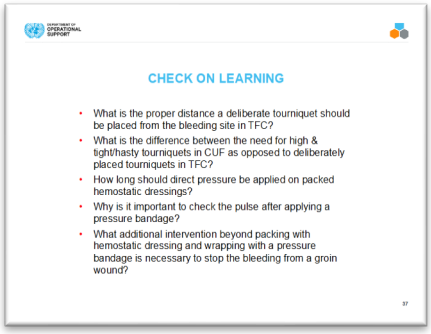
You now know the difference between a deliberate and hasty tourniquet and where to apply them and avoid the common pitfalls/mistakes. You have learned that an 'improvised tourniquet' should **ONLY** be used as a **LAST** resort…they **DO NOT** work.

Everyone should have had the chance to apply both a 'windlass' tourniquet. What did you learn while applying these tourniquets? We covered the proper technique in packing 'hemostatic dressing', applying direct pressure, and proper application of a pressure bandage in all anatomic locations.

What do you do if the hemostatic dressing you applied has rebleeding? We learned there are certain areas that are **NOT** amendable to limb tourniquets. Where are these areas located?

Everyone should have had a chance to practice 1) wound packing with hemostatic dressing and pressure bandage, 2) Neck junctional hemorrhage control, 3) axillary (armpit) junctional hemorrhage control, and 4) inguinal (groin) hemorrhage control with improvised junctional pressure delivery device (PDD).

SLIDE 37 – CHECK ON LEARNING



Ask questions of the learners, referring to key concepts from the module.

Now for a check on learning.

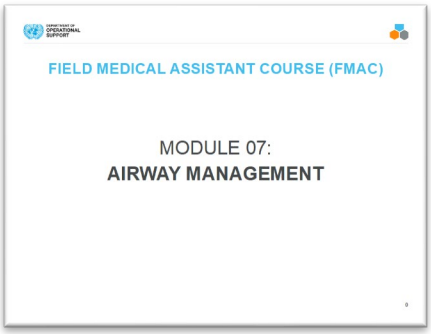
1. What is the proper distance a deliberate tourniquet should be placed from the bleeding Site in TFC?
    - 2 to 3 inches above the bleeding site
2. Highlight the difference between the need for high & tight (hasty) tourniquets needed in CUF as opposed to deliberately placed tourniquets in Tactical Field Care.
    - A high & tight (hasty) tourniquet is placed above the clothing as high as possible on the extremity. A deliberate TQ is applied after the wound has been exposed, 2–3 inches above the bleeding site.
    - High & tight (hasty) TQs are applied during CUF, and deliberate TQs are applied during TFC.

3. How long should direct pressure be applied onto packed hemostatic dressings?
    - 2 minutes
4. Why is it important to check the pulse after applying a pressure bandage?
    - If the bandage is too tight, it could block circulation and the bandage should be loosened.
5. What additional intervention beyond packing with hemostatic dressing and wrapping with a pressure bandage is needed to stop the bleeding from a groin wound?
    - PDD is needed to secure the dressing.

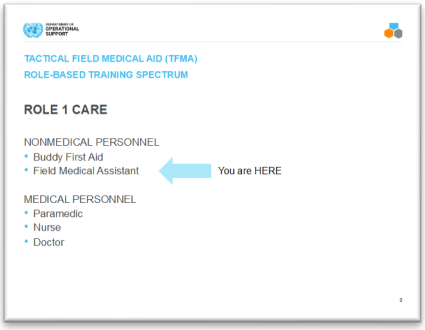
SLIDE 38 – QUESTIONS

MODULE 07
AIRWAY MANAGEMENT IN TFC

SLIDE 1 – TITLE SLIDE



SLIDE 2 – TFMA ROLES



Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

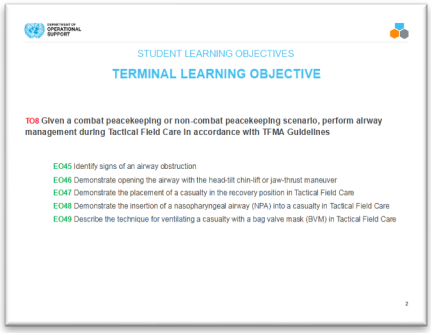
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO



The TFMA-FMA course is built on a foundation of learning objectives. These objectives layout the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

The module has one Terminal Learning Objective, or TLO. The TLO is supported by a series of Enabling Learning Objectives, or ELOs.

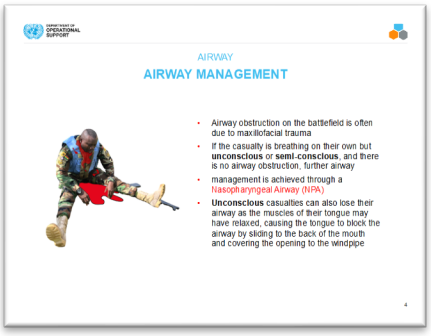
1. Demonstrating opening the airway with the head-tilt chin-lift or jaw-thrust maneuver
2. Demonstrating placing a casualty in the recovery position in Tactical Field Care
3. Demonstrating inserting a nasopharyngeal airway (NPA) into a casualty in Tactical Field Care
4. Describing the technique for ventilating a casualty with a bag valve mask (BVM) in Tactical Field Care

The critical aspects are to identify signs of life-threatening airway obstruction and the importance of prompt intervention and to demonstrate the appropriate interventions to address airway obstruction in accordance with the TFMA guidelines.

SLIDE 4 – MARCH PAWS

Airway management is the "**A**" in the MARCH PAWS sequence.

SLIDE 5 – AIRWAY MANAGEMENT IN TFC



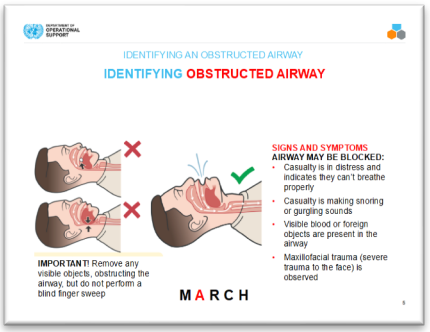
Remember: If a casualty is conscious and can speak normally, there is no airway obstruction.

Airway obstruction on the battlefield is often due to maxillofacial trauma (trauma to the face and jaw).

Unconscious casualties can also lose their airway when the muscles of their tongue relax, causing the tongue to block the airway by sliding to the back of the mouth and covering the opening to the windpipe.

Airway obstruction on the battlefield is often easily corrected with simple maneuvers.

SLIDE 6 – IDENTIFYING OBSTRUCTED AIRWAY



Airway obstruction on the battlefield is often due to maxillofacial trauma, which may include disrupted airway anatomy and/or bleeding into the airway.

Casualty may indicate that they are in distress and/or make snoring or gurgling sounds.

If you see something in the casualty's mouth (such as foreign material, loose teeth, dentures, facial bone, or vomitus) that could block their airway, use your fingers to perform a sweep to remove the material as quickly as possible.

Do not perform a blind finger sweep if no foreign body is seen in the casualty's mouth.

SLIDE 7 – IN A CASUALTY WITHOUT A FOREIGN BODY AIRWAY OBSTRUCTION, YOU CAN PERFORM THE FOLLOWING MANEUVERS

Unconscious casualties can also lose their airway, as the muscles of their tongue may have relaxed, causing the tongue to block the airway by sliding to the back of the mouth and covering the opening to the windpipe.

Using the head tilt/chin-lift or jaw-thrust maneuver to move the tongue away from the windpipe and open the airway may allow the casualty to resume breathing on their own.

If you suspect that the casualty has suffered a neck or spinal injury, use the jaw-thrust method. If a casualty cannot maintain an open airway once opened, a second responder may be needed to assist in maintaining an open airway.

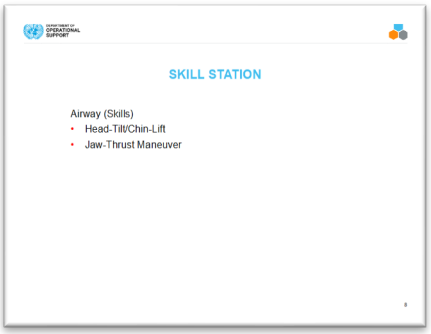
SLIDE 8 – HEAD-TILT / CHIN-LIFT AND JAW-THRUST MANEUVER (VIDEO)

Play video.

Inspect mouth for injuries, burns, or foreign items.

Do not perform a blind sweep if a foreign body is not visualized.

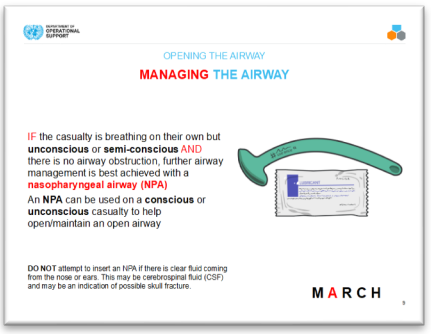
SLIDE 9 – SKILL STATION



At this time we will break into skill stations to practice the following skills:

- Head-tilt/chin-lift and jaw-thrust maneuver

SLIDE 10 – MANAGING THE AIRWAY



If the casualty is breathing on their own but unconscious or semiconscious, and there is no airway obstruction, further airway management is best achieved with a nasopharyngeal airway (NPA).

An NPA can help an unconscious or conscious casualty maintain an airway if they are breathing on their own.

Also known as a "Nose Hose" or "Nasal Trumpet," an NPA is well tolerated by conscious and unconscious casualties and is unlikely to stimulate their gag reflex.

An NPA provides an open (patent) airway and helps to keep the tongue from falling to the back of the mouth and blocking the airway, even if an unconscious casualty's tongue relaxes and partially covers their normal airway.

Do not use an NPA if there is clear fluid coming from the ears or nose. This may be cerebrospinal fluid (CSF), an indication of a possible skull fracture.

The NPA should be inserted into the nostril. If unable to insert into one nostril, insert into the other nostril. Ensure lubrication is used.

SLIDE 11 – NPA INSERTION (VIDEO)

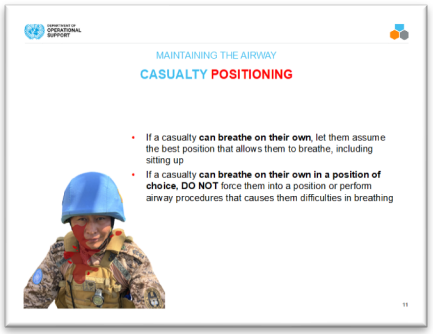
Play video.

SLIDE 12 – CASUALTY POSITIONING

Place unconscious casualties in the recovery position after ensuring their airway is open and completing any necessary treatments.

The recovery position allows blood and mucus to drain out of the casualty's nose and mouth and not to drain back into the airway.

The recovery position also helps to protect against inhaling vomit if the casualty throws up.



SLIDE 13 – MAINTAINING THE AIRWAY/RECOVERY POSITION

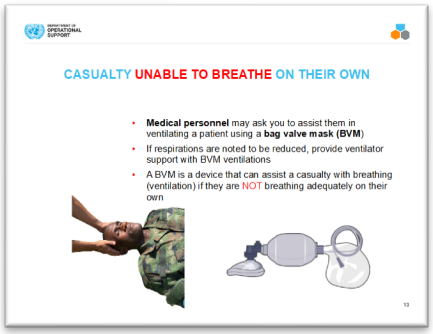
If a casualty can breathe on their own, let them assume the best position (position of comfort) that allows them to breath, including sitting up.

SLIDE 14 – CASUALTY UNABLE TO BREATHE ON THEIR OWN

If a casualty is **not breathing on their own**, notify a combat medic as soon as possible.

The medic will need to assist the casualty in breathing with a bag valve mask device.

Medical personnel may ask the FMA to assist in using the BVM.



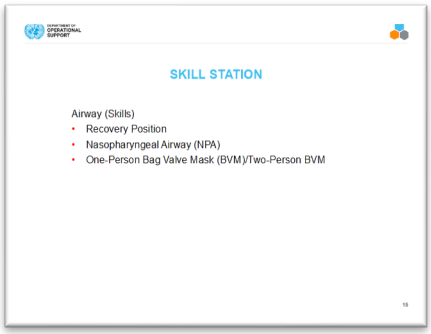
SLIDE 15 – BAG VALVE MASK (BVM) (VIDEO)

Play video.

If respirations are noted to be reduced, provide ventilator support with BVM.

Medical personnel may ask you to assist when using a BVM.

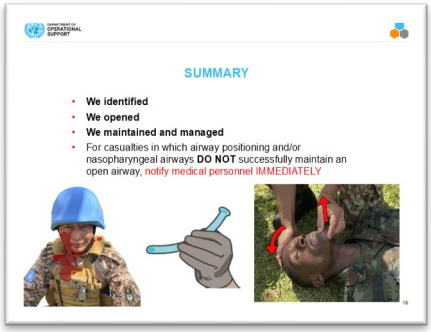
SLIDE 16 – AIRWAY SKILLS STATION



At this time, we will break into skill stations to practice the following skills:

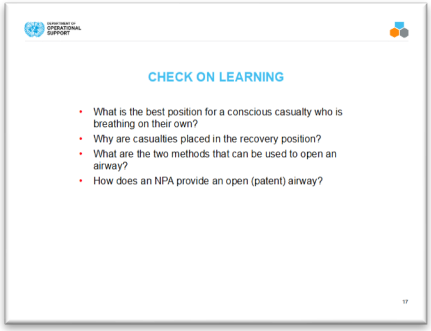
- Recovery Position
- Nasopharyngeal Airway (NPA)
- One-Person Bag Valve Mask (BVM)/Two-Person BVM

SLIDE 17 – SUMMARY



Prompt identification of airway obstruction and treatment are critical and can be accomplished, in most cases, with simple maneuvers/interventions by a FMA in the TFC phase of care.

SLIDE 18 – CHECK ON LEARNING

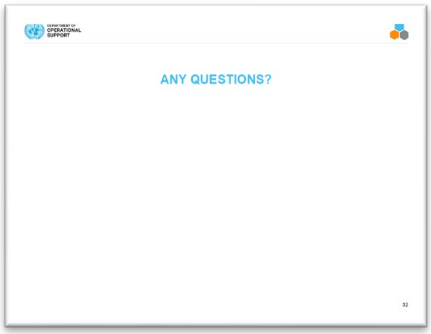


Ask questions of the learners, referring to key concepts from the module.

Now for a check on learning.

1. What is the best position for a conscious casualty who is breathing on their own?
    - A comfortable position of choice that allows them to breathe, including sitting up.
2. Why are casualties placed in the recovery position?
    - The recovery position allows blood and mucus to drain out of the casualty's nose and mouth and not to drain back into the airway. This position also helps to protect against inhaling vomit if the casualty throws up.
3. What are the two methods that can be used to open an airway?
    - Head-tilt/chin-lift method
    - Jaw-thrust method
4. How does an NPA provide an open (patent) airway?
    - A nasopharyngeal airway provides an open (patent) airway, helping to keep the tongue from falling to the back of the mouth and blocking the airway even if an unconscious casualty's tongue relaxes and partially covers their normal airway.

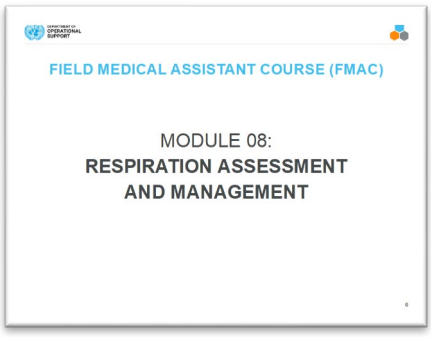
SLIDE 19 – QUESTIONS



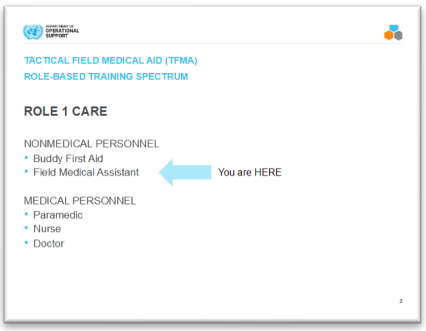
MODULE 08

RESPIRATION ASSESSMENT AND MANAGEMENT IN TFC

SLIDE 1 – TITLE SLIDE



SLIDE 2 – TFMA ROLES



Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

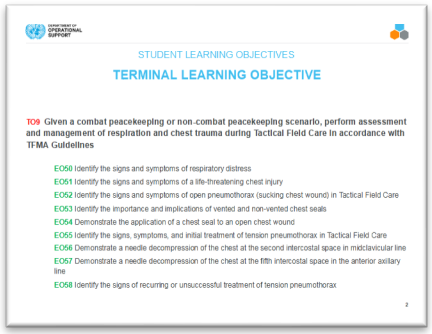
Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO

The TCCC-CLS course is built on a foundation of learning objectives. These objectives lay out the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

The module has one Terminal Learning Objective, or TLO. The TLO is supported by a series of Enabling Learning Objectives, or ELOs.



SLIDE 4 – MARCH PAWS

Respiration assessment is the "**R**" in the MARCH PAWS sequence.

SLIDE 5 – RESPIRATION OVERVIEW (VIDEO)

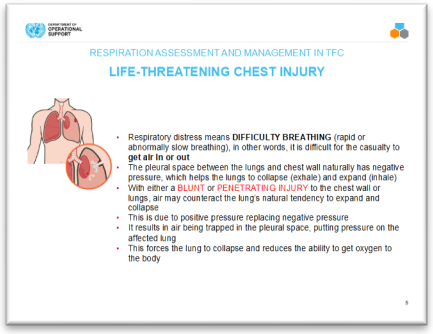
Play video

SLIDE 6 – LIFE-THREATENING CHEST INJURY

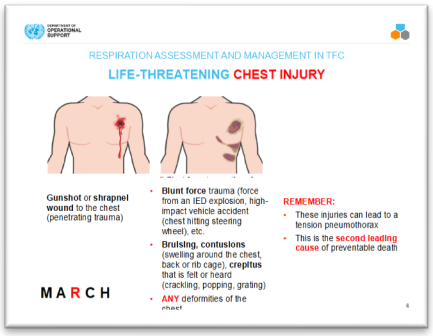
Respiratory distress means difficulty breathing.

The casualty is struggling to get air in or out or their breathing is ineffective.

This can result from blunt or penetrating injury.



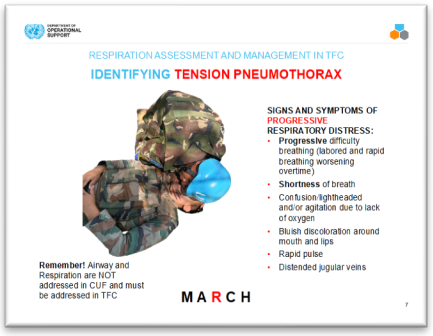
SLIDE 7 – LIFE-THREATENING CHEST INJURY



While it may be easy to see a gunshot wound or shrapnel wound to the chest, it is important to evaluate casualties for additional injuries, such as bruising, swelling, or other deformities of the chest not normally seen without removing the clothing.

These injuries may be signs of future life-threatening respiration issues.

SLIDE 8 – IDENTIFYING TENSION PNEUMOTHROAX



Tension pneumothorax is caused by significant torso (chest) trauma or a blast injury resulting in severe and progressive respiratory distress.

SLIDE 9 – IDENTIFYING SIGNS AND SYMPTOMS OF OPEN PNEUMOTHORAX IN TFC

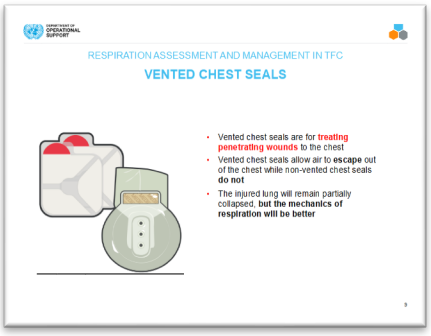
With an open pneumothorax, also called a sucking chest wound, air enters the pleural space around the lung through a wound in the chest wall.

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 normal airways of the mouth and nose. As a result, the affected lung cannot be fully re-inflated by inhalation.

It usually takes a hole in the chest the **size of a nickel or bigger** for a sucking chest wound to occur.

Not all chest wounds are sucking chest wounds; some do not penetrate as deeply as the lung cavity.

SLIDE 10 and SLIDE 11 – VENTED AND NONVENTED CHEST SEALS



Get to know the supplies within your BFAK and UNTP. Vented chest seals are preferred.

Penetrating chest wounds (open or sucking chest wounds) are treated by applying a chest seal.

Once a 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.

Continue to monitor the casualty after treatment with a chest seal. If the casualty condition worsens, a tension pneumothorax should be suspected.

Burping or removing the dressing may help; otherwise, a needle decompression of the chest may be needed.

SLIDE 12 – POSITIONING AFTER TREATMENT

If the casualty is unconscious, place the casualty in the recovery position. If conscious, allow the casualty to adopt the sitting position if that makes breathing more comfortable.

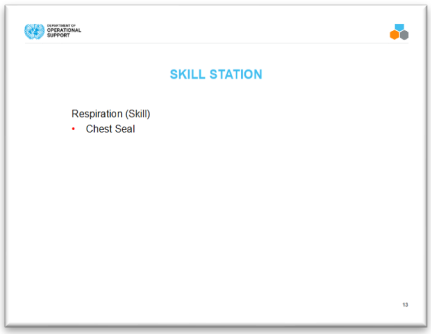
SLIDE 13 – TREATMENT OF OPEN PNEUMOTHORAX WITH CHEST SEAL (VIDEO)

Play video

SLIDE 14 – SKILL STATION

At this time, we will break into skill stations to practice the following skills:

- Chest seal

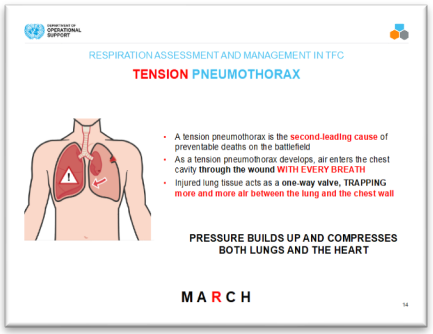


SLIDE 15 – TENSION PNEUMOTHORAX IN TACTICAL FIELD CARE

As a **tension pneumothorax** develops, air enters the chest cavity through the wound with every inspiration, but doesn't leave with expiration and is trapped.

Every breath adds more air to the air space inside the rib cage and outside the lung, and the pressure inside the chest builds up.

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 can potentially compress both lungs and the heart.

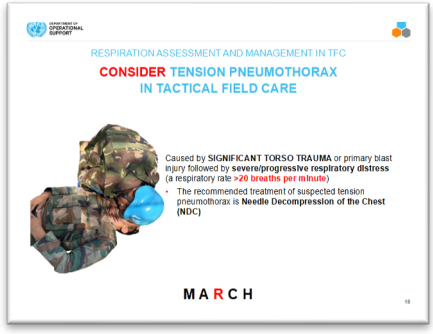
Both lung function and heart function are impaired with a tension pneumothorax, causing respiratory distress and shock. The elevated air pressure **OUTSIDE** the collapsed lung in a tension pneumothorax can impair the function of both lungs and the heart by preventing them from expanding normally. This CAN kill the casualty.

SLIDE 16 – CONSIDER TENSION PNEUMOTHORAX IN TACTICAL FIELD CARE

Signs of **tension pneumothorax** include early and late signs.

The early signs to look for are:

1. Increased difficulty breathing
2. Rapid or shallow breathing (like being out of
1. breath and not able to take a full breath)
2. Anxiety
3. Agitation
4. Apprehension
5. Decreased level of consciousness or unconsciousness



The late signs may not be displayed or may be displayed only when the casualty's condition has worsened. **Late signs** that indicate progression of tension pneumothorax include neck veins protruding (distended); tracheal deviation (a shift of the windpipe to the right or left).

These signs may be difficult to assess in a combat situation. You must **be alert** to the possibility of tension pneumothorax whenever a casualty has a penetrating or other chest wound. Therefore, the sole criterion for suspecting a tension pneumothorax is a chest wound with increasing respiratory difficulty.

It is important to evaluate casualties during TFC for early and late signs of tension pneumothorax. Like bleeding control, tension pneumothorax is treatable. Left untreated, a tension pneumothorax can cause severe respiratory distress, shock, and death.

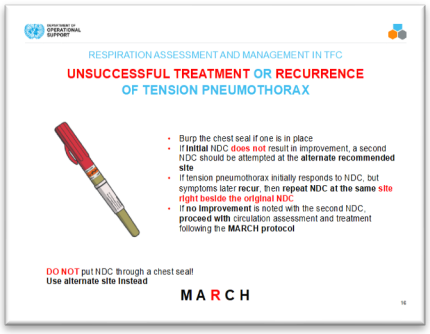
The **treatment** is to let the air trapped under pressure escape by inserting a needle into the chest.

After initial treatment by FMA, both types of chest injuries (sucking chest wounds and tension pneumothorax) will require advanced evaluation by medical personnel and evacuation.

SLIDE 17 – UNSUCCESSFUL TREATMENT OR RECURRENCE OF TENSION PNEUMOTHORAX

If initial treatment of tension pneumothorax with NDC is unsuccessful or if symptoms recur after successful treatment, a second NDC should be attempted.

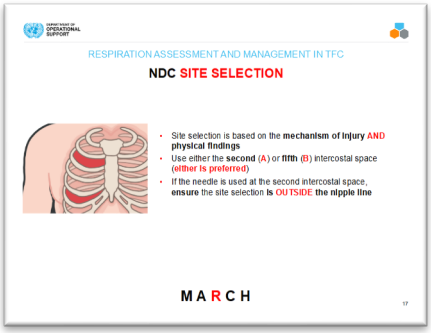
If no improvement is noted after the second NDC, proceed with circulation assessment and treatment following the MARCH protocol.



SLIDE 18 – TREATMENT OF TENSION PNEUMOTHORAX

The treatment is to let the air trapped under pressure escape by inserting a needle into the chest. This is called Needle Decompression of the Chest (NDC).

The device used for NDC is a catheter-over-needle device that is found in the BFAK.

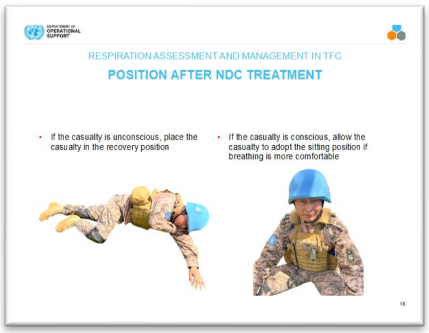


NDC can be performed at either the space between the second and third ribs on the front of the chest (away from the middle of the chest outside the nipple line to avoid the heart) or on the side of the chest between the fifth and sixth ribs.

- Use a 14-gauge or 10-gauge 3.” needle catheter
- Two options for NDC sites
    - 2nd intercostal space on mid-clavicular line
    - 5th intercostal space on the anterior axillary line
- Watch needle placement to avoid the heart and arteries
- Clean the area
- Place the needle perpendicular to body
- Hold in place for 5–10 seconds before removing needle and leaving catheter
- Document all interventions on the Casualty Card

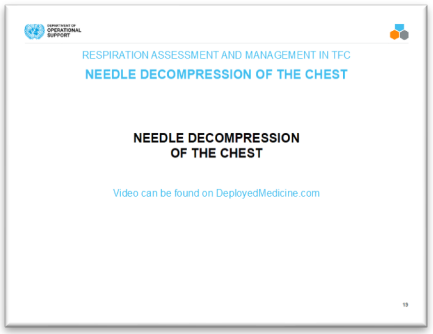
SLIDE 19 – POSITIONING AFTER TREATMENT

If the casualty is unconscious, place in the recovery position. If conscious, allow the casualty to adopt the sitting position if that makes breathing more comfortable.



SLIDE 20 – NEEDLE DECOMPRESSION OF THE CHEST (NDC) (VIDEO)

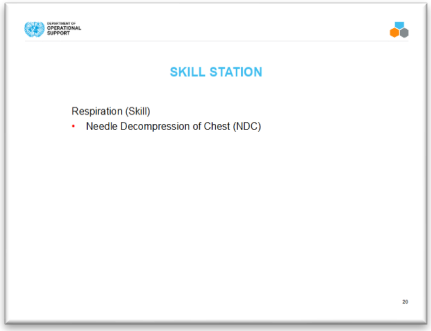
Play video



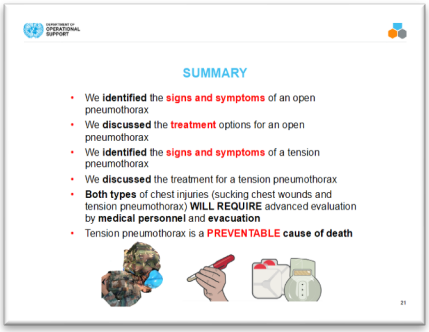
SLIDE 21 – SKILL STATION

At this time, we will break into skill stations to practice the following skills:

- Needle Decompression of Chest

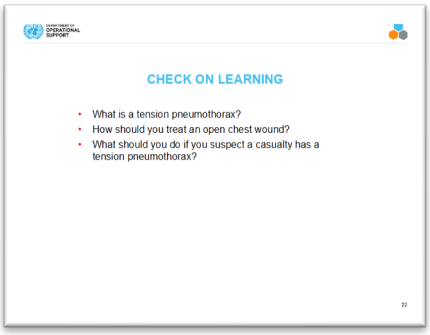


SLIDE 22 – SUMMARY



In this module, we discussed respiration assessment and management in TFC. We identified the signs and symptoms of an open pneumothorax and of a tension pneumothorax, as well as how to treat both. We emphasized that tension pneumothorax is a preventable cause of death. We also reinforced the need for medical personnel to provide advanced evaluation of these types of chest injuries, along with the need for evacuation.

SLIDE 23 – CHECK ON LEARNING



Ask questions of the learners, referring to key concepts from the module.

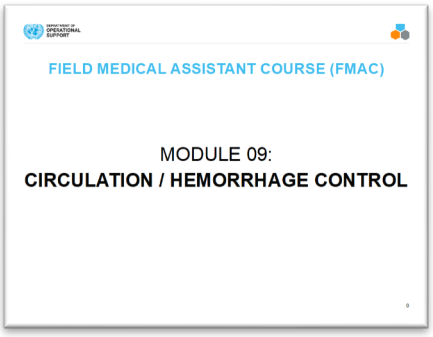
Now for a check on learning.

1. What is a tension pneumothorax?
    - As a tension pneumothorax develops, air enters the chest cavity through the wound with every inspiration, but doesn't leave with expiration and is trapped, so every breath adds more air to the air space inside the rib cage and outside the lung, and the pressure inside the chest builds up and causes the lung to collapse. 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.
2. How should you treat an open chest wound?
    - Treat open chest wounds by applying a vented chest seal completely over the wound during expiration.
3. What should you do if you suspect a casualty has a tension pneumothorax?
    - If a chest seal is in place, burp the seal. If there is no improvement after burping the seal perform a needle decompression of the chest.

SLIDE 24 – QUESTIONS

MODULE 09
HEMORRHAGE CONTROL IN TFC

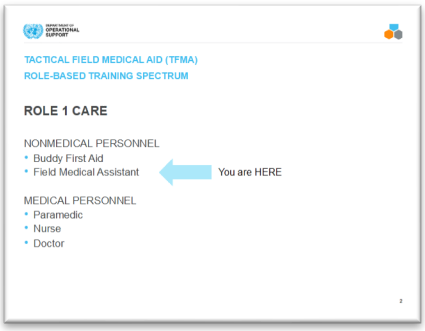
SLIDE 1 – TITLE SLIDE



Good morning/afternoon, my name is (insert here) and I will be your lead trainer for Module 9: Circulation/Hemorrhage control in the Tactical Field Care (TFC) environment.

Before we get started are there any questions?

SLIDE 2 – TFMA ROLES



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You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

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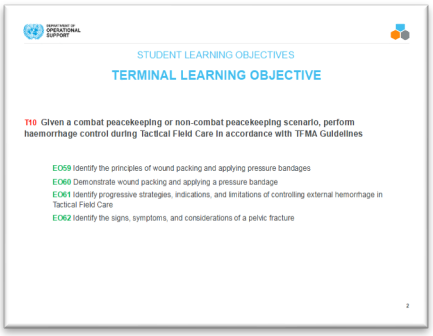
Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

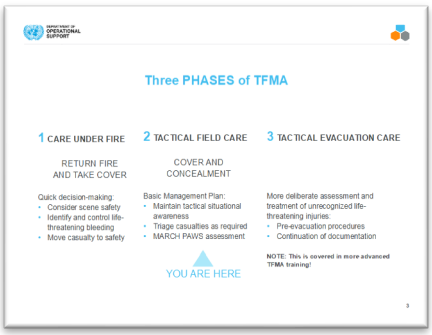
SLIDE 3 – TLO/ELO



The TFMA-FMA course is built on a foundation of learning objectives. These objectives lay out the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

The module has **one Terminal Learning Objective**, or TLO. The TLO is supported by a series of Enabling Learning Objectives, or ELOs.

SLIDE 4 – THREE PHASES OF TFMA



TFMA is organized into Phases of Care that start at the point of injury. These phases are relevant to combat and noncombat trauma scenarios:

1. **Care Under Fire or Care Under Threat** is the aid rendered at the trauma scene while there is still an active threat. Available medical equipment is limited to that carried by an individual or found in a nearby first aid kit. Massive bleeding is the only medical priority that requires your attention during this phase, as you are actively dealing with an ongoing threat in a potentially chaotic and dangerous situation.
2. **Tactical Field Care** is the care provided once the threat has been neutralized and/or the scene is safe or the casualty has moved/been moved out of the immediate threat situation. During this phase a rapid casualty assessment should be performed. Bleeding control should be assessed/reassessed, and airway/breathing issues addressed. Other injuries such as burns, fractures, eye trauma, and head injuries should now be identified and treated. Medical equipment is still limited. Time to arrival of medical personnel or evacuation may vary considerably, depending on the tactical situation, etc.
3. **Tactical Evacuation Care** is the care rendered during and once the casualty has been moved by an aircraft, vehicle, or other mode of transportation for evacuation to a higher level of care. Additional medical personnel and equipment are typically available in this phase of casualty care.

Remember: The goal of TFMA and the role of the FMA are to rapidly assess casualties to identify and treat potentially life-threatening injuries and keep the casualty alive long enough to reach a higher level of medical care.

SLIDE 5 – MARCH PAWS

Hemorrhage control assessment and management in the Tactical Field Care phase falls under the "**C**," for Circulation, in the MARCH PAWS sequence.

SLIDE 6 – HEMORRHAGE CONTROL IN TFC (VIDEO)

Play video.

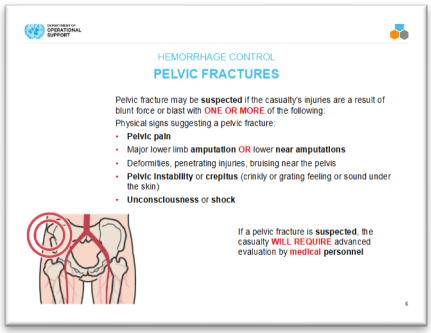
1. Unrecognized hemorrhage
2. Junctional areas
3. TFMA-recommended tourniquets
4. TFMA-recommended hemostatic dressings
5. Improvised junctional tourniquet
6. Pulse(s) checked
7. Reassessment
8. Pelvic fracture(s)
9. Findings reported

SLIDE 7 – PELVIC FRACTURES

In TFC, another key injury for which the casualty should be assessed is a ***pelvic fracture***.

Pelvic fractures can be a cause of massive internal bleeding and impact circulation, which is the "**C**" in the MARCH PAWS sequence.

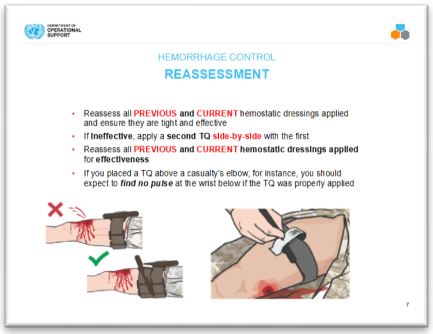
A pelvic fracture may be suspected if the casualty's injuries are a result of blunt force or blast with **ONE OR MORE** of the following physical signs suggesting a pelvic fracture:



- Pelvic pain
- Major lower-limb amputation OR lower-limb near amputations
- Pelvic deformities, penetrating injuries, or bruising near the pelvis
- Pelvic instability or crepitus, which is a crinkly or grating feeling or sound under the skin
- Unconsciousness or shock

If a pelvic fracture is suspected, the casualty **WILL REQUIRE** advanced evaluation by medical personnel, and you should notify medical personnel of the potential for a pelvic fracture as soon as possible.

SLIDE 8 – REASSESSMENT

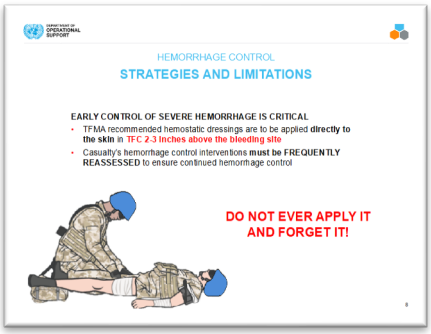


Hemorrhage control in the TFC phase takes place after massive bleeding control that occurs in the Care Under Fire phase.

It is possible that it **did not occur**, and this may be the first opportunity to address massive bleeding as well, so there is significant urgency.

The first step is to reassess ALL PRIOR hemorrhage control interventions for effectiveness. Check all TQs and hemostatic dressings that were applied and ensure they are tight and effective.

SLIDE 9 – STRATEGIES AND LIMITATIONS



Early control of severe hemorrhage is critical. In the TFC phase, TFMA-recommended TQs should be applied directly to the skin **2–3 inches above the bleeding site**. This is different from the high & tight placement over clothing that may have occurred in the CUF phase.

Always remember that the casualty's hemorrhage control interventions must be **FREQUENTLY REASSESSED** to ensure continued hemorrhage control.

This includes reassessments at frequent time intervals and any time the casualty is moved or the casualty's status changes. Watch the casualty for signs of shock.

Your actions will help ensure bleeding control.

DO NOT EVER APPLY IT AND FORGET IT!

SLIDE 10 – WOUND PACKING and PRESSURE DRESSING

The proper technique for applying a hemostatic dressing with a pressure bandage is to first **identify the exact source of bleeding** and pack the wound.

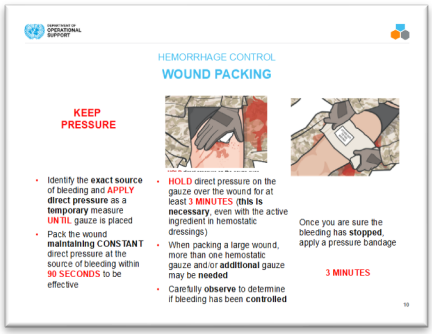
You should pack the wound with the hemostatic dressing while maintaining CONSTANT direct pressure at the source of bleeding.

After the wound is packed, you must hold direct pressure to the packing over the wound for **3 minutes**. **Do not** check for bleeding control during these 3 minutes.

After 3 minutes, if bleeding is controlled, you should secure the wound packing with a pressure bandage. If the bandage has a pressure bar, pull the bandage TIGHT, and reverse it back over the top of the pressure bar, forcing it down onto the pad. If there is no pressure bar, make

sure to keep tension while wrapping the elastic bandage, which is best done with short pulls and tugs of the bandage as you wrap it around the wound.

SLIDE 11 – WOUND PACKING



While packing a wound, maintain constant, direct pressure at the source of bleeding.

Once the dressing is applied, hold direct pressure on the gauze over the wound for at least 3 minutes. Then, 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 bandage over the hemostatic dressing.

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, and there should be no continued bleeding from the wound.

Make sure there is no continued bleeding from any prior hemostatic dressings that were placed.

SLIDE 12 – PRESSURE BANDAGE REASSESSMENT

It is also necessary to reassess any previously applied pressure bandages.

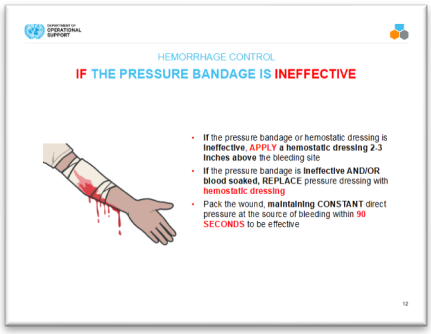
First, make sure there is no continued bleeding from the wound.

Then, check for circulation **BELOW** the pressure bandage by feeling for the distal pulse (a pulse below the bandage).

If the skin **BELOW** the pressure bandage becomes cool to the touch, bluish, or numb, or if the pulse below the pressure dressing is no longer present, the pressure bandage may be too tight.

If circulation is **BLOCKED** or STOPPED, loosen and retie the bandage. Dressings and bandages should be reassessed and checked routinely and EVERY TIME a casualty is moved.

SLIDE 13 – IF PRESSURE BANDAGE IS INEFFECTIVE



You must make sure the pressure bandage is still effective and bleeding is still controlled.

If the pressure bandage or hemostatic dressing is ineffective, APPLY A TOURNIQUET **2–3 inches above the bleeding site**, if possible.

If unable to place a tourniquet and the pressure bandage is ineffective AND/OR blood soaked, REPLACE the pressure dressing with a new hemostatic dressing.

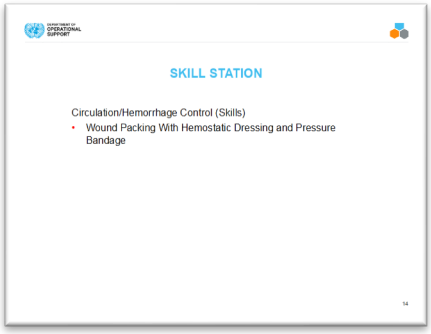
Pack the wound with the hemostatic dressing, maintaining CONSTANT direct pressure at the source of bleeding within 90 SECONDS, to be effective.

SLIDE 14 – PRESSURE BANDAGE (VIDEO)

Play video

1. Properly apply pressure dressing
2. Use the sterile side on top of hemostatic dressing
3. Wrap properly and secure
4. Assess circulation
5. Document treatment

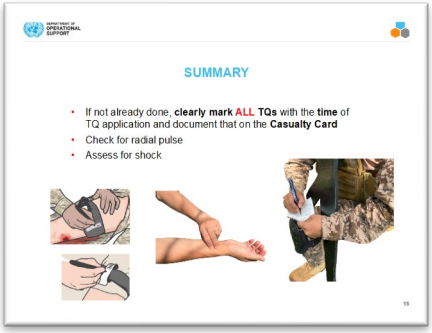
SLIDE 15 – SKILL STATION



At this time, we will break into skill stations to practice the following skills:

- Wound Packing with Hemostatic Dressing and Pressure Bandage

SLIDE 16 – SUMMARY



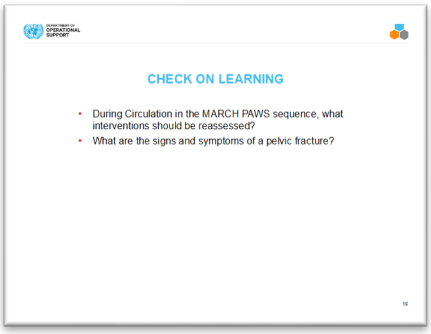
You should now understand the need to reassess all hemorrhage control interventions that may have been applied previously. You should also understand the need to replace or reapply any ineffective hemorrhage control intervention.

All of these interventions are designed to eliminate further bleeding and prevent the casualty from going into shock or worsening shock.

You should frequently reassess for shock by checking for a radial pulse and other signs of inadequate hemorrhage control.

Of course, if not already done, clearly mark ALL tourniquets with the time of tourniquet application and document all findings and treatment on the Casualty Card.

SLIDE 17 – CHECK ON LEARNING



Ask questions of the learners, referring to key concepts from the module.

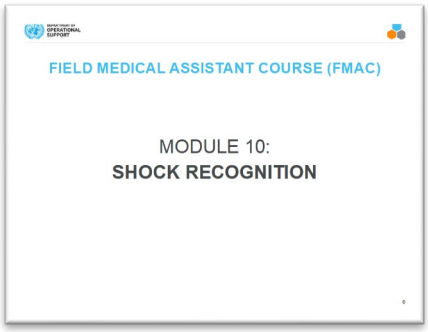
Now for a check on learning.

1. During Circulation in the MARCH PAWS sequence, what interventions should be reassessed?
    - Previously applied tourniquets and hemostatic dressings
2. What are the signs and symptoms of a pelvic fracture?
    - Severe blunt force or blast injury with one or more of the following:
    - Pelvic pain
    - Major lower-limb amputation OR lower near amputations
    - Deformities, penetrating injuries, bruising near the pelvis
    - Pelvic instability or crepitus (crinkly, or grating feeling or sound under the skin)
    - Unconsciousness or shock

SLIDE 18 – QUESTIONS

MODULE 10
SHOCK RECOGNITION

SLIDE 1 – TITLE SLIDE



SLIDE 2 – TFMA ROLES

Tactical Field Medical Aid is broken up into two roles of care. The most basic taught is the UN Buddy First Aid Course (BFAC), which is designed to instruct in the absolute basics of hemorrhage control and to recognize more serious injuries.

You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

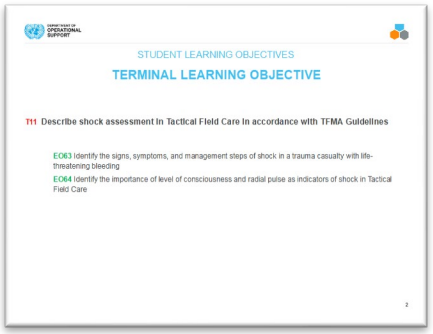
Finally, the last role, is Medical Professionals such as Paramedics, Nurses and Doctors, to provide the most sophisticated care to keep our wounded warriors alive and get them to definitive care.

Your role as a FMA is to treat the most common causes of death on the battlefield, which are massive hemorrhage and airway/respiratory problems. Also, you are given the skills to prevent complications and treat other associated but not immediately life-threatening injuries.

SLIDE 3 – TLO/ELO

The TFMA-FMA course is built on a foundation of learning objectives. These objectives lay out the basic structure of the course and describe the knowledge and skills you are expected to acquire by the end of the course.

The module has **one Terminal Learning Objective**, or TLO. The TLO is supported by a series of Enabling Learning Objectives, or ELOs.

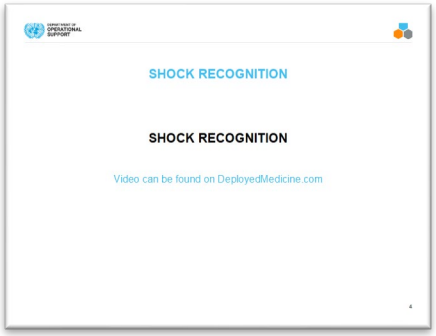


SLIDE 4 – MARCH PAWS

Shock recognition is related to circulation, which is the "**C**," for Circulation, in the MARCH PAWS sequence.

SLIDE 5 – SHOCK RECOGNITION VIDEO

Play video.

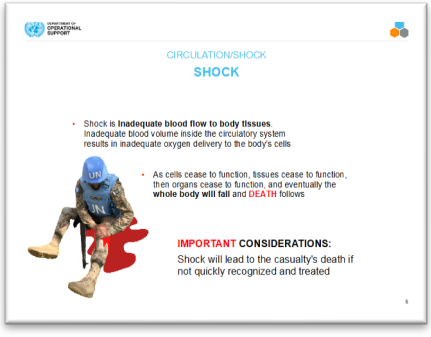


SLIDE 6 – SHOCK

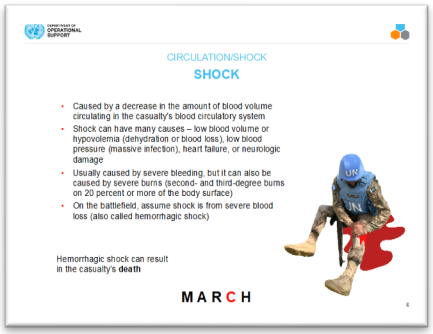
Shock is inadequate blood flow to body tissues. Inadequate blood volume inside the circulatory system results in inadequate oxygen delivery to the body's cells.

As cells cease to function, tissues cease to function, then organs cease to function, and eventually, the whole body will fail and **DEATH** follows.

REMEMBER: Shock will lead to the casualty's death if not quickly recognized and treated.



SLIDE 7 – SHOCK (CONT.)



Shock is caused by a decrease in the amount of blood volume circulating in the casualty's blood circulatory system.

Shock can have many causes:

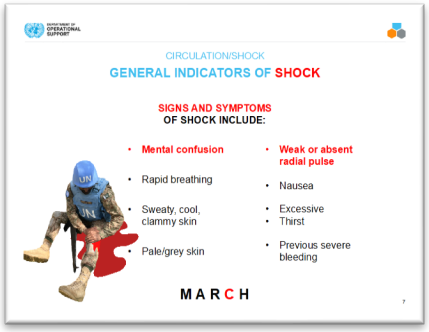
- Low blood volume or hypovolemia, such as dehydration or blood loss
- Low blood pressure from massive infection
- Heart failure
- Neurologic damage

Shock is usually caused by severe bleeding, but it can also be caused by severe burns, such as second- and third-degree burns on 20 percent or more of the body surface.

On the battlefield, assume shock is from severe blood loss. This is also called hemorrhagic shock.

Remember: If uncontrolled, hemorrhagic shock can result in the casualty's **death**.

SLIDE 8 – GENERAL INDICATORS OF SHOCK

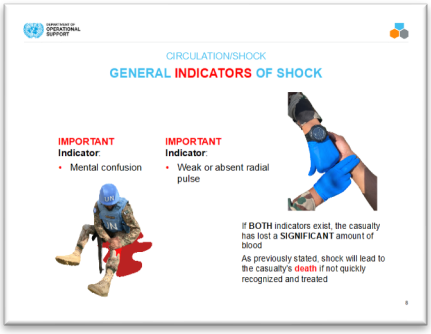


You need to know the signs of hemorrhagic shock on the battlefield:

- Mental confusion or altered mental status in the absence of a head injury
- Rapid or shallow breathing
- Sweaty, cool, clammy skin
- Pale/grey or blotchy blue skin as shock progresses
- Weak or absent radial pulse
- Nausea and/or vomiting
- Excessive thirst
- Previous severe bleeding

Make sure you frequently assess casualties during TFC for signs of shock. These symptoms can change and progress over time.

SLIDE 9 – GENERAL INDICATORS OF SHOCK (CONT.)

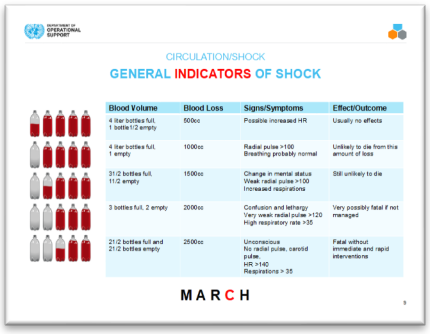


Shock has two important indicators. These are mental confusion and a weak or absent radial pulse.

If BOTH indicators exist, the casualty has lost a SIGNIFICANT amount of blood and is at risk of death.

As previously stated, shock will lead to the casualty's death if not quickly recognized and treated.

SLIDE 10 – GENERAL INDICATORS OF SHOCK (CONT.)



This table provides an overview of the effects of blood loss.

Up to 500cc of blood loss is well tolerated with often no effects except a possible increase in heart rate.

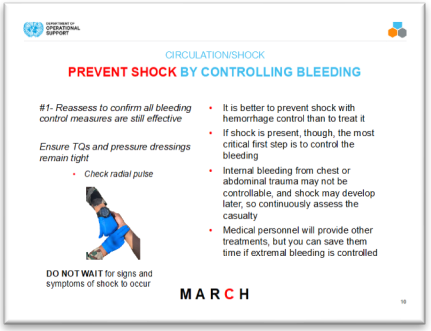
1,000cc of blood loss will usually produce an elevated heart rate greater than 100, but otherwise the casualty may appear normal. This amount of blood loss is not usually fatal.

1,500cc of blood loss may be associated with a change in mental status, a weak radial pulse greater than 10, and increased respirations. If there is no further blood loss, the casualty is still unlikely to die. 2,000cc of blood loss is accompanied by confusion and lethargy, a weak radial pulse often greater than 120, and a high respiratory rate greater than 35. This amount of blood loss is possibly fatal if not managed quickly.

2,500cc of blood loss will usually present with the casualty unconscious, with no radial pulse, a carotid pulse greater than 140, and respirations greater than 35. This amount of blood loss will be fatal without immediate and rapid intervention.

This table highlights why it is so important to quickly apply a tourniquet, once safe, during CUF and reassess and evaluate for additional bleeding sources during TFC.

SLIDE 11 – PREVENT SHOCK BY CONTROLLING BLEEDING



It is better to prevent shock with hemorrhage control than to treat it. Even if shock is already present, the most critical first step in treating it is to control the bleeding.

Reassess all bleeding control measures to ensure they are still effective. Ensure tourniquets and pressure dressings remain tight, as soon as possible. This is the most critical thing to accomplish in treating shock.

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, so continually reassess the casualty. If a casualty is not in shock, then they don't need treatment for shock, but should be watched carefully for the development of shock if they have been seriously injured.

DO NOT WAIT for signs and symptoms of shock to occur. Medical personnel will provide other treatments, but you can save them time if extremal bleeding is controlled.

SLIDE 12 – ASSESS/MONITOR FOR HEMORRHAGIC SHOCK

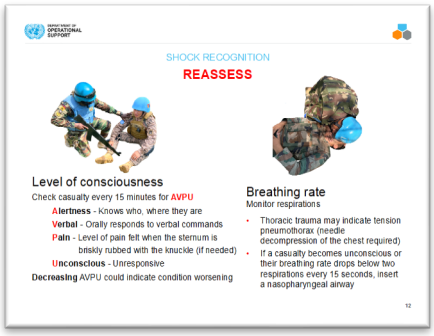
Assess for signs and symptoms of shock as soon as hemorrhage is controlled, the airway is open, and respirations have been managed.

The best indicators of shock are a decreased state of consciousness, if the casualty has not suffered a head injury, and/or an abnormal, weak, absent radial pulse.

Assess for hemorrhagic shock, as noted by altered mental status in the absence of brain injury and/or weak or absent radial pulse.

Reassess/monitor for changes in the level of consciousness by checking for alertness or responsiveness to verbal or physical stimulation.

SLIDE 13 – REASSESS



Reassess the level of consciousness every 15 minutes using the AVPU scale.

Check whether they are Alert, have Verbal responses, respond only to Pain, or are Unconscious. A decreasing AVPU could indicate the casualty's condition is worsening.

Also, continue to reassess the breathing rate and monitor the casualty's respirations.

- Thoracic trauma may indicate a tension pneumothorax, which will require a needle
- decompression of the chest.
- If a casualty becomes unconscious or their breathing rate drops below two respirations every 15 seconds, insert a nasopharyngeal airway.

SLIDE 14 – SHOCK MANAGEMENT

It is a good idea to let those casualties who are not in shock, and who can swallow, to 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.

Position the casualty in the recovery position with their head turned so fluids can drain from their mouth or in a position that allows them to breathe.

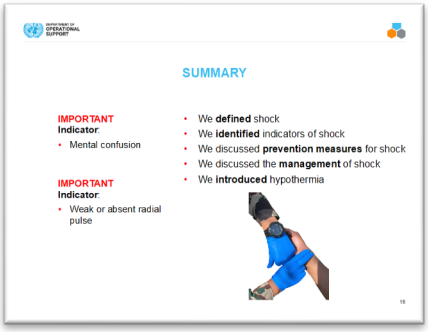
Evacuate the casualty if medical help is present or available. Reassess the casualty frequently for the onset of shock. Continually reassess and monitor!

SLIDE 15 – HYPOTHERMIA MANAGEMENT

Keep the casualty warm and prevent hypothermia. Even in very hot environments, a casualty suffering hemorrhagic shock from blood loss is at extreme risk for hypothermia.

Remember the active and passive means to warm and prevent hypothermia. Place a poncho or blanket under the casualty to protect them from the cold temperature or dampness of the ground. Cover the casualty with a survival blanket or other available materials to keep them warm and dry.

SLIDE 16 – SUMMARY



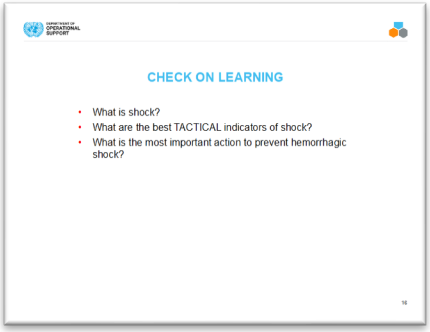
In summary, you should now be able to define shock, identify the indicators of shock, discuss prevention measures for shock, discuss the management of shock. You should also understand that hypothermia can be caused by shock and can make it worse.

Remember, the two most important indicators of shock are mental confusion in the absence of a head injury and a weak or absent radial pulse. If the casualty is in shock or develops shock, refer them to medical personnel and evacuate as soon as possible.

Always continue to reassess and communicate with your casualty.

Document all findings and treatments on the Casualty Card.

SLIDE 17 – CHECK ON LEARNING



Ask questions of the learners referring to key concepts from the module.

Now for a check on learning.

What is shock?

- Shock is inadequate blood flow and oxygen delivery to the body's cells, which leads to organ failure and death.

What are the best indicators of shock?

- Decreased state of consciousness (if casualty has not suffered a head injury) and/or an abnormal, weak, absent radial pulse.

What is the most important action to prevent hemorrhagic shock?

- Stop the bleeding

SLIDE 18 – QUESTIONS