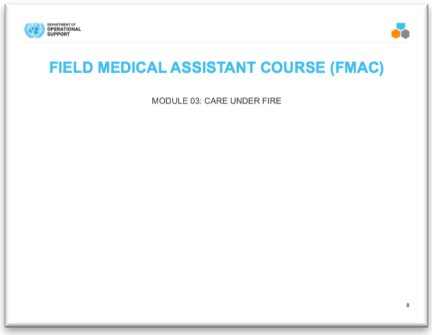
**FIELD MEDICAL ASSISTANT COURSE (FMAC)**

# Instructor Handbook

# MODULE 03 – **CARE UNDER FIRE**

## SLIDE 1 – TITLE SLIDE




## SLIDE 2 – TFMA ROLES

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

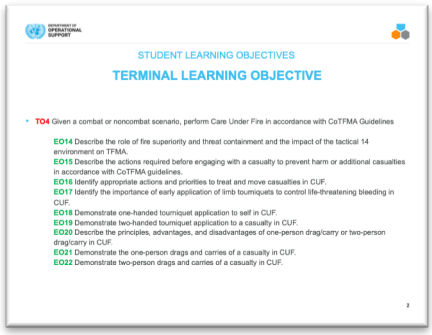
You are in the Field Medical Assistant (FMA) role. This teaches you more advanced care to treat the most common causes of death on the battlefield, and to recognize, prevent, and communicate with medical personnel the life-threatening complications of these injuries.

The Combat Medic/Corpsman (CMC) role includes much more advanced and invasive care requiring significantly more medical knowledge and skills.

Finally, the last role, Combat Paramedic/Provider (CPP) is for Combat paramedics and advanced providers, 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.

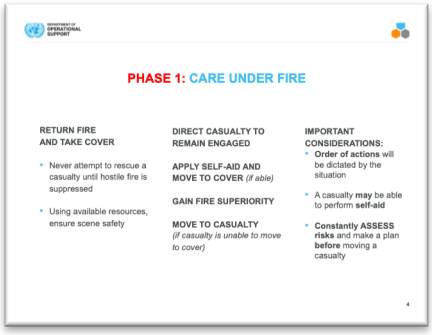
## SLIDE 4 – THREE PHASES OF TFMA

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 FMA Trauma bag). 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.

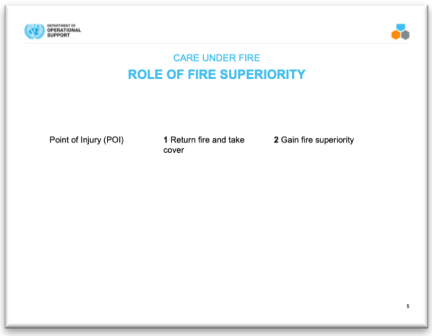



The mission does not stop just because there is a casualty. Most battlefield casualty scenarios involve making medical and tactical decisions rapidly. In the combat environment there is no "time-out" when casualties occur. Good medicine can sometimes be bad tactics; doing the RIGHT thing at the WRONG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

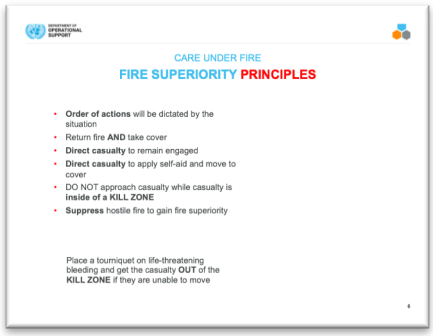
## SLIDE 6 – ROLE OF FIRE SUPERIORITY

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




## SLIDE 7 – FIRE SUPERIORITY PRINCIPLES

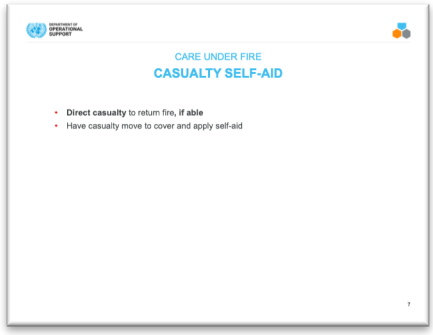
**Order of initial actions will be dictated by the tactical situation.**




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 service 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

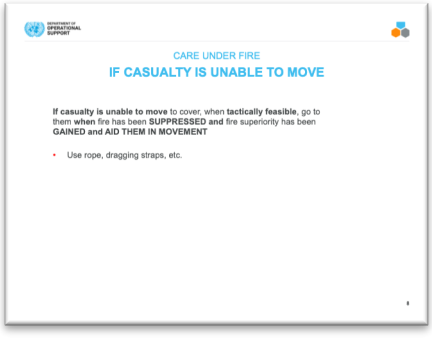
If the casualty is responsive and able, the first responder/FMA should direct the casualty to return fire, apply self-aid (tourniquet), re-engage, and move to cover (if possible).




## 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 Service member cannot move to cover, they should lie flat and motionless.

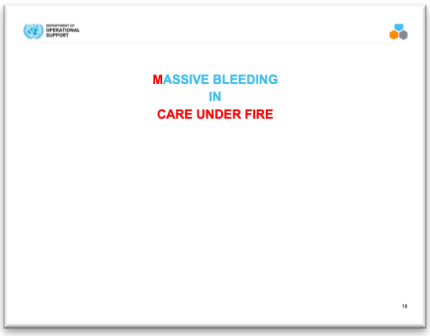


## SLIDE 10 – PHASE 1: CARE UNDER FIRE

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)

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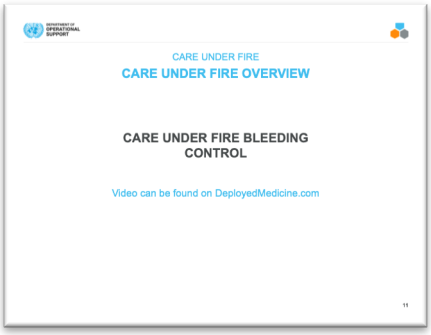
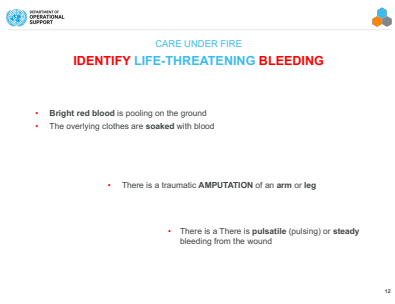



## SLIDE 13 – IDENTIFY LIFETHREATENING BLEEDING



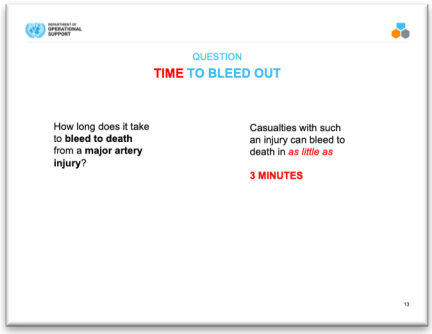

The following are examples of when bleeding is considered life-threatening: 1) there is a traumatic amputation of an arm or leg; 2) there is pulsing or steady bleeding from the wound; 3) blood is pooling on the ground; 4) the overlying clothes are soaked with blood; 5) bandages or makeshift bandages 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
    o 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

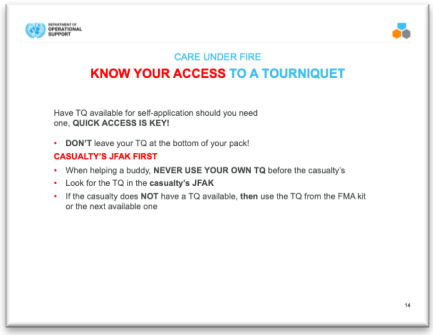
## SLIDE 14 – TIME TO BLEED OUT




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.

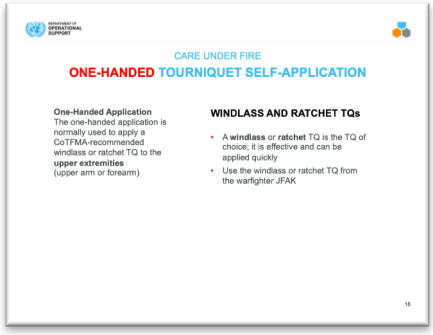
***Play video of Care Under Fire Bleeding Video.***

## SLIDE 15 – KNOW YOUR ACCESS TO A TOURNIQUET




All personnel on combat missions should have a CoTFMA-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



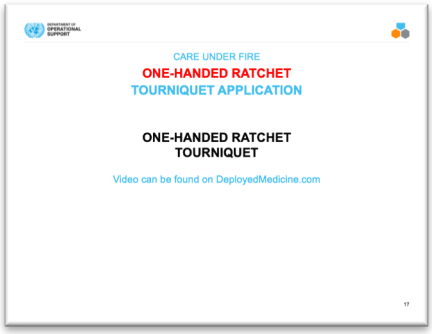

Casualty may need to apply one-handed tourniquet to an upper extremity when applying self-aid. Onehanded tourniquets are used to apply self-aid for bleeding from an injury to the upper arm or forearm.

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

*Play the video.*

## SLIDE 18 – ONE-HANDED RATCHET TOURNIQUET APPLICATION (VIDEO)

*Play the video.*

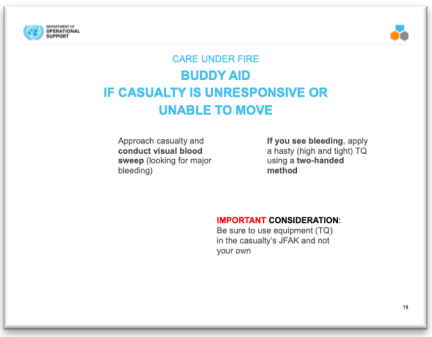



## SLIDE 19 – ONE-HANDED TOURNIQUET APPLICATION CRITICAL POINTS

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 20 – 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 Service 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 21 – TWO-HANDED RATCHET TOURNIQUET APPLICATION (VIDEO)

*Play the video.*

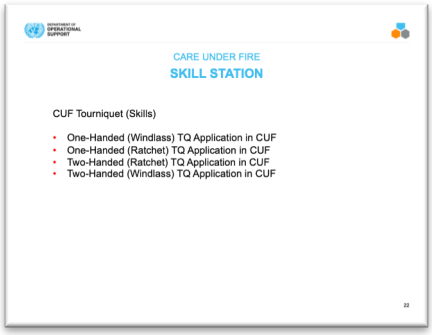
## SLIDE 22 – TWO-HANDED (WINDLASS) TOURNIQUET APPLICATION (VIDEO)

*Play the video.*

## SLIDE 23 – SKILL STATION

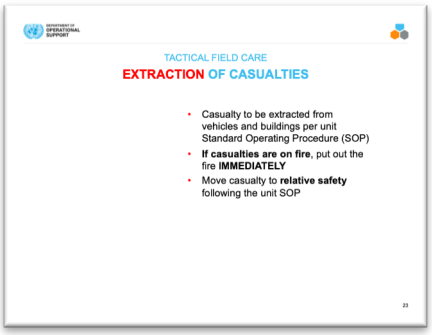
At this time we will break into skill stations to practice the following skills:

- One-Handed (Windlass) TQ Application in CUF
- One-Handed (Ratchet) TQ Application in CUF
- Two-Handed (Ratchet) TQ Application in CUF
- Two-Handed (Windlass) TQ Application in CUF




## SLIDE 24 – EXTRACTION OF CASUALTIES

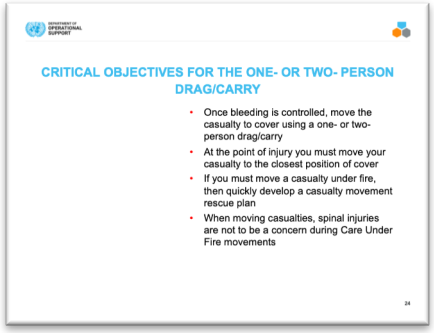
Follow unit standard operating procedures for removing/extracting casualties from vehicles. If the casualty is on fire, put out the fire, address life-threatening bleeding with a tourniquet if indicated, and move to cover as quickly as possible.



## SLIDE 25 – 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.

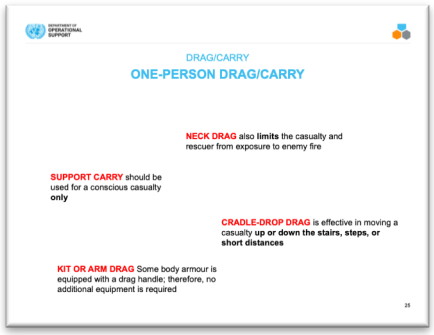
Carries and drags will enable the first responder/FMA to do this as quickly as possible without causing further harm to the casualty.




## SLIDE 26 – ONE-PERSON DRAG/CARRY

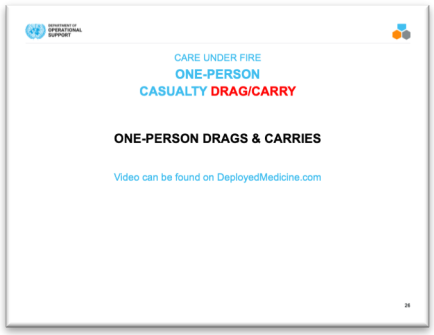
A variety of effective carries can be used depending on the casualty's level of consciousness, enemy threat level, terrain, etc.

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 27 – ONE-PERSON CASUALTY DRAG/CARRY (VIDEO)

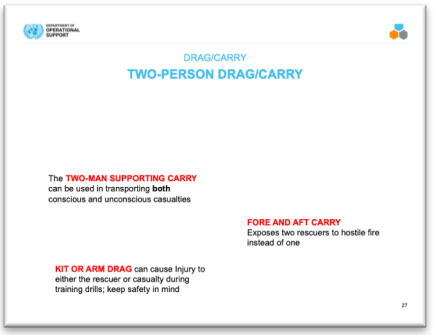
*Play the video.*




## SLIDE 28 – 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).



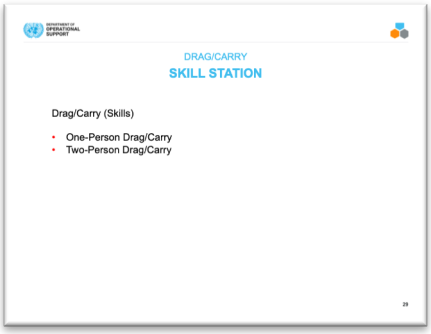
## SLIDE 29 – TWO-PERSON DRAG/CARRY (VIDEO)

*Play the video.*

## SLIDE 30 – SKILL STATION

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

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

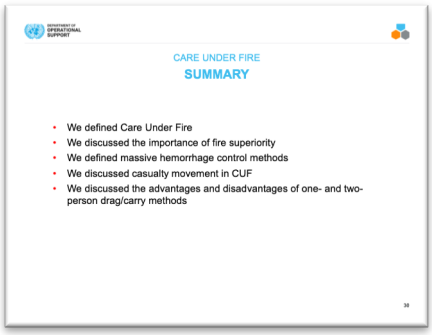



## SLIDE 31 – SUMMARY

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.

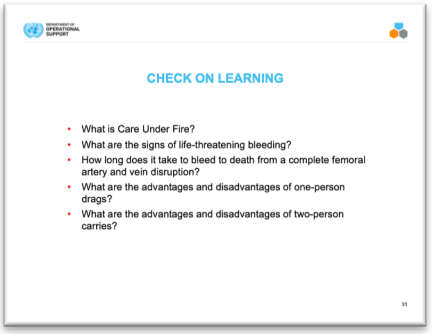
## SLIDE 32 – CHECK ON LEARNING

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 Service 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

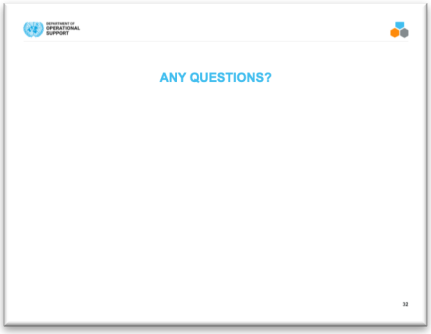
4) What are the advantages and disadvantages of a one-person drag?

- 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 33 – QUESTIONS