ABOUT COMBAT CASUALTY CARE (3C): WHY & HOW

CIOMR focuses on high quality casualty care: we (our Governments) send our young men and women in harm's way and therefore we (the citizens) have an obligation to provide them with the best possible care if "something happens". That care starts at the point of wounding and that care is provided at first by the buddy.

Every summer CIOMR organizes a 3C event; primarily as a training opportunity for non-medical personnel, but to make it more challenging for the participants the event is presented as a competition with a feed-back session.

The competition element necessitates certain special features. In 3C training it is a matter of pass / don't pass the grade, but in a competition everything must be standardized in order to have a fair playing field.

CIOMR handles that as follows.

1. Each year CIOMR's Operational Medicine Commitee (OMC) develops a draft scenario with a number of casualties
2. A list of requirements is derived from it, regarding the number of personnel, "props" and equipment, which is then discussed with that year's Host Nation
3. Depending on what the Host Nation is prepared and able to provide, and taking into account the venue for the competition, a definitive scenario is agreed upon; the casualty descriptions are subsequently finalized.
   Fig 1 is an example of such a scenario; fig 2 gives the injuries, dress instructions and play-acting of one of the casualties that go with that scenario

SCENARIO (example) **Fig 1**

Things have gone terribly wrong in South East Europe. In a brief undeclared war the aggressor made some territorial gains but was then largely repulsed by "a coalition of the willing". The Security Council was unable to agree, after which NATO decided to put a force in the most threatened areas, as a deterrent.
An "uneasy stalemate" exists.
Your team is part of the small complement of a Forward Operating Base (FOB).Everybody wears uniform only "outside the wire"

Incursions by the opponent are constantly tried, to which NATO has decided to react by undercover actions. One such undercover team has just returned from an action (actually a sabotage mission) and is putting its equipment into storage at the FOB. At that moment an explosion has been heard.

DESCRIPTION CASUALTY "X" (example) **Fig 2**

Condition and injuries

Condition

<c>: has almost stopped because of deep shock
A: patent
B: 28/min
C: heart rate 140/min (**only carotid** artery is palpable)
D: alert, talking spontaneously

Injuries

- open fracture left forearm
- considerable amount of blood lost
- ruptured eardrums, deaf

Play-acting, moulage and dress instruction

Play-acting:

- sitting
- not reacting to voice because of ruptured eardrums
- alert, but not really reacting to surroundings (deep shock)
- moaning and saying "I'm going to die"
- grasping his forearm with a blood-soaked cloth

Moulage:

- some blood from both ears
- deadly pale and sweating
- open fracture of left forearm
- lots of blood on the ground

Dress:

- civilian

4. For each casualty a scoring sheet is then developed. Such a sheet uses a template that follows the steps for assessment and treatment as described in CIOMR's 3C source document , "Combat Casualty Care". The contents of that document are based on the current TCCC Guidelines (US) with certain adaptations (see para 7); they are in accordance with STANAG 2122.
   Fig 3 is an example

Casualty "X" (example) **Fig 3**

Security

applies handcuffs (if hostile)	yes	(3)	no (-6)
searches and disarms (if hostile)	yes	(3)	no (-6)
done after initial providing of care	yes	(-8)	no

comments

Safety

disarms if mentally disturbed (own troops)	N/A		N/A
looks for additional weapons (own troops)	N/A		N/A
done after initial providing of care	N/A		N/A
wears personal protection/gloves	yes	(3)	no

comments

Primary Survey

<c> catastrophic bleeding / level of consciousness LOC / neck

checks for massive external bleeding	yes	(5)	no (-5)
stops massive external bleeding effectively (tourniquet)	yes	(5)	no (-7)
done after assessment of Airway, Breathing, Circulation	yes	(-8)	no
assesses LOC by addressing casualty	yes	(4)	no
immobilizes neck in blunt trauma) (gets help)	N/A		N/A

comments

Casualty is conscious

A checks airway

inspects mouth	N/A	N/A
cleans if necessary	N/A	N/A
opens airway (chin lift)	N/A	N/A
listens for passage of air (for max 10 seconds)	N/A	N/A
- absent: in hostile environment: stops	N/A	N/A
in safe environment: considers BLS	N/A	N/A
- present: maintains airway by positioning	N/A	N/A

comments

B checks breathing

checks respiratory rate by placing hands on chest	yes	(6)	no (-3)
checks for injuries **front** of chest	yes	(6)	no (-6)
checks for injuries **back** of chest	yes	(6)	no (-6)
seals ALL chest wound(s) airtight (vented/non vented)	N/A		N/A

comments

C checks circulation

done before all applicable A/B	yes	(-6)	no
checks for additional bleeding/ obvious wounds	yes	(4)	no (-2)
exposes all wounds before applying dressing	yes	(4)	no (-2)
covers wounds	yes	(5)	no (-2)
changes already applied tourniquet for dressing	N/A		N/A
checks heart rate at palpable artery	yes	(5)	no (-3)
splints obvious fractures	N/A		N/A

comments

D checks neurological status

determines once more Conscious vs. Unconscious	yes	(1)	no
checks pupils	yes	(2)	no (-3)
checks movement of limbs	yes	(2)	no

comments

Secondary Survey

performs full examination (if tactical situation permits)	yes	(3)	no

Supportive measures

prevents hypothermia	yes	(6)	no (-3)
positions casualty	N/A		N/A
provides pain relief / comfort	yes	(2)	no (-2)
re-examines casualty	yes	(5)	no (-5)
responds appropriately to findings of re-examination	N/A		N/A

comments

5. Each item has been assigned a number of points, for a “yes” and occasionally for a “no”. In case of a “no” the grades range between 0 and - 8
6. Occasionally “N/A” (not applicable) is used . In those instances that particular item on the sheet (that comes from the standard descripton in “Combat Casualty Care”) is not valid for that particular casualty. As an example: “Disarm a casualty that isn’t fully alert” is not valid if the casualty in the scenario is wide awake.
7. We also use “N/A” if the item is “controversial”, i.e. not generally accepted in all NATO militaries. It would be unfair to punish a team for not doing what they aren’t allowed to do because of national regulations, by giving points to some other team for whom the same action is not prohibited. In those cases we use “follow NATIONAL guidance” in the “Combat Casualty Care” booklet
8. If it’s almost impossible for a Judge to see whether an item has been specifically checked, we will use “N/J” (not judgeable) (as an example: the patency of the airway in a burned, conscious casualty with inhalation injury who is talking spontaneously but has a hoarse voice)
9. The exact number of points per item is the result of discussions between experienced military physicians in OMC. They take into account: the actual condition/abnormality, the importance of that condition/abnormality for that particular casualty and occasionally the needs of other casualties; all against the background of the tactical situation (scenario)
10. As a consequence the same item will not always be assigned the same number of points in all casualties

11. During the competition each item on the sheet is ticked by a Judge; either as “observed” (yes) or “not observed” (no). Each casualty has a separate Judge. Judges are expected not to ask questions during the competition, in order to have a level playing field by avoiding language difficulties on the part of the competitors. As of 2019 Judges can write comments (see boxes in fig 3). Those comments will also be copied in the electronic feed back (see para 16)
12. Separate scoring is done on team work (see Fig, 4) and (optionally) on radio traffic (see Fig. 5)
13. All points that have been obtained by the team (for teamwork, casualty treatment and possibly radio traffic) are added up; the “team totals” decide which team winst he competition

Teamwork example **Fig. 4**

- one team member is the obvious leader		yes	(10)	no	
- team members recognize that the situation is non-permissive at first and ALL take cover		yes	(7)	no	(-7)
The teamleader					
- immediately calls for help		yes	(3)	no	
- quickly assesses casualties and assigns tasks	yes	(4)	no		
- recognizes that Casualty D is DECEASED	yes	(3)	no	(-3)	
- secures/orders to secure weapon of Casualty D		yes	(3)	no	
- collects the findings of other team members	yes	(5)	no		
- sends sitrep / 9 liner	yes	(5)	no		

9-liner example	expected message						
							Fig.5
exact location	**"--- Valley"**			yes	(1)	no	
radio channel	**standard channel**			yes	(2)	no	
call sign	country and number			yes	(2)	no	
priorities and numbers	your choice			right	(6)	wrong	
special equipment	**Alpha**			yes	(1)	no	
type and numbers	your choice			right	(5)	wrong	(-3)
security at pick-up	your choice			right	(4)	wrong	(-3)
marking of pick-up point	**Charlie**	yes	(1)	no			
patients's political status	your choice			right	(2)	wrong	(-1)
pick up zone obstacles	**NIL**		yes	(1)	no		

NOTE: bold items are preprinted on the template the competitors will receive

14. The competition is usually run in 4 to 8 parallel lanes. As a consequence there are 4 to 8 casualties "A", the same number of casualties "B" etc. By using the system described above CIOMR assures that the interobserver variability between the Judges who assess the performance on respectively all casualties "A", "B" etc is kept to a minimum
15. For an effective learning experience feed-back is indispensible. This is provided immediately after the competition AND electronically (see para 16)
16. As of 2016 each competitor also receives his/her results electronically (see Fig. 6), showing what was expected and what was achieved. A compilation of members' results and scores for teamwork / radio traffic is also sent.

example **Fig. 6**

Team Utopia 3 Competitor "yyy"	**Max**	**Obtained**
Casualty "X"	**80**	**77**
Security		
applies handcuffs (if hostile)	3	3
searches and disarms (if hostile)	3	3
done after initial providing of care	0	0
Comments		
Safety		
disarms if mentally disturbed (own troops)	n/a	n/a
looks for and finds additional weapons	n/a	n/a
done after initial provision of care	n/a	n/a
wears personal protection	3	3
Comments		

<c> / LOC / neck

checks for massive external bleeding	5	5
stops massive external bleeding effectively (tourniquet)	5	5
done after assessment of ABC	0	0
assesses LOC by addressing casualty	4	4
Immobilizes neck	n/a	n/a

Comments

Airway

inspects mounth,	n/a	n/a
cleans if necessary	n/a	n/a
opens airway	n/a	n/a
listens for passage of air (for max 10 seconds)	n/a	n/a
- absent: in hostile environment : stops	n/a	n/a
in safe environment : considers BLS	n/a	n/a
- present: maintains airway by positioning	n/a	n/a

Comments

Breathing

checks respiratory rate by placing hands on chest	6	6
checks for injuries front of chest	6	6
checks for injuries back of chest	6	6
seals ALL chest wound(s) airtight (vented/non vented)	n/a	n/a

Comments

Circulation

starts before all applicable A/B items have been done	0	0
checks for additional bleeding / obvious wounds	4	4
exposes all wounds before applying dressing	4	4
covers wound(s)	5	5
changes already applied tourniquet for dressing	n/a	n/a
checks heart rate at palpable artery	5	5
splints obvious fractures	n/a	n/a

Comments

Disability (neurological status)		
determines once more conscious vs. Unconscious	1	1
checks pupils	2	2
checks movement of limbs	2	2
Comments		
Secondary Survey		
performs full examination (if tactical situation permits)	3	0
Supportive Measures		
prevents hypothermia	6	6
positions casualty	n/a	n/a
provides pain relief / comfort	2	2
re-examines casualty	5	5
responds appropriately to findings of re-examination	n/a	n/a
Comments		

17. The emails are sent not later than 2 weeks after the competition
18. As of 2017 individual participants will obtain a Certificate of Profiency if certain criteria are met. This has led to the following changes in the Competion:

    * each team member (the leader included) has to take care of 1 casualty
    * it is not be allowed that a casualty is cared for by several team members in sequence
    * while care is being delivered team members are not to speak to each other, until the senior judge gives permission
    * all casualties will be comparable as regards the severity of their injuries
    * in each scoring sheet a number of items will be marked as Critical Treatment Decision (CTD; red shading) or Important Treatment Decision (ITD; blue shading) The “red items” are considered essential for the survival of that particular casualty and must therefore be dealt with correctly and in the right sequence; i.e. in order to obtain the Certificate red items may not be missed. Blue items are important but not a matter of life or death. One or two may be missed therefore. All items follow the c-ABCDE approach that has been described in the “Combat Casualty Care Manual” (see Fig. 6 and para 16). Which items in the scoring list will be considered “red” and which “blue” differs from casualty to casualty and depends on the injuries of that casualty
19. If a participant doesn’t make the grade for the Certificate, the points he/she has obtained will still be added to his/her team’s total