Chapter 4 – CONDITIONS FOR OPTIMAL USE*

In order to aid Medevac Planners in selecting appropriate HBO treatment facilities based on the summary listing above, a description has been provided of the necessary capabilities of a HBO Centre. This will enable a selection of HBO facilities by type of indication, permitting a quick evaluation whether evacuation for HBO is feasible and practical.

First, the definition of "hospital-based" HBO chambers need further detail. The categories of HBO chambers, as defined in the CGP, fall slightly short on the actual characteristics: a Hyperbaric Facility may or may not be "hospital-based", and the next category would then be a "Centre for Hyperbaric Medicine".

For the purpose of military HBO indications, four categories have been defined:

0) The HBO Facility is located outside of the premises of a hospital, or physically distant on the hospital grounds (e.g. another building on the hospital campus grounds) so that ambulance transport is necessary to bring the patient from the ward to the HBO Facility.

I) The HBO Facility is based in a small, local hospital, which may or may not have a limited intensive care facility, but without the possibility of intensive care support during the HBO.

II) The HBO Facility/Centre is based in a larger, regional hospital with full EMS (emergency medical services) and intensive care ward(s); intensive care support is possible during HBO.

III) The HBO Facility/Centre is based in a larger hospital as in II), but the hospital provides additional specialized care.

Intensive care support during HBO needs to be defined as well; for the purpose of this document, a working definition of "ICU HBO" has been made:

- A mechanical ventilator for providing artificial respiration is placed inside the HBO chamber, and is adapted or designed for functioning in hyperbaric environments;
- Hyperbaric-tested or -designed drug infusion pump(s) are placed inside the HBO chamber;
- During the HBO, a minimum of the following patient parameters can be monitored continuously: ECG, blood pressure;
- Arterial Blood Gas measurements can be taken inside the HBO chamber, during treatment, and can be analyzed on-site;
- ICU-competent HBO personnel (as defined in the EBAss curriculum for HBO-ICU-nurse – www.ebass.org – or an ICU-competent MD) is present inside the HBO chamber during the complete treatment; and
- Advanced Life Support (ALS) equipment is readily available at the site of the HBO chamber.

Finally, for each condition discussed above, the required hospital capabilities can be defined.

* See also Annex B.

Table 4-1: Required Hospital Capabilities for Treatment of Military HBO Indications.

Condition	Hosp Based (0 – I – II – III)	ICU HBO	24/24 HBO	7/7 HBO	Special "Capabilities" of the Treating Hospital
1) Acoustic Trauma	0	–	–	+	–
2) Iatrogenic AGE	II	+	+	+	
3) Burns – Life-threatening	III	+	+	+	Burn Centre
4) Burns – Non-life-threatening	0	-	+	+	III – Burn Centre
5) CO-intoxication	I or II	– or +	+	+	
6) Crush	0 or III	– or +	+	+	III – Trauma Centre
7) DCS – Life-threatening	II	+	+	+	
8) DCS – Non-life-threatening	0	–	+	+	–
9) Frostbite (extremities)	0	–	–	+	Surgery
10) Soft Tissue Infections – Life-threatening	III	+	+	+	Septic Surgery

Annex B lists the hospitals that have been identified as of December 2012 with their capabilities to treat the indications/conditions discussed above. This list is not necessarily complete and not static, meaning that it can only serve as a starting point for Evacuation Planners to identify for each projected military support contingency plan the most appropriate HBO Facility and hospital.

Annex C lists contact information for regional or national reference persons/institutions in order to provide a quick and easy way for obtaining up-to-date information regarding existence and availability of these HBO Centres. Likewise, Annex C needs to be updated itself as time goes by, however, web links may persist for a longer time.