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Inside this Issue:

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Prolonged Field Care Working Group Position Paper

Operational Context for Prolonged Field Care

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We propose a universal approach to operational planning and logistical preparation for prolonged field care (PFC) missions, in the form of four stages. We have been accustomed to view missions in terms of patient treatment stages, such as seen in Tactical Combat Casualty Care (TCCC). This is less useful when planning for PFC because of the more comprehensive list of capabilities needed to consider across a wider spectrum of operational realities. Instead of echelons of patient care, we propose to use a system of mission or evacuation stages to simplify and standardize our language, using the following terminology: RUCK-TRUCK-HOUSE-PLANE (RTHP). We believe that the RUCK-TRUCK-HOUSE-PLANE format is useful, being simple as well as easily transferable and relatable, across all branches of service.

The stages are explained as follows:

RUCK: the gear carried to the furthest point on a mission, generally carried by medical personnel dismounted.
TRUCK: whatever additional equipment will be carried in mission-specific transportation, whether that is trucks, boats, all-terrain vehicle, kayaks, and so forth.
HOUSE: gear available to the medic, but which is only feasible to be maintained at a team house, firebase, or other mission support site. It represents the highest level of care the operational element has organic to it.
PLANE: planning stage included to allow the medical providers to consider how they will move patients on aircraft, whether medical evacuation (MEDEVAC) aircraft (those designated and equipped to move casualties as a primary mission) or casualty evacuation (CASEVAC) (preplanned nonmedical mission support aircraft, opportunity or "slick") aircraft.

These stages are conceptual and not necessarily linear, but should be used as guidelines only. Two examples follow.

Example 1: A unit conducting foot patrols, supported by gun trucks, with a team house at a local national base and with access to a helipad. In this case, while dismounted, the medic carries what makes sense to him (RUCK). He has access to larger equipment and resupply in the mission support vehicles (TRUCK). The team house stores the balance of medical equipment he could not feasibly carry forward, and this represents his highest organic level of care (HOUSE). The team will have planned for use of the helicopter landing zone to potentially transport patients to higher care or fixed-wing evacuation (PLANE).

However, the RTHP formula can just as easily be used for any other mission.

Example 2: A unit operating out of their vehicles on an extended desert mission may not have any higher level of organic care than that which is contained on their trucks. They may not operate out of a fixed facility or team house. The larger trucks, therefore, would represent the highest level of capability the unit has organic to them (HOUSE). However, when they split up into patrols, the smaller vehicles on each patrol will normally be stocked with resupply bags, and perhaps heavier medical equipment, such as oxygen bottles. These patrol vehicles now represent the TRUCK stage. The most specialized capabilities may only be retained by the command and control element, or mission support site, representing HOUSE. The individual medic and the equipment on his person represent RUCK (Figure 1).

The point of Figure 1 is the flexibility of the language to describe operational context of care. It should be noted these stages are always defined according to assets available, mission, and unit. There is no expectation that a "TRUCK" or "HOUSE" is strictly defined across different mission sets.

A useful operational planning diagram would be the development of a matrix with four horizontal rows labeled with the four operational stages, and the vertical

Figure 1 *A Special Forces team may use a large vehicle as their base (or HOUSE) for command and control, as well as logistics re-supply, during long range patrolling operations.*

columns labeled with the expected PFC capabilities, tailored to the applicable mission set. This allows for easier visualization and decision-making with respect to capabilities and equipment available throughout stages of the mission, with respect to casualty treatment and transport. A partial example is given in Table 1.

There are several further advantages to considering this model. Most important, after identifying stages in this manner, it is easy to identify which capabilities and which specific equipment a medical provider will have at any point on a mission or during evacuation of a patient. This then helps the medic to visualize gaps and areas that lack important capabilities along the proposed evacuation chain.

Space is a planning constraint on almost all Special Operations Forces (SOF) missions. From the moment a unit loads out from their home station, decisions are made to prioritize the allocation of space in shipping containers, on vehicles, and on the person of the individual combatants. The RTHP framework can be useful by simplifying prioritization here, as well.

Using this verbiage simplifies communication to unit leadership about constraints and limitations, as well as logistical needs. A medic can use the operational context and stages to better visualize the equipment needs, and communicate this to her team. For example, the medic's explanation would include the operational need to support a HOUSE, four trucks, and possibly the capabilities to outfit an aircraft to some degree. While the medic may carry hetastarch, or freeze-dried plasma, on his person, mission considerations may demand more definitive fluid therapy solutions at the TRUCK level, such as fresh whole blood transfusion equipment. At the HOUSE, she will have all the aforementioned options, as well as a sufficient supply of lactated Ringer's solution and normal saline to cope with other serious medical contingencies. Using this simple planning verbiage, the medic can easily convey to unit leadership his equipment requirements and how it should be distributed.

Finally, one of the strategic advantages of having the community use this lexicon is homogenizing our research, development, and procurement of equipment, and improving our overall capabilities over the long term. Since part of the emphasis on PFC is to effectively evaluate equipment to support capabilities, members of the SOF community can better evaluate equipment in our numerous sets, kits, and outfits, and objectively compare common equipment in the standardized operational phases. It will also quickly identify capability gaps and focus future research and development needs in the community.

To summarize, the application of a standardized, operational-context naming convention system such as RTHP in the context of medical operational planning, and specifically in PFC, provides several immediate benefits:

1. It provides a framework for planning mission support and personal load out.
2. It provides a clear system to communicate limitations of medical patient care and holding capability with leadership.

Table 1 *Example of a PFC Operational Planning Matrix* (table is truncated due to space restriction)

Stage	Monitor	Resuscitate	Ventilation/Oxygen	Airway
RUCK	Pulse oximeter, BP cuff, Stethoscope	NS/hetastarch	BVM with PEEP	SGA/cric
TRUCK	Monitor	NS/hetastarch/FWB kit	BVM with PEEP/O_2 (2 bottles)	SGA/cric with ketamine drip
HOUSE	Monitor	LR cases/hypertonic saline/FWB	O_2 concentrator	RSI capability
PLANE	Monitor	LR	BVM with PEEP	SGA/cric with ketamine drip

Note: BP, blood pressure; BVM, bag-valve-mask; cric, cricothyrotomy; FWB, fresh whole blood; LR, lactated Ringer's solution; O_2, oxygen; PEEP, positive end-respiratory pressure; RSI, rapid-sequence intubation; SGA, supraglottic airway.

3. It is a flexible language, applicable to any mission.
4. It gives the SOF community a common language, and allows all SOF medical providers and planners to easily share best practices or equipment suggestions.
5. It provides a simple lens through which to consider necessary research, development, or acquisition.

KEYWORDS: *prolonged field care, PFC, medical operations, operational matrix, medical planning*

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