

# **U. S. Army Medical Department Center and School**

**Collective Protection Update Briefing**

**To the**

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**Presented by:**

**Mr. Charles M. McNeilly**

**Deputy Director,**

**Directorate of Combat and Doctrine Development**

**AMEDDC&S**

**Fort Sam Houston, TX**

# AMEDD

## Collective Protection Requirements

### Background

#### WHAT IS THE REQUIREMENT:

- Protect patients inside field medical treatment facilities
- Enable medical staff to work without being encumbered with MOPP and other individual protection gear
- Enable continued treatment of patients.
  
- AMEDD joined with the USAF for the operational requirement for Collective Protection.
  
- The CBPS was developed for the smaller, more mobile, front line treatment facilities and the CP DEPMEDS was designed for Army DEPMED hospitals.

# AMEDD

## Collective Protection Requirements

### Fielding

- CBPS (64 Systems) and CPDEPMEDS (6 Systems) were expeditiously fielded during OIF under an Urgent Needs Statement from CENTCOM.
- Though this was an Army fielding, the USMC were also given twenty CBPS to use with their Forward Resuscitative Surgery System units.
- Medical units were issued the COLPRO in theater and New Equipment Training Teams were deployed to conduct the training.
- Since there were no incidents of the use of Chem/Bio warfare, the COLPRO did not have to be employed, but Commanders reported having confidence that their systems were in place and were ready if they had to be employed.
- The COLPRO systems brought tangible benefits when used in conventional manner, i.e. cleaner work areas, climate controlled, and CBPS was easier, faster to set up and less likely to blow away under the harsh winds and sandstorms than was the standard tentage.

# AMEDD

## Collective Protection Requirements

### Future

- Continue to be a player in the Joint Capabilities process for COLPRO; medical needs are documented in the Joint Expeditionary Collective Protection capability documents and program.
- Medical units in the Army Transformation Process (UEx, UEy) need to be collectively protected.
- Working on product improvements in the CBPS and CP DEPMEDS systems.
- Re-outfitting units that used their systems during OIF and completion of fielding of systems.
- Continue to develop solutions that support Army Modularity with scalable medical treatment facilities.
- US Air Force Medical Services are also playing in the COLPRO programs with their CP EMEDS.

# CBPS

Chemical Biological Protective Shelter



- Shelter designed to conduct medical operations in contaminated environment
- **A better shelter for CONTINGENCY and BASOPS operations**
  - Highly mobile - has its own prime mover
  - Environmental support - heated and cooled
  - Small Footprint, yet very capable
  - Rapid setup/load/move capability
  - Easy to use and train

# Deployed Use

- Use on contaminated battlefield
  - Critical to close support medical mission
    - Fielding: Treatment Squads (BN Aid Stations), FST, and Divisional medical companies
  - Allows supported unit to take NBC risk
- Use supporting SASO/OOTW
  - Demonstrates readiness - deter CBRN attacks
  - Supports rapid deployment of medical teams
    - Self contained environment and power
    - Self moving
    - Clean treatment environment rapidly established



# CBPS Effectiveness in NBC Environments



## ➤ Rated effective for the following:

- Contamination-free environment for 32 continuous hours of a 72 hour mission.
- 20 patient (ambulatory/litter) and/or personnel entry/exits per hour.
- Environmental control under primary power to maintain 60-90 F.
- 20 minute Set-up and Strike times in conventional environment.
- 40 minute Set-up and Strike times in NBC environment.
- Required mobility per OMS/MP
- Compatibility with current and co-developmental detectors and alarms.
- 300 sq ft of usable floor space in conventional mode.

# CBPS System Improvements

- Hydraulic system (Needs another power source than HMMWV engine)
- Larger airbeam shelter (at least 2 feet longer) for FST and DCS
- Combine TALP and personnel entryway
- Fuel consumption
- Noise reduction (within shelter and outside shelter)
- Shelter interior/exterior communication
- Improved bell timers for airlocks (audible and visual)
- Cost (low cost, light weight materials)
- Improved closure design (repair and durable)
- Develop a tracked version of the CBPS for use in Mechanized Units



# CP DEPMEDS

Collective Protected DEPMEDS



- Shelter designed to conduct medical operations in contaminated environment for Level III MTFs
- **A better shelter for CONTINGENCY and BASOPS operations**
  - Environmental support - heated and cooled
  - Provides clean, toxin-free, environmentally controlled patient treatment area
  - 72 hour Collective Protection via barrier and overpressure
  - CP Protected latrines

# Deployed Use



- Use on contaminated battlefield
  - Critical to support medical mission
    - Fielding: Combat Support Hospital (CSH)
  - Allows for continuous medical care
- Use supporting SASO/OOTW
  - Demonstrates readiness - deter CBRN attacks
  - Supports early entry element of CSH
    - CSH Jump Section
    - Deters use of chemical/biological weapons
    - Clean treatment environment established

# CP DEPMEDS

## in NBC Environments



### ➤ Rated effective for the following:

- 72 hour CB protection via barrier and overpressure.
- Houses 248 patients (ICU/ICW).
- Provides for personnel/patient entry/exits and supply air locks.
- Environmental control under primary power to maintain 60-90 F.
- Compatibility with current and co-developmental detectors and alarms.
- Provides clean, toxin-free, environmentally controlled patient treatment area (100K sq ft).
- CB protected 20K gallon water distribution system.
- CB protected latrines.

# Collective Protection System Improvements

- Leverage Airbeam Shelter Technology to replace current metal frame tentage (reduces weight and cube)
- Integrate CBRN fabric into tent fabric to eliminate the need for CBRN tent liners
- Combine TALP and personnel entryway
- Develop ECUs that are CBRN hardened, and provide overpressure without additional blowers
- Noise reduction (within shelter and outside shelter)
- Shelter interior/exterior communication
- Reduce Cost (low cost, light weight materials)
- Improved closure design (repair and durable)

# **AMEDD**

Collective Protection Requirements

## **Questions/Discussion**

**Contact Information:**

**Mr. Charles M. McNeilly**

**210-221-1016**