Declaration

- Unclassified presentation
- No conflicts to declare
- This presentation will be from the perspective of a CBRN focused small teams SOF based approach to CT

Introduction

- Ultimately medical planning is about risk
- CBRN
  - Low to moderate probability
  - High impact
  - Costly
Objectives

To become familiar with the:
- Uniqueness of CBRN medicine
- Factors to consider when engaging in CBRN SOF medical planning in support of CT operations.
  - Strategic factors
  - Operational factors
  - Tactical factors

CBRN Medicine

Medical Countermeasure/Device Regulation
- General
  - Procurement
  - Limited availability
  - Limited investment in development
  - Military and civilian medical procurement process
- Licensed
- Unlicensed
  - FDA - Animal Rule & Accelerated Approval Mechanism
  - Health Canada - Extraordinary Use New Drugs Program
  - Physician scope of practice and discretion

CBRN Medicine

Knowledge
- Unfamiliar subject matter
- Forgotten agents (what was old is new again)
- Known unknown
- Unknown unknown
- Evidence level and quantity
CBRN Medicine

- Diagnosis
  - Intel
  - Detection & Identification
  - Unrecognized exposure
  - Non-specific prodrome and initial manifestation of disease

An all hazards approach and preparation can mitigate risk but sacrifices speed and agility.

- Prophylaxis and Pre-treatment
- Personal protective equipment
- Triage
- Treatment
  - General
  - Inter-organization compatibility
- Decontamination
- CBRN specific patient care
  - Medical countermeasures
  - Supportive/Conventional patient care

Strategic Factors

- Force Development
  - Medical capability and capacity
Strategic Factors

- Force Generation/Force Employment Concepts
  - Composition of medical response team
  - Logistical considerations
  - Operational considerations
  - Training

Think complementary and force multiplying scopes of practice, medical authorities, and combined medical and soldiering competencies.

Strategic Factors

- Strategic inter-organizational integration
  - Combined training
  - Professional technical network
  - ROE
  - Demographic
    - Elderly
    - Pediatrics
    - Non military/SOF medical standards for employment

Operational Factors

- Casualty estimation
- Casualty evacuation support
  - Clean vs dirty patients
- Force health protection
  - Pre-mission screening
  - Pre-treatment
  - Prophylaxis
- Medical Adviser
- Medical Intelligence
- Lessons learned
Tactical Factors

- Expected vs unexpected
- Threat agent
- Delivery mechanism
- Permissive vs non-permissive
- Mission type
- PPE
- Pre-hospital medical assessments
- Decontamination
- Casualty management
  - Urgency
  - Approach
  - Threat specific
  - Undifferentiated
  - Zone based
  - Level of care per zone
  - Maximal tolerable delay to care within each zone
- Tactical circumstances
- Communication
- Enhanced medical surveillance post-deployment
- Management of deceased

Pearls

- Everything is toxic
- Weather and environment have powerful implications
- Exposed is not necessarily contaminated
- Known exposure vs unknown exposure matters
- Differential diagnosis is actually tricky
- Antidotes matter, but are nothing without sound supportive patient care
- Nothing gets easier in PPE
Summary

- Excellence in medical planning and care for CBRN casualties is predicated on an excellent approach to conventional casualties… just more complicated…

- CBRN medical planning at any level, without coordinated and integrated medical planning at all other levels will be insufficient and leave the forces we support vulnerable.

- An effective approach to CBRN medical response requires critical thinking and decision making with incomplete information.
- Relative lack of high quality evidence for threat treatments and unfamiliarity can make it difficult to plan a response without over or under committing resources.

Questions

References

- Allied Joint Doctrine for Medical Support, AJP-4.10, May 2015
- Concept of Operations of Medical Support in Chemical, Biological, Radiological, and Nuclear Environments, AMedP-7(D), 2007.
- Allied Joint Medical Doctrine for Support to Chemical, Biological, Radiological, and Nuclear (CBRN) Defensive Operations, AMedP-7, 2015.