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SOF CBRN Medical Planning:
A Factors Based Approach

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WE WILL FIND A WAY. | NOUS TROUVERONS UN MOYEN.

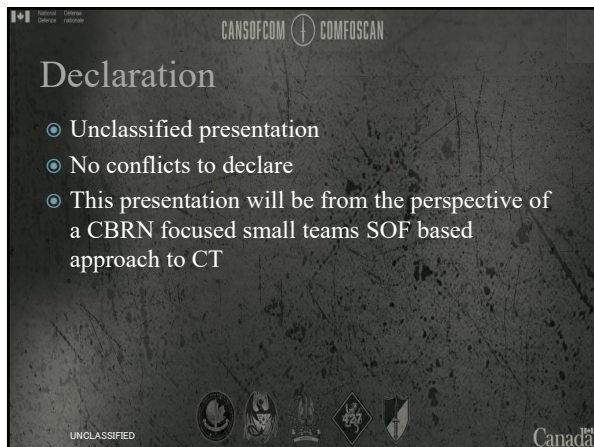
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Declaration

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

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Introduction

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

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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

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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

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CBRN Medicine

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

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CBRN Medicine

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

All hazards approach and preparation can mitigate risk but sacrifices speed and agility

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CBRN Medicine

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

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Strategic Factors

- Force Development
 - Medical capability and capacity

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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

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Strategic Factors

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

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Operational Factors

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

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Tactical Factors

- Expected vs unexpected
- Threat agent
- Delivery mechanism
- Permissive vs non-permissive
- Mission type
- PPE
- Pre/Post entry 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

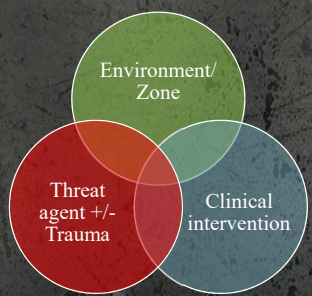
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Tactical Factors




Environment/Zone

Threat agent +/- Trauma

Clinical intervention

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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

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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.

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Questions

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