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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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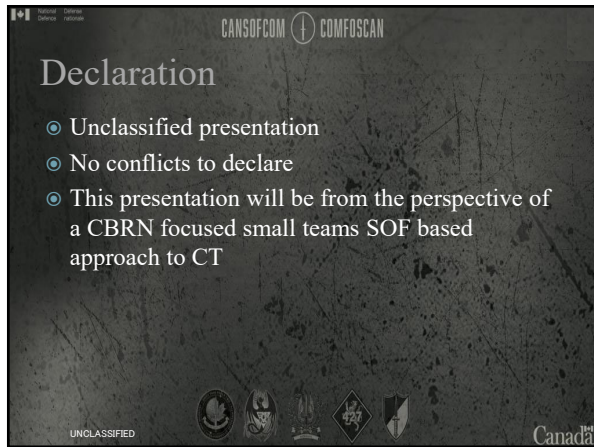
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### Declaration

- 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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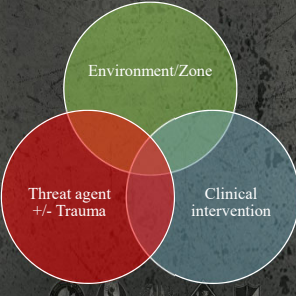
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## Tactical Factors




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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