

RECOGNITION OF A CBRN INCIDENT

Indicators of an environmental or CBRN hazard include:

- Any symptoms involving incident response or reconnaissance personnel
- Multiple casualties with similar non-traumatic symptoms and signs
- Unusual taste, smell or mist
- Unexplained dead animals
- Unexplained symptoms including:
 - Altered vision
 - Headache
 - Chest tightness
 - Non-thermal burns
 - Eye pain
 - Excessive secretions
 - Difficulty in breathing
- Any unusual or unexplained symptoms, signs, illness or deaths

Smells associated with chemicals Chemical detection

Chlorine	<i>Swimming pools</i>
Cyanide	<i>Bitter almonds</i>
Hydrogen sulphide	<i>Bad eggs</i>
Lewisite	<i>Geraniums</i>
Phosgene	<i>Freshly mown hay</i>
Sulphur mustard	<i>Garlic</i>

Chemical Agent Monitor	H - mustard
	G - nerve agents
3 colour detector paper	Red - mustard (H)
	Yellow - nerve (G)
	Green - nerve (V)

Principles of CBRN casualty management:

Recognition

Safety (Six 'C's Confirm - Clear - Cordon - Control - Communicate - Contain)

Self / Buddy first aid

Triage

Casualty assessment ('Quick Look')

Life saving interventions (T1 casualties only)

Casualty hazard management (Decontaminate and/or Isolate/Quarantine)

Supportive management (includes critical care)

Definitive management (includes specific antidotes & antibiotics, and surgery)

Rehabilitation

CBRN INCIDENT IMMEDIATE ACTIONS

Six Cs

CONFIRM

- Put on Individual Protective Equipment (where available)
- Warn others nearby
- Identify possible routes of exposure (e.g. food, airborne, skin)

CLEAR

- Move upwind, if gas, vapour or airborne particles
- Move to a safe distance (outside any exclusion zone)

CORDON

- Establish hot and warm (decontamination) zone
- Establish a formal clean / dirty line (CDL)

CONTROL

- Stop any eating, drinking or smoking in contaminated area
- Control and monitor re-entry and exit to / from zones
- Limit movement downwind of hazard
- Protect the area for further assessment including forensics (exploitation)

COMMUNICATE

- Inform Command using METHANE report and/or CBRN1 incident report
- Warn local Medical Treatment Facilities and personnel

CONTAIN (also see Casualty Hazard Management references)

- Prevent secondary contamination, if persistent hazard
- Prevent secondary infections, if contagious biological agent

METHANE REPORT

M	My call sign				
E	Exact location and wind direction				
T	Type of incident				
H	Hazards identified (C, B, R, combined or unknown)				
A	Assessment (or Access): Scene / Casualty				
N	Number of casualties: triage and type	T1	T2	T3	Dead
E	Emergency treatment given and resources required (incl.decontamination)				



MEDICAL INCIDENT MANAGEMENT

SCENE LAYOUT

Wind direction / speed:
Ambient temperature:

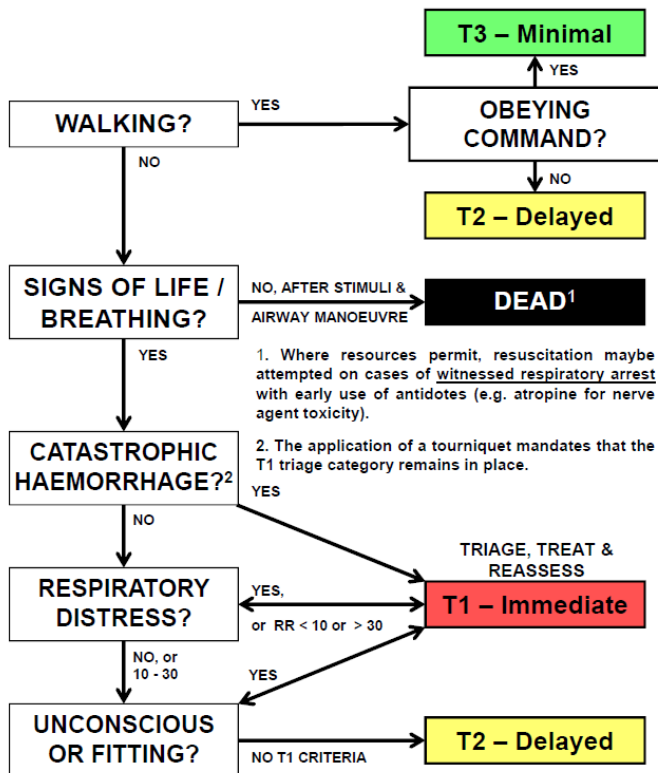
CONSIDERATIONS / BRIEF	Hazard(s):		
Safety	PPE/IPE state? Work/Rest rate?		
Cordons	Hot zone? Exclusion zone? Downwind hazard? CDL marked? CDA?		
Command/ Control Comms	I/C: Call signs/channels: Next report due:		
Assessment	Agent(s) detected:		
Triage	T1	T2	T3 D
Treatment	See Cards 7-9		
Transport	AXP HLS		
Exploit/ Recovery	SIBCRA? Recovery end state? Time to end state?		

For abbreviations - refer to AMedP-7.2 Lexicon

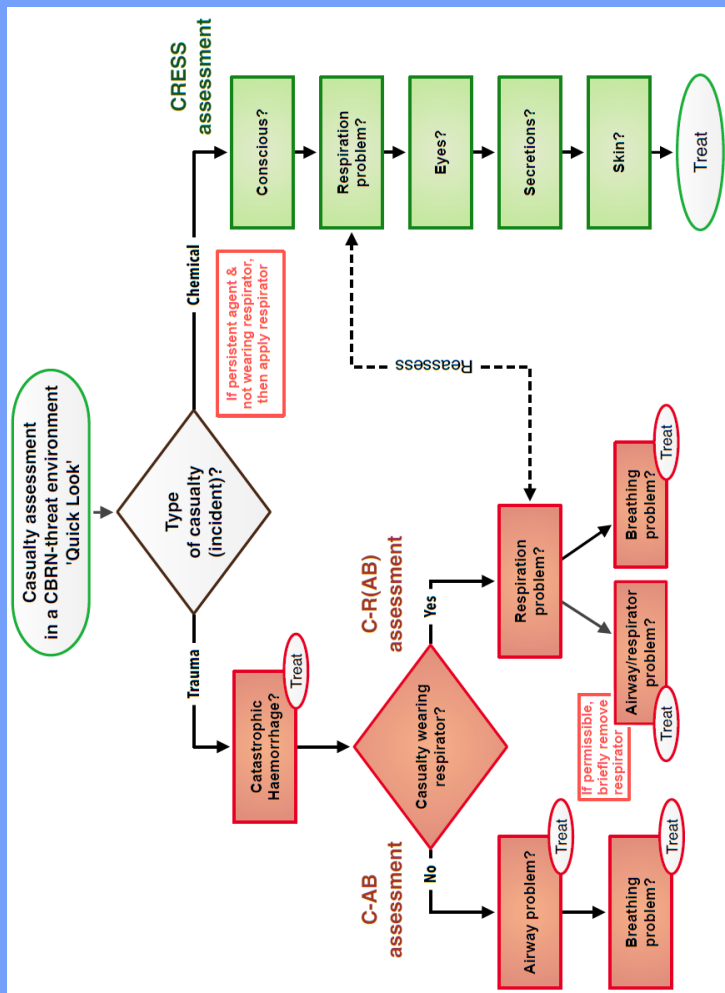
CBRN TRIAGE (HOT ZONE)

Triage Categories

T1	Immediate	Requires life-saving interventions (LSI)
T2	Delayed	Stretcher casualty but not requiring LSI, or casualty is incapacitated
T3	Minimal	Walking and not incapacitated



'QUICK LOOK' ASSESSMENT



CBRN Medical Slate Card 5

NATO Version AMedP-7.2.1(A)(1)

'CRESS' ASSESSMENT

	Nerve agent	Cyanide	Opiate (Morphine)	Atropine	Sepsis	Heat stroke
C	Consciousness	Unconscious / Convulsions	Reduced / Unconscious	Agitated / Confused	Normal, reduced or agitated	Altered
R	Respiration	Increased or stopped	Reduced / Stopped	Increased	Increased	Increased
E	Eyes	Normal / Large pupils	Pinpoint pupils	Large pupils / Blurred vision	Normal	Normal / Large pupils
S	Secretions	Normal	Normal	Dry mouth / Thirsty	Normal / Sputum	Normal
S	Skin	Pink → Blue	Normal / Blue	Flushed / Dry	Warm → Pale (cool)	Varied
	Other features	Vomiting Incontinence Slow pulse	Sudden onset		Fast pulse Fever (>38.3°C) Bio-syndrome*	High temperature (>38°C)

* Pinpoint pupils may not be present immediately if skin absorption or eye protection worn.
 * 'Bio-syndromes' include: respiratory, cutaneous (skin), lymphadenopathy, haemorrhagic, gastrointestinal, and neurological (central & peripheral).

CBRN MEDICAL TREATMENT

Priorities for Treatment

HOT (First Aid)	WARM (EMT*)	INTERVENTION
		<small>*Emergency Medical Treatment by medical personnel only</small>
<C> A a B	<C> A a B C Decon Evac	C atastrophic haemorrhage control B asic A irway management a ntidotes B reathing (and administration of oxygen) C irculation (and initial management of sepsis)* D econtamination (and disability) E vacuation to warm or clean zone
Evac	Evac	

General First Aid Treatment Options



Catastrophic Haemorrhage Control

Attempt to apply pressure dressing

- If limb - apply tourniquet (where available)
- If torso - manage as conventional catastrophic haemorrhage

Apply dressing / marking to protect and notify if potential contamination

(Expose to treat drill)



Airway Management*

Basic airway manoeuvres

- head tilt & chin lift (non-trauma)
- jaw thrust (trauma)

Suction airway, if equipment available, or self-drainage

Place in recovery position

** Where a respirator is worn:*

If airway problem is suspected and there is no immediate airborne hazard, then perform an airway check drill and refit as required after.



Antidotes (See agent-specific first aid)



Breathing

RIBS* (team medic) assessment

Breathing support and ventilation, as resources allow

If sucking chest wound

- apply appropriate dressing

If low oxygen level or blue

- give oxygen, if available

If penetrating injury - consider tension pneumothorax

- seek medical assistance immediately (medical skill required)

**RIBS - rate, injuries, back & sides.*

AGENT-SPECIFIC FIRST AID

Nerve agent

- Remove from scene, and decontaminate any liquid contamination
- Clear secretions and vomit (suction airway, if equipment available)
- Administer Nerve Agent antidote immediate therapy
- Place in recovery (semi-prone) position

Vesicant (Blistering agent)

Immediate pain - consider Lewisite / Phosgene Oxime / caustic agent

Delayed redness (6-12 hours) - consider Sulphur Mustard

- Remove from scene
- Immediate decontamination
- Monitor exposed for redness and irritation, especially eyes and airway
- Report any breathing or swallowing difficulty, incl. hoarse voice / cough

Pulmonary (choking) agent

- Remove from scene; avoid exertion
- If respiratory distress AND hazard cleared, remove respirator
- If liquid contamination or T1, remove clothing
- Basic airway management including head tilt and chin life
- If respiratory secretions, allow free drainage in recovery position
- If cyanosed (blue), give oxygen, if available

Cyanide (Blood agent)

- Remove from scene immediately
- If breathing and symptomatic, give oxygen (if available)
- Start CPR if cardiac arrest witnessed or within 10 minutes
- Administer cyanide immediate therapy MedCM, where available

Heat illness including heat stroke

Heat stroke is an altered conscious level with an excessive core temperature (>40°C) and is a medical emergency

- Stop activity, and check for any use of atropine
- Relax individual protective equipment state, if permissible
- Strip, soak, fan and fluids (SSFF), if permissible
- Rehydrate but avoid drinking large volumes ('little and often')
- Record any altered level of conscious, confusion or agitation
- Record core body temperature, where possible

BIOLOGICAL & RADIATION FIRST AID

MENTAL (PSYCHOTROPIC) INCAPACITANT / DELIRIUM / ATROPINE OVERDOSE

- If confused or agitated, remove any weapon system and reassure
- Avoid physical restraint due to risk of heat illness
- Manage in cool, calm & sheltered environment (manage as heat illness)

BIOLOGICAL CASUALTY MANAGEMENT

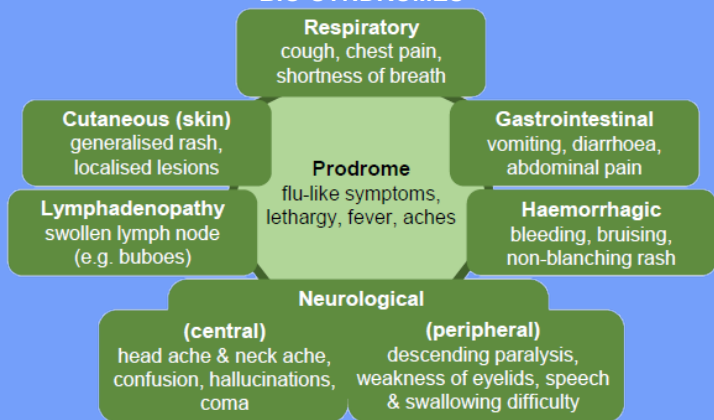
Assess risk of transmission (contagious disease)

- consider isolation & contact tracing

Monitor vital signs and identify type of bio-syndrome

- pulse rate, respiratory rate, temperature and level of consciousness

BIO-SYNDROMES



RADIOLOGICAL CASUALTY MANAGEMENT

Treat trauma first

- Record any physical / personal dosimetry
- Record the proximity and duration near to known source
- Record the onset time of any nausea, vomiting and / or diarrhoea
- Record any use of anti-sickness or stable iodine medication

AT-MIST-D HANDOVER

ID number	If known e.g. AB1234		
A	Age of casualty (adult / child (& age))		
T	Time of wound / exposure or time of onset of symptoms		
M	Mechanism of injury or type of incident		
I	Injuries	Intoxication	Infection
	(including injury pattern & observed injuries)	(type, route of exposure, & contamination risk)	Irradiation (including any dosimetry)
S	Symptoms and signs (including toxidromes)		Other:
	Cat haem	Consciousness	
	A	Resp	
	B	Eyes	
	Circ	Secretions	
	D	Skin	
T	Treatment given:	Auto-injector	Other MedCM:
		Atropine	
		Oxime	
		Anticonvulsant	
D	Decontamination status: (no contamination; fully decontaminated; wound contamination; internal hazard)		