

CASUALTY DECONTAMINATION—ALL HAZARDS/UNKNOWN CONTAMINANT

Summary of Training on Decontamination, Maui County Health Volunteers, 12/4/2007
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This document is intended to provide a quick reference on general concepts for the conduct of decontaminating patients in an emergency.

It is incumbent upon the person overseeing a decon operation to make adjustments based upon the situation or contamination at hand as well as applicable local, state and federal regulations.



Purpose of Decontamination:

- Prevent / reduce further injury to casualty
- Protect medical personnel and facilities

Key Points:

The key to successful decontamination is to **use the fastest approach that will cause the least harm and do the most good for the majority of the people.**

Expect at least a 5:1 ratio of unaffected to affected casualties and little to no warning.

Decontaminate victims as soon as possible after exposure.

Removal of clothing (head to toe) assists in decontamination. More removal is better; removing clothing can reduce contaminant by 75-90% (estimated).

Water flushing (or soap and water) is best mass decontamination method.

After a known exposure to liquid chemical agent, emergency responders should be decontaminated as soon as possible.

- Physical removal is BEST
 - Water (removes, dilutes, hydrolyzes agent)
 - Wiping (avoid smearing, abrasion)
- Adsorption/absorption (using one material to contain another)
 - Fuller's earth, clay, flour, etc.
 - Must be followed by mechanical removal
- Chemical breakdown
 - Hypochlorite solution (BLEACH)
 - 0.5% as last resort for skin decon
 - 5% for equipment

Things To Consider When Planning Decontamination Procedures:

Victims may (will?) leave incident scene on own and self refer (to hospital), may be contaminated and may spread contaminant.

Need to track patients and their personal effects through the decon system.

Privacy issues...undress/redress

Power, water availability

Parking/emergency vehicle ingress/egress

Easily identifiable entry makes control easier

Security of area/hospital (access control)

Wind direction

Need to plan for containment of runoff

References

OSHA Best Practices for Hospital Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances-January 2005

Code of Federal Regulations (CFR)

Hazardous Waste Operations-29 CFR 1910.120

Personal Protective Equipment -29 CFR 1910.132

Respiratory Protection - 29 CFR 1910.134

CONCEPT OF OPERATIONS FOR THE OFF-SITE TRIAGE, TREATMENT, AND TRANSPORTATION CENTER (OST3C)- U.S. Army Soldier and Biological Chemical Command. December 2003

Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident-U.S. Army Soldier and Biological Chemical Command (SBCCOM) January 2000

TRIAGE AREA

Purpose: Rapid initial assessment of patients to determine type and priority of treatment

Location: Close to or collocated with EMT Point; Re-triage as needed and on clean side

Staffing: Triage officer, stretcher (litter) team in Personal Protective Equipment (PPE)

EMT STATION

Purpose: Lifesaving emergency treatment; Decontaminate areas of obvious contamination or locations where treatments will be performed; Initiation of intravenous lines if necessary

Location: Upwind of or collocated with Triage point

Staffing: Medic(s) in PPE

NON AMBULATORY (LITTER/STRETCHER) DECONTAMINATION

Purpose: Decontamination of STABLE, non-ambulatory (litter) patients

Location: Between Triage Point & Hot Line

Activities: Remove and bag victims clothing; Decontaminate skin; Remove bandages; decontaminate splints; change tourniquets

AMBULATORY DECON: BASIC STEPS

Purpose: Decontamination of ambulatory patients

Location: Parallel to litter decon line; Use showers

Activities: May use partner assistance for decon and clothing removal; medic monitors process, assists with medical devices; remove clothing, shoes, jewelry etc.; move through shower; remove bandages/wash splints

Approximately 5 minutes +/- . Soap if available.

HOT LINE

Purpose: Delineates area of potential liquid hazard

Location: Between decon & clean treatment areas

Activities at Hot Line: Evaluate completeness of decon; stretcher-exchange point; Triage tag rewritten; spot decontamination

