PRIMARY RESPONSE INCIDENT SCENE MANAGEMENT (PRISM) GUIDANCE for CHEMICAL INCIDENTS

VOLUME 3: OPERATIONAL GUIDANCE FOR MASS CASUALTY DISROBE AND DECONTAMINATION

Edited by R.P. Chilcott & R. Amlôt
PRISM GUIDANCE FOR CHEMICAL INCIDENTS

VOLUME 3
Introduction

The purpose of this document is to provide evidence-based guidance on best practice during the initial response phase of an incident involving potential exposure of civilians to hazardous materials. The initial response can be divided into six main elements:

Evacuation

Prompt, orderly movement away from hazardous areas is a key component of the initial response. Inappropriate or delayed evacuation may worsen exposure to hazardous materials and have an adverse effect on subsequent operations.

Disrobe

The effectiveness of rapidly removing contaminated clothing in a safe manner cannot be overemphasized and is a process that requires good communication to facilitate casualty compliance.

Decontamination

Whilst disrobe will remove the vast majority of contamination, exposed areas will require decontamination to remove hazardous material from the skin and hair. The process of decontamination can be divided into three forms; improvised, gross and technical. Improvised decontamination is the immediate removal of contamination using any available means and can be divided into “dry” and “wet”. Dry improvised decontamination is performed by blotting exposed skin and hair with any available absorbent material and should be the default option for improvised decontamination. Wet improvised decontamination should only be used when the contaminant is caustic (e.g. provokes immediate skin irritation) or particulate in nature. Gross decontamination involves the “ladder pipe system” whereby two fire tenders are used to produce a corridor through which casualties may be sprayed with large volumes of water mist. Technical (or “thorough”) decontamination requires the use of bespoke decontamination units and associated resources that need to be transported to and deployed at the scene of an incident. The delayed availability of technical decontamination is compensated for by the use of improvised and gross decontamination.
Active drying

The act of drying the skin after showering is a key step in removing contaminants from the skin surface. It is important that this simple but effective process is performed in an appropriate manner to prevent any further spread of contamination.

Communication and casualty management

Good communication is key to acquiring the trust and cooperation of casualties and will maximize the overall efficiency of the initial response phase. Failure to adequately interact with casualties may lead to unnecessary anxiety, non-compliance and security issues at the scene of an incident.

Special Requirements (identifying and decontaminating vulnerable and at-risk casualties)

Casualties may be unable to comply with instructions issued by emergency responders due to mental impairment, physical disability or simply an inability to understand the spoken language. In order to maintain operational efficiency, casualties who are unable to comply with instructions will need to be rapidly identified and provided with appropriate assistance.

These six process elements are summarized in Figure 1. The incident recognition and post-initial response phases are outside the scope of this guidance document. The operational guidance provided in this document is based on prior evidence, detailed in Volumes 1 and 2.

The purpose of this document is to provide high quality images for two summary pictograms of the Primary Response Incident Scene Management for use in the subsequent production of pamphlets, key fob sticks or other educational/training resources.
Figure 1: Constituent elements of the initial response phase.
**PRISM Summary**

The main features of Primary Response Incident Scene Management are summarized overleaf. This summary figure should be used in conjunction with the training material provided in PRISM Volume 2.
Figure 2: Overview of the Primary Response Incident Scene Management (PRISM) actions, indicating critical aspects and key messages.
**PRISM Consequences**

The intended consequences and benefits of Primary Response Incident Scene Management are summarized overleaf. This is intended as a rough guide to demonstrate how prompt actions can reduce the level of contamination on a casualty. It should be noted that this is for guidance only, as the actual amount of contaminant removed at each stage will be dependent on a number of factors, including the weather and the toxicity and physicochemical properties of the contaminant.
The PRISM “Rule of Tens”

initial

100% contamination

10% contamination

+disrobe

+dry decon

+gross decon

1% contamination

0.1% contamination

... rapid and effective completion of each stage of the incident response procedure yields a ten-fold reduction in the level of casualty contamination

Figure 3: Theoretical reduction in the level of casualty contamination following primary response incident scene management (PRISM). This figure is for guidance only: the actual amount of contaminant removed at each stage will be incident-dependent.