

FIGURE 263e-2 Algorithm for evacuation in a multicasualty radiologic event.

Contamination-removing chemical agents are more than sufficient to remove radiologic contamination.

Wound decontamination should be as conservative as possible. The main goal is to prevent both extensive local damage and internal contamination through lacerated skin. The bandages should be removed and the wounds flushed. The wound should then be dried and assessed for radiation. This procedure can be repeated again and again until contamination is undetectable. Excision of contaminated wounds should be attempted only when surgically necessary. Radioactive shrapnel that can penetrate through the skin should be removed.

In the hospital, staff can wear normal hospital barrier clothing, including two pairs of gloves, a gown, shoe covers, a head cover, and a face mask. Eye protection is recommended. Decontamination of medical personnel is obligatory after emergency treatment and decontamination of the patient. After use, all protective clothing should be placed in a designated container for contaminated clothing.

Radiation intensity decays rapidly with the square of the distance from the source; thus increasing the distance from the source and decreasing the time spent near it are basic principles of radiation safety. Shielding with lead can be used as protection from small radioactive gamma sources. Geiger counters can detect gamma and beta radiation. Pocket chambers and dosimeters, film badges, and thermoluminescent dosimeters can measure accumulated exposure to gamma radiation. All these detectors are in common use in medical facilities and should be employed to help define the level of contamination. Alpha radiation is harder to detect due to its poor penetration. An alpha scintillation counter, which is capable of detecting alpha radiation, is not commonly used in medical facilities.

GUIDELINES FOR HOSPITAL MANAGEMENT

Figure 263e-3 shows a model for hospital arrangement for triage. Persons contaminated either externally or internally should be identified, externally decontaminated, and, if need be, treated immediately and specifically for internal contamination as detailed below. In all other cases, the need for treatment of radiation injuries does not constitute a medical emergency. Early actions—e.g., blood sampling both to assess the severity of the exposure and to perform blood typing and cross-matching for possible transfusion—need to be taken promptly if ARS is evident or if whole-body exposure is suspected.

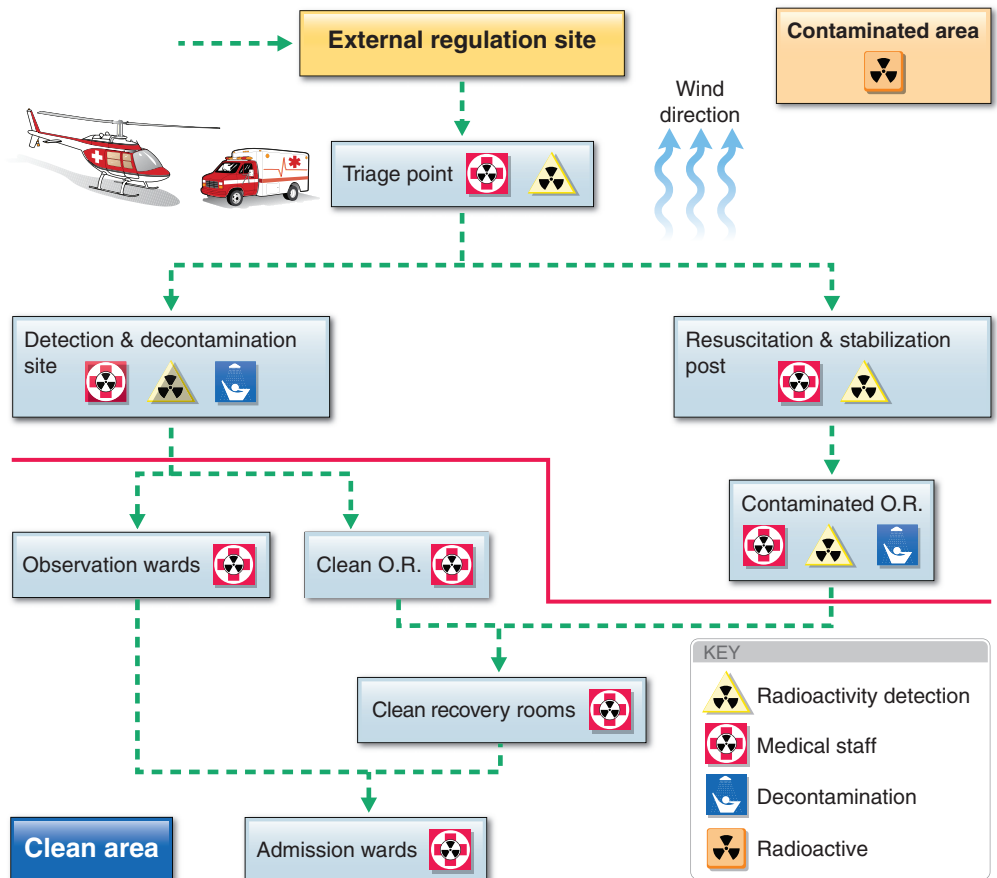


FIGURE 263e-3 Flow chart of hospital triage. O.R., operating room.