

A U.S. PERSPECTIVE ON CHERNOBYL

C. C. Lushbaugh, Ph.D., M.D.
R. C. Ricks, Ph.D., and
S. A. Fry, M.B., B.Ch., M.P.H.

In the United States, perspective of the April, 1986 Chernobyl disaster is still evolving as new information emerges and the Soviet Union's report to the International Atomic Energy Agency (IAEA) in August, 1986 is analyzed.¹ Our medical perspective is based on the 40-year history of radiation incidents worldwide and especially in the United States, which is maintained in a registry at the Radiation Emergency Assistance Center Training Site (REAC/TS) in Oak Ridge, Tennessee.²

REAC/TS REGISTRY

Until the Chernobyl disaster, only 284 radiation incidents had been recorded; these involved approximately 620 persons, 31 of whom had died from radiation-induced injuries (eight persons in the U.S.) (Figure 1). From the viewpoint of emergency medicine and traumatic surgery, this is a remarkably safe record, particularly when it is compared to that of emergencies and injuries not related to radiation exposures. Because of their rarity and bizarre nature, radiation injuries have been studied in great detail, and the medical records form a basis for training in the management of a radiation injury victim.³ These records also serve as a benchmark from which to observe the medical aspects of the Chernobyl explosion and evaluate the adequacy of the medical response.¹ From the perspective of previous experience, we salute Soviet physicians for their extraordinary response that dwarfs all previous experiences in the medical management of radiation injury victims.

In the Chernobyl disaster, more than 135,000 persons were at risk of exposure to life-threatening levels of radiation. A remarkably engineered evacuation of this population prevented the medical consequences from becoming worse than they were. A rapid and efficient medical triage identified 203 persons whose radiation injuries required hospitalization among 24,000 who received significant radiation exposures according to accepted criteria in the United States. Figure 2 shows how the Chernobyl experience greatly expanded the numbers in our Registry, which now total 24,819 persons who received significant exposures. Among the 203 Chernobyl victims who required expert medical care and management, the record shows that 29 apparently died in hospitals in Kiev

Radiation Emergency Assistance Center/Training Site, Oak Ridge, Tennessee.