A CALL FOR A RADIATION HEALTH COMMISSION

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As Chairman of the American Medical Association's advisory committee on radiation emergencies, it is my privilege to open this conference with a discussion of the need for the physician's involvement in radiation emergencies. The French premier during World War I, Georges Clemenceau, who was a physician, wisely observed: "War is much too serious a matter to be entrusted to the generals." If paraphrased today, he might have said that a nuclear accident is much too important a matter to be left to nuclear engineers. Contrary to such good advice, the management of nuclear accidents is left almost entirely in the hands of nuclear engineers and technicians with little if any physician input.

Although I believe there can be no adequate preparedness for the devastating medical consequences of nuclear warfare, public health and safety during nuclear accidents can best be safeguarded by physician participation in decision-making before, during, and after radiation emergencies. They are clearly best prepared to deal with the physical and emotional effects of such emergencies.

Until the Three Mile Island accident occurred, the nuclear power industry had been considered relatively safe. Early on, during both the TMI and Chernobyl accidents, the nuclear power industry failed to disclose relevant data in a timely fashion. The absence of information, both onsite and offsite, from managers, engineers, and technicians left the medical community without sufficient data to provide optimal radiation protection. Now, despite the continuing perception of safety by many experts, nuclear regulatory agencies are not able to relieve public anxiety about the health effects from nuclear power plants during radiation emergencies.

Informed physician participation in patient care at the time of radiation emergencies in nuclear power plants could alleviate some of this anxiety, not to mention the absolute necessity of medical management for any adverse health effects from radioactive waste disposal, storage of mine and mill tailings, transportation accidents, x-ray equipment and radioactive diagnostic materials in doctors' offices and hospitals, or radon contamination in homes.

Since the medical profession has to be involved in postaccident medical care from radiation accidents, physicians must increase and update their understanding of the public health and clinical consequences of all kinds of radiation emergencies. They must be kept

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well informed about the dangers of radiation exposure in and around the worksite, in clinical settings, and in the community. If the public is to benefit from such medical expertise, there must be continuing medical involvement in dealing with radiation emergencies at the highest policy levels.

At the national level, the Nuclear Regulatory Commission employs about 3,300 people but none is a physician. Only two states have cabinet-level regulatory agencies; one employs a single radiologist, the other has no physicians on the staff. There are no data available about physician employment at the subcabinet level.

There has been an absence of physician input into preparing for radiation emergencies, and numerous accidents, injuries, and illnesses from radiation exposure have occurred. The figure shows the locations where 16 people died in the United States, mainly from occupational but also from iatrogenic radiation incidents occurring between 1945 and 1985, and where 180 people suffered excessive radiation exposure either in an industrial or clinical setting.

Three obvious deficiencies need to be addressed:

- lack of public knowledge about radiation health and safety
- lack of confidence in radiation protection authorities
- lack of involvement by the medical community in radiation
- emergencies.

As the likelihood of radiation contamination continues to increase--at the workplace, in the hospital, or at home--physician participation in planning for, preventing, or managing radiation emergencies is increasingly urgent. With societal concerns about radiation effects and with the increasing age of the nuclear industry, it is time to consider health-related guidelines for responding to radiation emergencies. The following recommendations are made.

HEALTH-RELATED GUIDELINES

- The U.S. Nuclear Regulatory Commission should create a radiation health commission to plan for the prevention, diagnosis, and treatment of radiation-induced injury and illness.
- Full, immediate, and accurate disclosure of all human radiation exposures should be made first to medical authorities and then to the public.
- The American Medical Association should encourage state and county medical societies to develop a national registry of physicians who are trained to respond to radiation emergencies.

- A designated cohort of physicians and hospitals in the vicinity of every nuclear reactor should be trained in the management of blast, radiation, and burn injuries.

- In nuclear power regulatory agencies and in designated hospitals within 100 miles of a nuclear power facility, a physician should preside over a committee of specialists in nuclear medicine, radiology, emergency medicine, and other appropriate areas.

- State health departments, in cooperation with state medical societies, should develop evacuation plans for hospitalized, institutionalized, homebound, and other incapacitated individuals.

- Medical societies should arrange for physicians to lead discussions on the physical and psychological responses to radiation emergencies.

- Baseline health data of populations in the vicinity of nuclear facilities should be updated regularly.

- A national research effort should be directed toward the prevention and management of radiation toxicity.

Finally, I have the following additional suggestions and personal recommendations to share with you:

At this international conference on radiation emergencies, it seems only appropriate to recommend that every nation combine its radiation protection and radiation health activities, which should be staffed by physicians and public health experts, nuclear engineers, radiation health physicists, and emergency management specialists.

Also, at the international level, it seems appropriate to call for national registries of physicians who can educate the public about radiation health and safety, respond to public concerns in emergencies, and manage the clinical aspects of radiation accidents.

As a major output of this conference, I recommend that each nation design regional training programs for physicians who will be prepared to respond to radiation emergencies.

Serious Radiation Accidents in the U.S.A. 1945 - 1985