

NCRP Report No. 166, *Population Monitoring and Radionuclide Decorporation Following a Radiological or Nuclear Incident*

NCRP Report No. 166, *Population Monitoring and Radionuclide Decorporation Following a Radiological or Nuclear Incident*, provides information intended for use by emergency responders and planners and public-health officials for development of emergency response plans that include screening a population for internally-deposited radionuclides. However, this Report is not intended to be a procedures manual that can be incorporated directly into an existing radiological response plan. This Report should be used to evaluate and upgrade, to the extent feasible, the capability to screen small, medium and large populations for the presence of internally-deposited radionuclides and to assist in decisions about the possible medical treatment of patients who contain levels of radionuclides in excess of the Clinical Decision Guide (CDG), a concept developed in NCRP Report No. 161, *Management of Persons Contaminated with Radionuclides* (2008). This Report also discusses broadly the monitoring of a population for external contamination and decontamination as necessary prior to screening for internal contamination and refers to other literature that treats these subjects more completely.

Background information is provided, including various settings in which members of the public might incur internal depositions of various radionuclides. Initial screening of individuals at the scene and hospital and mass screening are described, and previous experience with internal radionuclide contamination of members of the public is summarized. Incident command is described briefly to provide the reader with an appreciation for the importance of incident response coordination between the community and the hospital(s) that will be receiving potentially-contaminated patients. It also emphasizes the importance of timely communications during an incident to optimize medical care and treatment of patients to decorporate internally-deposited radionuclides. Efficient and frequent communications facilitate the ability of hospitals to tailor their response to the number of patients who need treatment of acute injuries and screening of patients for internal contamination.

In addition to the many technical and logistical issues associated with screening patients for internal contamination; social, psychological and communications issues are important. This Report provides guidance on:

- organizing and conducting a screening program in a manner that is sensitive to these issues.
- practical needs such as information hotlines, setting up population screening centers, and considering the needs of special populations including children and pregnant women;
- long-term follow-up program to monitor (*i.e.*, to follow the health of) a population;
- scalability of emergency response plans and recommendations that communities and hospitals consider dividing their responses into three classes
- assessment of the current capacity within the nation to perform rapid screening of a population exposed to radioactive materials from a radiological or nuclear incident.

This Report makes several recommendations and emphasizes a number of points that are highlighted within the various sections. Several appendices to this Report provide both practical and more detailed information.

The Report is available from the NCRP website, <http://NCRPpublications.org>, in both soft- and hardcopy formats. For additional information contact David A. Schauer, ScD, CHP at schauer@NCRPonline.org, 301.657.2652 (x20) or 301.907.8768 (fax).