

# COMMENTARY

## Foreword

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The importance of preparing and planning for a catastrophic incident the size and scope of a nuclear detonation cannot be overemphasized.<sup>1-3</sup> The range of issues to be faced, including the physical, medical, psychological, legal, ethical, and economic consequences is daunting, but addressable. The Scarce Resources for a Nuclear Detonation Project builds on the groundwork and extraordinary efforts of many experts within<sup>4</sup> and outside government.<sup>1,2</sup> The approach to a nuclear threat involves prevention by control of nuclear material, detection, interdiction, render-safe, response, recovery, and resilience.

The magnitude of destruction possible from state-sponsored devices during the Cold War led to a sense of futility for civilian preparation. Since the Civil Defense planning era 50 to 60 years ago, there was little formal planning for nuclear detonation response until the events of September 11, 2001, and their aftermath. The scale of destruction of a terrorist nuclear attack pales in comparison to the apocalyptic visions of a nuclear exchange between national superpowers. Thoughtful planning is not futile and can substantially mitigate health consequences of a nuclear attack.

This issue of *Disaster Medicine and Public Health Preparedness* represents an effort by subject-matter experts from government, academia, and the private sector to do the following:

1. Describe the physical environment and the casualty situation after a 10-kiloton nuclear detonation<sup>5,6</sup>
2. Discuss the imbalance between resources and demand that produce the scarce-resources setting<sup>6,7</sup>
3. Present supporting information and background material on acute radiation syndrome and medical care issues to help facilitate an effective response<sup>5</sup>
4. Address the ethical, legal, psychological, and systemic challenges and the importance of both lifesaving and palliative/comfort care<sup>1,7-10</sup>
5. Provide measures that the overall medical system can take to prepare and respond to the scarce-resources setting, including a sample playbook for state and local planners to consider using<sup>7,11</sup>
6. Define an approach (based on the new model of resource and time-based triage<sup>12</sup>) to medical care and triage in the extreme scarce resources environment that would follow in the initial 4 days after a detonation
7. Provide practical guidance and a tool for use by planners and responders in triage victims. Although we recognize that it may have negative aspects especially because self/buddy-help and resilience are keys to the most effective societal response, the term *victim* is used throughout this issue as consistent with the terminology in the *Planning Guidance for a Nuclear Detonation*.<sup>4</sup> *Casualty* is used for people who are physically in-

jured, but many more people will be affected and “victim” applies to all of those affected.<sup>13</sup>

There are no perfect solutions to these issues, but we hope that these manuscripts will stimulate thoughtful discussion and debate and additional research and development efforts.

We are grateful to the authors, reviewers, subject matter experts, editors, and other individuals who participated in this project. Although this group focused on a nuclear detonation and its unique aspects, many of the findings and recommendations are applicable to an all-hazards preparedness approach for catastrophic disasters and the resultant scarce-resources setting.<sup>2,3</sup> The planning, preparing, and exercising processes to enhance response capabilities and resilience are never ending as new technologies, diagnostics, medical countermeasures, resource-sharing models, and the medical and physical sciences produce new knowledge and tools. This project is an important step toward addressing mass casualty challenges and we look forward to the dialogue, discussion, debate, collaboration, and progress that this effort will engender.

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