



NASEM Med Prep Meeting #45 **Nuclear Incidents** (August 22-23, 2018) Progress Made, Existing Gaps, and Future Opportunities

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The background of the slide is a dark, abstract composition. It features a grid of binary digits (0s and 1s) in a light blue/cyan color, some of which are slightly blurred. Overlaid on this are several semi-transparent financial charts. On the left, there's a candlestick chart with red and green bars. In the center and right, there are line graphs with red and blue lines, and a bar chart with red bars. The overall aesthetic is high-tech and financial.


No Disclosures
The expressed opinions are my
own

FOREIGN AFFAIRS

Ukraine Holds the Future

The War Between Democracy and Nihilism

By Timothy Snyder September/October 2022
Published on September 6, 2022



Ben Jones

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Russia, an aging tyranny, seeks to destroy Ukraine, a defiant democracy. A Ukrainian victory would confirm the principle

FOREIGN AFFAIRS

How to Avoid a War Over Taiwan

Threats, Assurances, and Effective Deterrence

By Thomas J. Christensen, M. Taylor Fravel, Bonnie S. Glaser, Andrew J. Nathan, Jessica Chen Weiss
October 13, 2022



A military exercise in Pingtung, Taiwan, July 2022
Ann Wang / Reuters

FOREIGN AFFAIRS

Russia's Menacing Mix of Religion and Nuclear Weapons

In the Kremlin, Faith and Force Go Hand in Hand

By Dmitry Adamsky March 5, 2022



Russian President Vladimir Putin and Patriarch Kirill, the head of the Russian Orthodox Church, in Moscow, November 2018
Alexander Nemmenov / Pool via Reuters

FOREIGN AFFAIRS

Will the War in Gaza Ignite the Middle East?

Escalating Violence Could Set Israel and Iran on a Collision Course

By Dalia Dassa Kaye October 19, 2023



Outside the damaged al-Ahli hospital, Gaza, October 2023
Mohammed Al-Masri / Reuters

FOREIGN AFFAIRS

Why China Wants More and Better Nukes

How Beijing's Nuclear Buildup Threatens Stability

By Abraham Denmark and Caitlin Talmadge November 19, 2021



A military parade in Beijing, China, October 2019
Jason Lee / Reuters

FOREIGN AFFAIRS

North Korea's Nuclear Opportunism

Why Kim Jong Un Chose to Exploit the Ukraine Crisis

By Sue Mi Terry March 24, 2022



Kim Jong Un in North Korea, March 2022
KCNA via Reuters

Four Horsemen of the Apocalypse

Exploring Medical and Public Health Preparedness for a Nuclear Incident

PROCEEDINGS OF A WORKSHOP

Leslie Pray, Benjamin Kahn, and Scott Wollek, *Rapporteurs*

Forum on Medical and Public Health Preparedness for
Disasters and Emergencies

Board on Health Sciences Policy

Health and Medicine Division

The National Academies of
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PROCEEDINGS OF A WORKSHOP



Exploring Medical and Public Health
Preparedness for a Nuclear Incident



The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Stated Objectives from August 2018

August 22–23, 2018

National Academy of Sciences Building—Fred Kavli Auditorium
2101 Constitution Avenue, NW, Washington, DC 20418

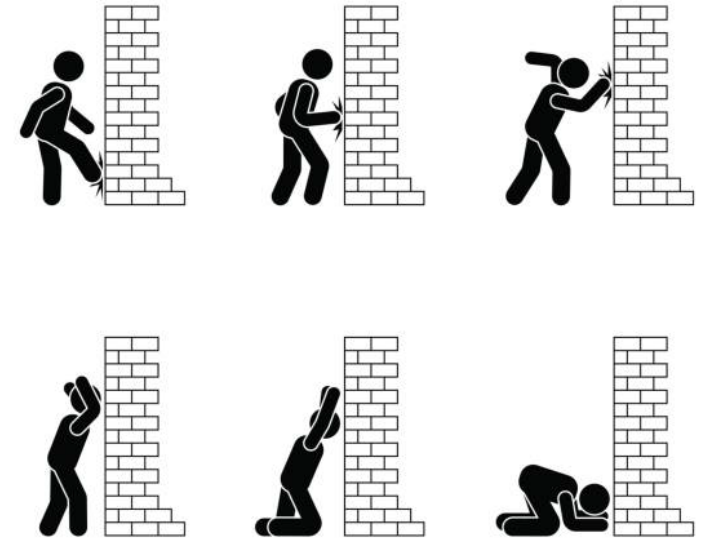
Meeting Objectives

- Understand the current state of medical and public health preparedness for a nuclear incident and how these relate to the prior assumptions about the threat environment
- Discuss possible changes to planning assumptions for nuclear incidents, with particular attention to the (re)emergence of state actor threats and the implications of those changes for nuclear incident prevention, planning, and response
- Consider the implications for capacity building of potential communication, education, and information challenges posed by a nuclear incident and opportunities and approaches for addressing them
- Explore challenges, opportunities, and implications for building capabilities to respond to and recover from a nuclear incident, including building capability for monitoring and long-term health surveillance among survivors

Summary Comments from Deputy ASPR—Kevin Yeskey MD

Developing an Action Plan

Lastly, Yeskey urged that the next step in nuclear preparedness be to consider an action plan by identifying priorities and delegating roles across stakeholders. He observed that there are numerous roles for ASPR based on the workshop discussions and noted that the government is well suited to delineating roles and designating funding. He reiterated, however, that this is a shared responsibility, and the private sector is absolutely better suited to performing certain tasks than the government. Looking ahead to the next 12 months and beyond, Yeskey said ASPR will engage organizations already working in this space, including the American Burn Association (ABA), the Association of State and Territorial Health Officials, the National Association of City & County Health Officials, and the Radiation Injury Treatment Network (RITN). ASPR's Regional Disaster Health Response System will help to address some of the concerns brought up at the workshop, he said, but there is more work to be done and more partnerships to facilitate. He cited a budding partnership between ABA and RITN—"we need more of that kind of action." As he adjourned the meeting, Yeskey commented that collective action can lead to solutions in this arena, but time is of the essence.



Unable to get joint RITN-ABA Nuc Det Care Guidelines published
“Fantasmagoric” & “Nihilism”



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****December, 2022****: Ukraine requests help from USAID
for Nuc Strike Civilian Defense preparations

Europe

Ukraine's top general warns of Russian nuclear strike risk

By **Max Hunder** and **Tom Balmforth**

September 7, 2022 12:09 PM PDT · Updated a year ago



Aa



with U.S. Defense Secretary Lloyd Austin and other
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Actionable, Revised (v.3), and Amplified American Burn Association Triage Tables for Mass Casualties: A Civilian Defense Guideline

Randy D. Kearns, DHA, MSA, FACHE, FRSPH, CEM,^{*,†,§} Amanda P. Bettencourt, PhD, APRN, CCRN-K, ACCNS-P,[‡] William L. Dickerson, MD, FACS,^{||,§} Tina L. Palmieri, MD, FACS, FCCM,^{‡,*,†} Paul D. Biddinger, MD, FACEP,^{||,‡} Colleen M. Ryan, MD, FACS^{†,||,§,††} James C. Jeng, MD, FACS^{§,***}

Burn care remains among the most complex of the time-sensitive treatment interventions in medicine today. An enormous quantity of specialized resources are required to support the critical and complex modalities needed to meet the conventional standard of care for each patient with a critical burn injury. Because of these dependencies, a sudden surge of patients with critical burn injuries requiring immediate and prolonged care following a burn mass casualty incident (BMCI) will place immense stress on healthcare system assets, including supplies, space, and an experienced workforce (staff). Therefore, careful planning to maximize the efficient mobilization and rational use of burn care resources is essential to limit morbidity and mortality following a BMCI. The U.S. burn care profession is represented by the American Burn Association (ABA). This paper has been written by clinical experts and led by the ABA to provide further clarity regarding the capacity of the American healthcare system to absorb a surge of burn-injured patients. Furthermore, this paper intends to offer responders and clinicians evidence-based tools to guide their response and care efforts to maximize burn care capabilities based on realistic assumptions when confronted with a BMCI. This effort also aims to align recommendations in part with those of the Committee on Crisis Standards of Care for the Institute of Medicine, National Academies of Sciences. Their publication guided the work in this report, identified here as “conventional, contingency, and crisis standards of care.” This paper also includes an update to the burn *Triage Tables- Seriously Resource-Strained Situations* (v.2).

The Institute of Medicine (IOM) of the National Academies’ vision of the delivery of the best possible healthcare in a catastrophic event requires a robustly prepared system that can rapidly self-assemble to deliver medical care as soon as possible after the event. Reducing the period of chaos presumably reduces preventable death and disability following the event. Accessible, reliable, valid, evidence-based tools to triage patients and allocate resources that are fair, responsive to specific needs and circumstances of individuals and the population are invaluable to reduce the period of chaos following the event. These tools need to be equitable, transparent, consistent,

From the ^{*}College of Business Administration, University of New Orleans,

proportional, accountable, collaborative, and follow the rule of law in order to fulfill the duties of compassion and care, steward resources, and maintain the trust of the public.¹

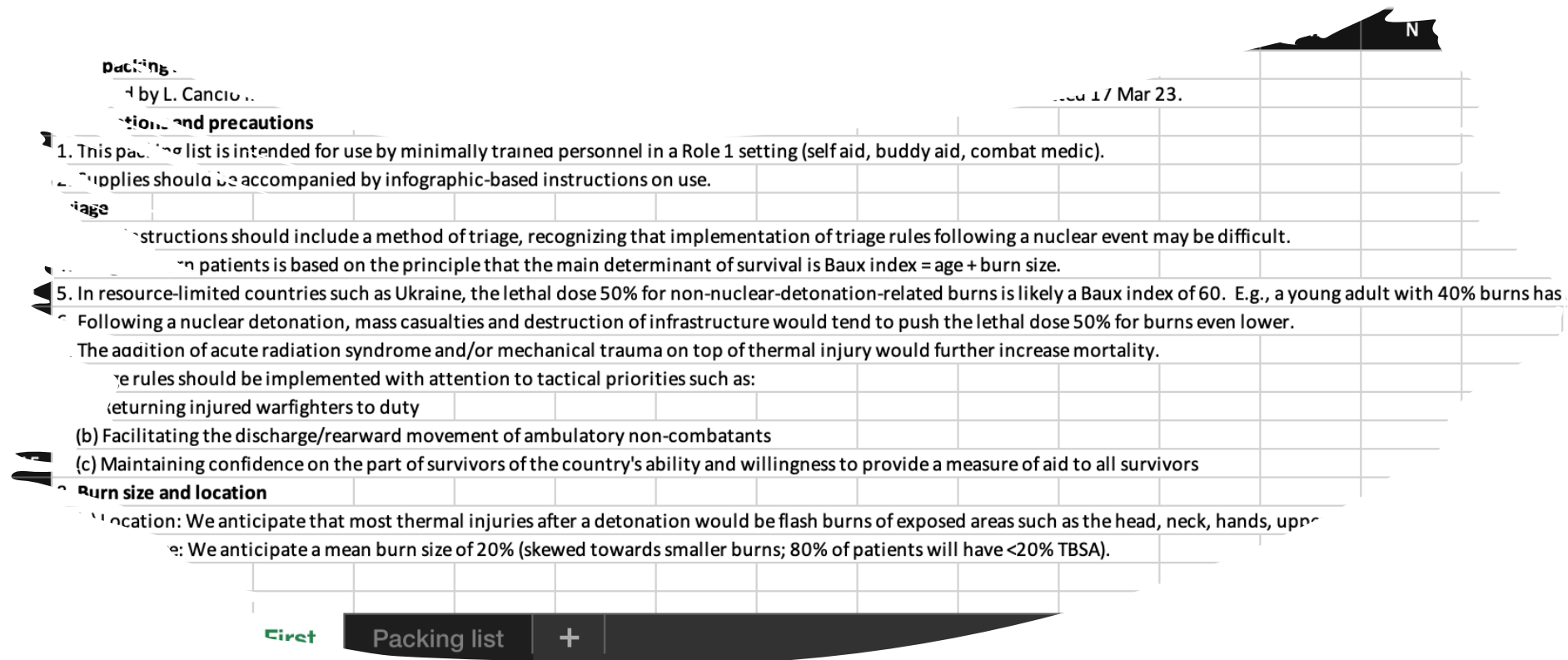
“Triage Table-Seriously Resource Strained Situations for clinicians, when faced with a surge of patients with burn injuries” was first published by Saffle et al in 2005² and later revised by Taylor et al in 2014.³ These landmark papers represented the burn field’s first attempts to create evidenced-based tables to predict expected mortality of a population due to burn injuries based on age and burn size and whether or not they were treated at a burn center. The purpose of this paper is to revise and update these tables to bring them in line with the IOM’s new definition of Crisis Standards of Care (CSC) and with the goal to make

Table 4. Catastrophic burn care, estimated 2000–2020; burn victims including catastrophic care in an austere environment

Age in Years	Burn Size Group (%TBSA)								
	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	>80
0–4									
5–19									
20–29									
30–39									
40–49									
50–59									
60–69									
>70									

White: patients with injury profiles that should be triaged to *medical care outside burn centers*. Yellow: patients with injury profiles that should be prioritized for *transfer to burn centers*. Gray: patients with injury profiles recommended for *comfort care with secondary triage when resources are available*.

Actionable Planning **HERE** and **NOW** for 20K Flash Burns and ARS Victims as a rapid “deliverable” from 2022-2023 USAID project



Bill of Lading per 5000 Flash Burn Victims-Ukraine

ications in 5 day patient kits on Tab 2

Dose Calculation on Tab 3

Administration Lay Instructions on Tab 4

Assumes what would be necessary for the first 5 days

Assumes austere care conditions, limited inpatient capability.... Medications should be taken orally vs. injection/IV

narcotics

are alternate medication options in many of these classes and they can be substituted as necessary by the practicing physician at time of treatment due to constrai

ment should drive medical treatment.

for determining if likely have ARS, if persistent vomiting starts within 2 hours likely have >4Gy dose vs. if it starts at 4 hours or

Bill of Lading per 5000 ARS Victims-Ukraine

Conclusions

- Not acting now would represent incalculable nihilism
- Scope: All of Society heavy lift--government, academia, industry
- Fantasmagoric nature & "1945": has been a barrier to peer-reviewed publication
- Extant V.1 austere solution for Ukraine civilian defense could be brought back INCONUS
- Plurality of key SME's and organizations already organic to current discussions
- Must be respectful of privileged information, "For Official Use Only", information security
- Need funding to convene 2nd round with published downrange NAS Proceedings (high impact factor forum)



