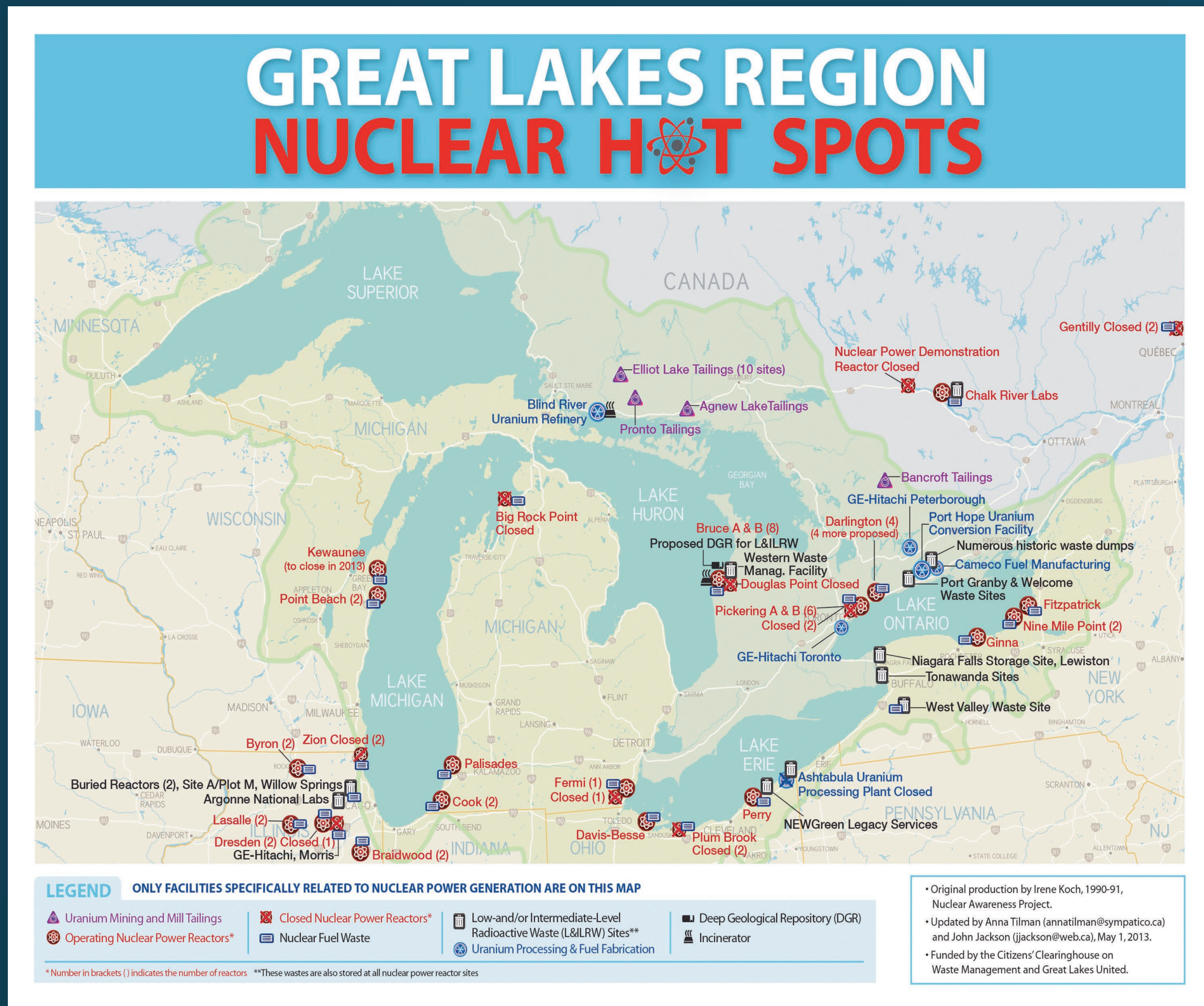


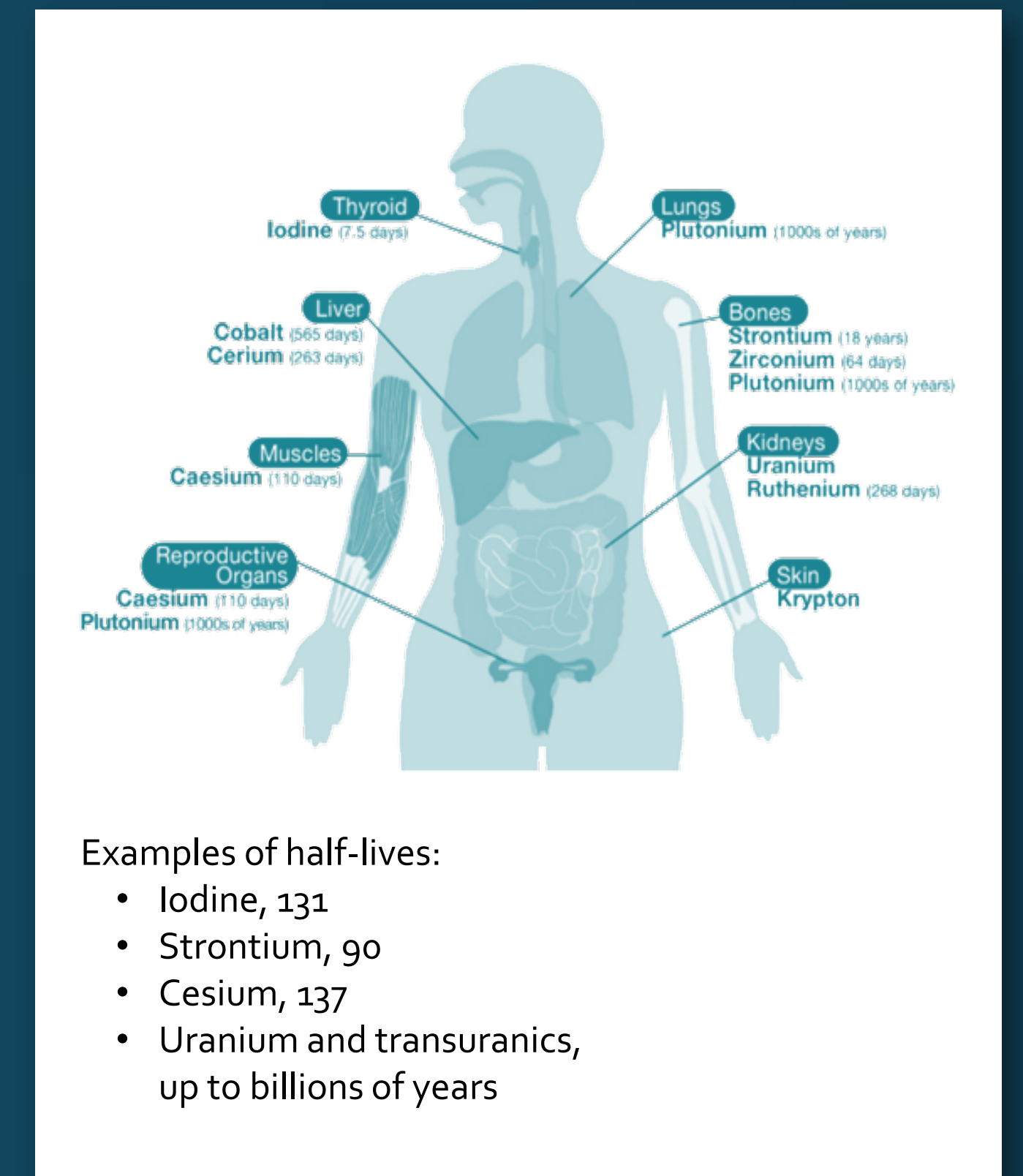
Training for Global Nuclear Realities: Medical Workers' Perception of Risk Affects Willingness to Respond to Radiation Emergencies.

Author Linda Redfield Shakoor, PhD

INTRODUCTION



External Contamination



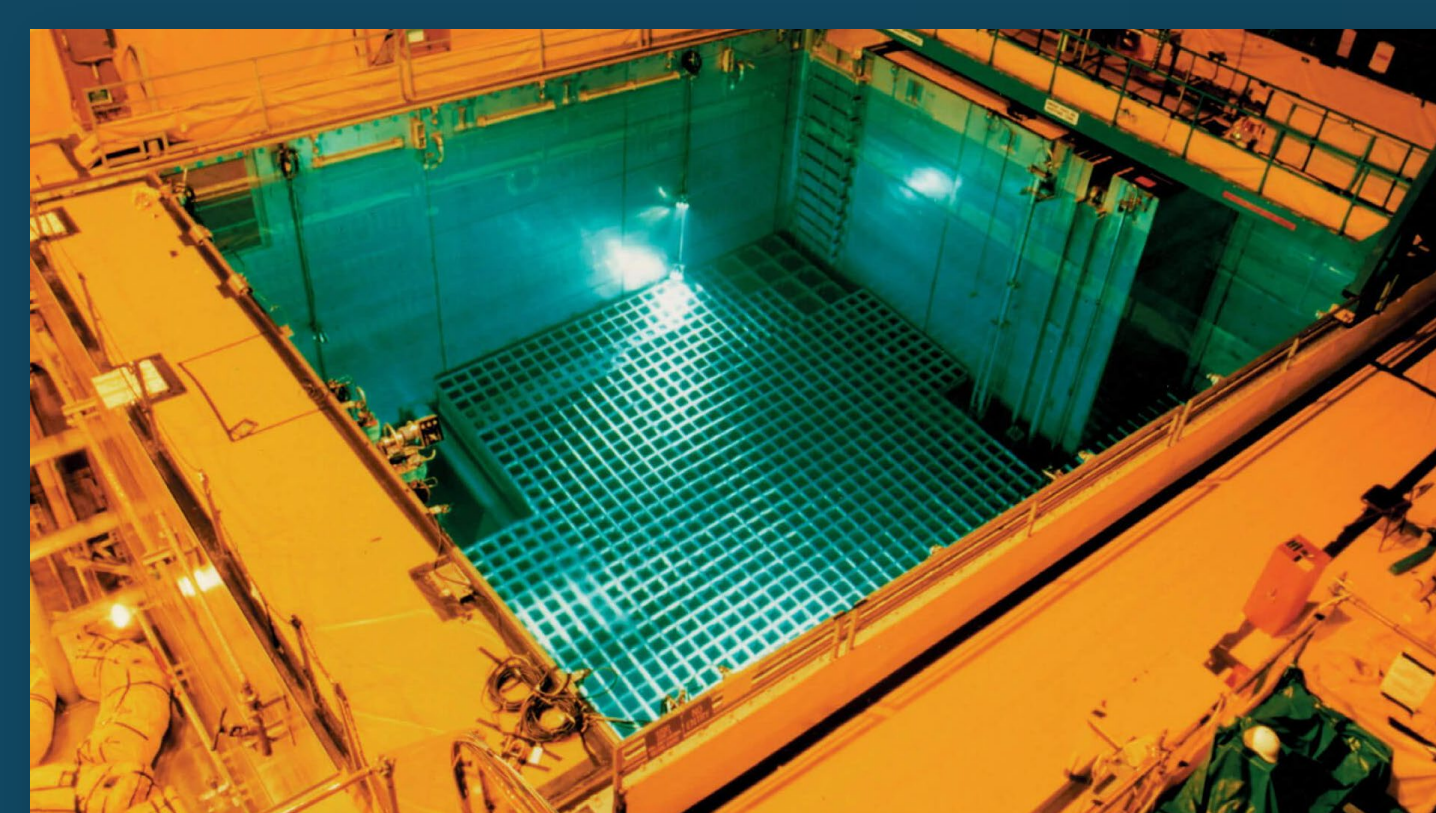
Internal Contamination



Western New York Structural Equation Model Study



Western New York Cross-border Transportation

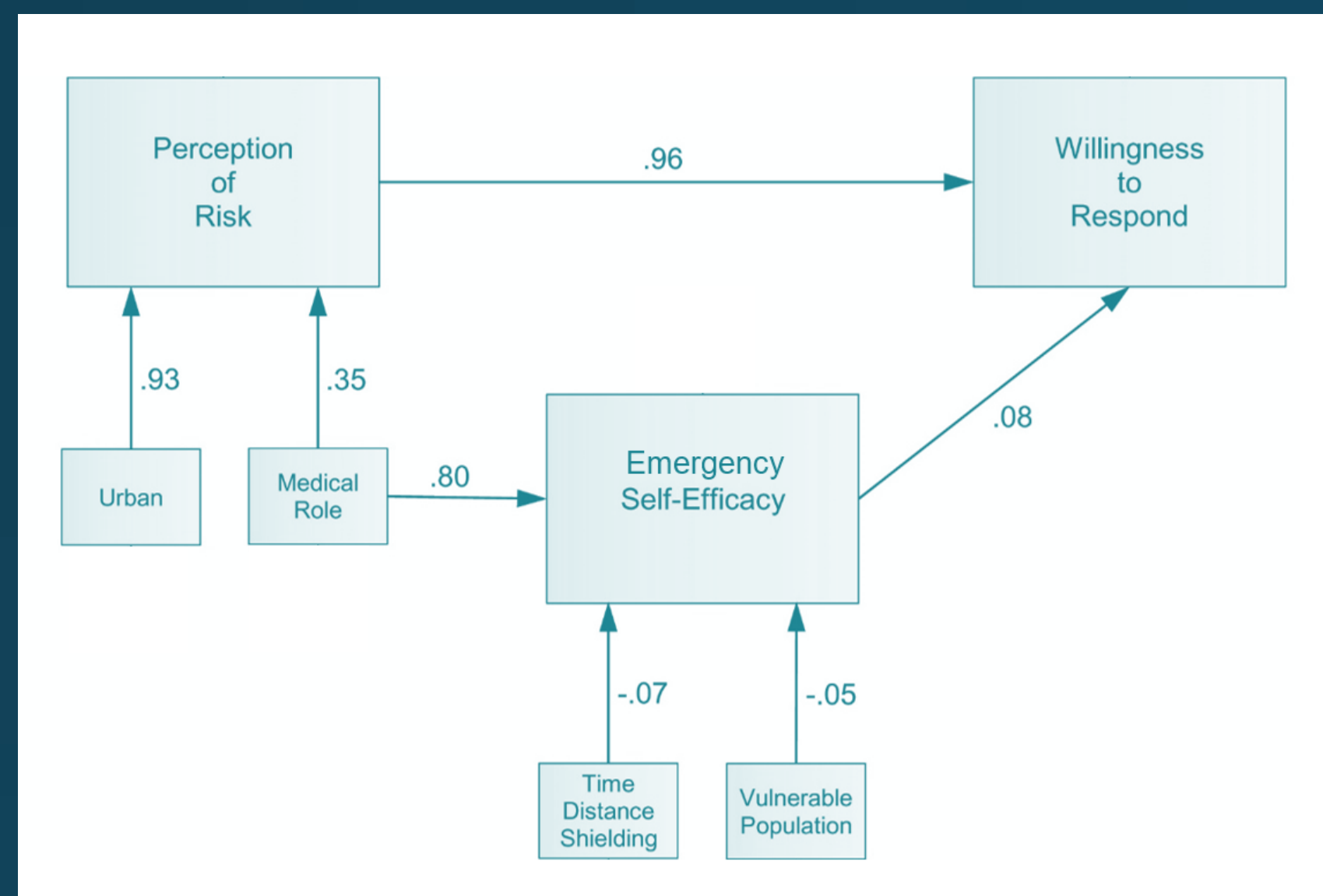


Spent Fuel image, US NRC.

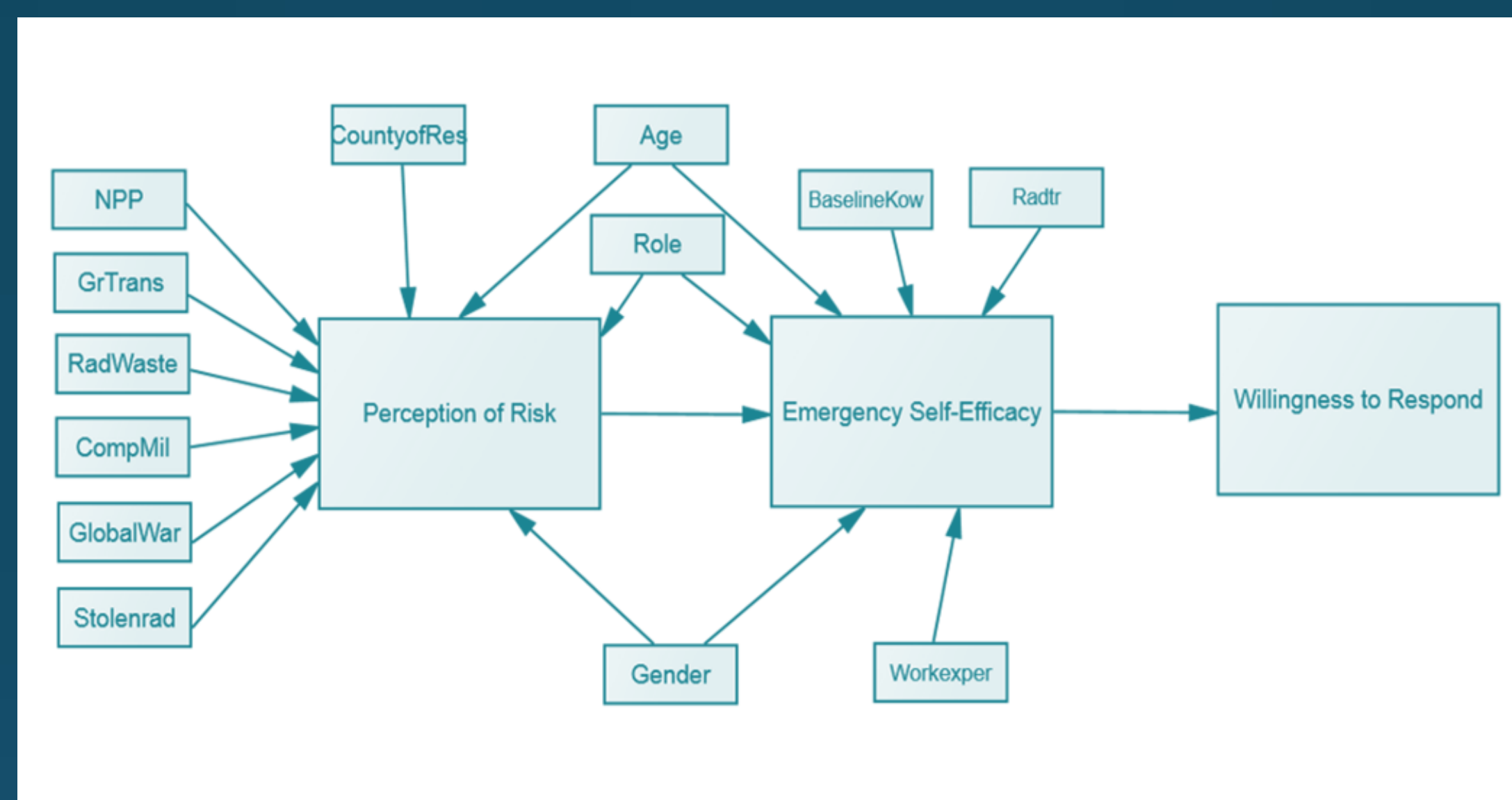
Nuclear waste pools are packed more densely in the US than those at Fukushima, with no removal plan in site.

--David Talbot, MIT

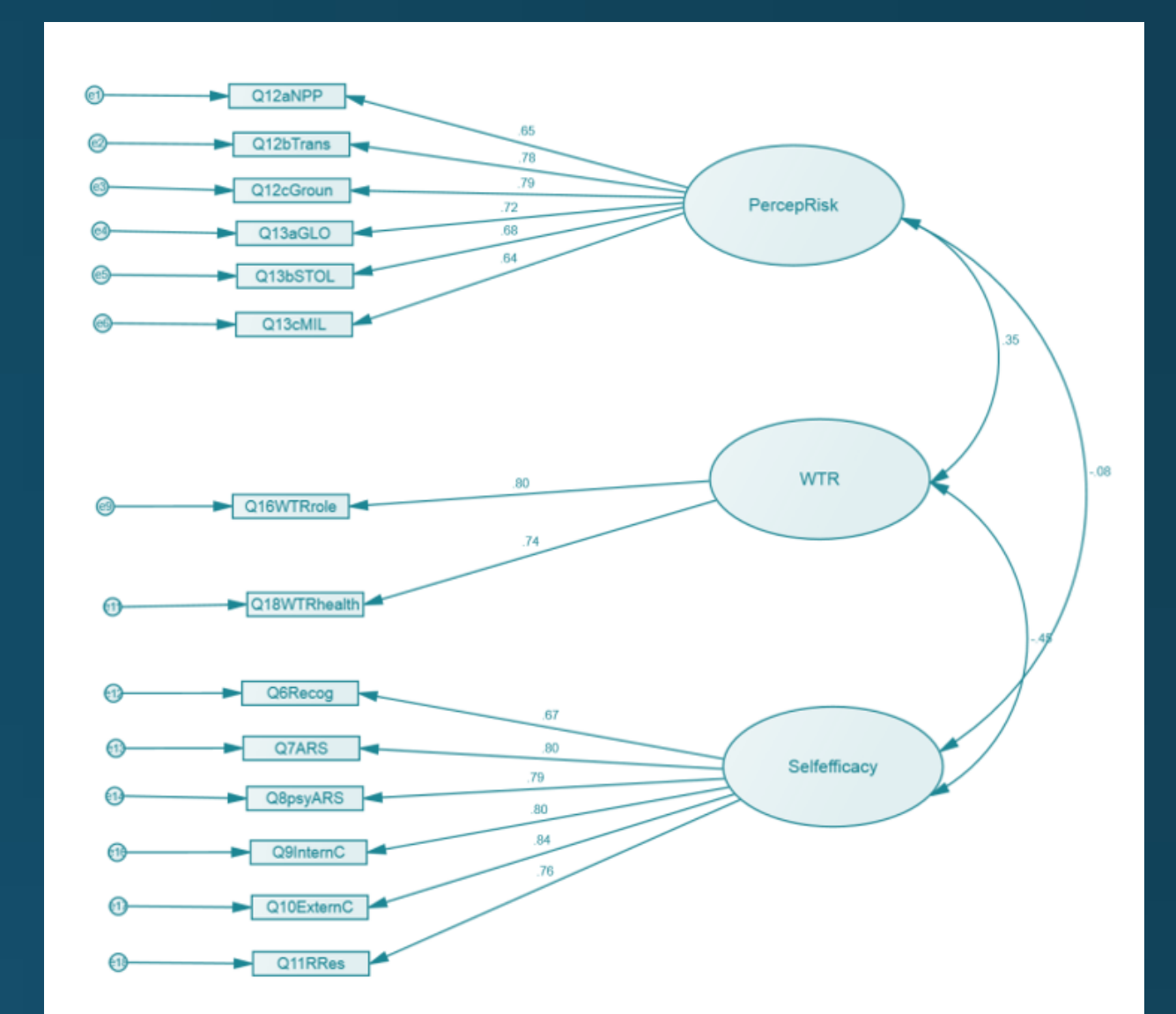
DATA ANALYSIS



Structural Equation Model (SEM) of Perceived Risks, Emergency Self-Efficacy and Willingness to Respond to a Nuclear Disaster Among Medical Providers, Medical Faculty, Nursing Students and First Responders



Hypothesized Structural Equation Model of Perceived Risks, Emergency Self-Efficacy and Willingness to Respond Among Medical Providers, Medical Faculty, Nursing Students and First Responders



Confirmatory Factor Analysis Model Coefficient Measurements With Three Indicator Variables Removed From Willingness to Respond

Hypothesized Latent Variable	Survey Items Included in Final Survey
Perception of Risk	Concern about: compromised military base where nuclear materials are stored; global nuclear war; historic burial radioactive material; nuclear power plant accident in a 50-mile radius; stolen or compromised stored nuclear materials; transportation of nuclear waste
Emergency Self-Efficacy	Competent to distinguish ARS (Acute Radiation Syndrome) from psychosomatic symptoms; Confident to identify, manage and treat internal contamination; Confident to treat externally contaminated patient; Prepared to identify ARS; Ready to respond based on knowledge; Recognition of a radiation accident
Willingness to Respond (WTR)	Family responsibilities as a barrier to WTR; Fear as a barrier to WTR; Lack of knowledge about health effects of ionizing radiation; Personal Safety assurance for WTR; Lack of knowledge of job specific role in a radiation event

Items for the Final Kept Survey Based on EFA Pilot Instrument Analysis

CONCLUSION



Is perception of risk of an ionizing radiological event determined by the county of residence, work, or study? YES. 134 of the research respondents live in urban areas.

Original SEM robust model showed a goodness of fit that **Perception of Risk** is a predictor of **Willingness to Respond** to any radiation emergency.

Unprecedented convenience sample made with "all partners" in a radiation emergency.

New coined term "Emergency self-efficacy" with identifying markers for internal and external contamination.

First-time nuclear study related to an international border:

- 13% respondents had radiological terrorism training in last 24 months.
- 16% respondents had CBRN training: Chemical Biological Radiological Nuclear



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