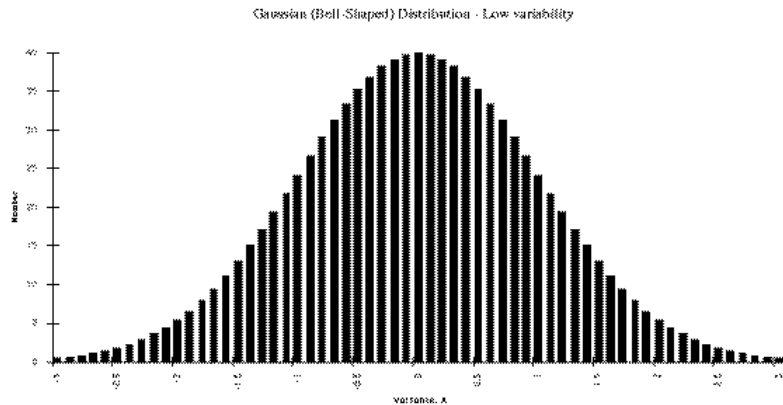


Protective Actions and Interventions: a State Perspective

Jill Lipoti, Ph.D., Director
Division of Environmental Safety and
Health
NJ Dept. of Environmental Protection

Appropriate protective actions for population exposure



- Medical treatment will help the small numbers of most exposed
- What protective actions will help the majority of population exposed?
- Ingestion pathway/ Recovery/ Return decisions potentially can make the biggest impact to public health

What does “optimization” look like?

- When can people return to their homes?
- When can people return to businesses?
- When can children return to schools?
- When can parks reopen?
- When can agriculture resume?
- How can we make these decisions?

Gap – organize, access, and understand data

- Data from multiple sources
 - Dosimetry readings
 - Gamma readings
 - Environmental samples – water, air, surfaces, soil
- Data has to be converted to exposure risk
 - Put in consistent format
 - Perform pathway analysis
- Radiation risk has to be integrated with environmental, health, social and political considerations

Gap – communication of assumptions

- Integration of social, political, economic considerations in protective actions requires clear presentation of assumptions that go into risk assessment
- Consultations with stakeholders
- Ability to change assumptions based on stakeholder input
- Ability to quickly see the change in risk with changes in inputs
- Ability to estimate uncertainties

Gap – balance of short-term and long-term risk

- Decisions made in early and intermediate phases will impact lifetime population risk to a large number of people
- One goal will be to decrease death from acute dose through medical intervention
- Don't add casualties by allowing emergency responders to rush in or remain without regard to dose
- Largest risk will come from the cumulative long-term exposure to radiation to a large population
- Another goal should be to limit long-term population exposure

Gap – Stakeholder input

- Integration of decision making with values of society
 - Realization that people don't make choices based solely on risk
 - Assessment of public values
 - Balance between present and future consequences of decisions
 - Acknowledgement that there are a complex mixture of risks, cumulative impacts, diverse populations

Gap – decision-making strategy

- Of all the risks affecting this population, which are most serious?
- Which are we most capable of limiting?
 - Economically
 - Technologically
 - Politically
- How to allocate resources and set goals for risk reduction?
- How do we accommodate competing goals?
- How to document the decision process?

Gap – presentation of options

- Collecting analyzing and presenting data
- Conducting technical analyses
- Presenting risk comparisons
- Identifying risk reduction opportunities
- Quantifying costs and benefits for each option
- Addressing equity concerns and balancing costs and benefits across generations

Summary

- Gaps exist in tools for
 - Readily consolidating and accessing raw data
 - Rapid analysis and display of comparisons to standards, maps, etc
 - Flexible and comprehensive method to convert raw data into estimates of human health risk for communication
 - Use of this information above in a documented decision making strategy