

From Silos to Systems: Transdisciplinary Approaches to Public Health Assurance in the Post-Katrina Era

Satellite Conference and Live Webcast
Thursday, July 13, 2006
12:00 - 1:30 p.m. (Central Time)

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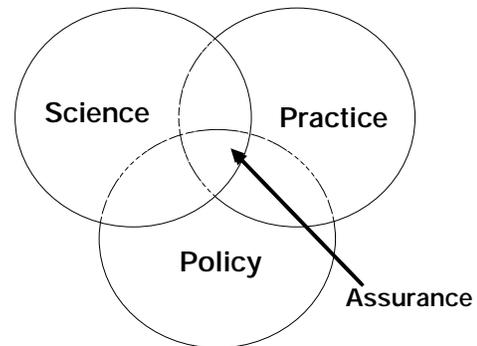
Faculty

Maureen Lichtveld, MD, MPH
Professor and Chair
Freeport MacMoRan Chair
of Environmental Policy
Tulane University
School of Public
Health and Tropical Medicine
Department of
Environmental Health Services
New Orleans, Louisiana



Program Objectives

- Identify key areas of science that play a role in post disaster rebuilding.
- Examine transdisciplinary strategies that undergird assurance.
- Evaluate the interconnectedness of assessment, policy development and assurance to achieve a sustainable health system.



Three Post-Disaster Cases

- 1997 Arboga, California floods
- 2004 Indian Ocean tsunami
- 2005 Hurricane Katrina,
New Orleans, Louisiana

Three Key Issues:

- Post-disaster actions.
- Assurance strategies.
- "Measuring up" to SPHERE.

Aerial view of flooded homes in Arboga. Floods of 1997.



1997 California Flood

- Dec. 1996- combination of melting snow and rainstorms causes rivers to overflow.
- 140,000 people displaced.
- 42/58 counties affected.

Response to 1997 California Flood

- CA Department of Health Services
 - Emergency Medical Services Authority
 - American Red Cross
 - Governor's Office of Emergency Services
- In conjunction set priorities, policy and direction for the healthcare response.

Responding to California's Flood Crisis



Responding to California's Flood Crisis

"During a typical 30-year mortgage period, there is a 26 percent chance that a homeowner living behind a levee will experience a flood larger than the 100-year flood. This risk is many times greater than the risk of a major home fire during the same period".

Responding to California's Flood Crisis

"The lack of funding to prevent levee deterioration will mean that there will be more flood fights during flood events, and fewer resources available to save distressed levees and prevent flooding".

Responding to California's Flood Crisis Strategies

- Ensure the integrity of existing flood project infrastructure through improved maintenance programs that balance public safety and needed environmental protection.
- Evaluate the integrity and capability of existing flood control project facilities and prepare an economically viable rehabilitation plan.

Responding to California's Flood Crisis Strategies

- Improve the effectiveness of emergency response programs.
- Create a sustainable fund to support flood management programs.

Responding to California's Flood Crisis: Strategies

- Update floodplain maps and provide better education on flood risks to the public and to agencies that authorize development in floodplains.
- Where feasible, implement a multi-objective management approach for floodplains that would include, but not be limited to, increased flood protection, ecosystem restoration, and farmland protection.

Responding to California's Flood Crisis: Strategies

- Evaluate potential policies and procedures that may determine the State's capacity to fund levee maintenance, infrastructure improvements and emergency response in the Delta.

Responding to California's Flood Crisis: Proposed Policies

- Examine existing flood insurance requirements and consider the creation of a "California Flood Insurance Fund," a sustainable State insurance fund to compensate property owners for flood damage.

Responding to California's Flood Crisis: Proposed Policies

- Create a Central Valley Flood Control Assessment District with the authority to assess fees that would provide adequate flood control protection for regional participants.

Responding to California's Flood Crisis: Proposed Policies

- Enact legislative and constitutional changes that would reduce taxpayer exposure for funding flood disaster claims.



Direct Relief International Tsunami Response: One Year Later



Allocation of Cash Grants and Medical Procurement

- Total: \$9,629,170 per 12/05
- Health Services & Medical Equipment: \$5,046,106- 53%
- Health Facility Construction & Rehabilitation: \$2,026,121- 21%

Allocation of Cash Grants and Medical Procurement

- Psycho-social Services and Training: \$1,177,439- 12%
- Disease Control (including insecticide treated mosquito nets): \$956,982-10%
- Clean Water and Sanitation: \$292,522-3%
- Shelter: \$130,000- 1%

India

- Locally managed projects to address communities health need.
- Mobile medical vans.
- Medical outreach camps.
- Community health clinics.
- Local partnerships to address education, rebuild cyclone resistant health care centers.

A village near the coast of Sumatra lies in ruin.



Indonesia

- Sustainable medical initiatives.
- Rebuilding structure for basic medical care.
- Training for public health workers to address PTSD.

Sri Lanka

- Medical supplies to treat traumatic injuries.
- Oral rehydration.
- Insecticide treated mosquito nets.

The December 2004 Indian Ocean tsunami strikes Thailand.

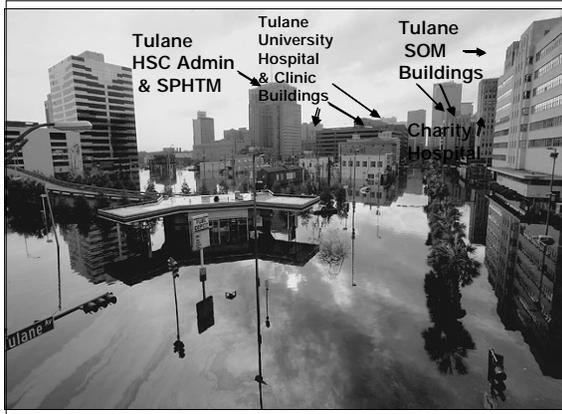


Thailand

- Effective Thai government response.
- Lead: department of disaster prevention and mitigation in Bangkok.
- Thailand did not request international financial equipment; welcomed expertise and equipment.

Building Back Better
A 12-month Update on Unicef's Work to Rebuild Children's Lives and Restore Hope Since the Tsunami





Public Health Concerns: Expected / Under-recognized

- Mortality
- Infectious diseases
- Evacuation, including special needs populations
- Shelter
- Food supplies
- Injuries
- Mental health

Issues of Science: When the Headlines Fade Away

- Integration of public health and primary care.
- Workforce quality and quantity.
- Health literacy - necessity rather than luxury.
- Preparedness and system performance.
- Connectivity: people and systems.

Issues of Policy

- Safe Housing – building codes
- Preparedness
- Health system - infrastructure

The Institute of Medicine Rebuilding for Health Sustainability and Disaster Preparedness in the Gulf Coast Region

Key Observations

- Emergency planning and post-disaster story.
- Rebuilding process.
- Rebuilding homes and businesses.
- Multiple lines of defense.
- Coastal restoration/management.
- Rebuilding communities' health.
- Role of science.

Emergency Planning and Post- Disaster Story

- The narrative of a disaster and recovery is important- story can't be framed by the press.
- Emergency response planning must be culturally sensitive and involve faith-based and other community organizations.
- Consider alternative approaches in the aftermath- many small shelters vs. one big one.

Rebuilding Process

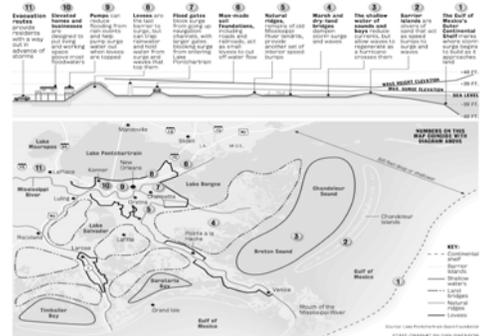
- Recovery in Louisiana has been much slower than expected, both nationally and internationally.
- Many contributing factors.
- Magnitude of disaster cannot be ignored.
- Many heroes despite almost overwhelming challenges.

Rebuilding Homes and Businesses

- Build homes that resist flood and damage.
- Building and zoning codes must be in place and enforced.
- Examine lessons learned from other disasters.
- Small business incentives programs critical.

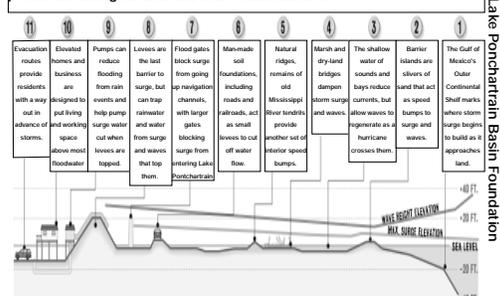
MULTIPLE LINES OF DEFENSE

Independent engineers and scientists are proposing multiple lines of defense as a strategy for integrating coastal restoration and hurricane protection using natural and man-made barriers.



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MULTIPLE LINES OF DEFENSE

11. Evacuation routes provide residents with a way out in advance of storms.

10. Elevated homes and business are designed to put living and working space above most floodwaters.

9. Pumps can reduce flooding from rain events and help pump surge water cut when levees are topped.

8. Levees are the last barrier to surge, but can trap rainwater and water from surge and waves that top them.

7. Flood gates block surge from going up navigation channels, with larger gates blocking surge from entering Lake Pontchartrain.

Role of Science

- Break down silos to bolster transdisciplinary actions.
- Science of rebuilding and rebuilding the science.

The Essential Public Health Services for Assurance

- Enforce laws and regulations that protect health and ensure safety.
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable.

The Essential Public Health Services for Assurance

- Assure a competent public health and personal health care workforce.
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

SPHERE

- Created in 1997 by humanitarian NGO's, the Red Cross and Red Crescent.
- Goals:
 - Improve quality of assistance to disaster- affected populations.
 - Enhance accountability of the humanitarian system in disaster response.

SPHERE Common Standards

- Participation: Active participation of affected population in assessment, design, monitoring and evaluation of assistance program.
- Initial Assessment: understanding of threat to life, dignity, health and livelihoods to determine whether and what kind of external response is required.

SPHERE Common Standards

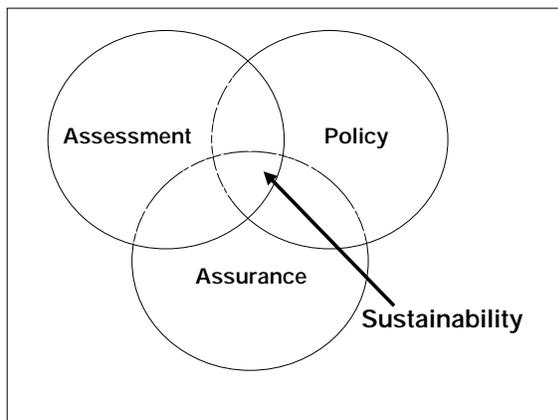
- Response: required when authorities are unable or unwilling to respond to needs, and when analysis indicates needs are unmet.
- Targeting: services provided equitably based on vulnerability and need.

SPHERE Common Standards

- **Monitoring:** effectiveness in problem response continuously monitored to improve or phase out as required.
- **Evaluation:** impartial examination of humanitarian action to identify lessons learned for practice and policy improvement and to enhance accountability.

SPHERE Common Standards

- **Aid worker competencies and responsibilities:** possess appropriate qualifications and experience for planning and implementation of targeted assistance program.
- **Supervision, management and support:** aid workers, receive supervision to ensure effective implementation of program.



Sustainability: United Nations Center for Regional Development

**Community Based Disaster Management:
Empowering Communities to Cope with
Disaster Risks**

Sustainability Case Study

- Studied six post-disaster communities for three different types of disasters
 - Cyclones: India and the Philippines.
 - Earthquakes: Indonesia and Nepal.
 - Floods: Bangladesh and Cambodia.

Sustainability Case Study

- Actions thus far to enhance sustainability in rebuilding communities
 - What worked and what didn't.
 - Focused on three key elements
 - Self-help.
 - Cooperation.
 - Education.

Sustainability Case Studies: Key Findings

- Sustainable development and disaster reduction are interdependent.

Sustainability Case Studies: Key Findings

- Must include:
 - Safety of core community facilities– particularly schools.
 - Dissemination of best practices in disaster management to communities.
 - Disaster risk management programs as an integral component of sustainable development.

Factors That Strengthen Sustainability

- The existence of "culture of coping with crisis" and "culture of disaster reduction."
- Risk assessment process involves participation of community members and incorporates their perception of vulnerability and capacity.
- Training tailored to communities' needs.

Factors That Strengthen Sustainability

- Broadstakeholders participation.
- Synergism of physical, technological, and economic assets to reduce hazards and vulnerability.
- Integration of post-disaster efforts into regular development planning and budgeting to ensure sustainability.

Outcomes

- As a result of the study several community based initiatives were developed to promote sustainability:
 - Afghan Training and Livelihood Initiative.
 - Patanka New Life Plan.
 - School Earthquake Safety Initiative.

Sustainability Lessons Learned

- Disasters are unpredictable: maintain projects and community awareness.
- Transparency of actions, information dissemination, and knowledge building foster community participation.
- "What is accepted by the community is more important than what is necessary?"

Fortune or Destiny?



- The road to success is always under construction...
- Your ability to accomplish tasks will be followed by success.



Community drill carried out in
G. Pangolin, Indonesia, in Nov. 2005



Upcoming Programs

**A Competent Workforce: Today's
Trends Impacting Tomorrow's Health**

Tuesday, July 18, 2006

1:00 - 2:30 p.m. (Central Time)

For complete list of upcoming
programs visit: www.adph.org/alphtn