MULTIDISCIPLINARY LEADERSHIP DEVELOPMENT FOR ALL HAZARDS PREPAREDNESS: BUILDING CAPACITY WHILE IMPROVING HEALTH

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Essential Guide to Leadership in 2011

- Understanding expectations
- Familiarization with our new environment
- Repackaging programs for the good of the whole
Expectations
New Environment
New Work
Overall Message:
Leaders must be the steward of a living strategy that defines how to meet expectations.
Today’s Overview

1. Reflect on new environment

2. Determine what matters most

3. Brainstorm, experiment & measure progress
Evaluation of Health Provider Leadership through All Hazards Training
Background

- Bad things happen
  - Tsunamis
  - Pandemic Influenza
  - Suicide cluster
- Within the Dept of Health and Human Services (DHHS), the United States Public Health Service (USPHS) provides the Nation with Emergency Response Teams
Background (Cont.)

- There are 6500+ officers, 41 teams, 7 team types spread around the world
- Pandemic All Hazards Preparedness Act of 2006 [Public Law 109-417]
- Homeland Security Act of 2002 section 502
Defining Problem

• Aware medical readiness and leadership Training is inadequate
  – White House Hurricane Katrina Lessons Learned Report
  – Direct observation of teams during Hurricane Gustav/Hanna/Ike
Problem Statement

• Using Simulation to prepare healthcare leaders for rebuilding health infrastructure is inadequate
  – Essential part of a coordinated response is delivery of strategic training where participants can exercise and reflect on outcomes
  – What we have learned is that there must be interaction with community to ensure competence
Change Needed in Approach to Learning: Roger’s and Constructivism

1. Experience/Personal Knowledge
2. Testing in a Complex Environment
3. Exploration (Associative, cognitive, situational)
4. Forming Hypothesis
5. Reflection

Growing Body of Knowledge

Community

Learning
NEW TACTICS IN A NOVEL ENVIRONMENT - TAKING THE MOST MEANINGFUL APPROACH
Mission: Protect, Promote and Advance the Health of the Nation

- Rapid Deployment Force
  - primary care and preventive medicine
- Mental Health Teams
  - behavioral health support
- Services Access Teams
  - specialize in access to care
- Applied Public Health Teams
  - provides public health assistance such as epidemiology, engineering, veterinary medicine, and environmental health
Community Health and Service Oriented Missions Program (CHASM)

• Preparation through collaboration
  – Intensifies relationship building skills and the concept of “working with” vs. “doing for”
  – Significantly furthers day-to-day public health by cross training subject matter experts who develop broad-based solutions in their community so all residents can be healthy
  – Increases public health expertise across the federal, state and local agencies and Tribal programs
Selecting Sites

• Start by looking for communities with great public health needs
  – County health rankings
  – Health statistics
  – Recently reported concerns
  – Desire to improve relationship/understanding of a given health care program or geographic region

• Desire to partner with the IHS health system, American Indian and Alaska Native Tribal Health Programs
  – Mutual goal of decreasing health disparities experienced by the American Indian and Alaska Native communities
Process for CHASM

• Partnership with community leaders
• Identify issues causing the most morbidity and mortality and appraise availability of local resources
• Work with community to improve:

  - Public Health Infrastructure
  - Preventive Services
  - Social Services

• Provide technical assistance to help underserved communities better access federal grants
Majority of Deaths Worldwide

![Graph showing global deaths by cause and by income group.]

- **By cause:**
  - Injuries
  - Communicable diseases
    - Other NCDs
    - Diabetes mellitus
    - Respiratory diseases
    - Cancer
  - Cardiovascular diseases

- **By income group:**
  - Low: Non-communicable diseases (60), Communicable diseases (50), Injuries (40)
  - Lower Middle: Non-communicable diseases (30), Communicable diseases (20), Injuries (10)
  - Upper Middle: Non-communicable diseases (20), Communicable diseases (10), Injuries (10)
  - High: Non-communicable diseases (10), Communicable diseases (10), Injuries (10)

*Source: WHO*
Mortality Distribution

Age at Death

Figure 2. American Indian and white mortality distributions by age at death: 2000-2009.
Working Toward Mastery Together

- Get Familiar
- Get Experienced
- Achieve Mastery

Projects Worked On vs Time Spent
Measuring the value of CHASM

• CHASM serves two objectives:
  – Improve emergency readiness of USPHS leaders
  – Increase local health capacity

• Need:
  – Determine the value of service oriented missions for the USPHS as well as for regional partners, such as state, county, and nonprofit public health officials
    • Training/Leadership development
    • Outputs/Health Outcomes
    • Economics
Adaptation of the Four-level Kirkpatrick Model to Assess Training/Leadership Development

1. Reactions
2. Learning
3. Behavior
4. Results

Collection of data at multiple levels yields more robust predictions of the results than any single measurement
FIGURE B. Adaptation of Kirkpatrick’s Four-Level Model for OFRD training exercises. Reactions and learning are measured together by administering a post-deployment questionnaire to PHS officers. Behavior is observed in daily PHS situation reports (SITREPs) and feedback from regional partners such as county health officials, collected via online survey. Results are measured by examining epidemiological data at six month intervals after the training exercise, as available.
Methods

• **Reactions**
  – Participants administered a survey immediately following the training exercise
  – Responses were graded on a Likert scale [1-5].

• **Learning**
  – Officers answered a series of Pre and post test questions prior to the field exercise covering material from earlier didactic sessions.
  – Reactions survey, and mean test scores from before and after the training exercise were compared using a paired t-test.

• **Behavior**
  – PHS officers submitted SITREPs describing their activities; this was used to compile a list of health outputs
  – Second, a survey was developed to solicit unbiased feedback from regional partners.
  – As third parties, assessed PHS officer performance in a variety of areas, including cultural competency, teamwork and communication, establishment and management of command, and coordination with local officials
In 2007, 234 Cases of TB in TN

- TB site environmental services - 12 sites in 9 counties
- Findings: malfunctioning negative pressure exhaust located within 25 feet of building entrances
- Reports formulated w/ specific engineering changes and guidance to improve TB infection control practices
Environmental Health

- Team created database of local information to be used for local planning and policy initiatives
- APHT implemented CASPER in time frame similar to real disaster
- Activities: data gathering, cleaning, analysis, interpretation, and report generation in 60hrs
Water Assessment:

- Teams performed 1,048 home site visits TN
- Collected data on location, features, and deficiencies of individual and wastewater disposal systems
- Mapped into the state’s Global Information System database
- Provided citizens technical information and resources for testing their water
- Improved state’s capability to respond to fly ash accident
Smelter Site Assessment: Teams identified toxic pathways into Knox County, TN. Data collected and analyzed during training helped get site on to EPA Superfund Site list.
Medical Readiness Expeditions

• Conducted in conjunction with NGO’s, academia, local health departments, hospitals, labs, and volunteers
• Provided free health, dental, vision, and education
• Buildings of opportunity were established
• Managed input, throughput, and output for 1,000 people/day
Total patients registered: 3,432
Total services provided: 4,737

Medical services rendered: 1,239
Dental services rendered: 1,956
Vision services rendered: 1,542

Total value of care provided: $1,003,376
USPHS Commission Corps teams transformed local health and human service projects into a purposeful training and capacity building operation.
Discussion

• What we can learn from CHASM
  – Failure can look like success, therefore outcomes are as important as outputs
  – Effective for teaching leaders to work with the community versus for the community
  – The Infusion of economics into strategic planning is critical

• Best practices

• Take-always
  – Unforeseen consequences
Deductions...

• In our New Environment - programs need to have breadth and stature: building identity and purpose over time
• The need to continually “add value” is a never ending process that presents opportunity
• Guiding this process over time and not solving a problem once is the crowning responsibility of leadership
Summary

• Define your challenges
  – Technological as well as personal
• Set realistic expectation
  – Mastery is not achieved overnight
• Keep your eye on the goal
  – Mentorship programs
References

• Kirkpatrick, Donald L., and James D. Kirkpatrick. *Evaluating Training Programs: the Four Levels*. San Francisco [u.a.: Berrett-Koehler [u.a., 2008].

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QUESTIONS?