

Medical Leadership in Times of Organizational Crisis

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Excellence, Innovation, and Leadership: Pathway to the Future**

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Objectives

- Define the generic attributes of leadership
- Describe the major NASA crises
- Relate these crises to the medical experiences of NASA HCWs
- Discuss the successful medical leadership attributes
- Understand the applicability of those attributes to NASA culture

Outline

- *Rating Leadership Attributes*
- Defining Leadership
- NASA crises' in Context
- Addressing Medical Leadership and Practices in NASA
Knowledge and Communications
- The 21st Century Health Leadership Realities
- Leadership in Times of Crisis
- *Rating Leadership Attributes*

Defining Leadership

Background

1992 Study of Leadership attributes identified by practicing occupational health nurses (Adapted from Murray and Hill)

- **North America**
 - Visionary
 - Intellectual creativity
 - Strong linguistic ability
- **In Australia**
 - Well informed
 - Good communication skills
 - Objective decision making
- **Politics and policy acumen not mentioned in responses**

Types of leadership

(Adapted from James McGregor Burns)

“Leadership over human beings is exercised when persons with certain motives and purposes mobilize, in competition or conflict with others, institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers... in order to realize goals mutually held by both leaders and followers....”

- *Transformational leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality.”*
- *Transactional leadership is the most prevalent style today*

NASA Crisis's in Context

The last 60 years

Politics and Health **VISIBILITY**

HIGH (health)
LOW (politics)

LOW (health)
HIGH (politics)

Humanitarianism

National
Security
Interest

Environmental/
Techno crisis

Context: NASA Unique Challenges and Crisis'

DISASTERS/CRISIS



IMPACTS

- **January 27, 1967:** 18 months delay to Oct 11, 1968
- **July 30, 1975:** last Apollo mission, no flights till 1981, Station and Lunar missions delayed. *Space Exploration Budget Cuts*
- **July 11, 1979:** STS delay and Skylab reentry
- **January 28, 1986:** Challenger Disaster. NASA under scrutiny. Almost 3 years delays until Sept. 29, 1988
- **December 24, 1996:** Bion crisis
- **September 1997:** Closing of the Reston SSF
- **January 29, 1998:** ISS partner agreement
- **March 1999:** Concerns about the funding of Russian science
- **January 2000:** life sciences crisis
- **September 11, 2001 & Anthrax letters**
- **February 1, 2003:** 2 years delay until July 2005
- **August 23, 2005:** Hurricane Katrina/ NASA response
- **August 16, 2007:** UTMC flooding
- **September 21, 2008:** Hurricane Ike closes MCC/JSC
- **May- July 2009:** 2009 Influenza pandemic
- **February 1, 2010:** NASA transformation and new strategic direction

Addressing Leadership & Practices

Institutionalizing NASA Medical Structure and Function

Essential Public Health/ Occupational Services (OCHMO): **Implies Priority?**

1. Monitor health status (**targeted surveillance**)
2. Diagnose and investigate environmental & health problems (**anticipate & prevent**)
3. Inform, educate and **empower people** (*life style choices*)
4. Mobilize community partnerships (*health/safety continues after work*)
5. Develop policies and plans (**engage and educate stakeholders**)
6. Enforce laws and regulations (**must do**)
7. Link people to needed services (*find innovative ways: IT, EAP*)
8. Ensure workplace health and safety (*must do*)
9. Interpret the law (**must adapt**)
10. Conduct interventions as appropriate (*clinical*)
11. **International & humanitarian** (since 1970)

IOM Reports (1999-present)

2001 (AN OCCUPATIONAL HEALTH MODEL)

Safe Passage: Astronaut Care for Exploration Missions sets forth a vision for space medicine as it applies to deep space voyage.

As space missions increase in duration from months to years and extend well beyond Earth's orbit, so will the attendant risks of working in these extreme and isolated environmental conditions. Hazards to astronaut health range from greater radiation exposure and loss of bone and muscle density to intensified psychological stress from living with others in a confined space.

Going beyond the body of biomedical research, the report examines existing space medicine clinical and behavioral research and health care data and the policies attendant to them. ***It describes why not enough is known today about the dangers of prolonged travel to enable humans to venture into deep space in a safe and sane manner***

2005

The National Aeronautics and Space Administration (NASA) is the global leader in air and space exploration, research, and development. Throughout its history, NASA has demonstrated ingenuity, focus, and resilience in meeting the requirements of exacting, time-sensitive projects. NASA's cultural legacy of believing that its workers can overcome complex technical challenges is reflected in the agency's stated core values: safety, people, excellence, and integrity. As a result, both the manned space flight and the unmanned space probe missions have produced leading-edge programs.

However, cultural traits and organizational practices that have fostered exceptional achievement may also affect employee health, well-being and productiveness

The Legal /Policy Framework and the OCHMO Leadership

EXTERNAL

- Congress
- Supreme Court
- W H/Administration
 - DHHS (FDA, CDC etc.)
 - DOL (OSHA, NIOSH)
 - DHS (FEMA)
 - DOS (USAID)
 - OMB
- International influences

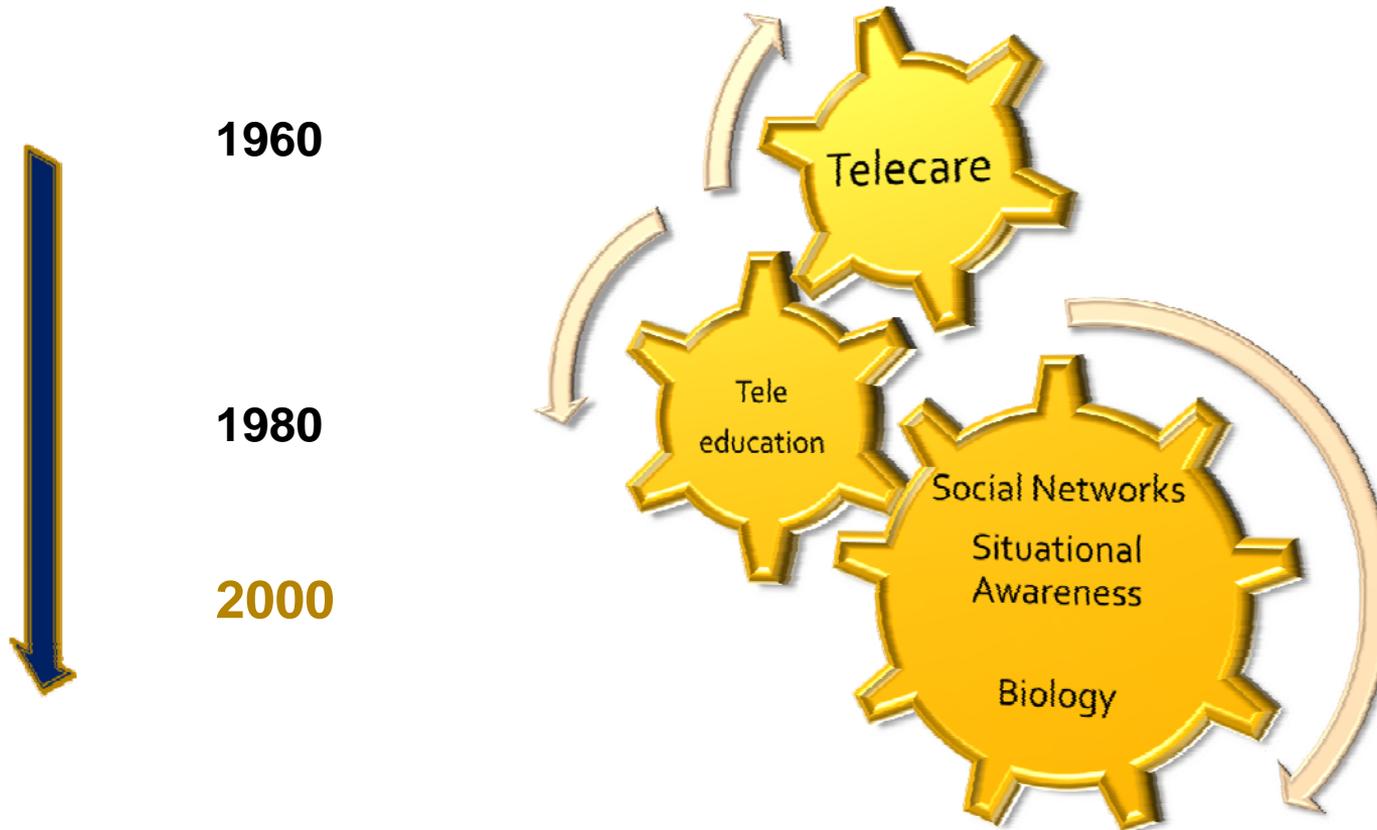
NASA MEDICAL

- **Aligned with Agency Core Values**
 - Protect Health
 - Encourage Safety
 - Provide preventive care
 - Prepare for the unforeseen/hazards
 - Respond to the unexpected
 - Continuity of operations & *Recovery*

The 21st Century Context

911 and beyond

Technology and Medical Networks



Disasters and Capacity Building Concept

Types

- Natural
- Human made
- Combined

Area

Duration

- Single Event
- Multiple events
- Sustained



Continuity of Operations

Impacts

Human Capital

- Societal translocations
- Psycho-social
- Violence

Resources/Infrastructure

- Water
- Food
- Shelter
- Fuel
- Transportation/Communications
- Commerce
- Medical Services

Categorization of Natural Disasters

CATEGORY

- ***Extreme Weather***
(Hydro-Meteorological)
- **Geothermal**
(Internal Geo-Dynamic)
- ***Topological***
(External Geo Dynamic)
- ***Pandemics/Epidemics***

HAZARDS

- Thermal, Flood & Flash Flood, Hurricane, Tornado, Lightning, Hail, Blizzard, El Niño, Lake Effect
- Seismic
 - Earthquake, Tsunami,
- Volcanic
 - Eruptions, Acid Rain, Glacier Melt down
- Landslides, Avalanches, Wild fires,
- HIV/AIDS, SARS, Flu, West Nile

(Adapted from the International Institute for Geo Information and Earth Observation)

Societal/Cultural Views

Disasters

Natural

- An act of God
- Destiny
- Unavoidable

?

Technological

- *Could be prevented*
- Community response
 - Consensual
 - Conflictual

- **Social Stigma**
- **Delayed and chronic affects**
- **Time to prepare**
 1. People
 2. Resources

Estimates in Global Death Toll (2008)

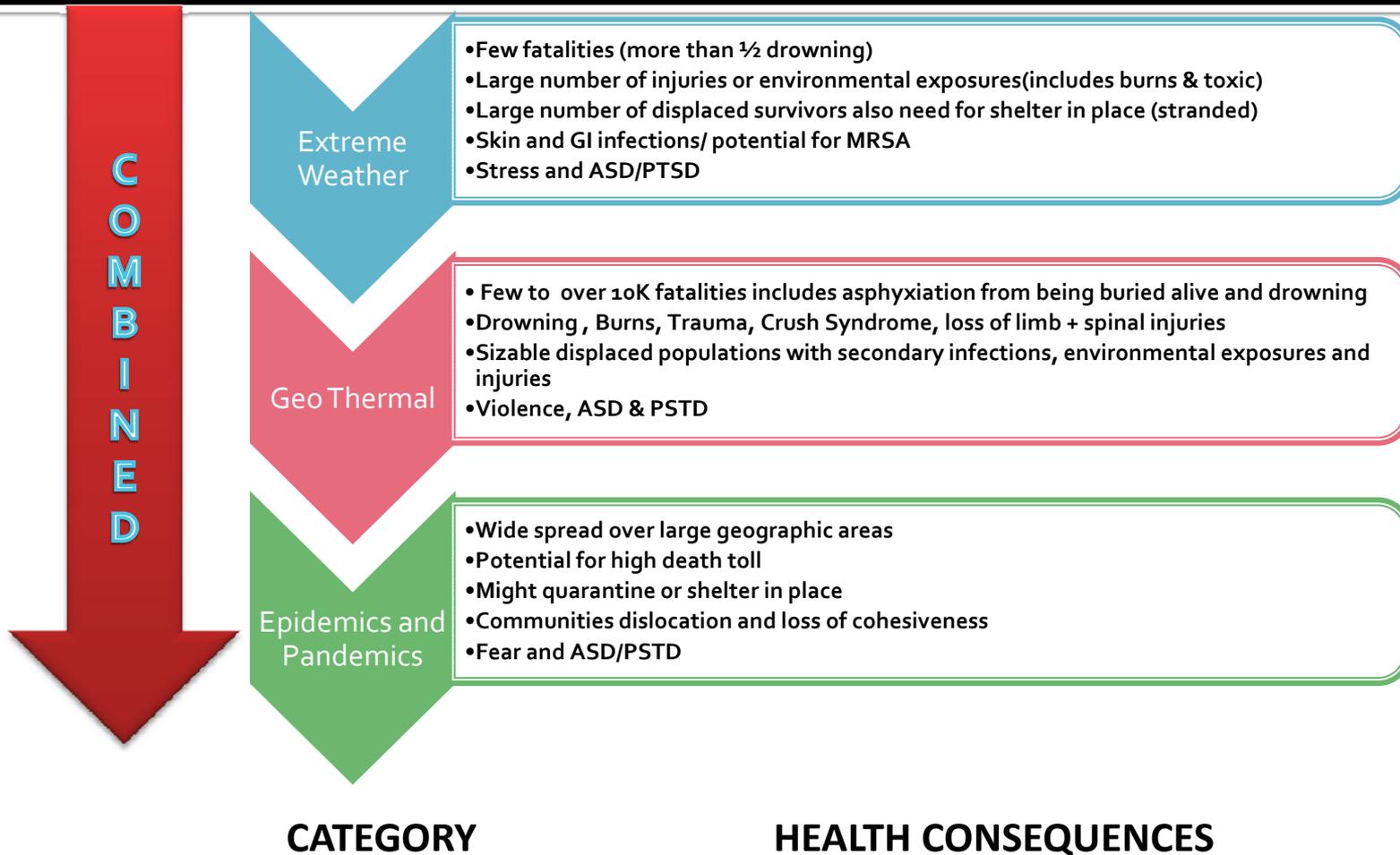
CATEGORY	MORTALITY
■ Extreme Weather	■ > 1,500
■ Geo Thermal	■ > 500,000
■ Epidemics/Pandemics	■ > 10 Millions

Cost is in trillions of dollars. Refugees and displaced persons in 10s of Millions
Tolerance to morbidity and mortality rates is diminishing

Number of Disasters Reported by States (1963-2007)

Rank	State	Number of Declarations
1	Texas	81
2	California	73
3	Florida	59
6	Louisiana	53
9	Ohio	45
13	Mississippi	42
18	Virginia	39
43	Maryland	18
58	District of Columbia	7

Natural Disasters and Health

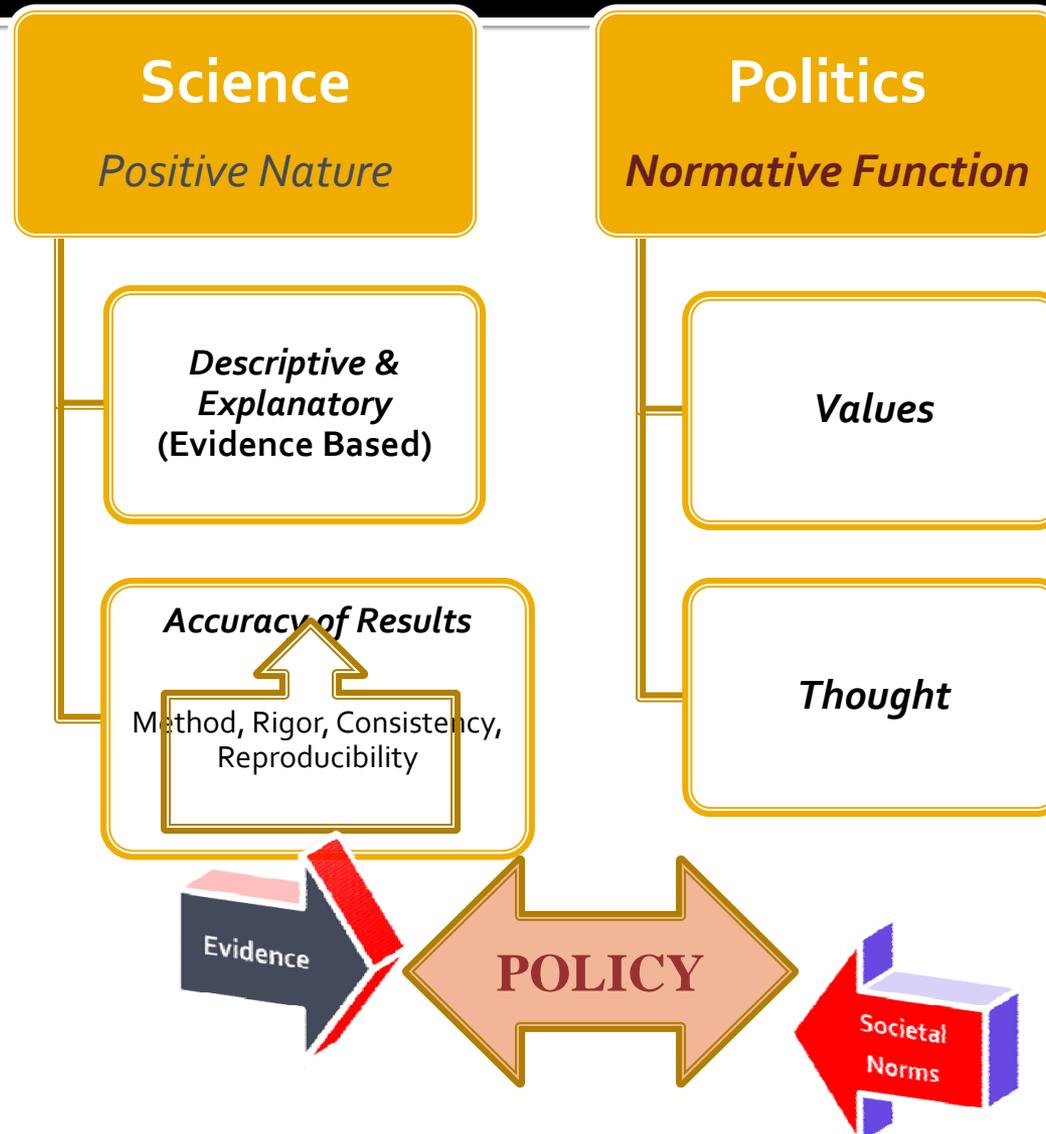


Knowledge & Communications

Creating an environment of trust

Science, Politics and Policies

(JD Kraemer, LO Gostin JAMA February 11, 2009-Vol 301, No 6)



WHAT

Identify the Problem

Establish Relevancy

HOW

Sources of Evidence

Strength of Evidence

DECISIONS POLICIES

Priority Setting

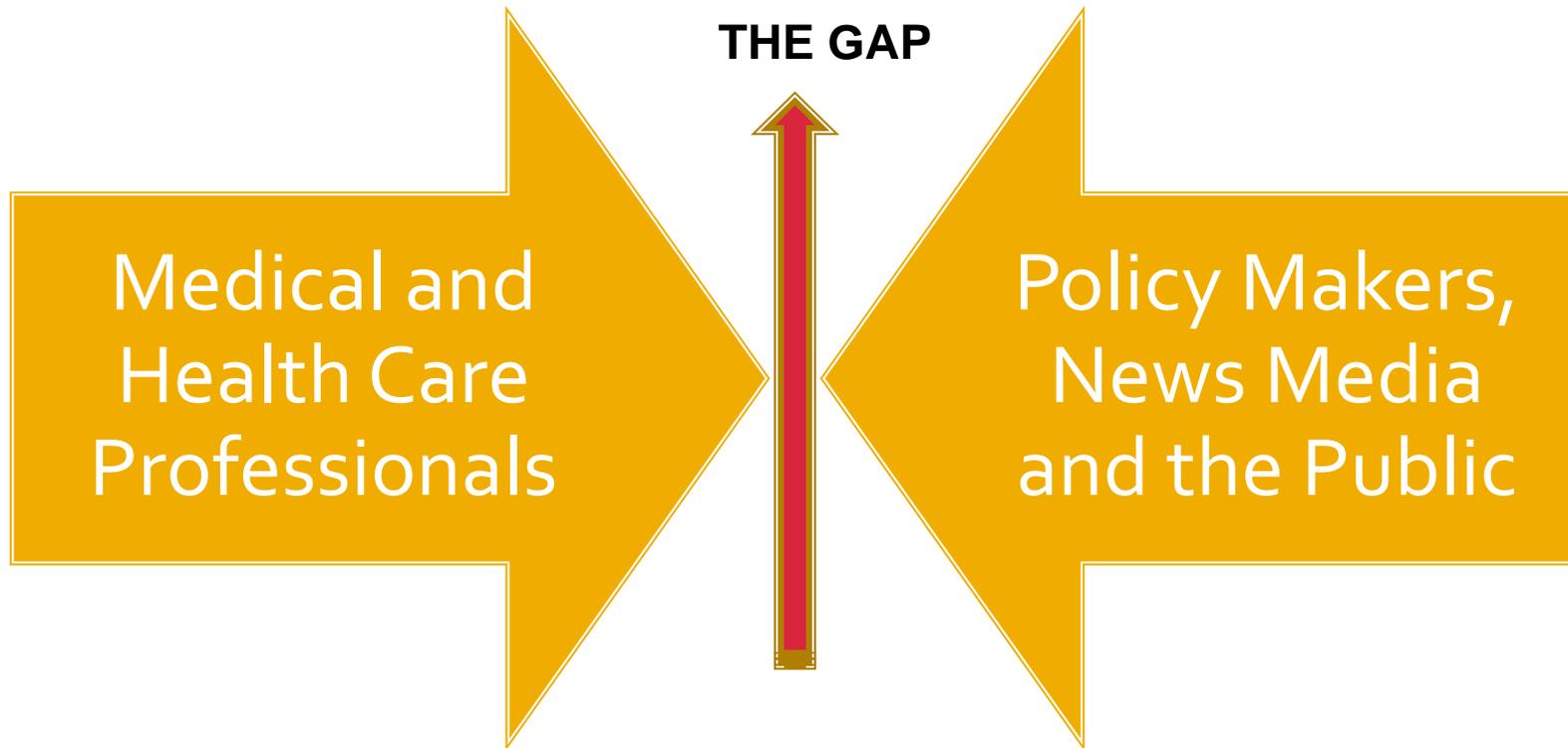
Evaluations

Tools

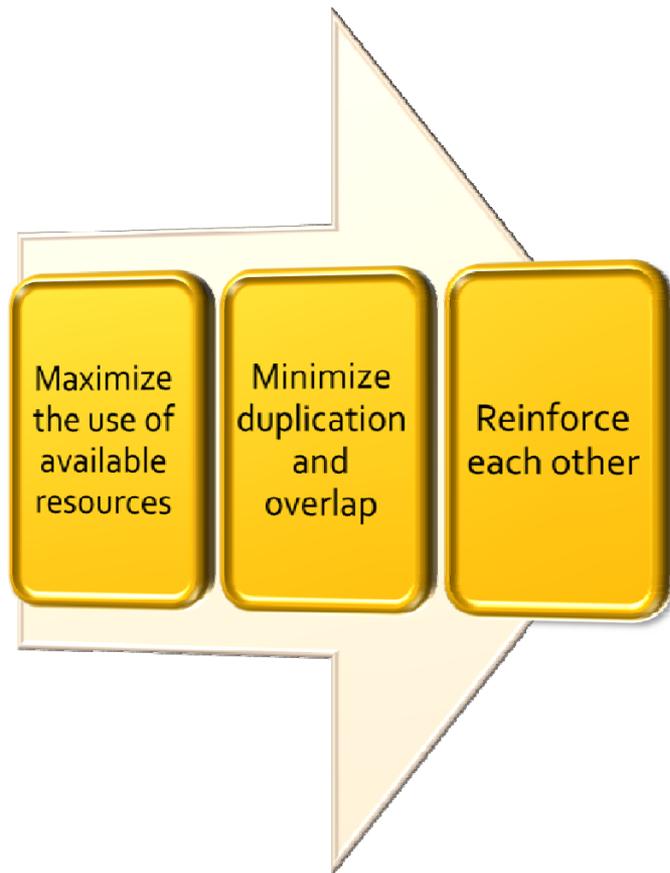
Actuarial/Census/Publications

Meta A.,RCT, Cochrane, Data bases

Addressing/Explaining the KAP



Unity of Effort: 3 Cs and 3 Es



- *Implement*
 - *Communication*
 - *Coordination*
 - *Cooperation*
- *Improve*
 - *Effectiveness,*
 - *Efficiency*
 - *Equity of responses*

Leadership in times of crisis

Conclusions

Crisis Cycle

(Adapted from L. Rowitz 2009)



Crisis Standards of Just Care

Fairness

Compassion
Stewardship of
resources
Trust

Equitability

Transparency
Consistency
Proportionality
Accountability

Community Engagement

Rule of Law

Learning and Mentoring

7 Leadership Skills for Crisis Management

1. Core competency in public/occupational health
2. Competency in organizational incident mgmt. and disaster medicine (medicine of the extreme environments)
3. Core management & leadership skills
4. Team building and conflict resolution skills
5. Ethics and resource allocation priorities setting
6. Best practices knowledge
7. Situational awareness

Positive Medical Leadership Attributes

(adapted from J. McGregor Burns & LH Kahn)

GENERIC

- Personal Character
- Ability to charter the course clearly
- Instill confidence and commitment
- Engender organizational strengths
- Represent and manage programs/projects
- Secure funding

21ST CENTURY

- Generic +
 - Vision
 - Understand the history
 - Apply history to present
 - Project present into the future
 - Share responsibility
 - Strategic acumen
 - Consensus building
 - Lead the change
 - *Address disparities*

NASA Medical used these attributes since 1965

Leadership Duties

21ST CENTURY

- **Generic+**
 - Vision
 - History
 - History and the Present
 - Project Present into the future
 - Share responsibility
 - Strategic acumen
 - Consensus building
 - Lead the change
 - Address disparities

NASA

- *Safety and health*
- *Priority setting*
- *Innovate standards and practices*
- *Develop, adapt and use technology and biology*

Type of Leadership in Organizational Crisis

