OUTREACH FOR HEALTH EMERGENCIES AND DISASTER RESPONSE
MOVING FROM ASSISTANCE TO SUSTAINABLE PROGRAMS

ATA/TATRC FIRST ANNUAL MID YEAR MEETING
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World Population
6,5 Billions
- >2,75 B. in costal areas
- > 1 B. in other disaster prone areas
TYPES OF NATURAL DISASTERS 1991-2005

Percent

- Floods
- Wind storm
- Epidemics
- Earthquake/Tsunami
- Drought
- Slides
- Extreme Temp.
- Wildfires
- Volcano
- Insect infestation

Adapted from ISDR/UN
2006 & first ½ of 2007 had lower incidence of hydrometeorological & geological events
WHAT IS THE COST?

In $ Billions adjusted to 2005

- Loma Prieta Earthquake 7.6 (1989)
- Hurricane Andrew 10.8 (1992)
- Midwest Floods 7.0 (1993)
- Northridge Earthquake 15.5 -35.0 (1994)
- Kobe Earthquake >170 (1996)
- Tsunami > 15.0 (2004)
- Hurricane Katrina >190 (2005)
1990 -2000 on average 
80,000 deaths/year
2003 estimated 700 
disasters and 70,000 deaths
Population growth results 
in increased numbers of 
individuals
- Injured
- Sick
- Displaced
Significant long term 
psychosocial dislocation and 
affect

HUMAN AND SOCIETAL COST 1990-2003
Telemedicine and telemonitoring supported a total of 1029 individuals in space.
- US share is 784 individuals.
- Continuous telemedicine time:
  - MIR 10 years (4 by US)
  - ISS approaching 7 years
  - (Moon 12 days and 12 hours)
- International distance learning for 6 years.

THE NASA EXPERIENCE
INTERNATIONAL DISASTERS & TELEMEDICINE: LESSONS LEARNED

- Acute Phase
  - Difficult to establish connectivity
  - Requires self sufficiency by the provider
  - Prior agreements with the host country national & local officials
  - Lack of agreed upon protocols

- Impediments/barriers
  - IT & Communications destroyed, non-existent, too expensive
  - Resources & Technical Expertise
  - Sometimes elaborate process and too many players
  - Reluctance, language, societal and ethical values, skills & geographical distances
SUSTAINING THE EFFORT (CHRONIC PHASE)

- Loss of interest and programmatic priority
- Lacking political & societal appeal
- Commitment by the stakeholders
OFFICE OF INTERNATIONAL MEDICAL POLICY
2007 INITIATIVE

+ Develop a distance learning program to address emerging global health threats (including disaster planning and resilience) to fill the gap in:
  ✖ The knowledge base for policy analysis, formulation and implementation
  ✖ Achieve commonality of practice for the international health care community
WHAT REMAINS TO BE ADDRESSED

- Global acceptance that the number of natural disasters will continue to increase with more survivors suffering chronic debilitating effects
- Long term commitment and resources transcending local and individual interests
- Policy action at the local, national & international level (G-7) to establish a priority for resource allocation to (short list)
  - Communication infrastructure (dedicated space based transponders and or microsatellites, portable ground stations, etc.)
  - Transportation means and prepositioning of logistics
  - Sustained training for professional and lay rescuers
  - Private sector incentives