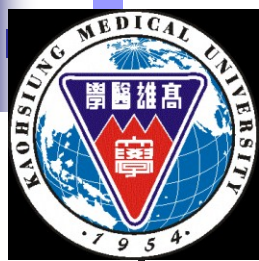


# Prevention of Mortality Associated with Disaster, Environmental and Injuries

**Hung-Yi Chuang**, *MD. MPH. Sc.D*

Professor, Department of Public Health,  
Kaohsiung Medical University

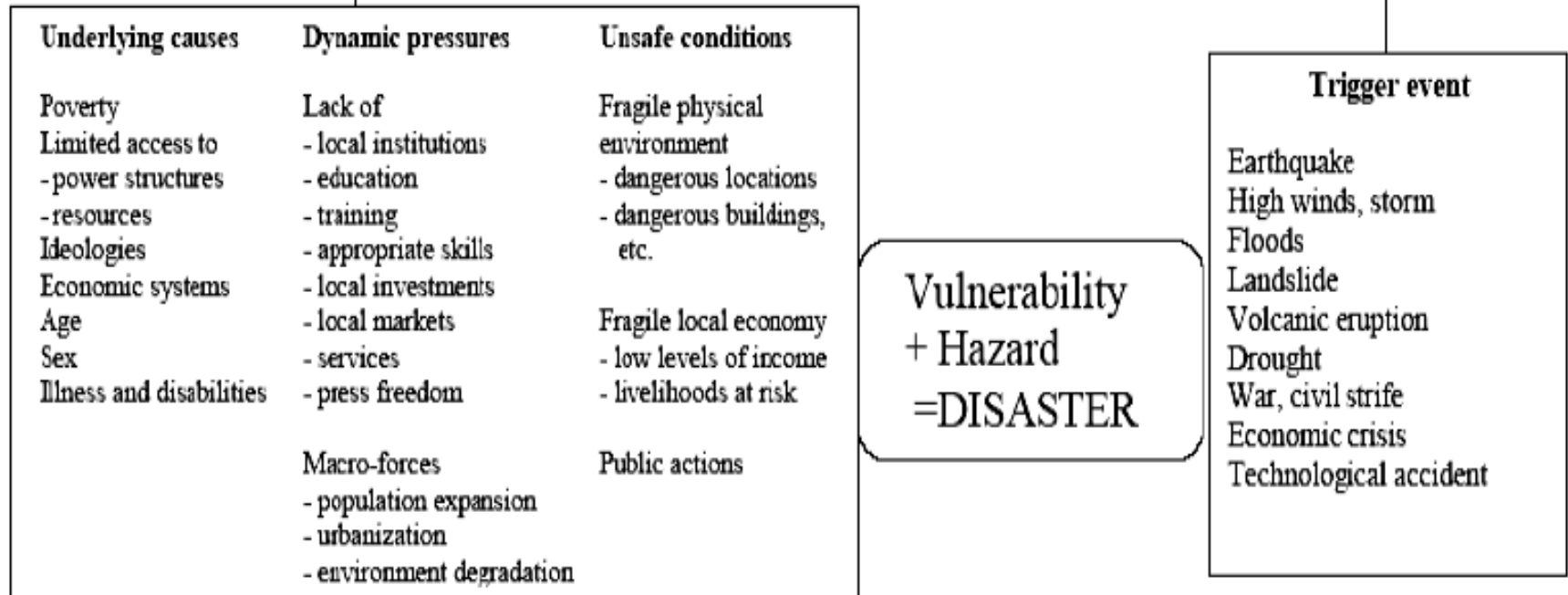


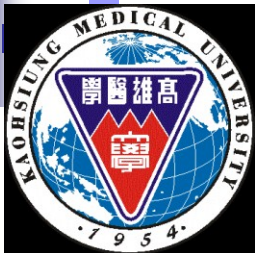
# Disasters

- **Typhoon; Hurricane**
- **Earthquake - volcanic action, tsunami**
- **Climate change - Extreme weather events**
- **Man-made disasters**

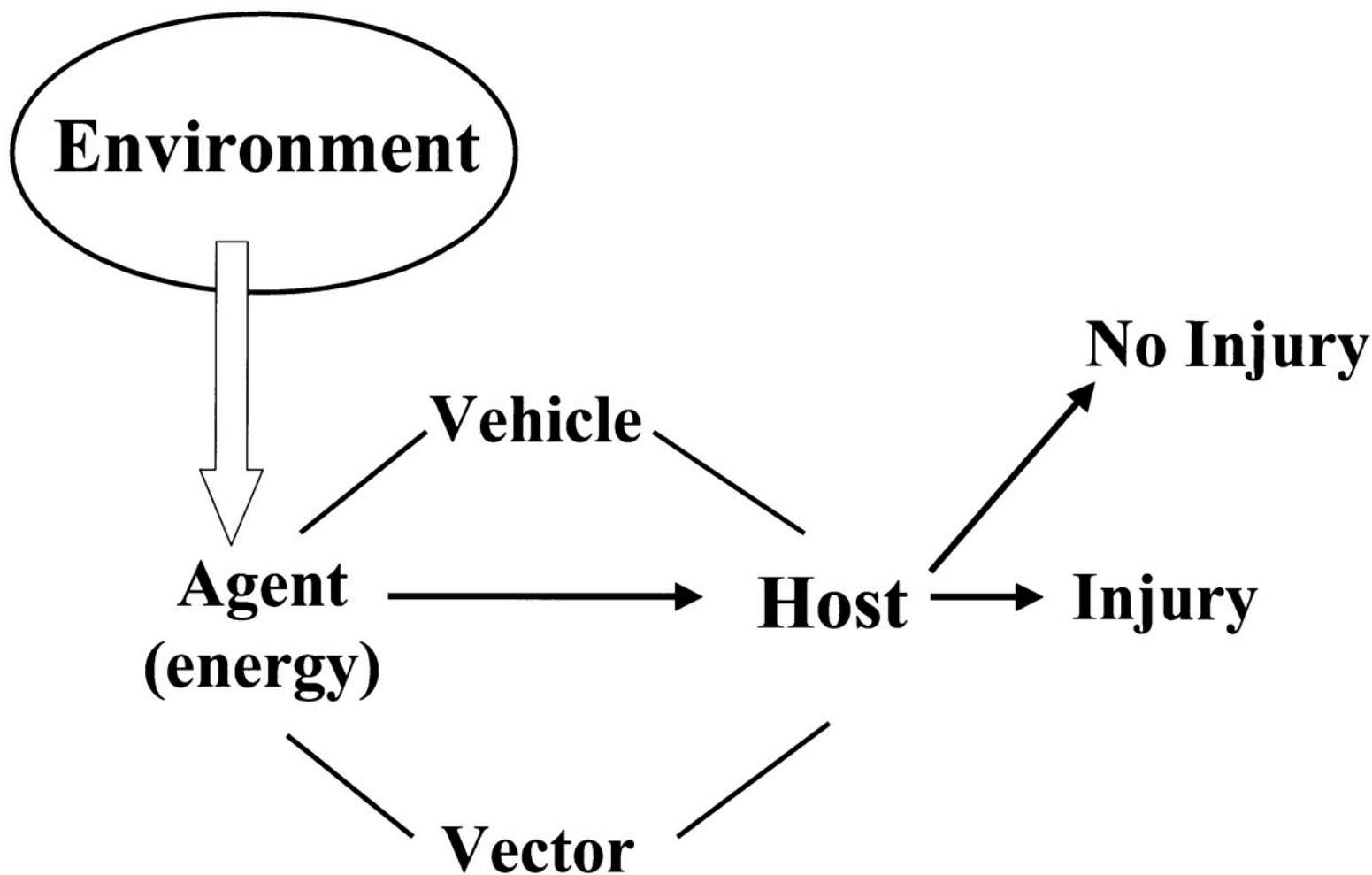
**Disasters: disruption of the human ecology that exceeds the capacity of the community to function normally  
(In 1990, the 44th General Assembly of the United Nations)**

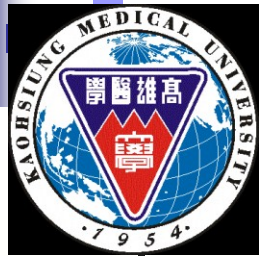
# A disaster occurs when hazards and vulnerability meet





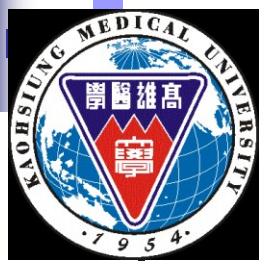
## The causal model for environmental injuries.





# Challenges in Disasters

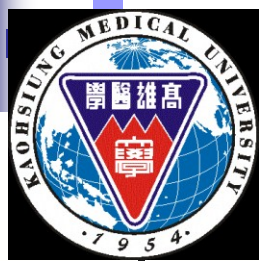
- **Physical destruction**
- **Public fear**
- **Social disruption**
- **Lack of infrastructure for data collection**
- **Time urgency**
- **Movement of populations**
- **Lack of local support and expertise**



**Man-made disasters**

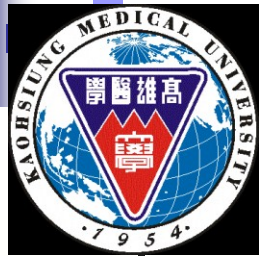
**Technical or technological disasters**

**Industrial disasters**



# 2014 Kaohsiung Gas Explosions

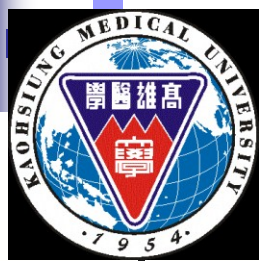




# Facts and figures

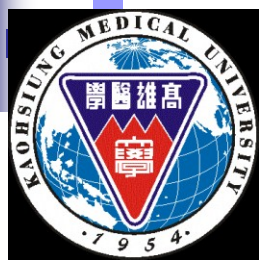
- **Propene leak (?? tons)**
- **Gas pipeline system, more than 6 km of road length were damaged**
- **At least 2 big petrochemical factories suspected**
- **32 deaths, 321 non-fetal injuries**





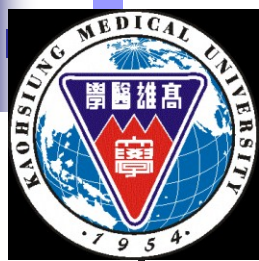
# The consequences of a disaster

- Referral of these survivors to appropriate health facilities often becomes difficult.
- Untreated or inadequately treated fractures and burned-infected wounds may lead to severe and long lasting disabilities.
- Scarcity of rehabilitation personnel and infrastructure poised to handle a new generation of persons with disabilities.
- Many survivors with newly acquired disabilities will struggle with the loss of their livelihood an additional consideration for them and their families.
- Increases in violence after disasters



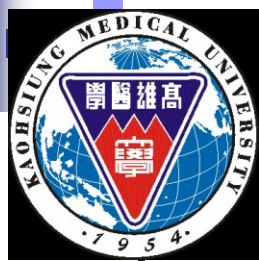
# For survivors with existing disabilities

- **Persons with disabilities can be more at risk during disasters.**
- **Many persons with disabilities lose their assistive devices during disasters.**
- **Persons with disabilities can have greater difficulty in accessing basic needs.**



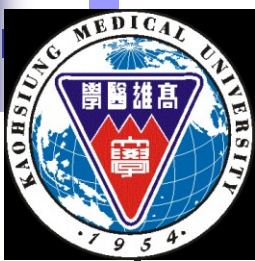
# Responses in the acute phase

- **Identifying persons with existing disabilities in temporary shelters and camps.**
- **Responding to the specific health care needs of persons with existing disabilities, such as insulin for diabetics.**
- **Identifying people with injuries and providing appropriate trauma care to save lives and minimize future functional impairment and disability.**
- **Implementing other curative and therapeutic interventions that can prevent disability.**
- **Transferring people with severe injuries and/or newly acquired disabilities to referral centers. In settings where such centers do not exist, efforts should be made to ensure that such persons are treated by specialists in existing facilities.**
- **Establishing a multi-disciplinary task force to prepare a long-term program, taking into consideration the resources available and socio- economic conditions of the country.**



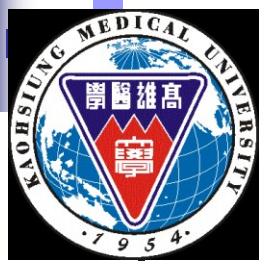
# Responses in the reconstruction phase

- **Identifying persons with existing and newly acquired disabilities, and assessing their immediate and long- term needs.**
- **Conducting mapping of resources and other community assets for meeting basic health care needs.**
- **Attending to the social needs of persons with disabilities by ensuring the opportunities for them to earn their livelihood.**
- **Developing the infrastructure necessary to provide medical rehabilitation services.**
- **Initiating Community Based Rehabilitation (CBR) Programs, ensuring that persons with disabilities have equal access to services and are treated as equal members of society.**



# Community Based Rehabilitation (CBR) Program

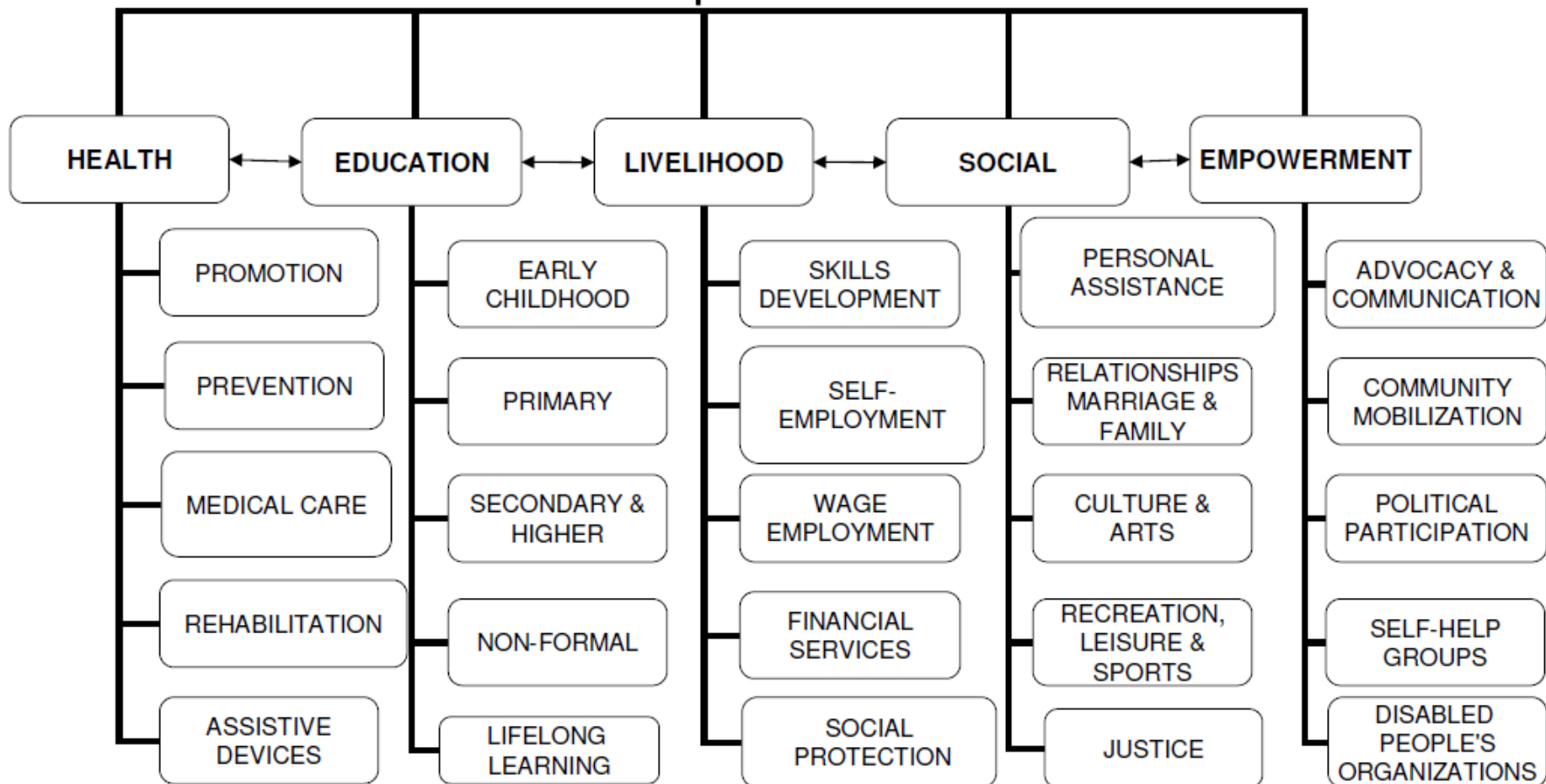
- **While initially a strategy to increase access to rehabilitation services in resource-constrained settings, CBR is now a multisectoral approach working to improve the equalization of opportunities and social inclusion of people with disabilities while combating the perpetual cycle of poverty and disability.**
- **CBR is implemented through the combined efforts of people with disabilities, their families and communities, and relevant government and non-government health, education, vocational, social and other services.**

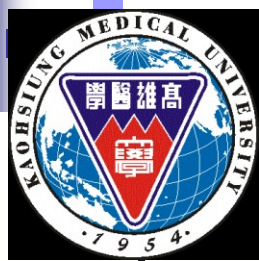


# The Community-based rehabilitation guidelines

- <http://www.who.int/disabilities/cbr/guidelines/en/>
- The community-based rehabilitation (CBR) matrix gives an overall visual representation of CBR.

# CBR MATRIX



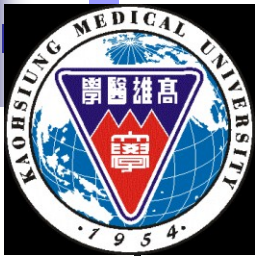


# Design for All

- **Following the "Design for All" concept during rebuilding of infrastructure.**
- **When rebuilding a community's infrastructure, efforts are needed to ensure that physical spaces are designed and built to be accessible to and safe for all, especially persons with disabilities.**
- **The Design for All concept should be routinely adapted during the reconstruction phase.**



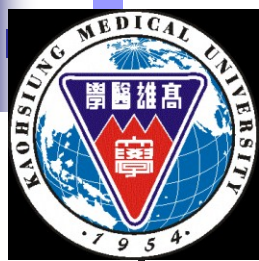




# Conclusion- final thought

- **Nothing Replaces Well Trained, Competent and Motivated People! Nothing!**
- **People are the Most Important Asset!**

**By Eric K. Noji**



**22<sup>nd</sup> ACOH**

**Asian Conference on Occupational and Environmental Health**

**April 27-30, 2017**

**Kaohsiung, Taiwan**

**Kaohsiung Medical University**

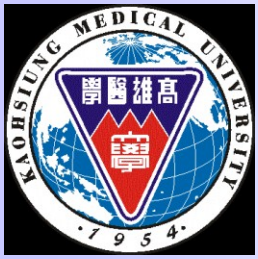


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# Thanks for Your Attention

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