



# Division of the Civilian Volunteer Medical Reserve Corps

*Engaging volunteers to strengthen public health, emergency response, and community resiliency*

## Disaster Risk Reduction & The Medical Reserve Corps

*Presented to the Community Capitals Framework Institute  
November 2014*

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# What is Disaster Risk Reduction?

*Disaster Risk Reduction is a framework for communities to utilize to lessen the impact of disasters from natural hazards through increasing resilience and reducing vulnerability.*

Focus is on actions that are **PROACTIVE** rather than **REACTIVE**.



# Assumption #1

*“There’s no such thing as natural disasters, only natural hazards.”*

- A disaster happens after the hazard and is dependent on the community’s vulnerability



Vulnerability





# Math Part I: Basic DRR Equation

$$D = H (x) V$$

*Disasters are the impact of the Hazard multiplied by the impact of the Vulnerability.*

D= Disaster

H= Hazard

V= Vulnerability

Keim, Mark E. 2011 "Integrating the MRC into Community-Based Disaster Risk Reduction." Presentation at the Region V and VII MRC Regional Conference.

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## Assumption #2

- It's hard to reduce a hazard, but we can reduce our vulnerability to the hazard





# Let's Talk about Vulnerability

*“The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effect of a hazard.” \**

How at risk are you (or is your community) to physical or emotional injury? \*\*

\* 2014 The United Nations Office for Disaster Risk Reduction; [www.unisdr.org](http://www.unisdr.org)

\*\*Keim, Mark E. 2011 “Integrating the MRC into Community-Based Disaster Risk Reduction.” Presentation at the Region V and VII MRC Regional Conference.



## Math Part II: Basic Vulnerability Equation

$$V = \frac{E(x) S}{R}$$

*Vulnerability is your Exposure to the Hazard multiplied by your Susceptibility. Your Resilience can reduce your Vulnerability.*

*V= Vulnerability*

*E= Exposure to the Hazard*

*S= Susceptibility to the Hazard*

*R= Resilience*



## Assumption #3

- Vulnerability is reduced through:
  - Reducing Exposure (hard)
  - Reducing Susceptibility
  - Increasing Resilience

$$V = \frac{E(x)S}{R}$$



### Exposure:

- *“People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.”*

### Susceptibility:

- *“The state of being at risk, if exposed to a hazard.”*

$$V = \frac{E(x)S}{R}$$

Resilience:



- *“The ability of a system, community or society exposed to hazards to **resist, absorb, accommodate to and recover** from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions”.*



$$\mathbf{Disaster = H \times V}$$

$$\mathbf{V = \frac{(E \times S)}{R}}$$

**H** = *Hazard*

**V** = *Vulnerability of a Population*

**E** = *Exposure to the Hazard*

**S** = *Susceptibility to the Hazard*

**R** = *Resilience*



## Assumption #4

- Resilience through human action can be incredibly effective!



According to Dr. Mark Keim:

*“An example of human action that affects resilience is social organization that facilitates (or hinders) response and recovery.”*

Keim, Mark E. 2008. “Building Human Resilience: The Role of Public Health Preparedness and Response As an Adaptation to Climate Change.” *The American Journal of Preventive Medicine*.

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# Medical Reserve Corps Vision:

*Dedicated Volunteers and Strong Active Units...  
Building Resiliency and Reducing Vulnerability*



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# The 5 W's of the MRC

**Who:** Medical & non-medical volunteers who care about public health & preparedness

**What:** Engage in preparedness & public health community activities

**When:** Founded following September 11<sup>th</sup>

**Where:** Over 1000 units throughout the U.S. located in health departments, emergency management, hospitals

**Why:** Increase community resilience & reduce vulnerability



# How Does the MRC Build Resilience?

Potential Vulnerability	MRC Activity (Increasing Resilience/Reducing Susceptibility)
Loss of Shelter	<i>Shelter with Support Services</i>
Loss of Sanitation & Hygiene	<i>Health Education &amp; Promotion</i>
Loss of Healthcare Services	<i>Facility Preparedness Planning Training/Exercises</i>
Increased Mental Illness	<i>Psychological First Aid Training Post-disaster Screening and Referral</i>
Exacerbation of Chronic Disease	<i>Health Screenings Community-Based Primary Care Outreach</i>
Community Panic	<i>Health Education Call Center Support</i>



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## Thank You!

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