



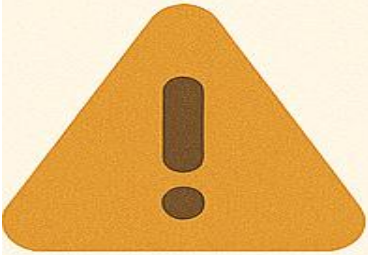
Disaster Nursing: East Meets West

A Comparative View of Malaysia,
the U.S., and Other Countries

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Disclaimer



The findings and conclusions in this presentation are those of the author and do not necessarily represent the official policies of the Office of the Surgeon General or the U.S. Public Health Service Commissioned Corps or the United States Government or any of the agencies with which they are affiliated.

Learning Objectives



Compare disaster preparedness across high- and low-resource settings.



Describe the role of nurses in disaster response globally.



Identify nursing strategies to support vulnerable populations during complex emergencies.



Global Disaster Frequency



U.S.
Wildfires,
hurricanes



Japan
Earthquakes,
tsunamis

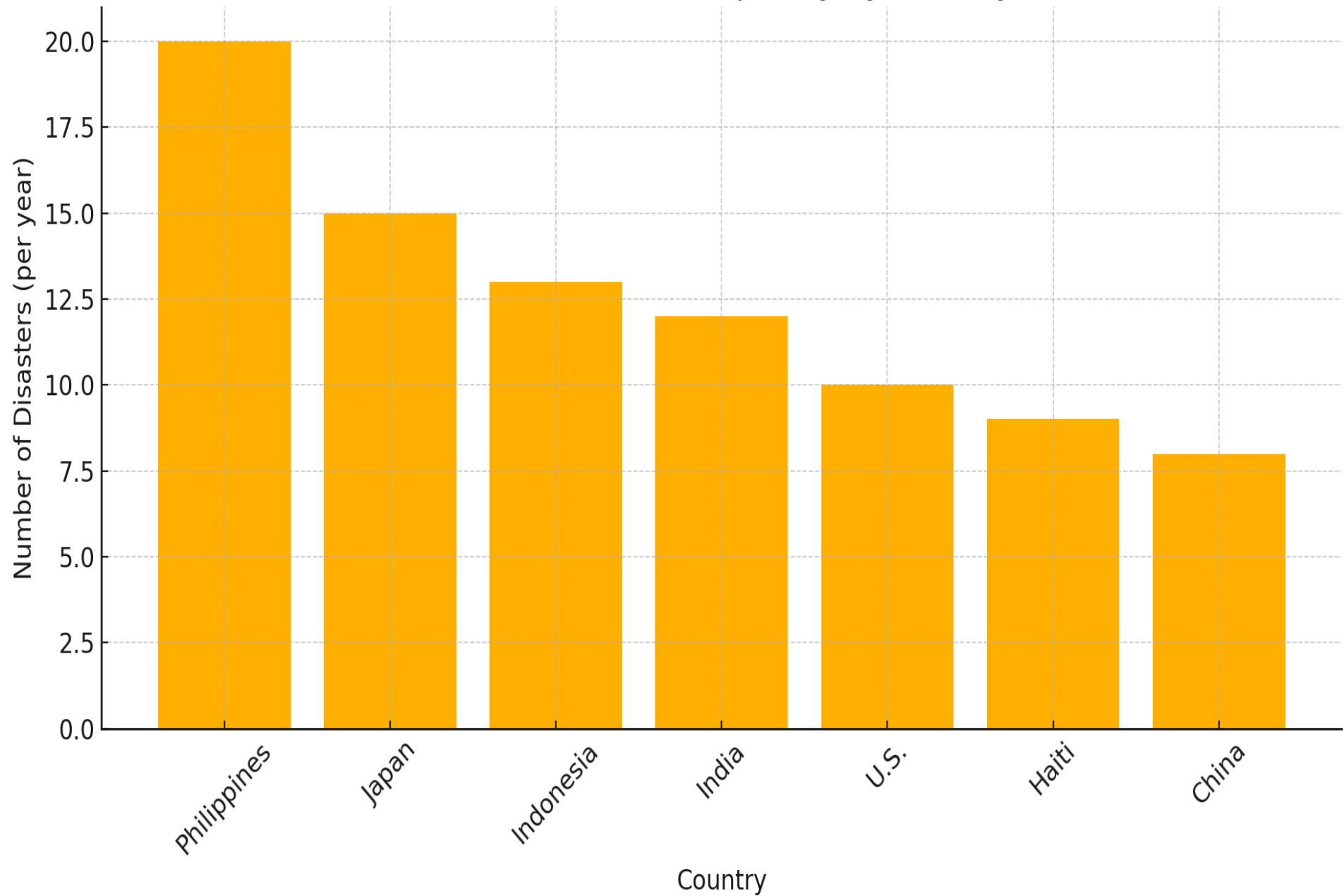


Philippines
Typhoons,
floods

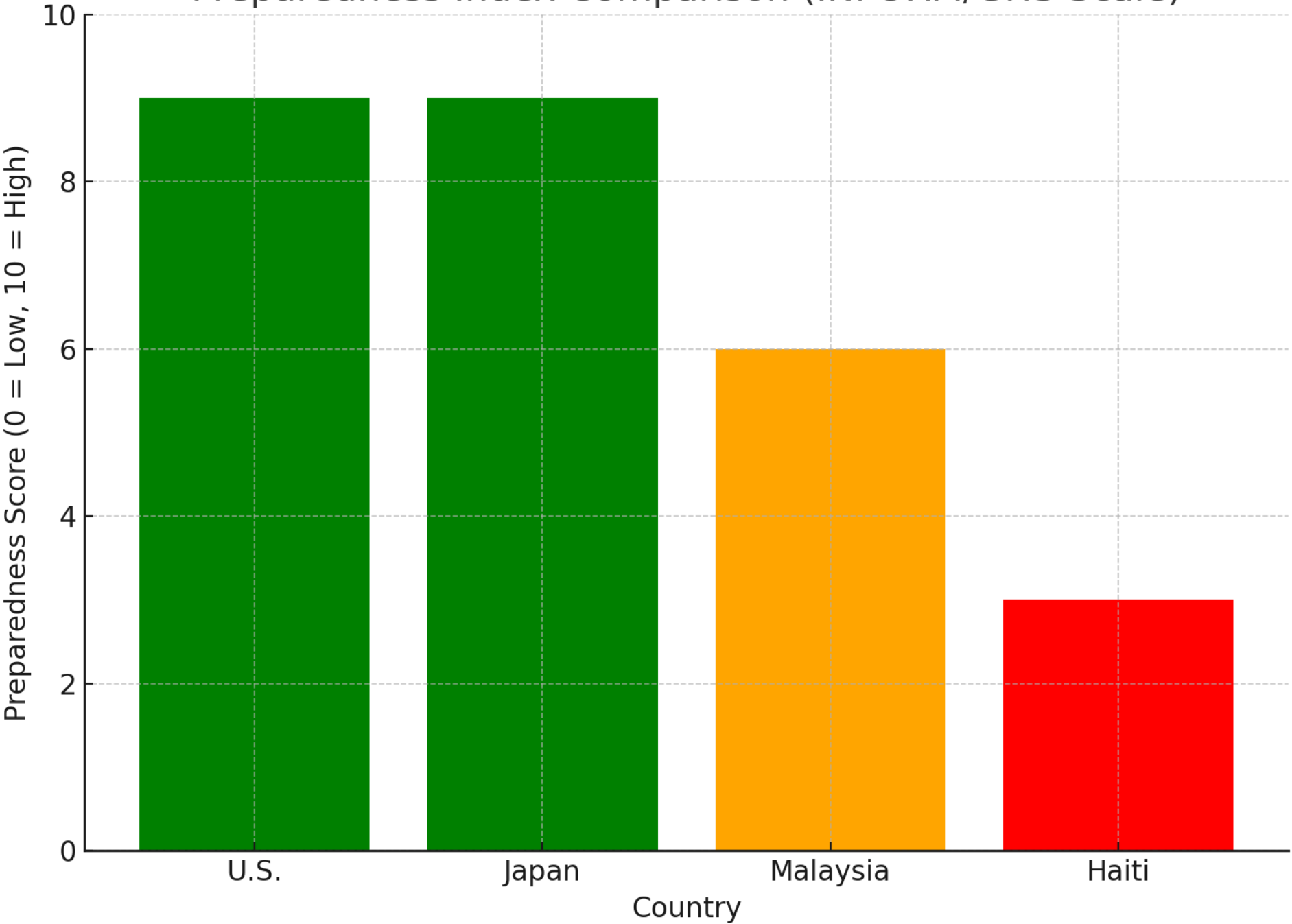


Haiti
Earthquakes,
hurricanes

Annual Disaster Frequency by Country



Preparedness Index Comparison (INFORM/GHS Scale)



Healthcare Capacity in Disasters

Country	ICU Beds per 100k	Surge Capacity	EMS Response Time (min)	Triage Protocols
U.S.	34.7	High	8	Established
Japan	13.0	Moderate	9	Standardized
Malaysia	3.4	Moderate	15	Developing
Haiti	0.7	Low	30	Limited

Crisis Communication Approaches



Provide timely and accurate information



Demonstrate empathy and compassion



Address concerns and questions



Collaborate with stakeholders

Cultural Disaster Response Traits

A light gray world map serves as the background for the slide. Three callout boxes are overlaid on the map, each containing text about a country's disaster response traits. The boxes are positioned over North America, China, and Southeast Asia.

U.S.

Individual
responsibility
federal aid

China

Centralized
top-down
coordination

Indonesia

Community
cohesion and
local action

Volunteer & Military Responders

U.S.



**National Guard
USPHS
CERT**

Japan



**DMAT
Self-Defense
Forces**

Nepal



**Community
responders
and NGOs**

Case Study: Typhoon Haiyan, Philippines



2013

Landfall

Response

Aftermath

2013

November

Local +
global response efforts

Infrastructure
and healthcare



Case Study: Fukushima Nuclear Disaster

- **Multi-agency**
- **Evacuation zones**
- **Coordination**
- **Challenges**

Technological Disasters: Nursing Response and Challenges

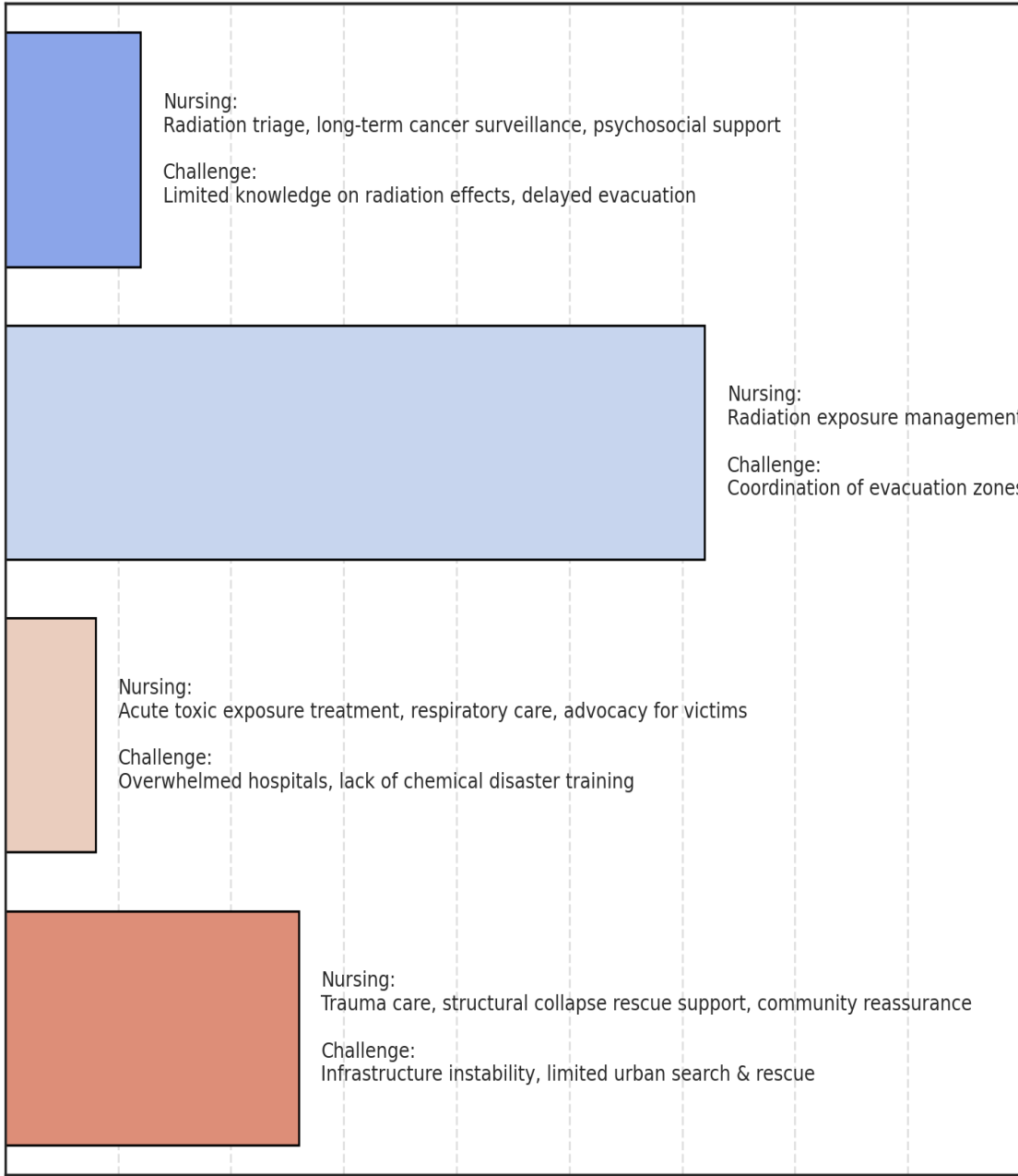
Disaster

Chernobyl

Fukushima

Bhopal Gas Tragedy




Highland Towers Collapse



1980 1985 1990 1995 2000 2005 2010 2015 2020 2025

Year

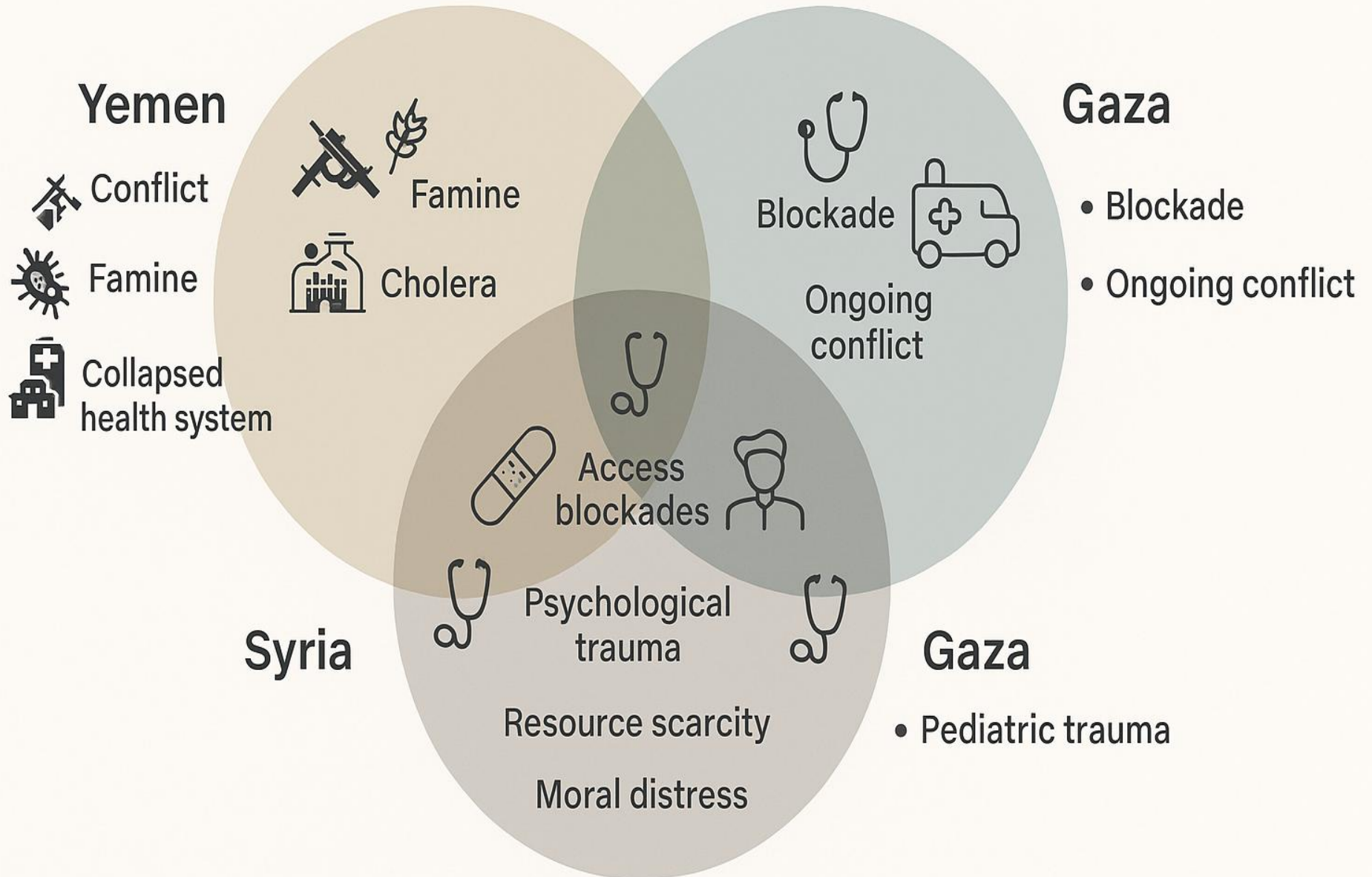
Climate Change & Disasters: Global Vulnerability Index

-  **Coastal Flooding** – Rising sea levels affect low-lying nations (e.g., Bangladesh, Pacific Islands).
-  **Wildfires** – Increasing in frequency in Australia, the U.S., and Mediterranean regions.
-  **Heatwaves** – Causing mortality surges in Europe, South Asia, and parts of Africa.

Urban vs. Rural Disaster Response

	Urban Settings	Rural Settings
Population Density	High density accelerates spread of disease and resource strain	Sparse populations hinder surveillance and outreach
Infrastructure	Advanced hospitals, but traffic/overcrowding can delay response	Limited facilities, often lack ICU, labs; or trauma support
Communication Access	Better digital reach; prone to misinformation via social media	Poor internet/phone connectivity; difficult to disseminate alerts
Healthcare Workforce	More personnel, but also more competition and burnout	Fewer providers; nurses often multitask and take on multiple
Logistics	Complex coordination across jurisdictions; risk of fragmented response	Challenges in supply chains, transport, and helicopter/air medical access

Complex Humanitarian Missions: Yemen, Syria, and Gaza



Pandemics & Global Health Crises

- **Global Impact of Pandemics**

- 🦠 *Disruption of Health Systems*

- 92% of countries reported service disruptions during COVID-19 (WHO, 2022)
- Overburdened health infrastructure in LMICs
- Collapse of routine care (maternal-child health, chronic disease)

- **Vulnerable Populations Hit Hardest**

- 🌍 *Disparities in Outcomes*

- Refugees and displaced persons lacked access to vaccines, ventilators
- Informal workers lost livelihoods and health coverage
- Marginalized groups faced misinformation and stigma

- **Nursing in Pandemic Response**

- 👩 *Global Frontline Role*

- Risked personal safety amid PPE shortages
- Led education campaigns in low-trust settings
- Administered vaccines in mobile clinics and remote areas
- Adapted to telehealth in high-restriction zones

Disaster Risk Reduction Strategies

STRUCTURAL MEASURES



- Levees, Dams, Sea Walls
- Earthquake-resistant buildings
- Cyclone shelters



Japan



Bangladesh

NON-STRUCTURAL MEASURES



- Public Education & Drills
- Early Warning Systems
- Land-use planning and zoning
- Community disaster preparedness training



Indonesia



Bangladesh

Lessons from Global Disasters



Invest in local
responders



Prioritize cultural
competence



Emphasize unified
protocols

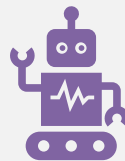
Future Directions in Disaster Nursing



Joint certification
programs



Global disaster
simulation
exercises



AI, VR, blockchain
in emergency
response

Call to Action: Strengthening Global Disaster Nursing



Key Takeaways

- Disasters affect every region—but preparedness, capacity, and outcomes differ widely
- Cultural competence, coordinated communication, and localized response



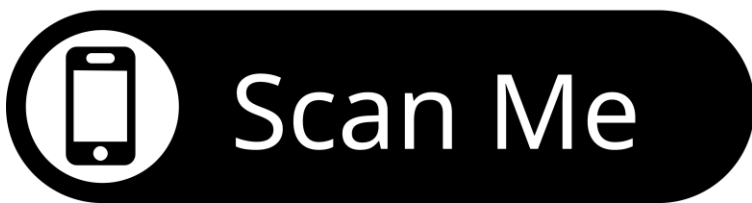
Opportunities for International Nursing Collaboration

- Joint simulation trainings and certification programs
- Academic and clinical exchanges between emergency and disaster nursing programs
- Shared toolkits for culturally informed disaster care and triage



Post-Conference Engagement

- Connect with fellow attendees and global partners
- Explore collaborative research, advocacy, or educational projects
- Promote knowledge exchange through webinars, forums, and professional networks



**Household
Emergency
Preparedness
Instrument**