

THE ASIA PACIFIC EMERGENCY AND DISASTER NURSING NETWORK: PROMOTING THE SAFETY AND RESILIENCE OF COMMUNITIES

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Abstract. The increasing numbers and diversity of natural and technological disasters in the Western Pacific and South-East Asian Regions pose severe, sustained public health threats, resulting in high numbers of deaths, injuries, infrastructure damage and destruction, personal suffering, high health and economic costs. Though successful health system responses and ongoing care delivery in disaster situations require nurses to have fundamental disaster competencies that enable their rapid and effective response, nurses are often insufficiently equipped and inadequately integrated into national disaster policy-making and response teams to fulfill their critical role in disaster prevention, mitigation, response and recovery. The work of the Asia Pacific Emergency Disaster Nursing Network (APEDNN) demonstrates a commitment to continual building and strengthening of partnerships, resources, data and evidence to better equip nurses, as well as other health workers, to optimally function in coordinating, leading, and furthering disaster preparedness, risk mitigation and response measures to protect the safety and health of communities.

DISASTER NURSING PREPAREDNESS AND RESPONSE: A PRIORITY

The relentlessly increasing numbers and diversity of natural and technological disasters in the Western Pacific and South-East Asian Regions pose severe, sustained public health threats and result in high numbers of deaths, injuries, infrastructure damage and destruction, personal suffering, high health and economic costs, including loss of livelihoods associated with social and economic impacts on communities as well as

impaired functional abilities of those affected (WHO/WPRO, 2005).

Successful health system responses and ongoing care delivery in disaster situations require nurses to have fundamental disaster competencies that enable their rapid and effective response during times of disasters or catastrophic events as well as in disaster preparedness and risk reduction.

Nurses, working at all levels of the health system, despite having professional ethical and legal responsibilities to take necessary interventions to deal with actual and potential risks to communities and populations they serve, are often insufficiently equipped and inadequately integrated into national disaster policy-making and response teams to fulfill their critical role in disaster prevention, mitigation, response and recovery.

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ASIA PACIFIC EMERGENCY DISASTER NURSING NETWORK

During the seven year span preceding the Wenchuan earthquake of May 2008, in the Western Pacific and South-East Asian Regions, over 1.6 billion people were affected by emergencies and disasters, including epidemics, accidents, earthquakes, wind-storms, waves/surges, floods, slides, droughts, temperature extremes and famine. Over 46 million persons were affected by the Wenchuan earthquake of 12 May 2008; over 69 000 persons died and 6.5 million homes were destroyed (WHO, 2009; WHO/WPRO, 2009). The Asia Pacific Emergency and Disaster Nursing Network (APEDNN) was formed during the *Joint Asia Pacific Informal Meeting of Health Emergency Partners and Nursing Stakeholders* in Bangkok, Thailand, in October, 2007, in response to increasing numbers of people affected by emergencies and disasters and insufficient investments in capacity-building for nurses and midwives, policy-making and actions to prevent and mitigate the devastating effects of such events. The APEDNN represented a key outcome of the 2007 *Joint Asia Pacific Informal Meeting of Health Emergency Partners and Nursing Stakeholders* (WHO/WPRO, 2007), convened by the World Health Organization (WHO) Regional Offices for South-East Asia (SEARO) in collaboration with the International Organization for Migration (IOM), in recognition of the need for coordinated and effective prevention, preparedness and responses, including short-term capacity-building as well as long-term, coordinated efforts (United Nations, 1989; ASEAN, 2005; UN/ISDR, 2005).

APEDNN MISSION, STRATEGIC OBJECTIVES

The APEDNN is envisioned as a leader in the Asia Pacific Region for emergency and

disaster nursing for safer and resilient communities, having a mission to advance a professional network to promote nursing's ability to reduce the impact of emergencies and disasters on the health of communities. The network's objectives are to:

(1) Establish a system for ongoing interaction among members to strengthen collaboration and mentoring.

(2) Collaborate with others in establishing the research agenda for emergency and disaster nursing.

(3) Develop and share tools, materials and training programs in emergency and disaster nursing education, services and research.

(4) Identify best practice standards and develop evidence-based guidelines for emergency and disaster nursing practice.

(5) Work with organizations [including the International Council of Nursing (ICN), the World Health Organization (WHO), leading stakeholders] to implement and validate emergency and disaster nursing competencies.

(6) Implement mechanisms for timely and effective sharing of information and other resources on an ongoing basis, including times of crisis.

(7) Disseminate information on the work of the network to inform and influence the development of emergency and disaster management policy and resource allocation.

Prior to the 2007 Bangkok meeting, participants were emailed a copy of a structured survey tool to assess disaster preparedness issues and challenges faced by nurses and midwives; core activities surrounding disasters and emergencies; quality improvement measures and priority education and training needs. A total of 16 completed surveys were returned from individuals representing 13 countries. Multiple disaster and

curricular domains or areas were ranked as being of highest priority for pre-service and continuing professional development of nurses included (WHO/WPRO, 2007):

- Public health preparedness, including emerging infectious diseases;
- Psychosocial health and disasters;
- Triage, assessment, resuscitation, stabilization;
- Crisis interventions for unique patient populations;
- Basic disaster preparedness concepts; communication, surveillance, monitoring and reporting; and
- Emergency and disaster research.

Subsequent to selected country case presentations, preliminary survey data analysis and plenary brainstorming sessions, 2007 Bangkok meeting participants worked in

groups to prioritize the knowledge and skills required by a team in preparing for and responding to disasters and emergencies, which were clustered by similar content areas or curricular domains (Fig 1).

As illustrated in Fig 1, the APEDNN courses or core domains identified are closely linked with and based upon the ICN Framework of Disaster Nursing Competencies (ICN/WHO/WPRO, 2009), to support capacity-building, assessment and evaluation within the key areas of the disaster management continuum—prevention, mitigation, preparedness, response and recovery, reconstruction and rehabilitation. The curricular blueprint highlights core courses aimed at skill-building at pre-service or entry to practice level as well as for all generalist nurses; advanced practice courses are to be ad-

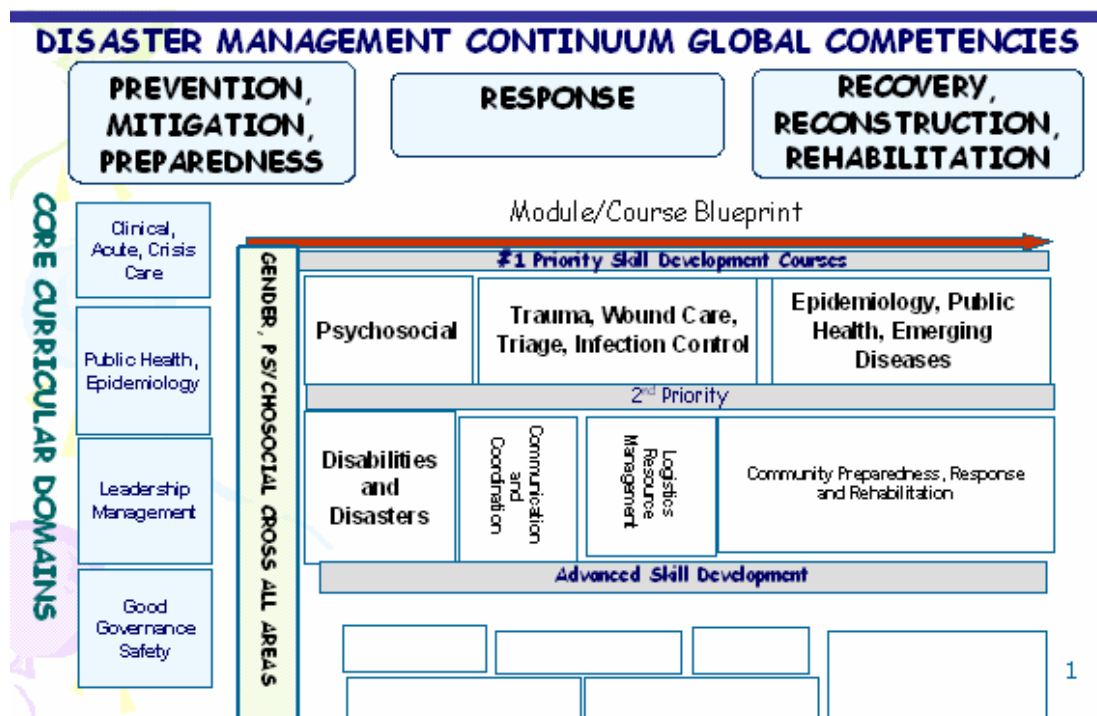


Fig 1–APEDNN capacity-building framework.

dressed over the longer-term.

APEDNN ACTIVITIES AND ACCOMPLISHMENTS

The World Health Organization (WHO) Regional Offices for South-East Asia and the Western Pacific, in collaboration with the Government of China and Shandong University, organized the 2008 Meeting of the Asia Pacific Emergency and Disaster Nursing Network and Health Emergency Partners, held in Jinan, Shandong Province, China, and attended by more than 350 nursing and health leaders, clinicians, academicians, and government representatives from China, as well as those representing countries from four different WHO Regions. The second APEDNN meeting focused on reinforcing and building nursing and midwifery knowledge and skills in psychosocial health management and infectious disease prevention and management in disasters and outbreaks, and in related areas of environmental health, communication, and information management. Network partnerships and membership were strengthened, research presented and progress made evaluated. Outcomes of the network since its formation in 2007 have included but are not limited to:

- Formulation of a standardized, common framework and core curriculum for nursing responses to health emergencies and disasters;

- Strengthening of communication and coordination mechanisms via the network and existing partnerships, enabling rapid proposal development for resource generation, rapid responses, including response team formation, accelerated preparation and translation of training materials and expedited nursing skill-building initiatives following major disasters;

- Participatory psychosocial, mental health disaster and trauma training, inte-

grated with and in addition to, triage, patient assessment and management, infection control and wound care training and evaluation subsequent to the Wenchuan earthquake;

- Furthering of partnerships, collaborative research endeavors, shared capacity-building efforts and knowledge dissemination; and

- Launching of the APEDNN Web Site (bilingual) hosted by Shandong University.

The 2008 APEDNN meeting culminated in the issuance of a Jinan Call to Action by all participants, urging nurses, midwives, all health and development leaders, educational institutions, governments, health and humanitarian organizations, and civil society to take immediate actions to ensure nursing and midwifery integration in emergency and disaster policy-making and national planning, capacity-building, education, and research, including the application of evidence-based guidelines and policies and community disaster prevention, preparedness and response measures, as well as necessary resource mobilization to sustain efforts to address emergency and disaster priorities for safer and more resilient communities.

APEDNN WEB-BASED PLATFORM

The negative impacts of emergencies and disasters can be prevented and/or significantly mitigated through the use of information technologies to enable rapid communication, the gathering, application and dissemination of data and evidence, research, as well as the development and delivery of multi-modal forms of capacity-building courses to support emergency and disaster practice, education, research and advocacy. Utilizing the strengths of computer-based information and communication technology in emergency and disaster

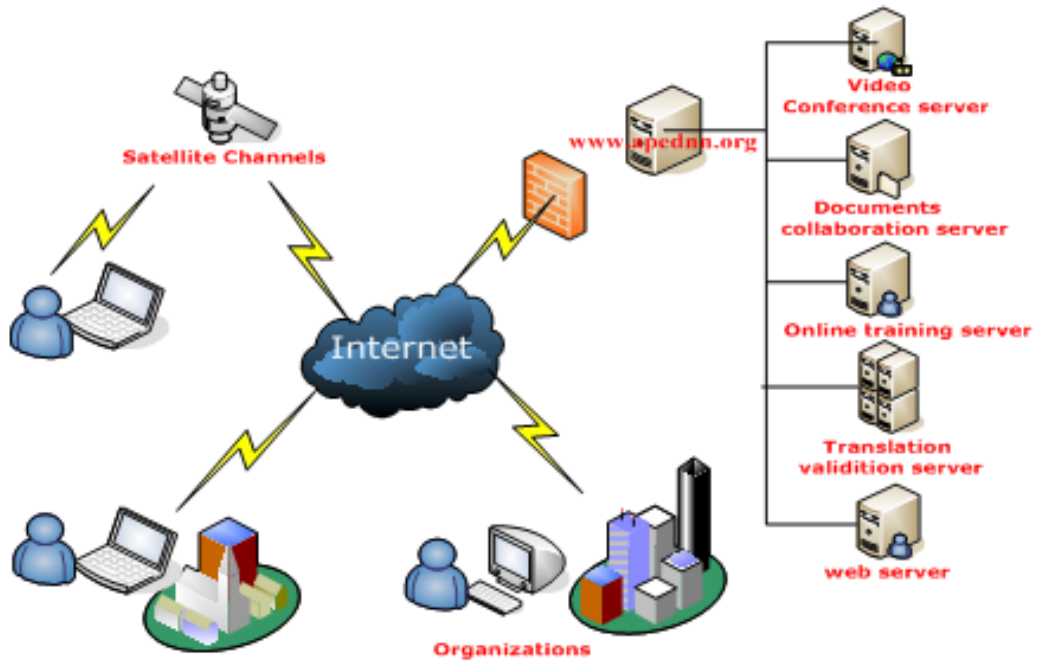


Fig 2–Basic Infrastructure and working mechanism for the APEDNN website.

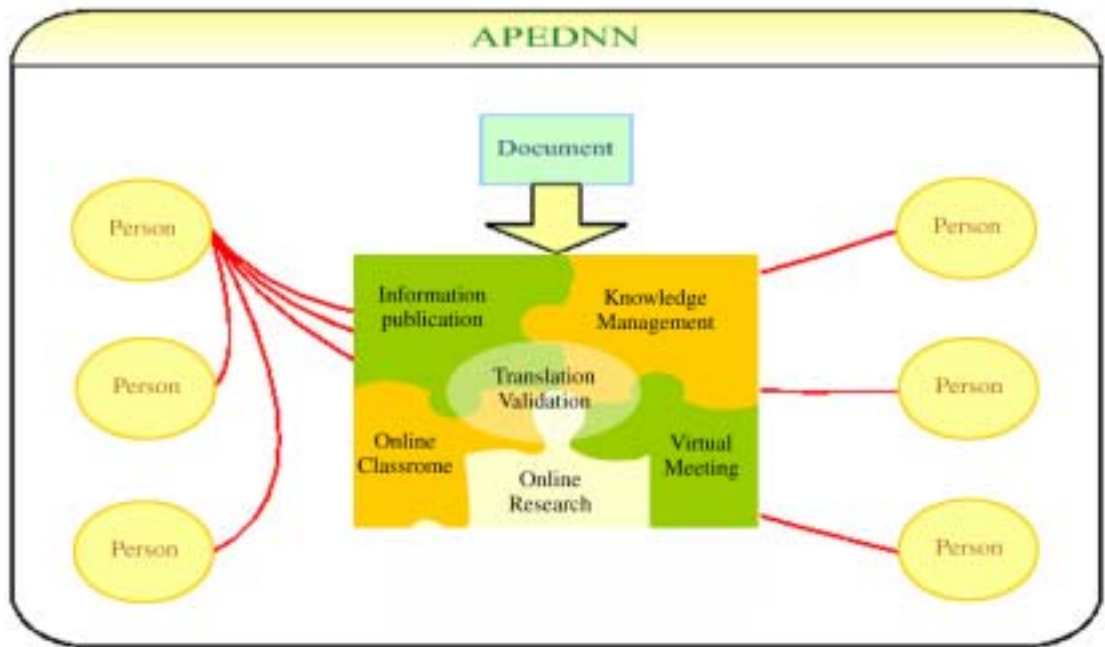


Fig 3–AEDNN functional modules and working mechanisms.

preparedness and response, a web-based APEDNN platform (APEDNN, 2008) was initiated and experimentally launched in 2008 through the joint efforts of the WHO Western Pacific Regional Nursing and Emergency Humanitarian Units and Shandong University.

The APEDNN platform is purposely designed to support the achievement of APEDNN aims and objectives. It is anticipated that the web-platform will:

- Promote sharing of information and resources among APEDNN members and its' partners, WHO officers and other health disciplines through computer, internet and other information technologies;
- Further the development of interdisciplinary networking activities involving different organizations, (eg, WHO, ICN, United Nations Inter-Agency Steering Committee and International Federation of Red Cross and Red Crescent, etc), focusing on disaster and emergency preparedness and responses, to strengthen capacities in coping with threats of disasters and emergencies and mitigating the consequences of such events;
- Provide updated information about disasters and emergencies, including the dissemination of relevant tools, materials and training courses, to improve education, research and practice; and
- Increase the interactions, quality of work processes and productivity among APEDNN members and partners, WHO officers and other health disciplines using a virtual working environment constituted of hardware, software, application programs and the internet.

The APEDNN bilingual (English and Mandarin) platform's basic website infrastructure and its' proposed functional modules and working mechanisms are shown in Figs 2 and 3, respectively.

The APEDNN web platform is designed to progressively better meet the needs of a broad range of users, including health professionals or students, government officers, the public and partners or stakeholders. The functional modules established thus far including Information Publication (eg, news updates, announcements); Knowledge Management (writing and course design using Google Docs Beta[®]); Virtual Meetings[®] (a web-based audiovisual communication tool, Super-V); Translation Validation[®]; Online Classroom[®]; and, Online Research[®] are undergoing upgrading.

Attention is being given to the analysis of the usefulness and impact of the web platform to health professionals and other stakeholders. There remains a strong and urgent need for sufficient resources, inclusive of funding, personnel and technology, as well as supportive cooperative mechanisms for optimal, sustainable web platform operations. The views of some stakeholders interviewed thus far have indicated that persuasive marketing strategies are needed to attract governmental and public attention to the benefits of investment in the development and operations of the web platform. Stakeholders also noted the importance of highlighting ways in which the APEDNN web platform is unique and distinguishable from other emergency and disaster websites. Although the platform is managed by health professionals to support the achievement of the aims and objectives of APEDNN, it can also serve a very important purpose in distributing evidence-based information to strengthen public education and health literacy, as well as meeting the information needs of a variety of governmental and non-governmental stakeholders.

The APEDNN 2009 meeting and capacity-building workshops, planned in collaboration with James Cook University School of Nursing, Midwifery, and Nutrition, took

place in Cairns, Australia from 28 to 30 September, 2009, immediately followed by an Emergencies and Health in the Tropics Conference on 1 October. The theme, disaster preparedness: family, community and health facility, was selected to highlight and address the World Health Day 2009 theme of reducing risks and keeping hospitals and communities safe during disasters and emergencies, including disease outbreaks, which is highly relevant in regions impacted by increasing numbers of emergencies, disasters and disease outbreaks. Concurrent capacity-building workshops enabled core course pilot-testing and the building of participants' knowledge and skills in selected areas of their choice. Capacity-building options included: psychosocial health and disasters; epidemiology, disasters and emerging diseases; trauma, triage, wound care; reproductive health and disasters; and, disabilities and disasters. Infection control, highlighting respiratory disease and outbreak control measures were addressed throughout the meeting and conference.

Recognizing the paucity of evidence in emergency and disaster preparedness and response around the world and the strong need for collaborative research capacity-building as well as evaluation of network contributions and effectiveness, APEDNN members, in the 2009 meeting, analyzed various applicable primary health care associated research conceptual frameworks to guide the work of the network. The network's flexible structure is designed to support integrated non-hierarchical participation, interdisciplinary and community partnerships and empowerment, building on a foundation of agreed-upon priorities and mutual understanding of the need for sustained measurement of common monitoring and evaluation indicators to evaluate and guide interventions and policies to meet population needs for safe and resilient com-

munities.

The APEDNN web platform has vital functions in the generation and dissemination of evidence, as it will have the capacity to support the conduct of online research for relevant members, organizations, and personnel and the sharing of experiences and lessons learned from different disasters in different locations and countries, through maximal use of the latest information technologies.

CONCLUSION

The work of the APEDNN network signifies the value of continual building and strengthening of partnerships, resources, data and evidence to better equip nurses, as well as other health workers, to optimally function in coordinating, leading and furthering community disaster preparedness and response measures, as community organizers, first responders, direct care providers, on-site coordinators of care, information providers and educators, mental health counselors, triage officers and promoters of health, recovery and rehabilitation (WHO/WPRO, 2008).

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