



REPORT

ASIA PACIFIC EMERGENCY AND DISASTER NURSING NETWORK MEETING AND THE THIRD INTERNATIONAL CONFERENCE ON DISASTER NURSING

Seoul and Daejeon, Republic of Korea
21–24 October 2011

An All-Hazards Preparedness Approach to Disasters

Manila, Philippines
August 2012

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An All-Hazards Preparedness Approach to Disasters

Convened jointly by:

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NOTE

The views expressed in this report are those of the participants in the Asia Pacific Emergency and Disaster Nursing Network Meeting and the Third International Conference on Disaster Nursing and do not necessarily reflect the policies of the Organization.

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Keywords

/Disaster planning / Emergencies / Nursing / Relief work /
/Health personnel - education

SUMMARY

In 2007, the WHO Western Pacific and South-East Asia Regions, in collaboration with nursing leaders and partners, formed the *Asia Pacific Emergency Disaster Nursing Network (APEDNN)*, with the aim of providing a network through which emergency and disaster preparedness could be enhanced. Membership is composed of policy-makers, practitioners, researchers, educators, WHO representatives and invited stakeholders who are committed to building disaster preparedness, response and recovery capacities.

The 2011 APEDNN meeting and the Third International Conference on Disaster Nursing, were convened in Seoul and Daejeon, the Republic of Korea, from 21 to 24 October 2011. The meetings were designed to better equip nurses and other health professionals to prepare for and respond to disasters through an all-hazards preparedness approach to disasters. More than 60 participants from 29 countries took part in the meeting. Nineteen countries from the Western Pacific Region and 10 countries from the South-East Asian Region were represented.

Meeting participants were expected to:

- (1) describe how they would apply the vision, objectives and conceptual framework of APEDNN in their work at national and regional levels;
- (2) identify methods of applying APEDNN courses, assessment tools, resources and research processes to plan, implement and evaluate measures aimed at strengthening nursing, health professional and community capacities to prepare for, respond to and recover from disasters;
- (3) acquire new knowledge and skills in addressing public health/emerging disease aspects of disasters; nuclear, biological and chemical disasters and the promotion of psychosocial and mental health during disaster response, recovery and rehabilitation phases; and
- (4) reach agreement on a quality improvement approach to capacity-building, research and evaluation endeavours of APEDNN.

During the meeting and international disaster conference, participants presented case studies of disasters and shared lessons learnt; heard plenary addresses from disaster prevention, response and recovery experts from around the world; viewed videos of disaster response simulated training exercises; were updated on an APEDNN course on psychosocial health and disasters; and had opportunities to practise hands-on skills and to visit a clinical teaching unit of the Armed Forces Nursing Academy.

Outputs of APEDNN, which were reviewed and discussed, included:

- (1) operational application of the International Council of Nurses/WHO *Framework of Disaster Nursing Competencies* (2009) in selected countries;
- (2) formulation of a conceptual framework and standardized core courses for nursing responses to health emergencies and disasters; based on literature reviews, needs assessments and application of core competency sets to key areas of capacity-building;

- (3) strengthening of cross-border 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;
- (4) participatory psychosocial, mental health disaster and trauma training, integrated with and in addition to, triage, patient assessment and management, infection control and wound care training and evaluation subsequent to the Wenchuan earthquake;
- (5) furthering of partnerships, collaborative research endeavours, shared capacity-building efforts and knowledge dissemination (multiple publications by network members);
- (6) launching and sustaining of the APEDNN web site (bilingual) hosted by Shandong University;
- (7) launching of Psychosocial Health and Disaster Training Course, presently being adapted as a Pacific Open Learning Health Network (POLHN) flexible learning course; and
- (8) the planned publication of the APEDNN compilation of case studies, entitled: *Nurses and Midwives in Action during Emergencies and Disasters, Case Studies from the Western Pacific Region.*

Agreement was reached to prepare an APEDNN monitoring and evaluation framework to be presented for discussion during the 2012 meeting. The development of a structured research action framework was also strongly endorsed, along with application for grants to further disaster research capacity-building.

The meeting and conference were made possible through the support of the World Health Organization, the national Research Foundation of the Republic of Korea, the Government of Japan's Voluntary Contribution Funds, Yonsei University as a WHO Collaborating Centre for Research and Training for Nursing Development in Primary Health Care, the Armed Forces Nursing Academy of the Republic of Korea, the Maple Foundation of the Republic of Korea, and Seoul Metropolitan Government.

1. INTRODUCTION

Recognizing the necessity of coordinated, sustained and maximum response to the growing numbers of emergencies and disasters in the Asia Pacific region, the World Health Organization (WHO) Regional Offices for South-East Asia and the Western Pacific, in collaboration with nursing leaders and partners, formed the Asia Pacific Emergency Disaster Nursing Network (APEDNN) in 2007, with the aim of providing a network through which emergency and disaster preparedness could be enhanced. Membership is composed of policy-makers, practitioners, researchers, educators, WHO representatives and invited stakeholders who are committed to building disaster preparedness, response and recovery capacities. The network's 2008 meeting was held in Jinan, Shandong, China. The 2009 meeting was convened in Cairns, Australia, while the 2010 network meeting was convened in Auckland, New Zealand.

The 2011 APEDNN meeting and the Third International Conference on Disaster Nursing were convened in Seoul and Daejeon, the Republic of Korea, from 21 to 24 October 2011. The meetings were made possible through the support of WHO, the National Research Foundation of Korea, the Government of Japan's Voluntary Contribution Funds, the WHO Collaborating Centre for Research and Training for Nursing Development in Primary Health Care at Yonsei University, the Armed Forces Nursing Academy of the Republic Korea, the Maple Foundation of the Republic of Korea, and the Seoul Metropolitan Government. The meeting aimed to equip nurses and other health professionals with essential skills to prepare for and respond to disasters through an all-hazards preparedness approach.

1.1 Participants

The APEDNN meeting was attended by more than 60 participants from 29 countries: 19 countries from the Western Pacific Region and 10 countries from the South-East Asian Region. The full list of participants is found in Annex 1.

1.2 Expected outcomes

By the end of the meetings, participants were expected to have:

- (1) described how they would apply the vision, objectives and conceptual framework of APEDNN to their work at national and regional levels;
- (2) identified methods of applying APEDNN courses, assessment tools, resources and research processes to plan, implement and evaluate measures aimed at strengthening nursing, health professional and community capacities to prepare for, respond to and recover from disasters;
- (3) acquired new knowledge and skills in addressing public health/emerging disease aspects of disasters; nuclear, biological and chemical disasters; and the promotion of psychosocial and mental health during disaster response, recovery and rehabilitation phases; and
- (4) reached agreement on a quality improvement approach to capacity-building, research and evaluation endeavours of APEDNN.

The meeting agenda is included as Annex 2.

2. PROCEEDINGS OF THE 2011 APEDNN MEETING

2.1 Day One: Friday, 21 October 2011

2.1.1 Opening ceremony

Congratulatory addresses were delivered by Mrs Kathleen Fritsch, Regional Adviser for Nursing, on behalf of the Dr Shin Young-Soo, WHO Regional Director for the Western Pacific; Hae-Kyong Shin, Brigadier General and Superintendent, Armed Forces Nursing Academy; and Chul Lee, Vice-President for Health Sciences, Yonsei University.

The keynote address by Gale Pollock, Major General (retired) and former interim Surgeon General, United States of America, focused on visual impairments and blindness as conditions representing a spectrum of emergencies and disasters, such as those caused by nature as well as those that develop slowly, resulting from natural or genetic causes. Accidents or acts of violence leading to eye trauma, for example, require an emergency response. The response, as in all disasters, focuses on communication, often involving other sectors, other essential personnel and the media.

Mr Pollock stressed that visual loss resulting from trauma is just the tip of the iceberg, as visual impairments arising from disease are slowly impacting persons around the world. Visual impairment, one of the top 10 disabilities in the United States of America and many other countries, has been given much more attention since the launch of the Decade of Vision in 2010. Multiple co-morbid conditions cause and/or accompany vision loss. These co-morbid conditions may include depression, diabetes mellitus, hypertension and other cardiovascular diseases, hearing and musculoskeletal disorders.

Communication and social interaction skills and techniques needed to interact fully with persons with disabilities during emergencies and disasters are typically not taught to health professionals.

The costs are high for persons with visual disabilities, in terms of direct medical costs as well as the indirect costs of accessing health care, lost productivity and informal supportive care costs. Persons with disabilities struggle to find ways of contributing to society and are sometimes neglected by friends, families and others. When left in isolation or without a feeling of being a contributing member of society, some persons may choose to withdraw further or to no longer be a burden. Of utmost importance is learning how to make persons with visual impairments feel that they are important, contributing members of society.

The common causes of visual impairment globally were reviewed, including cataracts and age-related macular degeneration. Macular degeneration, resulting in difficulties in reading and loss of facial recognition and central vision, is the leading cause of vision loss of persons aged 60 and over in a number of countries. Glaucoma causes blindness in more than 6 million people worldwide. Other causes of visual impairment and loss include retinitis pigmentosa and diabetic eye disease.

As health professionals, our engagement with governments, other health care professionals, the media and social networks is vitally important to make use of all opportunities

presented in addressing the natural disaster of vision loss. Persons affected with visual impairments need the same type of disaster support and collaboration to solve the problems associated with functional impairments. Major General (retired) Pollock challenged listeners to have very “bold” thoughts about how to address emergencies and disasters, no matter what the cause. Importantly, persons with disabilities must have access to information and advocacy to help them achieve their highest quality of life and functioning, thus enabling them to maintain or return to active life in their communities.

The discussion following the keynote address elaborated on methods of furthering communication and advocacy with governments and stakeholders to address problems surrounding health disasters. In terms of advocacy, it was suggested to present the problem with supporting data or evidence, explain why it is important and offer potential solutions to address the problem in a collaborative manner.

To address the needs of persons with vision loss, it was suggested to use a patient-centred approach. First, start talking about vision impairment so that people become aware of the problem and begin to understand it. Second, bring together people who are struggling with vision loss and ask what can make their lives better. Ask what services and support are needed and identify people and organizations that can help. Bringing persons with vision loss together with agencies and nongovernmental organizations can further a shared understanding focused on the actual needs of those experiencing visual loss. Involving the media and strengthening networks and relationships can further communication, understating of needs and necessary support.

Mr Michael Larui, National Director of Nursing, Solomon Islands, noted that eye injuries are a common cause of blindness in the Pacific Islands, and described the creation of a primary health care prevention of blindness and eye care programme. The government officer coordinating the programme is blind. Mr Larui re-emphasized the importance of ensuring that persons with visual loss are given full opportunities and are not seen as “disabled”. Such persons can become role models and mentors for others.

Ms Hillia Langrine, Deputy Chief Nurse Public Health, described eye problems related to diabetes and other causes in the Marshall Islands. Though the country has “one-stop shopping” for health, there are unmet needs for corrective lens prescriptions and eye surgery. She expressed interest in learning how to go about increasing nursing capacities in the area of blindness prevention and eye care. Offers of technical support were put forth.

Mr Johnny Aldan, President of the American Pacific Nursing Leaders Council (APNLC), explained that APNLC nurse leaders recognized the seriousness of noncommunicable diseases in the Pacific islands and were taking concerted action at the national level to address health issues surrounding them. Public health and school nurses in the Commonwealth of the Northern Mariana Islands constitute 'WOW' teams, stationing themselves where people usually exercise in the evenings in order to check blood sugar levels, blood pressure and vision and to provide preventive health education.

2.1.2 Role of APEDNN in emergencies and disasters

Following participant introductions, Ms Kathleen Fritsch, Regional Adviser for Nursing, WHO Regional Office for the Western Pacific, provided an overview of the development of APEDNN, its vision, mission statement and strategic objectives. Outcomes of the network include:

- operational application of the International Council of Nurses (ICN)/WHO *Framework of Disaster Nursing Competencies* (2009) in selected countries;

- formulation of a conceptual framework and standardized core courses for nursing responses to health emergencies and disasters, based on literature reviews, needs assessments and application of core competency sets to key areas of capacity-building;
- strengthening of cross-border 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, integrated 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 endeavours, shared capacity-building efforts and knowledge dissemination (multiple publications by network members);
- launching and sustaining of the APEDNN web site (bilingual) hosted by Shandong University;
- launching of Psychosocial Health and Disaster Training Course, presently being adapted as a Pacific Open Learning Health Network (POLHN) flexible learning course; and
- the planned publication of the APEDNN compilation of case studies, entitled: *Nurses and Midwives in Action during Emergencies and Disasters, Case Studies from the Western Pacific Region.*

A draft monitoring and evaluation framework for the network was presented for discussion during the meeting, as well as action planning for a more structured research action framework.

2.1.3 Training in emergency and disaster nursing in South-East Asia Region

Dr Prakin Suchaxaya, Regional Adviser for Nursing and Midwifery, WHO Regional Office for South-East Asia, and colleagues delivered presentations on emergency and disaster work under way in South-East Asia. A review of nursing/midwifery pre-service curricula has been carried out in all countries, utilizing the ICN/WHO *Framework of Disaster Nursing Competencies*. Though all curricula have some relevant content on emergencies and disasters, and more integration following the 2009 Indonesia earthquake and widespread tsunami, overall, coverage is quite variable—ranging from 1.5 to 2.0 hours of disaster theoretical courses to courses combined with 30 hours of drills and practice. While most courses focus on nursing/midwifery emergency and disaster functions such as initial treatment in facilities, missing areas include community preparedness, psychosocial health and disasters, and rehabilitation.

The WHO South-East Asia Region convened a meeting of experts on emergency and disaster nursing in September 2011. A key outcome of the meeting was the recommendation that a course on disaster nursing should be a part of all nursing/midwifery curricula, whether it is a stand-alone course or content integrated into the curricula. The competencies to be attained through such courses were seen to be the basic disaster-related competencies common to all areas of nursing practice, rather than advanced-level skill-sets. Emphasis was placed on the need to ensure that students have adequate practice time for skill acquisition, whether via drills, simulations or other exercises. A decision was made to focus regional disaster-related nursing

work in 2012 on community empowerment and preparedness, using a primary health care approach. Nursing management during disasters will also receive increased attention.

Disaster-related continuing professional education is under way in some South-East Asian countries, including Indonesia and Thailand. The Indonesian Ministry of Health, in collaboration with WHO, offers basic and advanced disaster courses for nurses. Despite the ongoing courses, only 1000 nurses have been trained to date. In Thailand, the Nursing Association and the Nursing Council have organized training courses in collaboration with training institutions to prepare master trainers to go back to their home jurisdictions and train others.

Ms Nirmala Singh, Principal of the College of Nursing, RML Hospital, New Delhi, India shared essential disaster-related knowledge and activities at the RML college and hospital, including:

- staff awareness of the definitions and types of disasters;
- systems to provide prompt and effective medical care to disaster victims, including a disaster management committee and a disaster control room;
- organization of disaster simulations and exercises to improve response mechanisms and efficiency;
- collection, collation and dissemination of information to and from the emergency or disaster control room;
- activation of a disaster plan and the following of a “chain of command” under the supervision of the medical superintendent, to ensure the deployment of a rapid response team composed of doctors, nurses and paramedical personnel, inclusive of:
 - blood bank preparations
 - ambulance services
 - triage team available for on-site triage;
- having a logistical support system in place to support the overall coordination and monitoring of materials, supplies, rooms, stretchers and wheelchairs, operating theatre use, supplies, consumables;
- provision of essential services—water, generator or other power supplies for power, lighting, decontamination, use of personal protective equipment (PPE); and
- communication, including with the media, and crowd management.

2.1.4 Emergency and disaster nursing: Are we adequately prepared?

Professor Aiko Yamamoto, University of Hyogo, Japan, started her presentation by sending greetings and thanks to members of APEDNN for the support given to Japan during its recent earthquake and tsunami disaster.

Professor Yamamoto defined disasters as widespread human, material, economic or environmental losses and impacts that exceed the ability of the affected community or society to cope using its own resources (United Nations International Strategy for Disaster Reduction, 2009). During the recent earthquake–tsunami disaster in East Japan, health systems and capacities in general and nursing in particular were put to the test. The Japanese Nursing

Association, together with government bodies, coordinated with the prefectural nursing associations to provide support and response to evacuation centres and nursing associations in the affected prefectures.

To augment the lack of staff in affected areas already experiencing workforce shortages and further losses due to the disasters, a policy was formulated to organize disaster relief nurses to provide direct support to evacuees at evacuation centres over a 24-hour period, to address key health and welfare challenges brought about by the earthquake–tsunami disaster. The key activities of the disaster relief nurses included: (1) dealing with the medical crises of evacuees, arranging and supporting medical care; (2) providing care to evacuees at the evacuation centres who needed ongoing medical and nursing care (such as the prevention of bed sores); (3) assessing infectious diseases, maintaining and improving environmental sanitation and preventing the spread of infection and infectious diseases through personal and hygiene measures, immunizations and infection prevention and control practices; (4) monitoring the daily living situation of evacuees at evacuation centres; (5) gathering and disseminating information; and (6) undertaking actions to address procurement needs for supply shortages.

The fundamental disaster nursing competencies required for nursing practice in the evacuation centres covered five main areas:

- (1) fundamental attitudes toward disaster nursing—competencies that should form the foundation for disaster nursing activities;
- (2) systematic assessment and provision of disaster nursing care—competencies for systematically implementing disaster nursing activities in different phases in the disaster cycle;
- (3) care provision for vulnerable people and their families—competencies for providing assistance to vulnerable groups who require assistance in times of disaster and their families;
- (4) care management in disaster situations—competencies for creating a system for providing medical and nursing care in times of disaster; and
- (5) professional development—competencies that contribute to the creation of knowledge on disaster nursing and the ability to develop one's own skills.

Professor Yamamoto ended her presentation by discussing the next recovery steps, including system construction and human resource development. System construction includes the development of networks and partnerships for collaboration with related work areas and sectors beyond the nursing community; the establishment of rules for comprehensive instructions for prescription (anticipated medications) and other matters to maximize the nursing function; and APEDNN network vitalization. Human resource development in Japan will focus on refining the core competencies of disaster nursing and identifying the appropriate disaster nursing curriculum for basic nursing education. Examination of advanced practice disaster nursing competencies for postgraduate education is also planned, together with curricular preparation.

Dr Orapan Thosingha, Assistant Professor, Mahidol University, Thailand and Thailand Nursing Association Committee member, outlined the national disaster preparedness and response structure and related activities. The National Civil Defence Committee, which heads overall disaster work, is coordinated by the Department of Disaster Prevention and Mitigation, Ministry of the Interior, which directly coordinates with the National Safety Council and the

National Disaster Warning Centre. The Government of Thailand coordinates disaster assessment, support and research throughout the country.

Thailand's National Centre for Disaster Nursing, established by the Nursing Council of Thailand after the 2009 tsunami, aims to strengthen disaster nursing throughout the country through its administrative and working committees. Nurses undertaking disaster-related training must commit to expanding the national disaster nursing network and to working operationally to train others and disseminate knowledge and skills. The centre collaborates with the Division of Nursing of the Ministry of Health, the Royal Thai Air Force, the Thai Red Cross and the National Department of Disaster Prevention and Mitigation. The centre has also translated into Thai the ICN/WHO *Framework of Disaster Nursing Competencies*.

Five-day disaster nursing training-of-trainers (TOT) courses have been offered since 2009. Course content includes on-the-scene assessment and triage, pre-hospital care, advanced life support, and evacuation and transport. The continued training of others is a requirement of the course. Certified trainers must continue training others to gain and maintain their certification. More than 1000 nurses have undergone TOT training to date. Evaluation of training outcomes is planned.

The National Centre for Disaster Nursing has been quite busy disseminating information during the recent floods in Thailand. The centre's web site provides information for nurses and the public. Nurses are advised to take care of themselves and families before responding to a disaster. A number of nurses involved in disaster relief have received national recognition for their work. Several gaps in disaster response have been noted: ensuring the safety of responders as well as disaster preparedness plans and support for the families of nurses and other personnel; ensuring adequate rest for responding nurses who have become exhausted from working long hours during disasters; and fuller involvement of psychosocial and mental health nursing personnel in disaster training and as members of response teams.

Dr Sheila Bonito, Assistant Professor, University of the Philippines, presented the network's vision, mission and objectives in relation to the ecological conceptual framework of APEDNN, which was envisioned in Bangkok in 2007, presented by Dr Beth Marks in 2008, and amended during the 2010 APEDNN meeting in Auckland. The ecological conceptual framework, in its modified format, is meant to support the monitoring and evaluation of network activities, outcomes and impact. The slightly modified framework enables assessment of the local context, responders and system factors from the perspective of risk and capacity assessment.

Risk assessment involves community profiling and the identification of hazards, risks and vulnerabilities. Capacity assessment is about the availability of risk assessments, emergency preparedness and response plans, capacity development activities and policies and guidelines related to emergency and disaster management. Actions and interventions include capacity-building, service delivery, policy development, research and collaboration. Thus, the framework proceeds from the identification and analysis of contextual factors, to actions or interventions and outcome measures.

APEDNN Ecological Framework Revised 2011



A draft monitoring and evaluation framework was also presented. The framework is based on the Basic Logic Model and is linked to the network's vision, strategic objectives and ecological conceptual framework. The monitoring and evaluation framework is composed of benchmarks or standards in key strategic areas: (1) community empowerment, assessment and profiling; identifying hazards, risks and vulnerabilities; (2) capacity assessment and development; (3) provision of nursing care during emergency response, recovery and rehabilitation; (4) policy development; (5) research and dissemination of knowledge; (6) communication and collaboration with other institutions and network members as well as with in-country partners; (7) equity; and (8) sustainability. Data reporting and analysis in terms of monitoring and evaluation will enable the documentation of resources, inputs, processes or activities, outputs, outcomes, and impacts in each of the strategic areas. Further inputs and comments about the proposed evaluation framework were invited. The monitoring and evaluation framework will be developed further by the APEDNN core working group and will be presented again to the APEDNN group at large prior to its piloting.

A stimulating discussion followed the presentations of the three speakers. Mr Michael Larui, National Director of Nursing, Ministry of Health and Medical Services, Solomon Islands, commented that so much was happening in Thailand and Japan and asked how the network could further the operational work of smaller island nations. Guidance in the area of research and disasters was suggested as a means to improve research capacities of provincial community health nurses and to further research focused on communities and disasters.

The question posed by Mr Larui led to further discussion. It was suggested that more participants be encouraged to join the network. Furthermore, it was suggested to use the monitoring and evaluation framework as a data source in seeking sources of support; to form other organizational partnerships; and to further the involvement of schools and governments. Other contributions to the discussion included the following:

- It is the responsibility of countries to adapt materials and courses. Of course, reporting back on what is being done at country level is also important.
- Response efforts of the network must be more than going to a country and saying, "We are here to help," but rather the network may wish to study the policies of

different countries. It should also explore volunteerism and how to deploy personnel to other countries.

- More preparation from the network is needed for deployment to other countries.
- There are many areas for research. It is important to find out what they are and to carry out research relevant to our settings.
- Sustaining the network is very important. To sustain a network, for example, requires economic sustainability. There is a need for more resources. Monthly communication via e-mail and enhanced communication between meetings were suggested (Y Zang).

Ms Pelenatete Stowers from the Ministry of Health, Samoa, stated: “What you have said depends on us as nursing leaders in each of our countries.” She encouraged colleagues from the Pacific islands to use the network “connections” to advance work in their own countries. She gave an example of how Samoa recently involved a network resource person and trauma expert, Ms Lisa Conlon from the University of Technology Sydney, to carry out a national capacity-building activity for its nurses.

Sustainability was described as being of key importance and as being “dependent on moving forward yourself, building on your learning and your mistakes and moving ahead nationally, using the network, the guiding framework and related support”. In Samoa, the ICN/WHO disaster nursing competencies were merged with the country’s nursing competencies to form the right mix of competencies for the Samoan context. The competencies are still in draft form. The Samoan nursing leaders are determining whether to integrate the competencies into their undergraduate nursing programme or to have them separate, for a variety of reasons. For example, competencies are used in Samoa to “credential” nurses on an annual basis and it is important to see if emergency and disaster competencies are part of the overall competency set.

Nurses in Samoa thought they had sufficient competencies in place, but when the 2006 tsunami struck on a distant beach, far away from a health facility, it became apparent that the competency set had to be revised. Thus nurses faced many challenges in working on an actual disaster site. Most notably, they had to apply the principles of triaging without the availability of medical supplies. Thus, the aim of the Samoan nurses post-tsunami was to adopt competencies and principles that would enable nurses to function anywhere. Transportation challenges also made it difficult for nurses to reach affected outer villages and outlying sites.

Ms Stowers commented that a monitoring and evaluation framework needed to be both general and specific enough to suit local contexts. Ms. Stowers went on to say that in order to facilitate getting assistance, we need evidence to show whether going to meetings and getting support makes any difference.

Dato' Fathilah binti Abd Wahad, Director of Nursing, Ministry of Health, Malaysia, raised a question concerning licensing examinations and whether they should apply to post-basic trauma and emergency training, as Malaysia has six-month training for emergency/trauma skills. She went on to congratulate the Nursing Council of Thailand and its national nursing disaster committee for their work. In recognizing Thailand, she stressed that laws should be passed to allow nurses to govern themselves, with regulations established by their nursing council. Serving as a regulatory body, the nursing council would declare standards of practice, curricular standards and necessary academic credits, training requirements and competencies. In Malaysia, nursing competencies have been changed to be more comprehensive, humanistic, holistic and based on the principles of primary health care (PHC). Nurses in PHC advanced nursing practice have to pass another four months of training. The four months of training is based on the

semester length for universities conducting the course. The duration of training has been cut to fit within a semester schedule.

Mr Johnny Aldan, President of APNLC, addressed the need for standardized policies and procedures across countries to ensure preparation for responding to disasters. He went on to suggest that if the network does not have communications with national lawmakers, attempts should be made to create legislation to enable nurses to go to places involving disasters.

Indonesian participants stated that disaster recognition was very low in their country and that they did not have the tools to enable them to do disaster assessments for hospitals and communities. They also noted that children and the elderly are often forgotten, with older people sometimes left behind during times of disasters.

Setting up a shared incident command system for members and countries was suggested. A request was made to determine how the network could facilitate such a shared incident command system. Communication, coordination and collaboration with other sectors and partners, such as the United Nations Health Cluster, were identified as being essential in furthering more coordinated and efficient disaster plans and responses.

2.1.5 Psychosocial and mental health in emergency and disaster nursing

The concept of “resilience building” in disaster nursing was presented and explored by Dr Yuli Zang of Shandong University, China. Resilience building is receiving growing attention because of increasing numbers and magnitudes of adverse events occurring globally. Dr Zang traced the evolution of the word “resilience” from the Latin verb “resilire” to the modern day meaning of “capacity to withstand shocks, perturbations and rebuild itself”.

From the individual perspective, resilience is seen as the ability of a person to maintain relatively stable levels of psychosocial and physical functioning. Frameworks for developing resilience include the Broussard and Myers model¹ on developing resilience for school nurses experiencing repeated disasters; Gillespie's² concept analysis of the outcomes of resilience; and Chen's³ study of contributory factors to psychological resilience after the 1976 Tangshan Earthquake in China.

Community perspectives of resilience involve a complex interaction of individuals, families, groups and the environment. Contributory factors include proximity to hazards, poor, inadequate or dense construction, economic health and the demographic-social profile of residents. In contrast, an organizational perspective of resilience addresses the need to respond to a rapidly changing business environment. Successful organizations understand the dynamic nature of business environment, and are able and willing to adapt to sudden and large changes.

¹ Broussard L and Myers R. School nurse resilience. *The Journal of School Nursing*, 2010, 26: 203–211.

² Gillespie B, Chaboyer W and Wallis M. Development of a theoretically derived model of resilience through concept analysis. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 2007, 25:124–135.

³ Chen J, Yang X and Wang J. Preliminary study on psychological resilience of survivor after a catastrophe: a case study of 1976 Tangshan earthquake. *Journal of Natural Disasters*, 2008, 17:86–91.

Finally, disaster resilience is defined as the ability of a system, community or society to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner, including preservation and restoration of its essential basic structures and functions.⁴

From a nursing perspective, disaster resilience is about nurses not only being resilient individuals, but also increasing their clients' resilience within ecosystems and helping improve community and health system resilience.

Professor Kim Usher, Director of Research, James Cook University, Australia, discussed disaster-related psychosocial needs and the increased prevalence of mental health problems associated with emergencies and disasters. Studies have shown an increase in prevalence of psychosocial problems after disasters, ranging from mild psychological and social distress to severe mental disorders.

In the short term following disasters, people of all ages, including children, may have difficulty with planning, decision-making, setting priorities and anticipating future needs. Those impacted by disasters may also experience delayed emotional reactions or their reactions may be displaced to unimportant things. There can also be considerable strain placed on families.

Medium-term psychosocial responses to disasters, occurring weeks to months following an emergency, may be characterized by people going through a wide range of emotions including intense distress, grief, fear, sadness, anger, uncertainty and insecurity about the future. During this stage, people may react strongly to political or community events. People may often feel overloaded or in a state of constant stress.

Long-term responses, occurring months to years after a disaster, are also possible and may only become obvious after a year or longer. They can involve economic hardship; poor health; depression; relationship problems; developmental, academic and behavioural problems in children; loss of satisfaction from leisure and recreational activities; loss of friendship networks; loss of sense of direction in life; and continuing disturbing memories of the disaster.

Post-trauma symptoms include (1) reliving the trauma over and over again through visions of the incident, nightmares or flashbacks; (2) avoiding situations that remind them of the trauma; (3) increased arousal, irritability or inability to sleep; (4) feeling emotionally distant from people; (5) feeling depressed or losing interest in usual activities; and (6) experiencing difficulties in their relationships or inability to return to work.

Professor Kim Usher then described supportive nursing interventions, which may include the following:

- Reassure the person that their reactions are normal, can be treated and they are not going crazy.
- Determine if the person has any other mental health problems, for example, depression, and provide treatment.
- Encourage the person to talk with others. They may be fearful of talking with others because they do not want others to know how they are feeling, or because talking to others causes flashbacks.

⁴ Birkmann J. *Measuring Vulnerability to Natural Hazards: Towards Disaster Resilient Societies*. New York, United Nations University Press, 2006.

- Help the person solve other problems in their life (for example, assisting the person obtain housing), as post-trauma symptoms are worsened by other stressors.
- Allow the person to talk about the event.
- Establishing groups for people who are having difficulty coping can encourage people to talk to others, as well as promoting friendships and helping people understand that they are not alone.
- Encourage the person to confront uncomfortable situations. For example, it may be helpful to revisit the site where the trauma occurred. If necessary go with the person, or encourage him or her to take someone trusted.
- Help the person deal with uncomfortable symptoms. For example, educating the person about sleep disturbances and remedies may be of assistance. Alternatively, sleeping tablets could be used, but only for short periods.
- Avoid prescribing benzodiazepines such as "Valium". If symptoms do not resolve or the person is very distressed, refer to a mental health specialist or a more experienced health worker.

Professor Kim Usher announced the availability of a psychosocial course developed for APEDNN, which includes case studies, slide shows and interviews. Portions of the course were presented through electronic linkage. Participants viewed an interview with a Pacific island nurse who had responded to a disaster as she relayed her experiences and feelings. Participants were encouraged to make use of the course at national levels and to document those trained, soliciting feedback about the course and evaluating outcomes after undertaking psychosocial health and disaster training.

The discussion following the two presentations addressed questions as to whether the resilience concept analysis might vary according to the age group being studied and the differentiation between individual and collective resilience. Concurrently, collective resilience such as community resilience is formed by persons with individual perceptions of resilience. Participants emphasized the need to work together with communities to understand the culture of the people impacted by disasters and to translate that understanding into the provision of culturally competent care supporting the strengthening of community resilience. Mainstreaming of people with disabilities and other vulnerabilities was highlighted in relation to strengthening resilience. Policy requirements for dead and missing persons were also discussed, in terms of protecting the cultural and religious practices of affected communities and nations.

2.2 Day Two: Saturday, 22 October 2011

2.2.1 Day 1: Summary, highlights and reflections

During the summary and reflection session on Day One, participants from the South-East Asia Region stated their aims to: (1) advocate for the role of nurses and midwives in emergency and disaster care; (2) include disaster management in pre-service nursing curricula and scale-up continuing education in disaster nursing; (3) promote multisectoral collaboration in support of full nursing and midwifery involvement in emergency and disaster prevention, response and recovery; and (4) carry out research and build the evidence base in support of emergency and disaster nursing. It was also recommended that psychosocial and mental health be fully integrated into disaster preparedness and response work. Meeting participants agreed with the recommendations.

2.2.2 Multidrug-resistant infections and newly emerging diseases

Ms Kathleen Fritsch delivered a presentation on antimicrobial resistance (AMR), addressing the scope and seriousness of the situation, associated statistical data, factors contributing to the extremely serious situation, and actions needed to save lives. Statistical data illustrated escalating AMR trends, including drug-resistant tuberculosis globally and in the Asia Pacific Region. Consequences, in terms of mortality, morbidity and financial losses were analysed.

The human activities exacerbating AMR discussed included:

- inappropriate antimicrobial use in chemotherapy;
- use of a narrow repertoire of antimicrobials on most patients;
- antimicrobial misuse and abuse in human beings;
- agricultural antimicrobial use and misuse;
- use of poor quality antimicrobials;
- inadequate infection control in health-care institutions;
- shortfalls in hygiene, sanitation and public health; and
- lack of surveillance and consequent late detection.

Survey results of high levels of inappropriate prescribing and use of antibiotics as well as problems associated with fake or substandard antimalarial drugs were reviewed as well as the significant increase in risk of infection with a resistant organism following previous antibiotic use.

Health care associated infections (HAIs) are the most frequent adverse event in health care worldwide, with a significantly higher endemic burden of HAIs occurring in lower- and middle-income countries as compared to high-income countries. Meeting participants readily identified types of patients being at higher risk for HAIs as well as many reasons for the higher risk of HAIs in limited resource settings and lesser-developed countries. Solutions to the escalating HAI problem were identified and discussed. Technical tools and guidelines available include various WHO patient safety and safe injection guidelines, the WHO Western Pacific Regional Infection Control Assessment Tool and Tool-kit as well as the recently launched WHO Patient Safety Curriculum, applicable to all health professional curricula.

2.2.3 Public knowledge and attitude regarding antibiotic use in the Republic of Korea

Dr So Sun Kim, Dean and Professor at Yonsei University College of Nursing, presented her research on antibiotic use in the Republic of Korea. Even though the Government of the Republic of Korea has implemented many national educational campaigns on the appropriate use of antibiotics targeting the general public, the effectiveness of such campaigns has never been evaluated. In her study, which was funded by the Korea Food and Drug Agency (KFDA), Dr So Sun Kim attempted to assess the knowledge and attitude of the general public toward antibiotic use.

Drug resistance infection has become a top public health problem in the Republic of Korea and a pressing medical emergency globally. Overuse and misuse of antibiotics cause resistance. According to one study, more than 50% of physicians prescribe antibiotics for the simple cold, and two-thirds of the general public in the Republic of Korea believe that antibiotics are helpful in treating the common cold. In order to fight against improper use of antibiotics and other resistance-associated problems, KFDA organized a national antimicrobial resistance experts

committee (NAREC) in 2003. Efforts to reduce antibiotic resistance must include educating the public on the appropriate use of antibiotics.

Dr So Sun Kim carried out a face-to-face survey on knowledge and attitude regarding antibiotic use with 1500 non-institutional adults in the Republic of Korea. The results showed that adults aged 40–59 years, the elderly, and those of lower socioeconomic or educational status had poor knowledge and attitudes toward antibiotic use. Even though the Government had carried out a national campaign, only 12% of those surveyed reported they knew about the programme. It is necessary to use different strategies for different groups of persons. There are several educational programmes implemented for physicians and the general public. The KFDA web site lists the number of antibiotic prescriptions by private physicians. One major policy resulting from the study was the development of a health course for primary and secondary schools in the Republic of Korea. The KFDA and the Ministry of Education mandated a course on the right use of antibiotics. School nurses are taking part in teaching the course. Since there is a significant correlation between level of knowledge and appropriate use of antibiotics, it is important to educate professionals and the general public.

2.2.4 Lessons from the recent emergencies and disasters

Dr Sheila Bonito shared experiences and lessons learnt from recent floods and typhoons in the Philippines. She focused on community resilience, factors that can increase the resilience of communities and policy issues. Over the past 20 years, the Philippines have had more than 100 tropical cyclones and almost 80 times that number of major floods. In two decades, tropical cyclones claimed almost 10 000 lives and affected more than 60 million people. Approximately 20 typhoons enter the Philippines every year, with nine making landfall, causing around 20 flood events in Metro Manila.

Ms Bonito focused on the most recent typhoons, Nesat and Nalgae, to explain the impact of and response to the typhoons. Typhoon Nesat sustained maximum winds of 194 kph and affected Luzon including Metro Manila. It caused 83 deaths, 73 injuries, affected 254 412 people, and caused property damage worth US\$ 333 million, including some major damage to health facilities. Typhoon Nalgae sustained maximum winds of 160 kilometres per hour. It caused 18 deaths, affected 143 702 people and caused property damage reaching US\$ 333 million.

Response efforts were made at the national, regional and local levels based on 12 health cluster approaches: nutrition; water, sanitation and hygiene (WASH); health; emergency shelter; camp management; protection; early recovery; logistics; food; agriculture; livelihood; and psychosocial clusters. Ms Bonito explained detailed efforts of some of these clusters:

- **WASH:** The Department of Health Emergency Management identified a need for access to safe water and solid waste management in evacuation centres. The United Nations Population Fund (UNFPA) supported the medical missions in flooded areas and the Philippine Red Cross provided hygiene kits.
- **Health:** The Department of Health deployed mobile medical teams to affected communities and evacuation centres and started prophylaxis against leptospirosis in selected areas. The Department of Health also conducted epidemiological investigation of suspected cases of leptospirosis and measles reported by the early warning system.
- **Nutrition:** Nutritional assessments were conducted and breastfeeding was encouraged in evacuation centres.

- Food: Relief food assistance amounted to US\$ 2.9 million, which supported 5764 families in 64 evacuation centres and 52 983 families outside of evacuation areas.
- Agriculture: The Department of Agriculture conducted field validation and damage assessments of rice fields and food crops.
- Camp coordination/management: Relief materials of 820 jerry cans, 209 family hygiene kits, and 600 household kits were distributed.
- Education: The United Nations Children's Fund (UNICEF) prepared 50 early childhood care and development packs, 1450 elementary school packs, 800 high school packs and 20 elementary library book sets.
- Logistics: The Department of Social Welfare and Development delivered 20 000 family food packs of 4.6 kg each and the World Food Programme purchased rubber boats to reach remote areas.

The response of the nursing sector included: active participation of hospital nurses in providing emergency response and keeping hospitals functional; involvement of public health nurses in providing primary health care services in evacuation centres; and creation of a master's degree courses in health emergency management at the University of the Philippines, Bicol University.

From the experience, the Philippines learnt the importance of rapid health assessments, information management of early warning system and service provision, health promotion and prevention of waterborne diseases and leptospirosis, and health sector coordination, which was demonstrated by the cluster approach that brought together different governmental and nongovernmental sectors at the national and international levels.

Professor Yamamoto shared lessons learnt from the great east Japan earthquake. On 11 March 2011, a 9.0-magnitude earthquake struck the Tohoku region in Japan. It was the fourth most powerful earthquake in the world's history and it was one of the worst natural disasters that Japan has experienced in almost a century. A 7.4-magnitude earthquake struck 30 minutes after the initial one, causing a massive tsunami and serious problems at several nuclear power plants. Some of the important lessons learnt included:

- networks are needed for collaboration between the health sector and other domains (e.g. logistics, communication) and for collaboration among health care professionals (e.g. physicians, nurses, pharmacists);
- undergraduate and graduate programmes in disaster preparedness are needed;
- past assumptions on food preparation, medical care and the role of nurses in the case of disaster need to be changed; and
- disparities among shelters regarding the living conditions and supplies need to be addressed.

By experiencing the great earthquake, the Japanese people realized that disasters can affect anyone, including themselves. They also realized the importance of family and bonds with others (*Kizuna* in Japanese).

Although a disaster is an unfortunate experience, it is often an opportunity for learning and for raising consciousness. Many Japanese realized the power of nature and disaster, but at the same time, they felt the resilience of the Japanese people and trusted in the Government's relief programme. Through their experience in a disaster, people can reflect on what happened which can help them to survive future situations. Professor Yamamoto presented the following proposals to prepare for future disasters:

- develop networks with other discipline;
- continue health support after the disaster, strengthen the health system and develop human resources need;
- consider gender-specific needs;
- review the personnel composition of the recovery-related committees by increasing the number of female members and health care workers; and
- strengthen the research support system to understand the actual health conditions and interventions for improving health of the general public.

2.2.5 Summary, evaluation and closure

The meeting concluded with an open forum to address next steps and the way forward. Furthering communication, collaboration and partnerships were identified as being necessary to continually strengthen the timely sharing of information, lessons learnt and potential best practices between and during times of crisis. Participants agreed on the importance of involving other networks as APEDNN partners in emergency and disaster work to further awareness-raising, skill development, research and changes in practice. The APEDNN web site, maintained by Shandong University, serves as an important information and knowledge dissemination portal.

It was suggested that countries and institutions review the network mission and objectives as they carry out self-assessments, and apply quality improvement processes and the evaluation framework when assessing and identifying priorities, taking action and reporting on disaster-related work at the national level. Reporting on and disseminating information on the work of the network are essential steps to inform and influence disaster policy-making, resource allocation and network expansion.

Specific areas of work identified as priorities included continuing the application and validation of emergency/disaster nursing competencies, further integrating emergency and disaster concepts and skills into curricula, and using and evaluating the psychosocial training course modules at the national level. All courses developed are to be accompanied by evaluation and monitoring tools. Participants requested examples of competency validation and curricular adaptations from countries such as Thailand and the Philippines, among others.

The establishment of a research agenda linked with the APEDNN ecological framework was considered as a priority step in building the disaster nursing evidence base and gathering data on the impact of interventions. Selected research activities identified were associated with the mapping of disaster nursing competencies, climate change, and disasters and community resilience. Participants strongly requested capacity-building in research and expressed interest in engaging in research with partners in other countries. Professor Usher agreed to lead the research agenda work.

Proposals were made for the consideration of holding the next APEDNN meeting in Malaysia. After an informal closure to the very stimulating 2011 APEDNN meeting, participants boarded buses to travel to Daejeon for the 3rd International Conference on Disaster Nursing.

An evaluation of the APEDNN meeting was done by the participants using a self-administered questionnaire. Forty-eight delegates participated in the process and a majority expressed satisfaction on overall administration and contents of the meeting. A detailed report is presented in Annex 3.

3. PROCEEDINGS OF THE 3RD INTERNATIONAL CONFERENCE ON DISASTER NURSING

3.1 Day One: Sunday, 23 October 2011

Theme: The Role of Nurses in Community Disaster Preparedness

3.1.1 Formal opening and recognition of AFNA's 60th anniversary

Congratulatory addresses were given by Ms J Lee, President of Korean Society of Disaster Nursing, and Professor Yamamoto, President of World Society of Disaster Nursing.

3.1.2 Keynote presentation: Disaster preparedness: Nursing leadership in building resilient communities.

The keynote presentation was given by Ms Kathleen Fritsch, Regional Adviser for Nursing, WHO Regional Office for the Western Pacific. She noted that the Asia Pacific region is vulnerable to disasters and crises. She stated that 2 billion people are at risk of crisis conditions, more than 3 million people in the region were killed in natural disasters in the past 20 years and 800 million were adversely affected. Furthermore, disasters are increasing in frequency, intensity and impact due to increasing population pressure, climatic change, and new and re-emerging communicable diseases. Challenges facing many communities include chronic under-investment, poor infrastructure, lack of staff, inadequate finance, inequitable distribution, and inefficient use of resources.

In 2011, the World Health Assembly adopted resolution 64.10, Strengthening national health emergency and disaster management capacities and resilience of health systems, which called for strengthening the role of the local health workforce in the health emergency management system to provide local leadership and health services. Nurses make up the largest health care workgroup in most nations of the world, and they make significant contributions to disaster preparedness and response efforts.

There are three domains in disaster risk management: (1) reduce frequency of events; (2) reduce community losses and vulnerabilities in people, property, services, livelihoods and environment; and (3) increase readiness and responsiveness of community emergency services. "Community resilience" is the capacity of the community to account for its vulnerabilities and develop capabilities that aid the community. Some of the characteristics of resilient communities are integration of preparedness and wellness, rapid restoration of services and social networks, individual-level preparedness and self-sufficiency, targeted strategies that empower and engage vulnerable populations, financial resiliency of families and businesses, and efficient leveraging of resources for recovery.

Ms Fritsch presented the overall mission and objectives of APEDNN and introduced the APEDNN capacity-building framework for disaster management continuum global competencies. The framework has four core curricular domains: clinical acute crisis care, public health and epidemiology, leadership and management, and good governance and safety. Priority for the development of modules or course blueprints will be based on core curricular domains. She also presented the APEDNN ecological framework that was developed in 2010.

Working as a network, APEDNN was able to develop a standard, common framework and core curriculum for nursing responses to health emergencies; to strengthen the nursing response through improved communication, partnerships, and more efficient support and interventions; to strengthen communication and coordination mechanisms such as the APEDNN web site; and to further partnerships, research endeavours, and shared capacity-building efforts.

APEDNN will focus on monitoring, research and evaluation for continuous quality improvement. Also, based on Rand Health (2011) guidelines for enhancing public health disaster preparedness criteria and promoting population wellness, APEDNN will promote access to quality health and social services, education about preparedness, risks and resources, participatory decision-making, self-sufficiency and partnerships among network nations.

3.1.3 Plenary session: Role of nurses and midwives in emergencies and disasters: experiences from countries in South-East Asia

Dr Prakin Suchaxaya provided an overview of disasters in the South-East Asia Region and highlighted issues for nurses and midwives. The South-East Asia Region accounted for approximately 44% of all disasters globally in the past decade, and 62% of all deaths due to natural disasters. One of the main problems of emergencies and disasters is its impact on health care services—overloaded facilities, lack of supplies, overworked staff due to no back-up, unorganized response, and multiple health issues requiring facility or public health interventions.

Ms Jamuna Tamrakar Sayami, Board Member of Nepal Nursing Council, presented the situation in Nepal. Nepal is prone to various types of natural disasters such as earthquakes, floods and landslides as well as climatic changes and man-made problems such as conflict, population density, unplanned settlement, and industrial accidents. The Disaster Health Working Group, which was founded in 1993 and revamped by WHO in 2000, is responsible for coordination of emergency preparedness and disaster response at the national level. There are several short courses for emergency room physicians and nurses. During emergencies and disasters, nurses and midwives are expected to work as triage practitioners, assist with surgeries, and provide ICU care, community care and referrals. However, nurses often cannot meet these demands due to a lack of adequate nursing knowledge and skills. Also, nurses need to be involved more at the community level and policy-making level.

Ms Amelia Kur, President of Indonesian Emergency and Disaster Nursing Association, presented the Indonesia case study. After the Aceh Tsunami in 2006, Indonesia enacted a disaster act in 2007. The main effect of this act was the paradigm shift from disaster response to disaster reduction and preparedness. Some of the main roles of the Indonesian Emergency and Disaster Nursing Association are improving competencies of nurses in emergencies and disasters; socialization at national and provincial levels; developing training programmes; establishing standard of emergency and disaster nursing roles; and ensuring the role of nurses in emergency and disaster policy-making at national and provincial levels.

Challenges faced by Indonesia include: increasing the public's and stakeholders' recognition of the role of nursing in emergency and disasters; ensuring nurses' participation in policy-making at national and provincial levels; providing insurance and support for nurses

working in conflict/disaster areas; and providing adequate emergency and disaster training by improving capacity of trainers.

Dr Orapan Thosingha presented the role of educational institutions and professional organizations in strengthening the emergency and disaster capacities of nurses and midwives. There are 80 Bachelor of Science in Nursing programmes in Thailand, and emergency and disaster nursing has been included as a course in the curriculum for more than a decade. The credits vary from two to three semester hours. The emphasis of the course is on emergency response during the emergent phase including triage, resuscitation, transportation, and recently psychosocial management and rehabilitation.

In 2009, the Nursing Council of Thailand declared emergency and disaster competencies for general nurses and nurse specialists in Thailand. Upon graduation, nursing students must take a license examination that covers eight subjects. One of the subjects, adult nursing, must have four items on emergency and disaster nursing. Another nursing organization, the National Centre for Disaster Nursing Thailand under the Thai Nurses Association, is actively training nurses and midwives in emergency and disaster response. During the past five years, the centre conducted training programmes, translated and distributed ICN manuals, and worked collaboratively with nurses in local areas in regard to disaster management.

Other panel presenters included Livio da Conceicao Matos, Ministry of Health, Timor Leste; and Md Mofiz Ullah, Faculty of the University of Dhaka College of Nursing, Bangladesh.

3.1.4 Concurrent sessions: Nurses' disaster relief activities

Session moderators were Edward Stapleton and Min-su Cho. The topics and presenters were as follows:

- (1) Seven months in Haiti: Yu Jung Huh (Captain, 20th Mechanized Infantry Division, Republic of Korea);
- (2) Relief activity for the Great East Japan Earthquake: Chiharu Miyata (Captain, Japan Ground Self-Defense Force, Ministry of Defense, Japan);
- (3) Disaster preparedness care of the elderly: Marva Harriott-Knox (Major, 121st Combat Support Hospital, USA);
- (4) Getting nurses ready to respond to emergencies and disasters: the Philippines' experience: Dr Sheila Bonito (Associate Professor, University of the Philippines, Open University); and
- (5) Voluntary flight nursing services in Hong Kong (China): expect the unexpected: Ping Fat Lau (Department Operation Manager, Pamela Youde Nethersole Eastern Hospital, Hong Kong [China]).

3.1.5 Concurrent sessions: Nurses' competencies for disaster nursing

Session moderators were Professor Kim Usher and Jeongyee Bae. The topics and presenters were as follows:

- (1) The role of the trauma coordinator: Jiyoung Kim (Nurse Coordinator, Trauma Center, Ajou University Hospital, Republic of Korea);

- (2) Preparing the nursing staff for trauma and mass casualty situation: Gila Hyams (Trauma Coordinator, Director of Nursing, Surgery Division, Rambam Healthcare Campus, Israel);
- (3) Competencies framework for disaster nursing: Wai-shan Chan & Timothy Lai (Clinical Associate, Hong Kong Polytechnic University School of Nursing, Hong Kong [China]);
- (4) Joint theatre trauma system and the joint theatre trauma registry: Jeanne Larson (Lieutenant colonel, 121st Combat Support Hospital, USA); and
- (5) In-hospital disaster preparedness: Seoung Hee Hong (Unit Manager, Paediatric Ward, Gangnam Severance Hospital, Republic of Korea).

3.2 Day Two: Monday, 24 October 2011

Theme: Nurses' preparedness for nuclear, biological and chemical disaster

3.2.1 Special lecture: The 10th anniversary of the World Trade Center attack: a look back at the successes and failures of the emergency response

Professor Edward Stapleton, Stony Brook University, USA, reflected on the events of 9/11 and shared the lessons learnt from the rescue experience. He stated that it was not a terror event but a war situation, that there were limitations to rescue and that the psychological toll was immeasurable. Since 9/11, there has been new appreciation for and public expectation of the role of emergency medical service systems.

Things that went right on 9/11 include: extra bravery of fire fighters and decisive and brilliant actions of a coordinator, which saved 30 000 lives; rapid mobilization of health care resources although they were mainly for rescuers; and people helping each other. Things that went wrong include: failure to save responders due to technical difficulties; feuding between agencies; and management lapses. Mr Stapleton explained that communication, command, and control are three pillars of emergency management. Prior to the event, the police emergency service unit and the fire fighter unit had never conducted a drill together. Also, too many fire fighters went into the tower due to lack of control. Finally, when the radio system failed, many fire fighters were cut off from critical information and died when the north tower fell. Many others were injured. Since 9/11, many have recognized that it is necessary to help each other, to prepare for different threats, and to plan for capacity-building and equipment.

3.2.2 Emergency and Disaster EXPO open to community residents

A hands-on exhibition that simulated emergency and disaster situations was held at the Exhibition Hall in the afternoon. Approximately 400 community residents participated in the event.

3.2.3 Concurrent sessions: chemical, biological, radiological, nuclear and explosive (CBRNE) disaster preparedness

Session moderators were Ping Fat Lau and Myoung-ran Yoo. The topics and presenters were as follows:

- (1) Hanaro joint radiation emergency training: Hyang-Mi Kim (Captain, Korean Military Hospital, Republic of Korea);

- (2) National radiation emergency medical system in the Republic of Korea: Min-Su Cho (MD, Chief, on-site medical response team, National Radiation Emergency Medical Center, Korea Institute of Radiological & Medical Sciences, Republic of Korea);
- (3) CBRNE recognition and action in US Emergency Medical Service: Edward Stapleton (Professor, Stony Brook University, USA); and
- (4) Bioterrorism response training in 2010: smallpox outbreak: Nam-Jeong Park (Staff Nurse, Infection Control Unit, Pusan National University Hospital, Republic of Korea).

3.2.4 Concurrent sessions: Psychological nursing care in times of disaster

Session moderators were Dr Sheila Bonito and Seum Young Joe. The topics and presenters were as follows:

- (1) PTSD in the Republic of Korea military: The experiences of Yeonpyeong island attack and sinking of Cheon-an warship: Eun Kyoung Jeong (Captain, Korean Military Hospital, Republic of Korea);
- (2) Mediating effects of emotion on the development of post-traumatic stress disorder and post-traumatic growth: flood area victim children: Jeong Ryu (Psychological Support Center of Disaster Victims, Republic of Korea);
- (3) Critical incident stress debriefing services for disaster victims: Jeongyee Bae (Director, Pusan Psychological Support Center for Disaster Victims; Professor, Inje University, Republic of Korea);
- (4) Preparedness and impact: Cyclone Yasi, 2011: Kim Usher (Professor, James Cook University School of Nursing, Midwifery and Nutrition, Australia);

3.2.5 Special lecture: Nursing and medical organization for mass casualty situation (MCS) and lessons learnt

Ms Gila Hyams, Trauma Coordination/Director of Nursing, Surgery Division, Rambam Healthcare Campus, Israel, shared Israel's emergency care systems and protocols in MCS. Since Israel is in constant threat of terror and war, it is necessary to be prepared at all times. Ms Hyams presented the pre-hospital aspects, medical aspects and logistical aspects of responding to MCS.

One of the main objectives of Israel's national Emergency Medical Service (EMS) is to improve the availability of ambulances. On-call teams park their ambulance at home so they can reduce response time. Also, careful efforts are made to transfer patients to the appropriate hospital to avoid secondary transfers. An EMS representative stationed in the hospital informs on patient flow with immediate notification of location and mechanism of the event. This way, 35% of the injured arrived at the hospital within the first 10 minutes, and 65% arrived within 30 minutes.

When considering the medical aspects of MCS due to terror, it is important to understand the unique pathology of the injury mechanism. Victims of suicide bombings, shootings and rockets have different injuries and require different initial treatment than victims of other trauma; mortality rates are also much higher. Ms Hyams stated that a terror event might result in multiple diagnoses within one body region; thus, the routine injury severity score (ISS) may underestimate the severity of injury. Understanding the unique pathology of the causal factor,

rapid image testing of the wounds and immediate surgery are key life-saving procedures. Surgeons are needed at all locations during every phase of the MCS.

Logistical aspects of MCS depend on the nature of the event. It is necessary to collect and verify information and then follow protocols. Hospital nurses' protocols are as follows: evacuate patients, especially those in the emergency department, to make room for the casualties; recruit staff, especially in the operating room, intensive care unit, emergency room, and trauma course; set up equipment before the casualties arrive; organize the imaging department; and reinforce hospital teams. Patients' records should follow guidelines and checklists should be updated.

Logistical aspects of management continue even after the initial MCS. The cycle of debriefing, lessons learnt, actions taken and quality improvement continues and any lessons learnt need to be spread nationally. Also, the mental treatment of victims, bystanders and staff with acute stress reactions needs to be managed. Management and control at the hospital headquarters are done by special computerized software. Some computer programmes not only manage administrative and clinical procedures, but also manage unidentified patients.

Other important logistical work includes continuing team education and construction of protected emergency departments. Ms Hymas concluded that due to the uncertain nature of future emergencies, strict rules and protocols should be accompanied by a mechanism for quick decision-making, based on evaluating unexpected and changing conditions since no one is immune to terror, war and disasters.

3.2.6 Plenary session

Three presentations were made on the Great East Japan Earthquake. On 11 March 2011, a 9.0-magnitude earthquake struck the Tohoku region in Japan. It was the fourth most powerful earthquake in the world's history and it was one of the worst natural disasters that Japan has experienced in almost a century. A 7.4-magnitude earthquake struck 30 minutes after the initial one, causing a massive tsunami and serious problems at several nuclear power plants.

3.2.6.1 Disaster relief activities by Japan Ground Self-Defense Force nursing officers in response to the Great East Japan Earthquake

LTC Takayo Maeda, Former Deputy School Commandant, Japan Self-Defense Force Central Hospital Nursing Institute, presented the activities of the Japan Self-Defense Force (JSDF) nursing officers during the great earthquake. It was the largest operation in the history of JSDF and challenges faced by the Joint Task Force were organized for the first time. The challenges of JSDF were: dealing with the complexity of the disaster—earthquake, tsunami and radiological crises; dispatching 100 000 personnel; managing logistics and transportation from all over Japan; and working with the United States military on humanitarian assistance and relief activities called "Tomodachi".

Some of the main activities of the JSDF ground team included: saving 14 937 lives, collecting and transporting 8440 bodies, managing logistics to support daily life such as food, water, bathing, medical and other supplies, eliminating road obstacles, and playing a major role in the management of the nuclear power disaster, such as decontamination of facility, spray water and cooling support, thermography shooting, video transmission, and dose control support.

The "Tomodachi" project, which was carried out with US military, focused on search and rescue of victims, transportation support for rescue supply and personnel donation supply, and recovery of infrastructure such as schools and hospitals at disaster areas. Support came from all over the world during the disaster.

Sendai Hospital, which is affiliated with Japan Self-Defense Forces, was established for Self-Defence Forces personnel and their families in 1971. According to the disaster dispatch plan, the hospital was prepared for large-scale disaster and maintained the annual training programme to care for the Sendai community. However, the Great East Japan Earthquake was beyond expectations.

Most patients who were transferred from local hospitals and nursing homes were older than 70 years. They suffered from hypothermia, injuries, fractures, respiratory infections, other chronic diseases and insomnia. Some needed total or partial daily care. Many nurses had to learn on the spot about daily care of elderly patients and had to secure the necessary supplies for elderly patients. Another issue was that many elderly patients did not have any place to go to after the treatment. On top of all this, the hospital staff did not have reliable communication equipment and did not know about the status of their family members. Also, they were physically exhausted because a relief team was not available. From the experience, it was learnt that communication measures had to be secured and that social workers were needed to place elderly patients in the community.

Nursing officers from JSDF were in charge of triage outside of the hospital during the initial crisis. Later, they relieved the other nurses by working in shifts in hospital wards and outpatient clinics, and made medical rounds by visiting 10 refugee camps. LTC Maeda presented the mobile hospital system at Sendai Hospital and explained the training and simulation programme.

3.2.6.2 Activities of support nurses during the Great East Japan Earthquake

Dr Hatsumi Kanzaki, RN, PhD, Research Institute of Nursing Care for People and Community, a WHO Collaborating Centre for Nursing in Disaster and Health Emergency Management at University of Hyogo, presented the activities of support nurses during the Great East Japan Earthquake. Dr Kanzaki noted that it was almost impossible to access the disaster areas along the northern coast. Communication was not possible for five days, gasoline was in short supply, and the roads were destroyed.

In Hyogo Prefecture, there is good collaboration among nursing, medical, dental and pharmacist associations. Also, there is an agreement on disaster relief. The Hyogo Nursing Association was able to enter the disaster area one week after the disaster and nurses visited more than 10 shelters a day. In Miyagi Prefecture, nurses operated a shelter and obtained a temporary prescription authority. Nurses not only took care of people in the shelters, but also dealt with sanitation and epidemics of influenza and noroviruce. Nurses established a list of priority concerns at different phases of disaster relief and identified the high-risk individuals who lived in temporary housing, with chronic diseases. Since many people living in the shelters did not have diseases, it was important for nurses to know about health maintenance and promotion. In Ishinomaki City, there was a policy to promote individuals' self-care skills and independency and to not over treat the patients.

Dr Kanzaki concluded that collaboration and coordination among health care professionals is most important. This time, Japan's past experiences may have misled disaster preparedness. As such, student nurses' competencies need to be enhanced, and nurses need to receive disaster nursing education.

3.2.6.3 Disaster medicine: lessons from the recent tsunami and nuclear plant disaster in Japan

Dr Yoshikura Haraguchi, MD, PhD, Tokyo, Japan (co-workers: Yoso Tomoyasu, MD, PhD, and Hosei Nishi, MD, PhD) presented the experiences of disaster medicine in Japan. The tsunami and fire following the earthquakes left a large number of victims and a large area contaminated by the nuclear accident. Dr Haraguchi explained the impact of the mega-disaster by past experiences in Japan and around the world. He emphasized the importance of crisis standards of care during a mega-disaster and/or complex disaster: ethics, comfort, compassion, dignity, fairness, equitability and consistency. He stressed transparency, communication, legal support, reliability and trust, responsibility and accountability, and education for people and disaster literacy, especially for vulnerable people.

It is vitally important to have a special care system for vulnerable people such as children, women, the elderly, and the poor. Transportation, long-term (nutrition and other) support and mental care for victims as well as medical staff are essential. Dr Haraguchi stated that after any mega-disaster there is a risk of a malignant cycle that consists of secondary and tertiary disasters, shortage of medical care, apathy and mental problems, demagoguery and un-peaceful society, a financial or economic crisis that spreads gradually, local and around-the-country medical problems, and worldwide economic/medical problems. He emphasized the need to interrupt this malignant cycle and stressed for an appropriate information and intelligence system.

3.3 Day Three: Tuesday, 25 October 2011

Workshop for nurses from the South-East Asia Region: Empowerment for disaster preparedness

3.3.1 The objectives of the workshop were:

- (1) to share experiences among nurses from the countries prone to disaster;
- (2) to master the core competencies of disaster nursing; and
- (3) to establish a foundation for collaborative networking among nurses.

3.3.2 Participants: nine nurses from WHO South-East Asia Region

3.3.3 Venue: Simulation Room, Armed Forces Nursing Academy, Republic of Korea

3.3.4 Detailed schedule:

The workshop was organized by faculty at the Armed Forces Nursing Academy (AFNE). The main methods employed for the workshop were high fidelity mannequin stimulation, hands-on practice, problem-based learning, and observed simulated clinical examinations (OSCE). All participants were awarded with a certificate of completion in the disaster nursing skills covered.

Time	Activity	Coordinator	Venue
09:00–09:40	Orientation	LTC M. Yoo	Conference room
09:40–10:00	Introduction of AFNA	Maj Y. Chung	
10:00–11:30 Divide into 2 teams & rotate	Simulation		
	Adult nursing	Capt E. Ko	Simulation Lab with AFNA students demonstration
	MCH nursing	Capt S. Hwang	
11:30–11:50	Coffee break		
11:50–13:00 Divide into 2 teams & rotate	Skill Station		
	Extraglottic Devices (EGDs) Video Laryngoscopy/Digital intubation	Maj J. Yoo	Fundamental nursing skill lab
		Maj H. Kim	
	Microsim In-hospital Intraosseous injection	Lt J. Na	Skill lab
Lt K. Keum			
Virtual IV	Maj M. Seo	OSCE 5	
13:00–14:20	Lunch		Officers' dining hall
14:20–16:30	Emergo Training System (ETS) - Introduction of ETS - Practise START triage method - ETS simulation	Maj S. Cho Maj Y. Kim Maj K. Keum Capt J. Yoo Capt E. Ko Capt S. Hwang Capt C. Kim	Disaster Nursing Education Centre
16:30–17:00	Presentation of certificate & photography session	LTC M. Yoo	Problem-based learning (PBL) 1
17:00	Dinner	Faculty and participants	Korean restaurant

List of APEDNN 2011 Meeting Participants

	Country	Name	Position and/or Organization	Email
WPRO-Supported Temporary Advisers				
1	Cambodia	Ms Muy Seang Lak	Ministry of Health	sreanglak@yahoo.com
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	Country	Name	Position and/or Organization	Email
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APEDNN 2011 MEETING PROGRAMME

Day One: Friday, 21 October 2011 'All Hazards Preparedness' Approach to Disasters

Time	Session
0800-0900	Registration: Yonsei University, College of Nursing
0900-1030	<p style="text-align: right;">Moderator: Prof Il-Young Yoo</p> Opening Ceremony <ul style="list-style-type: none"> • Welcome Address <i>So-Sun Kim</i>, Dean of College of Nursing, Yonsei University • Congratulatory Address <i>Dr Young-Soo Shin</i>, Regional Director, WHO/WPRO <i>Representative</i> from the National Research Foundation of Korea <i>Brigadier General Hae-Kyong Shin</i>, Superintendent, Armed Forces Nursing Academy <i>Chul Lee</i>, Vice President for Health Services, Yonsei University • Keynote Speech <i>Ret Mayor General Gale S. Pollock</i>, CRNA, FACHE, FAAN: Former Interim Surgeon General, USA
1030-1100	Group Photo & Break
1100-1200	<p style="text-align: right;">Moderator: Dr Araceli</p> Balabagno <ul style="list-style-type: none"> • Session 1 Role of Nursing Network in Emergency and Disaster: Asia Pacific Region <i>Ms Kathleen Fritsch</i>, Regional Adviser for Nursing, WHO/WPRO • Session 2: Training Initiative in Emergency and Disaster Nursing in the South-East Asia Region <i>Dr Prakin Suchaxaya</i>, Regional Adviser for Nursing and Midwifery, WHO/SEARO
1200-1330	Lunch
1330-1530	<p style="text-align: right;">Moderator: Prof Marcia</p> Petrini <ul style="list-style-type: none"> • Session 3: Emergency and Disaster Nursing: Are we adequately prepared? <i>Professor Aiko Yamamoto</i>, University of Hyogo, Japan <i>Orapan Thosingha</i>, Mahido University, Thailand <i>Ms Sheila Bonito</i>, University of the Philippines
1530-1600	Break
1600-1700	<p style="text-align: right;">Moderator: Prof Il-Young Yoo</p> <ul style="list-style-type: none"> • Session 4: Psychosocial and Mental Health in Emergency and Disaster Management <i>Professor Kim Usher</i>, James Cook University, Australia <i>Dr Yuli Zang</i>, Shandong University, China
1700-2000	Yonsei University Welcome Dinner

Day Two: Saturday, 22 October 2011 'All Hazards Preparedness' Approach to Disasters

Time	Session
0830-0900	Day 1 Summary, Highlights, Reflections Orientation to Day 2
0900-1030	Opening Ceremony Moderator: Mrs Pelenatete Stowers <ul style="list-style-type: none"> Session 5: Multi-Drug Resistant Infection & Newly Emerging Diseases <i>Ms Kathleen Fritsch</i>, Regional Adviser for Nursing, WHO/WPRO <i>So-Sun Kim</i>, Yonsei University, Korea
1030-1100	Break
1100-1230	Moderator: Prof Kim Usher <ul style="list-style-type: none"> Session 6: Lessons from Recent Emergencies and Disasters <i>Ms Sheila Bonito</i>, University of the Philippines <i>Professor Aiko Yamamoto</i>, University of Hyogo, Japan
1230-1300	Evaluation and Closure <i>Ms Kathleen Fritsch</i> , Regional Adviser for Nursing, WHO/WPRO
1300	Lunch Leave for the 3 rd International Conference on Disaster Nursing (Daejeon)

**3rd International Conference on Disaster Nursing
Day One: Sunday, 23 October 2011**

Time	Session
0800-0900	Registration: Daejeon Convention Center
0900-0950	Opening Ceremony <ul style="list-style-type: none"> Welcome Address <i>Brigadier General Hae-Kyong Shin</i>, Superintendent, Armed Forces Nursing Academy Congratulatory Address <i>Kyung-Rim Shin</i>, President, Korean Nurses Association <i>Jae-Sun Lee</i>, President, Korean Society of Disaster Nursing <i>Professor Aiko Yamamoto</i>, President, World Society of Disaster Nursing
0950-1000	Group Photo
1000-1030	<ul style="list-style-type: none"> Keynote Address <i>Ms Kathleen Fritsch</i>, Regional Adviser for Nursing, WHO/WPRO
1030-1040	Break
1040-1200	<ul style="list-style-type: none"> Plenary Session Roles of Nurses and Midwives in Emergency and Disasters: Experiences from Countries in South-East Asia <i>Dr Prakin Suchaxaya</i>, Regional Adviser for Nursing and Midwifery, WHO/SEARO
1200-1300	Lunch
1300-1400	Opening of EXPO
1400-1420	Break
1420-1610	<ul style="list-style-type: none"> Concurrent Sessions Nurses' Disaster Relief Activities 1) A Disaster Nursing Care Experience in Haiti <i>You-Jeong Huh</i>, CPT, Korean Army Division

	<p>2) Relief Activity for the 11 March Earthquake and Tsunami <i>Chiharu Miyata</i>, CPT, Japan Self Defense Forces Central Hospital Nursing Institute</p> <p>3) Disaster Preparedness Care of the Elderly <i>Marva Harriott-Knox</i>, CPT, 121st Combat Support Hospital</p> <p>4) Getting Nurses Ready to Response to Emergencies and Disasters: The Philippines Experience <i>Ms Sheila Bonito</i>, University of the Philippines</p>
1420-1610	<ul style="list-style-type: none"> • Concurrent Sessions <p>Nurses' Competencies for Disaster Nursing</p> <p>1) Role of Nurse Coordinator at a Trauma Center <i>Ji-Young Kim</i>, Nurse Coordinator, Trauma Center, Ajou Univ. Hospital</p> <p>2) Preparing the Nursing Staff for Trauma and Mass Casualty Situations <i>Gila Hyams</i>, Director, Rambam Healthcare Campus Teaching Center</p> <p>3) Competence Framework for Disaster Nursing <i>Wai Shan Chan & Kevin Leung</i>, Clinical Associate, The Hong Kong Polytechnic University of Nursing</p> <p>4) Voluntary Flight Nursing Services in Hong Kong: Expect the Unexpected <i>Ping Fat Lau</i>, Department Opeartion Manager, Pamela Youde Nethersole Eastern Hospital</p> <p>5) Joint Theater Trauma System and the Joint Theater Trauma Registry <i>Jeanne Larson</i>, LTC, 121st Combat Support Hospital</p>
1800-2100	Welcome Dinner

2011 APEDNN PARTICIPANT EVALUATIONS

Table 1. General Characteristics of the Participants

Characteristics	N (%)	Mean	Range
Age (years)		45.87 ± 8.54	26-61
Gender			
Male	14 (29.2)		
Female	34 (70.8)		
Professional Title			
Registered Nurse	27 (56.3)		
Advanced Practice Nurse	6 (12.6)		
Nurse Midwife	4 (8.4)		
Other	11 (22.9)		
Education			
Diploma	2 (4.2)		
Associate Degree	7 (14.6)		
Bachelor's Degree	21 (43.8)		
Master's Degree	6 (12.5)		
Other Degree	12 (25.)		
Workplace*			
Hospital	10 (20.9)		
School of Nursing	24 (50.0)		
Administration	14 (29.2)		
Community/Public Health Nursing	3 (6.3)		
Other	4 (8.3)		
Patients Residential Area*			
Urban Area	29 (67.4)		
Rural Area	8 (18.7)		
Non-applicable	6 (14.0)		

*Participants checked multiple answers

Table 2. Participants' Experiences of Emergency and Disaster Nursing

Characteristics	N (%)
Emergency and Disaster Training over the past 3 yrs	
Yes	24 (55.8)
No	19 (39.6)
Serious emergencies and disaster experiences over the past 3 yrs	
None	11 (22.9)
1-3	28 (58.3)
4-6	1 (2.1)
>6	3 (6.3)
Types of emergencies and disasters*	
Epidemic	14 (35.9)
Geological Event	14 (35.9)
Weather Event	17 (43.6)
Other	9 (23.1)
Attended the 2011 APEDNN Meeting	
Yes	14 (30.4)
No	32 (69.6)

*Participants checked multiple answers

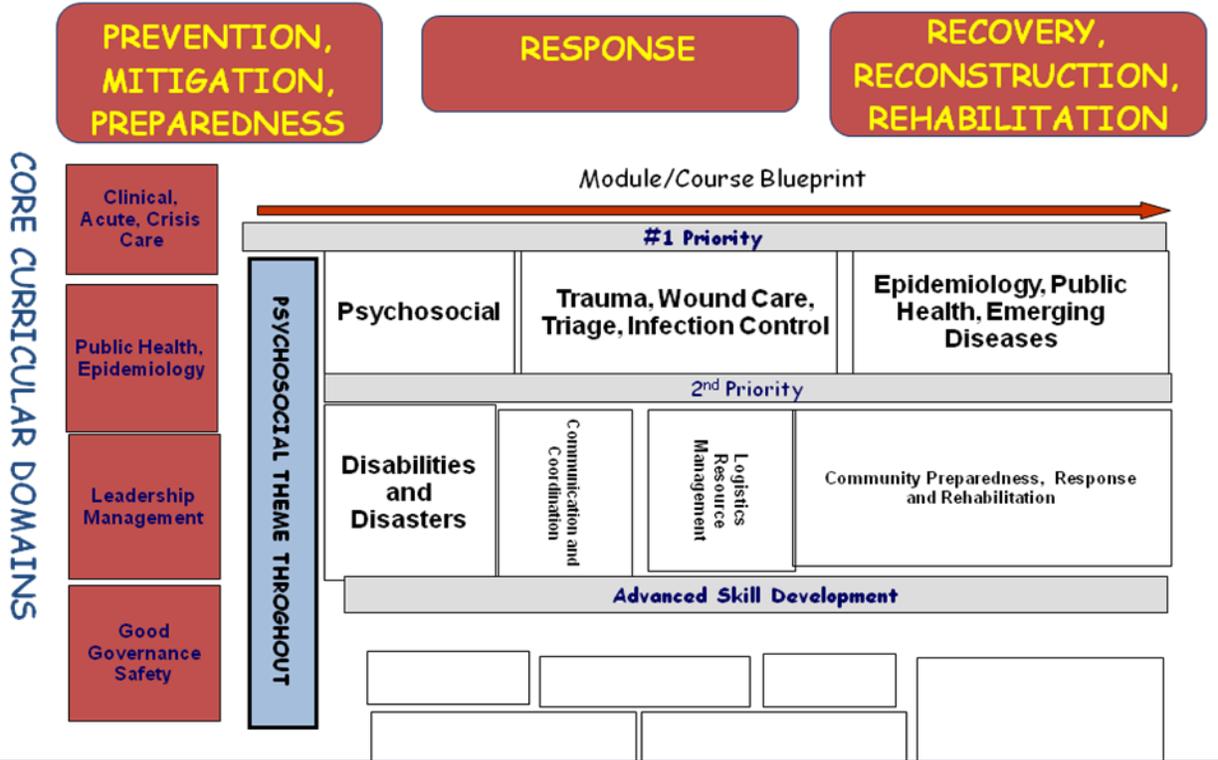
Table 3. Evaluation for APEDNN Meeting Day 1 & Day 2

Programs	Mean
Registration	3.88 ± 0.33
Meeting Overview	3.77 ± 0.43
Keynote Address	3.32 ± 1.00
Session 1 'Role of the Nursing Network in emergencies and disasters	3.67 ± 0.56
Session 2 'Training Initiatives in emergency and disaster Nursing in SEAR	3.69 ± 0.47
Session 3 'Emergency and disaster nursing: Are adequately prepared?'	3.60 ± 0.57
Session 4 'Psychosocial and mental health in emergency and disaster management'	3.56 ± 0.58
Session 5 'Multiple drug resistant infections and newly emerging diseases'	3.72 ± 0.50
Session 6 'Lessons from recent emergencies and disasters	3.84 ± 0.37
Overall	
Identified Key variables & interventions	3.56 ± 0.59
Identified Vision, objectives and conceptual framework of APEDNN	3.67 ± 0.56
Identified Lessons learned from recent disasters	3.66 ± 0.53
Demonstrate new knowledge and skills	3.47 ± 0.63
Agreed upon shared methods to promote research	3.51 ± 0.59

5 point Likert Score Range (0~ 4) with a higher score indicating higher level of satisfaction

APEDNN CAPACITY BUILDING FRAMEWORK

DISASTER MANAGEMENT CONTINUUM GLOBAL COMPETENCIES



APEDNN VISION, MISSION, OBJECTIVES, CAPACITY BUILDING FRAMEWORK

Vision:

A leader in the Asia Pacific Region for emergency and disaster nursing for safer and resilient communities.

Mission:

Advance a professional network of nurses and partners to support communities for prevention, mitigation, response, and recovery related to emergencies and disasters.

Objectives:

1. Establish a system for ongoing interaction among members to strengthen collaboration and capacity building.
2. Identify and validate emergency and disaster nursing competencies.
3. Develop and share tools, materials and training programmes in emergency and disaster nursing education, services and research.
4. Identify best practice standards and evidence-based guidelines and interventions using quality improvement process.
5. Collaborate with others in establishing the research agenda for emergency and disaster nursing.
6. Implement mechanism 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.