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Name of the University, Hospital, Research Institute, Academy or Ministry

Research Institute of Nursing Care for People and Community

Name of the Division, Department, Unit, Section or Area

University of Hyogo

City Akashi **Reference Number** JPN-77

Title WHO Collaborating Centre for Nursing in Disasters and Health Emergency Management

Report Year 06-2016 to 06-2017

1. Please briefly describe the progress made in the implementation of your agreed workplan as WHO collaborating centre during the past 12 months (or the reporting period listed above). Please report on how each workplan activity was implemented, if any outputs have been delivered, if any results have been achieved and if any difficulties have been encountered during this time. If an activity has previously been completed, has not started yet, or been placed on hold, please indicate this.

Activity 1

Title: To identify document and review good nursing and midwifery practices in disaster risk management for health

Description: Good nursing practices in disaster risk management in Japan and Asian countries will be reviewed. Literature review will be conducted to identify and review good practices. If needed, some undocumented good practices will be documented. Interviews with nurses experiencing the disaster in Asian countries will be undertaken if necessary. Good nursing practice as an example will be disseminated through APEDNN meeting and web site.

Two new good nursing practices in disaster risk management for health were identified through the reviewing reports, interview with key informants and participating actual activities. One is Epi Nurse Project in Nepal and another is the need assessment and external assistance coordination at 2017Kumamoto Earthquake in Japan. The good practice were shared with the members of APEDNN on its regular web-meeting.

Good Practice 1: EpiNurse Project

'EpiNurse' is short for 'Epidemiology Nurse'. The project aimed to prevent and control infectious diseases after disasters. After the Nepal earthquake that happened on 12 May 2015, the Nurses Association of Nepal launched the project with the support of a Japanese Nurse researcher, Dr. Sakiko Kanbara, Associate Professor at University of Kochi.

In the project, the Nurses Association dispatched nurses to the disaster survivors' homes and tents in the affected areas regularly, and the nurses collected the information and data of the living environments, monitored the health status of survivors and assessed the risk of infection outbreak.

The nurses used monitoring and surveillance tools which Dr. Kanbara developed. The tool was a portable information terminal –smart phone-, and reduced the labor and cost of information collection and made information collection standardized.

The nurses used the smart phone application and put the information and data such as sleeping environment, nutritional status, signs of infectious diseases such as fever and diarrhea. Those information with pictures and location information of GPS were sent to the database of EpiNurse Centre. Then the data was consolidated and analyzed. This enabled to grasp hygiene and health conditions at the affected areas in real time and to conduct and implement effective infection prevention measures.

The project was continued for one year and fortunately infectious disease epidemic did not occur in the area.

The outcome of the project was not limited on infectious disease prevention. As working on the project, nurses found the care needs of elderly and children in the communities and provided nursing care including mental health to them. The project became a turning point for advancing community nursing care to support the recovery from disasters.

The EpiNurse Project was awarded the Risk Award at the 2017 Global Platform and recognized as a cutting-edge plan to deploy the power of technology to monitor health risks.

Good Practice 2: Need assessment and external assistance coordination

In the Kumamoto earthquake that occurred in April 2016, the magnitude 6.5 and 7.3 earthquakes occurred one after another. After that, aftershocks with a seismic intensity of a lower 5 or greater on the seven-point Japanese scale continued for more than one month, and earthquakes with a seismic intensity of 3 or greater went over 400 times in 2 months after the occurrence. Over 200,000 people were affected by the quake, 161 people lost their lives and 2,692 were reported injured. The evacuees to evacuation centers were more than 180,000 at the peak. Other than those, many people stayed in cars or tents overnight instead of staying in evacuation shelters. Because of this, grasping the exact number of evacuees got difficult.

In the health sector, various teams such as Disaster Medical Assistance Teams (DMAT), Disaster Psychiatric Assistance Team (DPAT) and others support disaster survivors. In addition, many others such as NPOs / NGOs, individual volunteers and volunteer groups worked to support the survivors. While a lot of support were provided, there were problems such as confusion caused by a number of supporters / support organizations detuning evacuation shelters and divergence between support needs and provided services.

Under such circumstances, unique activities by nurses were held at evacuation centers immediately after the disaster. The points of the activity were as follows.

(1) Living and health needs assessment in evacuation shelters and coordination of supports and assistance of volunteers

(2) Living and health needs assessment of survivors staying other than evacuation shelters (outreach activity)

(3) Monitoring and Maintenance of health of staff and volunteers engaging in survivors support

In Japan every year some kind of natural disaster has occurred, and the public support system has been developed based on that experience. In the health sector, DMAT dispatching systems and dispatch systems of public health nurses are established at national level. On the other hand, activities of private sectors or volunteers are also becoming active. There are unbalances and mismatches between support needs and the provided support, and there are situations where support is not available and support is not provided unnoticed because needs are buried. Furthermore, supporters who had damages on their physical and mental health also were reported. It is also known that severe health damage will occur when the evacuation life is prolonged. Picking up support needs that are often overlooked in the public support system, stabilizing and maintaining the lives and health of displaced people is an important role of nurses targeting people's health and living. To fulfill the role, nurses need to obtain a competency to manage and coordinate resource effectively. The competency should be add as a disaster nursing competency.

Reference

EpiNurse, <https://www.epinurse.org/>

Outcome

Sonoe Mashino, Aiko Yamamoto, Sayaka Sumida, Kaori Matsuo, Marina Inagaki, Megumi Arisaka, Natsuko Yamamura, and Eni Nuraini Agustini (2017). Hiesei 28 nen Kumamoto Jishin niokeru shienkatudo houkoku [Activity Report on 2016 Kumamoto Earthquake]. University of Hyogo/ Research Institute of Nursing Care for People and Community , 2: 2-64.

Activity 2

Title: To update/revise the role and competencies of nurses and midwives in disaster risk management for health based on the review of good practices in Asia (ref – activity 1)

Description: Based on the results of good practices for nurses and midwives in disaster risk management for health, the role and competencies of nurses/midwives in disaster risk management will be revised and updates through a consultative process.

1. Purpose

Since 2009 when ICN (International Council of Nurses) and WHO developed the framework of disaster

nursing competencies, many researchers have further explored the competencies in disaster nursing. The present study aimed to review relevant study exploring the competencies of nurses in disaster risk management for health. According to our review results conducted in 2015, to date, there are limited articles in Asian countries. Thus we included the literature not only in Asia but also in other countries to acquire wide range of evidence.

We also reported a discussion in the symposium about disaster nursing we held in 2016.

2. Methods

1) Literature review

To address the aim of the review effectively, electronic search of the literature was initially conducted. The search using PubMed was conducted up to June 2017 on the following Medical Subject Headings (MeSH): disaster; nursing; and competency. Complementally, some citatory papers were also checked to supplement the aim of the study. The eligible criteria for including studies in the present literature review were: (1) papers written in English; (2) papers published in 2000 or later; (3) papers which contain three or more pages; (4) and papers which describe the competencies in disaster nursing for health.

2) The symposium about disaster nursing and other discussions at international academic conferences

The symposium about disaster nursing "Nursing to protect and support people's lives: lessons learned from the Great Hanshin-Awaji Earthquake to Kumamoto Earthquake" was organized and held on 24th July 2016 to discuss about good practice in disaster nursing especially in Japan. It was hosted by Research Institute of Nursing Care for People and Community, University of Hyogo, and co-hosted by WHO Kobe-Center and G7 Kobe Health Ministers Meeting Promotion Council. Six speakers talked their practice experiences and expertise, then a lively discussion about good nursing practice was held among more than 120 participants. The essence of the speech and discussion is shown in the Results section.

Prof. Mashino and Yamamoto participated in the "10th Asia Pacific Emergency and Disaster Nursing Network (APEDNN)" during 16-19th November, 2016 at Vellore, India. About 20 researchers from nine countries including Japan gathered and an active discussion about the framework of the nursing competencies in disaster was held.

Besides, Prof. Yamamoto delivered a keynote speech regarding disaster nursing at the "ICN (International Council of Nurses Congress) 2017" from 27th May to 1st June, 2017 at Barcelona, Spain. The contents of the discussion and speech are also shown in the Results section.

3. Results

1) Literature review

We identified nine papers including three review articles. Since the articles other than review papers were included into at least one review papers, we mainly focused on three review articles in this study. Thobaity et al. (2017) focused on the competencies for only nurses, whereas Daily et al. (2010) and Gallardo et al. (2015) included the study among not only nurses but also healthcare providers.

Thobaity et al. (2017) analyzed 12 articles. They identified the most common domains of the core competencies of disaster nursing; communication, planning, decontamination and safety, the incident command system and ethics, though the domains varied among studies. Daily et al. (2010) analyzed 39 articles about competencies for disaster for healthcare providers including nurses. They extracted individual competency domains listed in 17 articles out of 39, such as assessment, communication(s), detection, critical thinking, technical skills, preparation and planning, and so on. Gallardo et al. (2015) analyzed 38 articles. They found 36 papers out of 38 provided a list of competencies regarding such as knowledge, skills, traits, or behaviors.

On the other hand, Hutton et al. (2016) suggested that further studies should explore whether there are other domains regarding the disaster nursing practice, such as psychosocial care that may be missing or not fully developed including ICN Framework (2009). They also extracted nine categories about psychosocial care including "Describes the phases of psychological response to disaster and expected behavioral responses."

2) The symposium about disaster nursing and other discussions at international academic conferences

The symposium highlighted the importance in disaster nursing such as:

- To accumulate knowledge and skills about disaster nursing systematically
- To build relationships between nurses and other professionals and volunteers in the community
- To enhance the community resilience to overcome the disaster
- To develop the framework for health risk management during peacetime

The discussion about the framework of the nursing competencies in disaster at the APEDNN emphasized the importance and the feasibility of the ICN Framework (2009).

The keynote speech by Prof. Yamamoto at ICN 2017 was on the disaster nursing, including the nursing

competencies such as disaster preparedness, the enhancement of resilience, and so on. The speech raised some important points about further research, and it was well-received by a great number of participants.

4. Discussion

One review article was only among nurses, whereas the other two were among healthcare providers including nurses. The competencies suggested were generally similar to the framework by ICN (2009). However, other domains such as psychological care competencies should be considered and included, as Hutton et al. (2016) has proposed. The symposium revealed the importance of not only individual level but also community level or organizational level competencies, as well as the competencies specific for particular period such as peacetime and during disaster. Given that earlier studies have also suggested, the competencies should be addressed by each level and each period. As the competencies in disaster nursing specific to Asian countries could not be characterized in this study, it might be an issue in the future. Further refinement through both literature review and the discussion at international/ domestic conferences may be needed.

References

- Daily E, Padjen, P, Birnbaum M (2010). A review of competencies developed for disaster healthcare providers: limitations of current processes and applicability. *Prehosp Disaster Med*, 25(5):387-95.
- Gallardo A, Djalali A, Foletti M (2016) Competencies in Disaster Management and Humanitarian Assistance: A Systematic Review. *Disaster Medicine and Public Health Preparedness*, 9(4): 430-439, 2015.
- Hutton A, Veenema TG, Gebbie K. Review of the International Council of Nurses (ICN) Framework of Disaster Nursing Competencies. *Syst Rev*, 20;5(1):157.
- ICN, WHO (2009). ICN Framework of disaster nursing competencies. World Health Organization and International Council of Nurses.
- Thobaity A, Plummer V, Williams B (2017). What are the most common domains of the core competencies of disaster nursing? A scoping review, 31:64-71.

Activity 3

Title: To develop the education/training programs for nurses and midwives in disaster risk management for health at middle- and long - term after disaster.

Description: Based on revision of the role and competencies of nurses and midwives (ref - activities 1 and activities 2), the education/training programs will be developed.

An educational program has been developed and a workshop based on the program was planned. The actual provision will be in September of 2017. The program was designed for educators. The contents are the followings:

- (1) Setting learning objectives in relations to Disaster Nursing Competencies
- (2) Effective training measures: lecture, hands-on practice, scenario-based simulation
- (3) Critical contents: Care for vulnerable populations (elderly, children, woman, disables, foreigners), home care in the event of a disaster, leadership and coordination and so on.

Activity 4

Title: To develop the education/training programs for nurses and midwives focusing on prevention and mitigation in order to enhance community resilience.

Description: The training programs focusing on prevention and mitigation for nurses and midwives for strength of community resilience will be developed based on the UN Sendai Framework for Action and community resilience framework.

Three workshop programs for community residents were developed with the contribution of the graduate students of the Disaster Nursing Global Leadership program in University of Hyogo. The workshops were designed that participants would receive practical knowledge for preparing disaster events, have images of living situations at evacuation centers after disaster and learn how to maintain their own health after disaster. The facilitators of the workshops are nurses. Because the original programs were designed for Japanese, the evaluation and modification for other countries are needed.

Workshop 1: Preparing for evacuation

This workshop is designed to encourage participants to consider how to obtain evacuation information, safe evacuation methods, and support methods for people who need assistance in evacuation, and to select items to take out during evacuation. Rapid evacuation in the event of a disaster is important to reduce human injury and loss, and through the workshop, residents acquire the knowledge and skills necessary for rapid safe evacuation. The workshop can be modified for depending on target population, such as school children, elderly and so on.

Workshop 2: Self health maintenance at evacuation shelter

This workshop is aimed at acquiring knowledge and skills to maintain health at evacuation shelter. Based on the past disaster cases, an image of living in evacuation shelter is evoked using photographs. Then, participants are asked to discuss and examine issues on living in shelter and their solutions concerning things that are directly related to health maintenance such as meals, activities, and rest. Through these learning activities, participants can think and prepare concrete measures of maintaining health on the living in evacuation shelter.

Workshop 3: Disaster preparedness for foreign residents

This workshop is intended for foreign residents who currently come to Japan. The participants will understand hazards and risk of disaster in Japan and get familiar with those in their current neighborhood. They also learn how to find critical information at the time of a disaster, information and means on evacuation, collaboration with other residents in their neighbor. The workshop enhances the participants' ability to respond promptly at the event of a disaster.

2. Please briefly describe your collaboration with WHO in regards to the activities of the WHO collaborating centre during the past 12 months (e.g. means of communication, frequency of contact, visits to or from WHO). Please feel free to mention any difficulties encountered (if any) and to provide suggestions for increased or improved communication (if applicable).

- 1)The Centre sent two faculty members to the 2nd WHOCC Forum in Manila held in November 2016.
- 2)The faculty of the Centre actively participate the web-meeting that is conducted within the group of WHOCCs relating to HRH in WPRO bimonthly. The Centre provides input on capacity building of nurses in terms of disaster response. The Centre sent two faculty members to the 10th Asia-Pacific Emergency and Disaster Nursing Network Meeting that was jointly hosted by Asia Pacific Emergency and Disaster Nursing Network (APEDNN), WPRO and SEARO. In the meeting, the faculty shared information about disaster nursing education and training programs, experiences and practices of disaster response, lessons learned from past disaster experiences with participants from other WHO CC.
- 3)Two faculties of the Centre met with the Technical Officers at WPRO and discussed about the activities and the future plan as WHOCC during the 2nd WHOCC Forum in Manila held in November 2016.
- 4)The director of the Centre had several web-conferences and tele-conferences with the Technical Officer at WPRO and received suggestions for the activities. The director and faculties also had been discussing TORs and Activities for redesignation with the team of Division of Health Security and Emergency at WPRO by tele-conferences and emails.
- 5)The faculties of the Centre had frequently met with the director and staff of WHO Centre for Health Development (WHO Kobe Centre) to share information, exchange ideas and discuss about collaborating activities.
- 6)A faculty engaged in the research project of disaster mental health, which organized by WHO Kobe Centre.

Difficulties and Suggestions:

The center has been received supportive advices from the Responsible Officer of the Centre in WPRO since he was assigned. In supportive and good relations with technical officers at WHO-WPRO facilitated our work as WHO-CC.

If there are Nurse Scientists in the headquarter and/or Technical Officers in Nursing as previously, communication between WHO/WHO Regional Office and WHO CC and the activities of WHO CC will be improved and accelerated.

Activities as WHO-CC will be facilitated with the financial support system at worldwide.

It is crucial to be provided proper information regarding to redesignation process in advance with sufficient time.

3. Please briefly describe any interactions or collaborations with other WHO collaborating centres in the context of the implementation of the above activities (if any). If you are part of a network of WHO collaborating centres, please also mention the name of the network, and describe any involvement in the network during the last 12 months.

1)The Centre is the member of the Global Network of WHO CC for Nursing and Midwifery Development. University of Technology Sydney (AUS-93) is the secretariat of the Network. Each member center provided the information of the activities and progresses in own center each year and the secretariat published the report. The 18th General Meeting of the network was held on July 30th, 2016 and the center made input on setting the agendas of the meeting and sent a faculty to the meeting.

2)The Centre is the member of the Asia Pacific Emergency and Disaster Nursing Network (APEDNN). The network is consisted of WHO-CCs for nursing in WPRO and SEARO and other institutions and individuals in Asia Pacific countries. The network hold a web-meeting bimonthly and the Centre participate the meeting actively. The network also hold the annual on-site meeting to share, discuss and stimulate activities regarding to Disaster Risk Management for Health. The Centre sent two faculty members to the 10th APEDNN meeting held on November16-19, 2016 in Vellore, India. As the WHO CC for Nursing in Disaster and Emergency, the Centre provided the information of the works regarding to the good practice on capacity building and care provision in Disaster Nursing and the director of the Centre gave the lecture about nursing contributions to the Sendai Frame Work for Disaster Risk Reduction at the International Conference held at the same time as the APEDNN meeting.

3)The Centre discussed about research collaboration regarding to evaluation of training programs for disaster nursing with James Cook University (AUS-98) and the Hong Kong Polytechnic University (CHN89).

4)The Centre jointly conducted a study for a survey on health-related lifestyle and psychosocial health behavior among adolescents in six countries with other WHO CC in WPRO and SEARO. Dr. Regina Lee, the Hong Kong Polytechnic University, School of Nursing (CHN-89) is the chief researcher of this project and other WHO CCs participating in this project are University of Technology Sydney (AUS-93), Mahidol University (THA34), Catholic University of Korea (KOR-104), Peking Union Medical College School of Nursing (CHN-129) and Christian Medical College and Hospital (IND-86). The team of the Centre conducted a survey in Japan. Data collection and analysis of Japanese data have been done and comparative analysis of six-country data will be done shortly.

4. Please briefly describe any type of technical, programmatic, advisory or other support received from WHO during the past 12 months for the implementation of the agreed activities listed above (if any).

Dr. Arturo Pesigan, Technical Officer of Emergency and Humanitarian Action at the WHO Country Office for Sri Lanka visited the Centre from December 11 to 16, 2016. The faculties of the Centre and Dr. Pesigan had meetings regarding to Emergency Program at WHO, education and training for nurses, capacity building for community resilience and others during his stay. He also gave a lecture about WHO strategies for Health Emergency to the faculties and graduate students of Disaster Nursing Global Leader program.