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Evolving towards professionalism in emergency nursing in Hong Kong

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Received 3 October 2007; received in revised form 20 November 2007; accepted 30 November 2007

Abstract This paper aims to share with the readers about the experience of emergency nursing development and related roles in Hong Kong. The roles of emergency nurses are evolving and triggered by three major historical milestones. The three milestones consist of: (1) Transition of nursing education from hospital training to nursing degree program at universities in 1990; (2) The re-evolution after the establishment of Hospital Authority in 1993; (3) Hong Kong’s return to China in 1997. These milestones have contributed immensely to the development of quality nursing education, nursing professionalism with emphasis on specialty knowledge and skill training in Accident and Emergency departments (AED) in Hong Kong. Since 1991, the emergency nursing role has been expanded and extended. Wound management remains one of the major extending roles for emergency nurses, who confine themselves to manage simple wounds. Nurse initiated tetanus immunization, intravenous access; investigations such as electrocardiogram, blood glucose, and urinalysis are well implemented in all AEDs under the governance of guidelines and protocols. Initial triage analgesic for the minor musculoskeletal injury and fever are also part of the triage care in some AEDs in Hong Kong now. To meet the demand and challenge, innovative role development such as lecturer practitioners and emergency nurse practitioners have been piloted and implemented recently.

Besides the normal duty, emergency nurses also participate in the work outside the hospitals such as involvement in emergency medical teams to assist in various rescue missions or volunteer for Flight Nursing (Government Flying Services). However, the nursing shortage is another common problem faced by the Hong Kong health care body. With the help of advanced technology, better pre-graduate
Introduction

The issue of professionalisation has been at the heart of much discussion in nursing. This paper aims to chart the path towards professionalisation of emergency nursing in Hong Kong with an aim to communicate with nurses as well as those interested in nursing and emergency nursing development in Hong Kong. At the outset an overview of nursing development will be introduced, followed by discussions of Hong Kong’s emergency system and related nursing training, role development as well as current practices. The recent challenges and current issues will be highlighted. The authors, a previous lecturer practitioner and a nurse specialist currently working in an emergency department, hope that this paper can enhance deeper understanding of the Hong Kong nursing situation, promote better communication and encourage collaboration amongst the nursing fraternity of Hong Kong in the future.

Nursing development in Hong Kong

Hong Kong, originally a small city situated in the southern part of Mainland China, became a small British colonial city in early nineteenth century. The training of nurses in Hong Kong first started in 1904 as the training of midwives. The first formal Nursing School, the School of General Nursing in Queen Mary Hospital was instituted in 1937. Since then it has undergone continuous reform in order to meet the demands arising from rapid societal changes. The format of nurses’ training and its registration examination was modeled from the British system. The nursing students received 3 years of hospital-based training and were required to pass a Nursing Board Registration Examination after the completion of their training (Hong Kong Society of Nursing Education, 2002). After the Second World War, the population of Hong Kong grew very quickly due to the influx of returning residents and refugees from China. The main thrust triggered the government to build more hospitals and was instrumental in starting the emergency services known as ”Casualty” (Hong Kong Academy of Medicine, 2006). With the increasing demand of nursing services, nursing education development in Hong Kong has undergone great changes especially in the late 1980s. These key changes can be seen as milestones in the history of Hong Kong nursing and are discussed below.

Milestone 1: Transition of nursing education from hospital training to nursing degree program at universities

Nursing education has traversed a long way in the last two decades. The transition of basic nursing education from the 3-year hospital-based apprenticeship training to the 4-year degree program at three local universities (The University of Hong Kong, The Chinese University of Hong Kong and Hong Kong Polytechnic University) represented a big revolution and evolution in nursing education. In 1990, Hong Kong Polytechnic University started the first intake of 40 first year nursing students and traditional hospital based nursing schools started to decrease uptake of students and gradually they have faded out. A nursing graduate from a local university is usually granted both a bachelor degree qualification from the relevant university as well as a practicing qualification as a registered nurse from Nursing Council of Hong Kong (authorized nursing organization for the nursing license in Hong Kong). Now the intake of first year nursing students of each university is approaching 200 each year. The 4-year bachelor degree program in nursing aims to equip students not only with general nursing knowledge and skill, but also develop a deep awareness of holistic care in response to the increasing demand for holistic nursing care in terms of disease prevention, health promotion and research. The university nursing departments also prepare the nurses to take up extended and expanded roles in the delivery of primary, secondary and tertiary care.

Milestone 2: The re-evolution after the establishment of Hospital Authority

From the early 1990s, various changes have taken place in Hong Kong that have triggered much advancement in nursing. The Hospital Authority (HA) was established to take over all the public hospitals. Casualty was renamed as the ”Accident and Emergency Department” (AED). From 1993 to 1998, 5 more hospitals with AEDs were established
to make up a total of 15 hospitals serving an overall population of nearly 6 million (Hong Kong Academy of Medicine, 2006). The new HA not only brought in new hardware such as hospitals, new management structure and advanced technology in health care, but it also brought in a new system for work culture, training and promotion. In the context of AED, a management nursing team now consists of a chief of service, a departmental operating manager (DOM), a ward manager, a nurse specialist, nursing officers and nurses. Greater emphasis has been placed on outcome indicators and quality assurance. The AED needed to be open to the community and also transparent to the media. A lot of collaboration has been required among different disciplines such as the Hong Kong Police Force and Fire Services, in order to stringently maintain the security of the community. In line with HA policies, the DOM, ward manager and nurse specialist together with the departmental Chief of Service (AED) have looked into areas such as training, staffing, quality assurance, disaster planning, and the development of clinical guidelines. In addition, the introduction and extensive use of Hospital Information Systems such as the Clinical Management System and the Accident and Emergency Information System provide great support for daily nursing work in terms of management, clinical care and discharge planning for the clients. Nowadays, all AED clinical notes, laboratory results and even X-ray films are now scanned and stored in the AED data base for easy retrieval and storage (Hong Kong Academy of Medicine, 2006).

Specialty training in emergency nursing
Since the establishment of the HA in 1994, more formal AED nursing training programs have been provided to AED nurses as on-the-job training or specialty training to ensure nurses' clinical competency. Now a junior nurse working in the AED is required to complete a certificate course of emergency wound management and techniques; a certificate course on intravenous access and therapy, a triage workshop; an emergency child birth workshop; field triage; various disaster drills at a civil airport; radiation Hazmat and so on. In addition, an AED nurse with 2-years AED working experience normally gets through the training of Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS) as well as other related courses. Besides this, more comprehensive certificates and diploma courses have been introduced such as the Emergency Nursing Course or Post Graduate Diploma in Critical Care — these courses are aimed at developing AED nurses' knowledge and clinical competencies.

Hong Kong Emergency Nurse Association
Hong Kong Emergency Nurse Association (HKENA), the only emergency nursing organization, was established in 2002. HKENA organizes numerous professional development and training activities for all AED nurses. It also acts as a platform for the exchange of ideas and experiences with overseas emergency nurse associations with a view to updating and improving emergency nursing care in Hong Kong.

Milestone 3: Hong Kong’s return to China
On July 1997, Hong Kong was renamed as “the Hong Kong Special Administrative Region of the People’s Republic of China” which started a new era for the government as well as for Hong Kong citizens. Hong Kong nurses thus have more opportunities to link with health care organizations in Mainland China. More communication such as visits and conferences are now held to enhance better communication and collaboration. Hong Kong people seem increasingly interested to learn Mandarin in addition to Cantonese (mother tongue) and English. Nursing student exchanges (3–4 weeks) between universities in China and Hong Kong during semester breaks have become a common event in a nursing student’s school life.

These milestones have contributed immensely to the development of professionalism — especially amongst the AED nursing system, which is discussed below.

Nursing system in AED in Hong Kong
A typical AED of Hong Kong adopts a Functional Nursing model to cope with the high volume of patients’ attendance as well as to ensure efficient high quality care in critical care. This model of care is task focused; tasks are divided with each nurse assuming the responsibilities for specific tasks. For example, one nurse is assigned to perform wound care, whereas another nurse may assume responsibility for medication administration or triage care. The nurses become highly competent with the tasks although the drawback of this model is problems with continuity of care (Potter and Perry, 2005). A regional AED typically handles 450–500 patients daily, 138,000 annual presentations (AEIS, 2006). In a resuscitation room, we have adopted a multidisciplinary approach to care for critically ill patients. The system is similar to the USA, UK or Australia, and aims at providing holistic care to critical care patients efficiently. The trauma service in Hong Kong is a mature and efficient service
with well-established protocols and guidelines to support the trauma patient from admission to AED to the trauma unit of a hospital.

### Triage system

A triage system was first introduced in 1988 and now a 5-tier triage system has been used as described below:

- **Category type I (critical)** — Patient should be treated immediately if suffering from a life-threatening condition with unstable vital signs caused by a major event.
- **Category type II (emergency)** — Patient should be treated within 15 min when suffering from a potentially life-threatening condition with borderline vital signs but with potential risk of rapid deterioration.
- **Category III (urgent)** — Patient should be treated within 30 min if suffering from a major condition with potential risk of deterioration but with stable vital signs.
- **Category IV patient (semi-urgent)** — Patient should be treated within 90 min when the patient suffers from an acute but stable condition.
- **Category V (non-urgent)** — Patient does not have an acute condition and thus the patient should be treated within 180 min (HA Triage Guideline, 2006).

In Hong Kong, the workflow of a regional AED is generally well-organized so that they can handle a high volume of cases. Patient waiting times need to be kept within 10 min by the triage nurses. AED nurses’ roles have been evolving and they have had some autonomous practices or extended roles in the Hong Kong context since 1990, as delineated below.

### Role development and extended roles for AED nurses

In 1991, the first nurse specialist in A&E medicine was appointed. Their major role is to handle in-service specialty training within AED, to update specialty development and to carry out research. As of 2006, a total of seven nurse specialists have been appointed in the AED under the HA. Wound management remains one of the major extended roles of AED nurses, who confine themselves to manage simple wounds. Nurse initiated tetanus immunization, nurse initiated investigations such as electrocardiogram, blood glucose, and urinalysis are well implemented in all AEDs under the governance of guidelines and protocols (Hong Kong Academy of Medicine, 2006). Nurse initiated medications such as paracetamol and ventolin inhalation are being practiced in a few AED according to protocol. However, the autonomous practice of AED nurses is comparatively lower than UK AED nurses (Reveley et al., 2001; Hong Kong Academy of Medicine, 2006). Comparison of autonomous practices of Hong Kong AED and UK AED are summarized in the table below:

### Comparison of autonomous practices among nurses of HK AED & UK AED

| Innovative practices                  | UK A&E nurse                               | HK A&E nurse                 |
|---------------------------------------|--------------------------------------------|------------------------------|
| Analgesic prescription in triage      | Yes (after training and assessment)        | Yes (in some AEDs only), driven by own AED protocol. |
| Wound closure                         | Yes (after training and assessment)        | Yes (after training and assessment) |
| Plaster of Paris application          | Yes (after training and assessment)        | No                           |
| X-ray triage                          | Yes (after training and assessment)        | No                           |
| Minor injury unit                     | Yes                                        | No                           |

Since 2004, a new triage pain management protocol was launched and the triage nurses have the autonomy duty to initial Paracetamol for the minor musculoskeletal injury patients (Wong, 2007). Recently, the Prince of Wales Hospital, the Academic Unit of Emergency Medicine of Chinese University of Hong Kong and Kadoorie Critical Care Fund have taken the lead to send three senior AED nurses to the UK for emergency Nurse Practitioner (ENP) training. It is a stimulating effort to further advance the role development of AED nurses of Hong Kong. A UK Emergency Nurse Practitioner (ENP) is qualified to assess, diagnose, treat and discharge patients with certain injuries in an autonomous manner (Reveley et al., 2001). The overall responsibilities of an ENP are to provide quality minor injury services for injuries such as cuts, scalds, bites, sprains and strains. The ENPs in the UK can request and read X-rays, manage wounds, apply Plaster of Paris, remove foreign bodies, prescribe some medication such as antibiotics, tetanus and analgesics and give general advice. It is expected that the
A pilot program of 3 AED nurses training in the UK will lead to further continuity and success of the ENP role development in Hong Kong.

**Lecturer practitioner (LP) role**

Lecturer practitioner role is a combination post of 0.5 service funded and 0.5 education funded post, which has been developed for nearly 2 decades in the UK (Lathlean, 1997). The specific responsibility can be summarized in four dimensions: practice, education, management and research. In Hong Kong, a pilot LP post was established from 2002–2005 with funding from Kadoorie Critical Care Fund. This role involves the integration of clinical practice, quality assurance, education and research within the Accident and Emergency Departments in the Prince of Wales Hospital and the Nethersole School of Nursing of the Chinese University of Hong Kong.

The overall objective of creating a LP post was achieved by liaisons with The Nethersole School of Nursing, Academic Unit of Accident of Emergency Medicine of the Chinese University of Hong Kong and related AED. This author, as the first pilot LP in Hong Kong, was delighted that she could act as a catalyst to stimulate professional development, motivate the research atmosphere in the clinical area and facilitate AED service improvement. The outcomes of changes in AED during the working period consisted of extending the nursing autonomy and improving the services of AED in terms of the implementation of a triage nurse pain protocol for musculoskeletal injury patients and promoting more effective wound care for minor injury patients. However, it was difficult to divide time equally between academic and clinical roles as well as to perform all the expected functions at once. Nevertheless, the author truly believes that the mission of the LP role is very valuable for the benefit of nursing education and practice. The Lecturer Practitioner role has considerable merit and warrants expansion in HK. However, more discussion or support in terms of clearer job description, funding, career role development and support from the HA are required for the future development of the LP post of Hong Kong.

**The challenges: AED nurses working outside the hospital**

Besides the normal duty within the hospital, it is also the duty of an emergency nurse to participate in the emergency medical teams and to assist in various rescue missions outside the hospital. In the event of mass casualties, the team also assumes the responsibilities for conducting field triage in order to prioritize victims for transfer to hospital. Furthermore, a lot of emergency nurses also volunteer for special services such as Flight Nursing (Government Flying Services). With training, a flight nurse teams up with the Government Flying Services (GFS) and the Auxiliary Medical Officer in evacuating victims, or search-and-rescue of the victims. The objectives are to provide expeditious professional medical and nursing care to people in need and to achieve maximum operational efficiency for the GFS air ambulance during casualty evacuation from remote islands. In addition, some emergency nurses have joined a newly established service: the Hospital Authority Overseas Support Team (HAOST). In response to summons from the Hong Kong Special Administration Region (HKSAR) Government, HAOST would be dispatched to overseas regions to assist Hong Kong citizens. They provide medical advice, psychological support and facilitate smooth early transfer of all surviving victims and relatives concerned. For example, in 2006, a dispatch team went to Egypt to help victims and relatives involved in a major traffic accident. On this occasion, there were 14 mortalities while others were critically injured. The Support Team quickly discovered that one patient was wrongly identified as a dead victim while another victim with head injuries was mistakenly diagnosed as being confused, but the patient was only frightened and hindered by the language barrier (Hong Kong Academy of Medicine, 2006).

**The way ahead**

Hong Kong, a beautiful, densely populated international city situated in the southern part of China, continues its important role and hopes to host important international events such as participation in the 2008 Olympics, and International Monetary Fund meeting. After the severe acute respiratory syndrome (SARS) outbreak, the HA learned a big lesson and started to form a HA task force on Contingency Planning for Major Events or Unexpected Disasters. For example, recently there was strong discussion and serious preparation for the 2008 Olympics and the East Asian games to be held in 2009. To face challenges, more collaboration, organization and communication are required among different disciplines in Hong Kong and China. To meet the demand, nursing training will be provided to equip AED nurses to face different challenges. However, the nursing shortage is another common headache faced by the Hong Kong health care body.
Innovative methods have had to replace the manpower shortage. With the help of advanced technology, better pre-graduate and specialty-training programs, Hong Kong health care strives to achieve the highest standards of quality care.

Conclusion

The history of nursing development in Hong Kong is regarded short in comparison to some western countries such as the USA or UK. However, nursing role development in Hong Kong is evolving and starts to chart its way to success. This role development aims to execute nurses’ roles and responsibilities either independently or collaboratively with other professionals in order to meet the demand of individuals, families and the community. There are certainly great changes and more stories of successful care giving are bound to be reported in the near future. We hope that the changes will also lead to advancements in the professional status for emergency nurses.

Acknowledgement

The authors wishes to acknowledge Mr. Raymond Chan (DOM, PYNEH) for his generous help in providing information related to emergency nursing. Thanks also go to all nurses who have devoted their efforts to providing quality emergency nursing services in Hong Kong.

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