

Perspectives on Critical Care Nursing: Hong Kong



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Editor's note:

This is the first in a series of articles that will describe the perspectives of different countries on the provision of critical care services. Authors will adopt varied approaches to explain how critical care services operate in their country and describe the role nurses play in service delivery and patient care. Some articles are based on presentations that were given at the 2nd BACCN International Conference and the 1st Congress of the World Federation of Critical Care Nurses held in Cambridge, UK, during September 2004. Hopefully, by reading these articles you will develop a greater understanding of how critical care services are delivered throughout the world. The articles are published to create dialogue between our readers, so if you have any questions or queries that you wish to discuss with the authors, please e-mail them to the editors. The questions and responses will be published in future editions of the journal.

SUMMARY

- ❖ The history of intensive care in Hong Kong began in 1967.
- ❖ There are about 20 intensive care units (ICUs) spread throughout the territories in Hong Kong. Fifteen are public hospitals and the others are private hospitals. The number of beds in each unit varies between 4 and 22.
- ❖ The Hospital Authority sets the standards for manpower requirements for ICUs, which are expected to have 4.2 nurses per bed.
- ❖ It is recommended that at least 80% of ICU nurses go through a formal ICU training programme.
- ❖ Approximately 50% of nurses in Hong Kong hold a degree level qualification.

INTRODUCTION

Hong Kong is a region of China being returned to the administration of this country in 1997. It is a small piece of land with an area of about 1,100km² and a total population of close to 6.7 million (Hospital Authority, 2004). There are approximately 60 hospitals providing services to the citizens of Hong Kong. Forty-seven of these hospitals are public hospitals which provide over 90% of the hospital services for the territories. The public hospitals are under the control of the Hospital Authority and are funded centrally by the Government (Hospital Authority, 2004). The remaining hospitals are privately funded. There are about 4,600 doctors (1.55 per

1,000 population) and 20,000 nurses (6.25 per 1,000 population) providing services in the public hospitals (Hospital Authority, 2004). There are two teaching hospitals in Hong Kong: the Prince of Wales Hospital which is attached to The Chinese University of Hong Kong, and the Queen Mary Hospital which is attached to the Hong Kong University.

The initial training of nurses prior to 1990 was purely hospital-based. After a three-year hospital-based training, nurses were awarded a Registered Nurse title, which was regulated by the Hong Kong Nursing Board. From 1990 onwards, colleges and universities began developing pre-registration nursing degree courses. In addition, nurses who had trained before 1990 had opportunities to access post-registration degree courses. From 2000 onwards, all nurse training has been based in universities, and it is estimated that more than 50% of nurses in Hong Kong hold a nursing degree qualification (Hospital Authority, 2004). Nursing is a well-respected profession in Hong Kong society; this is reflected in the entry salary of nurses which is usually higher than the starting salary of many other degree-based professions.

HISTORY AND DEVELOPMENT OF CRITICAL CARE SERVICES IN HONG KONG

The major impetus for the growth and development of intensive care as a speciality can be traced back to the poliomyelitis epidemics that occurred in Europe between 1949 and 1952 (Hall et al., 1992). This resulted in the rapid growth of technology to support critically ill patients, most notably the development of intermittent positive pressure ventilators. However, the history of intensive care in Hong Kong is much shorter, beginning in 1967 when the first ICU was set up at the Kwong Wah Hospital (Lett & Lo, 1997). Before 1967, critically ill patients were cared for on general wards. Between 1968 and 1970, three other units were set up (Nethersole Hospital in 1968, Grantham Hospital in 1968 and Queen Mary Hospital in 1970). Since then, most of the acute hospitals in Hong Kong have now established an ICU.

In common with many other countries throughout the world, specialist education for doctors and nurses was limited. Doctors obtained ICU experience by simply being posted to work on the unit. In 1981, the first doctor from Hong Kong (Ronald Lo) completed formal ICU training in Australia (Lett & Lo, 1997). This resulted in the acknowledgement of the need for specialist training by the central training committee of the Medical & Health Department (later the Hospital Services Department), and doctors continued

to travel overseas to obtain specialist training. During the 1970s and 1980s, senior nurses working in the ICUs were sent to the United Kingdom to gain specialist education. Many obtained the English National Board Clinical Course in General Intensive Care (ENBCC 100) and/or Coronary Care Nursing (ENBCC 124). When they returned to Hong Kong, they were responsible for assisting in the establishment and development of intensive care and coronary care services and staff.

In terms of the development of intensive care as a medical sub-speciality, three factors acted as driving forces:

- ❖ The establishment of the Hong Kong Society of Critical Care Medicine;
- ❖ The opening of the Prince of Wales Hospital ICU;
- ❖ The Halnan Report.

Hong Kong Society of Critical Care Medicine

The establishment of the Hong Kong Society of Critical Care Medicine (HKSCCM) occurred in 1983. Many doctors from Hong Kong attended the inaugural meeting of the Western Pacific Society of Critical Care Medicine held in Tokyo in 1979; they brought back ideas for creating their own critical care society. After a few years' preparation, the HKSCCM was finally established in 1983. The HKSCCM has doctors, nurses and allied health professionals as members. It is an associate member of the Federation of Medical Societies of Hong Kong, and a full member of the World Federation of Societies of Critical Care Medicine which is the largest multi-professional organisation dedicated to ensuring excellence and consistency in the practice of critical care medicine.

Prince of Wales Hospital ICU

The opening of the ICU at the Prince of Wales Hospital in 1984 is seen as a landmark in the development of intensive care units in Hong Kong (Lett & Lo, 1997). An anaesthetist from Sheffield, UK, Professor Andrew Thornton, set up the unit. He led the way in establishing the need for dedicated medical staff to work within ICUs. After his return to the UK in 1987, critical care medicine received a further and major boost with the appointment of Professor T.E. Oh as Chair of the Department of Anaesthesia at The Chinese University of Hong Kong. He and his colleagues have made great contributions to the clinical and academic development of intensive care medicine. He led the way in introducing the Australasian standards for and practices of intensive care into



Hong Kong. The recognition of intensive care as a speciality at the Prince of Wales Hospital was completed by the renaming of the Department of Anaesthesia to the Department of Anaesthesia and Intensive Care in 1989. This ICU was also the first to be accredited by the Australian and New Zealand College of Anaesthetists to offer training in intensive care outside Australia and New Zealand. This was therefore the first centre in Hong Kong that could train doctors to specialise in intensive care medicine. Moreover, the ICU at the Prince of Wales Hospital was the first in Hong Kong to offer a formal ICU diploma nursing course. This programme commenced in 1995 and is the result of collaboration between the hospital and The Chinese University of Hong Kong.

The Halnan Report

In 1988, Professor Keith Halnan from the UK was invited by the Hong Kong Government to give his expert opinion on intensive care and on the proposal to establish an Academy of Medicine in Hong Kong. His report acknowledged the relatively short history of intensive care provision but identified the major strides that had been made. This report has made many people aware of the need to develop intensive care as a real entity (Lett & Lo, 1997). The Hong Kong Academy of Medicine was finally developed in 1993. It serves as an organisation that sets and maintains professional standards in medical practice in Hong Kong.

During the 1990s, intensive care continued to evolve as a medical sub-speciality. Medical training has been established with the development of a six-year training programme organised by the Intensive Care Board under the College of Anaesthesiologists and the Critical Care Board under the College of Physicians. Doctors who successfully complete this training can register on the Specialist Register of the Medical Council as intensivists or critical care physicians. These qualifications enhance their effectiveness working within ICUs, and also strengthen their profile in terms of gaining senior positions.

INTENSIVE CARE UNITS IN HONG KONG

Most ICUs in Hong Kong follow the European and Australasian styles by having general ICUs; single discipline ICUs (or speciality ICUs) are not common. There are about 20 ICUs spread throughout the territories in Hong Kong. The number of beds in each unit varies between 4 and 22. ICUs in Hong Kong are also classified according to the different level of facilities or resources they offer (College of Nursing Hong Kong, 2000). For example, the ICU in the Prince of Wales Hospital is comparable to a Level III ICU in Australasian hospitals. This is because it is attached to a big regional hospital with 24-hour Accident and Emergency services, it has consultation services of different medical and surgical specialities, it is covered by qualified intensivists, and has a 1:1 nurse-patient ratio. Some hospitals also have high dependency units (HDUs). These HDUs differ from the ICUs in that they take patients of lower dependency such as those requiring monitoring but not ventilation. The Hospital Authority sets the standards for manpower requirements for ICUs; they are expected to have 4.2 nurses per bed. In some hospitals, HDUs are used as 'step down' facilities to bridge the gap between the ICU and the general wards. Patients are usually transferred to these units once their condition has improved sufficiently and they do not require ventilation or high dose inotropic support. Typically, HDUs are small facilities with only four or five beds. The nurse-patient ratio for HDUs is 1:2.

In the past, the Hospital Authority did not set any rigid rules to describe the required qualifications for nurses working in these areas. However, after the Severe Acute Respiratory Syndrome (SARS) epidemics in 2003, the Hospital Authority issued guidance that at least 80% of ICU staff should have gone through a formal ICU training programme. At the moment, there are three institutions offering formally recognised ICU speciality training programmes for nurses in Hong Kong. These are the Institute of Advanced Nursing Studies of the Hospital Authority Head Office, The Chinese University of Hong Kong, and the Hong Kong University. They offer post-registration qualifications (certificate and diploma) in intensive care nursing. Moreover, The Chinese University of Hong Kong is also running a Masters in Critical Care programme, which provides a higher academic qualification rather than speciality training.

In an effort to achieve high standards of care and service, many ICUs have developed clinical improvement programmes to include research activity, the use of systems to support evidence-based practice, risk management, and occupational safety and health. Standards and core competency (or mandatory training) are in cardio pulmonary resuscitation, moving and handling, and infection control.

INTENSIVE CARE NURSING

The management structure of all public hospitals is very similar. The nursing team is led by a Department Operations Manager (DOM) who is the nursing head of ICU. Under the DOM, there is a Ward Manager, who deals with manpower and resource management issues, and a Nurse Specialist, who deals with clinical issues such as clinical patient care, clinical supervision, education and training, consultancy, research activities and standard development. The Ward Manager leads a nursing team that includes Nursing Officers (who are similar to charge nurses or sisters in the UK) and Registered Nurses. The Nursing Officers are involved in day-to-day managerial work and bedside patient care. Registered Nurses are purely responsible for providing direct bedside patient care. ICUs in Hong Kong generally run a three-shift system (early, late and night) and nurses work 44 hours a week over six days.

After registration, all nurses are expected to engage in continuing professional development activities to expand, refresh and update their nursing knowledge. Activities are accredited via a points system and nurses are expected to obtain at least 15 continuing nursing education (CNE) points per year.

Role of intensive care nurses

In common with many countries, intensive care nursing in Hong Kong is concerned with providing the highest level of monitoring and support for patients with severe physiological dysfunction. The goal of intensive care nursing is to provide individualised care, so that the critically ill patients can adapt to their physiological dysfunction as well as cope with the psychological stress of being in an ICU (College of Nursing Hong Kong, 2000). The primary scope of intensive care nursing includes a large element of direct patient activity aimed at:

- ❖ Providing cardio-respiratory support to maintain adequate oxygenation;
- ❖ Monitoring and maintaining sedation and analgesia;
- ❖ Monitoring and managing the delivery of fluids and

electrolytes;

- ❖ Establishing and maintaining nutritional support;
- ❖ Monitoring and managing elimination functions;
- ❖ Promoting exercise, rest and sleep;
- ❖ Providing a balance between stimulation and rest;
- ❖ Maintaining general hygiene and protecting the skin, eyes and mouth;
- ❖ Providing psycho-social support for patients and their family/visitors.

Nurses are responsible for monitoring and managing the technology required by their patients, for example haemodynamic monitoring devices, intra-aortic balloon pumps, SpO₂ monitoring, mechanical ventilators, intracranial pressure monitoring, transcranial Doppler and haemofiltration. Despite the use of technology, the concept of holistic care is emphasised. Many ICUs use a model of care to guide practice e.g. the Roy adaptation model (Roy & Andrews 1999).



The nurses' role in intensive care does not differ too much from nursing roles in other countries; nurses remain as the direct caregivers, patient educators, mediators and patient advocates. As for working pattern, most ICUs practise case (patient) assignment, while a few use a primary nursing approach. In terms of extended roles, ICU nurses strive hard to extend their roles in a medically-dominant environment. General speaking, nurses' extended role in ICU is somewhat limited; they neither prescribe medications nor perform endotracheal intubation. However, individual ICUs do allow their nurses to extend their roles by following unit agreed protocol for such activities as titrating inotropes or weaning patients from ventilation, IV cannulation, defibrillation, insertion of laryngeal mask airways and administration of emergency medications during life-threatening situations.

Future developments

Nursing is continuing to develop and the Nursing Council of Hong Kong, as the regulatory body, is in the process of establishing a system for the recognition of advanced practice. It is thought that a new qualification of Advanced Practice Nurse will be introduced. The overall aim of this system is to encourage nurses to put more emphasis on the improvement of the quality of clinical care and

how they, as nurses, can influence and impact on this.

CONCLUSION

In 2003, the SARS epidemics in Hong Kong infected many people, and up to 20% of them required intensive care services. This definitely brought to the fore the importance of intensive services in the country. Although intensive care nursing in Hong Kong could be seen as a 'slow starter', its growth and development in a relatively short period of time means it is catching up very quickly. Intensive care nurses in Hong Kong have the potential and are developing the confidence to increase their profile in contributing to patient management and outcome and in striving to develop Hong Kong as a centre of excellence in critical care.

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