

# NEWSLETTER

## *Hong Kong Association of Critical Care Nurses (HKACCN)*

Vol. 5, No. 1, January 2003

HKACCN LOGO

### *Editorial*

#### *Western-Pacific perspectives in critical care*

Violeta Lopez, Professor, CUHK

The 12<sup>th</sup> Congress Western Pacific Association of Critical Care Medicine was held in Bali, Indonesia on the 22 – 25 August, 2002. Critical care nurses from the Philippines, Korea, Singapore, Malaysia, Hong Kong, Thailand, Australia, Sweden and Australia met and discussed several innovative nursing interventions with regards to caring for critically-ill patients with different health problems. Evidence-based practice for critical care nurses was discussed in relation to some of the barriers for not implementing research evidence. Most of these barriers include nurses' lack of knowledge about the research process, lack of support from the organization, lack of time to implement evidence-based practice even though nurses acknowledge their importance, and nurses do not see the need to change practice. Research priorities for critical care nursing practice were also discussed for the purpose of providing nurses with some ideas about which research topics are worth pursuing and strategies to assist nurses in conducting the much need research. The views of the nurses from the Western Pacific regions indicate that lack of good research mentors and lack of knowledge were probably the two most important barriers in conducting research. In addition, the lack of communication between nurses from these regions, other than being in a congress such as this, was also mentioned as a major limitation in exchanging experiences on what nursing interventions are effective for caring the critically-ill patients.

The American, Australian and European critical care nurses have well-established organizations that support their members. Within the Western-Pacific region, such organization is lacking and therefore, limits the advancement of the critical care nurses' profession. In light of this views, it was recommended that one way of being visible in the international arena was to establish a nursing association in line with the Western-Pacific Association of Critical Care Medicine and to hold conference or congress together with this association. This would then be similar to the Australian and New Zealand Intensive Care Society and the College of Australian Critical Care Nurses.

Such organization that would include memberships of critical care nurses associations within the Asia Pacific region would be similar to that of the European, American, Australian and New Zealand. The proposed organization to address critical care nursing issues within this region with the aim of improving communication, networking and most importantly, practice and research.

#### *Graduation Ceremony of Diploma in Critical Care Nursing (Beijing)*

David Chan, PDC Chairman, HKACCN

The closing ceremony of the Diploma in Critical Care Nursing (Beijing) was held on the 18<sup>th</sup> November 2002. This was a time when the Hong Kong Association of Critical Care Nurses (HKACCN), Chinese Nursing Association (CNA) and the Peking University Medical



*Participants of the Beijing Critical Care Nursing program pictured with representatives from HKACCN, CNA and PUMC*

College (PUMC) celebrated their efforts made to improve the standards of their mother country.

HKACCN made use of its Hong Kong and overseas experiences in the specialty to help developed such program in Beijing. After years of preparation (including helping them to develop clinical mentors), the program commenced in July 2002 and ended in November 2002. Students were nominated from different parts of China. They all needed to go through 4 weeks of theories, and 16 weeks of clinical practicum in different critical care settings (respiratory ICU, cardiac ICU, Neurosurgical ICU, renal and AED) in Beijing. Speakers included many nurse specialists from Hong Kong as well as some nurse experts and doctors from Beijing. Students were required to go through different types of assessment including clinical assessment, case study, group project assignment, seminar presentation, as well as written examination. Despite all these heavy work, many students still got very good results. The program was very well received. To us, this was also a precious experience. We have learnt how to work with our counterparts in Beijing, and we have also learnt how keen and enthusiastic these students were in pursuit of further knowledge in terms of intensive care nursing.

According to our agreement with China, HKACCN will inject efforts to help develop their own program within the next three years. Obviously, the first program in 2002 was a success. We will have our second program started on 21 July 2003. Lastly, I would like to express my sincere appreciation and gratitude to all nurses who have contributed their time and efforts to make this pioneer program a reality and to all nurses who will continue to support the program in 2003 and 2004.

## **EVIDENCE-BASED PRACTICE**

### **Making a difference in eye care: Using Gladwrap in the eye care of ICU patients**

So Hang Mui, NS, ICU, PYNEH

Current practice revealed a wide variation in eye care in our unit. We all agree that it is important to do eye assessment and eye care but we knew little about the rationale for doing it and most importantly, we knew little about the outcome of what we were doing.

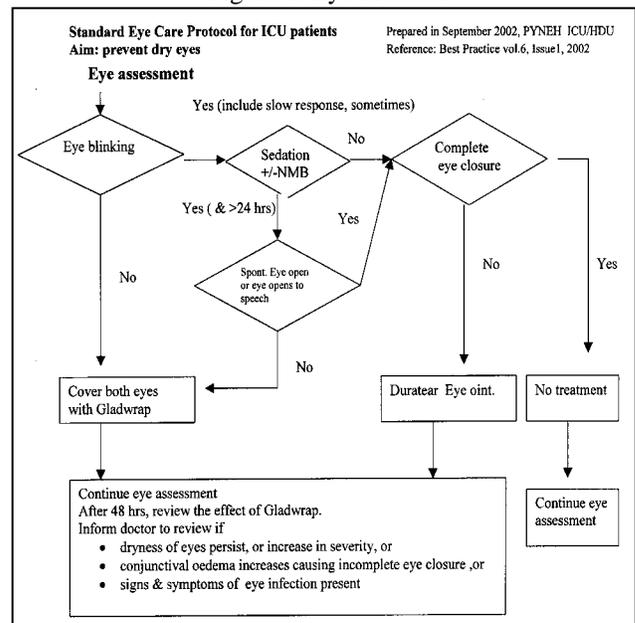
In ICU, eye care is recognized as a simple procedure and of relative low priority of care when compared to the care of major organ failure faced by critically ill patients. This sounds logical, but some unfavorable factors start to act silently when the patient is unconscious, sedated, paralyzed, and are on ventilator support. Unconscious, sedated or paralyzed patients are of high risk of corneal abrasions, infection and conjunctival chemosis. Systemic review of the literature has demonstrated that corneal abrasions occur in ICU patients within relatively short periods from 48 hours to one week.<sup>1</sup> Research studies reported that the incidence of corneal abrasions are as high as 50%.<sup>1</sup> The loss of protective mechanisms such

as loss of blink reflex, decrease of tear formation superimposed with increased intraocular pressure often are a result of positive pressure ventilation. Therefore, ICU patients are highly susceptible to inadequate eyelid closure and drying of the eyes. These unfavorable eye conditions will impair patients' corneal and conjunctival surface defences. Thus, ICU patients are at risk for superficial keratopathy, keratitis, conjunctivitis and conjunctival chemosis (ventilator eyes). Further, these eye problems can lead to poor vision affecting the quality of life in those patients who recover from a critical illness.

Therefore, we decided to take a proactive step in eye not merely to change a practice, but to correct misconception and to modify our belief on eye care. To bridge evidence and practice, we set up an eye care team and set our goals and prioritized our efforts. All team members were empowered with the knowledge and skill of eye care and were notified about the best evidence available. Meanwhile a survey was conducted to explore staff practice on eye care. This information was valuable to guide our training strategies and would like to take this opportunity to share our experience of using Gladwrap (Polyethylene cover) in the eye care for intensive care patients.

The most challenging issue was to formulate an eye care protocol, using Gladwrap to seal patient's eyes. Although different approaches have been used to maintain the tear film and facilitate adequate corneal wetting, the findings of meta-analysis of randomized controlled trials (RCTs) found that there were significant differences of using Gladwrap in reducing corneal abrasion compared to eye instillations.<sup>2</sup> Gladwrap was laid over patient's eyes to provide a moist chamber aiming at preventing dry eyes. We then conducted a trial run to fourteen patients to ensure the eye protocol (Figure 1) was practical and feasible.

Figure 1: Eye Protocol



The trial run findings showed that all patients' eyes remained moist and eyelids closed completely even when ventilator eyes developed. Relatives accepted the use of Gladwrap after explanation was provided to them. Patients' facial appearance can be fully viewed by relatives because of the transparency of Gladwrap. Most nurses gave positive feedback. Other advantages included the ease of frequent pupil assessment, decrease of confusion with a standardized protocol and cost saving. Finally, a plan to follow up and evaluate patients' eye condition in order to document the effectiveness of Gladwrap was organised.

The implementation of best practice is not a simple task but our commitment brings all our efforts toward a common goal: eyes care, we care. Eventually we can make a difference in patients' outcome and justify our intervention with the best evidence.

Lastly I would also like to thank our team members for their commitment and contribution, our staff for their involvement, ICU director, Ward Manager and DOM for their continuous support. Without these human factors, the best practice on eye care will only remain as a piece of information.

#### Reference

1. Evidence Based Practice Information Sheets for Health Professionals: Eye Care for Intensive Care Patients. Volume 6, Issue 1, 2002. BestPractice BestPractice.
2. Joyce, N, 2002, Eye care for intensive care patients, A Systematic Review No.21 The Joanna Briggs Institute for Evidence Based Nursing and Midwifery, Adelaide

## **CLINICAL UPDATES**

### **Critique Analysis on Glasgow Coma Scale**

Yau Ching Ying, Jane, RN, AED, QEH

The Glasgow Coma Scale has been the gold standard of neurologic assessment for trauma patients since its development by Teasdale and Jennett in the early 1970s.<sup>1</sup> It was created to assess the level of impaired consciousness and coma in the patient with head injuries. They believed that impaired consciousness is an expression of dysfunction in the brain as a whole. This may be due to agents acting diffusely, such as drugs or metabolic imbalance; or to the combination of remote and local effects produced by brain damage which was initially focal. Such focal brain damage may affect some of the responses which are used to assess the level of consciousness, and any scale devised for general use must allow for this possibility

Being a tool to assess the degree of consciousness after severe head injury, the Glasgow Coma Scale has largely addressed the above criteria. It uses three easily assessable variables, namely the eye opening, best motor responses and best verbal responses. Teasdale and Jennett<sup>1</sup> chose the three components because each of them are independently evaluated and reported in many cases of coma and found that they are relevant in

assessing patient with impaired consciousness. They believed that the opening of eyes could indicate arousal mechanism, but not necessarily attentiveness. Motor responses were easily elicited from four limbs and could reflect the functional state of the central nervous system. They also believed that the return of understandable utterance could indicate the recovery of consciousness.

It is practical to use without special training. It uses numbers that substitute the use of terms to describe consciousness, so as to avoid ambiguity. It has become the most widely used and accepted. It has provided a universal, standardized and yet simple approach that health care professionals can utilize to monitor and communicate neurologic assessment findings.

Although most of the time it is used uncritically and has its advantages, it still has its disadvantages. It shows that using numbers as an integral part of the scoring system is of no real values.<sup>2</sup> In practice, even the higher scores are by no means a reliable indicator of how ill someone is. Besides, it has no indication of the underlying pathological or structural basis of the impaired consciousness. The situation is even worse if the 'worst' instead of the 'best' score is recorded.<sup>3</sup>

There are also problems in eliciting responses, such as the initiation of painful stimuli in order to see a patient's response. Pressure on the supraorbital ridge or the sternum may result in unnecessary injury to the patient. Unfortunately, in most cases, when an unconscious patient arrives at AED, the first thing that the doctors do is to rub the sternum of the patient to see his response.

There are also ethical considerations of eliciting responses from painful stimuli. Sternal rub and supra-orbital pressure has been proved to be damaging and should be avoided. If the patient is suffering from hemiparesis, he or she may actually feel the pain, but he or she may not be able to make responses. In view of this, other measures like the Babinski's reflex or skin sensation can somehow replace the painful stimuli.

As far as the reliability and validity of the scale is concerned, there were not many studies found. In 1974, Teasdale and Jennett tested their own scale and found that '...reasonably close agreement in evaluations by nurses, neurosurgeons and other medical practitioners...' However, twenty years later, Marion and Carlier<sup>4</sup> found that there were significant discrepancies between neurosurgeons and non-neurosurgical ED personnel assessments, indicating that the reliability and validity of the scale is questionable and need further studies.

When using the Glasgow Coma Scale in situations like patient with major trauma, alcohol and drug intoxication and pediatric patients, there are scoring challenges and limitations. In reality, there are quite a number of conditions in the three components that affect the accuracy of the Scale (Fig. 1)<sup>5</sup>

In some developed countries like USA, patients suffering from severe trauma are usually medicated for the purpose of airway management and safety. They are usually sedated and intubated.<sup>5</sup> In Hong Kong, although trauma patients will not be sedated for transferal, when considering the assessment and management sequence, 'ABC' will be assessed and managed first before 'D', the neurological disability. If not, hypoxia and hypotension can be the secondary causes of the impaired consciousness. Apart from this, some of them sustained spinal injury and the responses may be confused with those of head injury. Therefore, 'pseudoscore' in such situations must be well indicated.

Alcohol and drug effects can over-shadow the responses of the actual physiological damage of the brain due to head injury. These effects are not well addressed in the scale. Moreover, the scale is not appropriate to assess the Pediatric patients under the age of three.<sup>6</sup> It lacks developmental considerations. Besides, factors like fear and anxiety owing to strangers and unfamiliar environment can affect the assessment result as well. Children under such condition will never co-operate with health care professionals during the assessment. Therefore, unless there is plenty of time to do a thorough neurological examination, a quick guide of AVPU will be more appropriate.

Fig. 1: Conditions that affect Glasgow Coma Scale Score

Eye Opening	Verbal Response	Motor Response
Periorbital edema Ocular trauma Cranial nerve injury Pain	Endotracheal intubation Tracheostomy Laryngectomy Maxillary facial trauma Edematous tongue Mutism Aphasia Hearing loss	Spinal cord injury Peripheral nerve injury Extremity injury with immobilization Pain
	Inability to comprehend language spoken Dementia Psychiatric disorders Developmental delay Medications Alcohol and drug intoxication	

Being a health care professional, one should take into consideration the above factors when using the Glasgow Coma Scale. The weaknesses of the scale should be addressed. It is better to use multiple assessment tools in addition to this in order to overcome the limitations.

References

1. Teasdale, G. & Jennett, B. (1974). Assessment of coma and impaired consciousness: a practical guide. *Lancet*, 2, 81-84.

2. Lowry, M. (1998). Emergency nursing and the Glasgow Come Scale. *Accident and Emergency Nursing*, 6, 143-148.

3. Lowry, M. (1999). The Glasgow Coma Scale in clinical practice: a critique. *Nursing Times*, 95(22), 40-42.

4. Marion, D. W., & Carlier, P. M. (1994). Problems with initial Glasgow Coma Scale assessment caused by prehospital treatment of patients with head injuries: results of a national survey. *The Journal of Trauma*, 36(1), 89-95.

5. Fischer, J., & Mathieson, C. (2001). The history of the Glasgow Coma Scale: implications for practice. *Critical Care Nursing Quarterly*, 23(4), 52-58.

**NTI CONFERENCE**

Leung Oi Kwan, NO, ICU, CMC

The annual National Teaching Institute (NTI) & Critical Care Exposition is going to be held on the 17<sup>th</sup> to 22<sup>nd</sup> of May 2003. I myself had joined this conference in 1998 and found it very fruitful and would like to share with members of HKACCN my experiences from this conference.

The conference was organized by the American Association of Critical-Care Nurses (AACN). It provided lectures, seminars and workshops covering all the clinical aspects, managerial topics, and educational perspectives in critical care arenas. In addition, there were numerous posters describing results of research or CQI projects conducted in various American hospitals. Exhibition booths displaying the latest health care related equipment and instruments were also available for participants to see and discuss with the representatives of the companies involved. Hospital visits were also arranged for the members of HKACCN at the end of the conference.

From these activities, I had the opportunity to update my knowledge on various aspects of critical care nursing including:

1. How critical care units were actually managed in the USA.
2. How to interpret ventilation wave forms and the beneficial effects of prone position for patients with ARDS.
3. How to use noninvasive cardiac output measurement equipment and conduct troponin test at bedside.
4. How to promote holistic care in ICU through involving patients' significant others in the care plan of the patients and allowing patients' pet to visit and stay in ICU for a certain period.
5. How nurses from others parts of the USA showed commitment to improving critical care nursing and passion for their chosen profession.

These experiences certainly broadened my vision and professional horizon. If you have not attended this

conference, I would recommend you as HKACCN members not to miss the chance to attend this forthcoming conference. You can have the detailed information by accessing the website of NTI [info@aacn.org](mailto:info@aacn.org). In addition, HKACCN is also organizing this trip and is offering some sponsorship to our members who would like to participate in this venture.

## CONTINUING EDUCATION

The following continuing education programmes have been organised by the PDC for members and non-members.

### ECG Course for Beginners

This is a 2-evening (6 hours) workshop designed to help frontline nurses, who do not have previous knowledge of ECG, to interpret common arrhythmias and common ECG disorders including heart block, bundle branch block, myocardial infarction and coronary insufficiency.

The aim of the workshop is to enable nurses to detect and report life-threatening dysrhythmias early and intervene accordingly in clinical and triage situations.

Schedule	Content
Day 1: 6:00 to 9:00 pm	1. Basic ECG concept 2. Common arrhythmias
Day 2: 6:00 to 9:00 pm	1. Heart block and bundle branch block 2. Myocardial infarction and coronary insufficiency

2003 ECG courses are as follows:

ECG 2003-1	22 & 29 January
ECG 2003-2	19 & 26 March
ECG 2003-3	21 & 28 May
ECG 2003-4	20 & 27 August
ECG 2003-5	17 & 24 September
ECG 2003-6	19 & 26 November

Venue : Room 3, LG1, Ruttonjee Hospital  
Award : Certificate of Attendance  
Fees : HK\$200 (Member)  
HK\$400 (Non-Member)

### Managing Clinical Risks in Critical Care Setting

Date: January 8, 2003  
Venue: Lecture Theatre, LG1, Ruttonjee Hospital  
Time: 6:30 – 9:00 pm  
Fees: HK\$100 (Members)  
HK\$200 (Non-members)  
Award: 2 CNE Points

### Elementary Critical Care Nursing Course

Date: January 20 – April 4, 2003  
Venue: Lecture Theatre, LG1, Ruttonjee Hospital  
Time: 18:15 – 20:45 pm  
Fees: HK\$1000 (Members)  
HK\$1200 (Non-members)  
Award: Certificate of attendance

Deadline: 3 January 2003

#### Program Contents:

20/1/03	Course introduction Introduction to critical care nursing haemodynamic monitoring
27.01/03	Principles of mechanical ventilation and its advances Acute respiratory failure and ventilatory care airway management
10/02/03	Airway management oxygen and humidification therapy
18/02/03	arterial blood gases, SaO <sub>2</sub> & ETCO <sub>2</sub> monitoring Care of patients with non-invasive ventilation
24/02/03	Basic concepts of ECG and interpretation cardiac arrhythmias and nursing care
03/03/03	myocardial infarction and nursing care heart block and cardiac pacing
10/03/03	head injury and post-operative care neurological assessment and ICP monitoring
19/03/03	Acute renal failure and renal replacement therapy Care of patient with CVVHD
24/03/03	Thermo injury and nursing care Care of patients with pancreatitis
31/03/03	Care of trauma patients Care of patients with spinal injury
07/04/03	Objective Test (Multiple Choice Questions)

For further information, please visit the website of the HKACCN:  
<http://www.medicine.org.hk/hkaccn>

Or contact HKACCN clerk:  
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## **CONFERENCE ANNOUNCEMENTS**

19-22 February 2003

XIIth World Congress on Cardiac Pacing and  
Electrophysiology  
Hong Kong

<http://www.icpes.com>

1-3 March 2003

International Medical Care & Diagnostic Conference &  
Exhibition

Airport Expo-Dubai, United Arab Emirates

<http://www.indexexhibitions.com>

18-21 March 2003

23<sup>rd</sup> International Symposium in Intensive Care and  
Emergency Medicine

Brussels

<http://www.intensive.org>

10-12 April 2003

Annual International Nursing Research Conference  
College of Nursing, UK

<http://www.man.ac.uk/rcn/research2003>

4-6 May 2003

Hospital Authority Convention 2003  
Hong Kong

<http://www.ha.org.hk/haconvention/hac2003/index.htm>

6-10 May 2003

13<sup>th</sup> World Association for Disaster and Emergency  
Medicine

Victoria, Australia

<http://www.wcdem2003.com>

17-22 May 2003

2003 National Teaching Institute™ &  
Critical Care Exposition  
San Antonio, Texas, USA

<http://www.aacn.org/AACN/nti03.nsf/vwdoc/AboutNTI2003?opendocument>

5-6 June 2003

2003 Best Practice Guidelines Conference  
Ontario, Canada

<http://www.rnao.org>

8-12 June 2003

4<sup>th</sup> World Congress on Paediatric Intensive Care  
Boston, Massachusetts, USA

<http://www.pic2003.com>

10-23 August 2003

Study tour to Scandinavia  
Cardiovascular Health Outcomes  
Health Outcomes Institute, Inc.

<http://www.health-outcomes-institute.com>

## **GREETINGS TO NEW MEMBERS**

The HKACCN takes this opportunity to welcome all new members who have chosen to join the Association in enhancing and promoting excellence in critical care as a new dimension in nursing education, practice, management and research. Members are encouraged to continuously support and promote the Association and its activities to their colleagues.

## **CONTRIBUTIONS TO THE NEWSLETTER**

The HKACCN Newsletter is published quarterly. The editor welcomes articles reporting news and views relevant to critical care nursing. The following deadlines for submission of issues, news clips, short articles, and research briefs must be adhered to for 1999. Please forward contributions to:

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### Article preparation

Individual submissions should be double-spaced and can be sent through the email. Accompanying photographs must be of good quality. The editor reserves the right to accept, modify, reject and/or check material to corroborate information.

### Submission dates

January issue – December 30  
May issue - April 30  
September issue – October 30

### ***Editorial Staff***

Chief Editor	Violeta Lopez
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## **NEW ADDRESS OF HKACCN**

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