

NEWS

CCRS:

The Intensive Care Taskforce continues to work with Statewide Services Development Branch and Business Information Program (BI) to progress a web-based Critical Care Resource Management System (CCRS), which will integrate, in the future, with the NSW Health Bedboard program. The live pilot phase of CCRS commenced on the 16th March 2009 and will be continue for 2 weeks following which CCRS will be used by the Aeromedical and Medical Retrieval Service and critical care services to inform the statewide coordination of intensive care beds and improve access to intensive care services.



Dr Stuart Lane is in training to swim the English Channel in August 2009 to raise funds for intensive care research. Stuart is an English Expat who is a Senior Lecturer in Critical Care with the University of Sydney and a Staff Specialist in Intensive Care at Nepean Hospital. Critical Splash is project under the national Intensive Care Foundation. ICF is a charity dedicated to improving the care of critically ill patients by raising funds for vital clinical research projects as well as the education of health professionals responsible for intensive care. Our overall aim is to improve the number and quality of lives saved in Intensive Care Units each year. For further information on Stuart's channel swim including how to donate money and ICF visit the Website <http://www.intensivecareappeal.com/index.html>



Change to ICCMU & ICUConect Newsletter

This will be the last ICCMU newsletter in this format. As of April 21 a new e-bulletin will be distributed on a fortnightly basis (every second Tuesday). At the moment the e-newsletter will include the following sections:

- News
- Research Window
- Evidence-based practice
- Education
- Patient Safety
 - Information will be sourced from NSWHealth SABS
- Updates
 - ICCMU projects
 - ICCMU Website
- Websites

The main reason for this change is to reduce the number of emails circulating on ICUConect that are of a 'news' focus. The ICCMU newsletter will return in June 2009 with a new focus and format. Inclusions for the e-bulletin will be accepted up to close-of-business every other Monday

Guidelines

International Guidelines

National Guideline Clearinghouse

- *Corticosteroid insufficiency, Recommendations for the diagnosis and management of corticosteroid insufficiency in critically ill adult patients.* consensus statements from an international task force by the American College of Critical Care Medicine. Crit Care Med 2008 Jun;36(6):1937-49. [127 references] [PubMed](#)
- *Assessment and management of the critically ill.* In: *Evidence-based geriatric nursing protocols for best practice.* Balas MC, Casey CM, Happ MB. Comprehensive assessment and management of the critically ill. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008 Jan. p. 565-93. [76 references] http://www.guideline.gov/summary/summary.aspx?doc_id=12253&nbr=006337&string=critical+AND+care
- *Urinary catheter-associated urinary tract infections, Prevention of.* In: Prevention and control of healthcare-associated infections in Massachusetts. In: Betsy Lehman Center for Patient Safety and Medical Error Reduction, JSI Research and Training Institute, Inc. Prevention and control of healthcare-associated infections in Massachusetts. Part 1: final recommendations of the Expert Panel. Boston (MA): Massachusetts Department of Public Health; 2008 Jan 31. p. 83-9.

UK NICE

- *Critical illness rehabilitation:* includes a comprehensive list of tools and guidance to promote the rehabilitation of critically ill patients including full guideline, appendices and quick reference guide <http://www.nice.org.uk/Guidance/CG83>

Useful Websites

Having trouble understanding Patient safety terminology. US AHRQ includes a comprehensive glossary at their website to explain everything from *active error* [*active failure*] through to *workaround*

<http://www.psnet.ahrq.gov/glossary.aspx#A>

CLAB Report



What projects have you done to increase CLAB compliance in your unit?

I think the initial and most IMPORTANT aspect of the project was to create through advertising an awareness of the importance of compliance with the CLAB standards. Our unit believed it was imperative to let everyone know what the CLAB-ICU Project was all about. We started to give inservices to ICU staff, both Clinicians and Nurses. A bulletin board was created where CLAB updates, hand hygiene audit results and CLAB compliance results were displayed. We disseminated information about CLAB via the communication book, bulletin boards and all the toilet doors! Due to our efforts the news quickly spread and everyone now knows what the CLAB-ICU project is all about.

The next step was to acknowledge individual and unit compliance via Honour Rolls. We put the names of all the clinicians (Specialists, Registrars, RMOs and Nurses) who complied with the regimen laid out in the checklist and who filled out the appropriate forms properly after each line insertion. As an added effect, the clinicians also got feedback on the number of lines they inserted each month. We also put up a Hall of Fame for those clinicians who had achieved 100% compliance for 3 consecutive months. Since then, the Nepean ICU has achieved 100% compliance nearly every month. There were, however, occasions when we missed our target and fell back to a 95% compliance which in itself is still a big achievement.

A big round of applause goes to the Nepean Intensive Care Staff, your teamwork and work ethic is very, very commendable.

Marizel delas Penas

Nepean Clab-ICU Project Nurse

Research

Valentin A, Capuzzo M, Guidet B, Moreno R, Metnitz B, Bauer P & Metnitz P (2009) Errors in administration of parenteral drugs in intensive care units: multinational prospective study *BMJ* 2009; 338b814 online

BMJ Online includes a facility to reply to publication. The rapid responses to this work can be accessed on: http://www.bmj.com/cgi/eletters/338/mar12_1/b814

Medication Error & Never Events

This article highlights the very real problem of medication error in ICU. Preventing medication errors have become high priority both Australian and other countries. The Australian Commission on Safety & Quality in Health care is addressing the problem through:

- Standardisation of medication management cycle
- Improving patient safety by reducing medication practice gap
- Medication Reconciliation
- Advocating medication safety & quality through collaboration with other key organisations

Further information on the Australian program can be found at

<http://www.health.gov.au/internet/safety/publishing.nsf/Content/PriorityProgram-06>

In the US adverse outcomes due to medication errors have been included in the Never Events list. The term "Never Event" was first introduced in 2001 by Ken Kizer, MD, former CEO of the National Quality Forum (NQF), in reference to particularly shocking medical errors (such as wrong-site surgery) that should never occur.

Medication errors are part of Care Management events and are defined as "Patient death or serious disability associated with a medication error (eg, errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration)"

There are six discrete categories with the other categories being:

1. Surgical events
2. Product or device events
3. Patent protection events
4. Environmental events
5. Criminal events

Further information can be accessed at

<http://www.psnet.ahrq.gov/primer.aspx?primerID=3>

ABSTRACT

Objective To assess on a multinational level the frequency, characteristics, contributing factors, and preventive measures of administration errors in parenteral medication in intensive care units.

Design Observational, prospective, 24 hour cross sectional study with self reporting by staff.

Setting 113 intensive care units in 27 countries.

Participants 1328 adults in intensive care.

Main outcome measures Number of errors; impact of errors; distribution of error characteristics; distribution of contributing and preventive factors.

Results 861 errors affecting 441 patients were reported: 74.5 (95% confidence interval 69.5 to 79.4) events per 100 patient days. Three quarters of the errors were classified as errors of omission. Twelve patients (0.9% of the study population) experienced permanent harm or died because of medication errors at the administration stage. In a multiple logistic regression with patients as the unit of analysis, odds ratios for the occurrence of at least one parenteral medication error were raised for number of organ failures (odds ratio per increase of one organ failure: 1.19, 95% confidence interval 1.05 to 1.34); use of any intravenous medication (yes v no: 2.73, 1.39 to 5.36); number of parenteral administrations (per increase of one parenteral administration: 1.06, 1.04 to 1.08); typical interventions in patients in intensive care (yes v no: 1.50, 1.14 to 1.96); larger intensive care unit (per increase of one bed: 1.01, 1.00 to 1.02); number of patients per nurse (per increase of one patient: 1.30, 1.03 to 1.64); and occupancy rate (per 10% increase: 1.03, 1.00 to 1.05). Odds ratios for the occurrence of parenteral medication errors were decreased for presence of basic monitoring (yes v no: 0.19, 0.07 to 0.49); an existing critical incident reporting system (yes v no: 0.69, 0.53 to 0.90); an established routine of checks at nurses' shift change (yes v no: 0.68, 0.52 to 0.90); and an increased ratio of patient turnover to the size of the unit (per increase of one patient: 0.73, 0.57 to 0.93).

Conclusions Parenteral medication errors at the administration stage are common and a serious safety problem in intensive care units. With the increasing

complexity of care in critically ill patients, organisational factors such as error reporting systems and routine checks can reduce the risk for such errors.

Gastric Residual Volume and aspiration in critically ill patients receiving gastric feedings

Metheny N, Schallom L, Oliver DA and Clouse RE
American Journal of Critical Care 17(6)512-520

This paper reports on the thorny issue of gastric residual volumes and enteral feeding in intensive care. The principal author is the pre-eminent nurse researcher in this area of clinical practice.

Background The helpfulness of bedside assessment of gastric residual volume in the prediction of aspiration has been questioned, as has the volume that signals increased risk of aspiration.

Objective To describe the association between gastric residual volumes and aspiration of gastric contents.

Methods In a prospective study of 206 critically ill patients receiving gastric tube feedings for 3 consecutive days, gastric residual volumes were measured with 60-mL syringes every 4 hours. Measured volumes were categorized into 3 overlapping groups: at least 150 mL, at least 200 mL, and at least 250 mL. Patients were categorized as frequent aspirators if 40% or more of their tracheal secretions were positive for pepsin and as infrequent aspirators if less than 40% of their secretions were positive for pepsin. Gastric residual volumes were compared between the 2 aspiration groups.

Results Approximately 39% of the 206 patients had 1 or more gastric residual volumes of at least 150 mL, 27% had 1 or more volumes of at least 200 mL, and 17% had 1 or more volumes of at least 250 mL. Large-bore tubes identified most of the high volumes. Eighty-nine patients were frequent aspirators. Volumes less than 150 mL were common in both aspiration groups. However, the frequent aspirators had a significantly greater frequency of 2 or more volumes of at least 200 mL and 1 or more volumes of at least 250 mL.

Conclusions No consistent relationship was found between aspiration and gastric residual volumes. Although aspiration occurs without high gastric residual volumes, it occurs significantly more often when volumes are high. (*American Journal of Critical Care*. 2008;17:512-520)

Symptoms of acute posttraumatic stress disorder after intensive care

Wallen, K, Chaboyer W, Thalib L & Creedy DK
American Journal of Critical Care 17(6)534-544

Research into the recovery and experiences of ICU survivors is becoming increasingly important as more patients survive critical illness. Given the differences between clinical practices and ICUs in various countries this paper is important for ICUConnectors in that authors report it to be the first undertaken in an Australasian ICU.

Background Admission to intensive care is often a sudden and unexpected event precipitated by a life-threatening condition, 2 determinants thought to influence the development of posttraumatic stress disorder.

Objectives To identify the frequency of acute symptoms of posttraumatic stress disorder and to describe factors predictive of these symptoms in patients 1 month after discharge from intensive care.

Methods In this prospective cohort study, all patients meeting the inclusion criteria during the study period were invited to participate. Participants completed the Impact of Event Scale-Revised, and demographic and clinical data were accessed from an intensive care unit database.

Results During a 9-month period, 114 of 137 patients who met the inclusion criteria consented to participate in the study, and 100 (88%) completed it. The mean total score on the Impact of Event Scale-Revised was 17.8 (SD, 13.4; possible range, 0-88). A total of 13 participants (13%) scored higher than the cutoff score for clinical posttraumatic stress disorder. Neither sex nor length of stay was predictive of acute symptoms of posttraumatic stress disorder. In multivariate analysis, the only independent predictor of symptoms was age. Patients younger than 65 years were 5.6 times (95% confidence interval, 1.17-26.89) more likely than those 65 years and older to report symptoms.

Conclusion The rate of symptoms of posttraumatic stress disorder 1 month after discharge from intensive care was relatively low. Consistent with findings of previous research, being younger than 65 years was the only independent predictor of symptoms. (*American Journal of Critical Care*. 2008; 17:534-544)



Policy Directives and Guidelines

2008 - NSWHealth clinicians Intranet access

<http://www.health.nsw.gov.au/policies/date/2008.asp>

1. CPR - Decisions Relating to No Cardiopulmonary Resuscitation Orders GL2008_018
2. Adult-to-Adult Living Donor Liver Transplantation Guidelines GL2008-019
3. Audit and Risk Management Committees - NSW Health PD2008-069

2009- NSWHealth clinicians Intranet access

<http://www.health.nsw.gov.au/policies/date/2009.asp>

4. NSW HEALTHPLAN - identifies the NSW Health emergency management arrangements to coordinate a whole of health response in the event of an emergency. PD2009_008
5. Oral Health Chart & Referral Form for Medical Emergency Departments -To establish a clear, patient focused referral pathway that ensures a care management focus between public emergency departments and oral health services. GL2009_003
6. Paracetamol use - Policy Directive redefining paracetamol doses advised to avoid hepatotoxicity. PD2009_009

➤ Safety Alert Broadcast System - NSWHealth clinicians only

<http://www.health.nsw.gov.au/quality/sabs/index.html>

- **Safety alert** - require immediate action & attention
- **Safety Notices** - require risk assessment at a local level
 1. Autonomic Dysreflexia
 2. TGA recalls - these are issued on a regular basis. The list is extensive so we suggest that you review these on a regular basis
 3. Intravenous Amiodarone
 4. PEEP valve/ PEEP valve diverter mal-assembly
 5. Wrong route errors with oral medication
 6. Nasogastric feeding tubes for infants & children
- **Safety Information - ensuring lessons learned** from statewide, national & international sources are shared regularly across the NSWHealth system
 1. Dräger Oxylog 2000 Transport Ventilator: This Safety Information describes correct assembly for attaching the breathing valve.
 2. Hand Hygiene: Do you know that if you are caring for a patient with clostridium difficile an alcohol handrub is not adequate. OR have you identified the five moments of hand hygiene in ICU? This Safety information highlights these issues. If you want to know more about the 5 moments of hand hygiene visit the following links.
 - WHO website
http://www.who.int/gpsc/tools/Five_moments/en/index.html
 - Hand Hygiene Australia
<http://www.hha.org.au/>

Quality



• Lessons learnt on Quality and Safety - NSWHealth clinicians only

At this site NSW health clinicians are invited to share experiences of incidents and proven solutions to quality and safety issues that arise in the health system. Case studies can be submitted and a discussion forum is available. Contribute your knowledge and join an ongoing dialogue on quality and safety issues. These are the latest lessons submitted to Q & S.

- Inter-hospital transfer of head injury
- The "restlessness" of haemorrhage

<http://internal.health.nsw.gov.au/quality/lessons/>



Safety Alert



Safety Notice



Safety Information

Education

For Your Diary (2009):

- Advanced Respiratory Evening - SVH Melbourne
26 March 2009
Phone: (03) 9288 4488
Flyer available at ICCMU website under Calendar
<http://intensivecare.hsnet.nsw.gov.au>
- Retrieval Education Day - Gosford
April 1 2009 
Phone: 02 4320 5644
- Critical Care Conference in the Vineyards
2nd - 3rd April 2009
Grand Mecure, Hunter Valley Gardens, POKOLBIN
CALL FOR ABSTRACTS (Closes 5th December 2008)
Email : criticalcare@hnehealth.nsw.gov.au
- Trauma down the Coast 
April 30-May 1 2009
Novotel Wollongong
Conference secretariat: 02 9437 9333
Web: Online registration available
<http://www.itim.nsw.gov.au/go/events/trauma-down-the-coast>
- 7th Spark of Life Conference 
April 30-May 4 2009, Hobart, Tasmania
Australian Resuscitation Council
Web: <http://www.resus.org.au/>
- ITIM RNSH Trauma Evening
- ACCCN - ICE 2009
29th - 30th May 2009
The Hotel Grand Chancellor, HOBART, TAS
Web: www.acccn.com.au
Email: ice@acccn.com.au
Phone: 61 3 9347 8577
- 2nd International Symposium on Extra Corporeal Support in Critical Care
24th - 25th July 2009
Grand Hyatt Hotel, MELBOURNE, VIC
Web: <http://www.ecmo.com.au/>
- 3rd International Conference on Safety Quality Audit & Outcomes. Research in Intensive Care
6th - 7th August 2009
Millennium Hotel, QUEENSTOWN, NZ
Web:
<http://anzics.com.au/conference.asp?Section=sqo09>
- 9th Rural Critical Care Conference 
21-22 August 2009 Wagga Wagga NSW
<http://www.ruralcriticalcare.asn.au/index.php>
- 10th Congress of the World Federation of Societies of Intensive & Critical Care Medicine
28th August - 1st September 2009
Florence, ITALY
Web: <http://www.wfsiccm-florence2009.it/en/index.php>
- 7th Australasian Conference on Safety & Quality in Healthcare
6th - 9th September 2009
Sydney Convention & Exhibition Centre,
Darling Harbour, SYDNEY, NSW
Web: <http://www.aaghc2009.org.au>
- 7th International Conference for Emergency Nurses
7th - 10th October 2009
Jupiters Casino, GOLD COAST, QLD
Web: <http://www.cdesign.com.au/cena2009/>

- *NECSS Care of the Critically Ill*
Tamworth West Diggers Oct 22-23
Cost \$150 for seminar, \$26 for dinner
Contact : ICCMU 02 4734 2585

- *ACCCN / ANZICS ASM*
29th - 31st October 2009
Perth Convention & Exhibition Centre, PERTH, WA
Web:
<http://www.intensivecareasm.com.au/content/view/112/144/>

All web and email addresses were correct at time of publication

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Where available further details on these education events can be found at the ICCMU website under Clinicians/Education – calendar <http://intensivecare.hsnet.nsw.gov.au/current/event>