

Health Education Collaborative Newsletter

A message from the CEO



***Bruce Greaves
CEO/Director***

Welcome to issue 16

We hope you had a Happy Easter and enjoyed the school holidays.

It has been a busy month undertaking delivery of National Disability Service courses around regional Victoria including Mildura, Swan Hill Horsham, and Ararat, all in one week! We are so proud to be working with NDS delivering courses contextualised to the needs of this vastly diverse organisation.

Our Australian Orthopaedic Association (AOA) Collaborative fracture management course is now going full steam ahead with course requests coming in from far as far as WA and northern QLD. We hope to be delivering courses in all states on a regular basis by years end. Please give us call if you would like to discuss a program in your area.

In June I will be heading off on an outback adventure up the middle of Australia to Kununarra and El Questro Station, onto Kakadu and across to Rockhampton via Mt Isa and Longreach. Then I will then head back down the east coast. During this trip I will be visiting several health care facilities along the way meeting staff and providing information on our unique courses and delivery methods and how we collaborate with other organisations to contextualize courses and programs to meet the needs of their staff and members.



This will be my home for the trip. We call it the snail as its house is on its back. *I am sure we will throw in a few nice hotels along the way.*

If you or your organisation would like to arrange to meet, please contact me directly on 0444 547036.

Bruce Greaves CEO/Director
Health Education Collaborative

Clinical Update



Margaret Vilella
**Executive Director/
Director of
Education**

Clinical question with Marg

Answer for last month's question.

Questions:

- Which of the signs and symptoms below are most common in adult patients with severe sepsis?
 - Fever > 38 C
 - Tachycardia
 - Tachypnoea
 - Metabolic acidosis
 - Acute oliguria

The correct answer is C. A change in respiratory rate is often the earliest warning sign in nearly all states of clinical deterioration including sepsis, systematic inflammatory response syndrome, shock, and respiratory insufficiency, among others.

Why is RR so important?

Alveolar ventilation which is a product of RR and tidal volume (the volume of air moved into or out of the lungs during a normal breath) is usually carefully controlled by the actions of central and peripheral chemoreceptors and lung receptors. Peripheral chemoreceptors (carotid and aortic bodies) and central chemoreceptors (medullary neurons) primarily function to regulate respiratory activity. This is an important mechanism for maintaining arterial blood partial pressure of oxygen (PaO₂) and partial pressure of carbon dioxide (PaCO₂), and pH within appropriate physiological ranges.

Ventilation is driven by both the (PaO₂) and (PaCO₂), with PaCO₂ being the most important driver. The body attempts to correct hypoxaemia (low oxygen in the blood) and hypercarbia (increased CO₂ in the blood) by increasing both tidal volume and respiratory rate.

Any condition that causes metabolic acidosis, such as abdominal pathology or sepsis, will also cause a rise in tidal volume and respiratory

rate through an increased concentration of hydrogen ions, which leads to increased CO₂ production. In addition, any other condition that causes hypercarbia or hypoxia will also increase alveolar ventilation.

You can see that respiratory rate is an important indicator of a severe derangement in many body systems, not just the respiratory system and therefore is a key predictor of adverse events.

So, please take the time to measure it correctly!

2. Mrs Snow is an 80-year-old lady who has presented with some new confusion. Her RR 25, SaO₂ 95%, pulse is 100 bpm (regular), BP is 100/55 and T 37.5. WCC count is 13. *Do any of these parameters fall within sepsis warning signs?*

RR, pulse, new confusion, WCC and possibly saturations would fit into the sepsis warning signs. There is some particularly important information missing here – what is normal for this patient, what are the trends? Is the BP trending down? Are the saturations trending down? Is the respiratory rate trending up?

This blood pressure may also be low for this patient. Always, look at what is normal for the patient and look at all the parameters not just one parameter in isolation.

If you would like to learn more on clinical assessment, [click here](#) to enroll in our Clinical assessment course. The course is only \$70 and is 4 CPD hours.

This month's clinical question

What are the normal values for PaO₂, PaCo₂ and PH?

Courses

Fracture Management

We aim to roll out Fracture Management Courses around Australia in the second half of this year. If you would like to host a session in your state, please contact us on 0419 939458.

Please have a look at our website for a full list of courses available

www.healthec.com.au

Remembering the ANZAC Nurses

As another ANZAC day passes us by, I thought it timely to reflect on the nurses that were on the frontline during WW1. This article is from the Australian Government Department of Defence.

Anzac nurses—a remarkable but rarely told story



Nurses of the 3rd Australian General Hospital form up to follow a piper into their camp under the leadership of their matron, Miss Grace Wilson, and second in command of the hospital, Lieutenant Colonel JA Dick, at Mudros West, Lemnos.

More than 3,000 Australian civilian nurses volunteered for active service during World War I. Twenty-five died during their service and eight received the Military Medal for bravery. However, theirs is a story rarely told.

From the first Allied landings at Gallipoli on 25 April 1915, Australian nurses cared for hundreds of casualties in hospital and on transport ships anchored offshore. Working in often gruelling conditions, with limited medical supplies and a desperate lack of fresh water, they tended to a seemingly endless stream of wounded and sick soldiers for the duration of the campaign.

Reflecting on her work in the hospital ship *Sicilia*, Sister Lydia King wrote in her diary:

I shall never forget the awful feeling of hopelessness on night duty. It was dreadful. I had two wards' downstairs, each with more than

100 patients, and then I had small wards upstairs - altogether about 250 patients to look after, and one orderly and one Indian sweeper. Shall not describe their wounds, they were too awful. One loses sight of all the honour and the glory in the work we are doing.

Click [HERE](#) for the full article. Australian Government Department of Defence.

Next Issue: May 2021



Contact us:

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Web page: <http://www.healthec.com.au/>