

BACCN

British Association
of Critical Care Nurses

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ISSUE 3

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All Link Nurses

Tuesday 22nd
September.

Lets meet up again
for study day in
Thetford Contact:
Marian and Vanessa

SPECIAL POINTS OF INTEREST:

- **Hi All. Here is the third BACCN newsletter. We hope you find it of interest. Please help us network by contributing articles you feel might be of interest. We also would like to start a Discussion and opinions section to have your say.**
- **Best Wishes
Marian and Vanessa
BACCN link Nurse
Coordinators**

Are we heading for a pandemic? If we are to believe every thing in the press we are in one. However as nursing professionals we know that it could happen and the best thing we can do is to be prepared. I expect by now, that we all have a copy of the Algorithm for the management of patients who are suspected of having swine flu (Health protection agency) giving guidelines on how to screen and assess patients with clinical symptoms and geographical or demographical involvement . Infection control and reporting is essential in preventing and transmitting the flu further. Those that are affected must be isolated. In the community those not requiring hospital must remain at home and away from communal areas.

Patients are advised to always

cover nose and mouth with a tissue when coughing or sneezing, and dispose of tissues promptly and carefully, insuring they adhere to good hand hygiene at all times. Patients requiring hospitalization, must be nursed in a side room under strict respiratory isolation and healthcare staff are required to wear full personal protective equipment, using a correctly fitted high filtration mask (FFP3) along with a minimum number of staff caring for the patient. The virus can survive for up to 24hrs on hard surfaces, and twenty minutes on soft surfaces indicating the need to cleaning all surfaces, and handles. None of us know how this flu will develop. However containment is the key. Marian BACCN Link nurse coordinator

DISCUSSION AND OPINONS

In the Nursing Times. net 29th April 2009. Mark Radcliffe suggests that the interesting thing about the Panorama programme on the whistle-blowing case involving Margaret Haywood is that everyone involved can legitimately claim to be doing the 'right thing' The BBC, as 'investigative reporters' exposed poor nurs-

ing services. The nurse involved can claim to be protecting patients by exposing low standards of care. The MNC can claim to be protecting patients by adhering to the core principles of patient confidentiality. The question is: What needs to happen to make things better? Do you have an opinion?



"Yes! That was very loud Mr. Trainer, but I said I wanted to hear your HEART!"

BACCN Study Day
4th June

Hearty
Haemodynamics
Lynford Hall Hotel

Please contact Marian and Vanessa with articles or opinions at:
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INADEQUATE FLUID RESUS CAN RESULT IN HYPOVOLAEMIC SHOCK ENDING WITH ORGAN FAILURE

Fluid resus is an important part of the management of a burn. The emergency management of severe burns course (EMSB 2007) state that children with a burn over 10% and adults with a burn of 15% need fluid replacement.. The burn process causes mediators to be produced and these are released at the

and overall outcome of the patient. In order to give adequate fluid resus the Parkland formula is used within our unit. This formula is used on admission. The Pts weight is obtained and the admission room heated to prevent the patient losing heat, and fluid loss by an exposed burn wound. The percentage of burn is the

and stays within the circulating volume longer. Dziewulski, suggests that formula's are guidelines and can be unreliable in the old, young and patients with other medical conditions However, fluid infused still depends on area, size and depth of the burn, venous assess would be modified accordingly, such as : large venflon, or CVP access.

THE FIRST EIGHT HOURS START-TIME IS FROM WHEN THE BURN OCCURED

burn site and alter vascular membrane integrity which increases permeability (EMSB'07) Histamine, serotonin, Prostaglandins, bradykinin, thromboxanes and angiotensin are released from the burn site. Capillaries become leaky, fluid is lost leaving a depleted circulatory volume. Burns over

area of skin loss caused by the burn and not erathema, To assess this properly, the wound is cleaned. The results are calculated using the Rule of 9's calculation of % of burnt body surface area x Wt (Kg) x 4ml. Half of the total requirement is given in the first eight hours from when the burn occurred, then the second half of total requirement given over the next sixteen hours.

Metabolic requirements are calculated and feed commenced early, to reduce relocation of bacteria from the gut and help prevent gastric ulceration. Patients are monitored closely for the first 24hrs. An A line, CVP line, respiratory rate, BP temp and pulse, fluid balance and urine output are observed for signs of shock

OESOPHAGEAL DOPPLER AND PICCO CAN BE USED TO GAIN CARDIAC OUTPUT STUDIES TO AID FLUID MANAGEMENT

20%-30% produce such large volumes of mediators, which increase vascular permeability leading to generalised oedema. (EMSB 2007) . Adequate fluid replacement will increase circulatory volume and can reduce depth of the burn thus reducing skin damage

The choice of fluid is Hartmanns, a salt containing fluid, to replace depleted salt lost due to the burn. Fluid comparisons have been researched with conflicting results. However, Hartmanns appears to be the accepted fluid for this type of fluid resuscitation (EMSB 2007) Volulyte is used as a colloid for boluses. This has larger

Oesophageal Doppler and PICCO are used in the heamodynamically unstable patient to aid adequate filling and help prevent hypovolaemia and organ failure. Initial good management of fluids are important and more likely to lead to better outcomes for patients



Patients with burns greater than 20% should have the Parkland Formula initially then goal directed therapy

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IN CRITICAL CARE-CAN WE DO BETTER?

In line with the Government's strategy to improve end of live care, rolled out in 2003-2007 and the idea that aspects of palliative care can be integrated in critical care. Colchester developed an end of life care pathway for critical care, with consultant support and was adapted from the national Marie Curie Liverpool Care Pathway LCP

confirm brain stem death can ameliorate their distress. For these Patients the LCP is not appropriate, yet the families still have bereavement needs. So in conjunction with the implementation of the LCP Colchester has set up a bereavement follow-up service.

Where treatment is futile, patients and families may have more time in which to

It is crucial that the people involved in the end of life care are fully informed about the proposed plan of care, in order to avoid distress and the prospect of complaint.

The LCP ensures that all parties are identified and are actively involved.

However, the Mental Capacity Act 2005



THE PATHWAY CONSISTS OF ASSESSMENT, CARE AND BEREAVEMENT

For ITU. The pathway is designed for the last 48hrs of life and contains three sections- assessment, ongoing care and bereavement care. A problem encountered in critical care is that the death-like state of critical illness is indistinguishable from dying. While many pts will survive critical illness a percentage

accept death, prior to the withdrawal or withholding of treatment. Decision-making in these circumstances is extraordinarily difficult and subject to individual variations. The LCP is an evidence based care plan that can add structure to clinical practice surrounding the withdrawal of treatment, which is appreciated.

Offers a further dimension to consent and treatment which is especially relevant to critical care patients.

In the absence of competence the Act allows for the provision of a legal power of attorney to ensure the patients documented wishes are acknowledged and incorporated into discussions

Sudden death denies families the opportunity to begin the grieving process whilst the dying person is still alive

ETHICALLY SOUND

unfortunately, will not. Sudden death, denies families the opportunity to begin the grieving process whilst the dying person is still alive, which facilitates the acceptance of death. However, the care and support families receive during the few vital hours it takes to

In deciding whether to continue with treatment it is important to gather certain information from medical records, the GP and honest dialogue with the families, as critical care patients are usually unable to communicate their choices by virtue of their illness.

during end of life care. One difficulty which came to the fore when introducing the LCP was lack of training. Without training confusion exists over issues such as feeding, hydration and goals from cure to comfort and altering practice accordingly. Training with the pathway will increase confidence.

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NEXT BACCN STUDY DAY
12th OCTOBER
BEDFORD LODGE

**THE NOVALUNG
 INTERVENTIONAL LUNG
 ASSIST (ILA)**

The Novalung was introduced in 1999. However, it is a relatively new concept for some district hospitals, and there are many factors to consider prior to patient selection for therapy. Within our hospital it has been used as a last resort for a patient with ARDs where ventilation was compromised, the CO2 levels were high and the patient was acidotic.



What is a novalung?

It is a pumpless extra corporeal unit, which is marketed as 'advanced protective ventilation' allowing lung tissue 'Time to Heal' in conditions, such as ARDS, Acute Lung Insult, and pneumonia. Using the Novalung lung strategies can be achieved while reducing the effects of ventilator associated injuries such as barotraumas, volutrauma, atelectrauma and biochemical trauma with its use. (Meyer 2008)

It consists of three main components

Cannulae for femoral access.

Membrane ventilator-a heparin coated, biocompatible, diffusion unit for gaseous exchange.

Monitoring device for measuring volumetric blood flow. (Royal Australasian College of Surgeons)

Next edition:

Follow up on Jaci Chapman's article and audit of feeding critical care patients

Insertion and testing NG tube position. News on an audit in progress.

Any discussions or opinions from yourselves. Please send articles to share, to Marian and Vanessa

Catheters are mainly inserted into the femoral site, to form an arteriovenous shunt for the elimination of CO2. The novalung is pumpless and is reliant on the patients own blood pressure to maintain blood flow. Mean arterial pressure has to be maintained at > 60mmHg and typically equate to 1-2L/min of the cardiac output for extracorporeal gas exchange.



BACK PAGE STORY HEADLINE

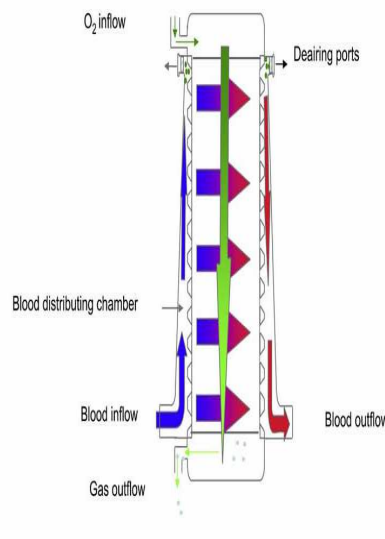
The novalung commonly referred to as a membrane ventilator, provides the ability to supplement oxygen and remove CO2 accumulated during respiratory failure by a process of diffusion. It is made from polymethylpentene (PMP) a low resistant material, the hollow fibres of the PMP are woven tightly in bundles together forming stacks, this arrangement increases the surface area to 1.3m2 in which gas exchange can occur..

Supplemental O2 flows through the PMP fibres and the flow rate is adjusted according to the patients' blood results. Although the gas used is oxygen, and improvements in oxygenation have been seen in patients placed on the novalung, this additional oxygen contributes little to the overall oxygenation of the patient.

Arterial blood enters the unit through the blood inflow port, reaching a distribution chamber, once inside the membrane ventilator blood flows over the PMP fibres. These fibres are bio-

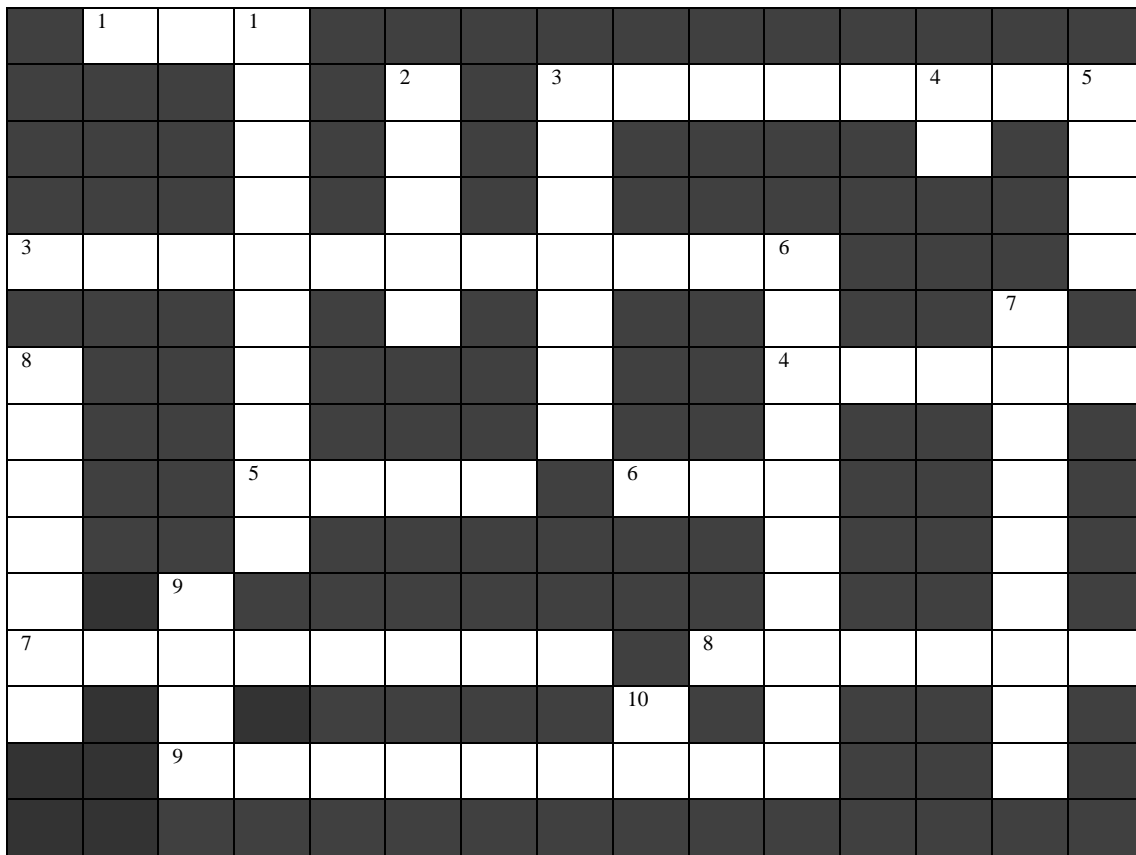
compatible and coated with heparin making the surface non-thrombogenic, The patient, in most cases will need additional heparin, to maintain APPT to 50 – 60 seconds.

Joanne Finn, Sister
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 Harlow



The monitoring device comprises of a transducer clamped onto the blood outflow limb and it measures blood flow through the system, this is displayed on a monitor. The parameters for the blood flow should be between 0.5L/min–4.5L/min

ACROSS	1.	PEA
THROMBUS	2.	
BRADYCAR-	3.	DIA
RESUS	4.	
NODE	5.	
GTN	6.	
INTROPE	7.	
MITRAL	8.	
TAMPONADE	9.	
DOW		
AMIODARONE	1.	
TRACH	2.	
THYROID	3.	
BI	4.	
SKIN	5.	
ADRENALINE	6.	
PULMONARY	7.	
DIGOXIN	8.	
PORT	9.	



Across

1. What initials do we give an arrest where cardiac output is absent, but a rhythm remains on the monitor? (3)
2. A blood clot that breaks away in the vessel is known as? (8)
3. A rhythm and rate below 60 bpm is known as? (11)
4. A patient in peri-arrest suddenly loses cardiac output. What would you do? (5)
5. The AV - - - - (4)
6. What is the abbreviation of nitro – glycerine. (3)
7. What type of drug is dobutamine (8)
8. What is the valve called between the left atrium and left ventricle. (6)
9. What is a post-op complication of heart surgery? (9)

Down

1. What drug can be used to treat SVT and Arrhythmias. (10)
2. A new E.T. tube out is called Lo - - - - - (5)
3. What gland can be affected by Amiodarone? (7)
4. Older defibrillators deliver a single directed monophasic waveform. Recently defibrillators have been developed to produce - - phasic waveform (2)
5. What do you press and observe when checking capillary refill (4)
6. What drug is commonly given in cardiac arrests? (10)
7. What artery is really a vein? (9)
8. A drug which slows and strengthens the pulse rate (7)
9. On a venflon, where would you insert the drug? (4)
10. The - - node fires the electrical impulse and spreads across the atria (2)

Vanessa
Link-Nurse Coordinator