The Critical skills for critically ill patients workshop was held over two days at the Novotel Rotorua on the 15th and 16th November. As well as increasing the profile of critical care nurses it was to establish standards, quality and safety and provide communication to critical care nurses (ICU, CCU, HDU.)

NZ Heart Health currant perspective and future challenges – Professor Norman Sharp.

The death rate for heart disease are declining (peaked in 1970) with the onset of better treatment but there is an increasing mortality for Maori people in NZ with more Maori and Pacific island people suffering form obesity, heart disease and diabetes T2. Smoking is down but once again is higher in Maori and Pacific Island people. Blood pressures over a 30 yr period are trending down and cholesterol levels are down 1mml. There are large inequalities in NZ with its socioeconomic ethnicity, shorter life expectancy, poverty and overcrowding.

Environmental changes to be put in place are smoke free, food environment, and physical activity. A mandate national health target by 2012 is to be implemented with a heart health and diabetic check. Extra funding for research in Maori women's health, heart start (in schools) and healthy living programme and a pacific certificate in nutrition are to be started as well as identifying risks and treating at a lower age

Diabetic emergencies Dr Nic Crook

There seems to be an upward trend of T1 diabetes in the Scandinavian countries as well as a trend upwards of T1 diabetes occurring in the 0-5 age bracket and they are not really sure why this is happening.

Signs and symptoms of diabetes are polyuria, polydipsia, blurry vision, nausea and vomiting, dry mouth, Treatment includes the following tests: CBC, blood ketones, urine ketosis, blood glucose, U+Es. FBC .Blood gases, ECG, Chest X ray, urine and sputum for culture.

For the first 8 hours 1-2 hrly bloods should be carried out. IV fluids of normal saline 1 litre should be given stat if the BP is > 90. Then follow up by 1L over 2 hrs then 1L over 4hours. Sliding scale at a constant rate of actrapid insulin with the aim to get the blood level of glucose down 3mmls an hour. When the blood glucose is 15 or below change the N/S to dextrose 5 % and change to sliding scale insulin. Continue with background lantus. If the potassium is 3.5 – 5 add 40mmls of KCL. If it is below 3.5 notify the Doctor and if the K is above 5 add no potassium. Bicarbonate is not recommended as it increases cerebral oedema.

In type 2 diabetes most patients are over 50 years of age and can have glucose levels of >33, no ketosis or lactic acidosis. Heparin is recommended until blood sugar is < 15.

Diabetes and Heart disease. Dr. Mike Williams.

Why do we treat diabetes
Macrovascular - eyes, kidneys

Mascovascular - heart disease, MI, stroke, cardiovascular disease.

Early identification of risk and treatment of same. This includes antihypertensive drugs, statins to decrease cholesterol, asprin, stents - drug eluding, bypasses, stopping smoking, treating obesity, and intensive glycaemic control. The main ones used are metformin and glipazide.

TECOS (Trial Evaluating Cardiovascular outcomes with sitagliptin – trade name Janvvia.)
Study participants have T2 diabetes and pre-existing cardiovascular disease. Are at least 50 yrs of age and have adequate baseline glycaemic control. It is a long term, event driven, cardiovascular outcomes trial and its primary objective is to determine whether including sitagliptin has any impact on a composite cardiovascular end point. (heart attack, stroke, unstable chest pain, CHF, change in renal function and urinary excretion rate over time or initiation of cronic insulin therapy). In NZ there are twelve sites where the trial is being undertaken and the trial is to last seven years. The drug is taken as a daily dose, usually 100 mgs, and can be taken in conjunction with other oral hyperglycaemics – metformin or sulfonyl. After a twelve week treatment there was a significantly reduced Hb AIC from baseline compared to the placebo. Stilgliptin is in a class of medications called dipeptidyl peptidase-4 (DPP-4) inhibitors. It works by increasing the amounts of certain natural substances that lower blood sugar when it is high. It is the first agent in this class to be launched onto the world market that can be used by people with type 2 diabetes whose blood glucose cannot be controlled well. The benefit of this medication is its fewer side effects (e.g. less hypoglycaemia, less weight gain) in the control of blood glucose values.

10% of people world wide will have diabetes by 2030. The Tairawhiti area has one of the highest rates of diabetes in NZ with almost 2700 people in the area having diabetes. Diabetes is almost three times more common in Maori than non Maori and Tairawhiti has a large Maori population.

Practical workshops attended.

Chest X-ray interpretations
Arterial blood gases
Invasive ventilation
Airways management. Practical session on introducing nasopharynealairways, laryngeal mask airways (LMA)s, intubation technique with endotracheal tubes,

Tracheostomy
(Advantages of non fenestrated blue line tracy tubes. Complications. Humidification. Suctioning. Basic anatomy and physiology.)

Fluid management

Learning from HDC cases Margret Cain
Two cases were discussed with both cases dying as a result of insufficient documentation and information not passed on
Identifying the sick ward patient – communication. SBARR.
Early warning system
Simple interventions.
Simple assessment.

Early warning scores. (EWS)
85% of cardiac arrests in hospital are predictable. Only 1-10 % get home.
Purpose of assessment.
Recognise the at risk patients. Identify organ impairment easily,to proritise patient problems, initial simple treatment, communicate actions.
Simple intervention. - O2, sit patient up, tell somebody. Observations. Chart clearly, frequent as required, changes to suit mode. So what are we charting, see NICE guideline. Heart rate, respiration rate, blood pressure, level of consciousness, O2 saturations, temperature. Taken into account diagnosis, co-morbidities. All parameters need to be recorded. Accurate method. When all parameters recorded an aggregate score is calculated. A trigger is set - a threshold what leads to some sort of action. Response graded. Low, medium, high.
Simple assessment .ABC
Airway, Breathing, Circulation.
D – CNS disability, function
Exposure – full patient examination.
Trend analysis. baseline, know the patients past medical history. Note subtle changes. Accurate charting. Put everything into context.
Monitering equipment…. Limitations. Mindful of what reading doesn't tell you.

Packaging assessment
SBAR, situation, background, assessment, recommendation/request. Information in front of you.

Introduction of national medical chart. Computerised medication system .Medication safety. Best research evidence – double checking risk medications. Automaticity – labelling of high risk medications, calculating doses. High risk patients – neonates, children.

Medical emergency team (MET). Rapid response team. Minimising mistakes. Evidenced based practise. Auditing.

Niki Joyce SIN
(Wd 7)