

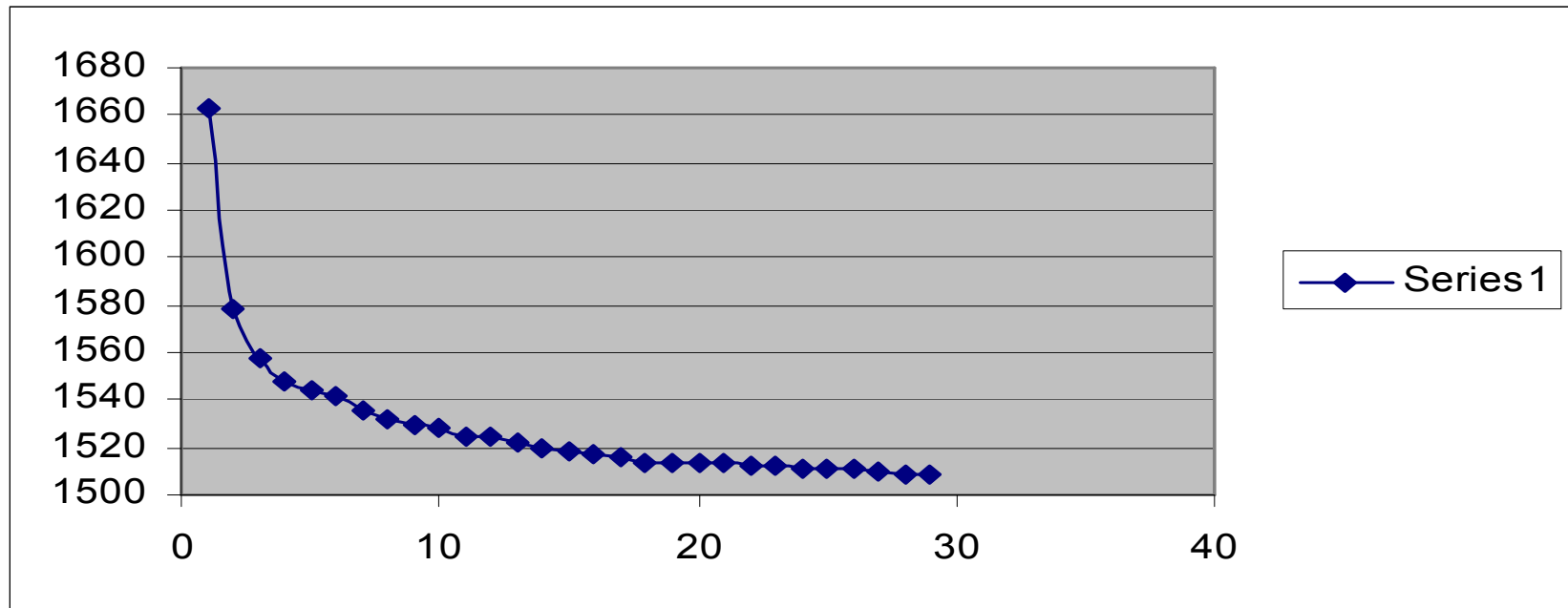
**The Early Warning Score Implementation**  
**Reduced the number of unexpected deaths.**

**do Campo J, Anderson M, Shennan C, Goss K, Roberts M,  
Owen S, Dent L, Showell P, Bush S, Woodcock T, MacDonald  
A, Einoder B.**

**Department of Medicine and Department of Surgery,  
Launceston General Hospital.**

**World Congress of Internal Medicine 2010**

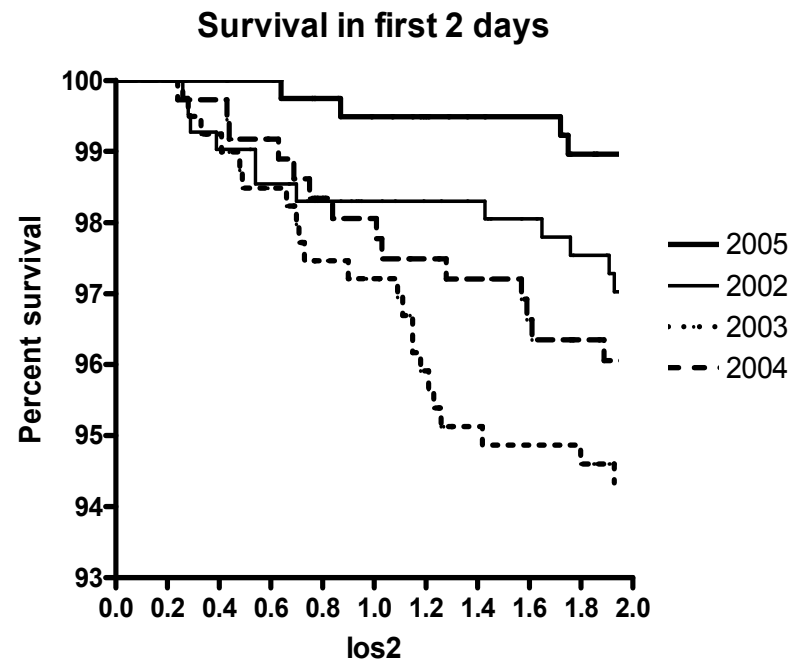
# ICU Mortality 2001-04



## ICU Mortality 2001-05

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
• <b>Total ICU</b>	<b>443</b>	<b>410</b>	<b>348</b>	<b>389</b>	<b>333</b>
• <b>Total Death</b>	<b>68</b>	<b>53</b>	<b>73</b>	<b>53</b>	<b>51</b>
• <b>First 24-48hs</b>	<b>32</b>	<b>24</b>	<b>36</b>	<b>22</b>	<b><u>10</u></b>

# ICU Survival





**Australian & New Zealand  
Intensive Care Society**

## **LAUNCESTON HOSPITAL HALVES DEATH RATE**

The Launceston General Hospital has halved the death rate of patients in the first 48-hours of being admitted to its Intensive Care Unit over the past year.

Intensive Care specialist, Dr. Jorge Do Campo, said the hospital has achieved the significant reduction, bringing the death rate down to 10 last year after it had reached a high of 36 in 2003.

He said the reduction had a strong bearing on a new emphasis on critical care procedures and processes in the hospital, including the establishment of a "Code Blue" Team, as well as more teaching sessions for junior doctors and nursing staff.

Dr. Do Campo was speaking at the 31st Australian and New Zealand Intensive Care Scientific meeting in Hobart.

The research paper highlighted:

2002: 20 deaths in the first 48 hours (Total patients 398, Mortality 51; Mortality in first 48 hours 20)  
2003: 36 deaths (Total patients 373:70:36)  
2004: 22 (Total patients 256:49:22)  
2005: 10 (Total patients 376:50:10)

For the 2006 year figures are still be collated.

Dr. Do Campo says the reduction has been significant over the four year period.

He said the reason for the change had been a major change in policy and procedures at the hospital in relation to critical care, particularly with the introduction of a Medical Emergency Team and greater teaching sessions with junior staff.

The team operates on a Code Blue process where they take over the treatment of a patient who appears to be deteriorating in health, such as a cardiac patient, or someone who has pneumonia.

This team comprises an Intensive Care Unit Registrar, an Intensive Care, or Emergency Care Nurse, the Medical Registrar and the on-call Intern doctor.

The team is called to a patient immediately there has been deterioration in their health and takes over the treatment.

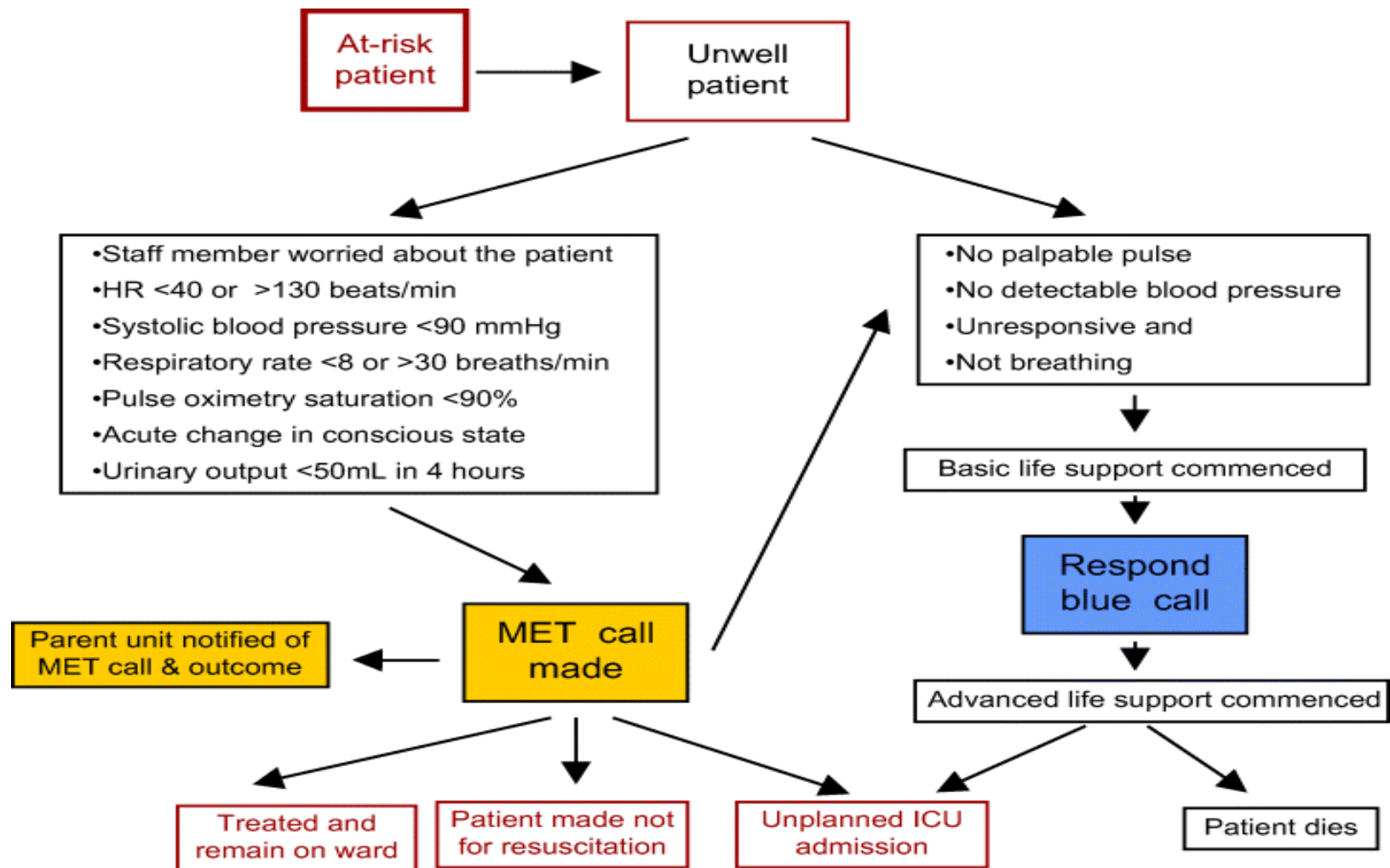
**For further information:**

Rob Masters – 0413 147 080  
Dr. Jorge Do Campo - 0439 36338

**Date: Saturday 14 October**

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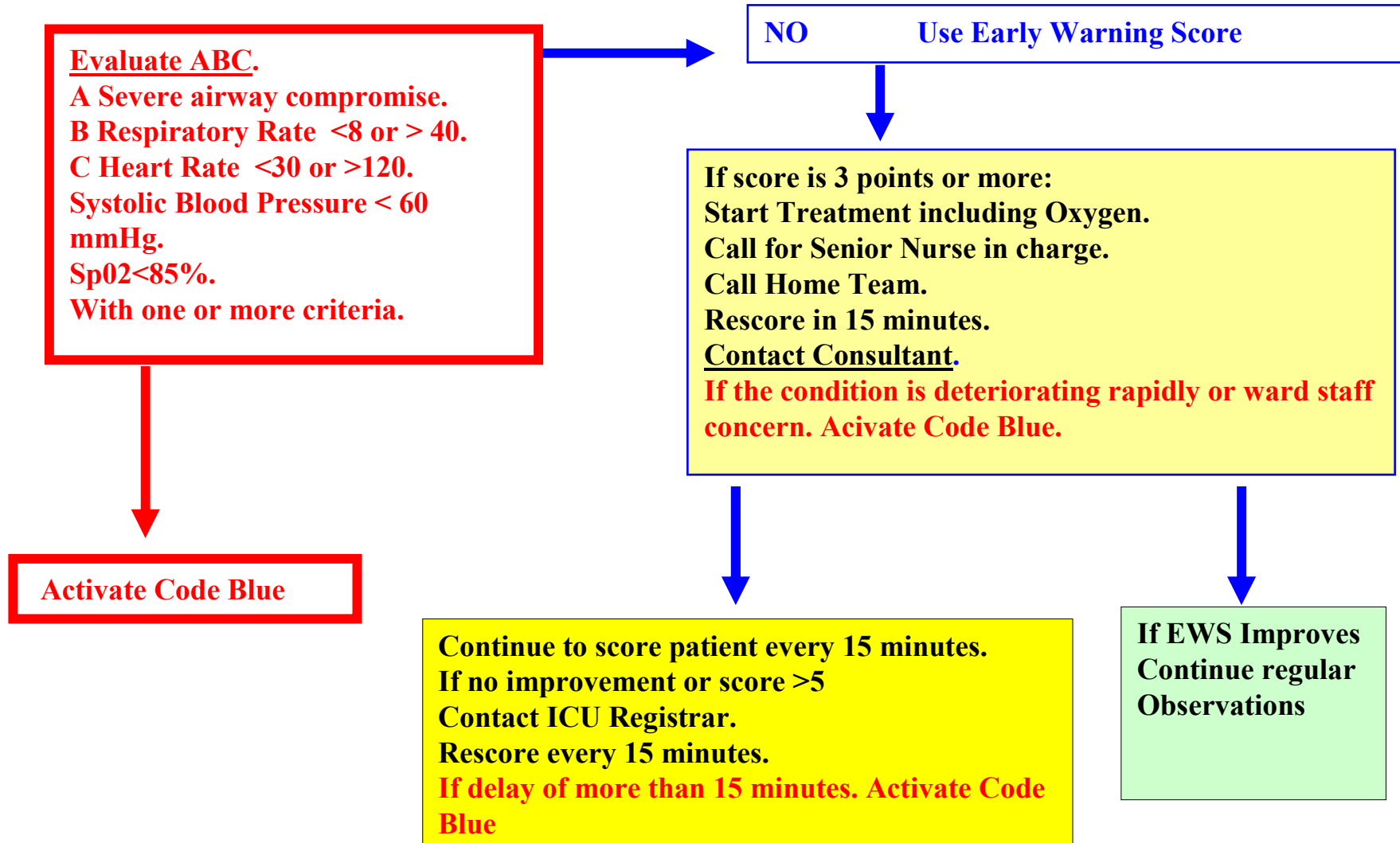
ANZICS is the peak professional and advocacy body for medical practitioners specialising in the treatment and management of critically ill patients in public and private hospitals. ANZICS also leads the world in intensive care research through its Clinical Trials Group and patient databases, including the Adult Patient Database, the Paediatric Intensive Care Registry and the ANZICS Research Centre for Critical Care Resources.



# Early Warning Score-08

<b>Score</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>HR per minute</b>		<40	41-50	51-100	101-110	111-129	>130
<b>BP Systolic</b>		<80	81-100	101-199		>200	
<b>Respiration per minute</b>	<8			9-14	15-20	21-29	>30
<b>Conscious State</b>	Un-responsive	Response Only to pain	Drowsy. Rousable to voice.	Alert			
<b>Temperature</b>		<35		35.1-37.5	>38.5		
<b>Urine Output</b>	Nil	<20 ml/2h	20-50 ml/2h	>50 ml/2h			

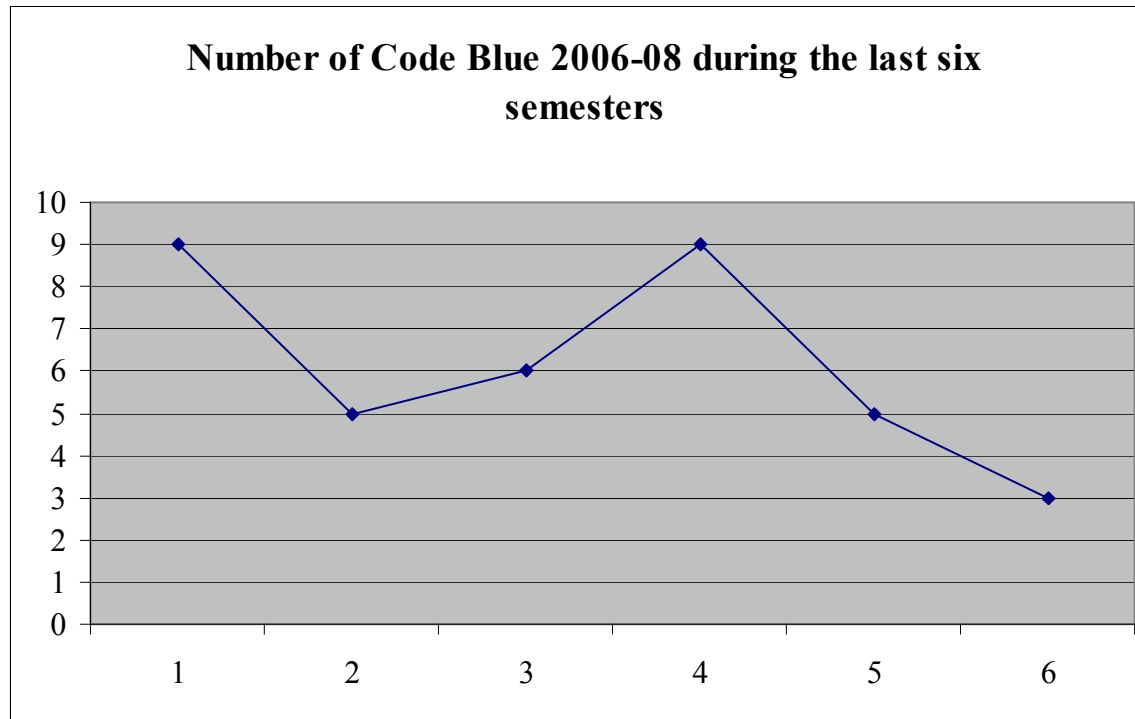
**If Patient Unwell or Condition Deteriorates.  
Nurse caring for the patient assess and diagnose the problem.**



# Code Blue Ward 4D 2007-08

Year	2007	2008 January to June	2008 July to December
Total CB Ward	15	5	3
Syncope =	5 All survived	-----	1 Survived
Asystole =	2 #	1 #	
Respiratory	4 All survived	1 Survived	
EMD (*)	1 Survived		1#
Unknown	2 Survived		
VF arrest	1#	1 Survived	1Survived
Haematemesis	----	1 Suvived	
CVA	-----	1 Survived	

# Code Blue Ward 4D 2006-2008



# Code Blue Diagnoses January to June 2009

Code	01/09	02/09	03/09	04/09	05/09	06/09	TOTAL
Syncope	1	1	2	2	2		8
Cardiac	2	7	11	1	3	1	25
Respiratory	4	3		1	1	1	10
Hypovolemia			1	1			2
Seizures			1			1	2
Unresponse		1			1	3	5
Sepsis							0
PreEclampsia	1						1
Head Injury			2				2
Hypoglucaemia							0
<b>Total</b>	<b>8</b>	<b>12</b>	<b>17</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>55</b>
<b>Death</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>17</b>

# Code Blue Diagnoses July to December 2009

Code	07/09	08/09	09/09	10/09	11/09	12/09	TOTAL
Syncope	4	2		3	1	1	11
Cardiac	1	1		3	3	3	11
Respiratory	4	3	1	3		1	12
Hypovolemia	1	1	1	1		1	5
Seizures	1	3		1			5
Unresponse	2		1				3
Sepsis		1	1		1		3
Hypoglucaemia						1	1
Total	13	11	4	11	5	7	51
Death	1	1	0	0	1	1	4

## Early Warning Score-09

	<b>January to June</b>	<b>July to December</b>
<b>Code Blue</b>	<b>55</b>	<b>51</b>
<b>Deaths</b>	<b>17</b>	<b>4</b>

**Fisher's Exact Test  $p=0.002$**

## **Early Warning Score-09**

**The EWS has opened an education pathway for bedside ward nurses, as they now incorporate basic intensive care nursing skills.**

**This has improved the Early Recognition of the Deteriorating Patient and reduced delay in intervention.**

**The junior doctors participate in the process giving priority to the EWS ward calls.**

**The nurses were able to contact the Consultant directly, resulting in better communication.**

# Early Warning Score-10

<b>Score</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>
<b>Temperature</b>	<34.5C	<35.5C	35.5-38.4C	>38.5C	>40C
<b>HR per minute</b>	<40	41-50	51-105	106-119	>120
<b>BP Systolic</b>	<80	81-95	96-179	180-199	>200
<b>Respiration per minute</b>	<8		9-21	22-34	>35
<b>Sp 0xygen</b>	<88%	89-93%	>94%		
<b>Neuro Response</b>	Response Only to pain- Unrousable	Drowsy - Rousable to voice.	Alert	Confused (New)	
<b>Urine Output</b>	Nil >2hrs Or Nil >12hrs	< 30 ml/2hrs Or Nil>6hrs	>30 ml/hr		

