• Launched in Jan 2010
• 1,000 less cardiac arrests since BTF started
• The BTF charts are being used around Australia
• We wouldn’t be here today without the hard work of many clinicians and the leadership from:

Deborah Picone
Director General and Ministry Sponsor who said this program must be implemented

Professor Ken Hillman
Founder of the Medical Emergency Team and MET criteria

Professor Cliff Hughes
CEC Chief Executive
How system fatally failed Vanessa

NSW Premier Morris Iemma today announced a Special Commission of Inquiry into the NSW health system following an inquest into the death of a girl who was hit by a golf ball in 2005.

Deputy State Coroner Carl Milovanovich was scathing of the NSW Government in his findings into the death of Sydney teenager Vanessa Anderson at Royal North Shore Hospital.

She died from respiratory arrest due to the depressant effects of opiate medication after a doctor misread her chart.

The coroner said “almost every conceivable error or omission” had occurred in her treatment before her death and called for a wide-ranging inquiry into the NSW health system.

Mr Iemma stopped short of ordering a royal commission, instead announcing a statewide inquiry in the troubled health system.

“We will be establishing a special commission of inquiry to act on that recommendation of the coroner,” Mr Iemma said.

He indicated he would seek to appoint a high-profile lawyer such as Bret Walker, SC, to oversee the inquiry and has told his Health Minister, Roba Meagher, and the Director-General of Premier and Cabinet, Robyn Kruk, to finalise details within the
‘Slippery Slope’

Prevention → Clinical Review → Rapid Response → Advance Life Support → Death

Outcomes
- Continued Treatment Plan
- Revised Treatment Plan
- Referral
- Clinical Pathway
- High care unit / facility
- End of Life care

‘Between the Flags’ intervention on the ‘Slippery Slope’ of patient deterioration.
NSW Standard Observation Charts

• A sick patient is a sick patient, wherever they are
• Standardisation
• Calling criteria
• ‘Track and trigger’
• CERS in every hospital
Striking the right balance

Clinical judgement

Discretion in Yellow Zone

No discretion in Red Zone

Rule-based approach
Yellow Zone Response

IF YOUR PATIENT HAS ANY YELLOW ZONE OBSERVATIONS OR ADDITIONAL CRITERIA* YOU MUST
1. Initiate appropriate clinical care
2. Repeat and Increase the frequency of observations, as indicated by your patient’s condition
3. Consult promptly with the NURSE IN CHARGE to decide whether a CLINICAL REVIEW (or other CERS) call should be made

Consider the following:
- What is usual for your patient and are there documented ‘ALTERNATIONS TO CALLING CRITERIA’?
- Does the trend in observations suggest deterioration?
- Is there more than one Yellow Zone observation or additional criterion?
- Are you concerned about your patient?

IF A CLINICAL REVIEW IS CALLED:
1. Reassess your patient and escalate according to your local CERS if the call is not attended within 30 minutes or you are becoming more concerned
2. Document an A-5 assessment, reason for escalation, treatment and outcome in your patient’s health care record
3. Inform the Attending Medical Officer that a call was made as soon as it is practicable

### Additional YELLOW ZONE Criteria
- Increasing oxygen requirement
- Poor peripheral circulation
- Excess or increasing blood loss
- Decrease in level of consciousness or new onset of confusion
- Low urine output persistent for 4 hours (< 100mls over 4 hours or < 0.5ml/kg/hr via an IDC)
- Polyuria, in the absence of diuretics (urine output > 2000ml/hr for 2 hours)
- Greater than expected fluid loss from a drain
- New, increasing or uncontrolled pain (including chest pain)
- Blood Glucose Level <4mmol/L or >20mmol/L with a decrease in level of consciousness
- Hypokalaemia > 1.5mmol/L or Hypokalaemia 2+ or more
- Concern by patient or family member
- Concern by you or any staff member

CONSIDER IF YOUR PATIENT’S DETERIORATION COULD BE DUE TO SEPSIS, A NEW ARRHYTHMIA, HYPOXIAEMIA/HAEMORRHAGE, PULMONARY EMBOLIS/DVT, PNEUMONIA/ALETECTASIS, AN AMI, STROKE, OR AN OVERDOSE/OVER SEDATION

Red Zone Response

IF YOUR PATIENT HAS ANY RED ZONE OBSERVATIONS OR ADDITIONAL CRITERIA* YOU MUST CALL FOR A RAPID RESPONSE (as per local CERS) AND
1. Initiate appropriate clinical care
2. Inform the NURSE IN CHARGE that you have called for a RAPID RESPONSE
3. Repeat and increase the frequency of observations, as indicated by your patient’s condition
4. Document an A-5 assessment, reason for escalation, treatment and outcome in your patient’s health care record
5. Inform the Attending Medical Officer that a call was made as soon as it is practicable

### Additional RED ZONE Criteria
- Cardiac or respiratory arrest
- Airway obstruction or stridor
- Patient unresponsive
- Deterioration not reversed within 1 hour of Clinical Review
- Increasing oxygen requirements to maintain oxygen saturation > 90%
- Arterial Blood Gas: PaO<sub>2</sub> < 60 or PaCO<sub>2</sub> > 60 or pH < 7.2 or BE < -5
- Venous Blood Gas: PrCO<sub>2</sub> > 60 or pH < 7.2
- Only responds to Pain (P) on the AVPU scale
- Sudden decrease in level of consciousness (a drop of 2 or more points on the GCS)
- Seizures
- Low urine output persistent for 6 hours (< 200mls over 6 hours or < 0.5ml/kg/hr via an IDC)
- Blood glucose level <4mmol/L or >20mmol/L with a decreased level of consciousness
- Lactate > 4mmol/L
- Serious concern by any patient or family member
- Serious concern by you or any staff member

The intended message remains the same and aims to ‘Strike the right Balance’
If you or any other staff member is concerned about your patient activate your local ‘Clinical Emergency Response System’

Clinical Review or Rapid Response
The **DISCRETIONARY ZONE**

- Activation of the facility’s CERS based on Yellow Zone observations or additional criteria is *discretionary* and based on your *Clinical Judgement* of the patient’s condition.

Decision to escalate or not to escalate **MUST** be done in consultation with the **NURSE IN CHARGE**.
To determine if a Clinical Review is required you and the **NURSE IN CHARGE** should consider:

- What is usual for the patient?
- Are there documented **ALTERATIONS TO CALLING CRITERIA**?
- Does the trend in observations reflect deterioration?
- Is there more than one Yellow Zone observation or additional criteria?
- **ARE YOU CONCERNED ABOUT YOUR PATIENT?**

‘Use your Clinical Judgement’
The Yellow Zone

If escalation is not required you **MUST**:  

– Initiate appropriate clinical care  
– Repeat and increase the frequency of observations as indicated by the patient’s condition. The frequency should be *above the minimum requirement of 8 hourly*  
– Document relevant information including actions taken and the rationale for not escalating in the patient’s health care record.
The Yellow Zone

• If a Clinical Review is CALLED you **MUST**:
  – Initiate appropriate clinical care
  – Repeat your patient’s observations
  – Increase the frequency of observations as indicated by the patient’s condition
  – Document an A-G assessment, reason for escalation, treatment and outcome in the Health Care Record
  – Inform the AMO as soon as practicable
CONSIDER IF YOUR PATIENT’S DETERIORATION COULD BE DUE TO

• SEPSIS,
• A NEW ARRHYTHMIA,
• HYPOVOLAEMIA / HAEMORRHAGE,
• PULMONARY EMBOLUS/DVT,
• PNEUMONIA / ATELECTASIS,
• AN AMI,
• STROKE,
• OVERDOSE / OVER SEDATION
The Yellow Zone

• If you become more concerned or if the call is NOT attended within 30 minutes:
  – Reassess your patient and escalate according to your local CERS

PLEASE NOTE:
Any Red Zone Observation or additional criteria = **Rapid Response**
Deterioration not reversed within 1 hour of Clinical Review = **Rapid Response**
Serious Concern = **Rapid Response**
MANDATORY escalation

If your patient has any RED Zone observations or additional criteria you **MUST**

- Call for a Rapid Response
- Initiate appropriate clinical care
- Inform the **NURSE IN CHARGE** that you have called for a Rapid Response
- Repeat and increase the frequency of observations

‘Remain with your patient’
MANDATORY escalation (continued)

• Document an A-G assessment, treatment, escalation process and outcome in the Health Care Record
• Inform the AMO as soon as it is practicable

Note: Refer to your local Clinical Emergency Response System protocol for instructions on how to make a call
The Worried Criterion

If at any stage you or any other staff member are concerned about your patient activate your local ‘Clinical Emergency Response System’

Clinical Review  or  Rapid Response
The NSW Standard Observation Charts have been improved......
Change:
- Tick box added for Altered Calling Criteria
- Tick box added for Resuscitation Plan

Change:
- Guide for minimum frequency of observation and example of how to complete documentation

Change:
- Next review date/time added. Alterations to Calling Criteria divided into Yellow Zone and Red Zone with an example of how to complete documentation

Change:
- Provision for MO to sign off Alteration to Calling Criteria until AMO can provide a signature

Change:
- Date/time columns added. Intervention rows reduced to 4
Change: Tick box added for Altered Calling Criteria

Change: Number of columns reduced from 24 to 21

Change: Oxygen device/mode row added as well as key for documentation

Change: SBP scale stops at 230

Change: HR scale stops at 160
Rhythm row added

Change: Row added for initials
Red and Yellow reference boxes removed
### SAGO – Page 3

**Change:**
Tick box added for Altered Calling Criteria

**Change:**
Number of columns reduced to 21

**Change:**
Dashed line added to 37 degrees.
0.5°C increments added to scale

**Change:**
Pain score now graded and Yellow Zone added to severe pain row
Row added for initials

**Change:**
Fluid balance summary removed due to the introduction of the state fluid balance chart
Change:
Wording of ‘Advance care directives’ changed to ‘End of life care plan’

Change:
Title change ‘Yellow Zone Response’
Clarification of the decision making process when calling for a Clinical Review.
Emphasis placed on using clinical judgement and consulting the NURSE IN CHARGE.

Change:
Updated BGL and U/O criteria in both the Yellow and Red Zones
The importance of family or staff member concern is highlighted in both Yellow and Red Zones.

Change:
Title change ‘Red Zone Response’
Emphasis placed on notifying the NURSE IN CHARGE when a call is made, increasing the frequency of observations, informing the AMO and documentation.

Change:
Lactate added to Red Zone additional criteria
SPOC – Page 1

Change:
Facility line removed
Text added “all observations must be graphed”
Tick box added for Altered Calling Criteria
Tick box added for Resuscitation Plan

Change:
Added - guide for minimum frequency of observations and an example of how to complete documentation.

Change:
Text added to highlight the requirement to document the rationale for Altering to Calling Criteria.
Altered Calling Criteria divided into Yellow and Red Zones with an example of how to complete documentation.
Standard thresholds added as a guide for each age group.

Change:
Provision for MO to sign off Altered Calling Criteria until AMO provides signature

Change:
Intervention rows reduced from 9 to 4
### SPOC – Page 2

#### Change:
- Facility line removed
- Tick box for Altered Calling Criteria enhanced
- Text added “all observations must be graphed”

#### Change:
- Row for initials enhanced
Change:
Facility line removed
Tick box for Altered Calling Criteria enhanced
Text added “all observations must be graphed”

Change:
Dashed line added to 37 degrees.

Change:
Row for initials enhanced
Change:
Wording of ‘Advance care directives’ changed to ‘End of life care plan’
Title change ‘Blue Zone Response’

Change:
Title change ‘Yellow Zone Response’
Clarification of the decision making process when calling for a Clinical Review.
Emphasis placed on using clinical judgement and consulting the NURSE IN CHARGE.

Change:
The importance of family or staff member concern is highlighted in both Yellow and Red Zones.

Change:
Title change ‘Red Zone Response’
Emphasis placed on notifying the NURSE IN CHARGE when a call is made, increasing the frequency of observations, informing the AMO and documentation.

Change:
Lactate added to additional criteria to align with the SEPSIS Kills program.

Change:
Box added with common causes of clinical deterioration

Change:
Immediately ‘life threatening’ additional criteria are highlighted.

### Blue Zone Response

**IF YOUR PATIENT HAS ANY BLUE ZONE OBSERVATIONS YOU MUST**
1. Initiate appropriate clinical care
2. Increase the frequency of observations, as indicated by your patient’s condition
3. Manage anxiety, pain and relief oxygenation in consultation with the NURSE IN CHARGE
4. You can make a call to escalate the care of your patient at any time if you are worried or unsure whether to call

Consider the following:
1. What is usual for your patient and are there documented ‘ALTERATIONS TO CALLING CRITERIA’?
2. Does the abnormal observation reflect deterioration in your patient?
3. Is there an adverse trend in observations?

### Yellow Zone Response

**IF YOUR PATIENT HAS ANY YELLOW ZONE OBSERVATIONS OR ADDITIONAL CRITERIA YOU MUST**
1. Initiate appropriate clinical care
2. Repeat and increase the frequency of observations, as indicated by your patient’s condition
3. Consult promptly with the NURSE IN CHARGE to decide whether a CLINICAL REVIEW (or other CERS) call should be made

Consider the following:
- What is usual for your patient and are there documented ‘ALTERATIONS TO CALLING CRITERIA’?
- Does the trend in observations suggest deterioration?
- Is there more than one Yellow zone observation or additional criteria?
- Are you concerned about your patient?

**IF A CLINICAL REVIEW IS CALLED:**
1. Reassess your patient and escalate according to your local CERS if the call is not attended within 30 minutes or you are becoming more concerned
2. Document an A-G assessment, reason for escalation, treatment and outcome in your patient’s health care record
3. Inform the Attending Medical Officer that a call has been made

### Red Zone Response

**IF YOUR PATIENT HAS ANY RED ZONE OBSERVATIONS OR ADDITIONAL CRITERIA YOU MUST CALL FOR A RAPID RESPONSE (as per local CERS) AND**
1. Initiate appropriate clinical care
2. Inform the NURSE IN CHARGE that you have called for a Rapid Response
3. Repeat and increase the frequency of observations, as indicated by your patient’s condition
4. Document an A-G assessment, reason for escalation, treatment and outcome in your patient’s health care record
5. Inform the Attending Medical Officer that a call has been made

### Additional YELLOW ZONE Criteria
- Increasing oxygen requirement
- Poor peripheral circulation
- Greater than expected fluid loss
- Reduced urine output or anuria (< 1 ml/kg/hr)

### Additional RED ZONE Criteria
- Cardiac or respiratory arrest
- Circulatory collapse
- Patient unresponsive
- New onset of stridor
- Deterioration not reversed within 1 hour of Clinical Review
- 3 or more simultaneous ‘Yellow Zone’ observations
- Lactate ≥ 4mmol/L
- Serious concern by you or any staff or family member
Future directions

• Standard Maternity and Newborn Observation Charts (SMOC/SNOC) under review in 2014
• Trial of the Community SAGO and Care of the Dying charts will be evaluated in early 2014
• Scoping has begun on potential new charts
  • HDU/CCU flowchart
  • Dialysis observation chart
  • Ante-natal observation chart
We gratefully acknowledge

Remember “Always swim between the red and yellow flags”
For further information

www.cec.health.nsw.gov.au

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