



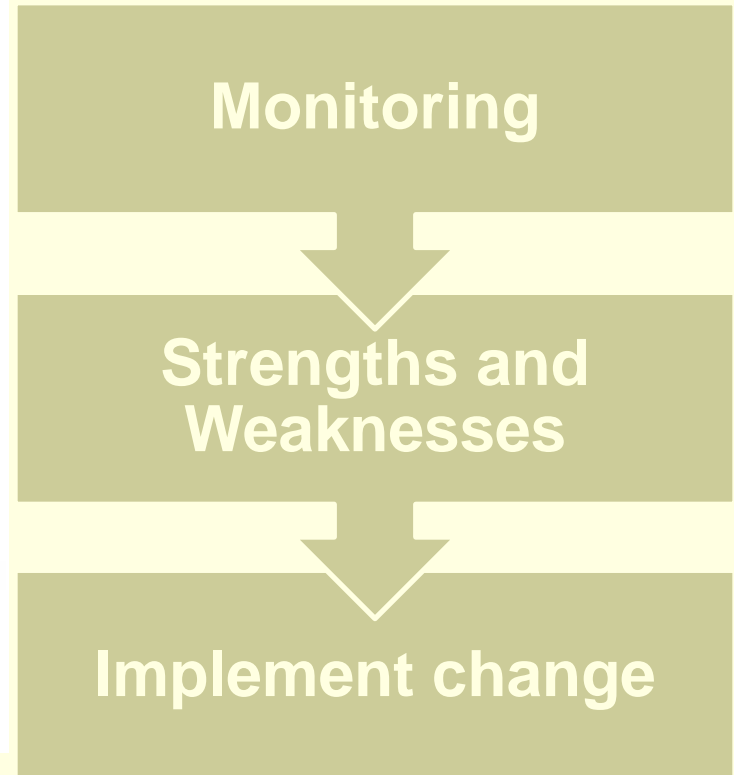
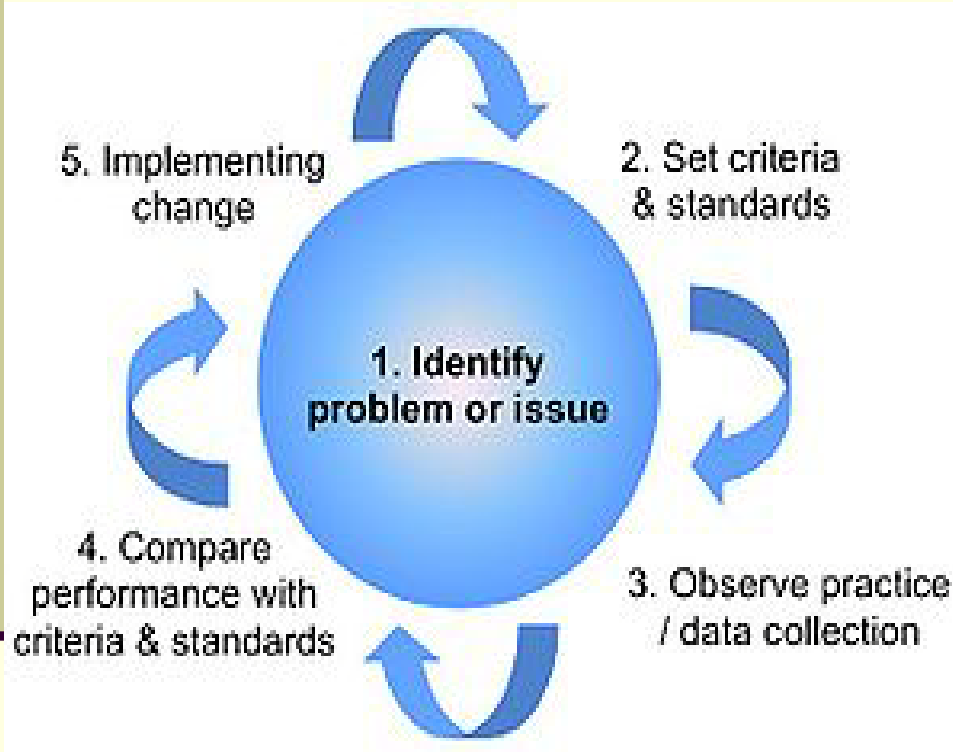
Report of Audit Subcommittee

Maria Donnelly
AMNCH

Audit subcommittee

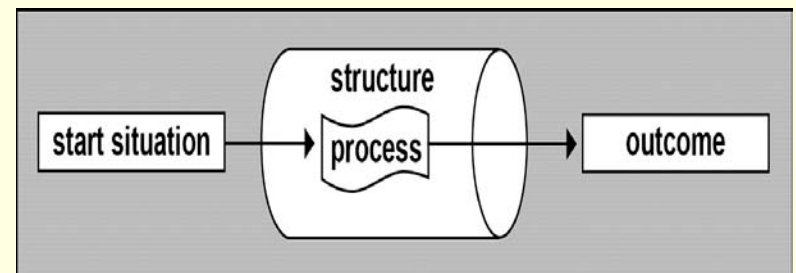
- Kathleen McMahon
- Dolores Ryan
- Anne Marie Oglesby
- Aine Lynch
- Maria Donnelly

Clinical Audit-Quality Improvement process



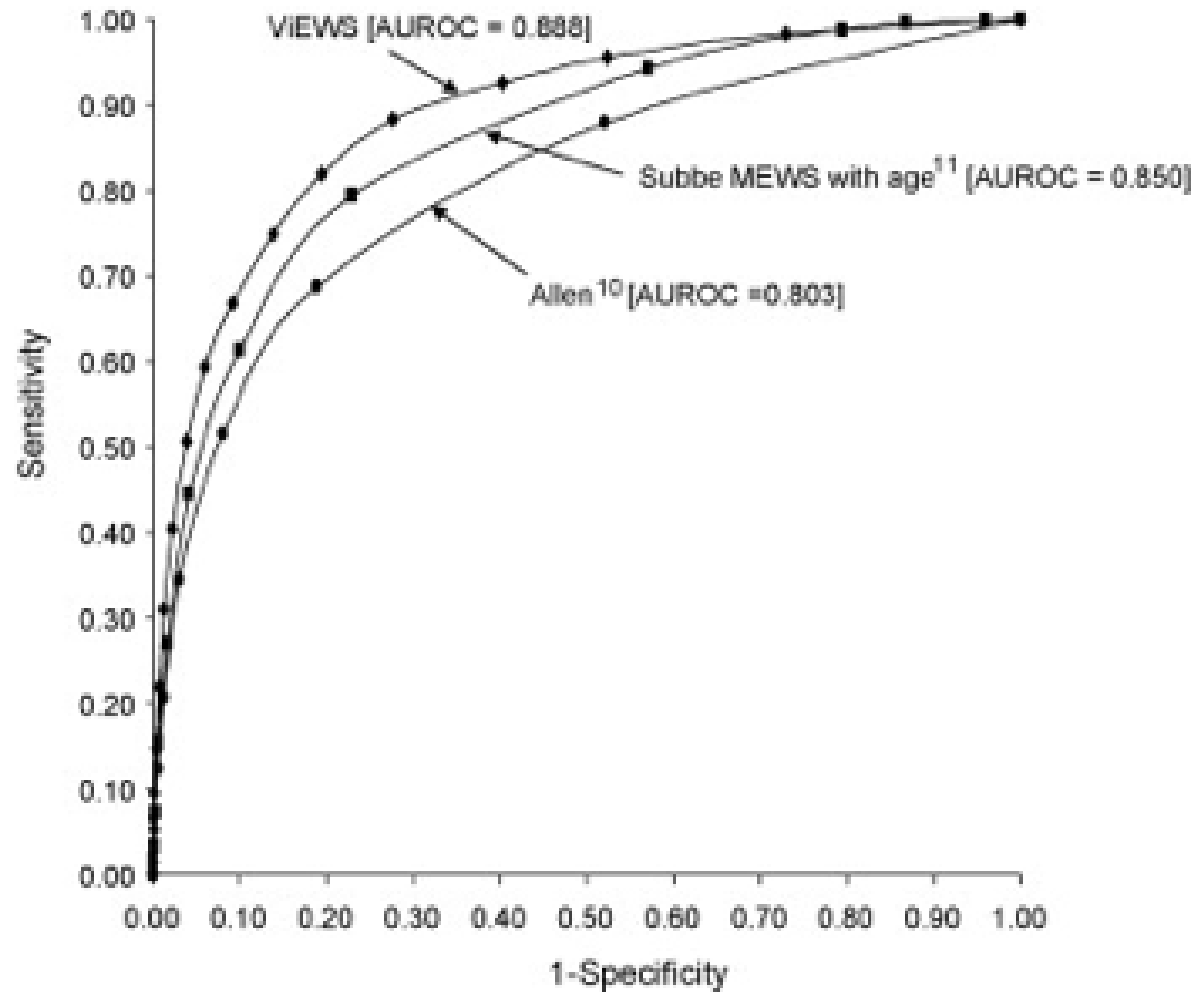
EWS

- NPSA – ‘11% of deaths followed a deterioration not recognised or acted on’
- Well established that vital signs predict adverse events - if done
- MJA 08 – only 15% got full package
- What is the best pack?



ViEWS vs. other T&Ts

Resuscitation 2010



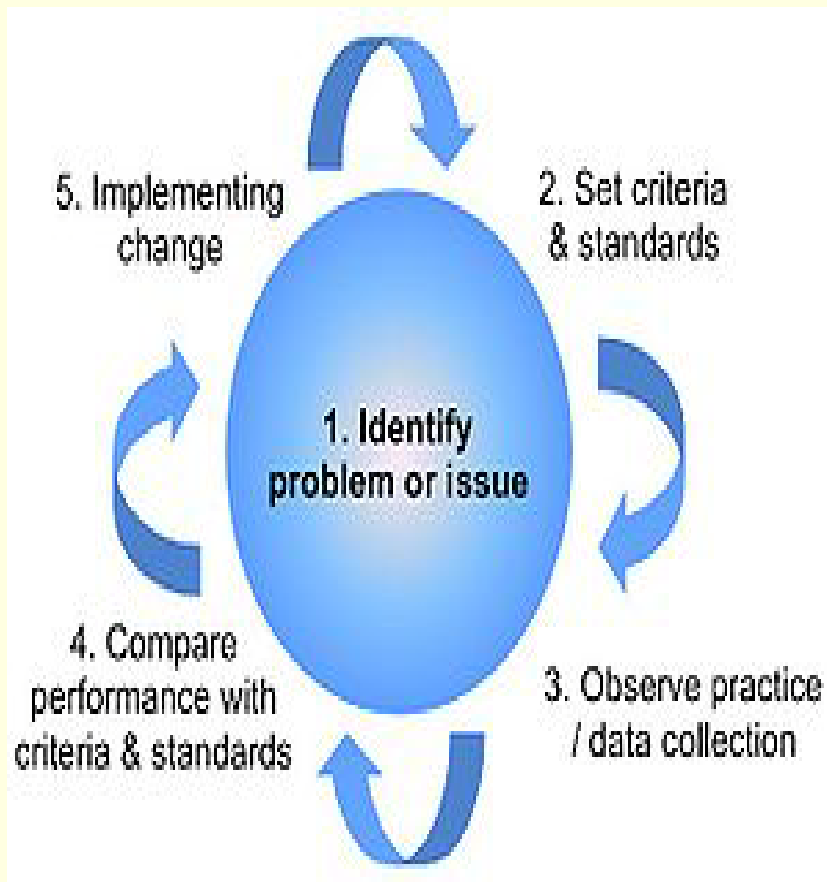
MEWS

Modified Early Warning Score (MEWS) KEY							
Resuscitation Status Should be Established by the Primary Medical Team							
Score	3	2	1	0	1	2	3
Respiration Rate	≤8			9-19	20-30	31-35	≥36
Peripheral Oxygen Saturations (SpO ₂)	<85%	85-89%	90-92%	>93%			
Inspired O ₂				On Air			O ₂ Therapy >35%
Temperature (°C)	<34.0	<34.1-35.0	35.1-35.9	36-37.9	38-38.5	≥38.6	
Systolic BP (mmHg)				See Table 1 (on back page)			
Pulse (BPM)	<40		41-50	51-99	100-110	111-130	>130
AVPU / CNS response			New Agitation/Confusion	Alert	Voice		Pain/ Unresponsive
Urine Output: After 4 Hours	<80mLs	80-119mLs		120-800mLs	>800mLs		

Does it work ?

- If not why not
- ? obs done correctly - complete package
- Did the nurse call when appropriate
- Was the response to call appropriate
 - Did doctor come – quickly enough!
 - Was intervention appropriate
- Did the patient survive?

Audit Objectives

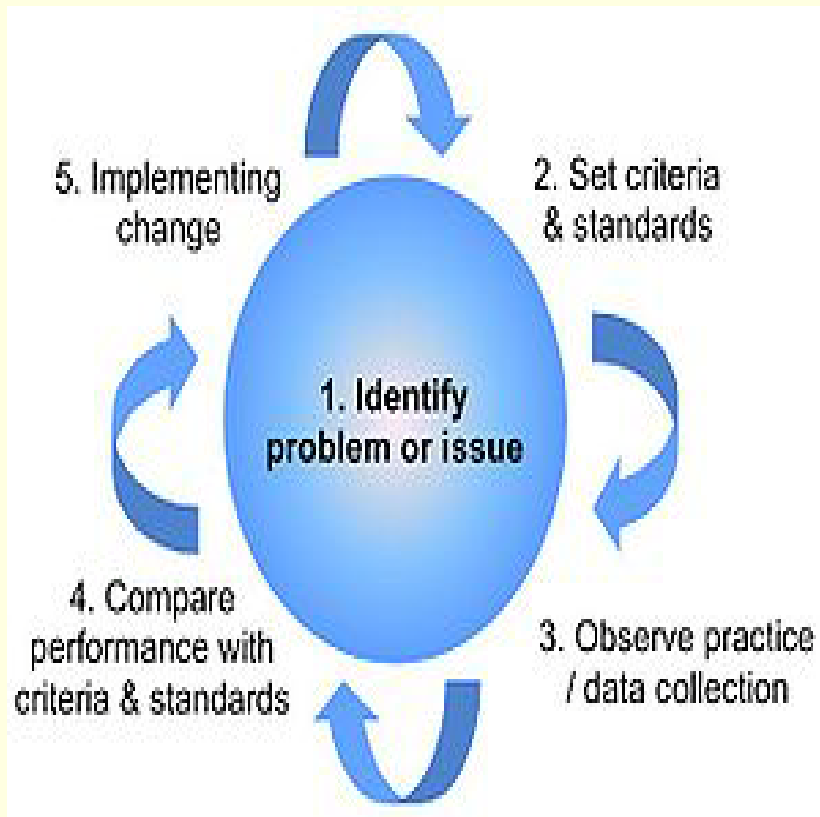


- **Pre implementation audit**
- **Pre → baseline status**
- **Set improvement targets**
- **Post → track performance, generate regular reports ► feedback to staff**

Pre Implementation Period

- Retrospective audit + use for prospective analysis
- Previously validated definitions
- Relation between abnormalities in pre - defined obs in 24hrs preceding
 - Cardiac arrest calls
 - ICU admissions – unplanned/timing
 - Hospital deaths
 - Outcome post cardiac arrest
- Free from Hawthorne effect

Audit Objectives



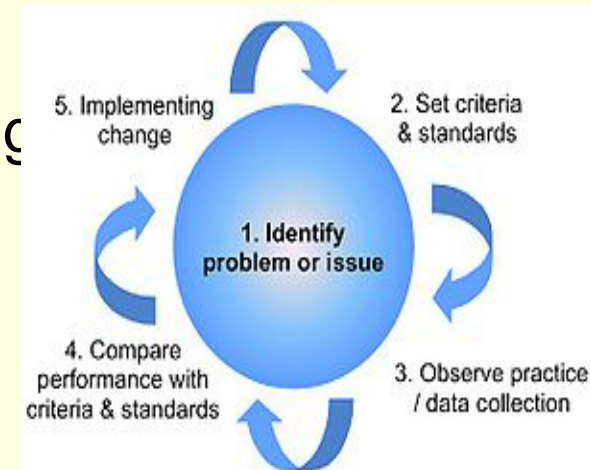
- Pre implementation data collection
- Pre → current status
- State targets
- **Post → measure implementation + compliance + success**
- **Track performance, generate regular reports ► feedback to staff**

MEWS/MET audit

- Minimum dataset
- Expanded dataset

Minimum Dataset

1. **Maintain database** of MRNs of all patients who activate escalation limb Stages 1-4
2. **Elements of EWS**
 - Utilization of SBAR tool
 - Utilization + completion accuracy of MEWS obs chart
 - Utilization of escalation response mechanism
3. **Outcomes**
 - Patient outcome
 - disposition of patients triggering
 - Scope of care decisions



SBAR Communication audit tool

■ **SBAR Communication Audit Tool**

■ **Date:** ____/____/____ **Ward:** _____

■ **Situation:**

- | | | | |
|------------------------------------|--|-----|----|
| ■ Identity of individual reporting | | Yes | No |
| ■ Location of patient | | Yes | No |
| ■ Name of patient causing concern | | Yes | No |

- | | | | |
|----------------------------|--|-----|----|
| ■ Brief summary of problem | | Yes | No |
| ■ Is this problem acute | | Yes | No |

■ **Background**

- | | | | |
|--|-----|-----|----|
| ■ Concise summary of reason for admission | Yes | No | |
| ■ Summary of treatment to date | Yes | No | |
| ■ All baseline observations | | Yes | No |
| ■ BP; Pulse; Resps; Sats; Temp; Level of consciousness | | | |
| ■ Previous observations | | Yes | No |

■ **Assessment**

- | | | | |
|--|-----|-----|----|
| ■ Nurses assessment of situation if possible | Yes | No | |
| ■ EWS score | | Yes | No |

■ **Recommendation**

- | | | | |
|--|-----|----|--|
| ■ Did the nurse make any recommendations | Yes | No | |
| ■ If yes, what ----- | | | |

- | | | | |
|-----------------------|--|-----|----|
| ■ Any feedback given: | | Yes | No |
|-----------------------|--|-----|----|

- Time spent on feedback _____

Observation chart audit tool










Section 1: Audit of Vital Signs (MEWS) Chart:

Instructions: Mark **Y** for Yes/**N** for No; Audit MEWS Vital Signs x 24hrs (Max 8 vital signs); Audit 1/3 of Patients on Ward (Max 5)

Name: _____ **Date of Audit:** _____ **Ward:** _____

Vital Signs Audit Questions:	Y/N		Y/N		Y/N		Y/N		Y/N	
Name is recorded										
Ant's name is recorded										
Ward is recorded										
Vital signs are assessed at least 12 hourly										
Frequency of observation is appropriate										
MEWS Score is initialled										
	No VS	No. dated	No VS	No. dated	No VS	No. dated	No VS	No. dated	No VS	No. dated
Vital Sign (VS) is dated		No timed		No timed		No timed		No timed		No timed
Vital Sign is timed using 24hr clock		No. RR		No. RR		No. RR		No. RR		No. RR
Respiratory rate (RR) is recorded		No. P		No. P		No. P		No. P		No. P
SpO2 (P) is recorded		No. BP		No. BP		No. BP		No. BP		No. BP
Systolic Pressure (BP) is recorded		No. T		No. T		No. T		No. T		No. T
Temperature (T) is recorded		No. O2		No. O2		No. O2		No. O2		No. O2
Oxygen Saturation (O2) is recorded		No. PS		No. PS		No. PS		No. PS		No. PS
MEWS Score (PS) is recorded		No. Totals		No. Totals		No. Totals		No. Totals		No. Totals
MEWS is calculated for each set of vital signs	No. Totals	No. Correct	No. Totals	No. Correct	No. Totals	No. Correct	No. Totals	No. Correct	No. Totals	No. Correct
MEWS calculation for each MEWS Score is correct										
Frequency of next Vital Signs is appropriate to Score										
_____ have signed they have read policy	No RNs on off duty	No. signatures	No RNs on off duty	No. signatures	No RNs on off duty	No. signatures	No RNs on off duty	No. signatures	No RNs on off duty	No. signatures
Number of staff who have COMPASS training										
Result: Divide No Ys x 19-Multiply x 100										

Escalation flow chart

Modified Early Warning Score (MEWS) Protocol (Escalation Flow Chart)		
Modified Early Warning Score Total		
MEWS 1	 Stage 1	Inform CNM/Nurse in Charge and Document in patient healthcare record.
 MEWS 2-3	 Stage 2	Inform CNM/Nurse in Charge. Inform SHO or MEWS 2 or 3 and request review within 1 hour. Record observations at least every 30 minutes until reviewed. SHO to specify frequency of observations, formulate management plan and document.
 MEWS 3 or more in any single parameter	 Stage 2a	Inform CNM/Nurse in Charge. Request immediate review by Registrar. Record observations at least every 15 minutes until reviewed. Registrar to specify frequency of observations, formulate management plan and document. Registrar to contact Consultant within 10mins and consider transfer of patient to a higher level of care. Stay with patient. Activate medical emergency team (MET) as appropriate to hospital model.
 MEWS 4-6	 Stage 3	Inform CNM/Nurse in Charge. Inform Registrar of MEWS 4-6 and request to review within 30 minutes. Record observations at least every 15 minutes until reviewed. Registrar to specify frequency of observations, formulate management plan and document. Consider transfer of patient to a higher level of care. Stay with patient. Activate medical emergency team (MET), as appropriate to hospital model.
 MEWS ≥ 7	 Stage 4	Inform CNM/Nurse in Charge. Request immediate review by Registrar. Record observations at least every 15 minutes until reviewed. Registrar to specify frequency of observations, formulate management plan and document. Plan to transfer to a higher level of care. Registrar to contact Consultant within 10 minutes. Stay with patient. Activate medical emergency team (MET), as per hospital model.

IF RESPONSE NOT CARRIED OUT AS ABOVE CNM/ NURSE IN CHARGE TO CONTACT REGISTRAR OR CONSULTANT

MEWS escalation response Audit

Audit of MEWS Activation									
MRN		MEWS/MET activation		yes	no	Time of call	Time to review	comment	
MEWS									
Ward									
		Stage1	Inform senior nurse						
		Stage2	Review within 1hr						
		Stage 2a	Immediate review						
		Stage3	Review within 30mins						
		Stage4	Immediate review						
		Lack of response as above	Registrar/consultant called						
			Ward manager satisfied with response						
		Nurse	Sig.						

MEWS escalation response audit

- Compliance with escalation protocol when triggered
 - Did they call as indicated – why not
 - Did they come within the time
 - Did they do it - appropriate management plan
 - Activated inappropriately
- Track patients in whom not activated
 - Hospital deaths
 - Cardiac arrests
 - Unexpected ICU admissions/time of admission
 - Risk management (FAIR) /complaints/incident reports/indemnity failure to rescue

Patient outcomes

- Maintain database of disposition of patients triggering a response
- Scope of care decisions
- Outcomes of patients triggering –
 - Survival
 - LOS –ward/ICU/HDU/CCU/Hospital
 - Non DNR cardiac arrests
 - Non DNR deaths/1000discharges
 - Survival from cardiac arrest on day/30/180/1000 discharges
 - Unplanned ICU admissions

Scope of care decisions in triggered patients

MRN			
MEWS score			
Palliative care			
DNR			

Basic Outcome Data

MRN				
MEWS score				
Died				
LOHS				
Unplanned ICU admission				
LOICU stay				
Non DNR Cardiac arrest	Survived	Calendar Day of arrest	To hospital discharge	
Non DNR deaths				

Expanded dataset

- Availability of resources
 - Equipment
 - Higher dependency beds
 - Personnel
- Training
 - Evaluation of compass training programme
 - Database of staff trained
- Staff evaluation of system
 - Staff knowledge +awareness of system
 - User friendliness of system

Expanded dataset

- Evaluation of crisis antecedents
 - physiologic variables which triggered the system
 - Duration of deterioration prior to call
- Audit hospital process improvements
 - Case discussions
 - Clinical outcome review committee
 - 'respecting patients' team – ascertain patients wishes
 - Links with palliative care

Expanded dataset

- MEW scoring system to be re evaluated at defined time periods as new information becomes available from audit feedback/research nationally or internationally

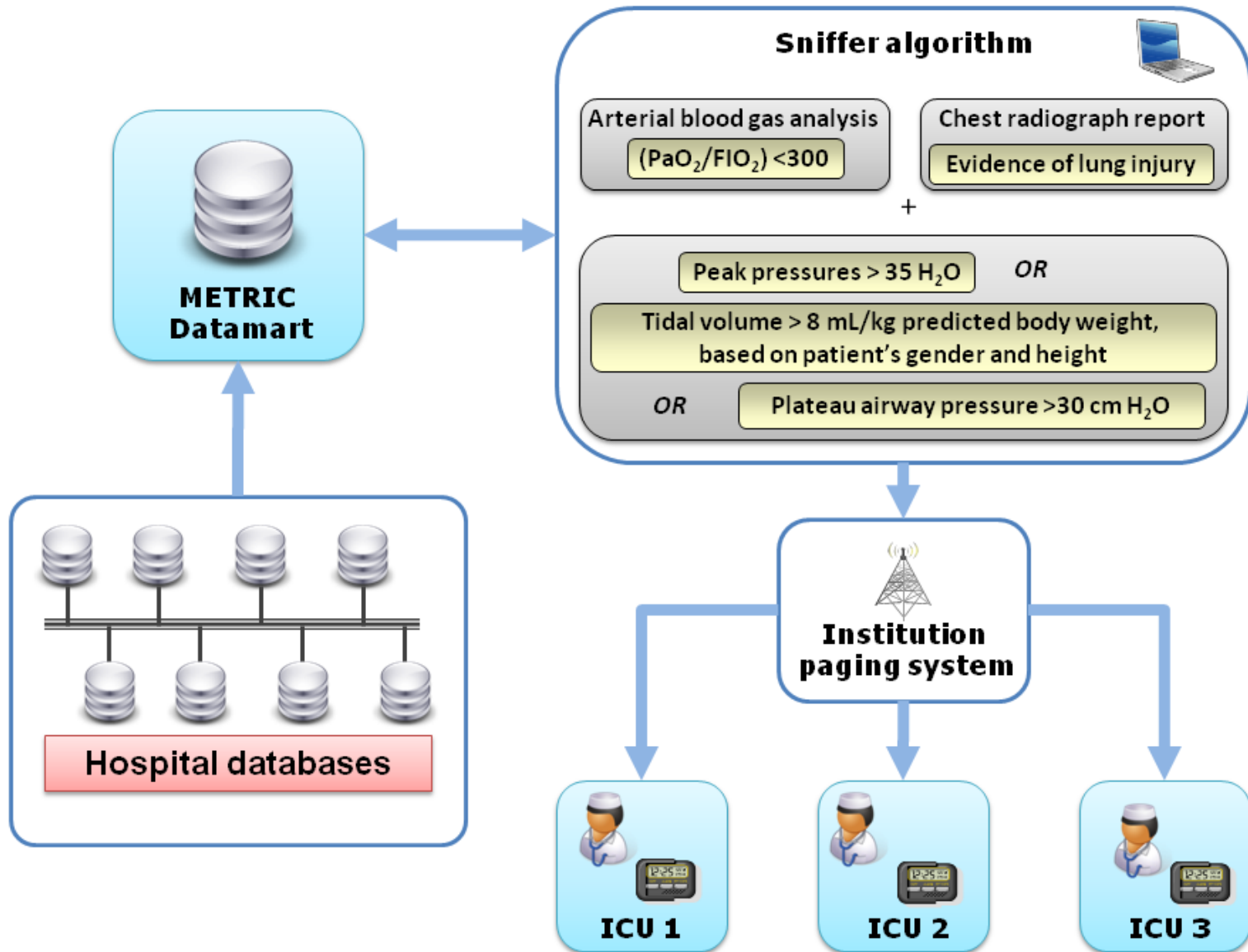
Future

- Advanced technology – monitors
 - Not good at repetitive tasks
 - New generation monitors – record vitals ▶ score
 - Wireless connections to paging system
- Other mechanisms for triggering - e.g., lab based alert systems connected to ▶ pager

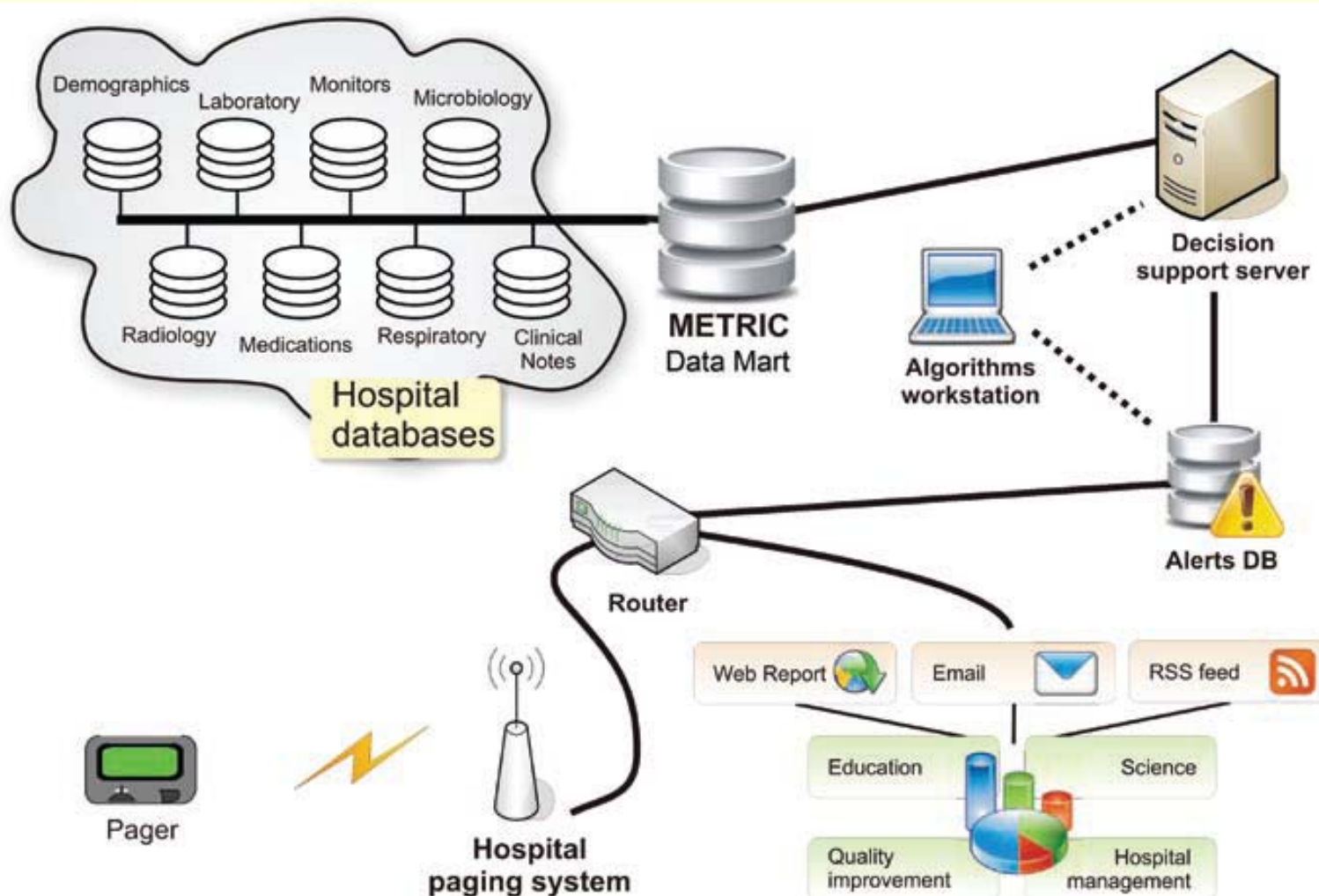
Conclusion

- Work in progress
- Never considered to be final
- Data collection spreadsheets - website
- Hospitals to decide how much audit they can do – adapt as indicated
- Collect as much data electronically
- Utilize information from other databases
 - PIMS/cardiac arrest/risk registers etc

ALI/ARDS “Sniffer”



ICU "DataMart"



MEWS/MET Call Log

ADDRESOGRAPH

Date	_ / _ / _
Time of call	
Who made MEWS/MET call	

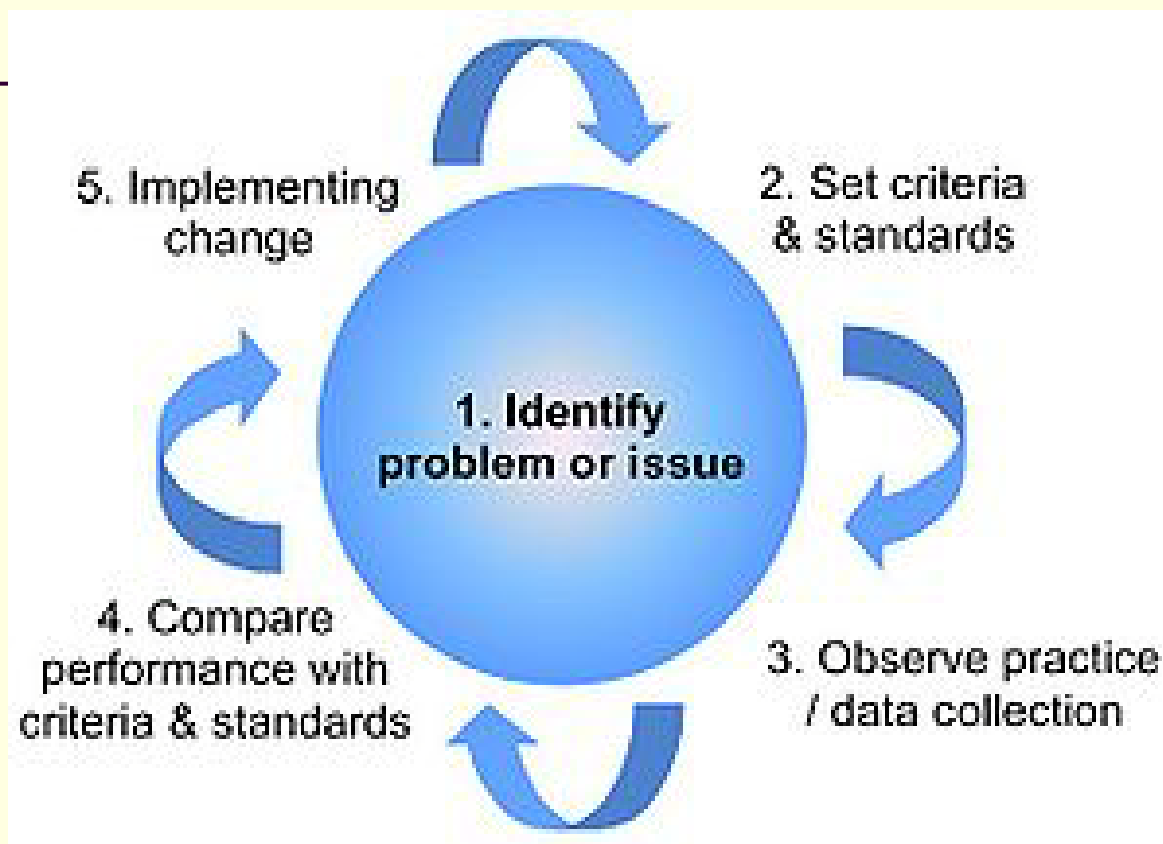
Indication for call: MEWS Score			
Hypoxia	<input type="checkbox"/>	Decreased GCS/seizures	<input type="checkbox"/>
Tachypnoea	<input type="checkbox"/>	Tachycardia	<input type="checkbox"/>
Hypotension	<input type="checkbox"/>	Bradycardia	<input type="checkbox"/>
Oliguria/Renal failure	<input type="checkbox"/>	Staff worried	<input type="checkbox"/>
Other	<input style="width: 95%;" type="text"/>		

Provisional Diagnosis leading to deterioration:	
Treatment/Resuscitation details:	
Tests ordered	
Plan - to include disposition of patient	
Is patient for further review?	Yes Time: ___ Date _ / _ / _ No
Other specialty consultation	<input type="checkbox"/> Specify <input style="width: 100%;" type="text"/>

ICU Referral	<input type="checkbox"/>	Time bed requested	___ : ___
		Time of arrival in ICU	___ : ___
Outcome			

Issues arising – inappropriate call out - comments

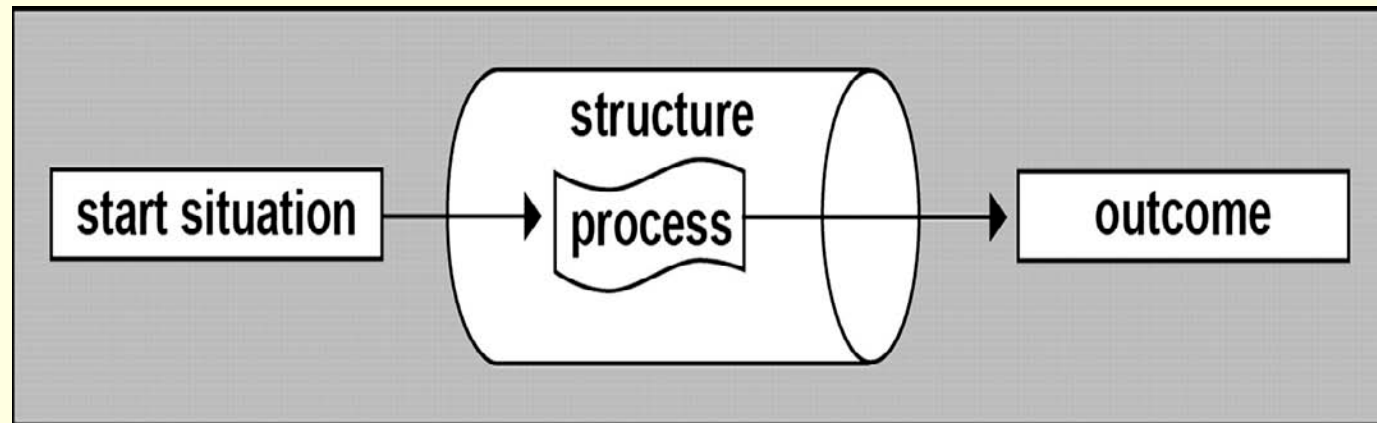
Clinical Audit



'a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change'

How do you measure Quality in Healthcare

- More than 30 years ago, Donabedian proposed that we measure quality of health care by observing the



Draft National Standards for Safer Better Healthcare

Consultation Document
September 2010



Figure 1: Themes for Quality and Safety



Minimum dataset

- Maintain database of MRNs of all patients who activate escalation limb Stages 1-4 (colour code **ybp** on PIMS)
 - frequency of utilization/1000 admissions
 - Changes in utilization frequency over time