

Case Study 3

CASE 3(AF)

- The important things to get across in this case are:
 - Sick patients must always go back to bed
 - Hypoxia should be treated with oxygen even though they have CAL
 - Always check an unrecordable BP with a manual machine
 - Work out why the BP has fallen ($BP = CO \times PVR$)
 - Her hands are cool therefore it must be a fall in Cardiac output
 - The increased Heart Rate does not allow for adequate cardiac filling and so SV will fall then CO will fall and then BP will fall ($BP = CO \times TPR$).
 - Left atrium will not expel all the required blood, left atrial pressure will build up and patient will develop pulmonary oedema (hence the worsening hypoxia)
 -
- Pt has poor cardiac output due to impaired myocardium from previous ischaemic heart disease and inadequate stroke volume because of rapid ventricular rate.
- Need to slow heart rate, requires a loading dose of digoxin to return to therapeutic levels and frusemide to reduce the end diastolic volume and get the heart back onto the right part of the Starling curve
 - Increasing MEWS
 - BP not recording, try a manual
 - RR increasing & SaO₂ decreasing
 - When ECG done shows AF with rapid ventricular response
 - Med chart
 - Digoxin given
 - Frusemide given
 - Inhalers given
 - Bloods
 - Digoxin level low



Facilitator Card

Case 3

Aim: To recognise a deteriorating medical patient

Learning Objectives:

- Obtain adequate history
- Obtain appropriate vital signs using appropriate equipment
- Recognise limitations of electronic equipment
- Refer appropriately
- Communicate effectively
- Appropriate use of oxygen in a COPD patient

Equipment:

- Facilitator Card
- Player 1 Card - Patient
- Player 2 Card - EN
- IV Cannula
- Medication Chart
- Blood Test results
- Observation chart
- Fluid balance chart not available
- Communication Card
- Scribing Code Blue Form (Optional)

Roles in the scenario

1. Patient
2. Enrolled Nurse
3. Registered Nurse
4. Medical Registrar
5. Optional extras:
 - a. Additional Nurses
 - b. Intern
 - c. Consultant
 - d. Relative

During the Scenario:

Scenario

Gladys Jones
UR 123458

A 78-year-old patient, admitted to hospital because of atrial fibrillation. She has a history of recent falls, IHD, COPD and hypertension. After her morning shower she is more SOB than usual and by lunchtime didn't have much of an appetite. The Enrolled Nurse has come to do the 2 pm vital signs.

She has increased respirations and is quite SOB speaking in short (1-2 word) sentences. Her ankles are swollen and heart rate is rapid.

To start the scenario:

1. Assign roles to each player
2. Set up room with the patient in a chair
3. Give the first player card to the player designated as the Patient
4. Give the Second player card to the player designated as the EN
5. When the RN Phones the Intern place the two players (RN & Intern) back to back to simulate communication via the phone.
6. Allow the scenario to build on itself prompting other players to enter as called for or prompt if necessary
7. Supply players with further information such as medication charts, observations or blood results when asked



If the EN needs prompting:

1. What are your first actions?

Suggested Responses

- Check accuracy of the pulse oximeter by checking a manual pulse
- Oxygen
- Assistance
- Move patient back to bed
- Manual BP

2. Who would you notify?

- RN
- Intern
- Registrar

The EN should discuss the case face-to-face with the RN

Communication should be clear expressing concerns and what he/she would like the RN to do

If the RN needs prompting:

1. What are your first actions? & Why?

- Oxygen
- Vital signs
- Assist patient back to bed if not already

2. Who would you notify?

- Intern
- Registrar

If the RN asks for the Intern he/she is caught up on the surgical ward and won't be able to come for a long time.

Communication between the RN and Registrar can be face-to-face

The RN needs to be clear about the issues and state what he/she would like the Registrar to do

If the Medical Registrar needs prompting:

1. What further information do you require & what assessment would you do?

- Full examination
- History

2. What tests would you order?

- ABG
- Electrolytes
- Digoxin Level
- CXR

3. What is your management plan for this patient?

- Oxygen
- IV Access
- Bloods
- Ongoing vital sign orders
- Notification

To summarise

Ask the group:

1. What they thought went well?
2. What suggestions would they make to improve their roles?

Take Home messages from Case 3

1. MEWS policy- requires a Registrar review
2. The importance of Resp Rate & the physiology
3. Communication
4. Oxygen therapy and COPD patients



Case Study 3

Player 1 Card

Patient

You are a 78-year-old patient, Gladys Jones, admitted to hospital because of atrial fibrillation. You have a history of recent falls, IHD, COPD and hypertension. After your shower you noted that you were more SOB than usual and by lunchtime you didn't have much of an appetite. The Enrolled Nurse has come to do your 2 pm vital signs.

You have increased respirations and are quite SOB speaking in short (1-2 word) sentences. Your ankles are swollen your heart rate is rapid.

Case Study 3

Player 2 Card

Enrolled Nurse

You are an EN working on a Medical ward attending to the 2 pm ward observations. You are attending to a 78 year-old patient, Gladys Jones who has been admitted for AF. The patient has a history of recent falls, IHD, COPD and hypertension. You proceed to record the patients' observations.

Case Study 3

Blood Results

ABG		Normal Range	Other bloods	Normal Range
PH	7.236	7.35-7.45	Digoxin Level 0.5	1.0-2.0 nmol/L
PO2	35.3	80-100		
PCO2	60	35-45		
HCO3	30.0	22-26		
BE	+5	-2.4-+2.3		
SaO2	70	95-98%		
Glucose	10.0	3.7-5.2		

Respiratory Acidosis with CO₂ retention.

HES ACT 2605

29. 15-892

pVR

V1

V4



II

aVL

V2

V5

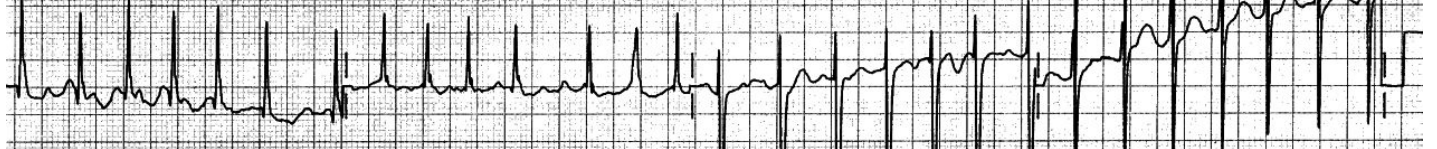


III

aVF

V3

V6



RHYTHM STRIP: II
25 mm/sec: 1 cm/mV



ECG

Atrial Fibrillation

With marked RAD and qR in V1 as evidence of RVH; large S waves in the precordial leads may signify associated LVH.

ADULT	DATE	DATE
	TIME	TIME
	Write >36	Write >36
	31-35	31-35
	25-30	25-30
Respiratory Rate (breaths/minute)	21-24	21-24
	15-20	15-20
	9-14	9-14
	5-8	5-8
	Write ≤4	Write ≤4
Respiratory Rate MEWS	0 2	
Oxygen Delivery	Flow Rate (L/min)	Flow Rate
RA Room air	Device	Device
RA Room air	RA RA RA	
An increase in oxygen delivery requirement MUST be referred to a medical officer for urgent patient review		
Oxygen Saturation (%)	98-100	98-100
	95-97	95-97
	93-94	93-94
	90-92	90-92
	87-89	87-89
	85-86	85-86
	Write <84	Write <84
Oxygen Saturation MEWS	0 0 3	
Blood Pressure (mmHg)	Write >200	Write >200
	190-199	190-199
	180-189	180-189
	170-179	170-179
	160-169	160-169
	150-159	150-159
	140-149	140-149
	130-139	130-139
	120-129	120-129
	110-119	110-119
	100-109	100-109
	90-99	90-99
	80-89	80-89
	70-79	70-79
	60-69	60-69
	50-59	50-59
	40-49	40-49
	30-39	30-39
	Write <29	Write <29
Heart Rate MEWS	0 2 2	
Blood Pressure MEWS	0 1	
Temperature (°C)	Write >39.6	Write >39.6
	38.6 - 39.5	38.6 - 39.5
	38.0 - 38.5	38.0 - 38.5
	37.6 - 37.9	37.6 - 37.9
	37.0 - 37.5	37.0 - 37.5
	36.1 - 36.9	36.1 - 36.9
	35.1 - 36.0	35.1 - 36.0
	34.1 - 35.0	34.1 - 35.0
	Write <34.0	Write <34.0
Temperature MEWS		
Sedation Score	Awake	Awake
	Mild	Awake and alert
	Moderate	Easy to rouse
	Severe	Moderate Constantly drowsy, easy to rouse but unable to stay awake (example: falls asleep during conversation)
	Severe	Severe Somnolent, difficult to rouse
Sedation MEWS	0 0 0	
TOTAL MEWS	0 3 7	
Pain Score		
Initials		

MEWS Escalation Table				
MEWS	Notify	Escalate	Observations	Intra hospital escort
MEWS 4 - 5	• Team Leader • RMO to review within 30 mins	After 60 minutes If nil review or nil improvement escalate per MEWS 6 - 7	Vital signs: ½ hourly for 1 hour	RN/RM
MEWS 6 - 7	• Team Leader • Registrar to review within 30 mins	After 60 minutes If nil review or nil improvement escalate per MEWS ≥ 8	Commence fluid balance chart If patient improves, "decrease frequency of vital signs" to:	RN/RM and RMO
MEWS ≥ 8	• Team Leader • Contact Registrar to review immediately • Contact Consultant	Consider MET if nil review or nil improvement	Hourly for 4 hours 4 hourly for 24 hours	RN/RM and REG

Usual / Target SBP: 140/80

Circle the column showing the patient's usual systolic BP

190	180	170	160	150	140	130	120	110	100	90	80
0	0	1	1	2	2	2	3	3	4	5	5
0	0	0	1	1	1	2	2	3	3	4	4
0	0	0	0	1	1	2	2	3	3	4	4
1	0	0	0	1	1	2	2	3	3	3	3
1	1	0	0	0	0	1	1	2	2	2	2
1	1	1	0	0	0	0	1	1	2	2	2
2	1	1	1	0	0	0	0	1	1	1	1
2	1	1	0	0	0	0	0	0	0	0	0
2	2	2	1	1	0	0	0	0	0	0	0
3	2	2	2	1	1	0	0	0	0	0	0
3	3	3	2	2	2	1	1	0	0	0	0
4	3	3	3	2	2	2	2	1	1	0	0
									1	0	

Score current SYSTOLIC BP using circled column

0
1
2
3
4/MET

Modified Early Warning Scores

MET Criteria
Dial "8" or use Code Blue Button

- Any observation in the 4/MET zone
- Airway threat
- Respiratory or cardiac arrest
- Sudden drop in level of consciousness
- Repeated or prolonged seizures
- Any patient you are worried about that does not fit the above criteria

Pain scale:	Tick box if a variance applies	Tick box if variation to frequency of observations apply
0 = no pain → 10 = worst pain	<input type="checkbox"/> Refer to back section for variance	<input type="checkbox"/>

DO NOT WRITE IN THIS BINDING MARGIN





Complete details or affix label

ACT Health

General Observation Chart - Adult

UR Number: _____
 Family name: _____
 Given names: _____
 DOB: Case 3 Gender: _____

Variations to Frequency of Observations <small>(note minimum frequency 4 hourly unless otherwise documented below)</small>				
Date/Time:				
Frequency required:				
Medical officer name:				
Signature:				

Variance to MEWS in patients with a chronic condition:

Where a patient has a pre-existing chronic condition that may require variance from the normal scoring of MEWS document the revised accepted range for the adjusted vital sign below. Agreement with the admitting Consultant or Registrar is required. Variance must also include a "valid until" date.

Respiratory rate	9	to	24	= 0	Reason for Variance to MEWS Criteria: <u>COPD</u>
Oxygen Saturation	88	to	100		Consultant/Registrar Signature: <u>Dr. Von Matternhorn</u>
Heart Rate		to			Print name: <u>Lorenzo Von Matternhorn</u>
Sedation score					Date: _____
					Time: _____ hours
					Valid until: <u>Discharge</u>

Variance to MET in patients with a chronic condition:

Where a patient has a pre-existing chronic condition that may require a variance from the normal MET criteria document the revised accepted MET criteria for the adjusted vital sign below. Agreement with the admitting Consultant or Registrar is required. Variance must also include a "valid until" date. (EXAMPLE: accept SBP down to 80 mmHg as long as alert, warm, passing urine and heart rate not greater than 100 beats/min)

Respiratory rate	<	OR	>	= MET	Reason for Variance to MET Criteria: _____
Oxygen Saturation	<	OR	>		MET Instructions: _____
Heart Rate	<	OR	>		Name (Consultant/Registrar): _____
Blood Pressure	Systolic BP less than				Signature: _____
			mmHg		Date: _____ Time: _____ hours
					Valid until: _____

Communication for MEWS ≥ 4

Date	Time	Action/comments	Print name	Signature

Additional Observations											
Date											
Time											
Blood Glucose Level (mmol/L)											
Weight (kg)											
Bowels											
Other (specify)											
Other (specify)											
Date											
Time											
SG											
pH											
Leucocytes											
Blood											
Nitrite											
Ketones											
Bilirubin											
Urobilinogen											
Protein											
Glucose											

URINALYSIS

General Instructions

- Vital sign value must be recorded in the correct row as identified by its range.
- Observations must be represented graphically.
- For a vital sign in the extreme of a range i.e. RR ≥ 36, write the number.
- If vital sign falls in coloured area refer to MEWS legend to determine score.
- Add all scores to calculate **Total MEWS**.
- For MEWS ≥ 4 refer to MEWS Escalation Table.

DO NOT WRITE IN THIS BINDING MARGIN

General Observation Chart - Adult

