

Title	AAA misdiagnosis	Version	2.34
Target Audience	FY doctors & student nurses	Run time	10 -15 mins
Authors	Henry Dowson, James Jackson, Udesh Naidoo, Paul Wilder, Mark Loughrey	Last review	4/7/18
Scenario requirements	Normal faculty requirements	Necessity	n/a

Brief Summary

A patient who was misdiagnosed with renal colic on admission yesterday. CT urogram had shown no renal or ureteric stone. The patient complains of similar symptoms today but pain is much worse in the back indicating possible aortic pathology. He has a leaking AAA (which has not ruptured) and will become very hypotensive and unstable requiring fluid resuscitation and urgent surgical review for repair in theatre.

Educational Rationale

Misdiagnosis is not uncommon and foundation doctors should be aware of, and confident to suspect, other pathologies after initial presentation. This scenario will test the candidate's logical ABCDE approach, fluid resuscitation skills and preparation of patients for urgent high-risk surgery, including multi-disciplinary team working. Causes of shock and initial treatment are skills required by all doctors.

Learning Objectives: Nurse

- A-E assessment of a patient with abdominal and low back pain
- Identifying a deteriorating patient
- Calling for help and SBAR handover and communication skills

Learning Objectives: Doctor

- A-E assessment and management of an acutely unwell patient
- Awareness of differential diagnoses for abdominal and low back pain
- Management of hypovolaemic shock
- Escalation of patients not responding to initial treatment measures
- Communication, leadership and MDT team working

No	CURRICULUM MAPPING	This scenario
1	Acts professionally	✓
2	Delivers patient-centred care and maintains trust	✓
3	Behaves in accordance with ethical and legal requirements	✓
4	Keeps practice up to date through learning and teaching	✓
5	Demonstrates engagement in career planning	
6	Communicates clearly in a variety of settings	✓
7	Works effectively as a team member	✓
8	Demonstrates leadership skills	✓
9	Recognises, assesses and initiates management of the acutely ill patient	✓
10	Recognises, assesses and manages patients with long term conditions	✓
11	Obtains history, performs clinical examination, formulates differential diagnosis and management plan	✓
12	Request relevant investigations and acts upon results	✓
13	Prescribes safely	✓
14	Performs procedures safely	✓
15	Is trained and manages cardiac and respiratory arrest	
16	Demonstrates understanding of the principles of health promotion and illness prevention	✓
17	Manages palliative and end of life care	
18	Recognises and works within limits of personal competence	✓
19	Makes patient safety a priority in clinical practice	✓
20	Contributes to quality improvement	

Candidate Briefing: Nurse

Setting Surgical Assessment Unit (SAU)

You respond to a call bell from a patient in SAU. Mr Andrew Ball, a 73 year old man who presented yesterday, is complaining of increasing pain in his abdomen and now in his back. You know from your handover that he was admitted with abdominal pain yesterday and may have “passed a kidney stone”.

Please assess the patient and take necessary actions.

Candidate Briefing: Doctor

Setting Surgical Assessment Unit (SAU)

You are on call for surgery. Please wait as directed until you receive a call from SAU and then act as you would in real life after your SBAR handover.

Candidate Briefing: Doctor (no Nurse)

Setting Surgical Assessment Unit (SAU)

You are on call for surgery.

You respond to a call about a patient in SAU. Mr Andrew Ball, a 73 year old man who presented yesterday with abdominal pain and may have “passed a kidney stone”, is now complaining of increasing pain and the nurse is worried.

When you arrive the nurse has already left the bed bay to deal with another issue.

Please assess this patient and take appropriate actions.

Technical set-up

Setting	Surgical Assessment Unit (SAU)		
Simulator	Manikin / actor		
Age	73	Gender	Male
Scenario programmed?	Yes	IT information e.g. PC filepath	

Initial monitor parameters

RR	O2 sats	Pulse (HR)	BP	ECG rhythm
20	95% on air	120	90/60	Sinus tachycardia
Cap Refill Time	Blood glucose	Temp.		Patient Height & Weight
4s	6.5	36.9		1.8m (6ft) / 80kg

Initial patient set-up

Airway	Obstruction	Airway adjunct
	No	No

Breathing	Chest sounds	O2 supply
	Normal	Air

Circulation	Heart sounds	Cannula	BP cuff	Peripheries / pulses
	Normal	Yes	No	Cold and clammy

Disability	Eyelids	Pupils	AVPU/GCS
	Open	Equal & reactive	A / 15

Exposure	Posture	Moulage	Bowel sounds
	Supine	Flank bruising (Grey-Turner's sign) Sweating	Normal

Specific equipment / prop requirements

- BNF
- IV fluids
- Non-invasive BP cuff
- ABG/VBG/large bore cannula
- Thermometer
- Catheter
- Drug chart - *has only paracetamol as given yesterday*
- Simulated ABG/VBG results - anaemic/shocked - *hidden until requested*
- ECG - sinus tachycardia - *hidden until requested*
- Urine dip - negative for all parameters - *hidden until requested*
- CT urogram report - *hidden until requested*
- Blood results from yesterday - *hidden until requested*
- CT urogram scan (large A2 film)

Multi-Disciplinary Comments

e.g. how to run with candidates from only one discipline

How to run with candidates from only one discipline:

An additional member of faculty can play the role of the SimNurse nurse in this scenario if available, otherwise use the separate briefing for a doctor with no nurse.

SimNurse CONDUCT

Throughout the scenario you should act as a “competent robot” i.e. you should perform all tasks requested to the best of your ability, but should not initiate any treatment on your own. If you are not being effectively instructed by the candidate, you may be prompted via your ear piece by the lead facilitator as to what your next action should be.

If you strongly disagree with management then you are free to question them, stating your reasons.

If asked to give drugs, you should request that they are prescribed on the drug chart. If they are unsure of the dosage please refer them to the BNF or Hospital Guidelines App or via Intranet.

Comments on facilitating scenario

The patient is already suffering from hypovolaemic shock but still conscious and able to communicate his symptoms. He will rapidly deteriorate if fluid resuscitation is not initiated on assessment of cardiovascular system. BP can drop to 60/? and pulse increase to 140. POC bloods will reveal Hb of 62.

Yesterday and this morning's blood will be available as well as ECG, VBG/ABG, previous CT abdo scan report and urine dip. Candidate can get rapid POC Hb but bloods will not be analysed yet.

Facilitator can choose whether to involve previous CT urogram which, if reviewed will show a 6cm AAA

Patient should not improve but their deterioration can be slowed with aggressive fluid resuscitation.

Urgent senior help should be asked for and candidate may contact surgical SpR, vascular consultant, blood bank and ITU/anaesthetist.

Debriefing points:

- 1) ABCDE assessment
- 2) Fluid Management
- 3) Communication with tea and calling for senior help
- 4) Differential diagnosis
- 5) Hypovolaemic shock
- 6) CT vs theatre and why
- 7) Post op care and why

Telephone advice

- You will be sitting in the control room for the duration_
- Answer all calls as "switchboard" in the first instance to allow for realistic delay. Call back after 1 - 2 minutes
- The Surgical / Vascular Registrar should sound busy and state they are tied up with another patient
- They should be helpful but press the candidate hard about what assessment has been performed e.g. nature of pain, findings of physical examination
- If the candidate is not armed with the information, tell them to get the required info and call you back

Patient Briefing

Setting	Surgical Assessment Unit (SAU)
Name	Andrew Ball
Age	73
Gender	Male

What has happened to you?

PRESENTING COMPLAINT - Abdominal pain

- Abdominal pain radiating to left flank and now into the back

OTHER SYMPTOMS

- Dizzy and lightheaded
- Palpitations
- Feeling cold
- Looks sweaty

How you should role-play

You have abdominal pain radiating to the left flank and now into the back. You are very concerned and are anxious. You are suspicious that such a little stone can make you feel like this as you have been told you have “renal colic”.

Throughout the scenario you can complain of pain if not acted upon and you feel dizzy and lightheaded.

The facilitator may ask you to become confused or even unconscious depending upon the skills of the candidate.

Your abdomen is very tender on any examination, and you have significant back pain.

Your background

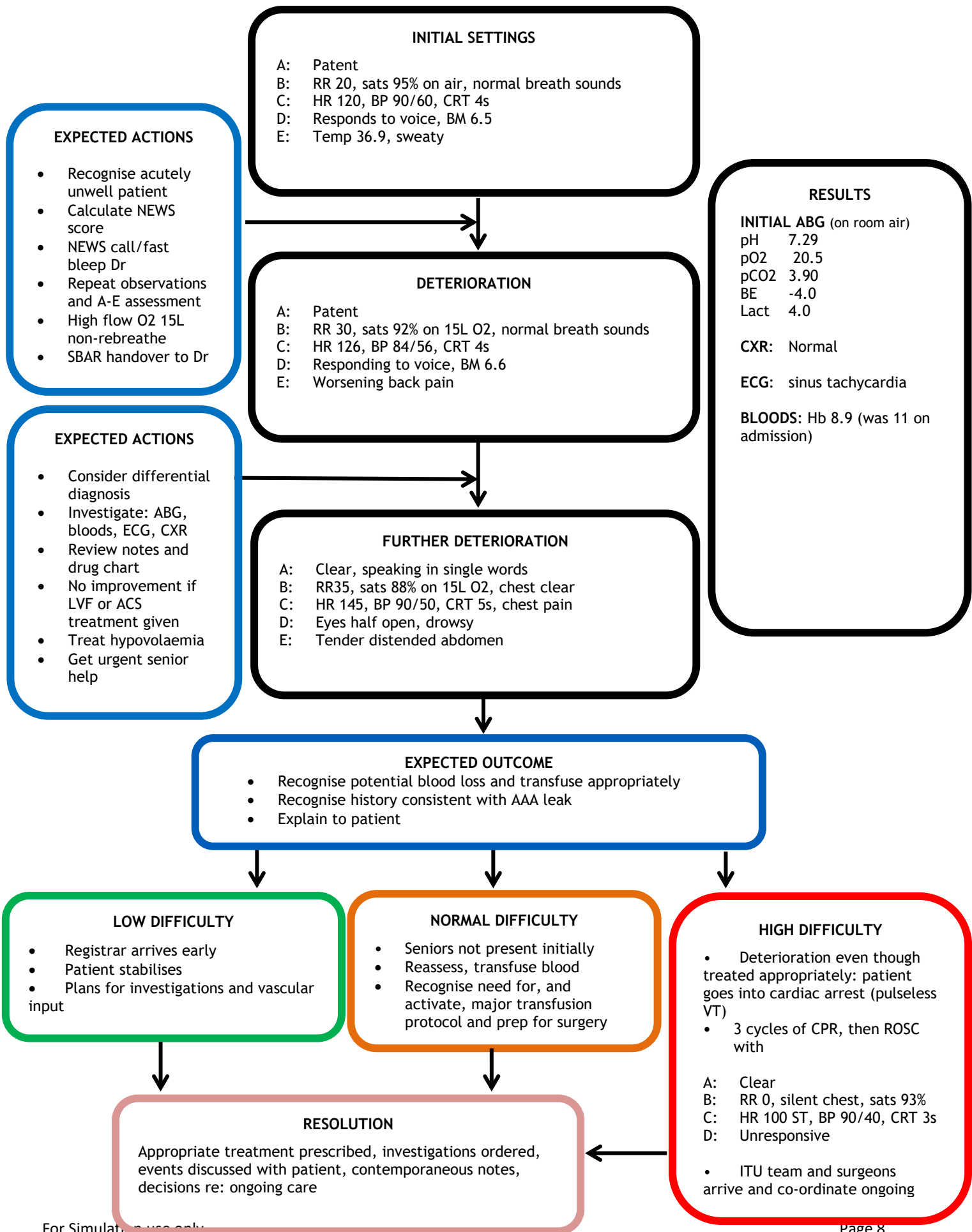
PAST MEDICAL HISTORY

- Mild renal impairment
- COPD
- Claudication on walking 100 yards - currently on exercise program
- Colectomy - bowel cancer
- Osteoarthritis - back and knees
- No known allergies
- Smoke 10 a day

MEDICATION

- Aspirin
- Tiotropium
- Salmeterol
- Paracetamol

Scenario flowchart



References

- Local guidelines for management of ruptured AAA
- The Society of Vascular Surgery practice guidelines on the care of patients with an abdominal aortic aneurysm.
[https://www.jvascsurg.org/article/S0741-5214\(17\)32369-8/fulltext?code=ymva-site](https://www.jvascsurg.org/article/S0741-5214(17)32369-8/fulltext?code=ymva-site)

Scans of clinical paperwork / props

RADIOMETER ABL800 FLEX

Identifications
 Patient ID: 789987
 Patient Last Name: Ball
 Patient First Name: Andrew
 Sex: Male
 Date of birth: 20/01/1991
 FO₂(I): 15L %
 T: 36.0 C
 Sample type: Arterial
 Operator: TEMP FPH 1

Blood Gas Values

↓ pH: 7.290 [7.350 - 7.450]
 ↓ pCO₂: 3.90 [4.70 - 6.00]
 ↓ PO₂: 20.5 [11.1 - 14.4]
 Hct_c: 0.35 %

Oximetry Values

ctHb: 6.2 g/L [94.0 - 98.0]
 FO₂Hb: 96.0 %
 SO₂: 94.0 %
 FCOHb: 1.0 % [0.5 - 1.5]
 FHb: 3.5 % [0.0 - 5.0]
 FMethb: 1.0 % [0.0 - 1.5]

Calculated Values

cBase(Ecf)c: -4.0 mmol/L
 cHCO₃-(P)c: 20.2 mmol/L

Electrolyte Values

cNa⁺: 140 mmol/L [136 - 146]
 cK⁺: 3.5 mmol/L [3.4 - 4.5]
 cCl⁻: 100 mmol/L [98 - 106]
 cCa²⁺: 1.20 mmol/L [2.2 - 2.45]

Anion Gap_c

Metabolite Values
 cGlu: 4.8 mmol/L [3.9 - 5.8]
 clac: 4.0 mmol/L [0.5 - 1.6]
 cCrea: 140 μmol/L [44 - 97]

Notes
 ↑ Value(s) above reference range
 ↓ Value(s) below reference range
 c Calculated value(s)

RADIOMETER ABL800 FLEX

Identifications
 Patient ID: 789987
 Patient Last Name: Ball
 Patient First Name: Andrew
 Sex: Male
 Date of birth: 20/01/1991
 FO₂(I): 15L %
 T: 36.0 C
 Sample type: Venous
 Operator: TEMP FPH 1

Blood Gas Values

↓ pH: 7.290 [7.350 - 7.450]
 ↓ pCO₂: 3.90 [4.70 - 6.00]
 ↓ PO₂: 7.9 [11.1 - 14.4]
 Hct_c: 0.35 %

Oximetry Values

ctHb: 6.2 g/L [94.0 - 98.0]
 FO₂Hb: 96.0 %
 SO₂: 70.0 %
 FCOHb: 1.0 % [0.5 - 1.5]
 FHb: 3.5 % [0.0 - 5.0]
 FMethb: 1.0 % [0.0 - 1.5]

Calculated Values

cBase(Ecf)c: -4.0 mmol/L
 cHCO₃-(P)c: 20.2 mmol/L

Electrolyte Values

cNa⁺: 140 mmol/L [136 - 146]
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 c Calculated value(s)

NEWS - OBSERVATION CHART



Frimley Health
NHS Foundation Trust

Surname: ~~Ball~~ BALL First name: ANDREW
Hospital number: ~~789987~~ 789987 D.O.B: 73 YEARS OLD Date of admission: YESTERDAY

	DATE									DATE										
	TIME									TIME										
A+B Respirations Breaths/min	≥25																			≥25
	21-24																			21-24
	18-20		18	19	20	20														18-20
	15-17																			15-17
	12-14																			12-14
	9-11																			9-11
≤8																			≤8	
A+B SpO2 Scale 1 Oxygen saturation (%)	≥96																			≥96
	94-95			94	95	95														94-95
	92-93		93																	92-93
	≤91																			≤91
SpO2 Scale 2* Oxygen saturation (%) Use Scale 2 if target range is 88-92%, eg in hypercapnic respiratory failure † ONLY use Scale 2 under the direction of a qualified clinician	≥97 on O ₂																			≥97 on O ₂
	95-96 on O ₂																			95-96 on O ₂
	93-94 on O ₂																			93-94 on O ₂
	≥93 on air																			≥93 on air
	88-92																			88-92
	86-87																			86-87
	84-85																			84-85
≤83%																			≤83%	
Air or oxygen?	A=Air	A	A	A	A															A=Air
	O2 L/min																			O2 L/min
	Device																			Device
C Blood pressure mmHg Score uses systolic BP only	≥220																			≥220
	201-219																			201-219
	181-200																			181-200
	161-180																			161-180
	141-160																			141-160
	121-140																			121-140
	111-120		Y	Y																111-120
	101-110		I	I	Y															101-110
	91-100		I	I	I															91-100
	81-90		I	I	I															81-90
	71-80		I	I	I															71-80
61-70		I	I	I															61-70	
51-60		I	I	I															51-60	
≤50																			≤50	
C Pulse Beats/min	≥131																			≥131
	121-130																			121-130
	111-120																			111-120
	101-110																			101-110
	91-100																			91-100
	81-90																			81-90
	71-80																			71-80
	61-70																			61-70
	51-60																			51-60
	41-50																			41-50
	31-40																			31-40
≤30																			≤30	
D Consciousness Score for NEW onset of confusion (no score if chronic)	Alert	A	A	A	A															Alert
	Confusion																			Confusion
	V																			V
	P																			P
	U																			U
E Temperature °C	≥39.1°																			≥39.1°
	38.1-39.0°																			38.1-39.0°
	37.1-38.0°		37.2																	37.1-38.0°
	36.1-37.0°																			36.1-37.0°
	35.1-36.0°																			35.1-36.0°
≤35.0°																			≤35.0°	
NEWS TOTAL		2	1	2	3															TOTAL
Monitoring frequency																				Monitoring
Pain score																				Pain score
Initials																				Initials

CT Urogram report ^c

There are no renal stones within the ureters or urethra.

There is an incidental finding of a 6 cm AAA. Urgent surgical referral is advised.

Urine Result

↪

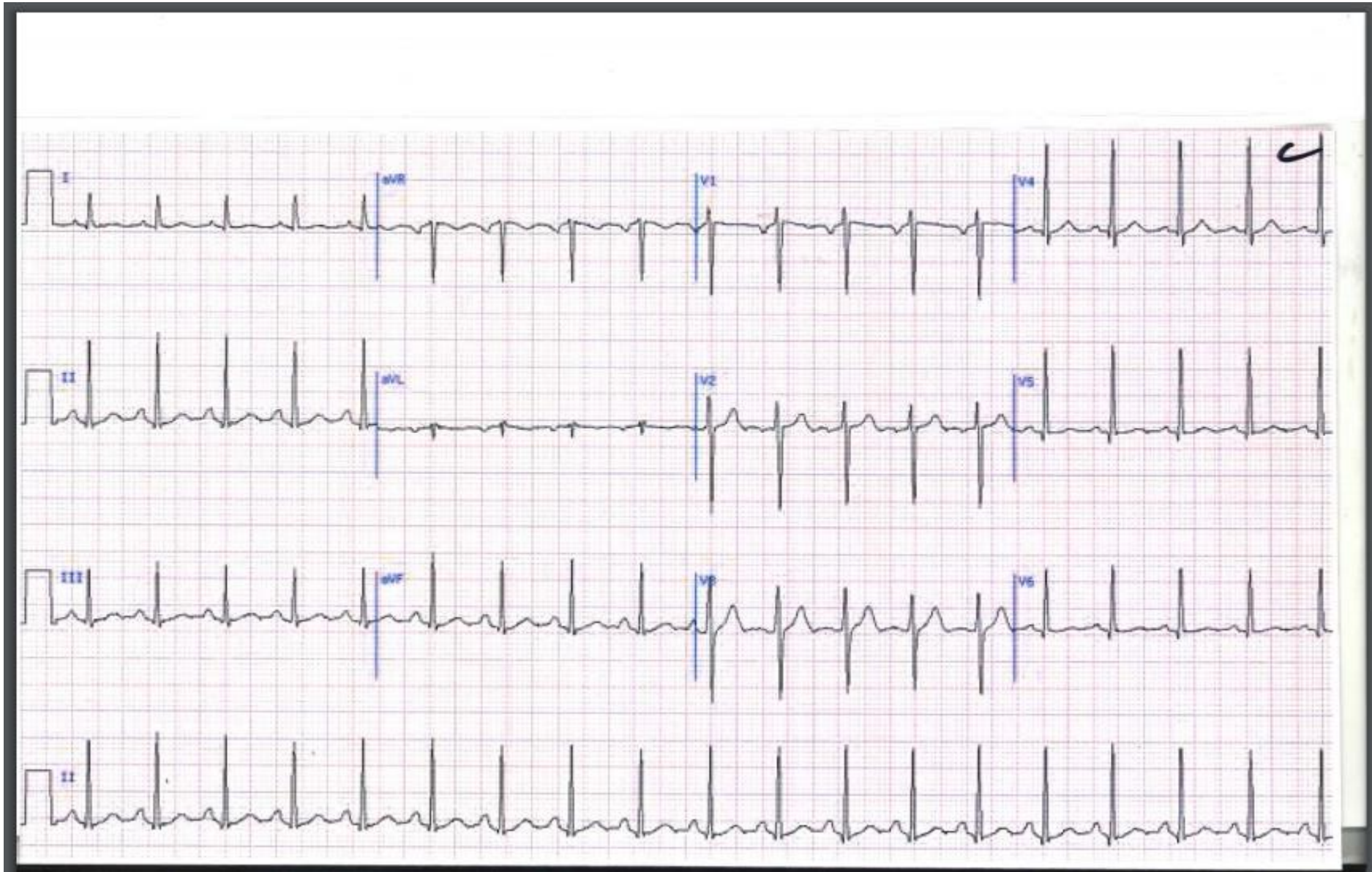
Urine available upon request of dip stick or during catheterisation

Specific Gravity	1.015
PH	6.0
Leukocytes	Neg
Blood	Neg
Nitrites	Neg
Ketones	Neg
Protein	Neg
Glucose	Neg

Blood Results

c

TEST	RANGE	ADMIT	Day 1
Hb	13 - 18	11.0	8.9
Hct	0.4 - 0.54	0.54	0.53
WBC	4 - 11	8.8	8.7
neuts	2.0 - 7.5	4.1	4.0
Platelets	150 - 450	312	321
PT	12 - 14	12.5	
INR	0.9 - 1.2	1.1	
APTT	35 - 44	44	
Na	135 - 145	141	141
K	2.5 - 7.8	3.9	3.9
Urea	2.0 - 7.0	6.5	7.0
Creat	50 - 90	135	140
Albumin	35 - 50	39	
Bili (total)	< 21	10	
Bili (unconjugated)		/	
AST	< 40	33	
ALT	< 50	20	
ALP	30 - 130	41	
CRP	< 4.0	<4	8
Amylase		192	





Grey-Turner sign

@DeMadaria

Only showing here the three Drug Chart pages that have writing on – i.e. none of the blank pages

Frimley Park Hospital

First Name(s): <u>ANDREW</u>	Ward <u>S.A.U.</u>	Date chart started <u>YESTERDAY</u>	Chart number
Surname: <u>BALL</u>			of
Hospital Number: <u>789987</u>	Consultant	Doctor bleep number	Date of admission <u>Yesterday</u>
NHS Number: _____			
Date of Birth: <u>13-07-43</u>			

Date weighed	Weight (kg)	Date weighed	Weight (kg)	Height (M)	Surface area (M ²)	Ideal Body Weight (IBW)	Body Mass Index (BMI)	Diet
<u>YESTERDAY</u>	<u>80</u>			<u>1.8</u>				

Allergies (write 'none known' and sign if none known). This section must be completed before medication is given.

Drug/substance	Details of reaction
<u>none known</u>	

This patient also has the following additional charts (complete and tick relevant box (es))

IV heparin infusion chart		Chemotherapy chart		MRSA Suppression	
PCA		Epidural		Medicines reconciliation	

Reminder: Prescriptions must be rewritten not amended
Unclear prescriptions will be challenged
Care with opioids if elderly, frail and/or renal impairment

Date	Communication for doctors. Messages must be actioned within 24 hours.	Sign and Bleep No.	Actioned sign and date

Smoking		Alcohol		Is patient self medicating: Yes / No Level 1 / 2 / 3
Is the patient a smoker	Yes / No	Audit C score		
Is NRT currently in use	Yes / No	Full Audit score (if undertaken)		
		Withdrawal medication required		

Date chart rewritten ___ / ___ / ___ TTO written ___ / ___ / ___

Needs: Large print PMR card

RISK ASSESSMENT RECORD SHEET FOR VENOUS THROMBOEMBOLISM (VTE)

• Please use in conjunction with Trust guidelines overleaf • Please see separate Trust guidelines for obstetric patients

Thrombosis Risk	Thrombosis Risk	Procedure Related	Initial Assessment	Assessment at 24 hours	Assessment on	Assessment on	
			___/___/___	___/___/___	___/___/___	___/___/___	
High	Previous VTE		✓				
	Immobility expected to last >72 hours						
	Malignancy						
	Acute or chronic lung disease						
	Acute or chronic inflammatory disease						
	Chronic heart failure						
	Lower limb paralysis (excluding acute stroke)						
	Acute infectious disease, e.g. pneumonia						
	BMI >30kg/m ²						
	Inherited or acquired thrombophilia						
	Pregnancy or less than 6 weeks post partum						
				Hip or Knee replacement			
				Hip fracture			
				Other major orthopaedic surgery			
	Surgical procedure lasting >30mins with additional VTE risk factor(s)						
Medium	Oestrogen containing oral contraception or HRT		✓				
	Selective oestrogen receptor modulators						
	Age > 60						
	Dehydration						
	Varicose veins with phlebitis						
				Minor surgical procedure with additional VTE risk factor(s)			
	Surgical procedure lasting >30mins with no additional VTE risk factor(s)						
	Plaster cast immobilisation of lower limb						
Low	None of above	None of above					
Bleeding Risk/Contraindications	Patient Related	Procedure Related					
	Haemophilia or other known bleeding disorder						
	Thrombocytopenia (Platelets < 100 x 10 ⁹ /L)						
	Within two weeks of acute stroke (haemorrhagic or ischaemic)						
	Severe hypertension (BP > 200 systolic or 120 diastolic)						
	Severe liver disease						
	Oesophageal Varices						
	Active Peptic Ulcer disease						
	Active bleeding or potential bleeding lesions						
	Major bleeding risk, existing anticoagulant therapy or antiplatelet therapy						
	Severe renal disease						
				Neurosurgery, spinal surgery or eye surgery			
				Other procedure with high bleeding risk			
				Lumbar puncture/spinal/epidural in previous 4 hours or anticipated in next 12 hours			
	Risk assessment performed by			~~~~~			
Signature			~				
Copy of Patient Information Leaflet given to patient			Yes	No			

