

Please have a calculator,
paper and a pen handy before
commencing the mock
station.

Post-Operative Patient on the Ward– Notes for Candidate

Post-Operative Patient Station: 10 minutes

Patient: Marianne Johnson (23F)

DOB: 11/12/2000

E35336702

You are the FY1 on the General Surgical ward.

Marianne Johnson is a 23-year-old who underwent an appendicectomy 24 hours ago.

Her pain is being managed with regular analgesia, and she is complaining of nausea and vomiting. She is currently nil by mouth.

This is a medical records-based station, there is no simulator present.

The **examiner** will give you information relating to **clinical symptoms and signs if requested**.

The station will last 10 minutes.

You are expected to:

0-5 minutes:

- Review the available documentation
- Explain to the examiner your approach to the patient and describe your plan for improving nausea and vomiting

5-10 minutes:

- Calculate the patient's fluid balance over the last 24 hours and determine requirements for the next 24 hours. You can use a pen, paper and calculator.
- Describe a suitable fluid regime for the next 24 hours. You will be provided with this list:

Three bags of each of the following are available for use:

- Hartmann's 1L
- 0.9% NaCl 500 mL
- 0.9% NaCl 500 mL with 20 mmol KCl
- 0.9% NaCl 1L
- 0.9% NaCl 1L with either 20mmol OR 40 mmol KCl
- Dextrose saline 500 mL
- Dextrose saline 500 mL with 20 mmol KCl
- Dextrose Saline 1L
- Dextrose Saline 1L with either 20 mmol KCl OR 40 mmol KCl
- 5% Dextrose 500 mL
- 5% Dextrose 500 mL with 20 mmol KCl
- 5% Dextrose 1L
- 5% Dextrose 1L with either 20 mmol KCl OR 40mmol KCl

Post-Operative Patient on the Ward: Station documents

Clerking notes

HPC:

23F presented with 2 day history of acute right lower quadrant abdominal pain, migrating from periumbilical region over the last week. Intensity gradually increased from 2/10 to 8/10. Pain associated with nausea, anorexia, and low-grade fever. No prior abdominal surgeries.

O/E:

Chest : clear, HS I+II+0 regular rhythm

Abdomen: Soft, tenderness RIF at McBurney's point

Calves: SNT, no peripheral oedema

PMH:

Nil

DHx:

nil

Allergies: nkda

SHx:

Non-smoker, occasional drinker

Patient height, weight:

Height: 166cm

Weight: 69kg

Operation notes

Patient: Marianne Johnson

Date: 11/2/2024 (Day 1 as inpatient)

Procedure: Appendicectomy

Surgeon: Mr Bhatt Assistant: Dr. Javaid

Anaesthesia: General, sevoflurane

The surgery proceeded uneventfully. Upon laparoscopic exploration, the appendix was found to be inflamed and enlarged consistent with acute appendicitis. No complications encountered during the procedure.

The rest of the colon was of normal appearance with nil signs of perforation or ischaemia.

The reproductive organs were normal in appearance for age of patient.

Closure: The surgical incision was closed in layers with absorbable sutures. Sterile dressing applied with local anaesthetic injection.

Mr Bhatt

Electronically signed

Post-operation notes

Patient arrived at post-op recovery 30 minutes after wound closure. The patient tolerated the procedure and anaesthetic well and was transferred to ward once stable. Did not require any active intervention. Post-op care and follow up information handed over to ward staff.

Dr O'Connor FY1

Signed

Day 2 as inpatient (12/02/2024) Post-op review

Patient lying in bed, complains of nausea and vomiting

Pain controlled with SC morphine 10mg BD. Required 4x PRN doses since stepdown to ward post-op.

No shortness of breath, no chest pain. Surgical site clean, no dysuria, bowel sounds present on examination.

Name: **MARIANNE JOHNSON** S Number: _____ Ward: _____ Date: _____

EWS 2 key	DATE TIME	D1	D1	D1	D1	D1	D2	D2	D2	D2	DATE TIME								
		6am	10	2pm	6pm	10pm	2am	6am	10am	2pm									
A+B Respirations <small>Breaths/min</small>	≥25										3	≥25							
	21-24										2	21-24							
	18-20	●	●	●	●	●	●	●	●	●		18-20							
	15-17										1	15-17							
	12-14										3	12-14							
A+B SpO ₂ Scale 1 <small>Oxygen saturation (%)</small>	≥96	●	●	●	●	●	●	●	●	●	1	≥96							
	94-95										2	94-95							
	92-93										3	92-93							
	≤91											≤91							
SpO ₂ Scale 2' <small>Oxygen saturation (%)</small> <small>Use Scale 2 if target range is 95-92%, eg in hyperaemic respiratory failure</small> <small>ONLY use Scale 2 under the direction of a qualified clinician</small>	≥97 on O ₂										3	≥97 on O ₂							
	95-96 on O ₂										2	95-96 on O ₂							
	93-94 on O ₂										1	93-94 on O ₂							
	≥93 on air											≥93 on air							
	88-92										1	88-92							
	86-87										2	86-87							
Air or oxygen?	A=Air	●	●	●	●	●	●	●	●	●	2	A=Air							
	O ₂ L/min											O ₂ L/min							
	Device											Device							
C Blood pressure <small>mmHg</small> <small>Score uses systolic BP only</small>	≥220										3	≥220							
	201-219											201-219							
	181-200											181-200							
	161-180											161-180							
	141-160											141-160							
	121-140											121-140							
	111-120										1	111-120							
	101-110										2	101-110							
	91-100										3	91-100							
	81-90											81-90							
	71-80											71-80							
	61-70											61-70							
	51-60											51-60							
C Pulse <small>Beats/min</small>	≥131										3	≥131							
	121-130										2	121-130							
	111-120											111-120							
	101-110										1	101-110							
	91-100											91-100							
	81-90	●	●	●	●	●	●	●	●	●		81-90							
	71-80											71-80							
	61-70											61-70							
	51-60											51-60							
	41-50										1	41-50							
	31-40										3	31-40							
	≤30											≤30							
	D Consciousness <small>Score for NIV onset of confusion (no score if normal)</small>	Alert	●	●	●	●	●	●	●	●	●	3	Alert						
Confusion												Confusion							
V												V							
P												P							
U												U							
E Temperature <small>°C</small>	≥39.1°										2	≥39.1°							
	38.1-39.0°										1	38.1-39.0°							
	37.1-38.0°	●	●	●	●	●	●	●	●	●		37.1-38.0°							
	36.1-37.0°										1	36.1-37.0°							
	35.1-36.0°										3	35.1-36.0°							
≤35.0°											≤35.0°								
NEWS TOTAL		0	1	1	3	3	3	0	1	4		TOTAL							
Additional Parameters	Pain Score											Pain Score							
	Nausea	X	X	X	X	X	X	X	X	X		Nausea							
	Vomiting	X	X	X	X	X	X	X	X	X		Vomiting							
Monitoring frequency												Monitoring frequency							
Escalation of care Y/N												Escalation of care Y/N							
Initials												Initials							

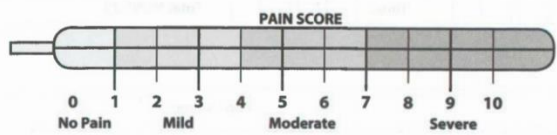
Name: MARILYN JOHNSON S Number: _____ Ward: _____ Date: _____

Ward Round Review Senior Decision Maker only: (Tick)
 Previous INPUT: N/A Previous 24 hours BALANCE: N/A Previous OUTPUT: N/A Patients Weight: 69kg

Time	INPUT <u>NBM</u>							OUTPUT					BALANCE
	Oral Intake (mls)	Fluids IV or SC/ Blood	Bolus Drugs	Drug Infusions	PCA/ Epidural	NG/TPN/PEG/jej (mls)	Running Total In	Urine	Drains	Drains	Vomit/ NGT	Bowels/ Stoma	
1400	01.00	<u>NBM</u>	100					60			100		
1500	02.00		100					50					
1600	03.00		100					30					
1700	04.00		100				400	30	20				290
1800	05.00		100	100				40			100		
1900	06.00		100					50					
2000	07.00		100					70					
2100	08.00		100				900	40					590
2200	09.00		100	100				30			150		
2300	10.00		100					40					
2400	11.00		100					50					
0100	12.00		100				1400	30	10				900
0200	13.00		100					30					
0300	14.00		100					40			450		
0400	15.00		100					40					
0500	16.00		100				1800	40					1500
0600	17.00		100					30			200		
0700	18.00		100					20			300		
0800	19.00		100	100				25			200		
0900	20.00		100				2300	40	15				2330
1000	21.00		100					30			200		
1100	22.00		100					35			100		
1200	23.00		100					40			140		
1300	24.00		100	100				55					
Totals		↓	2400	400									

Total INTAKE= 2800 mls OUTPUT= 2910 mls

Urinalysis pH: _____ Protein: _____ Blood: _____ Leucocytes: _____ Glucose: _____ Ketones: _____ Nitrates: _____
 Date: _____



Investigations

ECG:

Normal sinus rhythm

Bloods (pre-operative):

FBC: Hb 140(145), WCC 10.7(12.5), neuts 7.3(11.2), plts 380(385)

U&Es: Na⁺ 138(139), K⁺ 3.3(3.8), Ur 4.3(4.1), Cr 72(70), eGFR 87.1, CrCl: 117 ml/min

LFTs: NAD

Bone profile: Adj. Ca 2+ 2.3

Mg²⁺: 0.89

CRP: 78(130)

CXR:

(source wikipedia)

Haemoglobin (Hb):

- ♂ 130 – 180 g/L
- ♀ 115 – 165 g/L

White cell count (WCC):

- Total: 3.6 – 11.0 x 10⁹/L
- Neutrophils: 1.8 – 7.5 x 10⁹/L

Platelet count: 140 – 400 x10⁹/L

Na⁺: 133–146 mmol/L

K⁺: 3.5–5.3 mmol/L

Ca²⁺(adjusted): 2.2–2.6 mmol/L

Mg²⁺: 0.7–1.0 mmol/L

Chloride: 98–106 mmol/L

Phosphate: 0.74 – 1.4 mmol/L

Urea: 2.5 – 7.8 mmol/L

Creatinine:

- ♂ 59–104 µmol/L
- ♀ 45–84 µmol/L

Alkaline phosphatase (ALP): 30–130 U/L

Alanine aminotransferase (ALT):

- ♂ <41 U/L
- ♀ <33 U/L

Aspartate aminotransferase (AST): 1 – 45 U/L

Bilirubin: <21 µmol/L

GGT:

- ♂ <60 U/L
- ♀ <40 U/L

Albumin: 35–50 g/L

Medication chart

DRUG ALLERGIES (MUST BE COMPLETED)

No known allergies	Reaction	Sign	Date
<input checked="" type="checkbox"/>			

S No. _____ Patient's name **MARIANNE JOHNSON**
Date of birth _____

ADULT INPATIENT MEDICATION ADMINISTRATION RECORD University Hospitals of Leicester NHS Trust

Chart 1 of 1 Consultant Bhatt Ward B14 Site NHS

PATIENT DETAILS: Date recorded _____ BSA(m²) _____ Wt (kg) 81 HT 166
Pregnancy _____ Breastfeeding _____

DETAILS OF SUPPLEMENTARY CHARTS IN USE

Anticoagulant Chemotherapy
Diabetes Syringe driver
Supplementary infusion chart Gentamicin/Tobramycin
Other (please specify) _____ Haemodialysis

PRESCRIPTION FOR ONCE-ONLY MEDICATION / PRE-ANAESTHETIC / ANTIMICROBIAL PROPHYLAXIS

Date	Time to be given	Medicine (approved name)	Dose	Route	Prescriber's signature and name	Bleep No.	Date given	Time given
11/02/24	1100	METFORMIN	500mg	IV	Nida	123	11/02	1100 SA

MEDICINES MANAGEMENT CHECKLIST

Check: Pre-admission Drug history check Source: _____
 Rewritten drug chart checked Allergy check
 Patient's own medicines Self-administration
 Compliance aid Patient discharge
 TTO completed

MEDICINE PRIOR TO ADMISSION NOT PRESCRIBED

Initial	Date	Medicine	Dosage	Freq.	Reason

DISCHARGE INFORMATION

Initial _____ Date _____

REGULAR ANTIMICROBIAL THERAPY

MORNING (AROUND 0800); MIDDAY (BETWEEN 1200 & 1400); TEATIME (AROUND 1800); BEDTIME (AROUND 2200)

ENTER DOSE AGAINST TIME REQUIRED

16 MEDICINE (approved name) **METFORMIN** INDICATION **Post-operative** SPECIAL INSTRUCTIONS **2 DAYS** PHARMACIST _____
 Date **11/02/24** Route **IV** PRESCRIBER'S SIGNATURE & NAME **Bhatt** Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning **0800 500mg** ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Midday **1300 500mg** ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Teatime _____ Bedtime **2200 500mg** ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

17 MEDICINE (approved name) _____ INDICATION _____ SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date _____ Route _____ PRESCRIBER'S SIGNATURE & NAME _____ Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning _____ Midday _____ Teatime _____ Bedtime _____

18 MEDICINE (approved name) _____ INDICATION _____ SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date _____ Route _____ PRESCRIBER'S SIGNATURE & NAME _____ Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning _____ Midday _____ Teatime _____ Bedtime _____

19 MEDICINE (approved name) _____ INDICATION _____ SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date _____ Route _____ PRESCRIBER'S SIGNATURE & NAME _____ Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning _____ Midday _____ Teatime _____ Bedtime _____

UNIT No: _____ PATIENT NAME: _____

REGULAR MEDICINES

MORNING (AROUND 0800); MIDDAY (BETWEEN 1200 & 1400); TEATIME (AROUND 1800); BEDTIME (AROUND 2200)

ENTER DOSE AGAINST TIME REQUIRED

24 MEDICINE (approved name) **MORPHINE SULFATE** INDICATION **PAIN** SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date **11/02** Route **IV** PRESCRIBER'S SIGNATURE & NAME **Bhatt** Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning **0800 10mg** ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Midday _____ Teatime **1600 10mg** ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
 Bedtime _____

25 MEDICINE (approved name) _____ INDICATION _____ SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date _____ Route _____ PRESCRIBER'S SIGNATURE & NAME _____ Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning _____ Midday _____ Teatime _____ Bedtime _____

26 MEDICINE (approved name) _____ INDICATION _____ SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date _____ Route _____ PRESCRIBER'S SIGNATURE & NAME _____ Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning _____ Midday _____ Teatime _____ Bedtime _____

27 MEDICINE (approved name) _____ INDICATION _____ SPECIAL INSTRUCTIONS _____ PHARMACIST _____
 Date _____ Route _____ PRESCRIBER'S SIGNATURE & NAME _____ Bleep No. _____ Supply POD _____
 Enter Dose against Time: Morning _____ Midday _____ Teatime _____ Bedtime _____

1 Defined 2 Vomiting/nausea 3 Nil by mouth 4 Not required 5 Drug not on ward 6 Omission - other treatment in progress
 7 No action (not PRN) 8 Unable to take 9 Patient not on ward 10 Inappropriate/unclear prescription 11 Anaesthetic medical advice 12 Self-administration

AS REQUIRED MEDICINES

44 MEDICINE **SODIUM CHLORIDE 0.9%** DATE _____ TIME _____
 DOSE **5-10ml** ROUTE **IV** DOSE _____ TIME _____
 INDICATION **Flush Cannula** MAX FREQUENCY _____ ROUTE _____
 SIGN _____ BLEEP No. _____ PHARM. SUPPLY GIVEN

45 MEDICINE **SODIUM CHLORIDE 0.9%** DATE _____ TIME _____
 DOSE **5-10ml** ROUTE **IV** DOSE _____ TIME _____
 INDICATION **Flush Cannula** MAX FREQUENCY _____ ROUTE _____
 SIGN _____ BLEEP No. _____ PHARM. SUPPLY GIVEN

46 MEDICINE **MORPHINE** DATE **11/02** TIME **1100 1200 1300 1400 1500 1600 1700 1800**
 DOSE **2-3mg** ROUTE **IV** DOSE **2mg 2mg 2mg 2mg 2mg 2mg**
 INDICATION **PAIN** MAX FREQUENCY **QDS** ROUTE **IV**
 SIGN **Bhatt** BLEEP No. _____ PHARM. SUPPLY GIVEN

47 MEDICINE **ONDANSETRON** DATE _____ TIME _____
 DOSE **4mg** ROUTE **PO** DOSE _____ TIME _____
 INDICATION **PONV** MAX FREQUENCY **BD** ROUTE _____
 SIGN **Bhatt** BLEEP No. _____ PHARM. SUPPLY GIVEN

48 MEDICINE **PARACETAMOL** DATE _____ TIME _____
 DOSE **500-1000mg** ROUTE **PO** DOSE _____ TIME _____
 INDICATION **PAIN** MAX FREQUENCY _____ ROUTE _____
 SIGN **Bhatt** BLEEP No. _____ PHARM. SUPPLY GIVEN

49 MEDICINE _____ DATE _____ TIME _____
 DOSE _____ ROUTE _____
 INDICATION _____ MAX FREQUENCY _____ ROUTE _____
 SIGN _____ BLEEP No. _____ PHARM. SUPPLY GIVEN

50 MEDICINE _____ DATE _____ TIME _____
 DOSE _____ ROUTE _____
 INDICATION _____ MAX FREQUENCY _____ ROUTE _____
 SIGN _____ BLEEP No. _____ PHARM. SUPPLY GIVEN

UNIT No: _____ PATIENT NAME: _____

Post-Operative Patient on the Ward 1 – Examiner marksheet

MARKING RUBRIC	STATION SPECIFIC NOTES	✓
<p>Gathering of information</p> <ul style="list-style-type: none"> • Reviews available documentation (anaesthetic chart, post-operative instructions, drug prescription/IPAD charts, observation chart including fluid balance) • Reviews the blood result and interprets in the context of the patient 	<p>Gathering of information</p> <ul style="list-style-type: none"> - Patient is not on a PCA infusion so no IPAD chart for this station - Mild hypokalaemia post-op, likely related to vomiting 	
<p>Review of analgesia</p> <ul style="list-style-type: none"> • Reviews analgesia and anaesthetic charts • Indicates how they would assess the patient to determine cause of N&V • Identifies that the likely cause is <u>post-operative nausea and vomiting, morphine use without antiemetic</u> • Addresses the need to manage this • Explains the options available (e.g. IV or IM antiemetics, analgesic drug choice change, refers to ladder) 	<p>Review of analgesia</p> <p>Assess patient in A-E manner, focus on haemodynamic and hydration status.</p> <p>Reviews analgesia prescriptions and notes:</p> <ul style="list-style-type: none"> - Morphine 10mg BD SC with additional breakthrough doses between 1/6th-1/10th of TDD. However, utilising multiple PRN doses. - Notes patient is NBM but written up for oral paracetamol. Suggests changing to IV route whilst patient NBM. - Notes patient has ondansetron co-prescribed but also not administered as oral route. Suggests prescribing IV/IM antiemetic regular + PRN. <p>N.B – sevoflurane and other gaseous anaesthetic agents increase the likelihood of developing PONV. Propofol carries less risk.</p> <p>PONV needs to be managed for multiple reasons including: patient comfort, hydration + electrolyte balance, prevent wound dehiscence through pressure on GI tract + abdominal muscles.</p>	
<p>Calculations for fluid management over the last 24 hours</p> <ul style="list-style-type: none"> • Reviews the observation chart and confirms that the patient is hypovolaemic 	<p>Fluid IP: 2800ml Fluid OP: 2910ml</p> <ul style="list-style-type: none"> - Take into account insensible losses of 800ml - Total OP = 3710ml <p>24 hour balance = -ve 910ml</p>	

<ul style="list-style-type: none"> Indicates that they would assess the patient to determine hydration status (thirst, CRT, oedema) Calculates individual fluid inputs (oral and IV) Calculates individual fluid outputs (NGT, drain, urine and INSENSIBLE LOSSES [i.e. 800ml]) Calculates total fluid input, output and overall balance over the past 24 hours 		
<p>Calculation of fluid prescription for the next 24 hours</p> <ul style="list-style-type: none"> Correctly calculates the maintenance volume requirements by body weight (30ml/kg) Correctly calculates the normal maintenance K+, Na+, glucose requirements by weight Takes account of ongoing abnormal losses Takes account of blood results Suggests suitable IV fluid regime for the next 24 hours 	<p>Body weight = 69 kg <u>Total daily requirements:</u> Water = 2070ml - Fluid deficit of 910 = 2980ml requirement. Round up to 3 litres. Na+ = 69mmol K+ = 69mmol Glucose = 50-100g</p> <p>Note mild hypokalaemia so replenish 80 mmol.</p> <p>Example regime I to meet above requirements: 2L x 4% dextrose / 0.18% sodium chloride (dextrose saline) + 40 mmol K+</p> <p>500ml 4% dextrose / 0.18% sodium chloride (dextrose saline) + 40 mmol K+</p> <p>500ml 5% dextrose</p> <p>Total content: 77.5mmol Na+ (2.5* 31mmol = 77.5), 80mmol K+ (2* 40mmol), 157 mmol Cl- (2.5*31mmol plus 2*40mmol), 125g glucose (2.5*40 plus 25g)</p> <p>Alternative Example regime II : 3L 4% dextrose / 0.18% sodium chloride (dextrose saline) + 40 mmol K+</p> <p>Total content: 93mmol Na+, 80mmol K+, 173mmol Cl-, 120g glucose. This regime gives higher Na+ and Cl- content but you could justify clinically as the patient is vomiting.</p>	

Clinical reasoning

- Clear communication
- Explains fully the reasons for prescribing the IV fluids
- Explains the need to increase the analgesia

The electrolyte composition of these crystalloid solutions is summarised in the table below.
You must know this information – it will not be provided in the Finals OSCE examination.

	[Na ⁺] (mmol/L)	[K ⁺] (mmol/L)	[Cl ⁻] (mmol/L)	Glucose (g/L)
0.9% sodium chloride	154		154	
4% dextrose / 0.18% sodium chloride (dextrose saline)	31		31	40
5% dextrose				50
Hartmann's solution	131	5	111	

Global Impression:

- Excellent
- Good
- Pass
- Borderline
- Fail