

Table of contents

COMMON MEDICATIONS TO CHART:	3
COMMON AFTER-HOURS CALLS:- VITALS	4
Hypotension	4
Hypertension	4
Bradycardia	4
Tachycardia	4
Bradypnea / Apnoea	5
Low sats / Tachypnoea	5
Hypothermia	5
Fever	5
COMMON SYMPTOM COMPLAINT	6
Chest pain	6
SOB	6
Abdo Pain	6
Syncope /LOC /reduced GCS	6
Agitation / confusion / delirium	6
Constipation	7
Rash	7
Post-transfusion	7
COMMON LAB/IX ABNORMALITIES	8
AF	8
Acute GI bleed	8
Acute anaemia	8
Hypoglycaemia	9
Hyperglycaemia	9
Oliguria	9
Fluid Status & Electrolytes (<i>intake/output</i>) → always calls for help!!!	10
CANNULA REVIEWS	11

POST-OP/ICU PATIENT MX (FAST HUG)	11
WARFARIN CALCULATIONS	11
R/V FIBRINOLYSIS CONTRAINDICATIONS	11
ABX/VANC CALCULATIONS	11
QUICK EMERGENCY RX	11
PATIENT LEAVING AGAINST MEDICAL ADVICE (AMA)	12
DOCUMENTATION ADMITS/ GENERAL EXAM / SYSTEMS REVIEW	12
DEATH CERTIFICATION	12
RAPID RESPONSES (RR) & CODE BLUES & SEPSIS	13
OXYGEN DELIVERY SYSTEMS	13
FOLLOW-UP AND HANDOVER	13

COMMON MEDICATIONS TO CHART:

PAIN (analgesics)		A/E
Paracetamol	1 g PO TDS/QID (max 4g)	IFNBM → IV may lower BP
Ibuprofen (advil/nurofen)	400mg PO TDS	<ul style="list-style-type: none"> AKI, PUD, Bleeds, >65yo (if chronic), cardiac surgery
Nurofen plus Ibuprofen + codeine	200 / 12.8mg PO TDS (1-2 tablet)	
Oxycodone (endone)	2.5-5mg PO QID or q4hrly PRN	<ul style="list-style-type: none"> Anorexia Constipation !! Drowsy / confused Nausea/vomiting SOB / Resp. depression
Targin (oxy + naloxone)	2.5-5mg PO PRN	
Morphine	2.5-5mg PRN QID or q4hrly	
Panaediene	500/8mg PO TDS (q6hrly) PRN	
Panadiene forte	500 / 30 mg PO q6hrly TDS PRN	
Tramadol (opiate + SSRI)	SR = 100-200mg PO BD IR = 50mg PO QID	(max 600mg/day) Avoid w/ SSRI

Take NSAID w/ PPI = 40mg omeprazole PO QID

ITCH / ALLERGY		A/E
Calamine lotion		
Loratadine (Claritin) or cetirizine	10mg daily PRN	• NON-sedating
Promethazine (Phenergan)	25mg PO/IM BD	• Sedating
Hydrocortisone	100mg IV stat	•

*Exc. atopic/contact dermatitis, drug eruption (erythema multiforme)

Nausea/Vomiting (anti-emetics)		A/E
Ondansetron (Zofran)	4-8 mg PO / SC/ IV TDS PRN	
Metoclopramide (maloxon)	10mg PO TDS PRN	<ul style="list-style-type: none"> Pro-kinetic Anti-dop (EPSE, avoid in PD) Oculogyric crisis (children)
Prochlorperazine (Stemtil)	20mg PO STAT 5-10mg PO TDS 12.5mg IV/IM TDS	• 1 st gen anti-psych (EPSE)
Droperidol (for PONV)	0.625-1.25mg IV/IM	<ul style="list-style-type: none"> Prolonged QT Anti-dop
Cyclizine (H1 antag → motion sickness)	50mg PO TDS	<ul style="list-style-type: none"> Drowsy Blurred vision ↑SNS, seizures
Dexamethasone	2-4mg PO TDS	• Steroids-related
Domperidone	10mg PO TDS	• Anti-dop

CONSTIPATION (aperients)		A/E
Movicol	2 sachets PO BD	Osmotic agent (↑H ₂ O content of stool) <ul style="list-style-type: none"> Bloating / flatulence Diarrhoea Abdo cramps
Coloxyl & senna	2 tablets PO BD	
Lactulose	20mL PO BD (also used for enceph)	Stimulant agent (↑H ₂ O + electrolyte secretion) <ul style="list-style-type: none"> Avoid in BO Same as osmotics
If BNO ≥ 3/7		A/E
Bisacodyl	Suppository daily PRN	<ul style="list-style-type: none"> Pt embarrass Insertion pain Laxative dependence
Glycerine	Suppository daily PRN (osmotic lubricant)	
Micro lax	Enema daily PRN (osmotic saline laxative)	
Fleet	Enema daily PRN (last resort)	

*Exc: SBO/LBO, drug-related (opiates)

INSOMNIA		A/E
Melatonin	2-4mg PO nocte PRN	
Temazepam	5-10mg PO nocte PRN	<ul style="list-style-type: none"> Dependence Falls risk

Exc: brain pathology, metabolic (uraemia, high ammonia)

Anti-HTN (always use small doses)		
Prazosin	0.25mg PO	• Fast acting
Hydralazine	1mg IV	• Fast acting - (give every min up to 5 mins)
Amlodipine	5mg PO OD	• Slow-acting
GTN	10mg patch 600mcg SL PRN	<ul style="list-style-type: none"> Slow-acting - Remove once SBP < 140 Max dose 1.8g (3x tablets)
Ramipril	1.25-10mg PO OD	• Nocte
Metoprolol	50mg PO TDS/QID	• For angina
Bisoprolol	10mg PO OD	• For angina –(NB: longer acting than esmolol, thus worse for aortic dissection)
Verapamil	80-120mg PO TDS	•

RESPIRATORY	
APO	<ul style="list-style-type: none"> Sit up + high-flow FiO₂ (target 88-92% or 95%) 40mg Furosemide IV STAT + cease all fluids
Wheeze (X-Asthma/COPD)	<ul style="list-style-type: none"> salbutamol → 2-12 puffs INH or 5mg NEB STAT Ipratropium → 500mcg NEB Above PLUS Prednisolone → 1mg/kg PO OD (max 50mg)
Weaning	<ul style="list-style-type: none"> Weaning plan for prednisolone Seretide / Symbicort → 1-2 puffs INH OD Tiotropium → 18mcg INH OD

Electrolyte abnormalities	
HypoNa	<ul style="list-style-type: none"> <135 = fluid restrict (0.5-1L/day or 0.5L less than daily UO) <120 = 3% NaCl (avoid osmotic demyelination - don't correct > 10 / 24hr or > 18 / 48hr)
HyperNa	<ul style="list-style-type: none"> 5% glucose @ 100mL/hr (avoid cerebral oedema - don't correct > 0.5 /hr)
HyperK	<ul style="list-style-type: none"> <6 = Ca resonium 15g daily >6 or any ECG changes = contact MOIC - Ca gluconate, Insulin, SABA
HypoK	<ul style="list-style-type: none"> <3.5 = 600-1200mg KCl PO BD (slow K) < 3 = 10mM KCl in 0.9% NS 100mL IV
HyperCa	<ul style="list-style-type: none"> IVF - 0.9% NS @ 1L over 4-6 hrs 20mg Furosemide iV >3.5mM → 90mg pamidronate IV
HypoCa	<ul style="list-style-type: none"> <2.15 = 500-600mg Ca Carb PO BD < 1.9 = PO or IV <1.6 → 1mL 10% Ca gluconate in 4mL 0.9% NS over 1 hour
HypoMg	<ul style="list-style-type: none"> <0.9 = 1000mg Mg aspart (Magmin) PO TDS <0.7 = PO or IV <0.4 = 10mM Mg sulphate in 0.9% NS 100mL over 1 hr
HypoPO4	<ul style="list-style-type: none"> <0.8 = 1 sachet Phosphate Sandoz (TDS) <0.5 = PO <0.3 = 10mM Na or K dihydrogen PO4 in 0.9% NS 250mL

Anti-coagulation		
Heparin /UFH (PPX)	5000 IU SC BD	AKI • Protamine (reversal)
Clexane /LMWH / enoxaparin (PPX)	40mg SC OD	• Protamine (reversal)
Clexane (Rx)	<ul style="list-style-type: none"> 1mg/kg SC BD 1mg/kg SC OD (if renal dysfxn - CrCl < 30) 	
Warfarin (coumadin or marevin)		• prothrombin X, FFP, vit K (reversal)
Aspirin /	100mg PO mane	•
Clopidogrel	75-300mg PO OD	•

PPX = prophylaxis, Rx = therapeutic intent

Common Antibiotics		
Amoxil	500mg PO TDS	<ul style="list-style-type: none"> Pneumonia, dental abscess AOM
Clarithromycin	500mg PO BD	• Atypical Pneumonia
Doxycycline		• Atypical Pneumonia
Augmentin Duo Forte	875/125 PO BD (5 days)	•
Flucloxacillin	500mg PO QID	• Cellulitis
Trimethoprim	300mg PO OD	• UTI
Nitrofurantoin	100mg PO QID	• UTI (pregnant)
Vancomycin	125mg PO QDS	• C. difficile
Metronidazole	400-500mg PO TDS	•

Palliative / Elderly		A/e
Agitation	Haloperidol 0.5-1mg SC q1hrly (max 4mg/day)	EPSE
	Midazolam 2.5-5mg q20minly (max 50mg/day)	Falls
Secretion / noisy breathing	Hyoscine (buscopan) - 20mg SC q4hrly (conscious)	
	Hyoscine (buscopan) - 0.4mg SC q4hrly (unconsc)	
	Glycopyrrolate 0.2mg SC q4hrly	
Pain	Morphine - 2.5-5mg SC QID	AKI
	Hydromorph - 0.25-0.5mg q1hrly (if CKD)	
Nausea	Metoclopramide - 10mg SC q6hrly (max 40mg/day)	
Sedation	Clonazepam - 0.5-1mg SL q6hrly	

Other common drugs		
Omeprazole	40mg PO OD	A/E = OP, hypoMg, AKI (AIN), GI disturbance
Pantoprazole	20mg PO OD	• Best if clopidogrel CI
Atorvastatin	20mg PO OD	• 80mg PO OD (if CVD/PAD)
Insulin		• RA - novorapid (aspart), humalog (lispro) → 5 min (3 hr)
		• SA - actrapid, humulin → 30 min (6hr)
		• IA - isophane → 1-2 hr (12hr)
		• LA - detemir, glargine → 1-2 hr (24hr)

NB: General A/E for any drug:

- anaphylaxis (wheeze, urticaria, angioedema),
- GI disturbance (N/V, diarrhoea, constipation)

COMMON AFTER-HOURS CALLS:- VITALS

	Hypotension	Hypertension	Bradycardia	Tachycardia
Nursing info	<ul style="list-style-type: none"> Vitals Acute vs chronic? Sx – conscious, chest pain, SOB, visual changes, ?sepsis, light-headed Hydration status Triggers Context –post-op, immunosupp. 	<ul style="list-style-type: none"> Vitals Acute vs chronic <u>End-organ damage</u> CVS/Resp – Chest pain, SOB, back pain, cough CNS – vision changes, headache, N/V, dizzy, numbness/tingling Urinary retention / constipation Pain / Anxiety 	<ul style="list-style-type: none"> Vitals Acute vs chronic Check pulse!! CVS – chest/back pain, SOB, cough, 	<ul style="list-style-type: none"> Vitals Acute vs chronic Check pulse!! CVS – chest/back pain, SOB, cough,
Chart info Triage	<ul style="list-style-type: none"> Meds – new/changed/ceased <ul style="list-style-type: none"> Anti-HTN (BB, CCB, clonidine, nitrates, PDE5i, diuretics) Opiates + Sedatives (BZD) Anti-convulsant (Na val) Anti-arrhythmic (digoxin, adenosine) Anti-depressants (TCA, MAOi) Fluid chart + drain + Hb 	<ul style="list-style-type: none"> Med r/v (ceased, omitted) <ul style="list-style-type: none"> Current anti-HTN Fluid chart + drain 	<ul style="list-style-type: none"> Cardiac Hx = AF, flutter, SSS, CAD Past ECG/ECHOes Hb EUC – K > 4, Mg > 2 Context – pregnant, sepsis, dehydrated, thyroid Med r/v = BB, CCB, thyroid meds, clonidine, digoxin 	<ul style="list-style-type: none"> Cardiac Hx = AF, flutter, SSS, CAD Past ECG/ECHOes Hb EUC – K > 4, Mg > 2 Context – pregnant, sepsis, dehydrated, thyroid Med r/v = BB, CCB, thyroid meds, clonidine, digoxin
DDX	<ul style="list-style-type: none"> Vasovagal / orthostatic >20mmHg diff. in SBP or > 10 in DBP (PD, T2DM, Autoimmune) Vasodilated (↓TPR) (pregnant or shock → cardiogenic, distributive, obstructive, neurogenic - SCI) Hypovol post-op (big 5) – dehydrated (V/D), DM, 3rd space (burn, sepsis), acute GI bleed Meds (see above) Metabolic (thyroid, Addison crisis) Toxins (CO, CN – cyanide) 	<p>Primary HTN - idiopathic Secondary HTN</p> <ul style="list-style-type: none"> Renal (RAS, AKI, Renal cancer) Endo (hyperthyroid, conn's, cushing's, acromegaly, pheo, Congenital adrenal hyperplasia) Drugs (cocaine, caffeine) Coarctation of aorta ?Pre-eclampsia OSA Malignant HTN, hyperthermia, NMS 	<p>Primary (Cardiac)</p> <ul style="list-style-type: none"> Asleep / resting Physiological normal (athletes) Heart block <p>Secondary</p> <ul style="list-style-type: none"> Meds – BB, AV blockers Neuro – brainstem stroke/trauma 	<p>Primary (Cardiac)</p> <ul style="list-style-type: none"> ACS <p>Secondary</p> <ul style="list-style-type: none"> Exc. PE, PTX 4 H's and 4 T's Pain Retention Anxiety Infection /sepsis Alcohol withdrawal
Ix / Assess	<ul style="list-style-type: none"> Postural BP + Vitals Check pulse!! <ul style="list-style-type: none"> Radial: SBP > 80 Carotids: SBP > 60 24hr - ECG +/- echo VBG Bloods –FBC, EUC, BSL, CRP, TSH Troponin, BNP, Coags, G+H UA +/- urine M/C/S CTB (if syncopal w/ head strike) 	<ul style="list-style-type: none"> Repeat BP (correct cuff size) + manual Check pulse!! Neuro + cardiac exam ECG Bloods –FBC, EUC, BSL, CRP, TSH VBG 	<ul style="list-style-type: none"> Check pulse!! ECG +/- ECHO <p><i>Additional (if indicated)</i></p> <ul style="list-style-type: none"> VBG FBC, EUC, CMP Troponin CXR 	<ul style="list-style-type: none"> Check pulse!! ECG +/- ECHO Check for shock signs etc. (poor perfusion, desats) <p><i>Additional (if indicated)</i></p> <ul style="list-style-type: none"> VBG FBC, EUC, CMP Troponin Coags + G & H (if bleeding)
Immediate Rx	<ol style="list-style-type: none"> A-E Encourage PO intake IV 250/500mL 0.9% NS Bolus W/H anti-HTN and remove GTN patches (don't w/h BB in rapid AF) <p>ICU t/f if severe</p> <ol style="list-style-type: none"> Vasopressor (adrenaline) Inotropes (metaraminol) 	<ol style="list-style-type: none"> A-E Move to single room Small dose of usual anti-HTN SA = 5mg amlodipine (if no postural drop) or 10mg GTN patch (remove if SBP < 140) FA = 0.25mg prazosin or 1mg hydralazine IV (every min up to 5 min) <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <p>DBP > 120 (Malignant HTN)</p> <ul style="list-style-type: none"> End-organ damage → IV 1mg hydralazine Asympt → PO-anti-HTN (target SBP < 160/100) </div> <div style="border: 1px solid black; padding: 5px;"> <p>DBP < 120</p> <ul style="list-style-type: none"> SBP > 150 → 5mg amlodipine STAT SBP < 150 → Give scheduled dose early </div> </div> <p>Fluid overload states (CHF)</p> <ul style="list-style-type: none"> 20mg furosemide Monitor EUC/CMP 	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <p>Haem stable</p> <ul style="list-style-type: none"> sleeping → attempt to rouse asympt → ECG </div> <div style="border: 1px solid black; padding: 5px;"> <p>Haem unstable</p> <ul style="list-style-type: none"> 500mcg atropine IV over 3-5 mins (max 3g) Apply pads - transcut pacing cease all AV blockers + call MOIC/ICU </div> </div> <p>ECG sinus Brady = cease BB AV block = cease BB 2nd/3rd HB = cardio ref</p>	<p>Stable tachycardia</p> <ul style="list-style-type: none"> Haem stable → 2.5 mg metoprolol IV Rx cause = diuresis or fluids HypoTN → contact MOIC/Cardio Amiodarone 150mg IV <p>Unstable tachycardia</p> <ul style="list-style-type: none"> Regular wide complex (VT or SVT + aberrancy) → 200J sync DC Post-resus: consult cardio Irregular wide complex (VF) → immediate unsync DC shock (200J) Regular narrow complex (ST / SVT /flutter) → Adenosine 6mg IV (then 12, 18 mg) Consider 100J sync DC Rx cause: vol overload (APO) / depletion (sepsis) Give fluids/ diuresis Irregular narrow complex (rAF, flutter + var block, MAT) → Rx cause: sepsis, pain, PE, ACS, thyroid Give fluids/ diuresis
Disposition	<p>?Admit</p> <ul style="list-style-type: none"> Telemetry pDVT/PE (+/- d-dimer, V/Q, CTPA) Fluid balance (?IDC, fluid chart) +/- IV ABx (infection) <p>?D/C home</p> <ul style="list-style-type: none"> F/U w/ GP 	<p>?Consult MIOC</p> <ul style="list-style-type: none"> Target SBP < 160/100 Decrease MAP < 10% in first few min and <15% in first few hours Ix underlying cause <u>Avoid</u> BB, CCB in bradycardia Diuretic, ACEi in pre-renal AKI 	<p>Consult MOIC/Cardiology</p> <p>If hypoTN</p> <ul style="list-style-type: none"> Manage as shock – IV fluid bolus 	<p>Consult MOIC/Cardiology</p> <p>If hypoTN</p> <ul style="list-style-type: none"> Call ICU as need central access Consider esmolol support

	Bradypnea / Apnoea	Low sats / Tachypnoea	Hypothermia	Fever																		
Nursing info	<ul style="list-style-type: none"> Vitals Acute vs chronic Asleep or awake 	<ul style="list-style-type: none"> Vitals Acute vs chronic Unwell – SOB, reduced GCS 	<ul style="list-style-type: none"> Vitals Acute vs chronic (trends) Context (post-op?) 	<ul style="list-style-type: none"> Vitals Acute vs chronic Check surgical sites, portals of entry (IDC, PIVC etc.) Check hardware (pacemaker, stents, staples, wires, AICDs, orthopaedic implants) 																		
Chart info Triage	Context	<ul style="list-style-type: none"> Resp/Cardiac Hx = COPD, asthmatic 		Admission notes – challenge dx and ID potential sequelae of interventions <ul style="list-style-type: none"> Oncology pt (neutropenic fever) Surgical pt 																		
Assess/ DDX	<ul style="list-style-type: none"> Centrally acting drugs (opiates, BZDs, alcohol) – OD or WD CNS – raised ICP, stroke, SCI injury Electrolyte imbalance OSA Hypothyroidism Sedation (BZD, anti-psych) Altitude motion sickness (AMS) o high altitude pulmonary / cerebral oedema (HAPE, HACE) Dysbarism (divers) – exposed to gas at higher P atm (5x N₂) 	<p>Must Exclude</p> <ul style="list-style-type: none"> PE, PTX, APO ACS, tamponade FB obstruction Sepsis Med – opiates <hr/> <p>5 main causes of hypoxia</p> <ul style="list-style-type: none"> V/Q mismatch DLCO issue (APO, ILD pneumonia) R → L Shunting (Pneumonia, ARDS, APO) High alt Voluntary hypoventilation 	<p>Environmental</p> <ul style="list-style-type: none"> Post-op Post-drowning (1-4yo) <p>Non-environmental</p> <ul style="list-style-type: none"> Drugs (opiates, BBT, ETOH) Any type of shock Dead (triad- coagulopathy, acidosis, hypothermia) 	<p>Primary infection (source control)</p> <ul style="list-style-type: none"> Meningitis AOM Pneumonia or URTI UTI Colitis / peritonitis / cholangitis Cellulitis Endocarditis <p>Secondary infection</p> <ul style="list-style-type: none"> VAP, line infection (PIVC) Pressure sore Blood product reaction <p>Non-infective (DIVINE BC)</p> <ul style="list-style-type: none"> Drugs- cocaine, NMS, SNS, Malignant hyperthermia Inflammation – IBD, SLE flare Vascular (PE, DVT) Ischaemia Neuro - CNS Endo – pho, hyperthyroid Blood – leukemia, Cancer - 																		
Ix / Assess	<ul style="list-style-type: none"> SpO₂ drop: cold peripheries Auscultate lungs!! (bronchial, wheeze, stridor, crackles) CXR Covid swab VBG or ABG (do not stop giving FiO₂) 	<ul style="list-style-type: none"> SpO₂ drop: cold peripheries Auscultate lungs!! (bronchial, wheeze, stridor, crackles) CXR Covid swab VBG or ABG (do not stop giving FiO₂) 	<ul style="list-style-type: none"> Systems review ECG – slow AF, J wave (lead 2) Bloods – FBC, EUC, VBG, CRP, 	Systems review (A-E assessment) <ul style="list-style-type: none"> Document trend in temp IVC VIP score AND any rash (SJS) Check axiall, oral, rectal and Foley Bloods- FBC, EUC, CRP, blood cultures x2, VBG Sputum M/C/S urine M/C/S CXR Swabs – COVID, viral multiplex MRI → osteomyelitis LP → nosocomial meningitis ECHO → endocarditis BC x2, CMP, LDH, urate → tumour lysis (neutropenic sepsis) → contact haem reg 																		
Immediate Rx	<p>Treat underlying cause</p> <p>A-E assessment</p> <ul style="list-style-type: none"> Opiates – naloxone reversal FB removal Omit medications Correct electrolyte imbalances <p>Any altitude sickness / dysbarism</p> <ul style="list-style-type: none"> Rx: Immediate Descent, rest and O₂ & lay flat Px: slow ascent and low dose acetazolamide for AMS 	<p>A-E assessment</p> <ul style="list-style-type: none"> Clear/Suction airway Auscultate lungs <p>Every L O₂ – 4% increase in FiO₂</p> <ul style="list-style-type: none"> NP 1-4L/min → 24-40% HM 4-10mL/min → 40-60% NRBM – 15 L/min → 60-90% <p>Target SpO₂: >95% or 88-92% (in pt relying on hypoxia drive)</p> <p>Rx underlying cause</p> <ul style="list-style-type: none"> Pneumonia/sepsis = ABx + IVF APO = sit upright, FiO₂, fluid cease/restrict and 40mg furosemide IV stat Wheeze = 6-12x puffs salbutamol INH stat 	<p>General</p> <p>A-E assessment</p> <ul style="list-style-type: none"> Warm blankets Bair hugger Warmed fluids <p>Emergency Rx:</p> <ul style="list-style-type: none"> Contact MOIC CPR in 10 mins → ROSC lay on side ECMO early CPAP PEEP 	<p>General</p> <p>A-E assessment</p> <ol style="list-style-type: none"> 1g paracetamol PO STAT 400mg ibuprofen PO STAT ?Empirical ABx if septic or FUO Contact MOIC – check ABx guidelines <table border="1"> <tr> <td>CAP</td> <td>Azithro + cef/doxy in COPD</td> </tr> <tr> <td>HCAP</td> <td>Vanc + tazosin (cover Kleb, pseudo, Moraxella)</td> </tr> <tr> <td>Meningitis</td> <td>2g ceftriaxone q12 hrly</td> </tr> <tr> <td>Cellulitis</td> <td>500mg flucloxacillin PO QID MRSA + = Bactrim BD</td> </tr> <tr> <td>C. diff</td> <td>Vanc/Metro PO</td> </tr> <tr> <td>SBP</td> <td>Ceftriaxone, Allergy: Cipro</td> </tr> <tr> <td>Neutropenic fever</td> <td>Tazocin, meropenem (pseudomonas cover)</td> </tr> <tr> <td>Endocarditis</td> <td>Vanc + tazosin</td> </tr> <tr> <td>Line infect</td> <td>Add vanco for MRSA cover</td> </tr> </table>	CAP	Azithro + cef/doxy in COPD	HCAP	Vanc + tazosin (cover Kleb, pseudo, Moraxella)	Meningitis	2g ceftriaxone q12 hrly	Cellulitis	500mg flucloxacillin PO QID MRSA + = Bactrim BD	C. diff	Vanc/Metro PO	SBP	Ceftriaxone, Allergy: Cipro	Neutropenic fever	Tazocin, meropenem (pseudomonas cover)	Endocarditis	Vanc + tazosin	Line infect	Add vanco for MRSA cover
CAP	Azithro + cef/doxy in COPD																					
HCAP	Vanc + tazosin (cover Kleb, pseudo, Moraxella)																					
Meningitis	2g ceftriaxone q12 hrly																					
Cellulitis	500mg flucloxacillin PO QID MRSA + = Bactrim BD																					
C. diff	Vanc/Metro PO																					
SBP	Ceftriaxone, Allergy: Cipro																					
Neutropenic fever	Tazocin, meropenem (pseudomonas cover)																					
Endocarditis	Vanc + tazosin																					
Line infect	Add vanco for MRSA cover																					

COMMON SYMPTOM COMPLAINT

	Chest pain	SOB	Abdo Pain	Syncope /LOC /reduced GCS	Agitation / confusion / delirium								
Nursing info	<ul style="list-style-type: none"> ➤ Vitals ➤ SOCRATES ➤ New vs old ➤ Cardiac Hx ➤ Previous ECG/ECHO 	<ul style="list-style-type: none"> ➤ Vitals ➤ New vs progressive ➤ Baseline FiO2 vs current ➤ Context (COPD, asthma, CHF, CKD), post-op ➤ R/v = resp & cardiac Hx 	<ul style="list-style-type: none"> • Vitals – hypoTN, tachycardia • New vs old • Peritonism / perforated viscous (rebound, guarding) • Ischaemic bowel (pain out of proportion) • Obstruction (distension, BNO, Absent BS) • Cholangitis (charcot triad) 	<ul style="list-style-type: none"> • Hx of Fits/epilepsy • Prodrome – syncope, chest pain, weakness 	<ol style="list-style-type: none"> 1. 1st episode of psychosis 2. Acutely agitated or aggressive patient 3. Delirium (fluctuating LOC) 4. Known MH diagnosis attending for review (must medically clear) 								
RF	<ul style="list-style-type: none"> • HC, HTN, DM, • Vascular disease (PVD, AAA) • Inflammatory issues • Smoking • Drug use (cocaine) • Recent surgery 	<ul style="list-style-type: none"> • HC, HTN, DM, • Vascular disease, • Autoimmune • Smoking • Drug use (marijuana – PTX – THC abuse) • Hx of resp. illness. 	<ul style="list-style-type: none"> • Vascular RF = ischaemic, • Previous bowel surgery • Smoker, EtOH • Autoimmune • Sexually active • Blood thinners (anti-coags) 	<ul style="list-style-type: none"> • Hx of Fits/epilepsy • Prodrome – syncope, chest pain, weakness • T2DM – hypoglycemia • Organ failure • Vascular RF • Drug and alcohol hx • Recent illness 	<p>Red flag signs</p> <ul style="list-style-type: none"> • Known mental health Dx • Drug and alcohol abuse • DM • History of malignancy • Cardio-resp or neuro diagnosis • Older age (> 40yo) 								
Chart info (DDX)	<p>RED FLAGS</p> <ul style="list-style-type: none"> • ACS • PE • Aortic dissection (diastolic murmur, tearing pain) • Angina – subcritical stenosis (crescendo-decrescendo) <p>SEMI-URGENT</p> <ul style="list-style-type: none"> • Pericarditis • Tamponade • Pneumonia, • Pneumothorax • Pleural effusion / pleuritis <p>COMMON</p> <ul style="list-style-type: none"> • GORD • Abdo pathology (referred pain) • Chest wall pain • Costochondritis • rib # 	<p>RED FLAGS</p> <ul style="list-style-type: none"> • Foreign Body • Anaphylaxis • Tension -PTX • ACS • PE • Aortic dissection <p>SEMI-URGENT</p> <ul style="list-style-type: none"> • CCF • Tamponade • AOO = COPD, asthma • Atelectasis (2nd to pain) • APO • Pneumonia (HAP, aspiration) • Simple PTX • Metabolic acidosis (HAGMA/NAGMA) <p>DO NOT MISS</p> <ul style="list-style-type: none"> • Anemia post-op or concealed bleed • Toxins /ODs (opiates, BZDs, marijuana) • NMD (MG) 	<p>Bowel</p> <ul style="list-style-type: none"> ➤ Obstruct = SBO/LBO, volvulus ➤ Ischemia, incarceration, strangulation (hernia, dead gut) ➤ Perforation / rupture (E.g. AAA, oesophagus, Peptic ulcer) ➤ Inflammation/sepsis (gastritis, IBD, diverticulitis, cholangitis) <p>Post-op</p> <ul style="list-style-type: none"> ➤ D1: inadequate analgesia ➤ D3-5: Intra-abdo bleed, SSI, anastomotic leak, sepsis <p>Organ</p> <ul style="list-style-type: none"> ➤ Hepatitis ➤ GB = stones, cholecystitis, cholangitis ➤ Pancreatitis (stone, EtOH) ➤ UTI, Renal colic, stones ➤ Splenic rupture ➤ AAA <p>Gender-specific</p> <ul style="list-style-type: none"> ➤ Ectopic, endometriosis, adnexal mass/abscess ➤ Ruptured ovarian cyst ➤ Testicular /ovarian torsion <p>Other</p> <ul style="list-style-type: none"> ➤ AMI ➤ RLL or LLL Pneumonia ➤ DKA ➤ HyperCa- polyuria, confusion 	<p>BRAIN ISSUE</p> <ul style="list-style-type: none"> ➤ Head Trauma ➤ Vascular – ICH, SAH ➤ Stroke ➤ CNS infection ➤ Raised ICP - SoL (cushing's) ➤ Seizure (post-ictal) <p>DIM-EVENT (NON=Brain)</p> <ul style="list-style-type: none"> • Drugs (OD, withdrawal, interactions – EtOH, BZD, opiates, anti-psychotics) • Infection (UTI, cellulitis, meningitis, encephalitis) • Metabolic (Low Na, low BSL, uremia – AKI, hepatorenal syndrome, UGIB) • Endocrine (Hypoglycemia, hyperglycemia esp. HHS, thyrotoxicosis, myxedema coma, Addisonian crisis, hypoadrenalism – prolonged steroid usage) • Vascular/cardiogenic – stroke, arrhythmia, structural (CMP), HTN, vasculitis, cavernous sinus thrombosis (veins) • Vasovagal – micturition, orthostatic • Epilepsy – post-ictal, meds, non-convulsive status epilepticus • Nutrition – Vit D, folate, B12, B1 deficiency • Toxins, trauma, TTP 	<p>DO NOT MISS</p> <ul style="list-style-type: none"> ➤ Pain ➤ Constipation / retention ➤ Infection (esp. necrotizing fasciitis and pressure sores) ➤ Psych (relapse mania, schiz) <p>Metabolic</p> <ul style="list-style-type: none"> ➤ Hypoglycemia ➤ Electrolytes (dehydration?) ➤ Hepatic enceph (cirrhosis, EtOH, hep B/C, HIV, IVDU) ➤ Thyroid storm ➤ Addisonian crisis <p>Neurological</p> <ul style="list-style-type: none"> ➤ BPSD ➤ CVA – TIA/stroke ➤ Post-ictal seizure ➤ SAH, ICH, SDH, NPH ➤ CNS mass <p>Cardiopulmonary (hypoxia)</p> <ul style="list-style-type: none"> ➤ ACS, PE, PTX, tamponade ➤ CCF, APO ➤ CO2 retention – COPD, PE ➤ Blood loss – UGIB, LGIB <p>Drug related (OD/WD)</p> <ul style="list-style-type: none"> ➤ Anti-emetics, anti-histamines, ➤ Anti-dop (anti-PD, Anti-psych) ➤ Anti-depressants TCA ➤ Cocaine, heroin, MDMA 								
Assess/Triage	<p>Bedside</p> <ul style="list-style-type: none"> ➤ ECG – serial ➤ UA <p>Bloods</p> <ul style="list-style-type: none"> ➤ FBC, EUC, CMP ➤ TFT ➤ Troponin/BNP ➤ ABG/VBG ➤ D-dimer ➤ CRP ➤ Lipase ➤ B-HCG <p>Imaging</p> <ul style="list-style-type: none"> ➤ Mobile CXR ➤ Cardiac ECHO ➤ CTPA ➤ CT chest ➤ Doppler LL USS 	<p>Bedside</p> <ul style="list-style-type: none"> ➤ ECG – serial ➤ UA <p>Bloods</p> <ul style="list-style-type: none"> ➤ FBC, EUC, CMP ➤ Troponin/BNP ➤ D-dimer ➤ CRP (infection) ➤ Lipase ➤ ABG/VBG – resp. acidosis? <p>Imaging</p> <ul style="list-style-type: none"> ➤ Mobile CXR ➤ Cardiac ECHO ➤ CTPA (PE) ➤ CT chest ➤ Doppler LL USS → DVT? 	<p>Bedside</p> <ul style="list-style-type: none"> ➤ ECG – serial ➤ CXR upright (free air) ➤ Urine B-HCG (FEMALE) <p>Bloods</p> <ul style="list-style-type: none"> ➤ FBC, ➤ EUC, CMP ➤ LFT ➤ CRP ➤ Lipase ➤ Serum B-HCG (ectopic) ➤ ABG/VBG = lactate, acidosis <p>Imaging</p> <ul style="list-style-type: none"> ➤ CT AP ➤ FAST / POCUS ➤ US <p>OTHER</p> <ul style="list-style-type: none"> ➤ Stool culture M/C/S + O/C/P ➤ Urine culture M/C/S ➤ Genital swabs M/C/S 	<p>Bedside</p> <ul style="list-style-type: none"> ➤ ECG – serial <p>Bloods</p> <ul style="list-style-type: none"> ➤ FBC, WCC ➤ Blood film (schistocytes for TTP) ➤ EUC, CMP ➤ LFT ➤ CRP ➤ VBG – BSL, lactate, acidosis ➤ TFT ➤ Coags ➤ Blood culture ➤ Drug levels – paracetamol, EtOH <p>Imaging</p> <ul style="list-style-type: none"> ➤ CT brain → MRI, LP ➤ XR – fractures ➤ EEG ➤ POCUS 	<p>When to do full work up?</p> <ul style="list-style-type: none"> ➤ 1st psychotic episode ➤ Old pt w/ delirium/ agitation <p>Bedside</p> <ul style="list-style-type: none"> ➤ Vitals – postural BP ➤ ECG – serial ➤ UA <p>Bloods – delirium screen</p> <ul style="list-style-type: none"> ➤ FBC, EUC, CMP ➤ LFT, ➤ VBG – BSL, lactate ➤ TFT ➤ B12, Folate, Vit D ➤ CRP, ESR ➤ Syphilis, HIV ➤ Blood cultures, urine M/C/S, CXR <p>Imaging</p> <ul style="list-style-type: none"> ➤ CT brain +/- contrast (SOL, bleed) ➤ LP <p>Cognitive tests:</p> <ul style="list-style-type: none"> ➤ MMSE, MOCA, MSE, 4-AT 								
Rx	<p>Exclude Big 3 – give Mx</p> <ul style="list-style-type: none"> • ACS = PCI or anti-platelets or anti-coag (MONA BASH) • Aortic dissection – permissible hypoTN with BB -esmolol (contact CS) • PE – well's score, CTPA, high-dose heparin • T-PTX -needle decompression <p>If not ACS</p> <ul style="list-style-type: none"> • Serial ECG & troponin • Monitored BED – CCU • Cardio r/v • Consider D/C • 24-hr holter monitor • ECHO • DASS-21 (MH) 	<p>ABCDE – * airway patent</p> <ul style="list-style-type: none"> • Avoid lying flat – let patient position themselves • Avoid XS-FiO2 in COPD • NIV (BIPAP) for acidotic-COPD and (CPAP) for APO <p>Medical</p> <ul style="list-style-type: none"> • X-COPD /Wheeze = Bronchodilators (12x puffs SABA) + IV 100mg hydrocort bolus • CCF/APO = 40mg Furosemide IV • Early ABx – if pneumonia • BZD once-off (for anxiety) 	<ul style="list-style-type: none"> • Keep NBM (or last meal) • A – airway patent, SUCTION • B – adequate FiO2, NGT • C = IVC – bloods <ul style="list-style-type: none"> ○ IDC, IVF (NS, hartmann) ○ Analgesia – (1g IV/PO Panadol (2/5-5mg IV morphine) (5mg endone PO) Intranasal fentanyl ○ High-dose PPI • D – GCS, BSL, <p>Refer accordingly</p> <ul style="list-style-type: none"> ➤ Gen Surg registrar (urgent if peritonism) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Peritonism</td> <td>NBM + IVF+ ABx + surgery</td> </tr> <tr> <td>Ischemic</td> <td>NBM + ABx + surg</td> </tr> <tr> <td>Obstructed</td> <td>NBM + NGT suction + surgery</td> </tr> <tr> <td>Cholangitis</td> <td>NBM + IVF + ABx + endoscopy (if septic)</td> </tr> </table>	Peritonism	NBM + IVF+ ABx + surgery	Ischemic	NBM + ABx + surg	Obstructed	NBM + NGT suction + surgery	Cholangitis	NBM + IVF + ABx + endoscopy (if septic)	<ul style="list-style-type: none"> • A – airway patent • B – adequate FiO2 • IVC – bloods <ul style="list-style-type: none"> ○ IVF (NS, hartmann) ○ Support ○ ABx (if sepsis) ○ Ionotropes • D – GCS, BSL <ul style="list-style-type: none"> ○ Thrombolytics ○ CVA interventions ○ Antidotes for OD (e.g. naloxone, flumazenil) ○ Give 5mg midazolam for non-convulsive epilepticus to wake them up <p>Refer accordingly</p> <ul style="list-style-type: none"> • Neurosurg consult • Neurologist • Endocrinologist • Geriatrics 	<p>If known MH dX → medically clear</p> <ul style="list-style-type: none"> ➤ No further Ix ➤ Await MH review ➤ Document ➤ Avoid premature Dx closure <p>General Mx for acutely aggressive pt:</p> <ol style="list-style-type: none"> 1) Attempt to de-escalate (reassure - offer drink, family support) 2) Re-orientate – “Hi Mark, my name is Jon, you’re in hospital at the moment, I’m one of your doctors” 3) Do NOT stand in their way (protect yourself, others & patient) 4) Medical sedation (senior advice) (IM haloperidol or PO risperidone) → required post-monitoring for GCS in resus room 5) Physical sedation = Security → restrain w/ 5-point immobilization
Peritonism	NBM + IVF+ ABx + surgery												
Ischemic	NBM + ABx + surg												
Obstructed	NBM + NGT suction + surgery												
Cholangitis	NBM + IVF + ABx + endoscopy (if septic)												

	Constipation	Rash	Post-transfusion										
Nursing info	<ul style="list-style-type: none"> Vitals New vs old/relapse Systemic signs Acute abdomen 	<ul style="list-style-type: none"> Vitals New vs old Red flags – painful, systemic signs 	<ul style="list-style-type: none"> Vitals – hypoTN, tachycardia Time since transfusion Symptoms present <ul style="list-style-type: none"> Fever, rash, SOB, cough, chest pain 										
Chart info	<p>Definition</p> <ul style="list-style-type: none"> Frequency < 3 BM / week Consistency changed to Bristol type 1 Feeling of incomplete evacuation <p>Review:</p> <ul style="list-style-type: none"> BNO day ### Review meds – anti-chol, opiates, antihistamine PO intake 	<ul style="list-style-type: none"> Drug allergy Context – post-drug, transfusion, Autoimmune, immunosupp, post-transplant Demographics / ethnicity Hx or FHx of skin cancer (SCC, BCC, melanoma) or any cancer Known to dermatologist 	<ul style="list-style-type: none"> Drug allergy Check correct patient details Check correct blood type, Rh 										
Assess/DDx	<ul style="list-style-type: none"> Exclude acute abdomen – obstruction, perforation, ischaemia Med – opiates, SSRI, TCA, BZD Immobility 	<p>Life-threatening</p> <ul style="list-style-type: none"> Anaphylaxis urticaria SJS Non-blanching Meningococcal septicemia <p>Common:</p> <ul style="list-style-type: none"> Drug reaction – erythema multiforme minor Dermatitis (atopic, contact) Bruising (exc. ITP, HSP, leukemia, NAI) Psoriasis Viral exanthem Cellulitis vs impetigo Fungal (tinea) Chilblains (perniosis) <p>Exam</p> <ul style="list-style-type: none"> LN exam FBC (WCC, eosinophil) Skin swab (M/C/S, viral PCR) 	<ul style="list-style-type: none"> Mild <ul style="list-style-type: none"> Urticaria (hives), rash, itch Febrile non-haemolytic (temp $\geq 1^\circ$ of baseline) Moderate-severe <ul style="list-style-type: none"> Anaphylaxis – angioedema, bronchospasm Acute non-haemolytic febrile reaction - hypoTN, temp >39 TRALI – SOB, hypoTN, temp >39 TACO – coarse crackles, JVP elevated, cough DIC – Bleeding, oozing Bleeding, oozing (DIC) Severe apprehension/agitation 										
Rx	<p>Non-pharm</p> <ul style="list-style-type: none"> Increase fibre intake Increase PO fluids Exercise Squatty-potty <p>Pharm</p> <ul style="list-style-type: none"> Movicol – 2x sachets PO BD Senna/coloxyl – 2x tablets PO BD Lactulose 20mL PO OD Suppository – rectal Fleet enema (last resort) 	<p>Treat underlying cause</p> <p>Non-pharm</p> <ul style="list-style-type: none"> Cease offending medications Inform MIOC ?dermatology r/v ?haematology r/v <p>Pharm</p> <ul style="list-style-type: none"> Itch/urticaria = 10mg loratadine PO PRN Anaphylaxis = IM 0.5mg adrenaline +/- PO steroids, antihistamines Eczema = Hydrocortisone ointment (e.g. beclomethasone) Sepsis = IV 1g ceftriaxone (HiB, gram -ve) Cellulitis = IV/PO 500mg flucloxacillin QID SJS = steroids + IVIg 	<ul style="list-style-type: none"> STOP transfusion A-E assessment Observations Call MOIC <table border="1"> <tr> <td>Urticaria</td> <td> <ul style="list-style-type: none"> Antihistamine (if minor or severe allergy) IM adrenaline + BLS (if anaphylaxis) </td> </tr> <tr> <td>Febrile non-haemolytic</td> <td> <ul style="list-style-type: none"> Panadol – antipyretics Increase obs Recommence if reaction subsides </td> </tr> <tr> <td>Acute haemolytic</td> <td> <ul style="list-style-type: none"> ALS IV ABX if sepsis Notify blood bank </td> </tr> <tr> <td>TRALI</td> <td> <ul style="list-style-type: none"> FiO2 → possible intubation IVF – hydration </td> </tr> <tr> <td>TACO</td> <td> <ul style="list-style-type: none"> Sit upright FiO2 Diuresis – furosemide </td> </tr> </table>	Urticaria	<ul style="list-style-type: none"> Antihistamine (if minor or severe allergy) IM adrenaline + BLS (if anaphylaxis) 	Febrile non-haemolytic	<ul style="list-style-type: none"> Panadol – antipyretics Increase obs Recommence if reaction subsides 	Acute haemolytic	<ul style="list-style-type: none"> ALS IV ABX if sepsis Notify blood bank 	TRALI	<ul style="list-style-type: none"> FiO2 → possible intubation IVF – hydration 	TACO	<ul style="list-style-type: none"> Sit upright FiO2 Diuresis – furosemide
Urticaria	<ul style="list-style-type: none"> Antihistamine (if minor or severe allergy) IM adrenaline + BLS (if anaphylaxis) 												
Febrile non-haemolytic	<ul style="list-style-type: none"> Panadol – antipyretics Increase obs Recommence if reaction subsides 												
Acute haemolytic	<ul style="list-style-type: none"> ALS IV ABX if sepsis Notify blood bank 												
TRALI	<ul style="list-style-type: none"> FiO2 → possible intubation IVF – hydration 												
TACO	<ul style="list-style-type: none"> Sit upright FiO2 Diuresis – furosemide 												
Disposition		<p>Description (A-E)</p> <ul style="list-style-type: none"> Asymmetry Borders Colour Diameter / size Evolving Location Distribution (acral, sym, truncal) Texture (raised, flat, palpable, soft) Configuration (dermatomal, linear, targetoid) <p>Plus</p> <ul style="list-style-type: none"> Itchy, burning, painful Systemic signs 	<p>General principles of Mx transfusion reaction</p>										

COMMON LAB/IX ABNORMALITIES

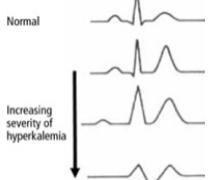
	AF	Acute GI bleed	Acute anaemia										
Nursing info	<ul style="list-style-type: none"> Vitals – haem unstable? New vs old How long (<48 hrs vs > 48 hrs) Sx – chest/back pain, SOB, cough 	<ul style="list-style-type: none"> Vitals – tachycardia, hypoTN New vs old/known Hydration status – ↑CRT, ↓UO, agitation 	<ul style="list-style-type: none"> Vitals How low Hb Obvious bleeding source – GI, urine, sputum, surgical site, wound 										
Chart info / Triage	<ul style="list-style-type: none"> R/v cardiac hx = previous ECG, ECHOs Known cardiologist Current/new RATE-control meds – BB, CCB, amiodarone, digoxin Check EUC – Mg, K, Ca Check TSH <p>Risk-scoring</p> <ul style="list-style-type: none"> CHADs-VASC (>2 – male, >3 -female) 	<ul style="list-style-type: none"> R/v med = anti-coagulants R/v Hb/Hct trend Hydration status Known cirrhosis, chronic hep B/C, EtoH (jaundice, ascites, palmar erythema, spider naevi, oedema) Past GI hx – colon cancer, IBD, diverticulitis, previous/last colonoscopy, surgery <p>Risk-scoring</p> <ul style="list-style-type: none"> Glasgow (can they go home vs endoscopy?) Rockall (what is their risk of rebleeding) 	<ul style="list-style-type: none"> Known bleeding source R/v Hb/Hct trend R/v med = anti-coagulants Simultaneous drop in WBC/platelets = dilution? Recent post-op (abdo or endovascular) 										
Assess / (DDX)	<p>PID – PIRATES</p> <ul style="list-style-type: none"> PID: pain, infection, dehydration, Pulmonary – PE, COPD, cor pulmonale Ischaemia – ACS (UA, STEMI, NSTEMI), CHF, existing CAD RHD Anaemia, alcohol (EtOH) Toxins – EtOH, theophylline, caffeine, Cocaine, amphetamine Thyroid – hyperthyroidism Electrolyte abnormalities (hypoK, hypoMg) Sick sinus syndrome, sepsis, structural HD <p>12-LEAD ECG ischaemia signs</p> <ul style="list-style-type: none"> Pathological Q waves ST segment elevation/depression T wave inversions or peaked T waves (early) <p>If</p> <ul style="list-style-type: none"> hypoxic → ? PE → CTPA protocol +/- ECHO TFT, troponin, Mg and K essential 		<p>ID bleeding source</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">1) GI</td> <td> <ul style="list-style-type: none"> Haematemesis (UGIB), melaena (LGIB), haematochezia, PR exam </td> </tr> <tr> <td>2) Post-surgical</td> <td>Check wound site</td> </tr> <tr> <td>3) Haemothorax</td> <td>Reduced breath sounds</td> </tr> <tr> <td>4) Concealed</td> <td> <ul style="list-style-type: none"> Sig. Hb drop + haem unstable ?hip, pelvis, abdo, placental abruption (pregnant) or retroperitoneal bleeding (esp. post vascular procedure) </td> </tr> <tr> <td>5) Unknown</td> <td> <ul style="list-style-type: none"> Dilution / error: common in 1st 48 hrs Nutritional: Fe study, B12, folate Haemolysis: sepsis, autoimmune, liver, DIC </td> </tr> </table>	1) GI	<ul style="list-style-type: none"> Haematemesis (UGIB), melaena (LGIB), haematochezia, PR exam 	2) Post-surgical	Check wound site	3) Haemothorax	Reduced breath sounds	4) Concealed	<ul style="list-style-type: none"> Sig. Hb drop + haem unstable ?hip, pelvis, abdo, placental abruption (pregnant) or retroperitoneal bleeding (esp. post vascular procedure) 	5) Unknown	<ul style="list-style-type: none"> Dilution / error: common in 1st 48 hrs Nutritional: Fe study, B12, folate Haemolysis: sepsis, autoimmune, liver, DIC
1) GI	<ul style="list-style-type: none"> Haematemesis (UGIB), melaena (LGIB), haematochezia, PR exam 												
2) Post-surgical	Check wound site												
3) Haemothorax	Reduced breath sounds												
4) Concealed	<ul style="list-style-type: none"> Sig. Hb drop + haem unstable ?hip, pelvis, abdo, placental abruption (pregnant) or retroperitoneal bleeding (esp. post vascular procedure) 												
5) Unknown	<ul style="list-style-type: none"> Dilution / error: common in 1st 48 hrs Nutritional: Fe study, B12, folate Haemolysis: sepsis, autoimmune, liver, DIC 												
Rx	<p>General Mx:</p> <ul style="list-style-type: none"> A-E assessment 12-lead ECG (24 hours) – Ischaemia signs FBC, EUC, CMP, CRP, TFT, Troponin, BSL <div style="text-align: center;"> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 50%;">Specific Mx</td> <td></td> </tr> <tr> <td>ACS</td> <td>Protocol (MOAN + PCI)</td> </tr> <tr> <td>Acute CHF</td> <td>Diuresis + CPAP</td> </tr> <tr> <td>PE</td> <td>CTPA (asap) + empirical anticoagulation</td> </tr> <tr> <td>X-COPD</td> <td>SABA (beware may cause AF)</td> </tr> </table>	Specific Mx		ACS	Protocol (MOAN + PCI)	Acute CHF	Diuresis + CPAP	PE	CTPA (asap) + empirical anticoagulation	X-COPD	SABA (beware may cause AF)	<p>General Mx:</p> <ul style="list-style-type: none"> A-E assessment FBC, EUC, LFT, CRP, Coags (PT/INR), G & H Haem stable (mild drop) <ul style="list-style-type: none"> Observe only -Follow through night Inform primary care team Haem unstable: → activate MTP <div style="text-align: center;"> </div>	<ul style="list-style-type: none"> A-E assessment Haem stable (mild drop) <ul style="list-style-type: none"> Observe only -Follow through night Inform primary care team Haem unstable: <ul style="list-style-type: none"> IV access: 2x large bore cannula Consider CVC/IO if no good access IVF – 500-1000mL 0.9% NS pRBC 1-2U at a time Discontinue anti-coagulation +/-reversal agent <ul style="list-style-type: none"> Warfarin: Prothrombinex, Vit K, FFP Heparin: Protamine Bloods: FBC, EUC, CMP, Coags and Group and Hold, VBG CXR (?haemothorax) CTAP (?intra-abdo bleed) Colonoscopy (+ve PR)
Specific Mx													
ACS	Protocol (MOAN + PCI)												
Acute CHF	Diuresis + CPAP												
PE	CTPA (asap) + empirical anticoagulation												
X-COPD	SABA (beware may cause AF)												
Special cons	<p>BEFORE prescribing DOACs:</p> <ul style="list-style-type: none"> Check EUC Reduce apixaban dose if >80yo, < 60kg and serum Cr < 133 2 -week course (1-2x daily) F/U with cardiologist to identify cause <p>Consider Heparin if NO contraindications:</p> <ul style="list-style-type: none"> Recent surgery ICH or known intracranial neoplasm Bleeding diathesis <p>Pulmonary vein RF ablation</p> <ul style="list-style-type: none"> Best if primary NOT effective if structural HD due to fibrosis + aberrant conduction pathway 	<p>Post-resus:</p> <ul style="list-style-type: none"> Stool chart Bowel Prep (remove stuck on blood on wall) 	<p>Jehovah's witness</p> <ul style="list-style-type: none"> Cannot transfuse these patients Resuscitate with IVF AND IV TXA <p>When to transfuse?</p> <ul style="list-style-type: none"> Hydrocort 200mg prior to blood transfusion to prevent ADH Hb <100 and high risk of myocardial ischemia Severe anaemia (e.g. Hb<70) Major active bleeding and Hb<100 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 50%;">No trauma</td> <td>4u pRBC + 2U FFP</td> </tr> <tr> <td>Trauma</td> <td>PLUS TXA</td> </tr> <tr> <td>Fibrinogen < 1g.L</td> <td>PLUS Cryoppt (clotting factors)</td> </tr> <tr> <td>Plt < 50</td> <td>PLUS Plts</td> </tr> </table>	No trauma	4u pRBC + 2U FFP	Trauma	PLUS TXA	Fibrinogen < 1g.L	PLUS Cryoppt (clotting factors)	Plt < 50	PLUS Plts		
No trauma	4u pRBC + 2U FFP												
Trauma	PLUS TXA												
Fibrinogen < 1g.L	PLUS Cryoppt (clotting factors)												
Plt < 50	PLUS Plts												

	Hypoglycaemia	Hyperglycaemia	Oliguria																
Nursing info	<ul style="list-style-type: none"> Vitals New vs old How low – fingerprick? Sx: weak, diaphoretic, blurred vision, hungry Last meal, last insulin dose NBM? General PO intake 	<ul style="list-style-type: none"> Vitals New vs old Sx: polydipsia, polyuria, hungry DKA/HHS – abdo pain, reduced GCS, N/V, ketotic breath, resp. depression 	<ul style="list-style-type: none"> Vitals – HR, BP New vs old IDC present? → post-void residual urine Hydration status Oliguria > 400mL/ day <15mL/hr(<0.25mL/kg/hr) Anuria = no urine output Sx = ?thirsty, pain, post-op, constipation (impaired bladder emptying) Systemic signs? 																
Chart info	<p>Context</p> <ul style="list-style-type: none"> Diabetic patient? AKI patient? NBM? <p>Common causes:</p> <ul style="list-style-type: none"> Med r/v - XS exogenous insulin Post-op Hunger strike <p>Medical causes (HASH)</p> <ul style="list-style-type: none"> Hepatic failure AKI – ↓↓ insulin excretion Sepsis Hypoadrenalism (↑K, ↓BP) 	<p>Context</p> <ul style="list-style-type: none"> Diabetic patient? Post-prandial? Post-op? <p>Common causes:</p> <ul style="list-style-type: none"> Med r/v – recent changes, missed dose R/V fluids – check for any fluids w/ 5% dextrose Post-op Sepsis Did not receive insulin dose 	<p>Common causes:</p> <ul style="list-style-type: none"> Poor PO intake IDC obstruction – clot R/V Meds = diuretics, IVF, anti-chol drugs, opiates Constipation <p>Pre-renal AKI (hypovolaemia, ↓CO)</p> <ul style="list-style-type: none"> Hypovolaemic causes → Shock, RAS Complications = hyperK (ECG), acidosis, XS fluid overload (APO) <table border="1"> <thead> <tr> <th>BUN/Cr</th> <th>High (> 20)</th> <th>High w/ ↑Cr</th> <th>Low (<12)</th> </tr> </thead> <tbody> <tr> <td>Causes</td> <td>GI bleed – if liver functional, steroids, low muscle mass, Burns, tetracyclines → all increase ammonia</td> <td>Post-renal obstruction Pre-renal uremia + renal disease</td> <td>ATN Low protein intake Liver failure Starvation → little protein or cannot convert</td> </tr> </tbody> </table> <p>Intra-renal AKI (Meds)</p> <ul style="list-style-type: none"> GN – nephrotic, nephritic AIN (PPI, penicillin, contrast) ATN – hypoperfusion to kidney (2nd to NSAID, ABx – aminoglycosides, ACEi/ARB) → epithelial casts Vasculitis DM <p>Post-renal AKI (obstruction)</p> <ul style="list-style-type: none"> Stone/clot (urinary tract), Tumours = BPH, prostate/cervical cancer, Prolapse Stricture Neuro – detrusor inactivity, SCI, cauda equina 	BUN/Cr	High (> 20)	High w/ ↑Cr	Low (<12)	Causes	GI bleed – if liver functional, steroids, low muscle mass, Burns, tetracyclines → all increase ammonia	Post-renal obstruction Pre-renal uremia + renal disease	ATN Low protein intake Liver failure Starvation → little protein or cannot convert								
BUN/Cr	High (> 20)	High w/ ↑Cr	Low (<12)																
Causes	GI bleed – if liver functional, steroids, low muscle mass, Burns, tetracyclines → all increase ammonia	Post-renal obstruction Pre-renal uremia + renal disease	ATN Low protein intake Liver failure Starvation → little protein or cannot convert																
Assess / DDx / Ix	<ul style="list-style-type: none"> BSL Urine + blood Ketones +/- cortisol +/- LFT – albumin (long-term nutrition) 	<ul style="list-style-type: none"> BSL Ketones (NR < 0.6) +/- cortisol <p>If DKA/HHS</p> <ul style="list-style-type: none"> ECG VBG – acidosis pH < 7.3 FBC, EUC, CMP, LFT, BSL, lipase, serum osmolality Blood ketones Urine – ketones, B-HCG <p>HHS criteria (MUST SATISFY ALL)</p> <ul style="list-style-type: none"> Osmolality > 320 mOsm/kg BSL > 30 pH > 7.3 AND HCO₃ > 15mM NO ketones (<0.6mM) 	<ul style="list-style-type: none"> Postural BP Hydration status (wet/dry) –eyes, tongue, JVP, chest, LL Bladder scan!!! ECG FBC, EUC (cr), CMP, BSL, VBG Paired serum / urine osmolality (intravascular overload or depletion?) Urinalysis + sediment (cell, protein, casts) KUB USS (if post-renal cause) +/- CT KUB <table border="1"> <thead> <tr> <th></th> <th>Urine Na</th> <th>Urine Osm</th> <th>BUN/Cr</th> </tr> </thead> <tbody> <tr> <td>Pre-renal</td> <td>Low (tubules working hard)</td> <td>High (Na and H₂O absorbed concentrating solutes)</td> <td>High > 20 NO sediments FeNa < 1%</td> </tr> <tr> <td>Renal</td> <td>High (SG > 1.010) (tubules not working)</td> <td>Low (SG = 1.010) (tubules not absorbing H₂O = low osmolality)</td> <td>Low ≤ 12 Sediments YES FeNa > 2%</td> </tr> <tr> <td>Post-renal</td> <td>Low (early) High (late)</td> <td>High (early) Low (late)</td> <td></td> </tr> </tbody> </table>		Urine Na	Urine Osm	BUN/Cr	Pre-renal	Low (tubules working hard)	High (Na and H ₂ O absorbed concentrating solutes)	High > 20 NO sediments FeNa < 1%	Renal	High (SG > 1.010) (tubules not working)	Low (SG = 1.010) (tubules not absorbing H ₂ O = low osmolality)	Low ≤ 12 Sediments YES FeNa > 2%	Post-renal	Low (early) High (late)	High (early) Low (late)	
	Urine Na	Urine Osm	BUN/Cr																
Pre-renal	Low (tubules working hard)	High (Na and H ₂ O absorbed concentrating solutes)	High > 20 NO sediments FeNa < 1%																
Renal	High (SG > 1.010) (tubules not working)	Low (SG = 1.010) (tubules not absorbing H ₂ O = low osmolality)	Low ≤ 12 Sediments YES FeNa > 2%																
Post-renal	Low (early) High (late)	High (early) Low (late)																	
Rx	<p>Non-pharm</p> <ul style="list-style-type: none"> W/H rapid-acting insulin and anti-glycaemic agents FA = 15g Lemonade SA = ice-cream, Biscuits <p>Pharm</p> <ul style="list-style-type: none"> Glucagon gel 5% dextrose 1L 50% dextrose 25-50mL OR IM glucagon <p>If persistent hypoglycaemia</p> <ul style="list-style-type: none"> ?Cause = large dose insulin or normal dose in AKI 5% dextrose (@ 75-150mL/hr) to maintain BSL > 10mM Cease all insulin regime Monitor volume status in HF patients 	<p>Pharm</p> <ul style="list-style-type: none"> RA insulin (novorapid) Give usual dose of insulin (if diabetic) <p>If DKA/HHS</p> <ul style="list-style-type: none"> A-E assessment FiO₂ (if hypoxic) IV fluids (1000-2000mL 0.9% NS) <p>Monitor K+</p> <ul style="list-style-type: none"> If K > 3.3 → SA insulin 100U in 99mL 0.9% NS to make 1U/mL (IV infusion at 5mL/hr or 5U/hr) If K < 3.3 → delay infusion → 10mM KCl in 100mL 0.9% NS <p>Monitor EUC</p> <ul style="list-style-type: none"> Mg < 0.6 → 10mM MgSO₄ in 100mL 0.9% NS PO₄ < 0.32 → 10mM KH₂PO₄ in 500mL 0.9% NS 	<p>Bladder scan > 500mL or symptomatic (feels full)</p> <ul style="list-style-type: none"> IDC – for post-renal AKI Cease offending meds – anti-chol, opiates Treat constipation <p>Bladder scan empty (fluid depleted)</p> <ul style="list-style-type: none"> Poor PO intake or <15mL/hr – chart IVF 250-500mL bolus Good PO intake - ?ID cause – GIB, sepsis, XS diuresis, diarrhoea and vomiting <p>Fluid overload (pitting oedema, ↑JVP, coarse crackles)</p> <ul style="list-style-type: none"> 40mg furosemide IV STAT ?cause = fluids, ACS, CHF, arrhythmias 																
Special Con	<ul style="list-style-type: none"> Consult endocrine Inform primary care team 	<p>NEVER change insulin regime</p> <ul style="list-style-type: none"> Hourly obs – neuro, vitals, BSL 2-4 hrly – EUC, VBG, ketones <p>To do:</p> <ol style="list-style-type: none"> Consult endocrine Inform primary care team Consider DVT prophylaxis 	<p>Post-op patient</p> <ul style="list-style-type: none"> Likely SIADH 1L fluid restrict (avoid IVF crystalloid) <p>To do:</p> <ol style="list-style-type: none"> Consult nephrology (pre-renal, renal AKI) Consult urology (post-renal AKI = if IDC fails to relieve) 																

Fluid Status & Electrolytes (intake/output) → always calls for help!!!

<p>Fluid review –</p> <ol style="list-style-type: none"> Clinical signs = Vitals (HR, BP), MM, JVP, Heart (CCF), Lungs (APO, effusion), Abdo (ascites), Peripheral oedema (<u>how far up?</u>: foot → ankle → calf → thigh → sacral) Fluid input/output → orals, NGT, IDC, drains, UO stools, check fluid chart 	<ol style="list-style-type: none"> Hydration status (bloods) → low urea/Na, high Hct (% of RBC), and low Na <ol style="list-style-type: none"> normal urea:Cr = dehydration high urea:Cr = acute GIB, low muscle mass, bladder rupture, high-dose steroids (Cushing's) Identify and Rx cause → Are they fluid restricted? → can they tolerate oral fluids? <ol style="list-style-type: none"> 0.9% NS IV at maintenance (100-125mL/hr – healthy or 60-80mL IF eGFR <30 or CKD patient) For 70kg adult = 35mL/kg/24hr = 2450mL/24hrs
--	--

↑ HIGH			↓ LOW																	
S+S	Cause	Rx	S+S	Cause	Rx															
<p>Sodium 11 Na 22.990</p> <p>[135-145] "cannot excrete water properly"</p>	<p>Polydipsia "are you thirsty?"</p> <p>Altered mental state (drowsy, confused)</p> <p>Muscle spasm/twitching</p> <p>Ataxia</p> <p>Late signs:</p> <ul style="list-style-type: none"> Orthostatic hypoTN Seizure Coma 	<p>Euvolaemic (iatrogenic – XS intake)</p> <ul style="list-style-type: none"> XS Na-fluid XS Na drugs XS salt intake <p>Hypovolaemic</p> <ul style="list-style-type: none"> Oliguria → dehydrated (dementia) Normal urine (abnormal) <ul style="list-style-type: none"> DI Osmotic diuresis (DKA) <p>Water deprivation test to confirm DI → desmopressin</p>	<p>**Treat Addison crisis** (low BSL, hypoTN, hyperK)</p> <ol style="list-style-type: none"> IVF 0.9% NS K diuresis + ↑BP IV 5% dextrose IV corticosteroids <p>***Na correction***</p> <ul style="list-style-type: none"> 4% glucose + 1/5th 0.18% NS or 5% glucose @ 100mL/h (1L over 12 hrs if chronic) HypoVol. Signs (orthostatic HypoTN) → 0.9% NS <p>Don't correct by >0.5 per hour, and >10 over 24h (risk of cerebral oedema)</p>	<p>SALT LOSS</p> <ul style="list-style-type: none"> Stupor Anorexia Lethargy ↓ Tendon reflexes Limb weakness Orthostatic HypoTN Seizure Stomach Cramps memory loss <p>SIADH causes:</p> <ul style="list-style-type: none"> Malignancy (SCLC, pancreas, prostate) CNS stress (AN, pain, TBI, General anaesthetic) Drugs (SSRI, TCA, SU) Hyperthyroid Pulmonary disease HIV, TB, pneumonia Hereditary Neuro = ICH, stroke 	<p>EUC = low Na (1) + Plasma conc/osmolality (2)</p> <table border="1"> <thead> <tr> <th>Low</th> <th>Normal</th> <th>High (pseudo)</th> </tr> <tr> <th>True</th> <th>False "pseudohypona"</th> <th>Dilutional</th> </tr> </thead> <tbody> <tr> <td>Check U_{Na}, U_{osm}</td> <td> <ul style="list-style-type: none"> High lipids (HC) High protein (MM, WM – paraprotein) Glycine post-op </td> <td> <ul style="list-style-type: none"> Mannitol, glycerol, sorbitol IV radiocontrast Recent iVig </td> </tr> </tbody> </table> <p>Corrected Na:</p> <p>FLUID STATUS → Paired /Urine Na (3), osmolality (4) and FeNa (5)</p> <ul style="list-style-type: none"> check EUC every 2hrs (2x separate to confirm hyperNa) FeNa < 1% (Pre-renal) → ↑ U_{osm}, ↓ U_{Na} FeNa > 2% (ATN) = ↓ U_{osm}, ↑ U_{Na} <table border="1"> <thead> <tr> <th>Na deplete</th> <th>Water gained</th> <th>Oedematous</th> </tr> </thead> <tbody> <tr> <td> <p>U_{Na} > 20 (kidney issue)</p> <ul style="list-style-type: none"> Diuretic / ACEI Nephropathy (RTA) Mineralocorticoid def. (Addison, CAH) Cerebral salt-wasting <p>U_{Na} < 20 (extra-renal)</p> <ul style="list-style-type: none"> Diarrhoea (GASTRO)+/- Vomit Fistula 3rd space losses (burn, sepsis) </td> <td> <p>U_{Na} > 20 (kidney)</p> <ul style="list-style-type: none"> SIADH Glucocorticoid def. Thiazide, ACEI, Hypothyroid Hereditary <p>U_{Na} < 20 (extra-renal)</p> <ul style="list-style-type: none"> Psychogenic Beer potomania Exercise induced </td> <td> <p>U_{osm} > 100</p> <ul style="list-style-type: none"> AKI (sepsis, SLE) Diuretics <p>U_{Na} < 20</p> <p>Hypoalbuminemia (inflammation)</p> <ul style="list-style-type: none"> CCF (HF) Cirrhosis, CKD (Hepatorenal syn) Nephrotic </td> </tr> </tbody> </table> <p>General Mx:</p> <ul style="list-style-type: none"> <135 fluid restriction (0.5-1L/d, or 500mL less than daily urine output) <120 3% hypertonic NaCl (0.5-2mL/kg/hr) Don't correct by >10 within 24h, and >18 over 48h (risk of osmotic demyelination if hypo for >48h) Rx reversible causes (esp. SIADH) 	Low	Normal	High (pseudo)	True	False "pseudohypona"	Dilutional	Check U _{Na} , U _{osm}	<ul style="list-style-type: none"> High lipids (HC) High protein (MM, WM – paraprotein) Glycine post-op 	<ul style="list-style-type: none"> Mannitol, glycerol, sorbitol IV radiocontrast Recent iVig 	Na deplete	Water gained	Oedematous	<p>U_{Na} > 20 (kidney issue)</p> <ul style="list-style-type: none"> Diuretic / ACEI Nephropathy (RTA) Mineralocorticoid def. (Addison, CAH) Cerebral salt-wasting <p>U_{Na} < 20 (extra-renal)</p> <ul style="list-style-type: none"> Diarrhoea (GASTRO)+/- Vomit Fistula 3rd space losses (burn, sepsis) 	<p>U_{Na} > 20 (kidney)</p> <ul style="list-style-type: none"> SIADH Glucocorticoid def. Thiazide, ACEI, Hypothyroid Hereditary <p>U_{Na} < 20 (extra-renal)</p> <ul style="list-style-type: none"> Psychogenic Beer potomania Exercise induced 	<p>U_{osm} > 100</p> <ul style="list-style-type: none"> AKI (sepsis, SLE) Diuretics <p>U_{Na} < 20</p> <p>Hypoalbuminemia (inflammation)</p> <ul style="list-style-type: none"> CCF (HF) Cirrhosis, CKD (Hepatorenal syn) Nephrotic
Low	Normal	High (pseudo)																		
True	False "pseudohypona"	Dilutional																		
Check U _{Na} , U _{osm}	<ul style="list-style-type: none"> High lipids (HC) High protein (MM, WM – paraprotein) Glycine post-op 	<ul style="list-style-type: none"> Mannitol, glycerol, sorbitol IV radiocontrast Recent iVig 																		
Na deplete	Water gained	Oedematous																		
<p>U_{Na} > 20 (kidney issue)</p> <ul style="list-style-type: none"> Diuretic / ACEI Nephropathy (RTA) Mineralocorticoid def. (Addison, CAH) Cerebral salt-wasting <p>U_{Na} < 20 (extra-renal)</p> <ul style="list-style-type: none"> Diarrhoea (GASTRO)+/- Vomit Fistula 3rd space losses (burn, sepsis) 	<p>U_{Na} > 20 (kidney)</p> <ul style="list-style-type: none"> SIADH Glucocorticoid def. Thiazide, ACEI, Hypothyroid Hereditary <p>U_{Na} < 20 (extra-renal)</p> <ul style="list-style-type: none"> Psychogenic Beer potomania Exercise induced 	<p>U_{osm} > 100</p> <ul style="list-style-type: none"> AKI (sepsis, SLE) Diuretics <p>U_{Na} < 20</p> <p>Hypoalbuminemia (inflammation)</p> <ul style="list-style-type: none"> CCF (HF) Cirrhosis, CKD (Hepatorenal syn) Nephrotic 																		



Composition of IV fluids

	Na+	Cl-	K+	HCO3-	Glucose	Calcium	osm/mL
Normal plasma	135-145	100-110	3.5-5.0	22-26	4-7	2.2-2.6	280-295
0.9% NaCl	154	154	-	-	-	-	308
5% Dextrose	-	-	-	-	50g (10% w/v)	-	154
Hartmann's solution	131	111	5	29	-	2	270
Gelofusine	154	120	-	-	-	-	274

<p>19 K Potassium 39.0983</p> <p>(3.5-5)</p> <p>Screen:</p> <ul style="list-style-type: none"> PTH, Vit D Myeloma ECG 	<ul style="list-style-type: none"> Muscle weakness Kussmaul resp (if acid) HypoTN, ↑HR <p>Arrhythmia</p> <ul style="list-style-type: none"> Tent T wave Prolonged PR Wide QRS (flat P wave) Sine wave (pre-cardiac) BBB or AV block, Torsades → VF/VT 	<p>↓ renal excretion</p> <ul style="list-style-type: none"> Exercise Drugs (BB, ACEI, spiro, amiloride, trimethoprim) Addison CKD or AKI (ATN = Severe K+) <p>↓ cell uptake</p> <ul style="list-style-type: none"> Hyperglycaemia A-adrenergic Metabolic Acidosis Cell damage (Chemo, rhabdo, tumour lysis) <p>Excess K+ load</p> <ul style="list-style-type: none"> PseudohyperK (haemolysed sample) Iatrogenic, RBC Transfusion 	<p>Mild (>5)</p> <ul style="list-style-type: none"> Stop K supp + drugs (spiro/amiloride, ACEI) 15mg PO Ca reosonium (polystyrene) daily <p>Moderate (>6):</p> <ul style="list-style-type: none"> ECG changes + MOIC 5mg SABA NEB SC 10U actrapid insulin + 250mL 10% dextrose IV <p>Severe (>7)</p> <ul style="list-style-type: none"> MET Team+ ECG → call cardio reg IV Ca gluconate 10mL 10% (over 10 mins) – cardioprotective Haemodialysis 	<p>Asymptomatic (until < 2.5mM)</p> <ul style="list-style-type: none"> Tremor Muscle cramps Muscle weakness Rhabdo + haemoglobinuria (XS exercise = vasodilatation) Ileus – Constipation <p>Arrhythmia – ECG</p> <ul style="list-style-type: none"> Prolonged QT ST depression Shortened PR U wave Flat T wave- 	<p>↑ GI loss (most common)</p> <ul style="list-style-type: none"> Diarrhoea/vomit (esp. upper GI losses), Laxatives Muscle cramps Ascites causes <p>↑ cell uptake (Na-K-ATPase)</p> <ul style="list-style-type: none"> XS Insulin Refeeding syndrome, DKA ↑ B-adrenergic = Caffeine, SABA or adrenaline Non-resorbable anions = Alkalosis, high Na, Hypothermia <p>↑ Renal loss (GU loss)</p> <ul style="list-style-type: none"> Endo (Cushing, Conn, mineralosteroids) Drugs = Diuretics exc. K+ sparing, tacosin, low Mg – hypoCa resistant to Rx Renal tubular acidosis, RAS <p>↓ K intake or GI loss</p> <ul style="list-style-type: none"> Chronic illness = Malnutrition, sepsis, fasting/AN Any illness (gastroenteritis) 	<p>Potassium Rich Foods:</p> <ol style="list-style-type: none"> Dried apricots Dark chocolate Dates + salmon <p>< 3.5 mM (mild) → oral Rx</p> <ul style="list-style-type: none"> PO slow KCl 600mg 2x tabs BD PO Chlorvascent 1-2tblt TDS <p>< 3.0 mM (mod-SEVERE)</p> <ul style="list-style-type: none"> Contact ICU ECG (3-lead) → call cardiologist IV 10mM KCl in 0.29% NS in 100mL mini bag → over 3-4 hours 1 bag = raise 0.1mM K+ (Max rate = 10mM/hr) IV 10mM KCL in 100mL NS <p>Nb: K+ infusion = painful & stinging if PIVC (use larger gauge cannula!)</p>
--	--	---	--	--	--	--

<p>20 Ca Calcium 40.078</p> <p>(2.1-2.55) corrected</p> <p>2^o bone mets</p> <ul style="list-style-type: none"> Prostate Colon Breast Renal Melanoma 	<p>Bones, stones, abd pain, psych state*</p> <ul style="list-style-type: none"> Kidney stones Constipation Pancreatitis Depression / anxiety/low mood Calciophylaxis (Ca within skin = bruising in septic patients) <p>Arrhythmias:</p> <ul style="list-style-type: none"> ↓ QT interval (≈ 3mM) Osborn wave Prolonged PR Wide QRS AV block → CHB → arrest bradycardia 	<p>CHIMPANZEE</p> <p>↓ renal excretion</p> <ul style="list-style-type: none"> Drugs (thiazides, Antacids) Dehydration (↑ urea/Cr = same) <p>XS bone release</p> <ul style="list-style-type: none"> MM (normal ALP) Bony mets (↑ALP) Sarcoid (↑ ACE) Thyrototoxicosis Lymphoma (↑ calcitriol) <p>XS PTH</p> <ul style="list-style-type: none"> Primary HPTH (↑ urine PTH) FHH ↓ urine PTH Tertiary (↑ PTH, ↑Ca, ↑PO4) Paraneoplastic (Lung SCC) <p>XS Vit D or Vit A</p> <ul style="list-style-type: none"> ↑ Vit D intake 	<p>TESTS</p> <ul style="list-style-type: none"> EUC, PTH, ALP, PO4 Vit D, Calcitriol EPG (light chain) Serum ACE Isotope Bone scan PTHrP 24 hr urine Ca PSA, CTAP, MMG <p>Rx cause</p> <ol style="list-style-type: none"> Call help Cease Ca supp. Rehydrate (IV 0.9% NS at 1L/4-6 hrs) + IV furosemide + ECG calciuresis Severe > 3.5mM (ICU) → IV bisphos (pamidronate) 30-90mg BOLUS <p>Avoid HARTMANN</p>	<p>[neuromuscular S+S] CATS GO NUMB – convulsion, arrhythmia, tetany, numb, hyper-reflex</p> <ul style="list-style-type: none"> ve Chvostek → facial spasms trousseau signs – oral tingling w/ wrist flexion + BP cuff inflation <p>Arrhythmia</p> <ul style="list-style-type: none"> Prolonged QT → torsades (need MgSO4) 	<p>↑ Renal loss (↑PO4, ↑PTH)</p> <ul style="list-style-type: none"> Loop diuretics CKD Rhabdo/tumour lysis <p>PTH-related (↑PO4, ↓PTH)</p> <ul style="list-style-type: none"> HypoPTH HypoMg PseudohypoPTH (PTH resistance) Cinacalcet (oral calcimimetic) DiGeorge – thymus (HPTH) <p>↑ deposition/ ↓ uptake (↓PO4, ↑PTH)</p> <ul style="list-style-type: none"> Bisphosphonate Denosumab Vit D def. ↓ sunlight exposure 	<p>TESTS – EUC, PTH, Vit D</p> <p><2.15 mM (mild)</p> <ul style="list-style-type: none"> PO Ca Carbonate 500-600mg 1-2tabs daily <p>< 1.9 mM (mod)</p> <ul style="list-style-type: none"> PO or IV (see below) <p>< 1.6 mM (severe)</p> <ul style="list-style-type: none"> IV Ca gluconate 2.2mM in 100mL in 0.9% NaCl over 1hour <p>Rx vit D def.</p> <ul style="list-style-type: none"> mild = 8000 IU severe = 50,000 IU colecalciferol once weekly Ca def. – adcal-D3 CKD- alfacalcidol
---	---	--	--	---	--	--

<p>12 Mg Magnesium 24.305</p> <p>(0.7-1.1)</p>	<ul style="list-style-type: none"> N+V hyporeflex Flushing, headache, HypoTN + bradycardia 	<ul style="list-style-type: none"> AKI, CKD Lithium therapy ↑ intake (purgative, antacid) OR haemodialysis w/ high Mg²⁺ dialysate 	<p>Stop Mg tablets</p>	<ul style="list-style-type: none"> Hyperexcitable (tetany → seizures) <p>Arrhythmia</p> <ul style="list-style-type: none"> Peaked T, widened QRS, widened PR Prolonged QT → torsade's (need MgSO4) 	<p>Poor nutrition or critical illness</p> <ul style="list-style-type: none"> Drugs (PPI, loop/thiazide, gentamicin, cisplatin, amphotericin) ETOH <p>XS LOSS</p> <ul style="list-style-type: none"> loop/thiazide HyperCa causes Diuretic, Severe diarrhoea, DKA Hungry bone syndrome, leptospirosis 	<p>MUST correct 1st as leads to ↓ K, Ca</p> <ul style="list-style-type: none"> <0.9 → PO = Magmin 1-tblts bd oral or Mg aspartate 500mg BD <0.7 → PO or IV: <0.4 → 10mM MgSO4 in 100mL 0.9% NS at 10mM/hr <p>*beware of diarrhoea + abdo distension (very uncomfortable)</p>
<p>PO4 (0.85-1.5) (20-40mM/day)</p>	<ul style="list-style-type: none"> N+V, chest pain, weakness, numb/tingling 	<ul style="list-style-type: none"> ACEI, ARB, BB, K+ supp. Endo = Addison's, T1DM Cell loss = Tumour lysis, rhabdomyolysis 	<p>Phosphate binders</p>	<p>LOW ATP</p> <ul style="list-style-type: none"> Lethargy Weakness AMS Left shift of Hb-O2 curve 	<p>Nutrition</p> <ul style="list-style-type: none"> Vit D def., Alcoholism 1^o HPTH Insulin or Gaviscon, PPI 	<p>Rx for DKA, Resp. alkalosis</p> <ul style="list-style-type: none"> <0.8 → PO/effervescent = 500mg PO4 Sandoz 1 sachet PO (up to tds) < 0.5 → PO <0.3 → IV: 10mM NaH2PO4 (avoid if high K) in 250mL 0.9% NS

Cannula Reviews:

Cannulas – ask what they're for

- **Blue (22g) usually fine** (if K+: ideally cub fossa)
- **Pink (20g) ideal** (if scan: in cub fossa)
- **Green (18g) cub fossa for CTPA** (ideal for other scans)

Assessment

- 1) VIPS score
- 2) Wear gloves
- 3) Clean bung with alcohol wipe
- 4) Flush with 10mL 0.9% NaCl

Management

Document continue using if **VIP ≤ 1**

OR VIP ≥ 2 (pain + swelling + redness or any pyrexia)

Put in new IVC and take out old one

Consider antibiotics (for 5/7)

- **Erysipelas:** oral PMP 500mg qid
- **Purulent cellulitis (abscess):** oral flucloxacillin 500mg qid
- **MRSA positive:** Bactrim bd

Post-op/ICU patient Mx (FAST HUG)

Feeding	<ul style="list-style-type: none"> ➤ NBM → TPN → PEG → NGT ➤ Aim: PO tolerate (clear fluids → semi-clear fluids → free fluids → soft diet → full diet) ➤ 1 kcal / kg/day = 1 mL / hr ➤ Check daily wt and fluid balance sheet
Analgesia	<ul style="list-style-type: none"> ➤ PCA → IV/SC → PO ➤ Aim Mg > 1 for NMDA receptor (esp. if ketamine used)
Sedation	<ul style="list-style-type: none"> ➤ anti-psych (haloperidol, olanzapine) ➤ Avoid BZD,
Thrombo-prophylaxis	<ul style="list-style-type: none"> ➤ Clexane (LMWH) > SCD compression ➤ UFH > LMWH (if AKI and reversible quicker)
Head of bed (15-30°)	<ul style="list-style-type: none"> ➤ Reduce aspiration risk (esp. SBO/LBO) ➤ For neuro patients (reduce ICP)
Ulcer prophylaxis	<ul style="list-style-type: none"> ➤ Pressure sores - ERAs ➤ Stress ulcers – PPI (↓ risk of C. diff)
Glucose (6-10mM)	<ul style="list-style-type: none"> ➤ AVOID TIGHT CONTROL ➤ Monitor for hyperglycaemia (increased morbidity and mortality) → LA insulin (e.g. glargine, detemir)

Warfarin Calculations:

Assessment

- Target 2-3 (bileaflet or tilting-disk mitral mechanical valve 2.5-3.5)
- Coumadin vs Marevan
- Previous INRs & doses
- P+: NBM, medication changes (esp. Abx, SSRIs, NSAIDs)

Practice: target 2-3

INR	Day 1	Day 2	Day 3	Day 4	Day 5
<1.5	5mg (3mf if RF)	5mg	10mg	10mg	10mg
1.5-1.9		2.5mg	2.5mg	5mg	7.5mg
2.0-2.5		1mg	0-2.5mg	0-5mg	0-5mg
2.5-2.9		-	0-2.5mg	0-5mg	0-5mg
>3		-	-	-	-

R/V Fibrinolysis Contraindications:

Fibrinolytic drugs (tissue plasminogen activator)

- Alteplase, streptokinase, urokinase
- **Indications (within 24 hours)** = STEMI, acute stroke, PE, acute DVT

Absolute CI

- ACTIVE bleed/ diathesis
- Known intracranial neoplasm
- Ischaemic stroke <3/12
- Suspected aortic dissection
- Sig. haed or facial trauma <3/12 ago
- Known cerebral vascular lesion

Relative CI

- Active peptic ulcer
- BP >180/110
- Pregnancy
- Stroke >3/12
- Current anti-coag
- Recent surgery <3/52
- Recent internal bleed <4/52
- CPR > 10 mins

Abx/Vanc Calculations:

Antibiotic Approval: d/w MOIC

- Indication
- Duration of therapy
- WCC, CRP, cultures: blood, urine, faeces, sputum, CSF
- Last fever/hypothermia ± SpO2 (if pneumonia)
- Recent plan from home team/ID

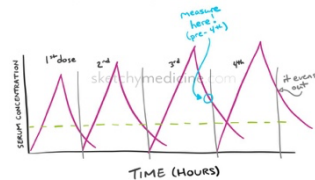
MOIC-0802-0902

Document

Vancomycin Monitoring:

- **Trough level before** 4th dose
- ?True trough
- Adjust dosage accordingly

Vancomycin Dosing (when to measure)



Trough level	Action
<10	increase dosage or shorten interval
10-14	continue if uncomplicated infection, increase for complicated (or consider AUC/MIC)
15-20	continue
21-25	reduce dosage, lengthen interval or withhold dose (except CNS infection)
>25	withhold dose until <20

Quick Emergency Rx

Emergencies	
Cardiac arrest	<ul style="list-style-type: none"> • 150J DC shock • 1mg adrenaline IV (every 3 mins) • 300mg amiodarone IV (if shockable)
Bradycardia	<ul style="list-style-type: none"> • 500mcg atropine IV (repeat 3-5mins – max 3mg)
SVT	<ul style="list-style-type: none"> • 6mg adenosine IV bolus + saline flush (repeat at 12 mg and 18mg if not resolved)
VT (haem stable)	<ul style="list-style-type: none"> • 300mg amiodarone IV (20-60 mins)
Anaphylaxis	<ul style="list-style-type: none"> • 0.5mg adrenaline IM • 200mg hydrocort IV • 10mg chlorperamine IV
Status epilepticus	<ul style="list-style-type: none"> • 4mg lorazepam IV OR 0.1-0.2mg/kg midazolam IV/IM • 10mg diazepam PR (if no IV access)
Hyperglycemia	<ul style="list-style-type: none"> • 4-8 units Novorapid (insulin aspart) SC STAT
Hypoglycemia	<ul style="list-style-type: none"> • 10% glucose (150mL) IV • 1mg glucagon IM (if no IV access)
HyperK	<ul style="list-style-type: none"> • 10% Ca gluconate 10mL for 10 mins (stabilise cardiac membrane) • 10% glucose 250mL + 10 U actrapid (insulin) • +/- 5mg SABA NEB and 30mg Ca resonium PO
Code black	<ul style="list-style-type: none"> • 1-2mg lorazepam PO/IM • 2-5mg haloperidol PO/IM
DC cardioversion conditions (HISS)	<ul style="list-style-type: none"> • HF • Ischemia • Shock • Syncope

PATIENT LEAVING AGAINST MEDICAL ADVICE (AMA)

- Situation where patient chooses to leave hospital before treating team recommends discharge
- Main reasons
 - Dissatisfaction with care
 - Dissatisfaction with staff caring for them
 - Feeling involved (not updated with clinical progress)
 - Inadequate pain control
 - Personal problems
- General approach
 - Inform senior reg/consultant
 - Listen to their concerns
 - Review chart – ensure that patient does not have condition that would limit their capacity to make informed decision (e.g. psychiatric problem, mental retardation, encephalopathy, delirium)
 - Explain consequences of leaving prior to completing treatment
 - Document conversation (ensure **documenting that patient had capacity and understood decision**)
 - Provide AMA form to sign
- Exceptions
 - Suicidal patients
 - Patients admitted under MH act 2007

Documentation admits/ general exam / systems review

<p><i>Chan (JMO) - admission</i></p> <p>55M with L carotid stenosis admitted under Dr Surgeon (NSx) for elective carotid endarterectomy</p> <p>HPC PMHx Meds - chart medications Allergies FHx SHx</p> <p>Plan NBM from MN 0.9% NaCl 125mL/h from MN Ceased SGLT2i Continue withholding clopidogrel Home team notified</p>	<p><i>Chan (JMO) – ward round</i></p> <p>PMHx T2DM - k/t Dr Endo Endocrinologist</p> <p>O/E Obs stable, afebrile Alert, oriented, comfortable at rest HSDNM Chest clear ASNT CSNT Nil peripheral oedema</p> <p>Impression ?Transient anxiety</p> <p>Plan Notify AHJMO if any concerns</p>	<p><i>Chan (JMO) – clinical review</i></p> <p>ATSP for Malaise 85M with constipation</p> <p>Progress Felt off for 30mins, ATOR now settled Nil fevers / chills / sweats / rigors / anorexia / fatigue Nil headache / vertigo / changes in speech/hearing/taste/smell / weakness / paraesthesias Nil nuchal rigidity / neck pain / photophobia / phonophobia Nil rhinorrhoea / sore throat / sinus pain / anosmia Nil chest pain / SOB / palpitations / pre-syncope / cough Nil abdo pain / N&V / constipation / diarrhoea / blood in stools / mucus in stools Nil dysuria / haematuria / urinary frequency / urinary urgency</p> <p>Issues # Constipation - Commenced Coloxyl & Senna, Movicol & Lactulose</p>
---	---	---

Death Certification

<p><i>Chan (JMO) - admission</i></p> <p>Death Certification</p> <p>Assessment Identity confirmed from wrist band Patient in bed, no signs of life No respiratory effort noted No response to verbal stimuli No response to painful stimuli No carotid pulse palpable Pupils fixed and dilated bilaterally No heart sounds during 3 minutes auscultation No breath sounds during 3 minutes auscultation</p> <p>Death confirmed at TIME on DATE</p>	<p>Plan Cremation certificate: completed Coronial checklist: home team to kindly complete Medical Certificate of Cause of Death: home team Consultant notified: yes/to be notified in the morning Family notified: yes Home team to kindly complete discharge summary</p> <p>May they rest in peace</p>
---	--

Rapid Responses (RR) & Code blues & Sepsis

<p>RR = red zone criteria, JMO + reg, within 15min</p> <p>CB = clinical judgement (SBP 60, cardiac arrest, sepsis), ICU (leader)/ anaesthetics/reg/JMO/any staff on ward, immediately</p> <p>What To Do?</p> <ul style="list-style-type: none"> • If first: quick handover, begin assessment/management (A-E) <ul style="list-style-type: none"> ◦ Handover to senior member once arrives • IVC ± bloods • Computer <ul style="list-style-type: none"> ◦ Read up on patient ◦ Document 	<p>Sepsis Definitions</p> <p>SIRS (≥2 criteria):</p> <ul style="list-style-type: none"> ➢ Temp >38.3 or < 36 ➢ Hr > 90 ➢ RR > 20 OR PaCO₂ < 32 ➢ WCC > 12 or < 4 <p>Sepsis = SIRS + infection</p> <p>Severe sepsis = sepsis + end-organ damage (see below)</p> <ul style="list-style-type: none"> ➢ Lactate > 4mM ➢ hypoTN ➢ UO < 0.5 ml/kg/hr for > 2hrs despite fluids ➢ Acute lung injury: PaO₂ / FiO₂ < 300 (NO pulm pathology) ➢ Creatinine > 2 ➢ Bilirubin > 4 ➢ Platelets < 10 ➢ INR > 1.5 	<p>Severe sepsis work-up</p> <ul style="list-style-type: none"> ➢ Vitals & Telemetry & code blue (get help!) ➢ Large bore IV access ➢ VBG – LACTATE ➢ IVF crystalloid (30mL/kg) ≈ 4-5L ➢ Empirical ABx (within 1 hr) ➢ Blood cultures x2 ➢ Fluid chart – IDC ➢ Bloods – FBC, EUC, CMP, INR ➢ FiO₂ (if hypoxic) <p>Goals in 1st 6 hours</p> <ul style="list-style-type: none"> ➢ CVP 8-12mmHg ➢ MAP ≥ 65mmHg ➢ UOP > 0.5mL/kg/hr <p>Once stabilised – ID source of infection</p> <ul style="list-style-type: none"> ➢ Consult MOIC/ICU ➢ ECHO, CTAP, LP, swabs (M/C/S), stool PCR (c. diff), cellulitis, urine/sputum M/C/S
---	---	--

Oxygen Delivery Systems

<p>Every L O₂ – 4% increase in FiO₂</p> <ul style="list-style-type: none"> ➢ NP 1-4L/min → 24-40% ➢ HM 4-10mL/min → 40-60% ➢ VM (Specific flow rate) → 24-50% ➢ NRBM – 15 L/min → 60-90% ➢ NIV (CPAP, BIPAP) <ul style="list-style-type: none"> ◦ Spend 15-20 mins – ensure no CI ◦ Correct mask fit + explain clearly to claustrophobic pt ◦ For APO → start at 8cm H₂O ◦ For COPD → IPAP (12-14cm), EPAP (4-6cm), PS (8) → titrate to 88-92% sats ◦ Check tolerance – air leaks, distress, hypoTN ◦ Assess response → O₂ sats, crackles, resp. distress <p>Target SpO₂: >95% or 88-92% (in pt on hypoxia drive)</p> <p>Note: Shunting</p> <ul style="list-style-type: none"> ➢ Resp. cause = ARDs, APO (fluid in alveolus) ➢ R → L shunt → ASD, VSD, PDA (congenital abnormalities) ➢ Does NOT respond to 100% FiO₂ ➢ Increased A-a gradient <p>Key Points</p> <ul style="list-style-type: none"> ➢ Do NOT let NIV delay intubation ➢ Repeat ABG post-NIV in 1 hours ➢ Spend 15-20 minutes to give good NIV 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 45%;">Indication</th> <th style="width: 40%;">Contraindication</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">CPAP</td> <td> <ul style="list-style-type: none"> • T1RF (hypoxia ONLY) • APO → 8cm H₂O • V/Q mismatch • Diffusion impairment </td> <td> <ul style="list-style-type: none"> • Active vomiting / haematemesis • Intubation needed • Undrained PTX/effusion </td> </tr> <tr> <td style="text-align: center;">BIPAP</td> <td> <ul style="list-style-type: none"> • T2RF (acidosis + hypercapnia) • APO + hypercapnia • Chronic resp. failure (NMD, chest wall, obesity hypoventilation) • Post-extubation in ICU </td> <td> <ul style="list-style-type: none"> • Reduced GCS = HIGH aspiration risk • Facial # • Haem unstable • Pt cannot remove mask </td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;"></th> <th style="width: 15%;">A-a gradient</th> <th style="width: 20%;">Corrected by FiO₂</th> <th style="width: 40%;">Cause</th> </tr> </thead> <tbody> <tr> <td>V/Q mismatch</td> <td style="text-align: center;">High</td> <td style="text-align: center;">Yes</td> <td>PE, pneumonia</td> </tr> <tr> <td>Diffusion issue</td> <td style="text-align: center;">High</td> <td style="text-align: center;">Yes</td> <td>ILD</td> </tr> <tr> <td>Shunting</td> <td style="text-align: center;">High</td> <td style="text-align: center;">No</td> <td>ARDS, APO, atelectasis ASD, VSD, PDA</td> </tr> <tr> <td>Low FiO₂</td> <td style="text-align: center;">Normal</td> <td style="text-align: center;">Yes</td> <td>High altitude</td> </tr> <tr> <td>Hypoventilation</td> <td style="text-align: center;">Normal</td> <td style="text-align: center;">Yes</td> <td>Residual anaesthetic, muscle relaxant</td> </tr> </tbody> </table>		Indication	Contraindication	CPAP	<ul style="list-style-type: none"> • T1RF (hypoxia ONLY) • APO → 8cm H₂O • V/Q mismatch • Diffusion impairment 	<ul style="list-style-type: none"> • Active vomiting / haematemesis • Intubation needed • Undrained PTX/effusion 	BIPAP	<ul style="list-style-type: none"> • T2RF (acidosis + hypercapnia) • APO + hypercapnia • Chronic resp. failure (NMD, chest wall, obesity hypoventilation) • Post-extubation in ICU 	<ul style="list-style-type: none"> • Reduced GCS = HIGH aspiration risk • Facial # • Haem unstable • Pt cannot remove mask 		A-a gradient	Corrected by FiO ₂	Cause	V/Q mismatch	High	Yes	PE, pneumonia	Diffusion issue	High	Yes	ILD	Shunting	High	No	ARDS, APO, atelectasis ASD, VSD, PDA	Low FiO₂	Normal	Yes	High altitude	Hypoventilation	Normal	Yes	Residual anaesthetic, muscle relaxant
	Indication	Contraindication																																
CPAP	<ul style="list-style-type: none"> • T1RF (hypoxia ONLY) • APO → 8cm H₂O • V/Q mismatch • Diffusion impairment 	<ul style="list-style-type: none"> • Active vomiting / haematemesis • Intubation needed • Undrained PTX/effusion 																																
BIPAP	<ul style="list-style-type: none"> • T2RF (acidosis + hypercapnia) • APO + hypercapnia • Chronic resp. failure (NMD, chest wall, obesity hypoventilation) • Post-extubation in ICU 	<ul style="list-style-type: none"> • Reduced GCS = HIGH aspiration risk • Facial # • Haem unstable • Pt cannot remove mask 																																
	A-a gradient	Corrected by FiO ₂	Cause																															
V/Q mismatch	High	Yes	PE, pneumonia																															
Diffusion issue	High	Yes	ILD																															
Shunting	High	No	ARDS, APO, atelectasis ASD, VSD, PDA																															
Low FiO₂	Normal	Yes	High altitude																															
Hypoventilation	Normal	Yes	Residual anaesthetic, muscle relaxant																															

Follow-Up and Handover

<p>Chase important bloods/imaging: “Consult MO JMO Request”</p> <ul style="list-style-type: none"> • Troponin for chest pain • UEC/CMP for refeeding syndrome • CXR for desat <p>Handover</p> <ul style="list-style-type: none"> • Patients requiring further review (e.g. repeat ECG/trop in 2h) • Patients likely to deteriorate
