Course Title	IMT3 Simulation	Scenario Title	Peri-arrest team management
Patient	Name: Fred/Frieda Granger Age: 72 Hospital number: R256635		

	Technical	Non-Technical
Learning Outcomes	▪ Running an emergency peri-arrest ▪ Recognising frailty & interventions which may treat acute pulmonary oedema. ▪ Considers appropriate ceiling of care.	▪ Situational awareness ▪ Effective leadership ▪ Challenging sexism within the workplace - recognises and challenges behaviour of anaesthetist +/- relative ▪ Recognises the need to support the team and offers debrief/support to FY1 ▪ Stress management ▪ Assertiveness
Scenario Overview	Setting of inpatient peri-arrest at handover time (8pm). Complex team dynamics. The patient has been found by the FY1 on call who has been looking after the patient this evening. The FY1 put out the arrest call because they were worried about the patient's high respiratory rate and low saturations. FY1 present to give a handover and reports patient was admitted with decompensated heart failure on background of CCF, CKD, T2DM & frailty. No DNAR in place or clear escalation plan. Stressed FY1 (female) present who knows the patient was called as the patient became acutely short of breath. She is worried she has made a mistake as the patient deteriorated quickly whilst she was trying to do an ABG. Anaesthetist refuses to help initially as the patient is "beyond help" and states loudly they would refuse to intubate the patient as "too old". Anaesthetist interjects to state that if the patient had a "real doctor to start with" this may not have happened. May also suggest the FY1 is too junior to deal with this and the IMT3 should have been here to help earlier. Relative can be present if enough faculty – Relative is very worried about deterioration. Understands that his/her father is frail and would not have wanted resuscitation if asked. Wants the team to get him back to himself in any way they can. She is derogatory if the IMT3 is female and asked to speak to the "real" doctor, not the nurse.	
Set Up	**Faculty Controlling/Observing:** Technician: x 1 Control room: x1 (Voice for referrals/switchboard) **Faculty Embedded:** FY1 (female) x1 Anaesthetist x1 +/- actor x 1 (playing family member if enough faculty available) Ward environment with monitor and mannikin– peri-arrest call just gone out. Staggered entry: 2 x IMTs enter. FY1 (plant) present in room on arrival. Anaesthetist will arrive 1-2 minutes into scenario.	
Prop List	Mannikin Observation machine Crash trolley – fully stocked CXR from admission (showing pulmonary oedema) & patient notes.	

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Console		A	B (improves with treatment)	C (deterioration)	D
	RR	40	35	42	
	SpO_2	88% on 2L	91% on 2L	82% on 15L	
	HR	135	120	140	
	BP	110/78	118/81	90/40	
	Rhythm	Sinus	Sinus	Sinus	
	Temp	37.1	37.1	37.1	
	Eyes	Open	Open	Open	
	Other	Crackles all lung fields	Crackles improve if given furosemide	Crackles all lung fields	
	Other	Raised JVP		Raised JVP	
	Other	Pitting oedema		Pitting oedema	
Expected Actions	- Lead the peri-arrest - Recognise pulmonary oedema on the CXR and from the history. Initiate medical management and consider escalating to the medical consultant on call. - Recognise an appropriate ceiling of care for the patient. - Support the team in managing conflict during the emergency call and offer support/debrief following the scenario. - Challenge derogatory behaviour and discussion around how to do this may be appropriate within the debrief.				
End Point	The scenario can come to an end once the patient has improved (observations B) and the IMTs have addressed the conflict highlighted within the scenario. If the patient relative is added in for complexity, the scenario will end once the plan has been explained to the relative.				

Participant briefing	You are the medical registrars on call tonight (ward cover and take) and the arrest bleep has gone off. One ward SHO is off sick, so both IMT3s attend the arrest.
Patient Briefing	Patient is drowsy throughout the whole scenario. He/she is not able to answer questions and reports he “cannot breathe” when he is asked questions. Very short of breath and wheezy throughout. He/she may state they “feel like they are drowning” if asked how they feel. If asked about ceiling of care patient is not sure and feels too unwell to answer.
Patient PMHx	Information available in end of bed notes: Day 4 of admission with decompensated heart failure on background of CCF, CKD, T2DM and frailty. His social history: carers BD, able to mobilise to toilet on same level living. Had been responding to diuretics but had blood test noting worsening renal function so this has been held for 48 hours.

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Investigations & results	**ABG**: pH 7.23 CO2 2.4 O2 7.4 HCo3 18 K 5.6 Na 152 Hb 104 Lactate 4.7 **Blood results from that morning**: Hb 108 WCC 7.1 Plts 187 Na 150 K 6.9 Creatinine 230 (Baseline 185) eGFR 34 INR 1.2 CRP 14 BNP 800 **Drug chart:** Aspirin 75mg OD Atorvastatin 40mg nocte Bisoprolol 5mg BD Dapagliflozin 10mg OD Eplerenone 50mg OD Furosemide 40mg IV infusion Losartan 50mg OD Metformin 1g BD
Plant Briefing	**Embedded FY1 (Plant 1):** When scenario starts, you will be trying to attempt an ABG. On arrival of team, this frees you up and you give them a handover. You are very worried that you have caused the patient to deteriorate and this is your fault. You are not sure what to do so you called for help. As a result you are second-guessing yourself and feel you are not good enough. When comments are made about you, you understandably become very upset and may leave the room or become withdrawn. You try to be helpful where possible for the IMT3s. **Embedded anaesthetist (Plant 2):** You are a senior anaesthetist, who finds the crash team role the least enjoyable part of your job. You are very academic and are happy to share opinions about the appropriateness of resuscitation in certain situations. When you realise that the patient is quite frail, you are reluctant to intubate him and make comments that we should halt intervention, particularly when you realise he doesn't have a DNACPR. You are derogatory towards female doctors in authority and you have a belief that FY1s are "too junior to make decisions or care for sick patients". You are vocal towards the FY1 who is female and make comments which upset them. If you are ignored you continue to make these comments. **Embedded family member (Plant 3 – if enough faculty present):** You are patients son/daughter who has been very involved in his care. You think he has been improving since admission and are shocked to discover he is more unwell today. Relative is very worried about deterioration and asks what has caused this. Understands that his/her father is frail and would not have wanted resuscitation if asked. Wants the team to get him back to himself in any way they

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	can. She is derogatory if the IMT3 is female and asked to speak to the "real" doctor, not the nurse. You are not aware of any previous DNACPR discussions previously, but you are amenable to this if its is explained well. You think you mum/dad would not want to go to ITU.				
On Examination		A	B	C	D
	Colour	Pallor			
	Skin	Normal			
	CRT	5			
	GCS	13/15			
	Pain Score	None			
	Abdomen	Normal			
Life Savers	Anaesthetist can suggest calling the medical consultant for advice. FY1 can suggest simple investigations and management such as CXR, ABG, bloods and furosemide. Family members can prompt ceiling of care discussion stating that they wouldn't want to be resuscitated or go to ITU.				
Telephone Assistance	**Medical consultant:** You are happy to discuss the patient. You think that the peri-arrest is potentially reversible with diuretic therapy and you advise to try this despite the renal function as the patient's primary issue is breathing. You feel the patient should have a DNACPR and a ward based level of care. You are not sure the patient will tolerate cPAP but you want them to try medical intervention first.				
Debriefing	• Clinical discussion around the management of acute pulmonary oedema in a frail patient with multiple comorbidities including CKD. • Discussion regarding leadership and assertiveness in managing an acute medical emergency. • Discussion around the recognition and challenge of derogatory behaviour in the workplace and it's impact on team effectiveness and dynamics. • Discussion of the support strategies for the team following a challenging arrest include debriefing and supporting your team. • Communication with relatives in high pressure situations and discussion of appropriate ceilings of care.				
References	ALS algorithm https://www.bma.org.uk/media/4487/sexism-in-medicine-bma-report.pdf (sexism in medicine BMA report) Signpost to active bystander training resources.				
Curriculum mapping (IMT stage 2 curriculum)	Generic CiP 2: Able to deal with ethical and legal issues related to clinical practice. Generic CiP 3: Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement. Clinical Cip 2: Managing the acute care of patients within a medical specialty service. Clinical Cip 7: Delivering effective resuscitation and managing the acutely deteriorating patient.				
Written by: Date: Review date:	Dr Kathryn Price, King's college hospital Adapted from scenario written by Dr Jimstan Periselneris, King's college hospital Overseen by Dr Nadia Short, GSTT 04/07/2022				

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Ward round entry for the day:

NHS Number: 4226587451 **Hospital Number**: R256635 **D.O.B:** 14/07/1949

F. Granger

Consultant WR Wilson

Problems:

Acute pulmonary oedema on background of CCF (LVEF 28%)

Multiple other comorbidities

Frailty

D4 of admission

Feels less breathless, no longer oxygen dependent

Weight decreasing, 68kg, admission 76kg

Chest clear

HS PSM

Minimal ankle oedema

Sats 95% air, RR 18, pulse 96, BP 102/58, Glucose 9.4

Noted worsening CKD (250 on background of 180) due to diuretic therapy

Plan

Hold furosemide

Daily weights and fluid balance chart - aim weight loss 1kg/day

Daily U&Es

Can restart if improving renal function

Mobilise with PT/OT

Meet with family to discuss increase POC

EDD 72 hours

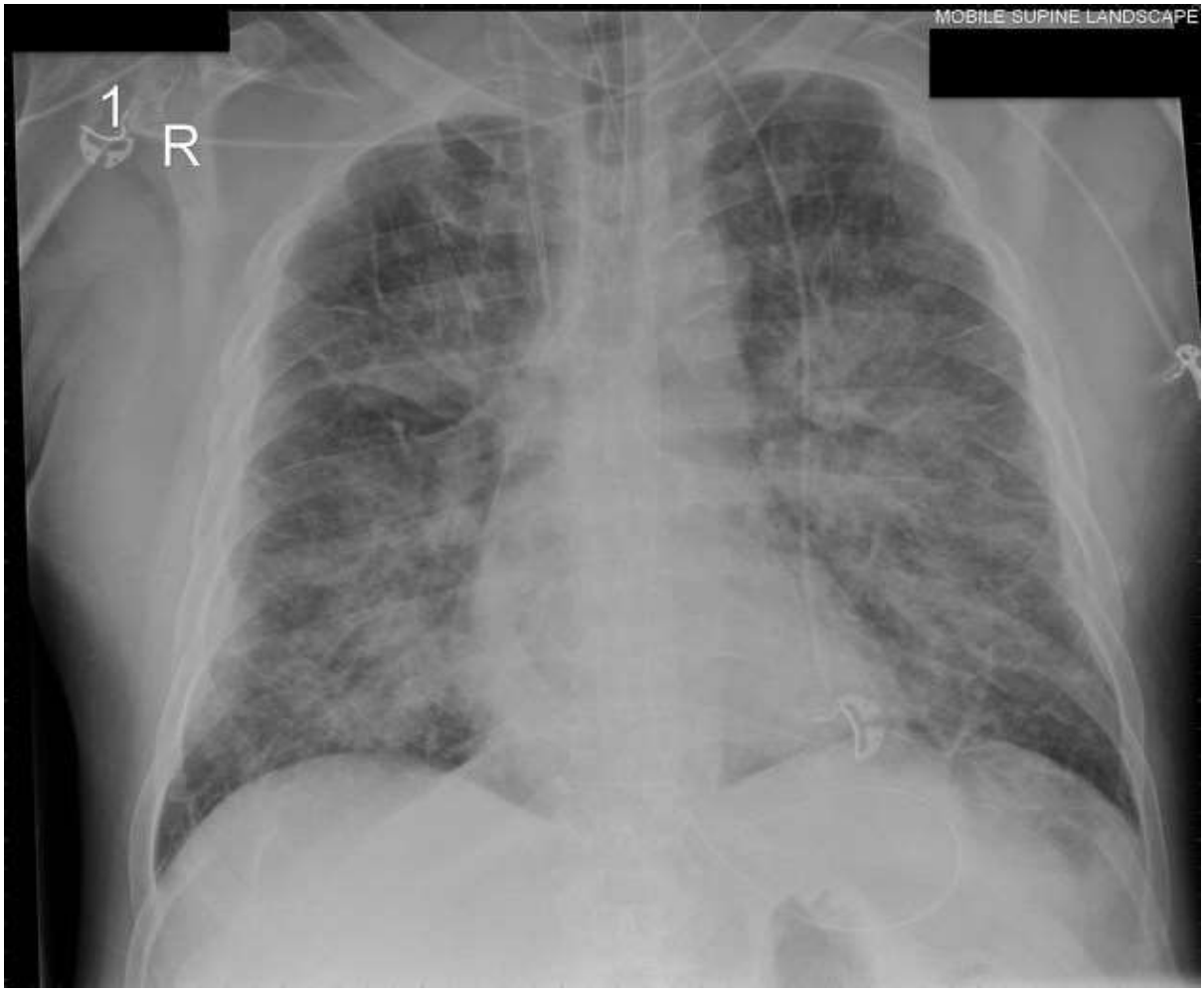

Image courtesy of radiopaedia.org