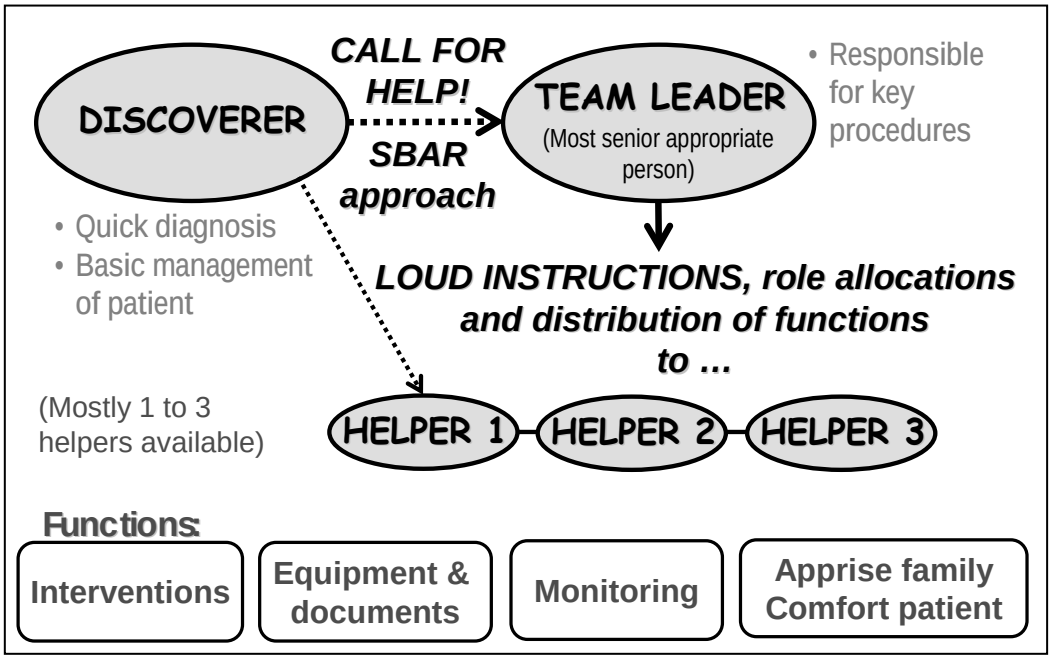
Pre-eclampsia
Scenario 4

MATERIALS TO BE READY AND AVAILABLE BEFORE STARTING THE SESSION:	
General **Drugs and supplies** • Syringes and needles • IV giving sets and IV pole • Test tubes for taking blood samples • Ringer's Lactate	**Equipment** • Sphygmomanometer • Stethoscope • Pulse oximeter if available • A supplemental oxygen source. o If cylinders are used, check that they have adequate oxygen o Flow meter and air oxygen blender o Tubing • Ambu bag and mask • Oxygen mask • Oxygen tubing • Oropharyngeal airway • Yankauer sucker



For all of the steps, please demonstrate what you would do.
Explain what you are doing as you do it and why you are doing it.

ESMOE-EOST: Pre-eclampsia, Scenario 4

		B = Before / A = After	B	A
Information provided and questions asked	Key reactions/responses expected from participants			
Scenario. Ms D is 39 year old P3G4 obese (100kg) and currently 36 weeks pregnant. She presents to the district hospital casualty complaining of shortness of breath. ***What will you do?***				
1. Shake and Shout	Does/does not respond; Alert and anxious			
2. Call a CAB	*Assess circulation; Pulse 140 bpm, BP 160/100mmHg*			
	Assess Airway: Speaks in very short sentences			
	Assess Breathing: RR 40 breaths per minute			
	Call for Help			
The doctor/ senior sister and two other nurses arrive (What must be done now?)				
	Circulation: Put up one IV line of ringers lactate, run slowly			
	When putting up a drip take blood for Hb, platelets, AST, Urea and Creatinnine			
	Assist breathing: Start an oxygen mask, Put on pulse oximeter if available			
	Insert a catheter and measure urine output			
More information(What must be done now?)				
3. Big 5, Forgotten 4, Core 1 (Secondary survey)	*Further History: Known with chronic hypertension, symptoms started a few hours ago, no asthma history, no chest pain, not coughing, attended antenatal care, on FDC but no other treatment*			
	CNS: Alert and anxious			
	CVS: Pulse140 bpm, BP 160/100mmHg, Apex beat in left axilla			
	Resp: Tachypnoeic, RR 40, rhonci and creps throughout lungs, can't lie flat, O_2 Sat on oxygen 92%			
	Liver and GIT; Liver not palpable or tender, not jaundiced			
	Renal: Urine 40mls from catheter, 2+ protein			
	Heamatological: Not pale, Hb 12g%,			
	Endocrine: 4.4 mmol/l			
	Musculo-skeletal: No DVTs, oedematous			
	Immune: Known HIV infected, on FDC for 5 years, temperature 36.5^{O}C			
	Core 1: SF measurement 38cm, FHR 140			
	Core 2: No vaginal bleeding			
4. Diagnosis	*Chronic hypertension with superimposed pre-eclampsia complicated by ?pulmonary oedema, pulmonary embolus, pneumonia, cardiomyopathy, infarct,*			
5. Further management	*Lasix, 80mg stat, IV fluid 60ml/hour*			
	Alpha-methyl dopa, 1g stat			
	Blood gas (pH 7.40, PO_2 70mmHg, PCO_2 25mmHg, BE -4.0), Chest X-ray			
	ECG, cardiac enzymes, septic screen,			
	Principle: make diagnosis before delivery; If in cardiac failure get out of cardiac failure before delivery Needs delivery and tertiary/ICU care			
	Prepare for referral			
	CLINICAL SCORE = TOTAL NUMBER OF TICKS ABOVE			
CLINICAL SCORE: Assessment, diagnosis, monitoring and emergency management			*28*	

DISCUSSION QUESTIONS	
1. Sort out differential diagnosis	*Causes Cardiac (Infarct, cardiomyopathy, valvular lesion, intrinsic) Infective, Embolus*
2. Infarct	*Bloods Trop T, ECG*
3. Cardiomyopathy	*Diagnosis of exclusion, more common,*
4. Antenatal care of chronic hypertension	*Principles: see attachment*

EXECUTION OF DRILL SCORE:	Before (B)	After (A)
A. Activation/Communication skills		
1. Appropriate equipment brought (emergency trolley)		
2. Discoverer exchanges information with team leader and helpers using SBAR approach		
3. Team leader assigns essential roles to helpers (care for the woman, calling a doctor, etc.)		
4. Team leader addresses team members by name		
5. All observations are communicated clearly and loudly		
6. Communication done correctly: instruction → repeat instruction → inform team when instruction is completed		
7. The delegated helper informs the patient and family of what is happening and what will be done for the woman		
B. Response/Team work		
8. Team responds appropriately to team leaders' instructions		
9. Team members cooperate with each other		
10. The team determines the disposition of the patient (transfer, plan for further management)		
C. Sign out/Documentation		
11. Person allocated to do documentation		
12. Care (actions) completely documented (timing of intervention and administration of drugs)		
D. Sequence of activities		
13. Activities performed in the correct order of priority		
EXECUTION OF DRILL SCORE (A-D above)	*13*	*13*
EXECUTION OF DRILL SCORE (A-D above): Number of boxes ticked		
TOTAL SCORE (CLINICAL SCORE + EXECUTION OF DRILL SCORE)		
Out of a possible score of	*41*	*41*

DISCUSSION POINTS

1. Remember to replace drugs etc (on emergency trolley)
2. Equipment to be cleaned and sterilised appropriately
3. During drill there are no arguments or in-between discussions of opinions on how something should be done. Only the necessary actions are performed as swiftly and efficiently as possible
4. The environment should be quiet. Only instructions and feedback allowed
5. Observations are given clearly and loudly
6. Importance of the correct sequence of events
7. Documentation

Date: …… Name of health facility: …….....

Name(s) of evaluator(s): Signature(s):

……..…
……

……..…
……

SCORE:

BEFORE	AFTER

NOTES AND FOLLOW-UP

ATTENDANCE

	Name	Rank	Ward	Signature
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

HOW TO MANAGE GESTATIONAL and CHRONIC HYPERTENSION

If gestational hypertension is diagnosed, or the woman is known to have chronic hypertension at a community clinic, the advice of an experienced doctor should be obtained to establish if any immediate treatment and investigations are required and as to the timing of referral.

- Check for proteinuria, oedema and increased weight gain.
- Ask again about family history of hypertension, history of hypertension in previous pregnancy, previous stillbirths, neonatal deaths, bleeding in previous or index pregnancy and any symptoms of persistent headache.
- Take a dietary history and advise appropriately
- Such patients should be referred to a district hospital within 3 - 5 days.

At the district hospital all patients should be re-assessed to confirm the diagnosis of gestational hypertension or chronic hypertension (NO proteinuria), or to see if pre-eclampsia or super-imposed pre-eclampsia has developed in the meantime. If the diagnosis of gestational/chronic hypertension is confirmed:

- Do an ultrasound assessment of the fetus in respect of gestational age or estimated fetal weight (if no previous dating ultrasound available).
- Test for fetal well-being with an umbilical artery Doppler test (if available).
- If the baby is viable (≥28 weeks), an antenatal CTG should also be carried out and fetal movement charts initiated.
- If the dipstick tests for proteinuria are doubtful, do a 24-hour protein collection to exclude pre-eclampsia. Blood pressure in pregnancy should be controlled at values of 135-140 mmHg systolic and 85-90 mmHg diastolic. Lowering the blood pressure further than this will compromise the baby. The patient may require antihypertensive therapy but this should be based on the individual case.
- If needed, start anti-hypertensive treatment with methyldopa 1g orally; followed by 500 mg 8 hourly; orally.
- If the woman has chronic hypertension, an assessment of must be made to see if her end organs are affected, specifically her renal function and cardiac function. A history must be taken for angina, claudication, and effort tolerance. An ECG should also be performed.

If the patient is less than 40 weeks, then outpatient management can occur at the antenatal clinic on a weekly basis and she can be seen by the same experienced doctor or midwife. Most of these cases will have a good maternal and perinatal outcome but some may develop pre- eclampsia.

If a woman with gestational/chronic hypertension develop proteinuria, increasing weight gain or there are decreased fetal movements, then she should be re-assessed and referred if needed. Delivery should be strongly considered at term (39-40 weeks) gestation if mother and fetus remain well.

(Adapted from: Guidelines for Maternity Care in South Africa, Fourth edition 2015)