

Supplementary Tables.

Supplementary Table 1. Obstetric Internal Medicine Debrief Outline

Obstetric Internal Medicine Debrief

Part A. Emotional debrief (5 minutes)

- Have participants sit down in a circle so everyone is included. The debrief is not to be videotaped to respect confidentiality.
- Ask each individual participant how they feel the scenario went
 - What went well in the scenario?
 - What could have been done differently?
- Ask focused questions on the following to the group
 - Communication
 - Team-work
 - Crisis resource management
- Ask if there are any questions pertaining to the content of the case
- Offer emotional support and resources if required.

Part B. (10 minutes)

- Didactic presentation from an Obstetric Internist on the topic pertaining to the simulation case
 - Slideshow with evidence-based content presented to the group
 - Analysis and summary

Following the debrief the participants complete their post-simulation multiple choice questionnaire.

Supplementary Table 2a. Case 1 Stem. Severe Hypertension in Pregnancy

SEVERE HYPERTENSION IN PREGNANCY: SIMULATION SCENARIO

A 29 y/o female G2P0(SA1) presenting at 32 weeks gestational age sent in to labour and delivery triage by her midwife for urgent management of hypertension with a BP of 178/99 mmHg.

Further history:

Provided by the patient. Had routine visit with midwife 3 days earlier and noted BP was 154/74 mmHg at that visit. She was asked by her midwife to take her blood pressures daily and she was sent to triage today when her most recent blood pressure was 165/110 mmHg. Baseline BPs throughout pregnancy usually <130/80 mmHg. Denies symptoms of preeclampsia when asked

Profile:

- Hypertension
- Unremarkable pregnancy to date

Physical exam provided to physician if requested to confirm a finding on exam

Labs and Investigations (provided if requested): preeclampsia labs unremarkable.

Course of Patient Condition

Patient will present with severe hypertension that is responsive to medical therapy. The patient will meet criteria for severe hypertension with no features of preeclampsia and will remain stable throughout the simulation.

Supplementary Table 2b. Case 2 Stem. Venous thromboembolism in Pregnancy

VTE IN PREGNANCY: SIMULATION SCENARIO

A 28 year old G2P0 (TA1) at 37+6 weeks gestation presented to the labour and delivery triage department for increasing left leg swelling and pain that started approximately a week ago following a transcontinental flight.

According to the labour and delivery nurse at triage she is hemodynamically stable. She has a painful swollen left leg.

Further History:

Provided by the patient. One week ago noticed that she had developed pain and swelling in her left thigh that is getting progressively worse since returning from abroad (symptoms started 1 day after air travel). The pain is so bad she is having trouble weight bearing. Denies dyspnea, chest pain, pre-syncope/syncope, palpitations, peripheral edema, orthopnea or PND. Denies fever, cough, hemoptysis, diaphoresis, or night sweats

Profile:

- Unremarkable. No prior history of VTE. No family history of VTE
- Healthy pregnancy to date

Physical exam provided to physician if requested to confirm a finding on exam

Labs and Investigations (provided if requested):

US Vessel Venous Doppler: Acute occlusive DVT throughout the left iliac vein and left common femoral vein extending into the proximal portion of the left superficial femoral vein

Course of Patient Condition:

The physician should recognize the need to urgently start the work-up for VTE and prompt initiation of anticoagulation however the patient will remain hemodynamically stable throughout the scenario.

Supplementary Table 2c. Case 3 Stem. Cardiac Arrest in the Peripartum Period

CARDIAC ARREST IN THE PERIPARTUM PERIOD: SIMULATION SCENARIO

A 23 year old G1P1 in the PACU after emergent C-Section who delivered 6 hours ago at 35+5 weeks. She presented to hospital with pre-eclampsia complicated by proteinuria and peripheral edema as well as IUGR of the fetus. The baby was having variable decelerations of her heart rate on routine monitoring, which prompted the emergent C-section. She has had increasing oxygen requirements over the last 4 hours with increasing dyspnea.

Profile:

- Limited prenatal care as recently moved to a new city
- Class 3 Obesity
- Healthy pregnancy up until 48 hours prior when she developed gestational hypertension. Patient had been admitted to hospital for 48 hours prior to delivery for monitoring of blood pressure and evolving preeclampsia.

Patient post emergent C-Section, now in PACU. Sitting up in bed. Moderate respiratory distress with increasing oxygen over the last few hours requirements. Non-rebreather mask already applied, at 15 L. 18 Gauge IV to right AC fossa running normal saline at 250 ml/hr. Patient is too dyspneic to provide history.

Physical exam provided to physician if requested to confirm a finding on exam

Labs and Investigations (provided if requested)

Blood work concerning for preeclampsia and markedly abnormal

CXR abnormal with bilateral patchy infiltrates

Course of Patient Condition: The patient will become progressively more hypoxemic over the first few mins and will then have a generalized tonic clonic seizure lasting 30 seconds. During the seizure the patient will remain hypoxemic but otherwise hemodynamically stable. When the seizure resolves, she

will have a PEA arrest requiring CPR. After 2 doses of epinephrine ROSC will be achieved. The case will end with return of spontaneous circulation and initiation of post-arrest care.

Supplementary Table 3. Univariate associations of baseline variables, cognitive load, and emotions with knowledge acquisition

Variable	Beta	Standard Error	p-value
Case 1			
Gender (ref: female)	-21.96	10.51	0.06
Postgraduate year (ref: PGY-2)	-6.67	12.23	0.59
Cognitive load			
Mental Demand	0.37	0.29	0.22
Physical Demand	-0.07	0.26	0.81
Temporal Demand	0.24	0.31	0.44
Performance	-0.05	0.28	0.85
Effort	0.06	0.37	0.88
Frustration	0.21	0.28	0.47
Emotion			
Tense/Calm	2.73	6.81	0.70
Nervous/Relaxed	4.03	6.08	0.52
Stressed/Serene	3.53	6.90	0.62
Upset/Content	10.63	8.80	0.25
Sad/Happy	3.81	7.78	0.63
Depressed/Elated	0.45	11.19	0.97
Lethargic/Excited	-17.0	9.45	0.09
Bored/Alert	-9.55	10.87	0.40
Case 2			
Gender (ref: female)	-4.18	9.94	0.68
Postgraduate year (ref: PGY-2)	2.40	10.57	0.82
Cognitive Load			
Mental Demand	3.19	2.16	0.16
Physical Demand	1.72	1.24	0.19
Temporal Demand	1.47	1.14	0.22
Performance	-0.32	1.23	0.80
Effort	0.98	1.37	0.49
Frustration	3.68	1.43	0.02*
Emotion			
Tense/Calm	-4.32	5.73	0.46
Nervous/Relaxed	-3.71	5.65	0.52
Stressed/Serene	3.54	6.88	0.62
Upset/Content	-7.75	7.34	0.31
Sad/Happy	-5.65	7.18	0.44
Depressed/Elated	-10.09	8.78	0.27
Lethargic/Excited	-6.75	7.96	0.41
Bored/Alert	2.86	7.30	0.70
Case 3			
Gender (ref: female)	-16.3	12.1	0.20
Postgraduate year (ref: PGY-2)	12.94	12.62	0.32
Cognitive Load			

Mental Demand	4.68	2.30	0.06
Physical Demand	0.93	1.02	0.38
Temporal Demand	2.21	1.67	0.21
Performance	-3.17	2.31	0.19
Effort	1.45	1.86	0.46
Frustration	1.02	1.42	0.48
Emotion			
Tense/Calm	1.32	6.29	0.84
Nervous/Relaxed	0.62	5.35	0.91
Stressed/Serene	4.28	5.81	0.47
Upset/Content	-1.66	8.94	0.86
Sad/Happy	4.77	6.16	0.45
Depressed/Elated	1.54	10.51	0.87
Lethargic/Excited	-8.29	5.52	0.16
Bored/Alert	-0.64	9.19	0.95

Supplementary Table 4. Multivariate associations of cognitive load with knowledge acquisition

Variable	Beta	Standard Error	p-value
Case 2			
Mental Demand	5.26	1.92	0.03*
Physical Demand	2.19	1.62	0.21
Temporal Demand	-1.72	1.52	0.29
Performance	2.04	1.01	0.08
Effort	0.008	0.99	0.99
Frustration	5.18	1.44	0.007*

Supplementary Table 5. Univariate associations of baseline variables, cognitive load, and emotions with knowledge retention

Variable	Beta	Standard Error	p-value
Case 1			
Gender (ref: female)	-11.43	10.63	0.30
Postgraduate year (ref: PGY-2)	-8.89	11.03	0.43
Cognitive load			
Mental Demand	0.10	0.27	0.71
Physical Demand	-0.29	0.21	0.19
Temporal Demand	-0.03	0.28	0.93
Performance	-0.02	0.24	0.95
Effort	0.28	0.28	0.34
Frustration	-0.18	0.24	0.47
Emotion			
Tense/Calm	1.93	6.23	0.76
Nervous/Relaxed	1.67	5.63	0.77
Stressed/Serene	1.18	6.36	0.86

Upset/Content	3.75	8.41	0.66
Sad/Happy	6.19	6.96	0.39
Depressed/Elated	-0.91	10.22	0.93
Lethargic/Excited	-17.97	8.26	0.048*
Bored/Alert	-17.27	9.03	0.08
Case 2			
Gender (ref: female)	-8.16	10.67	0.46
Postgraduate year (ref: PGY-2)	6.50	10.96	0.56
Cognitive Load			
Mental Demand	3.74	2.32	0.13
Physical Demand	1.02	1.42	0.49
Temporal Demand	-0.20	1.32	0.88
Performance	-0.10	1.34	0.94
Effort	1.49	1.47	0.33
Frustration	0.26	1.91	0.90
Emotion			
Tense/Calm	-4.96	6.22	0.44
Nervous/Relaxed	-6.03	6.03	0.34
Stressed/Serene	-2.65	7.54	0.73
Upset/Content	1.44	8.32	0.87
Sad/Happy	3.47	7.94	0.67
Depressed/Elated	-1.86	10.03	0.86
Lethargic/Excited	-4.54	8.81	0.62
Bored/Alert	10.39	7.46	0.19
Case 3			
Gender (ref: female)	-16.61	10.03	0.12
Postgraduate year (ref: PGY-2)	17.22	10.18	0.11
Cognitive Load			
Mental Demand	5.28	1.73	0.009*
Physical Demand	0.69	0.88	0.45
Temporal Demand	1.96	1.42	0.19
Performance	-2.86	1.97	0.17
Effort	2.16	1.54	0.18
Frustration	1.52	1.16	0.21
Emotion			
Tense/Calm	-1.67	5.38	0.76
Nervous/Relaxed	-2.92	4.52	0.53
Stressed/Serene	-0.06	5.08	0.99
Upset/Content	-8.15	7.33	0.29
Sad/Happy	-1.73	5.38	0.75
Depressed/Elated	-4.46	8.93	0.63
Lethargic/Excited	-7.90	4.63	0.11
Bored/Alert	3.27	7.82	0.68

Supplementary Table 6. Multivariate associations of cognitive load and emotions with knowledge retention

Variable	Beta	Standard Error	p-value
Case 1			
Emotion			
Tense/Calm	27.05	19.80	0.22
Nervous/Relaxed	-5.59	13.68	0.70
Stressed/Serene	-29.70	17.15	0.13
Upset/Content	-6.97	12.59	0.60
Sad/Happy	34.79	15.81	0.07
Depressed/Elated	1.06	13.06	0.94
Lethargic/Excited	-33.07	12.51	0.04*
Bored/Alert	9.04	14.01	0.54
Case 3			
Cognitive Load			
Mental Demand	6.51	2.95	0.06
Physical Demand	-0.05	1.04	0.96
Temporal Demand	1.09	2.69	0.70
Performance	-2.13	2.12	0.34
Effort	-2.17	3.21	0.52
Frustration	0.14	1.25	0.91