Case Study simulation

The purpose of this activity is for the participant to demonstrate their knowledge of core COMPASS principles. This will be demonstrated in the case study simulation by the group:

- Recognising that the patient is deteriorating
- Being able to explain why the patients vital signs have changed
- Escalating appropriately
- Using ISBAR
- Demonstrating knowledge of the correct interventions

Explain to the participants that this is a low fidelity case study simulation. The participants should try as much as possible to simulate (verbally) what they would really do in the given situation.

Each simulation should take approximately 20 minutes.

**Allocation of roles.**

- Start by allocating the the midwife and patient roles. Both roles have an information sheet that will help the participant to assume their role and answer questions.
- Other roles are available and depending on how the simulation unfolds can be allocated to the other participants in the group.
- Allocate a time keeper. The time keeper needs to alert the participants when simulation has been running for:
  - 15 minutes (5 minutes left)
  - 20 minutes (simulation complete)

The group should be encouraged to work together to understand what is happening to the patient and what needs to happen next.

The group should **use any materials or role players available to respond to the situation.**

**You may pause the simulation and discuss information presented in the shaded boxes.**
### Case Study Simulation – Sally

**Case Study Overview**

Sally is a 27 year old woman G1P0 35/40 gestation

Sally was seen for a routine antenatal visit 2 days ago where it was noted her BP was elevated at 163/98.

Following medical review Sally was admitted to Antenatal Ward and commenced on Aldomet (Methyldopa) 250 mg bd.

This morning the CTG was non reassuring, LFT and urates elevated, platelets lowered and decision made for urgent LUSCS.

LUSCS under GA (due to lowered platelets) was uneventful, baby sent to Centre for Newborn Care.

It is now 2 hours post return to the ward.

<table>
<thead>
<tr>
<th>COMPASS principles demonstrated</th>
<th>Participant actions</th>
<th>Prompts/ further information</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td><strong>Assess patient</strong></td>
<td></td>
<td></td>
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<tr>
<td>and</td>
<td><strong>Recognise the</strong></td>
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<tr>
<td><strong>Signs of deterioration</strong></td>
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<tr>
<td></td>
<td>Assess patient:</td>
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<tr>
<td></td>
<td>Vital signs →</td>
<td>Look at observation chart. What do vital signs indicate? Note increasing MEWS</td>
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<td></td>
<td>How is patient feeling? →</td>
<td>Patient is complaining of headache, blurred vision and epigastric pain – What does this indicate?</td>
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<tr>
<td></td>
<td>Urine output →</td>
<td>Look at fluid balance chart – note decreasing urine output</td>
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<td></td>
<td>Review patient materials e.g.</td>
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<tr>
<td>Step 2</td>
<td>Interventions for a deteriorating patient</td>
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<td>------------------------------------------</td>
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<tr>
<td></td>
<td>Call for help → Apply oxygen → Assess IV patency →</td>
<td>Why? Who? Should already have oxygen insitu (PCA)</td>
<td>How? Why?</td>
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<tr>
<td></td>
<td>Demonstrate the use ISBAR to communicate to:</td>
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<tr>
<td></td>
<td>Team leader</td>
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<tr>
<td></td>
<td>CMC</td>
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<tr>
<td></td>
<td>Registrar</td>
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<tr>
<td>Step 3</td>
<td>Notify appropriate clinicians using ISBAR</td>
<td>How long does the Registrar have to review the patient? (15 minutes)</td>
<td></td>
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<tr>
<td>Step 4</td>
<td>Ongoing care of deteriorating patient</td>
<td>How often would you do observations on this patient? Every 15-30 minutes until stable. Maintain a strict fluid balance chart, measure urine output and patella reflexes.</td>
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<tr>
<td></td>
<td>Continue above observation and patient assessments →</td>
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<td></td>
<td>Maintain ABC as clinically indicated → Prevent seizures → Control</td>
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<tr>
<td></td>
<td>What potential risks does Sally have? MgSO₄ Methyldopa, betablockers,</td>
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<tr>
<td>Hypertension</td>
<td>Hydralazine, calcium channel blockers</td>
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<td>--------------</td>
<td>-------------------------------------</td>
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<tr>
<td>Reassurance</td>
<td>Explanation of what is happening to Sally and her support people SCN</td>
<td></td>
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</tr>
</tbody>
</table>

### Step 5

**Appropriate management plan**

- Bloods renal function studies, liver function studies, coagulation studies, full blood count, 24 hour urine collection
- Further IV access
- Notify Consultant
- Transfer to Birthing or ICU
- Escort responsibilities

**END OF SCENARIO**

### All participants discussion

- Can you explain the changes in vital signs using the oxygen delivery chain?
- What do you think went well in this scenario?
- What might you do differently if you were to do this scenario again?

### The important things to get across in this case:

- Identify risk factors for pre-eclampsia (primigravida, up to five days post-partum)
- Recognise that the woman is deteriorating and when to refer a Maternity MEWS
- Signs of pre eclampsia – decreased urine output, increase BP, headaches, hyperreflexia, visual disturbances, epigastric pain, nausea, vomiting).
- Serious complications of pre-eclampsia can develop postnatally

**Physiological changes reflected in the vital sign readings:**

- Understand why the observations have changed; BP increasing
with worsening of PE, symptoms develop as condition worsens. Epigastric pain caused by oedema of liver cells, headache caused by cerebral oedema.

- The primary pathogenesis process in pre eclampsia is an abnormality of the placental vasculature that results in placental under perfusion, which, in turn, leads to release of factors that cause widespread maternal endothelial dysfunction with multi-organ dysfunction

- Complications include:
  - Widespread vasoconstriction (↓ blood flow to placenta, kidney, liver)
  - Coagulation cascade (damage of placental tissue → release of thromboplastin → DIC)
    - Headache, visual disturbances, may result in CVA – leading cause of death in PE

**Information noted from patient charts and results:**

- Maternity MEWS is increasing
- Symptoms of PE (headache, ↓ Urine output)
- Increased RR
- Bloods-↓ platelets, increasing LDH and creatinine

**Management should include:**

- ABC
- Control/prevent seizures (magnesium sulphate infusion)
- Control hypertension - aim to reduce BP to 130-140/90-100
Role Player card – Midwife

You are a midwife on the antenatal ward.
It is 1330hrs and you are performing routine post-operative observations on Sally while your colleague is at lunch.
All you know about Sally is that she returned to the ward at 1130 hrs after having a LUSCS under GA this morning.

Use any materials or role players available to you to respond to this situation.
Remember to use ISBAR when communicating!

**ISBAR:**

- **Identify** - self, Dr, patient, ward
- **Situation** - Why are you calling? Briefly state problem
- **Background** - What is the relevant background - history, recent procedure, medications...
- **Assessment** - what do you think is the problem?
- **Recommendation** - what would you like the doctor to do?
You are 27 years old. You have returned to the ward after an emergency caesarean section. Midwives have been coming in regularly to check your vital signs.

If asked:

- **How are you feeling?** I feel really sick, I think I am going to vomit. I have a dreadful headache and this pain in my stomach.

- **Where is the pain in your stomach?** Right up here, in the middle (point to epigastrium).

- **Have you been using your PCA for the pain?** Yes, but it is not helping at all.

- **Can you describe your headache?** It is here at the front, it feels like a vice.

- **When did you first notice the headache?** It started when the midwife was here checking my blood pressure before, it’s getting worse and worse.

- **Have you noticed any changes in your vision?** Yes, everything looks a bit blurry. But I am keeping my eyes shut because the light makes my eyes hurt.
### Progress notes

**29/2**

**New admission to antenatal ward at 1300 hrs.**

Sally is G₁P₀, 35/40 gestation.

BP 163/98 at antenatal visit this morning.

Seen by Dr Doolittle and decision made to admit pt. to AN ward for observation.

Commenced on Aldomet 250 mg bd.

CTG attended - reassuring

*u/a* - protein +++

PE bloods - NAD

BP remains elevated (162/90).

Nil complaints voiced. *(Flo Nightingale, RM)*

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**30/2**

**0800 hours**

Ward round Dr Doolittle

BP remains elevated - between 160-172 systolic and 98-100 diastolic

*u/a* - protein +++

For prostin 2mg

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1000hrs - written in retrospect

Asked to see patient re non reassuring CTG.

LFTs and urates ↑ platelets ↓

Prostin given 0815hrs - no effect
### Plan: Cat A LUSCS

<table>
<thead>
<tr>
<th>1130Hrs</th>
<th>Patient returned to ward post Cat A LUSCS under GA (low platelets)</th>
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<tbody>
<tr>
<td></td>
<td>LUSCS uneventful, baby transferred to CNC</td>
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<tr>
<td>PCA insitu, oxygen at 6L/min via HM.</td>
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<tr>
<td>Patient appears comfortable, nil complaints voiced.</td>
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<tr>
<td>IDC insitu and draining.</td>
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<tr>
<td>MEWS 2 (BP 150/80)</td>
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<tr>
<td>Patients mother in attendance (partner with baby in CNC)</td>
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M Poppins RM
Case study simulation – Sally

Read your role playing card and answer questions as best you can with the information given. Feel free to ad lib!!
Midwife

Imagine yourself in the situation and think about what you normally do when you are interacting with a patient. You can start by introducing yourself and go from there. The patient should have an answer to any questions that are relevant to the case study.

Time keeper

Alert participants at 15 minutes (5 minutes left) and 20 minutes (end of simulation)
Case study simulation – Sally
### Case study simulation – Sally

#### Birth summary
- **Date/time of birth:** 31/01/00
- **Anæsthetic (circle):** Nil
- **Mode of birth (circle):** Instrumental Caesarean

#### Postnatal Maternity Observations
To be performed as per Care Plan

<table>
<thead>
<tr>
<th>Code</th>
<th>Time</th>
<th>1/2/3/4/5/6/7/8/9/10/11/12/13/14</th>
<th>1/2/3/4/5/6/7/8/9/10</th>
<th>Fundus (tick as appropriate)</th>
<th>Notify Team Leader</th>
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- Notify Team Leader
- Notify Team Leader
- Notify Team Leader
- Notify Team Leader

#### Variance to MEWS in women with a chronic condition:
Where a woman has a pre-existing chronic condition that may require variance from the normal scoring of Maternity MEWS document the revised accepted range for the adjusted vital sign below. Agreement with the admitting Consultant or Registrar is required. Variance must also include a "valid until" date.

- **Respiratory Rate**
- **Systolic BP**
- **Diastolic BP**
- **O2sat**
- **Sedation**

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Description</th>
<th>Valid until</th>
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<tbody>
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#### Variance to MET in women with a chronic condition:
Where a woman has a pre-existing chronic condition that may require a variance from the normal MET criteria document the revised accepted MET criteria for the adjusted vital sign below. Agreement with the admitting Consultant or Registrar is required. Variance must also include a "valid until" date.

- **Respiratory Rate**
- **Heart Rate**
- **Systolic BP**
- **Diastolic BP**

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Description</th>
<th>Valid until</th>
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</table>

#### Communication for MEWS

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Action/comments</th>
<th>Print name</th>
<th>Signature</th>
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#### Urinalysis
- **pH:** 7.0
- **Specific Gravity:** 1.025
- **Urine:**
  - Nitrite
  - Blood
  - Protein
  - Sugar
  - Ketones
  - Cholesterol
  - Protein
  - Glucose

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**DO NOT WRITE IN THIS BOX**
### Case Study Simulation – Sally

**Doctor SMRT initial assessment if used**

<table>
<thead>
<tr>
<th>UR No.</th>
<th>1995-62</th>
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<tbody>
<tr>
<td>Family Name:</td>
<td>Smith</td>
</tr>
<tr>
<td>Given Names:</td>
<td>Sally</td>
</tr>
<tr>
<td>DOB</td>
<td>12/12/1983</td>
</tr>
<tr>
<td>Sex</td>
<td>M</td>
</tr>
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</table>

**MEDICATION CHART THE CANBERRA HOSPITAL**

**Regular Medications**

#### Year 28

<table>
<thead>
<tr>
<th>Date &amp; Month</th>
<th>Dose</th>
<th>Preparation</th>
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**Recommender Administration Trees**

#### Year 28

<table>
<thead>
<tr>
<th>Date &amp; Month</th>
<th>Administration Trees</th>
<th>Management Plan</th>
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**Doctors Must Enter Administration Sites**

#### Week 1

<table>
<thead>
<tr>
<th>Name</th>
<th>Preparation</th>
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**Refills**

<table>
<thead>
<tr>
<th>Name</th>
<th>Preparation</th>
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