Post operative care for mothers undergoing surgery for obstetric emergencies

Basic nursing issues

The patient should be discharged to the ward or recovery area with clear "orders" for the following:

- **Monitor ABC**
- If unconscious (P or U on AVPU scale), the patient should not be left alone until responding to voice, recovery position and airway opening as required
- Vital signs (T,P,Respiratory rate and BP and capillary refill time every 15 minutes for first one hour, hourly for 4 hours and then 2 hourly. Observations should be more often if there is a change in observation from a normal to abnormal value.)
- Monitor SaO2 (normal > 93 %) after a general anesthetic. Give **oxygen** as required until $Sa0_2$ is >93% in air or patient's colour normal. Remember cyanosis may not be present if severely anaemic.
- Observe the mother closely until the effect of the anaesthetic has worn off.
- Control pain: if severe need IV morphine
- Rate and type of intravenous fluid (if ketosis ensure adequate amount of glucose in drip)
- Urine output, and surgical/NG drainage/vomiting
- Record Input versus Output and calculate difference every 12 hours
- Other medications
- Laboratory investigations

The patient's progress should be monitored and should include at least:

- A comment on medical and nursing observations
- A specific comment on the wound or operation site
- Any complications
- Any changes made in treatment.

Prevention of complications

- Provide adequate pain control
- Encourage early mobilization:
  – Deep breathing and coughing
  – Active daily exercise
  – Joint range of motion
  – Muscular strengthening
  – Make walking aids such as canes, crutches and walkers available and provide instructions for their use
- Ensure adequate nutrition
- Prevent skin breakdown and pressure sores:
  – Turn the patient frequently
  – Keep urine and faeces off skin

Pain management (see section 4)

Manage pain wherever you see patients (emergency, operating room and on the ward) and anticipate their needs for pain management after surgery and discharge. Do not unnecessarily delay the treatment of pain.

In the first 12-24 hours after a major surgical procedure, such as Caesarean Section, there will be need for powerful opiate analgesia (usually morphine IV-see section 4 for details). Thereafter, the pain should be less severe and regular codeine, non-steroidals, aspirin or paracetamol should be sufficient.

Monitoring

All patients should be assessed at a frequency determined by how ill they are, and even those who are not seriously ill must be regularly assessed.

Vital signs (temperature, pulse and respiratory rate, BP, urine output and fluid inputs, should be recorded on a standard form or graph at least 4 hourly for 24 hours after the immediate post-operative recovery phase.

Do not forget anti-tetanus coverage when appropriate.

Progress notes need not be long, but must comment on the patient's condition and note any changes in the management plan. They should be signed by the person writing the note.

Notes can be organized in the "SOAP" format:

Subjective: how the patient feels

Objective: findings on physical examination, vital signs and laboratory results

Assessment: what the health worker thinks

Plan: management plan; this may also include directives which can be written in a specific location as "orders".

Specific post-operative issues

Post salpingectomy for ruptured ectopic pregnancy

- Counsel not to use IUCD.
- Early ultrasound as soon as new pregnancy suspected.
- If pregnancy is interstitial and cavity is opened, subsequent pregnancies at risk of uterine rupture.
- Offer child spacing/family planning advice

Post Caesarean Section

- Palpate the uterine fundus to ensure that the uterus remains contracted.
- Check for excessive PV loss
- Bowel function should be normal after 12 hours

- If uncomplicated, give liquids after 4 hours and solids when passing gas per rectum
- If infected, obstructed labour or uterine rupture, wait until bowel sounds before giving oral fluids
- Keep dressing on wound for 24 hours to ensure re-epithelialisation.
- If blood is leaking, reinforce dressing or replace with new one if more than half soaked
- *If bleeding occurs:*
    - Massage the uterus to expel blood and blood clots. Presence of blood clots will inhibit effective uterine contractions;
    - Give oxytocin 5 units IV and then infuse 40 units in 500ml IV fluids (normal saline or Ringer's lactate) over 4 hours. If bleeding is heavy give misoprostol rectally 4 x 200 microgram tablets
- If **there are signs of infection** or the mother **currently has fever**, give a combination of antibiotics until she is fever-free for 48 hours: - ampicillin 2 g IV every 6 hours; - PLUS gentamicin 5 mg/kg body weight IV every 24 hours; - PLUS metronidazole 500 mg IV every 8 hours. If **fever is still present 72 hours after initiating antibiotics**, re-evaluate and revise diagnosis.
- Infection of the uterus is a major cause of maternal death. Delayed or inadequate treatment of metritis may result in pelvic abscess, peritonitis, septic shock, deep vein thrombosis, pulmonary embolism, chronic pelvic infection with recurrent pelvic pain and dyspareunia, tubal blockage and infertility.
- If **retained placental fragments** are suspected, perform a digital exploration of the uterus to remove clots and large pieces. Use ovum forceps or a large curette if required.
- If there is **no improvement** with conservative measures and there are **signs of general peritonitis** (fever, rebound tenderness, abdominal pain), perform a Laparotomy to drain the pus.
- If the **uterus is necrotic and septic**, perform subtotal hysterectomy.
- If the mother is **significantly anaemic,** Hb < 6- 7g/dl, then transfusion may help recovery from the operation. If possible, consider 500ml of fresh cross matched blood from a relative.
- Remove catheter after 8 hours if urine is clear; if not wait until it is.
- Wait 48 hours before removing catheter if: uterine rupture, prolonged or obstructed labour, massive perineal oedema, puerperal sepsis with pelvic peritionitis
- If bladder was damaged leave it in for 7 days and until urine is clear. If not receiving antibiotics: give nitrofurantoin 100mg orally once daily until catheter removed.

Wound abscess

- If there is **pus or fluid**, open and drain the wound. Remove infected skin or subcutaneous sutures and debride the wound. Do not remove fascial sutures.
- If there is an **abscess without cellulitis**, antibiotics are not required.
- Place a damp sterile normal saline dressing in the wound and change the dressing every 24 hours.
- Advise on good hygiene and to wear clean pads or cloths that are changed frequently.

- **If infection is superficial and does not involve deep tissues, monitor for development of an abscess and give antibiotics:**
    - ampicillin 500 mg by mouth four times per day for 5 days; - PLUS metronidazole 400 mg by mouth three times per day for 5 days.
- **If the infection is deep, involves muscles and is causing necrosis (necrotizing fasciitis), give antibiotics until necrotic tissue has been removed and fever-free for 48 hours:**
    - penicillin G 2 million units IV every 6 hours; - PLUS gentamicin 5 mg/kg body weight IV every 24 hours; - PLUS metronidazole 500 mg IV every 8 hours;
- **Once fever-free for 48 hours, give:**
    - ampicillin 500 mg by mouth four times per day for 5 days; - PLUS metronidazole 400 mg by mouth three times per day for 5 days.

Note: Necrotizing fasciitis requires wide surgical debridement. Perform secondary closure 2–4 weeks later, depending on resolution of infection.
Next pregnancy Inform mother on discharge that she is at risk of uterine rupture during next pregnancy. Offer child spacing/family planning advice

Post uterine inversion

Once the inversion is corrected, infuse IV oxytocin 40 units in 500 ml normal saline or Ringer's lactate over 4 hours:

- If the **uterus does not contract after oxytocin**, give misoprostol rectally 4 x 200 microgram tablets
- **Give a single dose of prophylactic antibiotics** after correcting the inverted uterus**:**

  ampicillin 2 g IV PLUS metronidazole 500 mg IV; - **OR** cefazolin 1 g IV PLUS metronidazole 500 mg IV.
- If there are **signs of infection** or the mother **currently has fever**, give a combination of antibiotics until she is fever-free for 48 hours: - ampicillin 2 g IV every 6 hours; - PLUS gentamicin 5 mg/kg body weight IV every 24 hours; - PLUS metronidazole 500 mg IV every 8 hours.

Post symphisiotomy

- If **there are signs of infection** or the mother currently has fever, give a combination of antibiotics until she is fever-free for 48 hours: - ampicillin 2 g IV every 6 hours; - PLUS gentamicin 5 mg/kg body weight IV every 24 hours; - PLUS metronidazole 500 mg IV every 8 hours.
- Apply elastic strapping across the front of the pelvis from one iliac crest to the other to stabilize the symphysis and reduce pain.
- Leave the catheter in the bladder for a minimum of 5 days.
- Encourage the mother to drink plenty of fluids to ensure a good urinary output.
- Encourage bed rest for 7 days after discharge from hospital.
- Encourage the mother to begin to walk with assistance when she is ready to do so.

- If long-term walking difficulties and pain are reported (occur in 2% of cases), treat with physical therapy.

Post manual removal placenta

- Observe the mother every 15 minutes until the effect of IV sedation or anaesthetic has worn off.
- Monitor the vital signs (pulse, blood pressure, respiration) every 30 minutes for the next 6 hours or until stable.
- Palpate the uterine fundus to ensure that the uterus remains contracted.
- Check for excessive lochia.
- Continue infusion of IV fluids.
- Transfuse as necessary.

Peritonitis

Provide nasogastric suction.

Infuse IV fluids.

Give antibiotics until fever-free for 48 hours: - ampicillin 2 g IV every 6 hours; - PLUS gentamicin 5 mg/kg body weight IV every 24 hours; - PLUS metronidazole 500 mg IV every 8 hours.

If necessary, perform laparotomy.

Pelvic abscess

Give antibiotics before draining the abscess and continue until fever-free for 48 hours: - ampicillin 2 g IV every 6 hours; - PLUS gentamicin 5 mg/kg body weight IV every 24 hours; - PLUS metronidazole 500 mg IV every 8 hours.

If the abscess is **fluctuant in the cul-de-sac**, drain the pus through the cul-de-sac- culdocentesis. If the **spiking fever continues**, perform a laparotomy.

Care of the patient after Spinal Anaesthesia

Observations

Standard post anaesthetic observations

Sensation should return within 4 hours. If after 4 hours the patient remains numb and/or cannot move their legs, contact the anaesthetist urgently.

Analgesia

Severe pain may return suddenly when the spinal block has worn off. Give analgesia when patient first has pain.

Fasting

Fasting is not needed unless it is a surgical requirement eg after abdominal operations

Posture

The patient does not have to lie flat. Allow to sit up as soon as they are able

Mobilising

If not contraindicated by the surgery, the patient can get out of bed 2 hours after the return of normal sensation, ONLY WITH ASSISTANCE. Before getting the patient out of bed sit her up slowly. If the patient feels faint, dizzy or sick then lie the patient down, take the blood pressure and inform anaesthetist.

Potential complications

- **Postural hypotension**

  Lie the patient on the bed, give or increase IV fluids and inform anaesthetist.

- **Urinary Retention**

  Encourage patient to pass urine when sensation returns. If the patient has not passed urine and she has a palpable bladder, she may need a catheter.