**Lecture 10 :Postpartum Hemorrhage Nursing Care Plans**

[**Postpartum hemorrhage**](https://nurseslabs.com/postpartum-hemorrhage/) (PPH) is defined as a cumulative [blood](https://nurseslabs.com/blood-anatomy-physiology/) loss greater than or equal to 1,000 mL of blood loss accompanied by signs or symptoms of hypovolemia within 24 hours after the birth process, regardless of route of delivery. Nevertheless, a blood loss greater than 500 mL in a vaginal delivery should be considered abnormal (American College of Obstetricians and Gynecologists [ACOG], 2017).

[Postpartum](https://nurseslabs.com/postpartum-care/) hemorrhage is the fifth leading cause of maternal mortality in the United States and causes approximately 11-12% of maternal deaths. It is the leading cause of maternal morbidity and mortality globally (Nathan, 2019).

Primary postpartum hemorrhage may occur within the first 24 hours after birth, while secondary postpartum hemorrhage occurs more than 24 hours and up to 12 weeks after delivery. The four main causes for postpartum hemorrhage are the four T’s: tone (uterine atony), trauma (lacerations, hematomas, uterine inversion or rupture), tissue (retained placental fragments), and thrombin ([disseminated intravascular coagulation](https://nurseslabs.com/disseminated-intravascular-coagulation-nursing-care-plans/)).

**Nursing Care Plans**

The primary role of the [nurse](https://nurseslabs.com/registered-nurse/) in caring for patients with postpartum hemorrhage is to assess and intervene early or during a hemorrhage to help the client regain her strength and prevent complications. Early recognition and treatment of PPH are critical to care management. Data such as the amount of [bleeding](https://nurseslabs.com/risk-for-bleeding/), the condition of the uterus, checking the maternal vital signs, and observing for signs of shock would play a vital role in the care of the patient with hemorrhage.

**Here are eight**[**nursing care plans**](https://nurseslabs.com/nursing-care-plans/)**and nursing diagnoses for postpartum hemorrhage:**

1. [Deficient Fluid Volume](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/)
2. [Risk for Imbalanced Fluid Volume](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/2/)
3. [Ineffective Tissue Perfusion](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/3/)
4. [Risk For Infection](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/4/)
5. [Acute Pain](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/5/)
6. [Risk for Impaired Attachment](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/6/)
7. [Anxiety](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/7/)
8. [Deficient Knowledge](https://nurseslabs.com/postpartum-hemorrhage-nursing-care-plans/8/)

**1. Deficient Fluid Volume**

**Deficient Fluid Volume**

The body initially responds to a reduction in blood volume with increased heart and respiratory rates. These reactions increase the oxygen content of each erythrocyte and cause faster circulation of the remaining blood.  Blood flow to nonessential organs gradually stops to make more blood available for vital organs, specifically the heart and brain. Blood flow to the brain and the kidneys decreases as blood loss continues and fluid is conserved. Urine output decreases and eventually stops.

**Nursing Diagnosis**

* [Deficient Fluid Volume](https://nurseslabs.com/deficient-fluid-volume/)

**May be related to**

* Excessive blood loss after birth

**Possibly evidenced by**

* Changes in the mental status
* Concentrated urine
* Delayed capillary refill
* Decrease in the red blood cell count (hematocrit)
* Decrease blood pressure ([hypotension](https://nurseslabs.com/hypovolemic-shock-nursing-care-plans/))
* Dry skin/mucous membrane
* Increase heart rate (tachycardia)

**Desired Outcomes**

* The client will maintain a blood pressure of at least 100/60 mm Hg.
* The client will maintain a pulse rate between 70-90 beats per minute.
* The client will have a balanced 24-hour [intake and output](https://nurseslabs.com/drug-dosage-calculations-practice-quiz/).
* The client will have a cognitive status within the expected range.
* The client will have a lochia flow of less than one saturated perineal pad per hour.
* The client will demonstrate improvement in the fluid balance as evidenced by a good capillary refill, adequate urine output, and [skin turgor](https://nurseslabs.com/diarrhea/).

**Nursing Assessment and Rationales**

**1. Assess and record the characteristics, amount, and site of the bleeding, including the stage of**[**labor**](https://nurseslabs.com/labor/)**.**The amount of blood loss and the presence of blood clots will help determine the necessary interventions. The characteristics and quantity of blood passed can suggest excessive bleeding. For example, bright red blood is arterial and can indicate lacerations of the genital tract; meanwhile, dark red blood is likely of venous origin and may indicate superficial lacerations or varices of the birth canal. Spurts of blood with clots can indicate partial placental separation, excessive [traction](https://nurseslabs.com/fracture-nursing-care-plans/) on the cord, and failure of the blood to clot or remain clotted may indicate coagulopathy, such as disseminated intravascular coagulation. Excessive

**2. Count and weigh perineal pads and, if possible, preserve blood clots to be evaluated by the primary care provider.**Be certain to differentiate between saturated and used when counting perineal pads. Weighing perineal pads before and after use and then subtracting the difference is an accurate technique to measure vaginal discharge: 1 g of weight is comparable to 1 mL of blood volume. Saturation of a peripad within 15 minutes to 1 hour after delivery must be promptly reported. *Always be sure to turn the client on her side when inspecting for blood loss to be certain a large amount of blood is not pooling undetected beneath her.*

**3. Assess the lochia for color, quantity, and clots.**Observing the lochia provides for an estimate of the actual blood loss. Lochia rubra should be dark red. During the first few hours, the amount of lochia should be no more than one saturated perineal pad per hour. Small clots may appear in the drainage, but large clots are not normal.

**4. Assess the location of the uterus and the degree of contractility of the uterus.**The degree of uterine contractility will measure the status of the blood loss. Uterine atony allows the blood vessels at the [placenta](https://nurseslabs.com/fetal-development/) site to bleed freely and usually massively because the [muscle](https://nurseslabs.com/muscular-system-anatomy-physiology/) fibers that compress the bleeding vessels are flaccid. Large venous areas are exposed after the placenta separates from the uterine wall and bleeding is controlled by the contraction of smooth muscles in the uterus. The best safeguard against uterine atony is to palpate the client’s fundus at frequent intervals to ensure her uterus remains contracted. The fundus should be firm to compress the bleeding vessels at the placenta site.

**5. Assess for additional risk factors for postpartum hemorrhage.**Identifying the presence of risk factors for hemorrhages such as retained placental fragments, uterine or cervical lacerations, abnormal attachments to the placental site, uterine atony, or inadequate blood coagulation will help determine the management of the situation, thus preventing further complications.

**6. Monitor vital signs, including systolic and diastolic blood pressure, pulse, and heart rate. Check for the capillary refill and observe nail beds and mucous membranes.**Routine postpartum care involves assessing the vital signs every 15 minutes until stable. If the client has tachycardia and hypotension, suspect for a considerable amount of blood loss, usually representing 25% of the client’s total blood volume, or approximately 1,500 mL or more (Brown, 2017). Tachycardia is usually the first sign of inadequate blood volume (hypovolemia). The first blood pressure change is a narrow pulse pressure (a falling systolic pressure and a rising diastolic pressure). The blood pressure may continue to fall and eventually cannot be detected.

**7. Assess for the presence of a vulvar and vaginal hematoma.**A hematoma is a collection of blood within the tissues and may result from birth trauma, and they appear as a bulging or purplish mass. The client may also develop signs of concealed blood loss if the hematoma is large. Larger ones may require incision and drainage of the clots. The client should report signs of concealed blood loss accompanied by maternal complaints of severe pain, perineal or vaginal pressure, or inability to void. Small hematomas usually resolve without treatment or with cold application.

**8. Measure a 24-hour intake and output. Observe for signs of voiding difficulty.**Assessment of the client’s intake and output will help determine fluid loss. Monitoring urine output is a good gauge of blood loss because the kidneys need sufficient arterial blood flow and pressure to function. If they are not producing urine, it suggests the kidneys are not obtaining adequate blood. Voiding difficulty may happen with hematomas in the upper portion of the vagina, causing pressure in the urethra.

**9. Investigate reports of persistent perineal pain or feeling of vaginal fullness. Apply counterpressure on labial or perineal lacerations.**Hematomas often result from continued bleeding from lacerations of the birth canal. If the client reports severe pain in the perineal area or a feeling of pressure between her legs, inspect the perineal area to see if a hematoma could be causing this. Depending on the amount of blood in the tissues, the client may describe the pressure in the vulva, pelvis, or rectum. Urination may be difficult or absent due to the pressure.

**10. Measure hemodynamic parameters,** **including central venous pressure (CVP) or pulmonary artery wedge pressure (PAWP)  if available.**Measurement of the hemodynamic parameters will provide a direct measurement of circulating volume, replacement needs, and response to therapy in case of a life-threatening situation. Invasive monitoring with an arterial line, central line, and non-invasive or minimally invasive cardiac output monitoring may be considered according to PPH severity and availability (Muñoz et al., 2019).

**Nursing Interventions and Rationales**

**1. Massage the boggy uterus using one hand and place the second hand above the symphysis pubis.**Ask the client to void first before performing the massage, as an empty [bladder](https://nurseslabs.com/cystoscopy/) prevents [displacement](https://nurseslabs.com/defense-mechanisms/) of the uterus and ensures accurate [assessment](https://nurseslabs.com/nursing-process/) of uterine tone. With a gloved hand, place one hand on the abdomen just above the symphysis pubis and another hand around the top of the fundus to anchor the lower uterine segment. Do not overly massage because the excessive stimulation to contract it will tire the uterine muscle and worsen uterine atony. Once the uterus is firmly contracted, it should be left alone but still assessed regularly.

**2. Apply an ice pack on the hematomas if indicated.**The cold application can limit small hematoma and reduce blood flow to the area. Cold also numbs the area and makes the client more comfortable. Apply an ice pack covered with a towel to prevent thermal [injury](https://nurseslabs.com/risk-for-injury/) to the skin to prevent further bleeding. Larger ones may require incision and drainage of the clots.

**3. Exercise extreme caution when performing vaginal and rectal examinations.**Vaginal and rectal examinations may increase hemorrhage if cervical, vaginal, or perineal lacerations or hematomas are present. Bimanual clot evacuation can be done as indicated. This involves cupping the fundus of the uterus with one hand while performing a vaginal examination to break down and expel any blood clots digitally. This enhances the effect of uterotonic agents on myometrial tissue by facilitating the emptying of the uterine cavity (Koh et al., 2020).

**4. Monitor clients with placenta accreta,**[**gestational hypertension**](https://nurseslabs.com/preeclampsia-gestional-hypertensive-disorders-nursing-care-plans/)**, or [abruptio placenta](https://nurseslabs.com/abruptio-placentae/) for signs of**[**disseminated intravascular coagulation (DIC)**](https://nurseslabs.com/disseminated-intravascular-coagulation-nursing-care-plans/)**.**Thromboplastin released during attempts at manual removal of the placenta may result in coagulopathy as manifested by continued vaginal bleeding, epistaxis, oozing from incisions, mucous membranes, gums, IV site. Retained placental fragments can also be caused by placenta accreta. Placenta accreta is a condition that occurs when blood vessels and other parts of the placenta grow too deeply into the uterine wall. Retained placental fragments can remain in the uterus after spontaneous separation of the placenta causing excessive bleeding and uterine atony. Manual exploration of the uterine to remove the fragments may be necessary. Removing such deeply embedded placenta can lead to severe postpartum hemorrhage.

**5. Maintain a nothing-by-**[**mouth**](https://nurseslabs.com/digestive-system/)**(NPO) status while assessing the client’s status.**In case of a need to repair the laceration using a general anesthetic, the client should be kept on NPO until further orders are received. This will prevent [aspiration](https://nurseslabs.com/risk-for-aspiration/) of gastric contents if the mental status is impaired and if surgical management is required.

**6. Maintain bed rest with an elevation of the legs by 20-30° and trunk horizontal.**Elevation of the lower extremities increases venous return, ensuring greater availability of blood to the brain and other vital organs. Bleeding may be decreased with bed rest.

**7. Recommend the client be seated when holding the infant and change position slowly when lying down or seated.**To prevent orthostatic hypotension because it puts the client at risk of falls. Advise the client to dangle their legs first on the side of their bed after sitting up before attempting to ambulate.

**8. Monitor the client’s**[**hemoglobin and hematocrit levels**](https://nurseslabs.com/normal-lab-values-nclex-nursing/)**.**The initial hemoglobin level does not accurately reflect blood loss because compensatory mechanisms that move fluids from the interstitial space require time and are not apparent in the initial hemoglobin measurement. However, the initial measurement is useful to determine a baseline hemoglobin level as [anemia](https://nurseslabs.com/anemia/) is very frequent in parturients (Muñoz et al., 2019).

**9. Monitor the client’s platelet count activated partial thromboplastin time (APTT), fibrinogen, and fibrin degradation products (FDP).**In the presence of DIC, prothrombin will be low because it depends on the conversion of fibrinogen to fibrin, thrombin time will be elevated because it measures the time necessary for the conversion of fibrinogen to fibrin, and fibrin split products will be >40 mcg/mL reflecting the destruction of fibrinogen or fibrin. *Blood needs to be drawn for prothrombin, thrombin time, fibrinogen, and fibrin split products.*

**10. Educate the client and significant others on identifying the signs and symptoms that need to be reported urgently.**Signs and symptoms of a possible cause of bleeding should be reported. A continuous trickling of blood can result in much or more blood loss than the dramatic bleeding associated with uterine atony. The nurse should also teach the client what to expect about changes in the lochia. Instruct the client to report the following signs of late postpartum hemorrhage: persistent bright red bleeding and return of red bleeding after it has changed to pinkish to whitish. Once at home, the client should report [fever](https://nurseslabs.com/hyperthermia/), persistent pain, or a foul-smelling vaginal discharge. They should also be taught how to palpate the fundus and what normal changes to expect.

**11. Review the client’s blood typing and crossmatching results before blood administration.**[Blood transfusion](https://nurseslabs.com/blood-transfusion-therapy-nursing-management/) to replace blood loss with postpartum hemorrhage is often necessary. In most agencies, blood typing and crossmatching are done when a client is admitted to the [labor](https://nurseslabs.com/labor-stages-labor-induced-nursing-care-plan/) service so blood can be rapidly crossmatched.

**12. Administer**[**IV fluids**](https://nurseslabs.com/iv-fluids/)**using an 18-gauge catheter or via a central venous line.**Initial fluid replacement with a balanced crystalloid solution is recommended (102 mL of crystalloid for every 1 mL of blood loss). One randomized controlled trial in severe PPH found a very low incidence of fibrinogen depletion and coagulopathy when clients with an estimated blood loss in the range of 1,400-2,000 mL were resuscitated with crystalloids (Muñoz et al., 2019).

**13. Administer fresh whole blood or other blood products as indicated.**Fresh frozen plasma should be considered in massive ongoing PPH when there is a clinical suspicion of coagulopathy and laboratory tests are not normal. RBC transfusion should only be considered when the hemoglobin concentration is less than 7 g/dL. Platelets should be transfused when the count is <75×10⁹/L, aiming to maintain a level >50×10⁹/L during ongoing PPH (Muñoz et al., 2019).

**Administer medications as ordered.**

**14. Uterotonic drugs (e.g., oxytocin [pitocin], [methylergonovine](https://nurseslabs.com/female-reproductive-system-drugs/%22%20%5Ct%20%22_self) maleate [Methergine], prostaglandin F2a [Prostin 15M].**Intravenous oxytocin acts immediately after administration and helps the uterus maintain its muscle tone by increasing uterine contractions. Oxytocin has a short duration of action, and symptoms of uterine atony can quickly recur if it is administered as a single dose. If oxytocin is not effective, carboprost tromethamine, a prostaglandin F2a derivative, or methylergonovine maleate, an ergot compound, are given intramuscularly. Common side effects include headache, [nausea](https://nurseslabs.com/nausea/), [vomiting](https://nurseslabs.com/cholera/), fever, chills, and [hypertension](https://nurseslabs.com/hypertension-nursing-care-plans/). Blood pressure should be assessed before administering methylergonovine*and should not be given if BP is more than 140/90 mmHg.*

**15.**[**Antibiotics**](https://nurseslabs.com/antibiotics/)**(based on culture and sensitivity of the lochia)**.
Antibiotics act as prophylaxis to prevent infection or may be needed for an infection that caused or contributed to uterine subinvolution or hemorrhage. In clients presenting with secondary PPH, an assessment of vaginal microbiology should be performed (high vaginal and endocervical swabs), and appropriate use of antimicrobial therapy should be initiated when endometritis is suspected (Muñoz et al., 2019).

**16. Insert an indwelling Foley catheter (IFC) as ordered.**
[Catheterization](https://nurseslabs.com/cardiac-catheterization-nursing-care-plans/) will accurately measure the renal status and perfusion concerning fluid volume. Additionally, bladder distention is an easily corrected cause of uterine atony. The nurse should catheterize the client if she cannot urinate on the toilet or in a bedpan. Most healthcare providers include an order for catheterization to prevent delaying this corrective measure. After the uterus is firm from massage, the bladder should be emptied to keep the uterus firm.

**17. Prepare for surgical intervention if indicated**Many surgical interventions can be used, such as uterine compression sutures, selective arterial ligation, or hysterectomy (subtotal or total). These are mostly used as a last resort because these adversely affect future fertility and pregnancy. If bleeding is not resolved despite treatment with uterotonics and other available conservative interventions, invasive surgical interventions are recommended (Muñoz et al., 2019). *Surgical management may include evacuation of hematoma and ligation of a bleeding point, laceration or episiotomy extension, D&C, abdominal hysterectomy, or bilateral ligation of the hypogastric artery.*

**18. Assist with procedures as indicated,** such as manual separation and removal of placenta.
Hemorrhage stops once placental fragments are removed and uterus contracts, closing venous [sinuses](https://nurseslabs.com/respiratory-system/). Removing the retained placental fragment is necessary to stop the bleeding and can usually be accomplished by a dilatation and curettage (D&C). [Methotrexate](https://nurseslabs.com/antineoplastic-agents/) may also be prescribed to destroy the retained fragment.

**19. Uterine replacement or packing if inversion seems about to recur.**Replacement of the uterus allows it to contract, closing venous sinuses and controlling the bleeding. It is theorized that inward compression of the vasculature with balloon or packing decreases blood flow and eventually assists with the [clotting](https://nurseslabs.com/hemophilia-nursing-care-plans/) cascade. A balloon is placed manually and held in place while inflating. Ultrasound can help confirm the placement. Once confirmed, the balloon is inflated with saline until compression is achieved and decrease/cessation of bleeding is noted (Nathan, 2019).