"BRASSS V DRAPE V/S MODIFIED GROSS FORMULA IN ESTIMATION OF POSTPARTUM BLOOD LOSS"

BY

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LIST OF ABBREVIATIONS USED

ACOG - American College of Obstetricians and Gynaecologists

ANP – Atrial natriuretic peptide

BMI – Body mass Index

BNP – Brain natriuretic peptide

CDC – Centre for Disease Control

CDMR - Caesarean section done at Maternal Request

CEBL – Calculated estimated blood loss

CTRI - Clinical Trials Registry – India

EBL- Estimated blood loss

EDD - Expected Date of Delivery

EDTA- Ethylenediamine tetraacetic acid

Hb – Haemoglobin

Hct- Haematocrit

HIC- High income countries

JNMC - Jawaharlal Nehru Medical College

KAHER - KLE Academy of Higher Education and Research

KLES - Karnataka Lingayat Educational Society

LMIC- Low and middle income countries

LMP - Last Menstrual Period

LSCS - Lower Segment Caesarean Section

MCV – Mean corpuscular volume

mL - Millilitre

MW - Mann Whitney U test

NICU - Neonatal Intensive Care Unit

PCV - Packed Cell Volume

PPH - Postpartum Haemorrhage

PRBC - Packed Red Blood Cells

PT - Paired t Test

QBL- Quantitative blood loss

RBC – Red blood cell

SD - Standard Deviation

t test - Two sample t test

USG - Ultrasound

VBAC – Vaginal birth after caesarean section

VEBL – Visually estimated blood loss

WBC – White blood cell

WHO - World Health Organization

ABSTRACT

Background: Postpartum hemorrhage is the key contributor to maternal mortality, responsible for 35% of maternal deaths globally. Enhancing the accuracy of blood loss assessment is essential for determining the extent of blood loss and avoiding PPH-related morbidity and death.

Objective: The study aims to correlate postpartum blood loss by BRASSS V drape vs modified Gross formula.

Materials and methods: An observational study was carried out in KLES Dr. Prabhakar Kore Charitable hospital, a tertiary care institute located in Belagavi.

A hospital based observational study conducted at the Department of 258 women admitted between April 2023-March 2024 beyond 28 weeks of gestation, delivering vaginally were recruited for the study. Exclusions included obese women, severe anemia, histories of anticoagulant and Aspirin use and blood transfusion within 48 hours after delivery.

The study's reference technique is the BRASSS-V drape, a cost-effective, precisely calibrated blood collection receptacle that quantifies blood loss "in the immediate postpartum period."

Modified Gross formula calculates actual blood loss (ABL)= BV [Haematocrit $_{initial}$- Haematocrit $_{final}$]/ Haematocrit $_{mean}$, wherein blood volume (BV) is measured by kg of body weight times 70 ml/kg.

Results: 620 participants were screened for eligibility and 258 were enrolled in the study. 68.2% cases were registered, 53.8% multigravida and 84.8% term patients. 68.9% had spontaneous labor and 84.11% had an episiotomy during delivery. 13.5% of the study population had postpartum hemorrhage and 27.9% used additional uterotonics after delivery. Mean hemoglobin levels were 11.6g/dl pre delivery and 10.24 g/dl post-delivery. Mean hematocrit levels were 36.99 pre delivery and 32.8 post-delivery.

The correlation coefficient between blood loss measured by Brasss V drape and modified Gross formula was 0.9592 with a p value of <0.001.

Conclusions: Blood loss estimates from the BRASSS-V drape and the modified Gross formula show a significant correlation. Modified Gross formula calculates slightly higher blood loss compared to the drape method, and this may be accounted using mops during vaginal delivery with Brass V drape. Even though use of Brasss-V Drape is the regular practice for blood loss estimation, modified gross formula presents a more pragmatic, cost effective alternative which is easier to implement, especially in underserved areas. Modified Gross formula also offers a viable option for estimating blood loss in caesarean sections where use of drapes is impractical and traditional methods lack accuracy.

Key words- postpartum hemorrhage, BRASSS V drape, Modified gross formula, Vaginal delivery, observational study

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INTRODUCTION

The WHO identifies postpartum haemorrhage as the leading cause of maternal mortality, responsible for 35% of maternal mortality globally. Within the first 24 hours post birth, half of all maternal mortalities ensue, predominantly due to excessive blood loss (WHO-2012) [2]. Postpartum haemorrhage (PPH) is mostly preventable and nearly eradicated in high-income countries, yet it remains a significant issue in low- and middle-income countries, where women are disproportionately affected.[3]

The global Sustainable Development Goal targets to reduce maternal mortality by 2030 to 70/100000 live births, prioritizes lowering of maternal mortality rates resulting from PPH [4].

54%-93% of maternal mortalities can be attributed to postpartum haemorrhage (PPH), which is potentially preventable. Considering that nearly 40% of all postpartum haemorrhage (PPH) cases arise in low-risk women, all the women giving birth are susceptible to this risk[5].

If left untreated, postpartum haemorrhage (PPH) can lead to hypovolemia, shock, multiple organ failure, and maternal demise within two to six hours, contingent on the severity of blood loss and pre-existing factors like anaemia. [2]

Postpartum haemorrhage (PPH) is an avoidable, multifaceted and complex problem. Blood loss estimation is pivotal in management of postpartum management, especially in developing countries where access to healthcare resources may be limited.

Preventing PPH-related mortality and morbidity requires improving the precision and accuracy of blood loss measurements. The most frequently employed

technique for calculating blood loss is visual estimation. Numerous researches have highlighted the fallacies of visual assessment, revealing a proclivity to overemphasize blood loss at lower volumes and misjudge it at higher volumes, particularly during childbirth [6]. If blood loss is inaccurately assessed and not promptly managed, it can lead to fatality.

By contrasting the blood loss estimating formulae with the widely used benchmark method—direct measurement of blood loss—this study seeks to evaluate and validate the accuracy of the formula based blood loss estimation. All blood loss estimation formulas are based on the same principles, mainly on the idea that euvolemia occurs in the interim between the pre-operative and post-operative phases. This idea states that the patient's blood volume and the perioperative variations in haematocrit are correlated with the estimated amount of blood loss. [7].

NEED FOR STUDY

Need for reliable blood loss quantification has led to the proposal of several formulae which are based on clinical parameters

Enhancing the precision and dependability of calculating blood loss is vital for early correction of anaemia and the prevention of death and complications from postpartum haemorrhage (PPH). This study will use the volumetric approach as a reference method to evaluate and correlate the blood loss estimation formula's accuracy.

The formulistic method can be used to assess blood loss in surgical procedures such as LSCS where use of drapes is not feasible and traditional methods lack accuracy

AIMS AND OBJECTIVES

Correlation of postpartum blood loss by modified Gross formula versus BRASSS V drape

REVIEW OF LITERATURE

Hemodynamic changes during pregnancy

During pregnancy, profound changes are noted in the maternal hematopoietic system to support the mother as well as the developing foetus.

The mother's hematopoietic system undergoes profound changes throughout pregnancy in order to support the developing foetus as well as the mother. One of the earliest and most significant haematological changes is hypervolemia. This phenomenon shields the mother from blood loss occurring after delivery as well as from hypotension, which happens in the second half of pregnancy as a result of blood pooling in the lower extremities when standing, sitting, or laying supine.

I. Plasma Volume Increase

A. **Initiation**: Plasma volume commences to increase around 6 weeks of gestation and increases by 10-15% by 12 weeks. Rapid expansion takes place till 30-34 weeks, following which plasma volume plateaus or slightly decreases at term.

B. **Peak Volume**: By 32 weeks, blood volume reaches its maximum, ranging between 4700- 5200 ml, which is 30%- 50% higher than in non-pregnant women. The mean blood volume recorded typically ranges between 73 - 96 mL/kg higher than pre pregnancy values [8].

This plasma volume expansion is associated with 6-8 litres of water retention and 900 -1000 mEq sodium retention which is then distributed among the maternal intra and extracellular spaces, foetus and amniotic fluid [8].

Redistribution of fluid is noted during pregnancy. Studies indicate an increase in both interstitial and plasma volumes with increased extravasation of fluid in the extracellular space as compared to non-pregnant levels [8].

C. Hormonal influence on plasma volume:

Nitric Oxide and Steroid hormones alters the balance of maternal fluids and enhances plasma volume [9].

Estrogen hormone promotes production of angiotensinogen from liver, which acts by augmenting renal retention of sodium.

Estrogen stimulates renal, uterine, and hepatic renin production which further stimulates aldosterone secretion, leading to increased total body water [10].

Renin, angiotensin, aldosterone-

According to some hypotheses, fluid retention occurs during a "underfill" state, in which the initial vasodilation causes the release of hormones such as renin, angiotensinogen, and aldosterone. [11]

As an alternative, a state of "overfill" has been described as a sudden spike in salt retention brought on by elevated mineralocorticoids, which subsequently causes fluid retention and an increase in blood volume before vasodilation occurs. [12,13]

Atrial Natriuretic peptide (ANP) and Brain natriuretic peptide (BNP)

The peptide hormones brain natriuretic peptide (BNP) and atrial natriuretic peptide (ANP) are crucial for preserving fluid homeostasis during pregnancy.

The primary mechanism of atrial release of ANP is through stretch receptors triggered by increase in blood volume. It acts as a diuretic hormone and peripheral vasodilator.

Volume expansion during the first trimester of pregnancy triggers the atrial stretch receptors and induces peripheral vasodilation as well as boosts stroke volume and ANP levels.

Atrial natriuretic peptide plays a consistent role in postpartum diuresis as shown by the progressive rise of its levels throughout pregnancy and then again after birth.

Similar to ANP, Brain natriuretic peptide produced by the cardiac ventricles, lowers systemic vascular resistance and encourages diuresis, further raising the cardiac output (CO).[14,15]

Other Hormones:

The rise in plasma volume is also attributed to Growth hormone, Adrenocorticotrophic hormone, Prolactin, Prostaglandins, Placental lactogen and Deoxycorticosterone. [16]

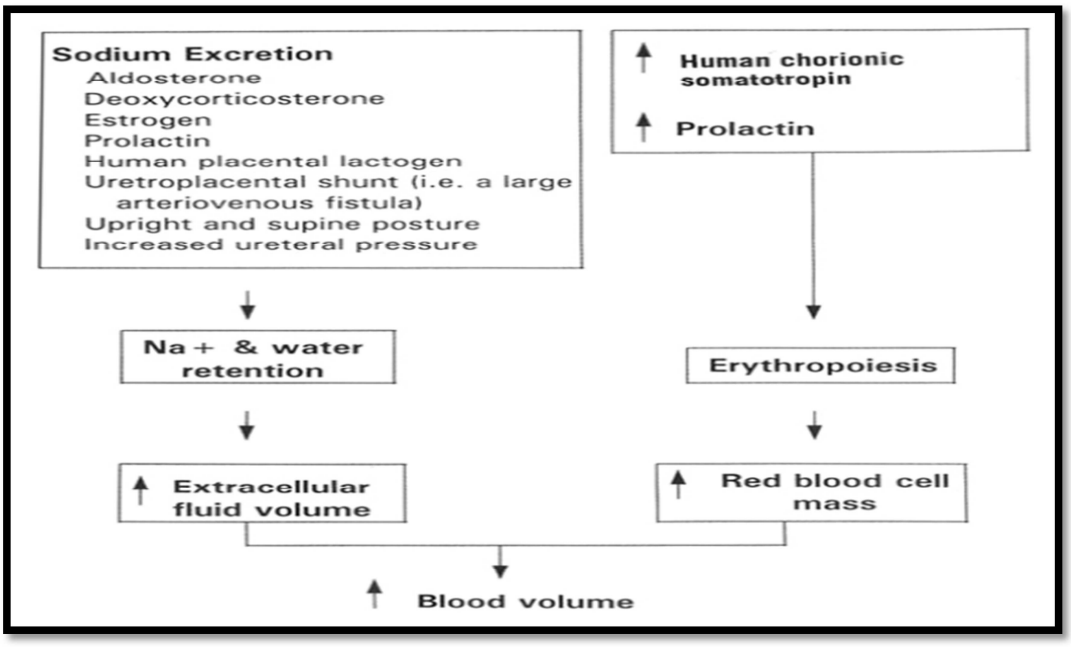

Figure 1: Hormonal influence on blood volume

Role of increased Plasma Volume:

The enhanced plasma volume is believed to meet with the heightened metabolic demands of the uterus and placenta, facilitating the delivery of nutrients to the developing foetus as well as the removal of waste. The rise in plasma volume during pregnancy likely responds to an under-filled vascular system caused by systemic vasodilation and increased vascular capacitance[17].

Additionally, blood viscosity drops by around 20%.

Blood volume further rises during labour, when uterine contractions force blood from the inter-villous area into the central circulation

Advantages of haemodilution of pregnancy:

In addition to fulfilling the increased circulatory demands of the expanding uterus, growing foetus, and placenta, the increased blood volume and improved

coagulation also safeguard the mother against excessive bleeding after birth, among other vital roles.

Hemodilution raises plasma volume in proportion to erythrocyte volume to prevent undue erythrocyte loss during separation of the placenta. [18]

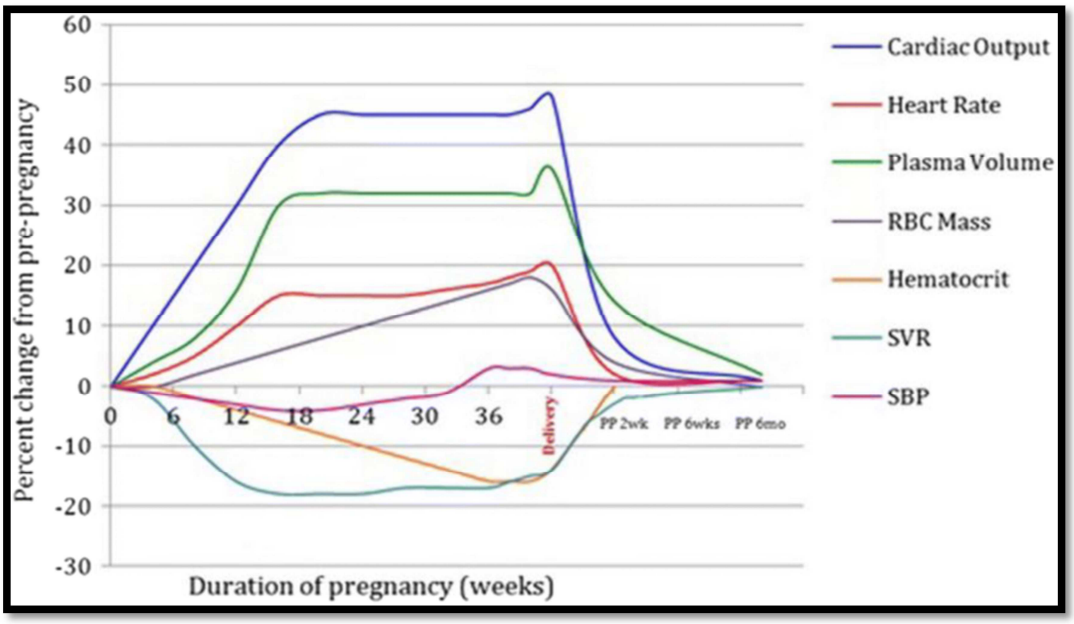

Figure 2: Hemodynamic changes during pregnancy

II. Red Blood Cell (RBC) Mass

At 8 to 10 weeks of gestation, red blood cell mass begins to rise. By at the end of the pregnancy, it attains a volume of 250–450 ml, which is 20%–30% greater than non-pregnant levels.

Red cell and haemoglobin mass reach their peak increment between 12 and 28 weeks of pregnancy. Plasma volume expands more significantly than haemoglobin mass and erythrocyte volume hence healthy pregnant women experience a slight decrease in haemoglobin concentration, haematocrit and RBC count. [19]

Hormonal Influence:

1) **Erythropoietin-**

- The primary factor driving the increase in RBC mass is a rise in erythropoietin levels, which stimulates RBC production. [20]

- The glycoprotein hormone Erythropoietin, in addition to other growth factors including interleukin-3, G-CSF, SCF, and IGF-1 increases the rate of maturation of erythropoietic progenitor cells. Increased Erythropoietin levels in pregnancy are likely due to the combined effects of sex hormones such Progesterone, Estrogen and Human placental lactogen [21].

- Erythropoietin levels increase by 50% in normal pregnancies, and the lifespan of RBCs is slightly reduced during this period.

- Increased erythropoiesis is supported by hormones such as Progesterone, Placental chorionic somatomammotropin and Prolactin.[22,23]

  The erythrocyte mass per unit of body weight does not change throughout pregnancy, regardless of the spike in erythrocyte production. [24]

RBC mass, effect on 2, 3 Diphosphoglycerate and oxygen affinity in pregnancy-

Greater oxygen demands of pregnancy are partially satisfied by the enhanced red blood cell bulk. In addition, RBC 2,3-Disphosphoglycerate levels rises, reducing oxygen affinity and moves the haemoglobin-oxygen dissociation curve to the right. This decreased oxygen affinity promotes oxygen transfer over the placenta to the foetal RBCs, which have a greater oxygen affinity due to foetal haemoglobin.[25,26]

III. Changes in RBC indices

1) Mean corpuscular volume (MCV):

Increase in RBC mass is accompanied by a slight rise in MCV in healthy pregnant individuals averaging 4 fl in women with sufficient iron, peaking at 30–35 weeks of gestation. [27]

Increased RBC production results in the rise in MCV levels. A shift is noted with greater percentage of younger and larger RBCs due to enhanced erythropoiesis.

2) Haemoglobin Concentration: Maternal plasma volume decreases in the third trimester followed by stabilisation of haemoglobin levels after decline of 1-2 g/dL in the late second trimester.[19]

Lowered haemoglobin levels (11-12 g/dl) can be attributed to a rise in plasma volume greater than that of the red cell mass during pregnancy.

3) Haematocrit values can plummet to 33%-38%.

The reported drop in haematocrit and haemoglobin levels during pregnancy is partially caused by shorter lifespan of RBC's. This results from 'emergency haematopoiesis' triggered by elevated erythropoietin levels. Erythrocytes formed under these conditions are shown to have a shorter lifespan, as their development skips the terminal cell division, leading to the expulsion of the nucleus one division earlier, producing younger erythrocytes that mature into larger cells and are removed from circulation sooner. [23,24]

The term 'physiological anaemia' was coined by Strauss in1934. It was defined as the apparent anaemia occurring in pregnancy as a result of hydraemic or diluted blood [28].

Plasma volume expansion is greater than the increase in RBC mass leading to dilutional anaemia of pregnancy. These adaptations collectively ensure that both the mother and the developing foetus receive adequate nutrients and oxygen, while also preparing the body for the potential blood loss during childbirth.

Variable	Non-pregnant adult	First trimester	Second trimester	Third trimester
Hemoglobin (g/dl)	12.0–15.8	11.6–13.9	9.7–14.8	9.5–15.0
Hematocrit (%)	35.4–44.4	31.0–41.0	30.0–39.0	28.0–40.0
Mean corpuscular hemoglobin (MCH) (pg/cell)	27–32	30–32	30–33	29–32
Mean corpuscular volume (MCV) (μm^3)	79–93	81–96	82–97	81–99
Red blood cell count (RBC) ($\times 10^6/mm^3$)	4.00–5.20	3.42–4.55	2.81–4.49	2.71–4.43
Red cell distribution (RDW) (%)	<14.5	12.5–14.1	13.4–13.6	12.7–15.3

Table 1:Changes in the blood indices during pregnancy

Adapted from Cunningham

POSTPARTUM HEMODYNAMIC CHANGES:

After the delivery of the baby and placenta, the postpartum period, referred to as puerperium, commences and continues until the mother's physiological and anatomical alterations return to the state prior to the pregnancy. Puerperium can be divided into 3 periods- The acute phase, which last for the first 24 hours following placental delivery; the early phase, which lasts for up to 7 days; and the late phase, which lasts for up to 6 weeks.[29]

Hematologic changes related to pregnancy return to baseline by six to eight weeks postpartum. Plasma volume decreases immediately after delivery, then temporarily rises again two to five days later.

Post pregnancy, there is a fluid shift to intravascular space from extravascular compartment amounting to 6-8 L of the net body water. Pregnancy induced enhanced functioning of RAAS (renin, angiotensin, aldosterone system) leads to retention of 950 milli-equivalents of sodium. Augmented levels (x1.5 times) of anti-natriuretic peptide hormone in the puerperium inhibits hormones promoting excretion of sodium such as vasopressin, angiotensin-2 and aldosterone. A period of rapid diuresis follows in the next 2 weeks resulting in daily urine output of approximately 3000cc/day [30,31].

Plasma volume gradually decreases but remains 10 to 15 percent above non-pregnant levels at three weeks postpartum, typically normalizing by six weeks postpartum.

Early puerperium is marked by increased erythropoietin levels. Despite the significant loss of blood during delivery, haemoglobin and haematocrit levels remain relatively stable in the immediate and early puerperium.

Physiologic anaemia should resolve by six weeks postpartum as plasma volume returns to normal by this time.

Immediately after delivery, cardiac output (CO) increases by 60% to 80%, then rapidly decreases within 10 minutes to near-normal levels by 1 hour postpartum. [8]

The auto transfusion of blood from the uterus to the systemic circulation paired with the rapid mobilisation of extracellular fluid and enhanced venous return from lowered venacaval compression causes of this high-output state. Placental separation in the 3rd stage of labour is not known to cause additional changes in the circulatory physiology of the woman [8].

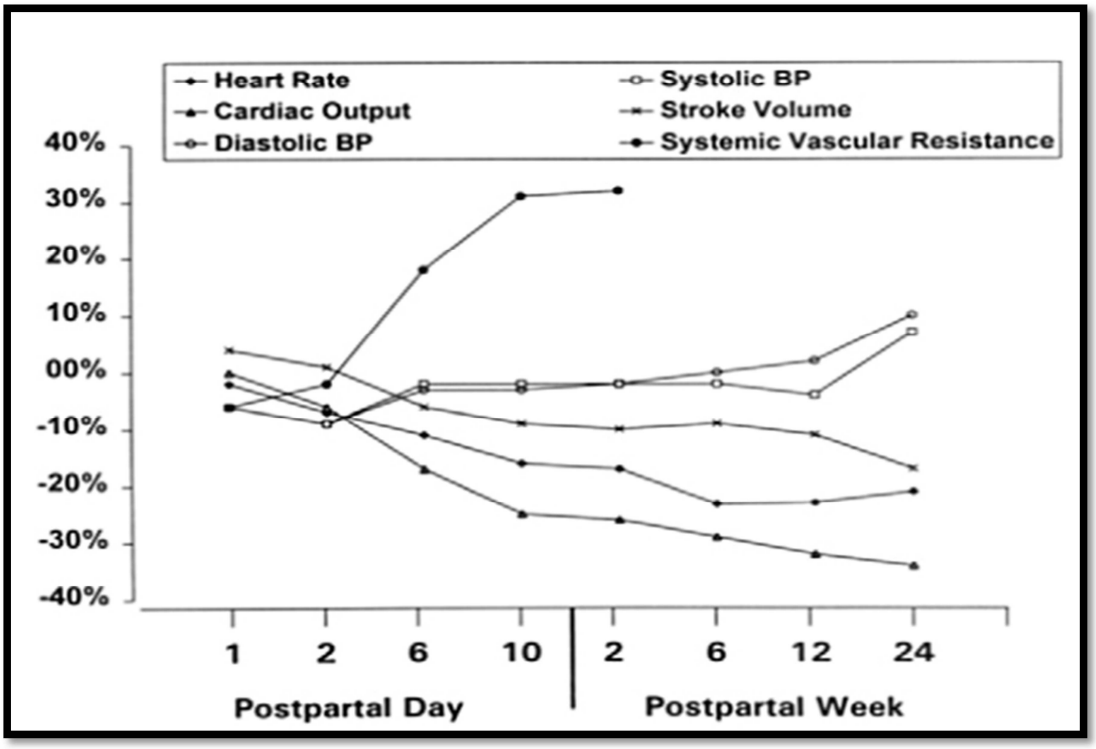

Figure 3: Hemodynamic changes postpartum

BLOOD COLLECTION METHODS:

There are 2 primary blood sampling systems.

A. Closed system

B. Open system

A. Closed system:

1. Use of needle and syringe

2. Vacuum extraction system

1. USE OF NEEDLE AND SYRINGE:

Drawing of blood using syringe and hypodermic needle is the most common practice.

Procedure :

a) Needle packaging is opened from the hub side, ensuring that the needle remains capped.

b) Sterile wrapping is removed from the end of the plunger ensuring the protection of the nozzle within the confines of the packaging.

c) Syringe is exposed and inserted onto the exposed hub of the capped hypodermic needle.

2. VACUUM EXTRACTION SYSTEM:

Closed blood collection system prevents direct contact with blood as well as draws multiple samples with a single prick.

Procedure:

Vacuum extraction system is available in multiple gauge sizes. The end, covered by a rubber stopper is screwed onto the barrel (bulldog). The 2 ends are separated by a thread where the barrel end is secured. The sample collection tube is held in place by the barrel in place, protecting from direct exposure to the blood sample. After venepuncture, the tube is pushed onto the needle, and blood sample is automatically collected in the collection tube assisted by the vacuum until the desired quantity is collected. [32]

B. Open systems- Winged steel needle attached with syringe [33,34]

SOURCES OF BLOOD COLLECTION-

There are three sources for blood collection: arterial, venous, and capillary.

1. Venous blood sampling is the most typically utilised method for blood sampling due to the ease in collection compared to arterial blood draw. This is the most commonly employed method in clinical set-ups and blood banks. Samples collected from the medial cubital vein provide greater volumes, allowing for the assessment of multiple biological indicators and greater feasibility than capillary blood [35].

   Blood banks use capillary samples for initial screening to determine donation eligibility.

2. Arterial blood sampling- Complex procedure wherein blood is drawn from the radial artery in the forearm. Arterial blood is useful for arterial blood gas measurements and haemoglobin testing. Due to the complexity of this procedure, only well-trained personnel should perform arterial blood collection in clinical settings. [36]

3. Capillary blood sampling- Primarily used for small volume collection.

HEMATOCRIT-

Terminology "haematocrit" is derived from the Greek words “haemato” and “krites.”

The test measures the volume of (RBS s) packed red cells relative to the total volume of blood and is reported as packed cell volume (PCV).

Blood sample is centrifuged and blood separates into three layers: The bottom layer comprising of RBCs, platelets, white cells (WBCs) in the middle layer and topmost layer of plasma. [37]

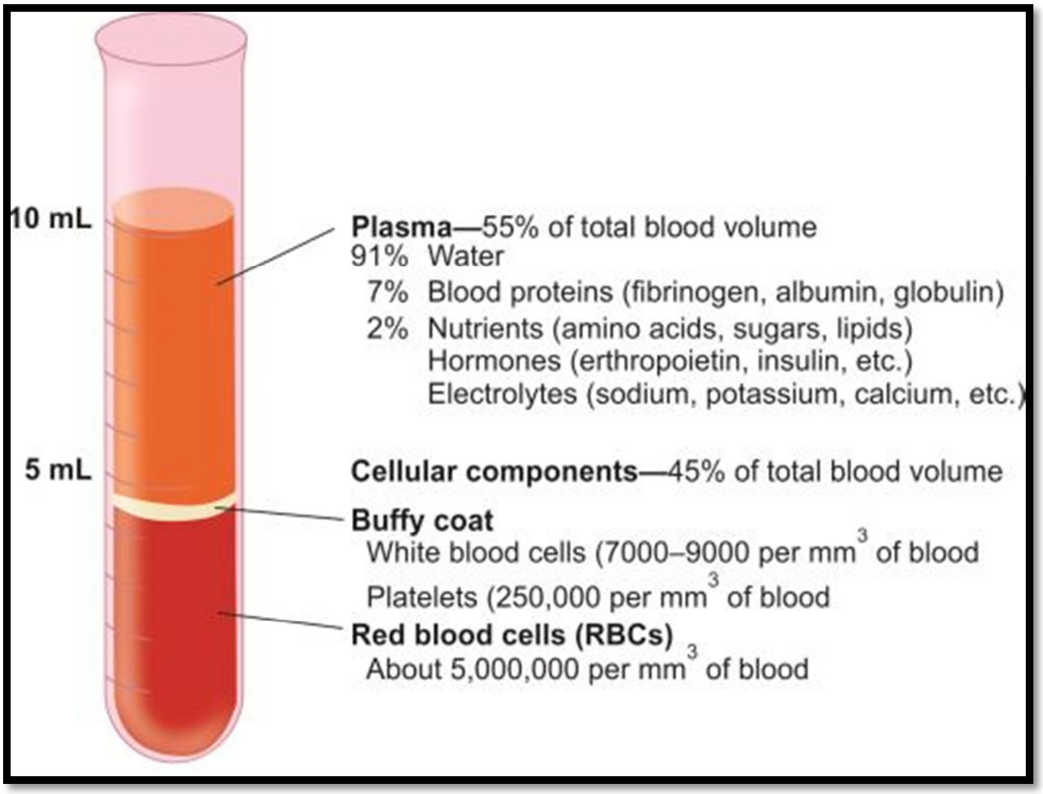

Figure 4: Haematocrit estimation and separation of blood in layers

Calculation of haematocrit:

Computed by "division of the length of packed RBC layer by the total length of cells and plasma and multiplication by 100". The proportion is reported in percentage. Adult male haematocrit values range from 40-54% whereas as the adult female haematocrit values range from 36-48%.[38]

Methods-

1. Macrohematocrit
2. Microhematocrit
3. Automated analysers
4. Blood gas analysers

1) MACROHEMATOCRIT METHOD:

Haematocrit calculation by "Wintrobe hematocrit tube", is referred to as the "macrohematocrit method". A 110nm long, narrow , glass tubing with graduations from 0 -100 mm in both descending and ascending sequence.

Requirements for the test: "Wintrobe hematocrit tube", a centrifugation machine, Pasteur pipette.

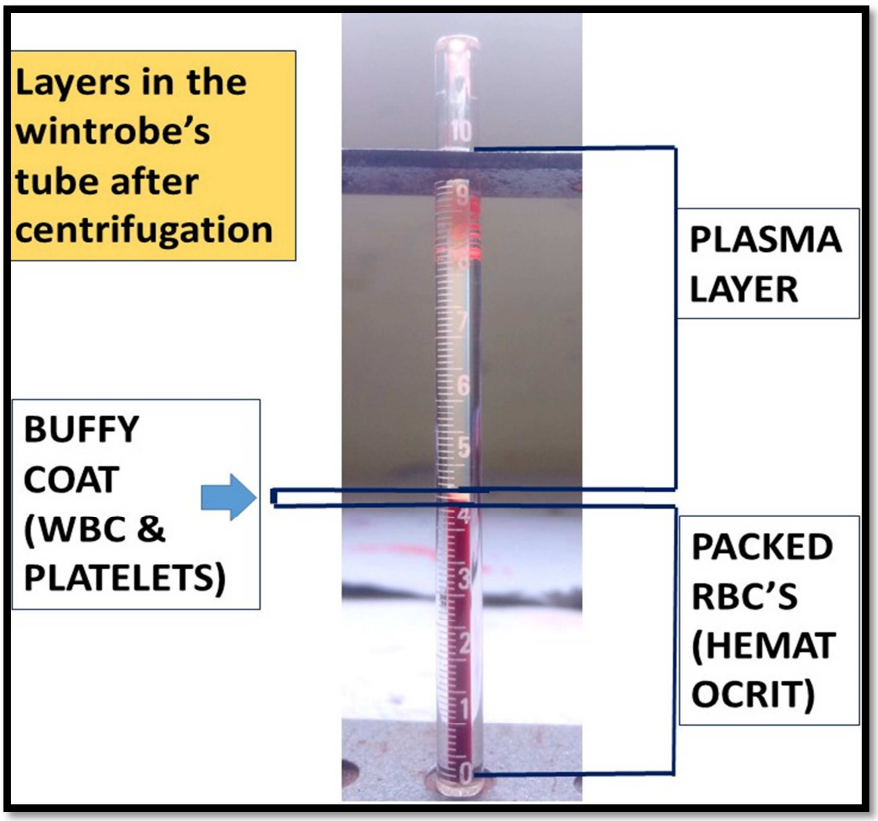

Figure 5: Wintrobe tube

Blood collection-

Venous blood collected in vaccutainer with ethylenediaminetetraacetic acid (EDTA) or heparin using proper aseptic techniques is used.[39]

B) Blood sample is filled up to a reading of 100 mm with the help of a pipette, ensuring no air bubbles are present.

C) The tube is centrifuged. For a single specimen testing, another blood-filled Wintrobe tube is used as a counterbalance.

D) The centrifuge rate is set to 3000 rpm for 30 minutes.

E) After centrifugation, the height of the RBC column is reported as haematocrit, excluding the buffy coat (WBCs and platelets) to avoid false positives. [40]

2) MICROHEMATOCRIT METHOD:

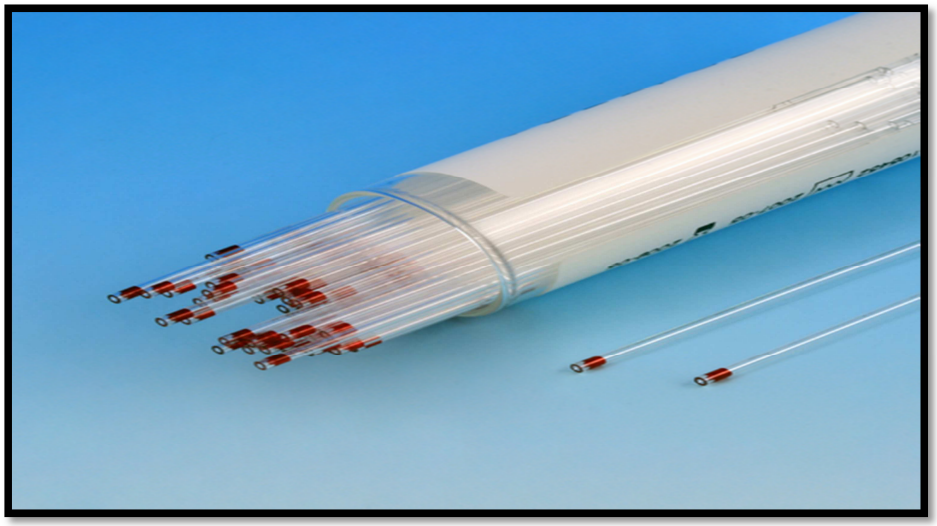

Figure 6: Microhematocrit tube

A smaller capillary tube instead of "Wintrobe's tube" is used. Smaller blood sample and a shorter test time is required, making it advantageous for patients with difficult blood collection (e.g., paediatric patients or those with hypovolemia), as a single finger-prick sample is sufficient.

Testing Procedure:

1. Capillary tube (typically 75 mm long, 1 mm in diameter) is filled with blood.
2. Both ends are sealed with a clay sealant or by heat.
3. Centrifugation at 11,000 to 12,000 rpm for 4 to 5 minutes.
4. Results are interpreted using a scale on a tube holder or a microhematocrit card reader.

Advantages of the microhematocrit method include:

1. Requires a small sample volume
2. Relatively fast analysis
3. Allows detection of hemolysis when reading the result
4. No dilution required [40]

Disadvantages of the Microhematocrit Method:

1. Requires Careful Preparation in sealing the capillaries
2. Uncertain Manual Reading.
3. Risk of Leakage can result in falsely low readings due to a greater loss of RBCs as compared to plasma.
4. Trapped Plasma can cause falsely high haematocrit (Hct) readings, up to 1.5-3.0%.
5. Abnormal RBC Sizing : Blood samples with abnormally sized or shaped RBCs trap more plasma, leading to a higher positive bias in haematocrit readings.
6. Effect of Excess EDTA can cause cell shrinkage, resulting in falsely low haematocrit readings.
7. Haemolysis causes destruction of cell walls and can result in falsely low readings.
8. Hyperosmotic conditions scan alters cell volumes leads to falsely low readings. [41]

3) AUTOMATED ANALYSERS:

Coulter principle measures impedance as the blood travels through a passage between 2 electrodes, measuring the average RBC size and count.

Measures the average red blood cell size and count using the Coulter principle, which detects impedance as the blood passes through a passage between two electrodes [42].

Coulter principle- Wallace H. Coulter established in October of 1948 that red blood cells can be identified by the brief variations in current they produce when they are suspended in a saline solution and passed through a tiny aperture with an electrical current. Whenever an erythrocyte flows through the aperture, the electrical resistance rises because the red blood cell membrane is non-conductive. The volume of erythrocytes passing through the orifice is determined by the difference in action potential between the electrodes, and those erythrocytes are counted. The dilution factor, erythrocyte count, and mean cell volume are used to calculate the haematocrit. [43].

Requirements: Blood sample with anticoagulant is required.

Blood sample is automatically mixed with an isotonic solution before adding to analyser.

Advantages of automated analysers include:

1. Assessment of haematocrit along with other haematology parameters using a single blood sample.
2. Dilution of the sample eliminates issues with hyperosmotic samples.
3. No preparation or manual dilution needed.

Limitations:

1. **Higher WBC or Reticulocyte Counts:** These cells have higher cell volumes and can affect calculation of haematocrit, red cell counts and haematocrit measurements and provide artificially exaggerated values.

2. **Auto-agglutination:** Two or more cells may be calculated as one, leads to falsely low results.

3. **Haemolysis:** Destruction of cell walls results in falsely low readings.

4. **Microcytosis:** Decreased mean corpuscular volume because of microcytosis can show low haematocrit results, as red cells may be counted falsely as leukocytes.

5. **Abnormal Osmolality:** The use of isotonic solution may raise the MCV in patients with aberrant osmolality, leading to erroneously high haematocrit levels. [42]

4) BLOOD GAS ANALYZERS: By employing a conductivity measurement adjusted for the quantities of conducting ions in the sample, blood gas analysers may assess a variety of stat parameters, including hematocrit[42].

Materials: Venous or arterial sample in a heparinized syringe/ test tube

Method: A solution's conductivity refers to its capacity to transfer electricity. The quantity, charge, and mobility of the ions (charged particles) in a solution affect the amount of electrical current flows through it. The quantity, dimensions, and form of cells floating in the solution also affect the ions' mobility.

Red blood cells and plasma fluid have distinct electrical as well as physical properties. Erythrocyte membranes are electrically insulating due to their lipid content, making them non-conductive. Plasma, rich in electrolytes and charged proteins (mainly Na+ at about 140 mmol/L), is fairly conductive. An inverse relationship is noted between the haematocrit values and electrical conductivity after accounting for the concentration of charged particles [42].

Critical Factors for Haematocrit Determination:

1. **Electrolytes:** Sodium, the primary plasma electrolyte, is measured and used in haematocrit calculations.
2. **Temperature:** Blood gas analysers use thermostat measuring chambers and preheat the blood sample, ensuring no temperature-related variability.
3. **Proteins:** In healthy individuals, plasma protein concentration is constant, and a fixed value is included in haematocrit calculations.

Advantages-

- Requires only a small sample volume
- Quick turnaround time
- Combines multiple parameters with haematocrit assessment such as measurement of blood gas, levels of serum electrolytes, pH etc
- No dilution or prior preparation is necessary

Limitations:

1. **Acute Hyperosmotic Conditions:** Causing cell shrinkage due to water moving out of cells, resulting in false readings such as low haematocrit values.

2. Abnormal plasma osmolality: Patients undergoing treatment with plasma expanders, receiving massive blood transfusion, receiving medications diluting blood can report falsely low haematocrit values.

3. **Arterial vs. Venous Blood:** Haematocrit readings for arterial blood is 2% greater than the venous sample[42].

METHODS OF HEMOGLOBIN ESTIMATION-

1. **Cyanmethemoglobin method:**Duration: Preparation time of 5-10 minutes followed by 60 seconds to conduct the test

Reagent- Drabkin's reagent

Potassium cyanide and Ferricyanide solutions react with haemoglobin resulting in conversion to methemoglobin. The amount of absorbance of the produced cyanmethemoglobin is measured using a photo-electric-colorimeter at 540 nm against a standard solution for quality control. The haemoglobin concentration reported is based on the absorbance result recorded in the device.[44]

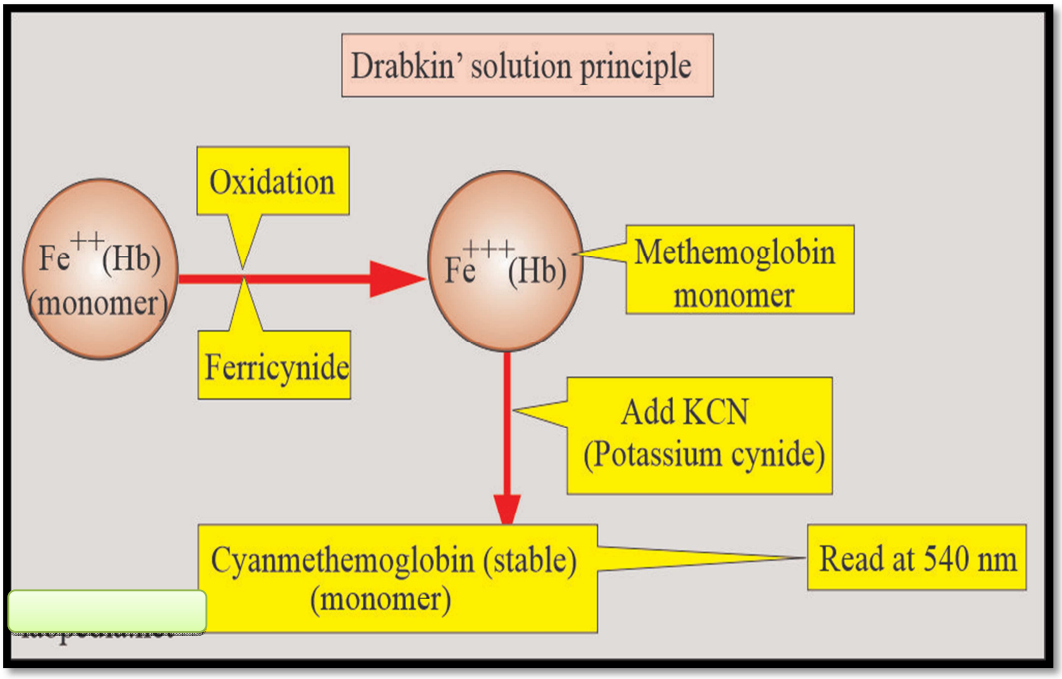

Figure 7: Cyanmethemoglobin method of haemoglobin estimation

2. **Indirect Cyanmethemoglobin (filter paper) method:**

Follows the same principle as cyanmethemoglobin method but involves spotting blood on filter paper. It is often used for its simplicity and reliability. Due to the

minimally invasive nature of sampling, the ease of packaging and transporting samples over long distances, the indirect cyanmethemoglobin method is recommended, particularly when laboratories are located far from blood collection points [44].

4. **Vanzetti's "Azide Methemoglobin Method"**:

Haemiglobincyanide's (HiCN) absorbance is shared by potassium ferricyanide, which transforms haemoglobin to stable azide methaemoglobin. First, capillary action is used to draw blood into a dry reagent cuvette. The red blood cells are then lysed by the reagent. Azide methaemoglobin is created when the free haemoglobin is oxidised to methemoglobin and is later measured by the device. [44]

5. **Copper Sulphate technique**

Duration: 20 seconds

Haemoglobin concentration is based on estimation of specific gravity from a a blood sample where the specific gravity value of 1.053 corresponds to haemoglobin concentration of 125 g/L.[44]

6. **Sahli's hemoglobinometer:**

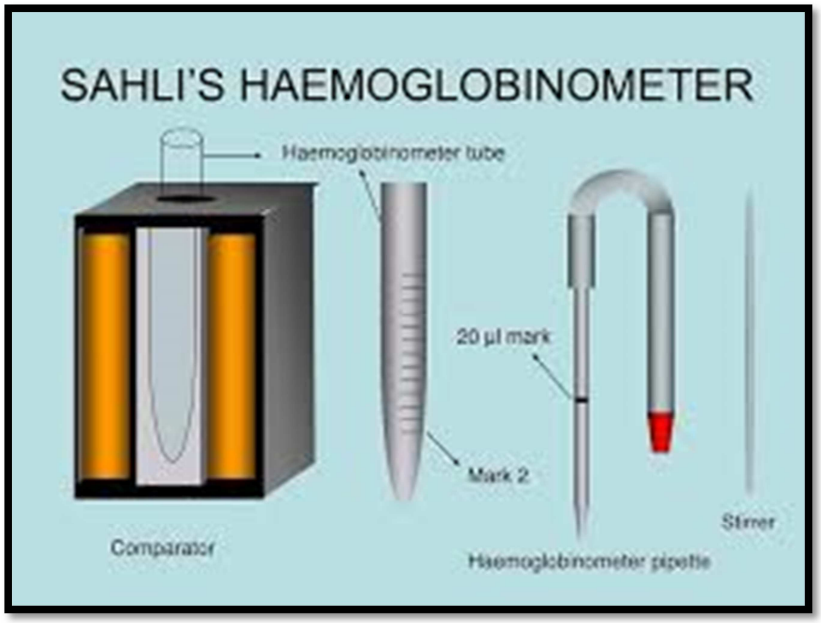

Figure 8: Sahli's hemoglobinometer

Manual device that includes a haemoglobin tube, pipette, stirrer and comparator. It works by converting haemoglobin to acid hematin using hydrochloric acid, which is then diluted until the solution's colour matches the comparator block. The hemoglobin concentration is determined by reading from the calibration tube.

Advantages: Commonly used for estimating hemoglobin in developing countries due to its simplicity and low cost

Disadvantages: Low precision and high inter-observer variability [44]

7. **Automated haemoglobin analyser:** Commonly used to analyse various haematocrit, and haemoglobin levels from blood samples.

Advantages: High precision and rapid action as compared to manual methods.

Disadvantages: The initial cost as well as on-going maintenance of an automated analyser is high and requirement of trained laboratory personnel further increases the expenses. Additionally, these analysers require stable climate conditions, making them unsuitable for non-laboratory environments such as mobile blood donor sites and field projects [44].

8. **WHO colour scale:**

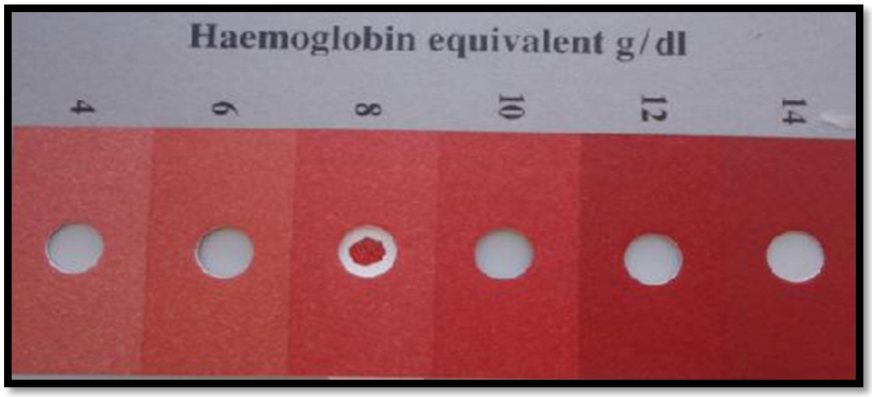

Figure 9: WHO colour scale

This device features six shades of red, ranging from lighter to darker, corresponding to hemoglobin concentrations of 40, 60, 80, 100, 120, and 140 g/L, mounted on strips. A drop of blood is placed onto a movable piece of filter paper and then compared to the shades of red on the colour scale.

Reagent- Drabkin's reagent or fresh anticoagulant sample [44]

Advantages: Useful in outreach areas

9. **Invasive photometric method:** Hemoglobin is oxidized to methaemoglobin by sodium nitrate, changing it from the ferrous to the ferric state, to form azidemethemoglobin. The hemoglobin concentration is then measured at 570 and 880 nm using a photoelectric colorimeter [44].

METHODS OF BLOOD LOSS ESTIMATION

The most common method for measuring blood loss during the third stage of labour is visual estimation, wherein the birth attendant makes a quantitative or semi-quantitative assessment of the blood lost.

Quantitative methods for measuring obstetric blood loss have proven to be more accurate than visual estimation. Successful implementation of an obstetric haemorrhage bundle is linked to improved outcomes in cases of postpartum haemorrhage [45]

Main et al compared obstetric outcomes after postpartum haemorrhage in hospitals implementing obstetric haemorrhage bundles v/s those without. There was a 20.8% reduction in severe maternal morbidity in hospital implementing bundles, compared to a 1.2% reduction in women at comparison hospitals (P<.0001) [46]

1. Visual estimation of blood loss

Studies comparing visual estimation to quantitative measurement have found that visual estimation tends to underestimate actual blood loss at higher volumes and overestimate it at lower volumes[6].

Additionally, visual estimation of blood loss does not seem to improve based on the healthcare provider's specialty, age, or clinical experience [47].

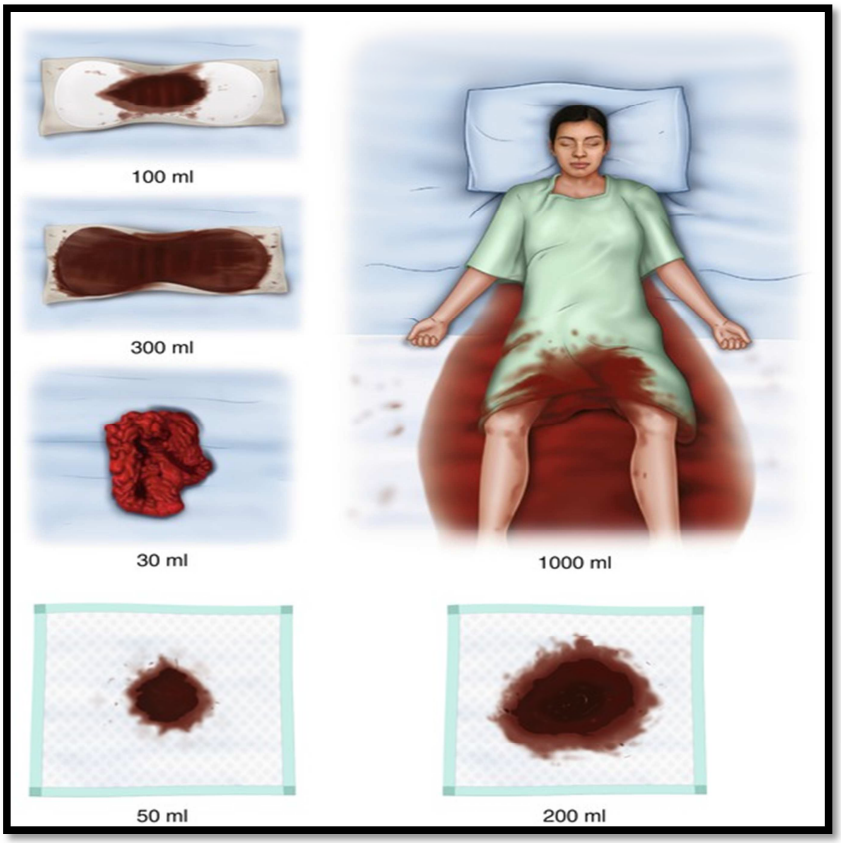

Figure 10: Visual estimation of blood loss

2. **Blood loss estimation formulae-**

a) The calculated estimated blood loss (cEBL): determined by multiplying the calculated maternal blood volume by the percentage of blood volume lost

Calculates maternal blood volume = 0.75 x [(maternal height in inches x 50) + (maternal weight in pounds x 25)] x 10 [48]

Percentage of volume lost = Pre-delivery haematocrit – post-delivery haematocrit/ Pre-delivery haematocrit

b) Gross equation-

Blood loss= BV x (Hct pre-op – Hct post-op)/ Hct average

Uses Moore's formula to calculate blood volume

$BV = k1 \times Ht^3 + k2 \times Wt + k3$

$V\ loss\ total = BV \times (HCT_{pre\text{-}op} - HCT_{post\text{-}op})$

For males: k1= 0.3669; k2=0.03219; k3=0.6041

For females: k1=0.3561; k2=0.03308; k3=0.1833

BV(ml): Patient's blood volume calculated before surgery

Ht : Height (in metres)

Wt: Weight (in kilograms)

V_{loss} total (ml): The total volume of RBC loss

$HCT_{pre\text{-}op}$, $HCT_{post\text{-}op}$: The Hematocrit values pre and post operatively [49, 50 c)]

c) Hemoglobin balance method-

$Hb_{total\ loss} = BV \times (Hb_{initial} - Hb_{final}) \times 0.001 + Hb_{transfusion}$

$V_{loss\ total} = 1000 \times Hb\ loss\ total / Hb\ initial$

$Hb_{total\ loss}$ (g)= The volume loss of Hemoglobin totally

$Hb_{initial}$ (g/L): The pre-op hemoglobin levels

Hb_{final} (g/L): The post op hemoglobin levels

$Hb_{transfusion}$ (g)L: The total volume of blood transfusion [50,51,52]

d) Hemoglobin dilution:

$V_{loss\ total}$ (ml)= BV x ($Hb_{initial} - Hb_{final}$)/ $Hb_{initial}$

$Hb_{final} = Hb_{initial}$ – total blood loss x Hb initial/ Blood volume

$Hb_{decrease} = Hb_{initial} - Hb_{final}$ = Total blood loss x Hb initial/ BV [50,53]

e) Ward formula

Allowable blood loss = EBL In Hct_{final}/ Hct initial [54]

f) Bourke Formula

Derived from Ward's formula

Estimated blood loss (ml)= BV x (Hct 0- Hct t)x (3-hct mean)

BV- Blood volume

Hct- haematocrit [55]

g) Moore formula

Blood volume is described as a function of body habitus. weight, build, and sex of the patient are taken into account when estimating total blood volume.

Male: Obese = 60, thin =65, normal =70, muscular= 75

Female: Obese = 55, thin =60, normal =65, muscular= 70 [54]

h) Nadler formula

Calculation of blood volume

Men: Blood Volume = $(0.3669 \times H^3) + (0.03219 \times W) + 0.6041$

Women: Blood Volume = $(0.3561 \times H^3) + (0.03308 \times W) + 0.1833$ [50]

i) Mercurali formula

Blood loss= Blood volume x (Haematocrit Pre-op – Hct Day-5 post operative)+ ml of transfused blood [56]

Calculates blood volume using Nadler's formula

3. Spectrophotometry: Most complex and accurate method for blood loss estimation. Measurement of haemoglobincyanide has been the gold standard method for hemoglobinometry in human blood, as recommended by the International Council for Standardization in Haematology (ICSH) since 1967 [57]

4. Gravimetric method: Direct blood collection in a plastic collection bag which is weighted for blood loss estimation (1 mL = 1 gram/1.06)[58]

This indirect method of estimating blood loss involves weighing blood-soaked surgical materials and subtracting their dry weight. The volume of suctioned blood is then added to this amount.

Visual estimation of blood loss compared to the gravimetric technique resulted in an error of approximately 30%. In a study conducted by Al Kadri HM et al the gravimetric mean blood loss was 304.1 mL, while the nurse- and physician-estimated mean blood losses were 213 mL and 214.3 mL, respectively [47.]

5. Dye dilution method: Vital dyes assumed to measure plasma volume, are injected into the cardiovascular system, blood drawn from large vessels shows three distinct concentration-time phases. This principle is used to determine plasma volume. [59]

6. Direct measurement method: A calibrated receptacle is positioned under the patient's buttocks immediately after the baby is delivered. The volume of blood collected in the receptable is measured [60].

7. Pictorial guide for blood loss estimation- Guidelines –

- Maternity pad (10 x 5 cm): 100ml
- Roller gauze pad: 100ml
- Large 45 x 45 cm 12 ply swab- 350 ml
- 1 kg soaked swab- 1000 ml
- 50 cm diameter floor spill- 500 ml
- 75 cm diameter floor spill- 1000ml
- 100 cm diameter floor spill- 1500ml
- Soakage of bed linens- 1000ml
- Overflow of blood from bed – 2000ml [60]

9. **Colorimetric blood loss estimation:** A smartphone application called Triton, developed by Gauss Surgical Inc., calculates blood loss by photographing used surgical gauzes and pads. It automatically filters out non-blood components mixed with the materials. By entering pre-operative haemoglobin data, the app predicts both post-operative haemoglobin levels and blood loss. [60]

POSTPARTUM HEMORRHAGE:

Postpartum haemorrhage (PPH), defined as the loss of more than 500 mL of blood within 24 hours after childbirth.

The World Health Organization (WHO) defines PPH as blood loss of 500 mL or more within 24 hours after birth

American College of Obstetricians and Gynaecologists (ACOG) defines postpartum haemorrhage as the cumulative blood loss greater than 1000 mL, regardless of the route of delivery.

Royal College of Obstetricians and Gynaecologist (RCOG) states that postpartum haemorrhage as the estimated blood loss of 500-1000mL as minor PPH and blood loss greater than 1000mL with no clinical signs of shock as major PPH.

Yefet et al states that decline in hemoglobin levels ≥ 2 g/dl and haematocrit levels $\geq 6\%$ were suggestive of postpartum haemorrhage [61]

It affects an estimated 14 million women annually, resulting in approximately 70,000 deaths—primarily in low and middle-income countries. This equates to one death every six minutes. The majority of maternal deaths from PPH occur in sub-Saharan Africa and South Asia. The estimated global maternal mortality ratio (MMR) of 223 maternal deaths per 100,000 live births in 2020 indicates that countries are significantly falling short of the Sustainable Development Goal 3 (SDG 3), target 3.1, which aims to reduce the global MMR to less than 70 per 100,000 live births by 2030 [1].

Other studies-

1) Visual estimation of postpartum blood loss, a simple and convenient method has been a routine practice for a long time. In the prospective study conducted by Lurtbunnaphong et al[5], 286 candidates met the inclusion criteria. A significant difference (80.4 ± 41.8 mL; $p < 0.0001$) was noted in the volume of blood loss between visual estimation (mean 178.6 ± 133.1 mL) and objective measurement with the sterile buttock drape (mean 259.0 ± 174.9 mL). Visual estimation of postpartum blood loss was around 31% less accurate than the objective measurement with the drape.

2) In the study conducted by Singh et al [1], for vaginal blood loss up to 200 ml and up to 400 ml, the underestimation of blood loss by the standardized visual method was 41.9 ml and 99.34 ml, respectively when compared with the BRASSS V drape. However, when the loss was more than 500 ml, the underestimation was 198 ml, which is indicative of the fact that with the increase in blood loss, the inaccuracy of the standardized visual estimation also increases.

3) In the review conducted by Hancock et al[62] – a systematic, integrative review of 36 published research studies was conducted. The review found that health professionals were highly inaccurate at estimating blood loss as a volume. Training resulted in short term improvements in skills, but these were not retained and did not improve clinical outcomes. Multi-faceted interventions changed some clinical practices but did not reduce the incidence of severe PPH or the timing of responses to excessive bleeding. Blood collection bags improved the accuracy of estimation but did not prevent delays or progression to severe PPH.

4) A prospective study conducted by Stafford et al [48] compared visually estimated blood loss with calculated blood loss in 677 women at Louisiana State University. The median haematocrit (HCT) at admission was 34.5% and the median discharge HCT was 30.3%, with a median change in HCT of 3.6. Median visual estimation of blood loss (VEBL) was 350 mL, whereas median calculated estimated blood loss (CEBL) was 632 mL [38]. VEBL was statistically different from CEBL between each degree of laceration and between all modes of delivery, demonstrating an underestimation of VEBL with increasing CEBL.

5) In the study conducted by Yefet et al [61], maximal rate of decline in Haemoglobin (Hb) values was witnessed during the first 6–12 h postpartum, followed by a more moderate rate of change between 12 and 24 h, which then plateaued after 24–48 h in all the groups, regardless of the absolute minimum value of Hb. Larger Hb and haematocrit reductions from pre-delivery measures were measured in the immediate postpartum period among women with PPH as compared to the control group. The LOESS curve demonstrated three Hb phases following delivery, i.e., a sharp decline in the first 6–12 h, followed by a moderate drop in the next 12–24 h, until stabilization after 24–48 h. Therefore, in our study, repeat haematocrit will be collected after 24-48 hours after delivery for proper estimation of blood loss.

6) In the study conducted by Ambardekar et al [58]- a randomized control trial with 900 women at KEM Pune, no statistically significant difference in the mean blood loss was measured with the two methods (weight: 262 ml; drape: 253 ml). The results show greater variability in low amounts of measured blood loss (i.e. less than 100 ml) in the drape arm. High-quality evidence showed that using calibrated drapes improved the detection of blood loss greater than

500 mL when compared with the gravimetric technique (RR 1.86, 95% CI 1.11 to 3.11). Low-quality evidence suggests there may be little or no difference in the risk of blood transfusion between the two groups (RR 1.00, 95% CI 0.06 to 15.94), or in the use of plasma expanders, reported as intravenous fluids given for PPH treatment (RR 0.67; 95% CI 0.19 to 2.35)

7) Cochrane review [63] conducted in 2018 could not discern whether calibrated drapes truly overestimated blood loss because of doubtful discrimination between blood and amniotic fluid. To avoid such mixing, BRASSS V drape is placed under the buttocks after delivery of the baby thus separating the collection of blood and amniotic fluid.

8) In postpartum haemorrhage, patient's circulating volume tends to fall with bleeding. The simultaneous shift of fluid into the circulating compartment and IV fluids administered to the patient maintain the circulating volume initially. Progressively, dilution of blood takes place and the haematocrit gradually falls [64] The RBC loss, as haemorrhage, continues logarithmically. In 1980, Ward et al [65] published a mathematical solution to the shift of circulating volume and the concept was taken forward by Gross in 1983. A new linear formula using the patient's average haematocrit was proposed. It was found that the Gross equation closely approximated the logarithmic one unless there was substantial haemorrhage causing the formulas to drift from the normal baseline.

9) In the study conducted by Felix et al[66], 77% of parturient had a drop in haematocrit after childbirth, the remaining 23% had no change in haematocrit after 2 hours as opposed to the study by Gharoro and Enabudoso [14] that reported some increase in their study series. The 6 hours assessment postpartum by Felix et al showed that nearly all parturient (99%) had a decrease in their haematocrit except 1% who had an unchanged haematocrit

thus making haematocrit a reliable parameter to assess blood loss. Addition of individual factors such as gender, height, weight, and volume of blood transfusion makes Gross equation reflect actual blood loss to some extent.

MATERIALS AND METHODS

Study design- Hospital based observational study

Study setting- Department of Obstetrics and Gynaecology, KLES Dr. Prabhakar Kore Charitable hospital and Medical Research Centre, Belagavi, a tertiary care centre.

Study duration- 12 months

Study period- April 2023- March 2024

Study population-

Inclusion criteria- Women >=28 weeks of gestation delivering vaginally and consenting to the study conducted at KLES Dr. Prabhakar Kore charitable hospital and Medical Research Centre, Belagavi

Exclusion criteria -

1) Obesity (BMI greater than 30 kg/m2)
2) Severe anaemia pre-delivery (Hemoglobin level less than 7 gm/dl)
3) History of bleeding disorders
4) History of anticoagulant therapy
5) History of Aspirin usage during pregnancy
6) Patient receiving blood transfusion within 48 hours after delivery
7) Women unwilling to consent
8) Women undergoing LSCS

Sample size: According to reference article [67,68] the minimum sample size was calculated using the formula-

$$n = \frac{2\left(Z_{\alpha/2} + Z_{\beta}\right)^2}{d^2}$$

Where d = $where,\ d = \left(\frac{|\mu_1 - \mu_2|}{\sigma}\right)$

μ_1 is mean of the first group,

μ_2 is mean of the second group,

σ^2 is the common error variance,

$Z_{\alpha/2}$ value is 1.96 for 95% confidence level

Z_{β} value is 1.2816 for 90% power.

The mean blood loss in women of **EBL group and QBL group** was 275.29 ± 89.82 ml and 380 ± 137.31 ml respectively. Considering this at 5% level of significance, and 90% power, the sample size is obtained to be 27 subjects for each group.

Minimal sample size required is 27 x 2 = 54 subjects.

Sampling technique was convenient sample and 620 women were screened for eligibility between April 2023 to March 2024.

Ethical clearance: The study was conducted in accordance with ethical clearance obtained from the JNMC Institutional Ethics Committee on 27/9/2022.

The study was registered with Clinical Trials Registry India (CTRI) with a registration number- CTRI/2023/05/053312

METHODOLOGY

Screening: Patients were screened for eligibility considering the inclusion and exclusion criteria. Women were enrolled in the study if they met all the inclusion criteria and were excluded even if there was 1 exclusion criteria

Consent: Written, informed consent was taken from all the participants.

Data collection: The following details were recorded in the proforma-

1. Participant information: Age, Address
2. Registered/ Unregistered case.
3. Height, Weight, BMI
4. Obstetric history: Date of last menstrual period (LMP), Expected date of delivery (EDD), Gestational age at enrolment, Obstetric score.
5. Spontaneous vs induced labour.
6. Mode of delivery
7. Use of mops/pads during delivery
8. History of blood transfusion within 48 hours of delivery
9. Maternal and foetal outcomes
10. Active Management of Third Stage of Labour and use of uterotonics

The details of the patient and obstetric history were recorded at the time of admission and patients were followed up till the date of discharge.

Maternal condition and details of maternal morbidity or mortality was also noted.

Investigations: Pre and post-delivery haemoglobin and haematocrit were recorded.

- Pre-delivery haematocrit was the most recent haematocrit within one week before delivery.

- Post-delivery haematocrit was measured after 48 hours post delivery

Blood loss was calculated using 2 methods –

BRASSS V Drape:

Figure 11: BRASSS V Drape

Specially designed low-cost calibrated sterile plastic blood collection receptacle that objectively measures the amount of blood collected in the immediate postpartum period and is the reference method in the study.

Developed by a Global network collaborative team funded by National Institute of Child Health and Human Development, Rockville, MD, USA (NICHD) for estimation of postpartum blood loss.

Modification of Gross formula

Actual blood loss = BV [$Hct_{initial}$- Hct_{final}]/ Hct_{mean}

Blood Volume= Body weight in kg x 70 ml/Kg

Hct Initial- Initial hematocrit of the patient prior to delivery

Hct Final- Final hematocrit of the patient 48 hours after delivery [49,69]

The estimated blood volume is calculated by a modification of Nadler's formula

Average blood volume (ml) = Patient weight (kg) x Average blood volume in mL/kg

Study Protocol-

a) After completion of the informed consent and collecting the baseline participant information, patient was assigned a screening number as well as a study ID.
b) Haemoglobin and haematocrit values were collected from the case records of the participants prior to delivery.
c) In the study hospital, BRASSS V drape was routinely placed under the buttocks of the patient immediately after the delivery of the baby to prevent mixing of the blood collected with the amniotic fluid. The belt provided with the drape was loosely tried around the abdomen of the patient.
d) Active management of 3rd stage of labour was performed for all patients in the study hospital.
e) Additional uterotonics given to the participants were also recorded.
f) Blood collected in the BRASSS V drape was measured by the principal investigator at the end of 2 hours.

g) Repeat venous sampling done 48 hours post-delivery for haematocrit assessment was collected from case records.

Statistical analysis: Data was analysed using statistical software R version 4.3.3. and Microsoft Excel. Categorical variables was given in the form of frequency tables. Continuous variables given in Mean ± SD / Median (Min, Max) form. Normality of variable was checked by Shapiro Wilk test and QQ plot. Wilcoxon test was used to compare the distribution of variables over time. Kruskal Wallis test was used to check the distribution of blood loss over baby weight. Spearman's rank correlation test was used to check the correlation of BRASSS V drape with modified gross formula. Bland Altman plot was used for the comparison of blood loss determined by BRASSS V drape and modified gross formula. P-value less than or equal to 0.05 indicated statistical significance

RESULTS

The study was conducted at KLES Dr Prabhakar Kore charitable hospital over a period of 12 months from April 2023- March 2024. A total of 620 women were screened for eligibility out of which 193 were excluded as they did not meet the inclusion criteria.

427 screened participants were eligible for the study with 169 participants being excluded after recruitment to the study. A total of 258 participants were analysed during the study.

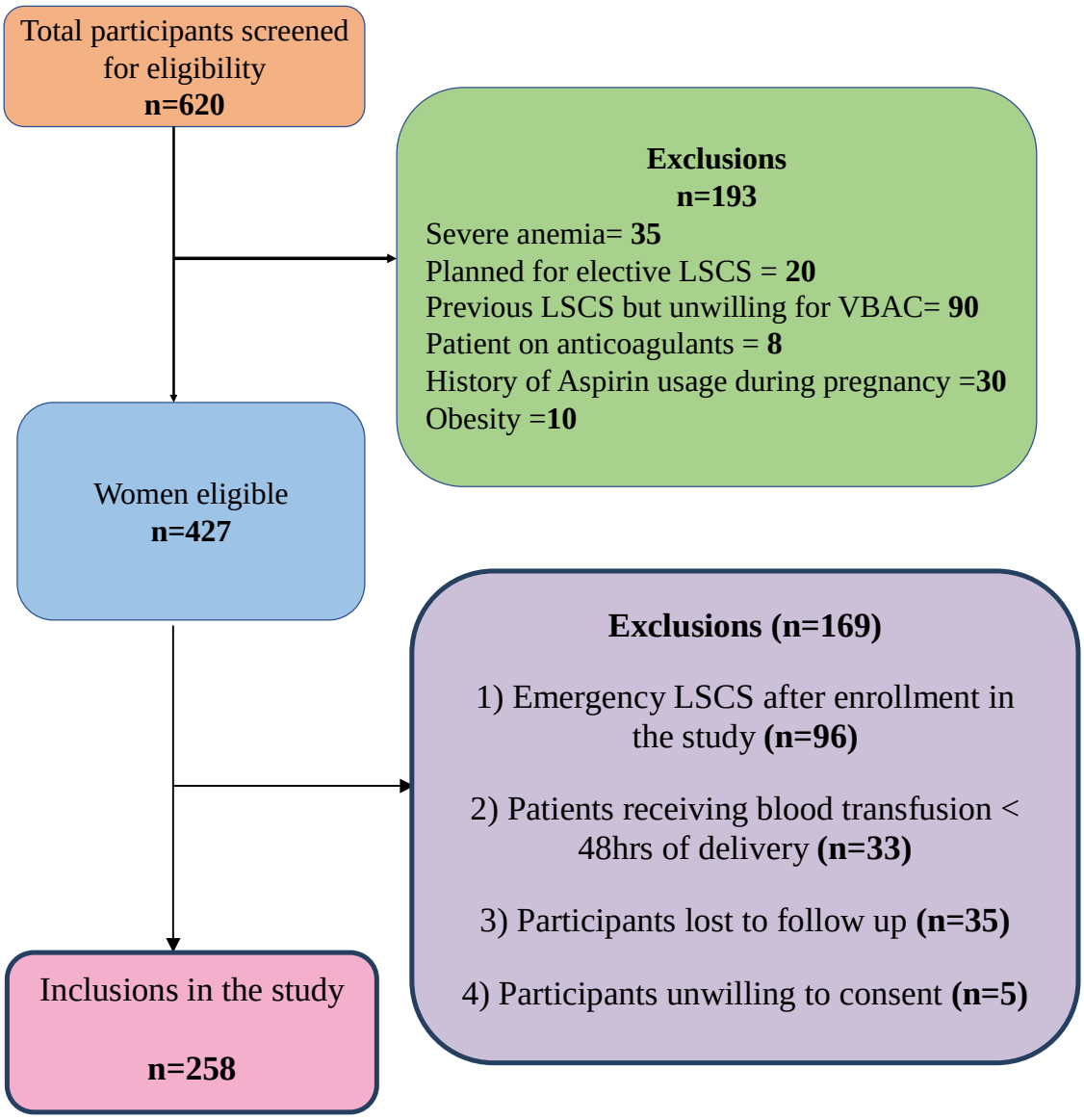

Figure 12: Consort diagram

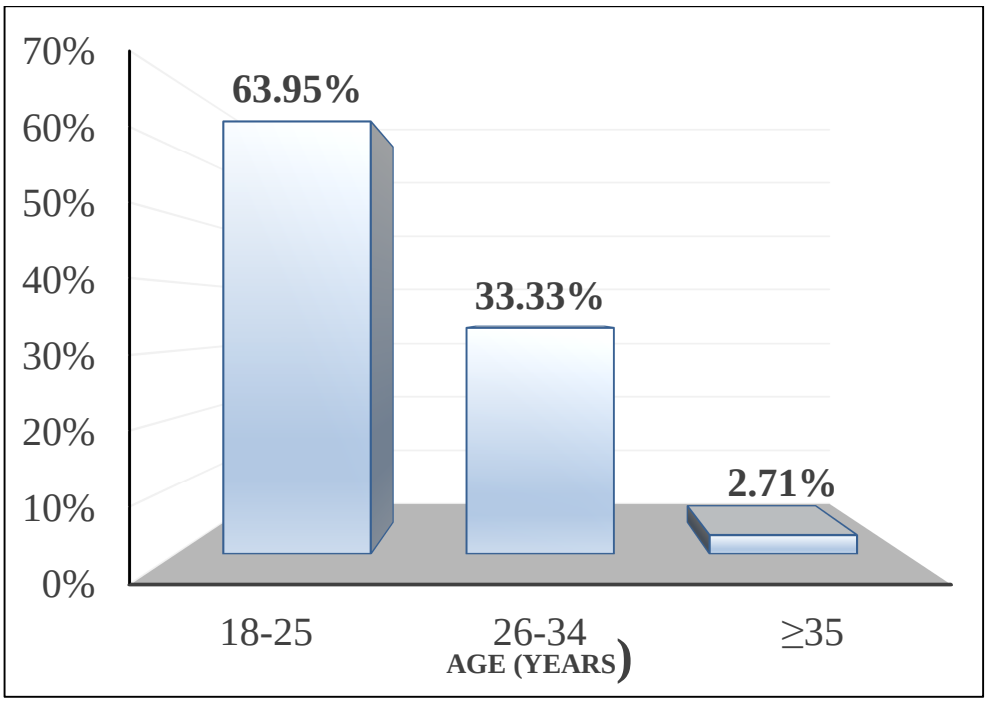

Figure 13: Age distribution (years)

Age (years)	18-25	165 (63.95%)
	26-34	86 (33.33%)
	≥35	7 (2.71%)
	Mean ± SD	24.77 ± 4.17
	Median (Min, Max)	24 (18, 39)

Table 2: Age distribution (years)

Majority of the subjects were between 18-25 years old (63.95%).

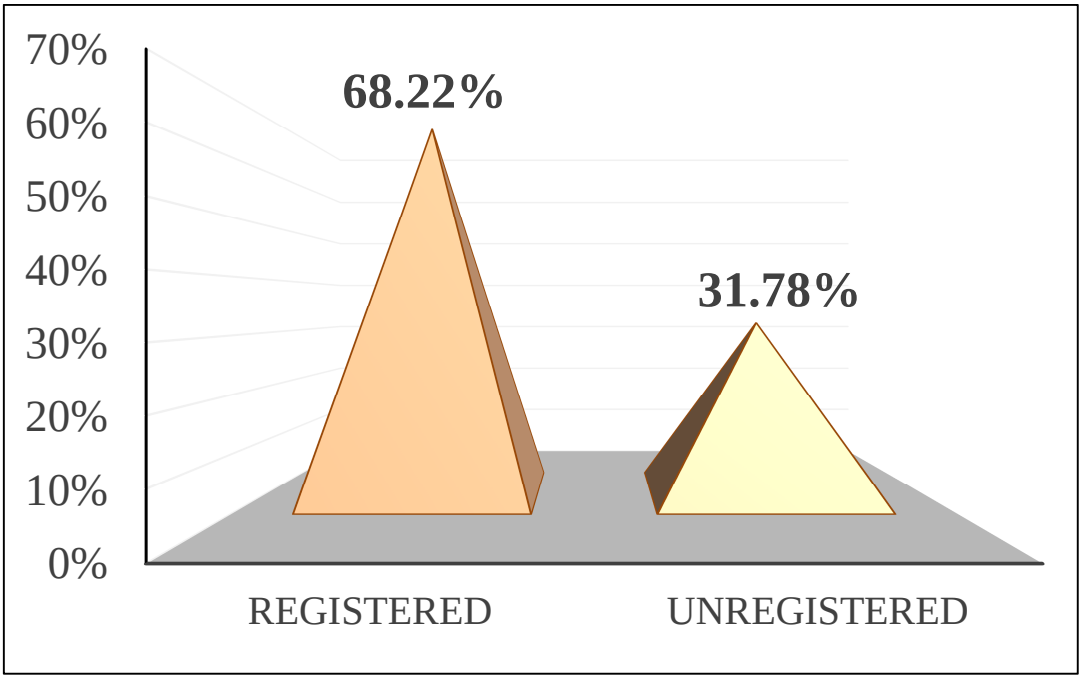

Figure 14 :Registered v/s unregistered case distribution

Registered	176 (68.22%)
Unregistered	82 (31.78%)

Table 3: Registered v/s Unregistered case distribution

Majority of the cases recruited were registered cases -176 cases (68%) – at least 8 visits at the study hospital whereas 31.78% cases were unregistered

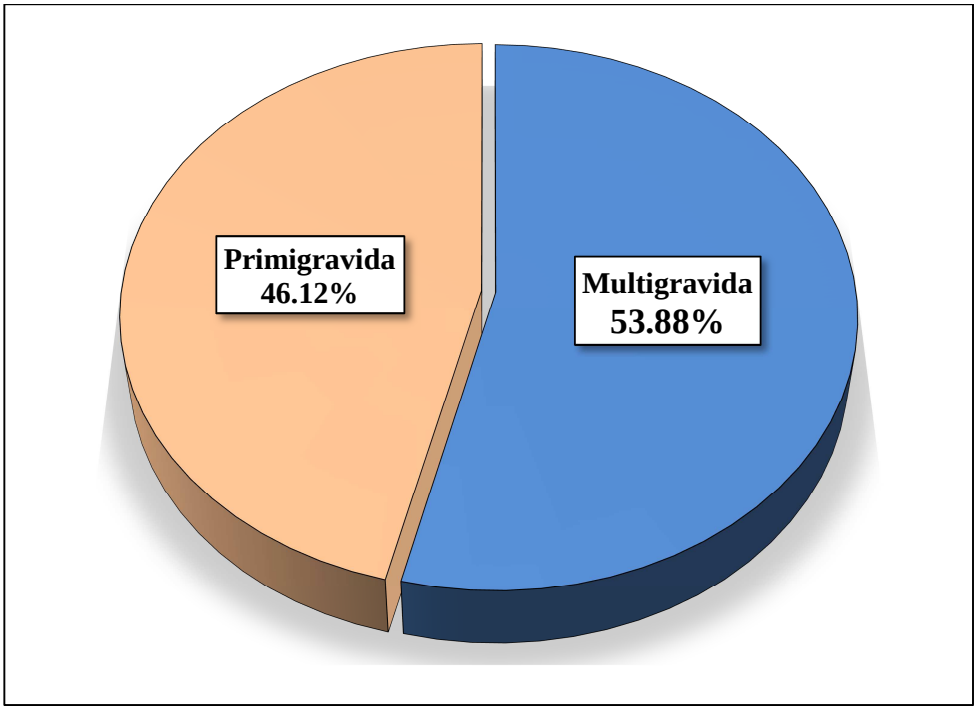

Figure 15 : Gravidity distribution

Gravida	Primigravida	119 (46.12%)
	Multigravida	139 (53.88%)

Table 4: Gravidity distribution

Majority of the study population were multigravida (53.88%) as compared to primigravida (46.12%)

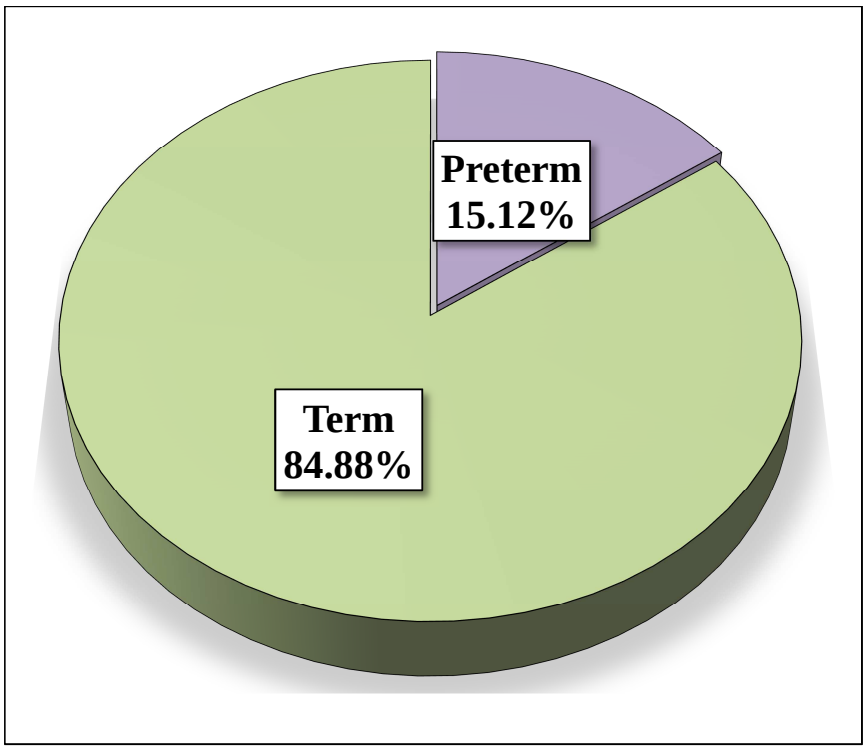

Figure 16: Gestational age distribution (weeks)

Gestational Age (weeks)	Preterm	39 (15.12%)
	Term	219 (84.88%)
	Mean ± SD	38.17 ± 2.77
	Median (Min, Max)	39 (28, 41.14)

Table 5: Gestational age distribution (weeks)

Majority of the study population are term patients (84.88%). The mean gestational age is 38.12 weeks

Weight (kg)	Mean ± SD Median (Min, Max)	55.01 ± 7.23 53 (43, 72)
Height (cm)	Mean ± SD Median (Min, Max)	154.28 ± 6.44 153 (143, 168)
BMI	18.5-24.9	219 (84.88%)
	25-29.9	39 (15.12%)
	Mean ± SD Median (Min, Max)	22.95 ± 1.52 22.85 (18.56, 25.8)

Table 6: Distribution according to height, weight and BMI

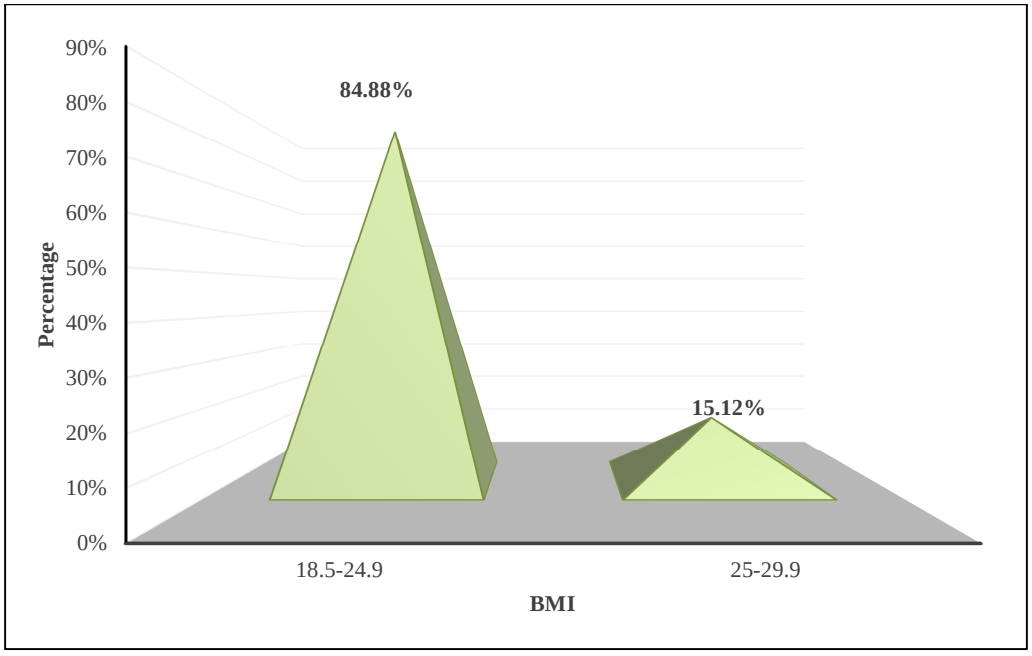

Figure 17 : BMI distribution

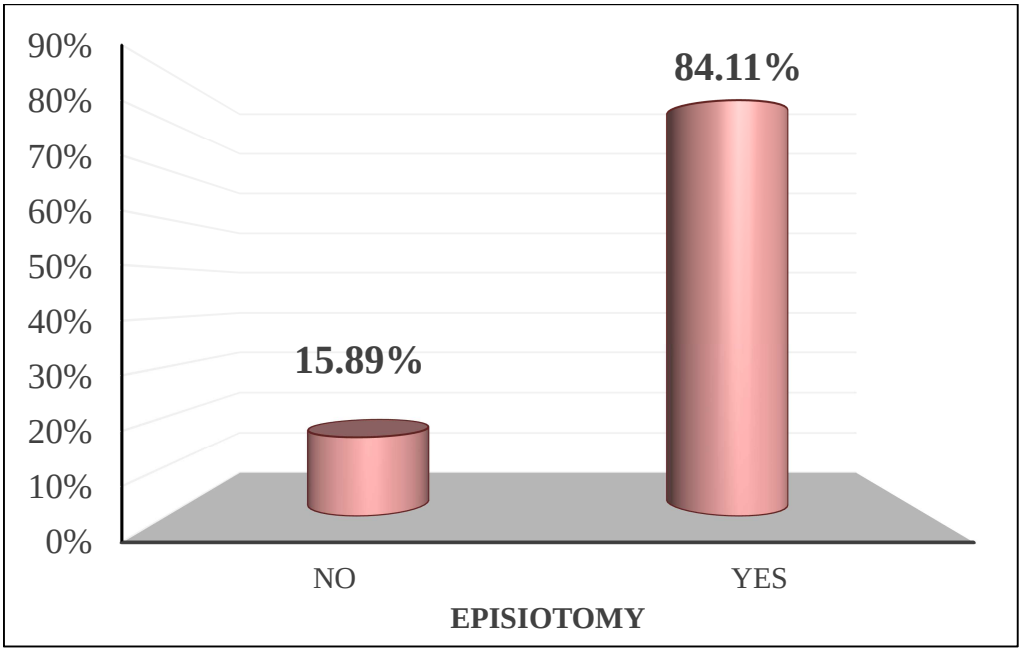

Figure 18 : Use of episiotomy during delivery

Episiotomy	No	41 (15.89%)
	Yes	217 (84.11%)

Table 7: Episiotomy vs no episiotomy distribution

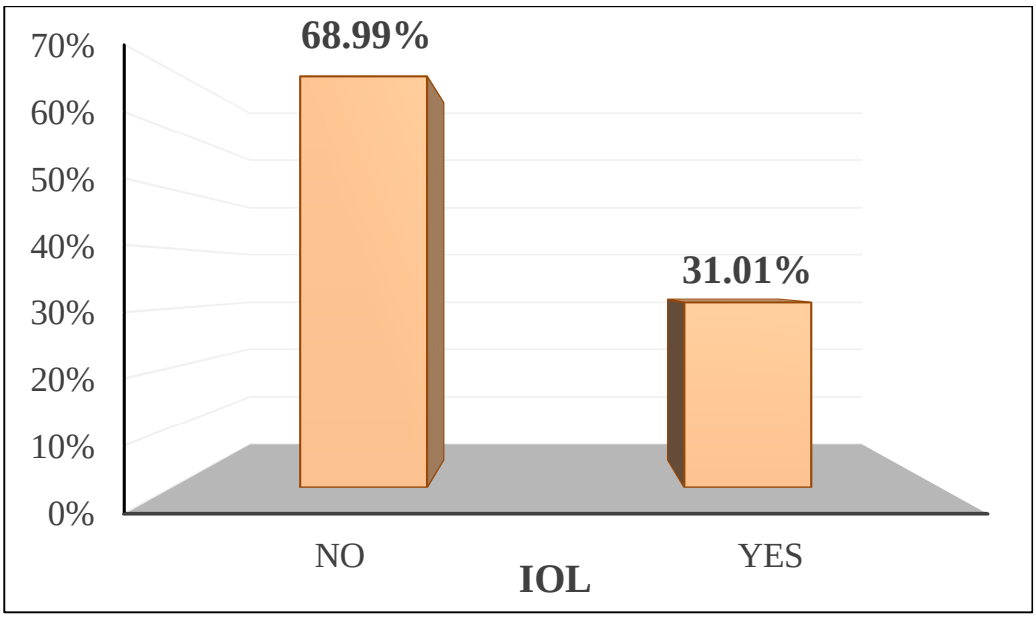

Figure 19 : Spontaneous v/s Induced labour distribution

Induction of labour	**No**	**178 (68.99%)**
	Yes	**80 (31.01%)**

Table 8: Induction v/s spontaneous labour distribution

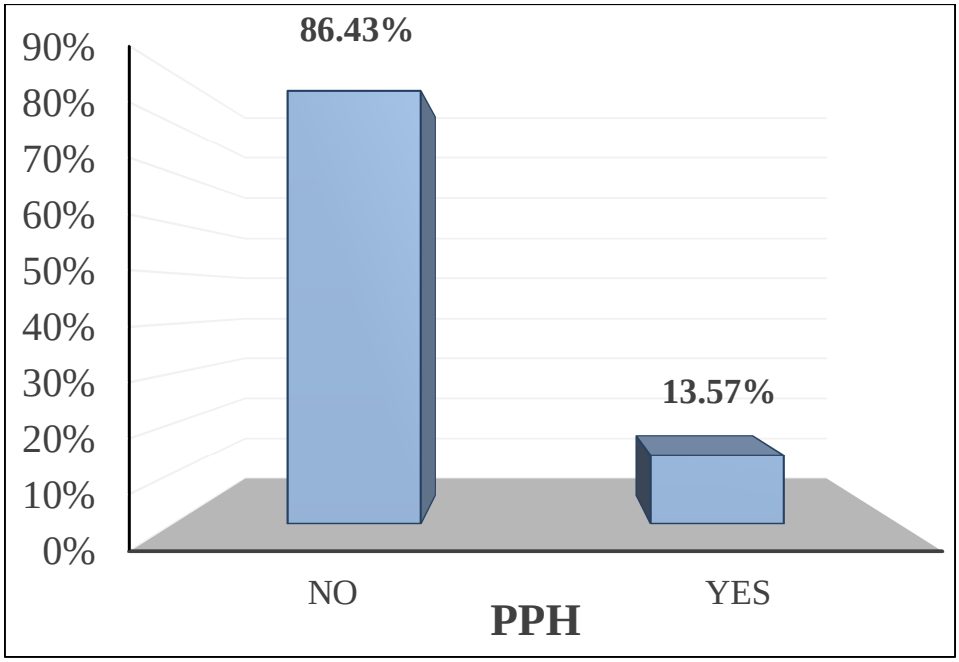

Figure 20 : Postpartum haemorrhage in study population

PPH	**No**	**223 (86.43%)**
	Yes	**35 (13.57%)**

Table 9: Postpartum haemorrhage in study population

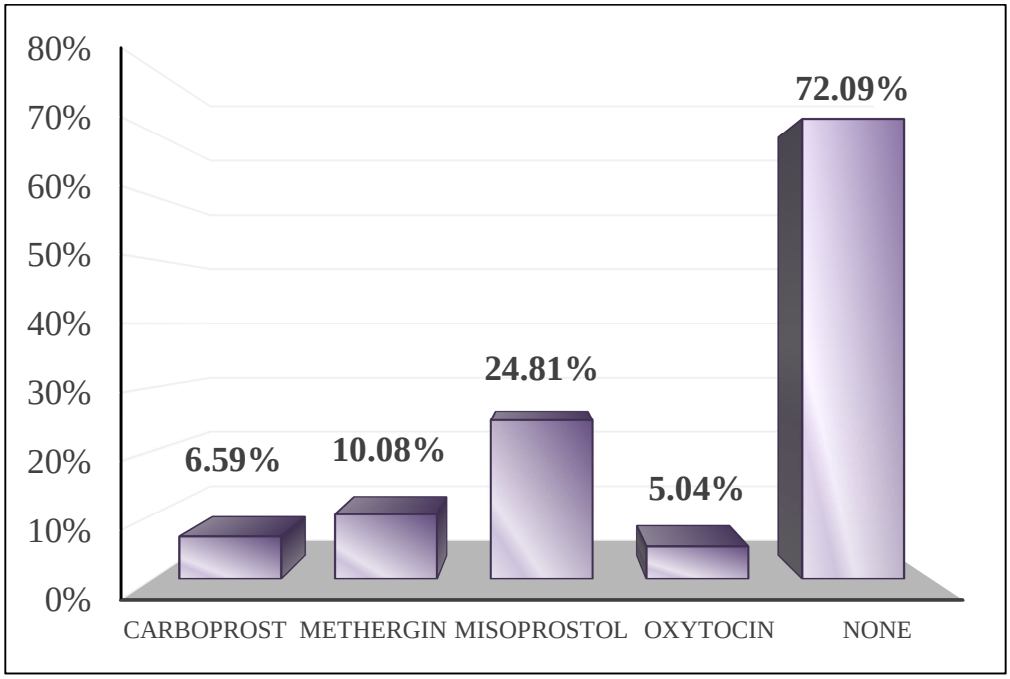

Figure 21. Use of additional oxytocics

Inj. Carboprost	**17 (6.59%)**
Inj. Methergine	**26 (10.08%)**
Tab. Misoprostol	**64 (24.81%)**
Additional Oxytocin	**13 (5.04%)**
Total use of additional oxytocics	**72 (27.91%)**
None	**186 (72.09%)**

Table 10: Use of additional oxytocics

Table 11: Haemoglobin levels pre and post-delivery (g/dl)

	Pre delivery	Post delivery (48hrs)	Change in Hb	P value
Mean Haemoglobin (g/dl)	**11.62 ± 1.35**	**10.24 ± 1.36**	**1.38 ± 1.08**	**< 0.001[W]***
Median (min, max)	**11.8 (8.2, 14.6)**	**10.2 (7.6, 14.1)**	**1.2 (-0.8, 6.2)**	

Table 12: Haematocrit levels pre and post-delivery

	Pre delivery	Post delivery (48 hours)	Change in PCV	P value
Mean Haematocrit (PCV)	**36.99 ± 3.64**	**32.8 ± 3.82**	**4.19 ± 3.31**	**< 0.001[W]***
Median (Min, max)	**37.1 (27.6, 45.6)**	**32.35 (24.5, 44.3)**	**3.7 (-3.1, 13.7)**	

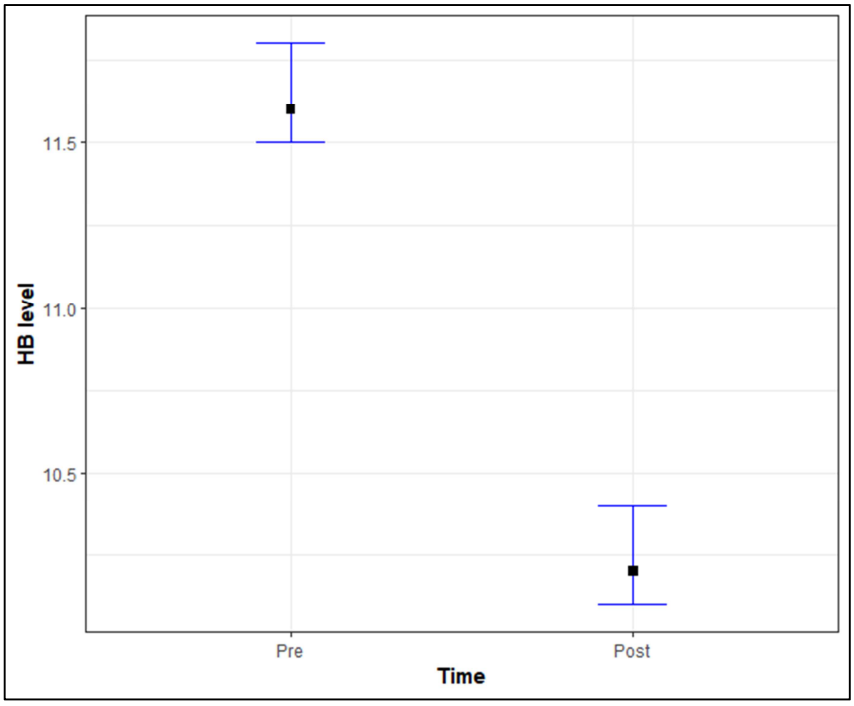

Figure 22 : Mean plot of Haemoglobin levels over time.

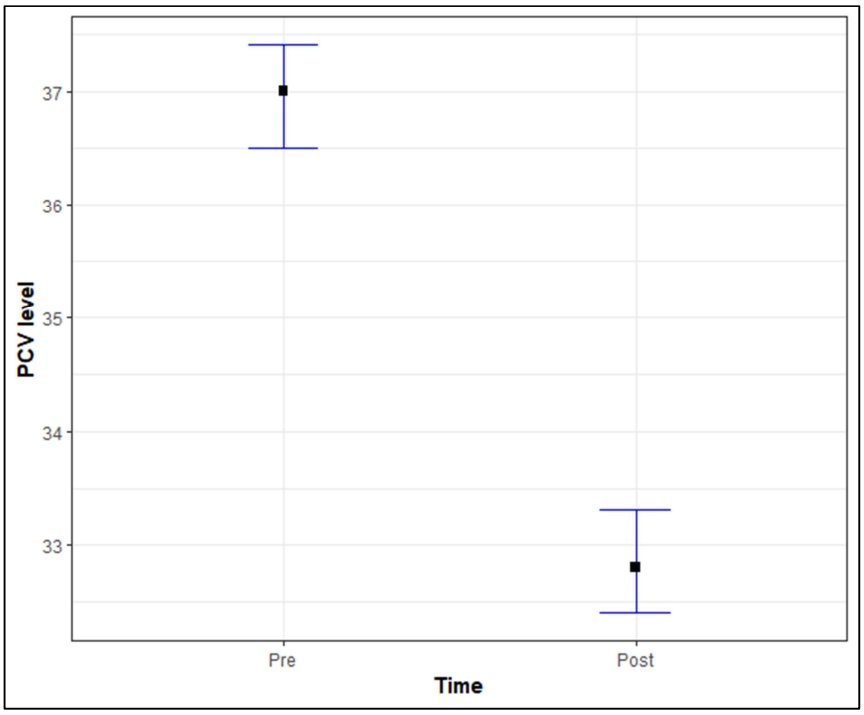

Figure 23: Mean plot of haematocrit levels over time.

Variables	Sub Category	Number of subjects (%)
Baby Gender #	Female	122 (47.29%)
	Male	134 (51.94%)
Baby Weight	<1Kg	10 (3.88%)
	1.5-2.5Kg	52 (20.16%)
	1-1.5Kg	4 (1.55%)
	2.5-3.5Kg	179 (69.38%)
	≥3.5Kg	13 (5.04%)
	Mean ± SD	2.67 ± 0.62
	Median (Min, Max)	2.7 (0.52, 4)

Table 13: Distribution according to baby details.

The majority of infants had a weight between 2.5-3.5 Kg (69.38%). The mean baby weight is 2.67 ± 0.62 Kg.

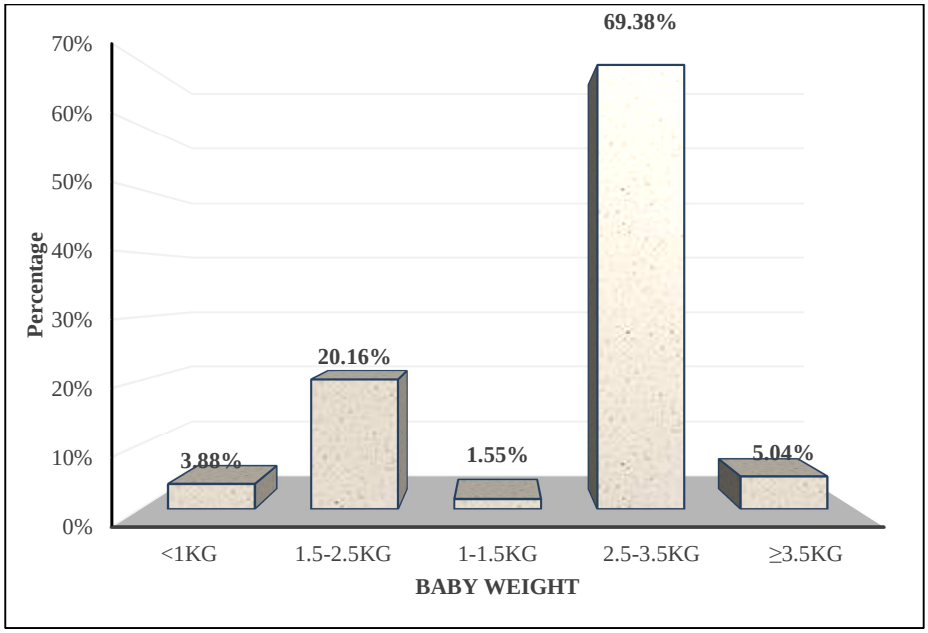

Figure 24 : Baby weight distribution

Weight of baby	BRASSS V drape	Modified Gross formula
<1Kg	305 ± 183.26 400 (50, 500)	405.7 ± 274.81 516.5 (24, 813)
1.5-2.5Kg	262.5 ± 197.38 200 (100, 550)	412.68 ± 453.87 206.85 (146, 1091)
1-1.5Kg	315.19 ± 176.74 300 (40, 850)	434.46 ± 322.64 383 (11.15, 1715)
2.5-3.5Kg	323.02 ± 185.02 350 (30, 800)	435.29 ± 281.49 392 (11.9, 1193)
≥3.5Kg	396.15 ± 145 350 (200, 700)	504.62 ± 263.34 387 (208, 1028)
p-value	0.6833^{K}	0.8459^{K}

Table 14: Baby weight and blood loss distribution

Variables	Sub Category	Correlation coefficient	p-value [SP]
Episiotomy	No	0.9372	< **0.001***
	Yes	0.9599	< **0.001***
IOL	No	0.9531	< **0.001***
	Yes	0.9752	< **0.001***
PPH	No	0.9510	< **0.001***
	Yes	0.7147	< **0.001***
Additional Oxytocics	No	0.9599	< **0.001***
	Yes	0.8067	< **0.001***
Whole data		0.9592	< **0.001***

Table 15: Correlation of blood loss determined by BRASSS V drape and modified gross formula.

*Abbreviation: SP – Spearman's rank correlation test, * indicates statistical significance.*

The overall correlation coefficient for the entire dataset is 0.9592, indicating a very strong positive relationship between blood loss estimates from the BRASSS V drape and the modified gross formula across all the studied cases.

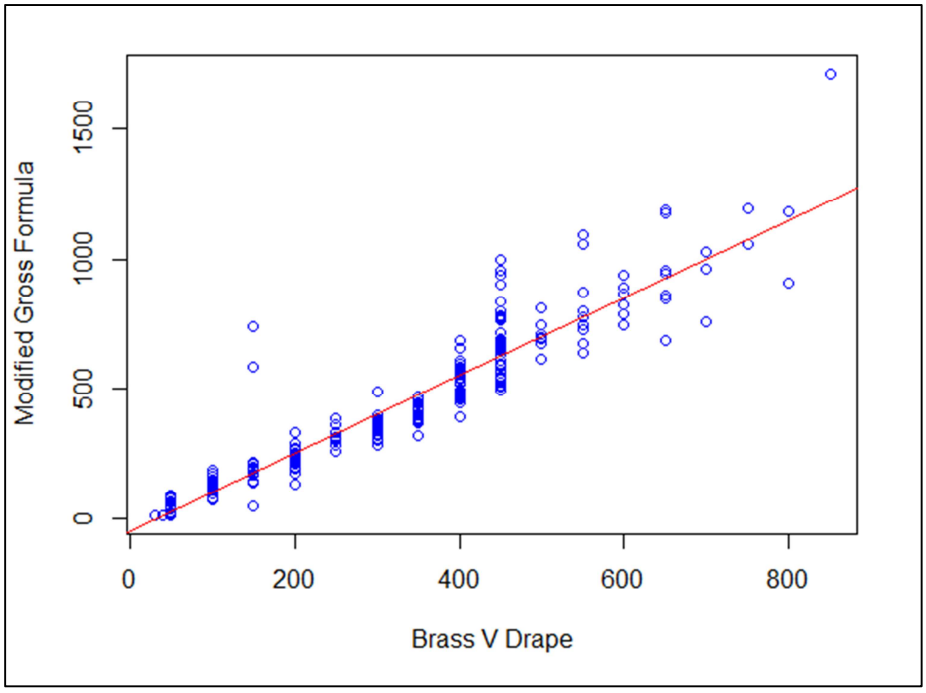

Figure 25: Scatter plot of blood loss determined by BRASSS V drape and modified gross formula for whole data.

Blood loss	BRASSS V Drape	Modified Gross Formula
<50 ml	3 (1.16%)	16 (6.2%)
50-149 ml	48 (18.6%)	34 (13.18%)
150-299 ml	47 (18.22%)	40 (15.5%)
300-449 ml	77 (29.84%)	53 (20.54%)
500-649 ml	67 (25.97%)	54 (20.93%)
650-799 ml	13 (5.04%)	33 (12.79%)
≥800 ml	3 (1.16%)	28 (10.85%)

Table 16: Distribution of blood loss determined by BRASSS V drape and modified gross formula.

In blood loss determined by the BRASSS V Drape method, the distribution across different ranges is as follows: 1.16% of cases had blood loss less than 50 ml, 18.6% fell within the 50-149 ml range, 18.22% were in the 150-299 ml range, 29.84% were within the 300-499 ml range, 25.97% were in the 500-649 ml range, 5.04% were in the 650-799 ml range, and only 1.16% were categorized as ≥ 800 ml.

In contrast, the distribution of blood loss estimates using the Modified Gross Formula method reveals a broader spread across different ranges: 6.2% of cases had blood loss less than 50 ml, 13.18% were within the 50-149 ml range, 15.5% fell within the 150-299 ml range, 20.54% were in the 300-499 ml range, 20.93% were in the 500-649 ml range, 12.79% were in the 650-799 ml range, and 10.85% were categorized as ≥ 800 ml.

Comparing the two methods, the Modified Gross Formula tends to provide higher blood loss estimates overall, with a greater proportion of cases falling into the 500-649 ml and ≥ 800 ml categories when compared to the BRASSS V Drape method.

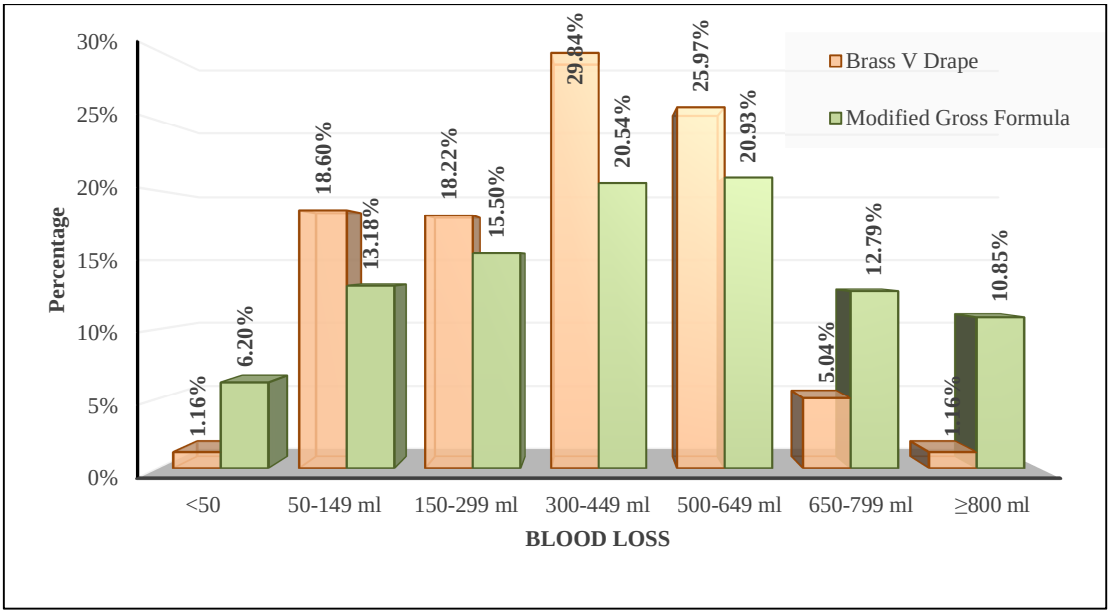

Figure 26: Comparison of blood loss determined by BRASSS V drape and modified gross formula.

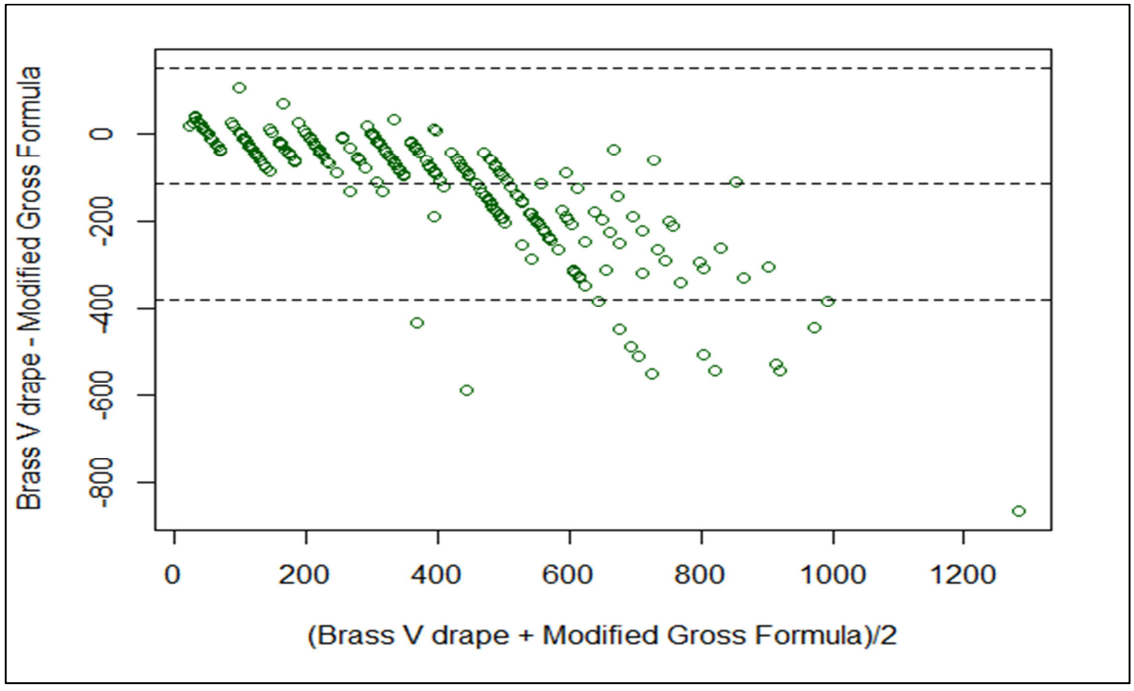

Figure 27: Bland Altman plot for comparison of blood loss determined by BRASSS V drape and modified gross formula.

DISCUSSION

This observational study was conducted among 258 women who underwent vaginal delivery during the study period. Blood loss was assessed for the participants using 2 methods- volumetric method using BRASS V drape and the formula based method using a modification of Gross formula.

There is a significant correlation between the blood loss estimated by BRASSS V drape and modified Gross formula.

Obstetric haemorrhage is an important cause of maternal death especially in the developing countries. Postpartum haemorrhage occurs unpredictably and no parturient is immune to it and can be stated to be an opportunistic killer.[7]

Assessment of postpartum blood loss is difficult due to physiological adaptations of pregnancy such as increase in plasma volume and hemodilution. These changes provide a reserve of circulatory volume and signs of haemorrhage and shock may be delayed or masked.

Quantification of blood loss after delivery is important because active intervention in the “golden hour” is crucial to prevent maternal morbidity and mortality.[2]

There are a wide variety of blood loss estimation methods which have been studied. Traditionally, blood loss after delivery is visually estimated, with wide variations in accuracy[8].

Demographic profile of the study population-

Age distribution (Table 2): Majority of study population (63.95%) were between 18-25 years of age with the mean age being 24.7 years. In 2020, the average age of childbearing in India was 27.4 years. There is a gradual decline from the mean age 28.75 years in 1975 to 27.4 years in 2020.

Registered and Unregistered case distribution (Table 3): Most of the subjects were registered cases (68.22%). Registered cases are defined as antenatal care provided atleast 8 times at the study hospital [69].

The World Health Organization (WHO) has revised its guidelines to increase the minimum antenatal care contacts from four to eight, aiming to reduce perinatal mortality and enhancing the quality of care for pregnant women.

As per National family health survey-5 (2019-2021), 58.1% pregnant women received at least 4 antenatal care visits with higher rates (68.1%) in urban population compared to rural population (54.2%) [70].

Similar findings were noted in the study conducted by Singh et al [1], with 67.4% booked cases. Participants having 3 or more antenatal visits were considered booked cases in the study.

Gravidity distribution (Table 4): The study population was evenly distributed between primigravida and multigravida population with 53.88% of the study population consisting of multigravida women.

Most of the subjects had no history of abortion and only 20.1 % of the study population had a previous history of abortion

Gestational age distribution (Table 5): The majority of the study population were delivered at term (84.88%). The mean gestational age was 38.17 ± 2.77 weeks.

Height, weight, BMI distribution (Table 6): The mean weight was 55.01 ± 7.23 kg with a mean height of 154.28 ± 6.44 cm. The majority had a BMI between 18.5-24.9 (84.88%).

Use of episiotomy during delivery (Table 7): Episiotomy was performed in 84.11% of the study population during delivery and 15.89% were delivered without one.

Spontaneous v/s induced labour (Table 8): The majority of the study population went into spontaneous labour (68.99%) whereas 31.01% were induced.

Active management of third stage of labour was performed for all cases.

Mops were used in all cases of vaginal deliveries.

Postpartum haemorrhage distribution (Table 9): 12.02 % of individuals experienced postpartum haemorrhage and 27.09% of the study population received additional uterotonic agents. Misoprostol was the most popular additional oxytocic agent which was used in 24.8% of cases.

BLOOD LOSS ESTIMATION METHODS-

1. **Volumetric method of blood loss estimation by BRASSS V- drape-**

Mean blood loss estimated by BRASSS V-drape was 323.49ml with a standard deviation of 181.31ml. The minimal blood loss observed by this method was 30 ml whereas the maximum blood loss was 850ml.

In blood loss determined by the BRASSS V Drape method, the distribution across different ranges is as follows: 1.16% of cases had blood loss less than 50 ml, 18.6% fell within the 50-149 ml range, 18.22% were in the 150-299 ml range, 29.84% were within the 300-499 ml range, 25.97% were in the 500-649 ml range, 5.04% were in the 650-799 ml range, and only 1.16% were categorized as ≥ 800 ml.

2. **Formula based blood loss estimation by modified Gross formula-**

Mean blood loss computed by modified Gross formula was 437.11 ml with a standard deviation of 290.01 ml.

The minimal blood loss calculated by the modified Gross formula was 11.15 ml and the maximum loss was 1715 ml.

In contrast, the distribution of blood loss estimates using the Modified Gross Formula method reveals a broader spread across different ranges: 6.2% of cases had blood loss less than 50 ml, 13.18% were within the 50-149 ml range, 15.5% fell within the 150-299 ml range, 20.54% were in the 300-499 ml range, 20.93% were in the 500-649 ml range, 12.79% were in the 650-799 ml range, and 10.85% were categorized as ≥ 800 ml.

Modified Gross formula closely approximated the logarithmic RBC loss unless there was substantial haemorrhage causing the formula to drift from normal baseline.

Comparison of haemoglobin levels pre and post-delivery (Table 11)-The mean haemoglobin levels pre-delivery was 11.62 g/dl with a standard deviation of 1.35g/dl whereas the mean values post-delivery were 10.24 g/dl with a standard deviation of 1.36 g/dl.

The mean change in haemoglobin levels noted after delivery was 1.38 g/dl with a standard deviation of 1.08 g/dl (p value<0.001)

Comparison of haematocrit values pre and post-delivery (Table 12)-

The mean haematocrit levels pre-delivery was 36.99% with a standard deviation of 3.64 whereas the mean values post-delivery were 32.8% with a standard deviation of 3.82

The mean change in haematocrit noted after delivery was 4.19 with a standard deviation of 3.31 (p value <0.001)

There were no cases of cervical tears, manual removal of placenta , ICU admissions and mortality in the study population.

Baby weight and blood loss distribution (Table 13, 14)-

The majority of infants had a weight between 2.5-3.5 Kg (69.38%). The mean baby weight is 2.67 ± 0.62 Kg. From Kruskal Wallis test, it is observed that, there is no significant difference in the distribution of blood loss determined by Brass V drape and modified gross formula over baby weight. This is supported by the study of Singh et al [1] and Kramer [71]et al

Correlation of blood loss determined by BRASSS V drape and modified gross formula by Spearman rank correlation test (Table 15):

The overall correlation coefficient for the entire dataset is 0.9592, indicating a very strong positive relationship between blood loss estimated by BRASSS V drape and the modified gross formula.

The correlation coefficients for blood loss are notably high regardless of whether an episiotomy was performed (0.9599) or not (0.9372) indicating a consistent relationship between the two blood loss estimation methods.

The correlation coefficients are consistently very high for both scenarios, whether induction of labour was performed (0.9752) or spontaneous labour (0.9531)was observed reinforcing the congruent relationship between both the methods.

The correlation coefficient decreases (0.7147) in cases of postpartum haemorrhage as compared to cases without (0.9510). Similar findings were noted in case where additional oxytocics were administered (0.8067) compared to cases where additional agents were not required (0.9599). This lower correlation might suggest that the methods are less consistent in estimating blood loss when the blood loss exceeds 500ml and additional oxytocics are used to cease the blood loss.

Comparing both the methods of blood loss estimation, the Modified Gross Formula tends to provide higher blood loss estimates overall, with a greater proportion of cases falling into the 500-649 ml and ≥ 800 ml categories when compared to the BRASSS V Drape method (Table 16).

The mean difference of blood loss by both the methods is 113.62 ml

The bias between the BRASSS V Drape method and the Modified Gross formula is estimated to be -113.6266 (95% CI: -130.2847, -96.9684). This is in the limits of agreement (-379.9414, 152.6883) suggest that the differences between the two methods can vary widely, spanning from -379.9414 to 152.6883 ml (Figure 27).

Use of mops for episiotomy in case of vaginal deliveries can account for the higher blood loss estimates calculated by the modified Gross formula when compared to BRASSS V drape.

The majority of the data points fall within this interval, with a few outliers lying outside of it. This suggests there is high level of agreement between the two methods with some level of variability and bias present.

Although the BRASSS V Drape is the standard method, modified gross formula presents a more pragmatic, cost effective alternative which is easier to implement, particularly in underserved areas

Modified gross formula offers a viable option for estimating blood loss in caesarean sections, especially when using drapes is impractical and traditional methods lack accuracy.

Blood loss estimation by modified Gross formula can be endorsed for all deliveries universally across all levels of healthcare, including remote and peripheral areas.

CONCLUSION

There is a significant correlation between the blood loss estimated by BRASSS V drape and modified Gross formula, hence it can be recommended for all deliveries universally especially in rural areas. Modified Gross formula provides a feasible approach for calculating blood loss in caesarean sections where the use of drapes is not practical and traditional methods lack accuracy.

BIBLIOGRAPHY

1. Singh G, Singh V, Sasidharan S, Singh S , Naseer A , M B, et al. A comparative study of Brass-V Drape and standardised visual estimation of blood loss during vaginal delivery – a single observer study. Journal of Obstetrics and Gynaecological investigations .2020;3 (1): 26-34
2. Diaz V, Abalos E, Carroli G. Methods for blood loss estimation after vaginal birth. 2014Feb18;9(9).
3. A Roadmap to combat postpartum haemorrhage between 2023 and 2030. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO
4. https://www.who.int/data/gho/data/themes/topics/sdg-target-3-1-maternal-mortality
5. Quantitative Blood Loss in Obstetric Hemorrhage. Obstetrics & Gynecology. 2019;134(6)
6. Patel A, Goudar SS, Geller SE, Kodkany BS, Edlavitch SA, Wagh K, et al. Drape estimation vs. visual assessment for estimating postpartum hemorrhage [published erratum appears in Int J Gynaecol Obstet 2006;95:312]. Int J Gynaecol Obstet 2006; 93: 220– 4.
7. Jaramillo S, Montane-Muntane M, Gambus PL, Capitan D, Navarro-Ripoll R, Blasi A. Perioperative blood loss: estimation of blood volume loss or haemoglobin mass loss? Blood Transfus. 2020 Jan;18(1):20-29. doi: 10.2450/2019.0204-19. Epub 2019 Nov 27. PMID: 31855150; PMCID: PMC7053522.
8. Ouzounian JG, Elkayam U. Physiologic changes during normal pregnancy and delivery. Cardiol Clin. 2012 Aug;30(3):317-29. doi: 10.1016/j.ccl.2012.05.004. Epub 2012 Jun 20. PMID: 22813360.

9. Carbillon L, Uzan M, Uzan S. Pregnancy, vascular tone, and maternal hemodynamics: a crucial adaptation. Obstet Gynecol Surv 2000;55(9):574–81.

10. Huseh WA, Luetscher JA, Carlson EJ, et al. Changes in active and inactive renin throughout pregnancy. J Clin Endocrinol Metab 1982;54:1010–6.

11. McCullogh, I.C.; Kelly, A.M.: Investigation of pregnancy-related changes in red cell 2,3-diphosphoglycerate. Clinica chim. Acta 98: 235-241 (1979)

12. Crocker IP, Baker PN, Fletcher J. Neutrophil function in pregnancy and rheumatoid arthritis. *Ann Rheumat Dis.* 2000;59:555–564. doi: 10.1136/ard.59.7.555.

13. Barron WM, Mujais SK, Zinaman M, Bravo EL, Lindheimer MD. Plasma catecholamine responses to physiologic stimuli in normal human pregnancy. Am J Obstet Gynecol. 1986;154(1):80–84

14. Thomsen JK, Fogh-Andersen N, Jasczak P, et al. Atrial natriuretic peptide (ANP) decrease during normal pregnancy as related to hemodynamic changes and volume regulation. Acta Obstet Gynecol Scand 1993;72:103–10. 13

15. Levin ER, Gardner DG, Samson WK. Natriuretic peptides. N Engl J Med 1998;339:321.

16. . Duvekot JJ, Peeters LL. Renal hemodynamics and volume hemostasis in pregnancy. Obstet Gynecol Surv 1994;49:830–9.

17. Faupel-Badger JM, Hsieh CC, Troisi R, *et al.* Plasma volume expansion in pregnancy: implications for biomarkers in population studies. *Cancer Epidemiol Biomarkers Prev* 2007;16(9):1720–3.

18. Datta, Sanjay & Kodali, Bhavani & Segal, Scott. (2010). Maternal Physiological Changes During Pregnancy, Labor, and the Postpartum Period. 10.1007/978-0-387-88602-2_1.

19. Vinturache A, Khalil A, *Glob. libr. women's med*., *ISSN: 1756-2228; DOI 10.3843/GLOWM.411323*

20. Lurie S, Mamet Y. Red blood cell survival and kinetics during pregnancy. Eur J Obstet Gynecol Reprod Biol. 2000 Dec;93(2):185-92. doi: 10.1016/s0301-2115(00)00290-6. PMID: 11074141.

21. Spivak JL. Serum immunoreactive erythropoietin in health and disease. J Perinat Med 1995;23:13–7.

22. Lund CJ, Donovan JC. Blood volume during pregnancy: significance of plasma and red cell volumes. Am J Obstet Gynecol 1967;98:393–403.

23. Sthohlman Jr. F. Humoral regulatuion of erythropoiesis. VII. Shortened survival of erythrocytes produced by erythropoietine or severe Blood Cells 1988;14:69–75. anemia. Proc Soc Exp Biol Med 1961;107:884–6.

24. Seno S, Miyahara M, Asukura H, Ochi O, Matsuoka H, Toyama T. Macrocytosis resulting from early denucleation of erythroid precursors. Blood 1964;24:582–91.

25. McFee JG. Anemia in pregnancy – a reappraisal. Obstet Gynecol Surv 1973;28:769–93.

26. Jepson JH. Endocrine control of maternal and fetal erthropoiesis. Can Med Ass J 1968;98:844

27. Brewer, G.J.; Oelshlegel, F.J., Jr.; Schoomaker, E.B.; Knutsen, C.A.: Potential effects of hemoglobin concentration on red cell metabolism together with observations on red cell metabolic differences between men and women; in Brewer, Hemoglobin and red cell structure and function, pp. 99-119 (Plenum Press, New York 1972).

28. Camilleri, A.P. (1958), PHYSIOLOGICAL ANAEMIA OF PREGNANCY. BJOG: An International Journal of Obstetrics & Gynaecology, 65: 266-277. https://doi.org/10.1111/j.1471-0528.1958.tb09195.x

29. Romano M, Cacciatore A, Giordano R, La Rosa B. Postpartum period: three distinct but continuous phases. J Prenat Med. 2010 Apr;4(2):22-5.

30. Ogueh O, Clough A, Hancock M, Johnson MR. A longitudinal study of the control of renal and uterine hemodynamic changes of pregnancy. Hypertens Pregnancy. 2011;30(3):243-59.

31. Cheung KL, Lafayette RA. Renal physiology of pregnancy. Adv Chronic Kidney Dis. 2013 May;20(3):209-14.

32. WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy. Geneva: World Health Organization; 2010. 3, Blood-sampling systems. Available from: https://www.ncbi.nlm.nih.gov/books/NBK138666/

33. Centers for Disease Control and Prevention. Evaluation of safety devices for preventing percutaneous injuries among health-care personnel during phlebotomy procedures 1993–1995. Morbidity and Mortality Weekly Report. 1997. pp. 21–25

34. Laboratory continuing education: phlebotomy collection methods. Medialab Inc; 2009.

35. Smith GC. Failed phlebotomy? Perhaps it's the site used. BMJ. 2015 Feb 05;350:h557.

36. Saberian L, Sharif M, Aarabi M, Broumand B, Shafiee MA. Arterial Versus Venous Blood Gas Analysis Comparisons, Appropriateness, and Alternatives in Different Acid/Base Clinical Settings: A Systematic Review. Cureus. 2023 Jul 11;15(7):e41707. doi: 10.7759/cureus.41707. PMID: 37575851; PMCID: PMC10414547.

37. Fred HL. Maxwell Myer Wintrobe: new history and a new appreciation. Tex Heart Inst J. 2007;34(3):328-35.

38. Billett HH. Hemoglobin and Hematocrit. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The History, Physical, and Laboratory Examinations. 3rd ed. Butterworths; Boston: 1990.

39. Bamberg R, Gwyn T, Miller J, Thompson M, Transou P. The effects of over-anticoagulated blood on hematocrit values by the microcentrifuge method. Clin Lab Sci. 2008 Summer;21(3):146-50.

40. Mondal H, Lotfollahzadeh S. Hematocrit. [Updated 2023 Jan 2]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK542276/

41. Bull BS, Koepke JA, Simson E *et al*. Procedure for determining packed cell volume by the hematocrit method. Third edition. NCCLS publication H7-A3. Wayne, Pennsylvania: NCCLS, 2000.

42. Hematocrit - a review of different analytical methods. (n.d.). https://acutecaretesting.org/en/articles/hematocrit--a-review-of-different-analytical-methods

43. Graham MD. The Coulter principle: Imaginary origins. Cytometry Part A. 2013;83(12):1057-61.

44. Whitehead RD, Mei Z, Mapango C, Jefferds MED. Methods and analyzers for hemoglobin measurement in clinical laboratories and field settings. Annals of the New York Academy of Sciences. 2019;1450(1):147-71.

45. Quantitative Blood Loss in Obstetric Hemorrhage. Obstetrics & Gynecology. 2019;134(6).

46. Main E, Cape V, Abreo A, Vasher J, Woods A, Carpenter A, Gould J. Reduction of Severe Maternal Morbidity From Hemorrhage Using a State Perinatal Quality Collaborative. Obstetric Anesthesia Digest. 2017;37(4):178-9.

47. Al Kadri HMF, Al Anazi BK, Tamim HM. Visual estimation versus gravimetric measurement of postpartum blood loss: a prospective cohort study. Archives of Gynecology and Obstetrics. 2010;283(6):1207-13.

48. Stafford I, Dildy GA, Clark SL, Belfort MA. Visually estimated and calculated blood loss in vaginal and cesarean delivery. American Journal of Obstetrics and Gynecology. 2008;199(5):519.e1-7.

49. GROSS J. Estimating Allowable Blood Loss. Anesthesiology. 1983;58(3): 277-80.

50. Nadler SB, Hidalgo JH, Bloch T. Prediction of blood volume in normal human adults. *Surgery.* 1962;51:224–32

51. Good L, Peterson E, Lisander B. Tranexamic acid decreases external blood loss but not hidden blood loss in total knee replacement. *Br J Anaesth.* 2003;90: 596–9.

52. Lisander B, Ivarsson I, Jacobsson SA. Intraoperative autotransfusion is associated with modest reduction of allogeneic transfusion in prosthetic hip surgery. *Acta Anaesthesiol Scand.* 1998;42:707–12.

53. Meunier A, Petersson A, Good L, Berlin G. Validation of a haemoglobin dilution method for estimation of blood loss. *Vox Sang.* 2008;95:120–4.

54. Donovan RL, Lostis E, Jones I, Whitehouse MR. Estimation of blood volume and blood loss in primary total hip and knee replacement: An analysis of formulae for perioperative calculations and their ability to predict length of stay and blood transfusion requirements. J Orthop. 2021 Mar 12;24:227-232. doi: 10.1016/j.jor.2021.03.004.

55. Sehat KR, Evans RL, Newman JH. Hidden blood loss following hip and knee arthroplasty. Correct management of blood loss should take hidden loss into account. *J Bone Joint Surg Br.* 2004;86:561–565.

56. Gibon E, Courpied JP, Hamadouche M. Total joint replacement and blood loss: what is the best equation? Int Orthop. 2013 Apr;37(4):735-9. doi: 10.1007/s00264-013-1801-0. Epub 2013 Feb 6.

57. Zajak J, Páral J, Sirový M, Odložilová Š, Vinklerová K, Lochman P, Čečka F (2024) Blood loss quantification during major abdominal surgery: prospective observational cohort study. BMC Surgery. https://doi.org/10.1186/s12893-023-02288-w

58. Ambardekar S, Shochet T, Bracken H, Coyaji K, Winikoff B. Calibrated delivery drape versus indirect gravimetric technique for the measurement of

blood loss after delivery: a randomized trial. BMC Pregnancy Childbirth. 2014 Aug 15;14:276. doi: 10.1186/1471-2393-14-276.

59. Freedman M. A new indicator dilution method for the estimation of surgical blood loss. Anaesthesia. 1984 Aug;39(8):826-31. doi: 10.1111/j.1365-2044.1984.tb06536.x.

60. Wolfe M, Kazma JM, Burke AB, Ahmadzia HK. Effect of implementation of a colorimetric quantitative blood loss system for postpartum hemorrhage. Int J Gynaecol Obstet. 2022 Dec;159(3):850-855. doi: 10.1002/ijgo.14225.

61. Yefet E, Yossef A, Suleiman A, Hatokay A, Nachum Z. Hemoglobin drop following postpartum hemorrhage. Sci Rep. 2020 Dec 9;10(1):21546. doi: 10.1038/s41598-020-77799-0.

62. Hancock, A., Weeks, A.D. & Lavender, D.T. Is accurate and reliable blood loss estimation the 'crucial step' in early detection of postpartum haemorrhage: an integrative review of the literature. *BMC Pregnancy Childbirth* 15, 230 (2015).

63. Diaz V, Abalos E , Carroli G. Methods for blood loss estimation after vaginal birth. Cochrane database of Systematic Reviews. 2018 Sep 13; (9)

64. Gharoro EP, Enabudoso EJ. Relationship between visually estimated blood loss at delivery and postpartum change in haematocrit. J Obstet Gynaecol. 2009 [cited 2022 Jun 14];29(6):517–20

65. C. F. Ward, E. A. Meathe, J. L. Benumof, F. Trousdale; A COMPUTER NOMOGRAM FOR BLOOD LOSS REPLACEMENT. *Anesthesiology* 1980; 53:S126

66. FOO. Relationship between Blood Loss during Vaginal Delivery Using Brasss-V Drape Estimation and Postpartum Haematocrit Drop in Ile-Ife Nigeria. Journal of Medical Science And Clinical Research. 2022 Mar 30; 10(03).

67. MISHRA, Nalini et al. Visual estimation of blood loss versus quantification of blood loss after vaginal birth using an innovative drape: a prospective study. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, [S.l.], v. 10, n. 1, p. 268-274, dec.2020. ISSN 2320-1789.

68. Ram GG, Suresh P, Vijayaraghavan PV. Surgeons often underestimate the amount of blood loss in replacement surgeries. Chin J Traumatol. 2014;17(4):225-8. PMID: 25098850.

69. https://data.unicef.org/topic/maternal-health/antenatal-care/

70. *Ministry of Health and Family Welfare, GoI. National Family health Survey (NFHS-5), 2019-21, India Report.* [[Last accessed on 2022 Jul 18]]. Available from: https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf

71. Kramer MS, Dahhou M, Vallerand D, Liston R, Joseph KS. Riskfactors for postpartum hemorrhage: can we explain the recent temporal increase? J Obstet Gynaecol Can 2011; 33: 810-9.

ANNEXURE A- PARTICIPANT INFORMATION PROFORMA

BRASSS V DRAPE V/S MODIFIED GROSS FORMULA IN ESTIMATION OF POSTPARTUM BLOOD LOSS

PARTICIPANT INFORMATION

IP Number: | | | | | | | | |

First Name: _____

Last Name: _____

Age (Years): _____

Address: _____

Phone Number: _____

Registered ☐

Unregistered ☐

Height ☐

Weight ☐

BMI ☐

ANNEXURE B- SCREENING FORM

BRASSS V DRAPE V/S MODIFIED GROSS FORMULA IN ESTIMATION OF POSTPARTUM BLOOD LOSS

SCREENING FORM

Screening number: ☐☐☐☐

Date of Screening: (dd/mm/yyyy) ☐☐☐☐☐☐☐☐

A. Inclusion Criteria:

Is Gestational Age ≥ 28 weeks? Yes ☐ No ☐

LMP -
EDD -
USG 1st trimester EDD/ Corrected EDD -
Actual Gestational Age–

B. Exclusion criteria criteria –

i.	Obesity (BMI ≥ 25 kg/m2)	Yes ☐	No ☐
ii.	Severe Anemia (Hb < 7 g/dL)	Yes ☐	No ☐
iii.	Previous LSCS not willing for VBAC	Yes ☐	No ☐
iv.	History of bleeding disorders	Yes ☐	No ☐
v.	On Anticoagulant Therapy	Yes ☐	No ☐
vi.	H/o Aspirin usage during pregnancy	Yes ☐	No ☐
vii.	Patient planned for elective LSCS.	Yes ☐	No ☐

C. **Is the patient eligible for the study** Yes ☐ No ☐

D. **Patient is willing to participate in the study** Yes ☐ ☐

ANNEXURE C- STUDY PROFORMA

BRASSS V DRAPE V/S MODIFIED GROSS FORMULA IN ESTIMATION OF POSTPARTUM BLOOD LOSS

STUDY PROFORMA

Study ID : | | | | | | | | |

Date of admission : | | | | | | | | |

Date of delivery : | | | | | | | | |

Date of discharge : | | | | | | | | |

BMI (kg/m^2): ☐

Obstetric score: G ☐ P ☐ L ☐ A ☐

Mode of Delivery: Vaginal delivery ☐

Instrumental delivery ☐

Emergency LSCS ☐
If yes, patient is ineligible for the study

Weight of the baby ☐

Volumetric method of blood loss assessment

Volume of blood loss by Modified Brasss V Drape (ml) ☐

Investigations -

Pre-Op Investigations: Date (dd/mm/yyyy) ☐
Hb (g/dL) - ☐
PCV (%) - ☐

Post-Op Investigations: Date (dd/mm/yyyy) ☐
Hb (g/dL) - ☐
PCV (%) - ☐

Change in Hb (Pre op – Post op) = ☐

Change in PCV (Pre op – Post op) = ☐

Estimated Blood Volume (ml) = *Weight (kg) x 70* = ☐

Estimated blood loss (ml)

$= Estimated\ blood\ volume\ X \{ \frac{(Preop\ PCV - Postop\ PCV)}{Preop\ PCV} \} =$ ☐

Active Management of third stage of labour done Yes ☐ No ☐

Use of additional pads/ mops- Yes ☐ No ☐

Manual removal of placenta – Yes ☐ No ☐

Additional Uterotonics used :-

i) Oxytocin Yes ☐ No ☐

ii) Carboprost Yes ☐ No ☐

iii) Misoprostol Yes ☐ No ☐

iv) Methergin Yes ☐ No ☐

Intrapartum/Postpartum Blood and Blood product transfusion – Yes ☐ No ☐

Episiotomy Yes ☐ No ☐

Cervical tear Yes ☐ No ☐

History of blood transfusion within 6 hours of delivery Yes ☐ No ☐

If yes, patient is ineligible for study

Maternal Outcomes

ii) PPH Yes ☐ No ☐

iii) Shock Yes ☐ No ☐

iv) ICU Admission Yes No ☐

iv) Perinatal Mortality Yes ☐ No ☐

If Yes, Reason: _____

ANNEXURE D- CONSENT FORM

CONSENT STATEMENT

I am making a voluntary decision to participate in the study "**BRASSS V DRAPE V/S MODIFIED GROSS FORMULA IN ESTIMATION OF POSTPARTUM BLOOD LOSS**". My signature below indicates that I have decided to participate, and I have read the information provided above or the information provided above has been read to me in the language that I understand best. I was given the opportunity to ask questions and that they have been answered to my satisfaction.

Date:

Name of the participant:

Signature or left thumb impression of the participant:

Name of the witness:

Signature or left thumb impression of the witness:

Name of the investigator:

Signature of the investigator:

ANNEXURE - E- MASTER CHART

SCREENING ID	STUDY ID	AGE	IP NO.	REG	GRAVIDA	PARA	ABORTIONS	PARITY	PRIMARY DIAGNOSIS	GESTATIONAL AGE	WEIGHT OF BABY	SECONDARY DIAGNOSIS	BABY WEIGHT	PRE Hb	PRE PCV	Brass V drape	POST hb	POST PCV	change in hb	change in pcv	Mean hematocrit	estimated blood volume	weight	height	BMI	gross formula	Use of mops	Episiotomy	MRP	IOL	AMTSL	Cervical tear	PPH	Post partum BT	ICU admission	Mortality	additional oxytocics
A001	100001	30	1192749	R	3	1	1	M	G3P1L1A1 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION FOR IOL	40.1		P2L2A1/ FTND/ FEMALE/ 3.1 KG	3.1	12	38	100	12	36	0.1	1.6	36.7	4060	58	156	23.8	173	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A003	100002	24	1192605	R	2	0	1	P	G2A1 WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION	40	LBW	P1L1A1/ FTND/ FEMALE/ 2.48KG	2.48	13	38	100	12	37	0.7	0.9	37.7	3430	49	150	21.8	80.8	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A004	100003	25	1192700	UR	1	0	0	P	PRIMIGRAVIDA WITH 30 WEEKS 6 DAYS POG WITH PPROM WITH IGT	30.6	LBW	P1L1/ PTVD/ MALE/ 1.3 KG	1.3	9.7	31	200	9.8	29	0.1	2.1	30.35	3570	51	152	22.1	238.7	Yes	No	No	no	Yes	No	No	No	No	No	
A005	100004	21	1192980	UR	1	0	0	P	PRIMIGRAVIDA AT 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.2		P1L1/ FTVD/ MALE/ 2.8 KG	2.8	12	34	50	12	33	0.3	0.3	33.45	3990	57	153	24.3	35.6	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A007	100005	19	1193110	R	1	0	0	P	PRIMIGRAVIDA AT 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.1		P1L1/ FTND/ FEMALE/ 3.3 KG	3.3	15	43	150	14	41	0.5	1.8	42.1	4200	60	161	23.1	170	Yes	Yes	No	no	Yes	No	No	No	No	No	
A008	100006	23	1193211	R	1	0	0	P	PRIMIGRAVIDA AT 38 WEEKS POG WITH RH NEGATIVE PREGNANCY IN LATENT LABOUR	38		P1L1/ FTND/ FEMALE/ 2.6 KG	2.6	10	31	40	10	31	0	0.1	31.25	4480	64	163	24.1	14.3	Yes	Yes	No	no	Yes	No	No	No	No	No	
A009	100007	22	1193272	R	2	1	0	M	G2P1L1 WITH 37 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH PROM IN AL	37.2	LBW	P2L2/ FTVD/ FEMALE/ 2 KG	2	11	34	350	9.6	30	1.4	4.2	32.2	3500	50	146	23.4	428	Yes	No	No	no	Yes	No	No	No	No	No	
A012	100008	26	1193106	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 1 DAY POG WITH LATE ONSET FGR FOR IOL	39.1		P1L1/ FTND/ MALE/ 2.7 KG	2.7	13	38	150	13	36	0.1	1.7	37.05	3710	53	158	21.2	166	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A016	100009	20	1193352	UR	2	0	1	P	G2A1 WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	39.2		P1L1A1/ FTND/ FEMALE/ 3.2 KG/ 10: 53 PM	3.2	13	35	300	9.8	31	3	4.3	32.95	3220	46	154	19.4	394	Yes	Yes	No	no	Yes	No	No	No	No	No	
A018	100010	21	1193179	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.4		P1L1/ FTND/ FEMALE/ 3.4 KG/ 9: 49 PM ON	3.4	12	37	300	11	34	1	3.3	35.75	3430	49	148	22.4	302	Yes	Yes	No	no	Yes	No	No	No	No	No	
A022	100011	22	1193300	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENATION WITH PROM	39.6		P1L1/ FT VENTOUSE DELIVERY / FEMALE/ 2.8KG	2.8	12	39	100	12	37	0.2	1.4	38.1	3920	56	151	24.6	144	Yes	Yes	No	no	Yes	No	No	No	No	No	
A023	100012	20	1193404	UR	1	0	0	P	PRIMIGRAVIDA AT 40 WEEKS POG WITH CEPHALIC PRESENTATION WITH RH NEGATIVE PREGNANCY IN LATENT LABOUR	40		P1L1/ FTVD/ FEMALE/ 2.7KG	2.7	9.1	28	150	8.5	28	0.6	1.5	27.75	3430	49	152	21.2	172	Yes	Yes	No	no	Yes	No	No	No	No	No	
A024	100013	23	1193309	R	1	0	0	M	G2P1L1 WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.6		P2L2/ FT VENTOUSE DELIVERY/ MALE/ 3.1 KG	3.1	10	33	350	9.5	30	0.7	2.9	31.75	3640	52	146	24.4	317	Yes	Yes	No	no	Yes	No	No	No	No	No	
A027	100014	24	1193752	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY WITH CEPHALIC PRESENTATION	40.1		P1L1/ FTVD/ MALE/3 KG	3	14	39	150	13	38	0.3	1.5	38.65	3850	55	148	25.1	146.5	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A030	100015	20	1193654	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG	40.1		P1L1/ FTND/ FEMALE/ 3.2KG WITH PPIUCD INSERTION	3.2	13	41	650	9.4	29	3.2	12	34.95	3010	43	146	20.18	850	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	oxytocin, carboprost, misoprostol
A032	100016	24	1194158	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P1L1/ FT VENTOUSE DELIVERY/ FEMALE/ 2.6 KG	2.6	12	35	500	9	27	2.7	7.8	30.9	3080	44	154	18.56	690	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	misoprostol
A035	100017	23	1199051	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION WITH MILD OLIGOHYDRAMNIOS	38.5		P1L1/ FTVD/ FEMALE/2.9 KG	2.9	12	39	300	11	35	1.1	3.7	37.25	3920	56	152	21.2	370	Yes	Yes	No	Yes	Yes	No	No	No	No	No	

A041	100018	20	1194271	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG WITH RH NEGATIVE PREGNANCY WITH CEPHALIC PRESENTATION WITH LATE ONSET FGR	40.1		P1L1/ FTVD/ FEMALE/ 2.8 KG	2.8	9	29	400	8.4	26	0.6	3.3	27.75	3500	50	150	22.2	392	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A044	100019	22	1194724	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	39.1		P2L2 / FTVD/ MALE/ 2.9 KG	2.9	13	39	450	11	32	2.2	7.1	35.25	3570	51	158	20.4	653	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A047	100020	30	1194685	R	3	2	0	M	G3P2L2 WITH 37 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH PROM IN LATENT LABOUR	37.2	LBW	P3L3/ FTND/ FEMALE/ 2.3 KG	2.3	14	39	200	13	36	1	2.4	37.3	3220	46	150	20.4	200	Yes	No	No	no	Yes	No	No	No	No	No	
A049	100021	30	1194733	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH K/C/O PDA IN LATENT LABOUR	39.3		P2L2/ FTND/ FEMALE/ 3.2 KG	3.2	12	38	600	8.4	28	3.7	9.7	33.25	3500	50	149	22.5	891	Yes	Yes	No	no	Yes	No	Yes	No	No	No	oxytocin, misoprostol
A052	100022	27	1196059	R	4	2	1	M	G4P2L2A1 WITH 39 WEEKS 1 DAYS POF WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.1		P3L3A1/ FTVD/ FEMALE/ 3KG	3	13	39	300	12	36	0.6	3.3	37.35	3430	49	145	25.7	319	Yes	No	No	no	Yes	No	No	No	No	No	
AO57	100023	20	1197434	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION	40		P1L1/ FTVD/ FEMALE/ 2.7 KG	2.7	9.6	29	300	8.8	26	0.8	2.8	27.8	3710	53	151	23.2	355	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A062	100024	22	1197234	UR	3	2	0	M	G3P2L2 WITH 38 WEEKS 2 DAYS POG IN ACTIVE LABOUR	38.2		P3L3/ FTND/ MALE/ 2.7KG	2.7	9.7	31	50	9.6	30	0.1	0.2	30.4	4200	60	156	24.6	27.5	Yes	No	No	no	Yes	No	No	No	No	No	
A063	100025	19	1192679	R	1	0	0	P	PRIMIGRAVIDA AT 39 WEEKS POG WITH CEPHALIC PRESENTATION WITH GESTATIONAL HTN	39		P1L1/ FTND/ FEMALE/ 3.2KG	3.2	14	38	400	11	33	2.3	4.2	35.25	3500	50	156	20.5	388	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A066	100026	29	1168004	UR	2	1	0	M	G2P1L1 WITH 37 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH LESS LIQUOR IN LATENT LABOUR	37.1		P2L2/ FTVD/ MALE/ 2.5 KG	2.5	12	39	400	11	33	0.8	5.7	36.05	3850	55	152	23.8	564	Yes	Yes	No	no	Yes	No	No	No	No	No	
A069	100027	19	1179443	R	1	0	0	M	PRIMIGRAVIDA WITH 39 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION WITH PROM	39.5		P1L1/ FTVD/ MALE/ 3.3KG	3.3	13	40	450	10	33	2.6	6.8	36.6	3780	54	144	25.8	642	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A072	100028	27	1193114	UR	2	1	0	M	G2P1L1 WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION	40		P2L2/ FTVD/ MALE/ 2.9KG	2.9	14	41	400	12	35	1.7	5.8	37.9	3360	48	146	22.5	477	Yes	Yes	No	no	Yes	No	No	No	No	No	
A077	100029	33	1192067	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH GDM	37.2		P1L1/ FTVD/ FEMALE/ 2.7KG	2.7	11	38	100	8.2	25	2.3	13	31.55	4130	59	150	24.2	109	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A080	100030	30	1194136	R	2	1	0	M	G2P1L1 WITH 40 WEEKS 3 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.3		P2L2/ FTND/ FEMALE/ 2.6KG	2.6	14	41	200	12	38	1.6	2.6	39.2	3920	56	148	23.57	251	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A083	100031	25	1193783	R	2	1	0	M	G2P1L1 WITH 28 WEEKS 4 DAYS POG WITH PRETERM LABOUR WITH OLIGOHYDRAMNIOS	28.4	LBW	P2L2/ PTVD/ MALE/ 1.2 KG	1.2	13	40	550	8.7	27	4.7	13	33.3	3430	49	152	21.2	1091	Yes	Yes	No	no	Yes	No	Yes	No	No	No	oxytocin, misoprostol
A088	100032	37	1194545	UR	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 4 DAYS WITH CEPHALIC PRESENTATION WITH PE	36.4	LBW	P1L1/ PTVD/ FEMALE/ 1.6KG	1.6	13	39	150	12	37	0.7	1.7	38.15	3990	57	155	23.7	173	Yes	no	No	no	Yes	No	No	No	No	No	
A090	100033	32	1194468	R	3	1	1	M	G3P1L1A1 WITH 37 WEEKS 2 DAYS POG WITH HYPOTHYROIDISM WITH IGT	37.2		P2L2A1/ FTND/ MALE/2.1KG	2.1	13	42	450	11	34	2.2	7.8	38.3	3290	47	146	22	608	Yes	no	No	no	Yes	No	No	No	No	No	misoprostol
A097	100034	24	10001254	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P1L1/ FTVD/ FEMALE/ 3 KG/ 6: 40 PM ON 20/8/23	3	12	36	400	9.8	31	2.2	5.5	33.3	3360	48	148	21.9	554	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A099	100035	27	10001424	R	3	1	1	M	G3P1L1A1 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P2L2A1/ FTND/ MALE/ 3.5 KG/ 6: 25 AM ON 21/8/23	3.5	12	41	600	9.6	31	2.4	9.3	36.05	3640	52	150	23.1	939	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	oxytocin, misoprostol
A100	100036	22	10001279	R	2	1	0	P	G2A1 WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION	39.2	LBW	P1L1A1/ FTND/ FEMALE/ 2.1 KG/ 2: 36 AM ON 20/8/23	21	11	37	400	9.8	31	1.2	6.3	34.25	3570	51	154	21.5	656	Yes	Yes	No	no	Yes	No	No	No	No	No	
A108	100037	28	10001508	UR	3	1	1	M	G3P1L1A1 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH PV LEAK	40.1		P2L2/ FTVD/ FEMALE/ 3.5 KG/ 3: 45 PM ON 20/8/23	3.5	12	39	250	11	36	1.1	3.1	37.85	3780	54	153	23.07	309	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A110	100038	27	10001424	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 2 DAYS POG WITH PROM	38.2	LBW	P1L1/ FTVD/ FEMALE/ 1.8 KG/ 6: 33PM ON 18/8/23	1.8	12	41	600	9.6	31	2.4	9.3	36.05	3360	48	151	21.05	866	Yes	Yes	No	no	Yes	No	Yes	No	No	No	misoprostol, methergin

A113	100039	23	10001536	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH PROM	40		P1L1/ FTND/ FEMALE/ 2.8 KG/10:26AM ON 21/8/23	2.5	9.9	32	400	8.4	28	1.5	4.5	29.95	3500	50	148	22.8	525	Yes	Yes	No	no	Yes	No	No	No	No	No		
A116	100040	29	10001722	R	3	2	2	M	G3P2L2 WITH 39 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN LL	39.3		P3L3/ FTND/ MALE/ 3KG/ 5:09 PM ON 21/8/23	3	9.8	35	300	9.7	31	0.1	3.3	32.85	3570	51	150	22.6	358	Yes	Yes	No	no	Yes	No	No	No	No	No		
A119	100041	20	10001271	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION	39.3		P1L1/ FTND/ MALE/ 2.8 KG/ 4:54 AM ON 22/8/23	2.8	12	37	450	10	32	1.3	5.7	34.35	3920	56	152	24.2	650	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol	
A122	100042	23	10002333	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.6	LBW	P1L1/ FTND/ FEMALE/ 2.4 KG/ 1: 16 AM ON 24/8/23	2.4	8.9	33	300	8.5	30	0.4	3.2	31.3	3570	51	146	23.9	364	Yes	Yes	No	no	Yes	No	No	No	No	No		
A127	100043	39	10001827	R	6	3	2	M	G6P3L3A2 WITH 38 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH K/C/O DVT WITH EPILEPSY WITH FETUS WITH ASD	38.4		P4L4/ FTVD/ MALE/ 2.6 KG/ 4: 54 PM ON 26/8/23	2.6	12	40	550	8.5	30	3.1	11	35.1	3500	50	144	24.1	1056	Yes	Yes	No	no	Yes	No	yes	No	No	No	oxytocin, misoprostol	
A129	100044	29	10002808	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH OLIGOHYDRAMNIOS WITH RH NEGATIVE	38.1		P2L2/ FTVD/ FEMALE/ 2.5 KG/ 11: 04 PM ON 26/8/23	2.5	12	38	50	12	39	0	0.4	38.4	4340	62	158	24.8	45	no	No	No	no	Yes	No	No	No	No	No		
A130	100045	22	10003293	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 5 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.5		P1L1/ FTND/ MALE/ 2.9 KG/ 5: 29 AM ON 29/8/23	2.9	11	37	400	9.6	32	1.8	5.5	34.2	3640	52	152	22.5	585	Yes	Yes	No	no	Yes	No	No	No	No	No		
A133	100046	20	10003420	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.1		P1L1/ FTND/ MALE/ 2.7 KG/ 10: 22AM ON 19/8/23	2.7	13	38	50	12	38	0.2	0.4	38.2	4480	64	159	25	47	Yes	Yes	No	no	Yes	No	No	No	No	No		
A135	100047	19	10003625	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39		P1L1/ FTND/ FEMALE/ 3 KG/ 12: 08 AM ON 30/8/23	3	11	34	450	8.7	28	2.1	6.1	31.3	3430	49	154	20.6	668	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol	
A138	100048	32	10003558	UR	3	1	1	M	G3P1L1A1 WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION WITH GESTATIONAL THROMBOCYTOPENIA	38		P2L2/ FTND/ MALE/ 2.7 KG/ 7: 12 PM ON 28/8/23	2.7	12	36	200	11	34	1	1.8	35	3780	54	148	24.6	194	Yes	Yes	No	Yes	Yes	No	No	No	No	No		
A140	100049	21	10003631	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM	40		P1L1/ FTVD/ MALE/ 2.7 KG/ 9: 01 PM ON 30/8/23	2.7	12	34	550	8.8	27	3	7.1	30.55	3220	46	151	20.17	748	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol, methergin, carboprost	
A142	100050	28	10004198	R	2	1	0	M	G2P1L1 WITH 40 WEEKS POG WITH CEHALIC PRESENTATION IN ACTIVE LABOUR	40		P2L2/ FTND/ MALE/ 2.94 KG/ 12: 12 AM ON 1/9/23	2.9	13	40	150	12	38	1.1	2	39.3	3360	48	154	20.25	170	Yes	Yes	No	no	Yes	No	No	No	No	No		
A147	100051	20	10003935	UR	2	0	1	P	G2A1 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH POSTDATISM IN LATENT LABOUR	40.1		P1L1A1/ FTVD/ FEMALE/ 3.2 KG/ 7: 34 PM ON 31/8/23	3.2	11	34	200	10	31	0.7	2.9	32.25	3710	53	156	21.8	333	Yes	Yes	No	Yes	Yes	No	No	No	No	No		
A150	100052	29	10004227	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH RH NEGATIVE PREGNANCY IN LATENT LABOUR	39.3		P2L2/ FTND/ FEMALE/ 2.8 KG/ 8: 57 AM ON 1/9/23	2.8	13	41	400	11	36	2	5.7	38.3	3570	51	152	22	493	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol	
A155	100053	30	10004482	UR	2	1	0	M	G2P1L1 WITH 28 WEEKS 3 DAYS POG WITH BREECH PRESENTATION IN ACTIVE LABOUR	28.3	LBW	P2L2/ PTD/ MALE/ 770 GRAMS WITH 7 : 35 SM ON 2/9/23	770g	11	34	50	10	34	0.3	0.5	34.3	4340	62	156	25	63	Yes	No	No	no	Yes	No	No	No	No	No		
A157	100054	27	10004463	R	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH PPROM	36.6	LBW	P1L1/ FTVD/ 2.4 KG/ FEMALE/ 12: 37 PM ON 2/9/23	2.4	13	41	150	12	39	1.2	2	39.5	3850	55	152	23.8	194	Yes	Yes	No	no	Yes	No	No	No	No	No		
A158	100055	28	10003408	UR	4	3	0	M	G4P3L2 WITH 29 WEEKS POG WITH POLYHYDRAMNIOS WITH INCREASED RESISTANCE ON DOPPLER IN LATENT LABOUR	29	LBW	P4L2/ PTVD/ MALE/ 870 GRAMS/ FSB/ 11: 10 PM ON 3/9/23	870g	11	35	450	8.5	28	2.3	6.3	31.35	3360	48	149	21.6	675	Yes	No	No	no	Yes	No	No	No	No	No	oxytocin, carboprost	
A159	100056	25	10004665	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.1		P1L1/ FTND/ FEMALE/ 2.5 KG/ 12: 48 AM ON 4/9/23	2.5	11	36	550	7.9	28	2.6	8.1	31.9	3430	49	151	21.4	870	Yes	Yes	No	no	Yes	No	Yes	No	No	No	misoprostol, methergin	

A161	100057	25	10005043	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 2 DAYS POG WITH LATENT LABOUR	39.2	LBW	P1L1/ FTVD/ FEMALE/ 2.45KG/ 4:36AM ON 5/9/23	2.45	12	39	400	9.9	33	2.4	6.8	36	3640	52	154	21.9	687	Yes	Yes	No	no	Yes	No	No	No	No	No	No	misoprostol
A163	100058	19	10004708	R	2	0	1	P	G2A1 WITH 35 WEEKS 2 DAYS POG WITH GESTATIONAL HTN WITH PROM	35.2	LBW	P1L1A1/ PTVD/ FEMALE/ 1.9Kg/4:01 PM ON 5/9/23	1.9	11	36	100	11	35	0.2	0.9	35.15	4480	64	161	24.7	127	Yes	no	No	no	Yes	No	No	No	No	No		
A165	100059	22	10004796	R	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 6 DAYS POG WITH GESTATIONAL HTN	36.6		P1L1/ PTVD/ MALE/ 2.6KG/ 11:59 AM ON 7/9/23	2.6	13	43	50	10	32	3.2	11	37.4	3290	47	150	20.8	87.9	Yes	Yes	No	no	Yes	No	No	No	No	No		
A166	100060	22	10004645	R	2	0	1	P	G2A1 WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40		P1L1A1/ FTND/ MALE/ 3 KG/ 9:40 AM ON 19/9/23	3	12	39	200	11	37	0.7	2	38.1	3710	53	152	22.9	194	Yes	Yes	No	no	Yes	No	No	No	No	No		
A168	100061	23	10005295	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS POG WITH CEPHALIC PRESENTATION WITH H/O ASD CLOSURE WITH PROM	39		P1L1/ FTVD/ MALE/ 2.7 KG/ 7:08 AM/ 6/9/23 WITH 3RD DEGREE PERINEAL TEAR	2.7	12	38	550	9.9	32	2	6.1	34.75	3850	55	154	23.2	675	Yes	Yes	No	no	Yes	No	yes	No	No	No	misoprostol
A170	100062	21	10006461	R	5	2	2	M	G5P2L2A2 WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	40		P3L3/ FTND/ FEMALE/ 2.9 KG/ 12: 04 PM ON 7/9/23	2.9	12	39	450	10	34	1.4	5.3	36.35	4480	64	159	25	653	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol	
A172	100063	20	10006510	UR	2	0	1	P	G2A1 WITH 39 WEEKS POG WITH CEPHALIC WITH PROM IN LATENT LABOUR	39		P1L1A1/ FTND/ MALE/ 3.3 KG/ 1: 55 PM ON 5/9/23	3.3	13	39	300	11	36	1.9	2.8	37.2	4200	60	162	22.9	316	Yes	Yes	No	no	Yes	No	No	No	No	No		
A174	100064	23	10007039	UR	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH PROM	36	LBW	P1L1/ PTVD/ MALE/ 2.25KG / 2: 58 PM ON 13/9/23	2.25	11	33	100	11	33	0.2	0.1	33.05	4550	65	161	25	137	Yes	Yes	No	no	Yes	No	No	No	No	No		
A177	100065	25	10007274	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 5 DAYS POG WITH RIGHT ECTOPIC/ ABSENT/ HYPOPLASTIC KIDNEY WITH SHORT STATURE	38	LBW	P1L1/ FTVD/ MALE/ 2.2 KG/ 7: 22 PM ON 14/9/23	2.2	12	40	450	10	31	2	9.1	35.85	3290	47	144	22.7	835	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A181	100066	24	10007834	UR	2	1	0	M	G2P1L1 WITH 28 WEEKS 3 DAYS POG WITH BREECH WITH SEVERE OLIGOHYDRAMNIOS WITH ESTABLISHED PRETERM LABOUR	28	LBW	P2L2/ PTVD/ 820 GRAMS/ MALE/ 5: 30 PM ON 16/9/23	820g	13	42	200	13	40	-0.2	2.3	41.15	4410	63	157	25	246	Yes	Yes	No	no	Yes	No	No	No	No	No		
A182	100067	25	10007632	R	1	0	0	P	PRIMIGRAVIDA WITH 33 WEEKS 6 DAYS WITH CEPHALIC PRESENTATION WITH PRECIOUS PREGNANCY	33	LBW	P1L1/ PTVD/ MALE/ 1.68KG/ 4: 59 PM ON 17/9/23	1.68	13	41	50	13	42	0.1	0.1	41.45	4620	66	162	25	11.15	Yes	Yes	No	no	yes	No	No	No	No	No		
A184	100068	30	10008101	R	3	2	0	M	G3P2L2 WITH 38 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	38.1		P3L3/ FTND/ MALE/ 2.7 KG/ 6:47 PM ON 18/9/23	2.7	11	34	250	10	32	1.2	2.5	32.9	3990	57	159	22.6	303	Yes	Yes	No	no	Yes	No	No	No	No	No		
A188	100069	20	10007981	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS POG IN LATENT LABOUR	37		P1L1/ FTVD/ MALE/ 2.8 KG/ 5: 31PM ON 18/9/23	2.8	13	39	100	12	39	1.2	0.6	39.1	4760	68	164	25	73	Yes	Yes	No	no	Yes	No	No	No	No	No		
A189	100070	20	10008445	UR	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM	37.2		P1L1/ FTVD/ MALE/ 2.5 KG/ 1:24PM ON 21/9/23	2.5	12	33	100	11	32	1.1	1.4	32.6	4130	59	161	22.77	177	Yes	Yes	No	no	Yes	No	No	No	No	No		
A191	100071	20	10008604	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION	40		P1L1/ FTND/ MALE/ 3.1 KG/ 10: 24 PM ON 21/9/23	3.1	12	41	450	11	35	1	5.3	37.8	3640	52	155	21.6	510	Yes	Yes	No	Yes	Yes	No	No	No	No	No		
A193	100072	20	10008153	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 1 DAY WITH CEPHALIC PRESENTATION WITH INCREASED RESISTANCE ON DOPPLER	37.1	LBW	P1L1/ FTND/ FEMALE/ 2.3 KG/ 7 AM ON 21/9/23	2.3	11	35	350	9.7	31	0.8	4.5	32.9	3220	46	148	21	440	Yes	Yes	No	no	Yes	No	No	No	No	No		
A197	100073	23	10009190	R	3	2	0	M	G3P2L2 WITH 37 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37		P1L1/ FT VENTOUSE DELIVERY/ MALE/ 2.8 KG/ 11:02 AM ON 24/9/23	2.8	14	43	650	11	32	2.8	11	37.4	3290	47	147	22	958	Yes	Yes	No	no	Yes	No	yes	No	No	No	misoprostol, methergin, carboprost
A198	100074	22	10009229	UR	2	1	0	M	G2P1L1 WITH 40 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	40.3		P2L2 / FTND/ FEMALE/ 3.3 KG/ 10:14 AM ON 24/9/23	3.3	13	40	150	11	33	1.9	7.7	36.5	3500	50	144	24.1	738	Yes	Yes	No	no	Yes	No	No	No	No	No		

A199	100075	21	10009339	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG IN LATENT LABOUR	40		P1L/ FTND/ MALE/ 2.7 KG/ 12:58 PM ON 25/9/23	2.7	12	37	450	9.6	28	2.5	9	32.3	3360	48	148	21.9	936	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A204	100076	24	10009470	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P1L1/ FTVD/ MALE/ 2.7KG/ 10:04 AM ON 26/9/23	2.7	12	38	100	12	39	0.1	0.8	38.5	4690	67	163	25	97	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A206	100077	23	10009911	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	37.5		P1L1/ FTND/MALE/ 2.5KG/ 9:05 AM ON 27/9/23	2.5	13	41	450	11	35	2.3	5.9	38.05	3500	50	151	21.9	542	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A207	100078	20	10001072	UR	2	1	0	M	G2P1L1 WITH 38 WEEKS 4 DAYS POG WITH CEPHALIC WITH RH NEGATIVE PREGNANCY WITH PV LEAK	38.4		P2L2/ FTVD/ FEMALE/ 2.8 KG/ 9:41 PM ON 27/9/23	2.8	13	44	250	12	40	0.4	3.8	41.9	3990	57	153	24.3	361	Yes	Yes	No	no	Yes	No	No	No	No	No	
A209	100079	25	10010392	R	1	0	0	P	PRIMIGRAVIDA AT 37 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37		P1L1/ FTND/ FEMALE/ 2.5KG/ 2: 56 PM ON 29/9/23	2.5	11	32	450	8.5	28	2.6	4.4	29.7	3850	55	156	22.6	570	Yes	Yes	No	no	Yes	No	No	No	No	No	
A211	100080	22	10010493	R	1	1	0	M	G2P1L1 WITH 33 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION WITH PRETERM LABOUR	33.5	LBW	P2L2/ PTVD/ FEMALE/ 2 KG/ 3: 04 PM ON 29/9/23	2	8.6	28	150	8.6	27	0	1	27.1	4760	68	164	25	175	Yes	No	No	no	Yes	No	No	No	No	No	
A213	100081	25	10010426	R	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 6 DAYS POG WITH LATE ONSET FGR WITH PPROM	36.6		P1L1/ PTVD/ MALE/ 2.6 KG/ 9: 46 AM ON 30/9/23	2.6	11	34	200	9.2	32	1.6	2.4	33.1	3710	53	156	21.8	269	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A214	100082	23	10010157	UR	1	0	0	P	PRIMIGRAVIDA WITH 28 WEEKS POG WITH PIH WITH FETUS SHOWING SHORT LONG BONES, TOF WITH AEDF	28	LBW	P1L0/ PTVD/ FSB/ FEMALE/ 940 GRAMS/ 10: 27 PM ON 30/9/23	940 G	10	33	100	10	34	0.1	0.8	33.2	4550	65	163	24.5	109	Yes	Yes	No	no	Yes	No	No	No	No	No	
A215	100083	23	10010922	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH PROM IN LATENT LABOUR	38.3		P1L1/ FTND/ MALE/ 2.65 KG/ 9: 33 AM ON 2/10/23	2.6	14	32	700	7.6	25	6.2	7.7	33.35	3290	47	148	21.4	759	Yes	Yes	No	no	Yes	No	yes	No	No	No	misoprostol, methergin, carboprost
A218	100084	26	10011537	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH POST DATISM	40.1		P1L1/ FTVD/ MALE/ 3.1 KG/ 5: 18 PM ON 5/10/23	3.1	11	33	400	9.1	28	1.4	5.1	30.05	3500	50	149	22.5	594	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A222	100085	22	10012047	R	2	1	0	M	G2P1L1 WITH 37 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR WITH FGR	37.6	LBW	P2L2/ FTVD/ F/ 2.3KG/7: 37 PM ON 6/10	2.3	13	39	500	10	32	2.6	7.8	35.5	3220	46	154	20	707	Yes	No	No	no	Yes	No	No	No	No	No	misoprostol
A223	100086	21	10012135	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.2		P2L2/ FTND/ 2.9 KG/ FEMALE/ 3: 19 AM ON 7/10/23	2.9	12	36	100	11	38	0.6	1.7	37.05	4060	58	165	21.3	186	Yes	Yes	No	no	Yes	No	No	No	No	No	
A227	100087	26	10012282	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION WITH RH NEGATIVE PREGNANCY	40		P1L1/ FTVD/ FEMALE/ 2.9 KG/ 8: 35 PM ON 7/10/23	2.9	15	44	300	13	41	1.5	3.3	42.7	4550	65	166	23.6	351	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A230	100088	18	10012341	UR	1	0	0	P	PRIMIGRAVIDA WITH 28 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH PRETERM LABOUR	28.3	LBW	P1L1/ PTVD/ FEMALE/ 1.5 KG/ 12: 37 AM ON 8/10/23	1.5	13	39	450	11	33	2.1	5.9	36.3	3430	49	150	21.7	557	Yes	Yes	No	no	Yes	No	No	No	No	No	
A231	100089	28	10011855	UR	2	1	0	M	G2P1L1 WITH 38 WEEKS 6 DAYS WITH GDM	38.6		P2L2/ FTVD/ MALE/ 3.3 KG/ 7: 41 AM ON 8/10/23	3.3	12	35	50	12	35	0	0.3	35.15	4340	62	161	23.9	37	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A239	100090	21	10012609	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH PV LEAK	38.3	LBW	P1L1/ FTVD/ FEMALE/ 2.1 KG/ 5: 54 PM ON 8/10/23	2.1	12	38	300	10	34	1.3	3.6	36	3710	53	157	21.5	371	Yes	no	No	Yes	Yes	No	No	No	No	No	
A236	100091	27	10012836	R	1	0	0	P	PRIMIGRAVIDA WITH 32 WEEKS 3 DAYS WITH CEPHALIC PRESENTATION WITH GESTATIONAL HTN WITH PRETERM LABOUR	32.3	LBW	P1L1/ PTVD/ MALE/ 1.6 KG/ 5: 50 AM ON 10/10/23	1.6	13	39	300	11	35	1.5	3.3	37.05	3640	52	146	24.4	324	Yes	No	No	no	Yes	No	No	No	No	No	
A240	100092	32	10012700	R	5	4	0	M	G5P4L4 WITH 38 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH FETUS WITH TGA	38.1		P5L5/ FTND/ MALE/ 2.6 KG/ 11: 52 AM ON 11/10/23	2.6	13	41	150	11	35	1.7	6.6	37.9	3360	48	149	21.6	585	Yes	no	No	no	Yes	No	No	No	No	No	methergin
A245	100093	23	10013390	UR	1	0	0	P	PRIMIGRAVIDA AT 33 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH PRETERM LABOUR	33.4		P1L1/ FTND/ FEMALE/ 2.7 KG/ 5: 50 PM ON 12/10/23	2.7	10	36	100	10	35	0.2	1.3	35.45	3990	57	152	24.6	146	Yes	Yes	No	no	Yes	No	No	No	No	No	

A247	100094	27	10012847	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37.6	LBW	P1L1/ FTVD/ FEMALE/ 2.1 KG/ 3: 04 AM ON 11/10/23	2.1	8.2	28	150	8.1	29	0.1	1.5	28.35	3780	54	149	24.3	200	Yes	Yes	No	no	Yes	No	No	No	No	No	No	
A248	100095	31	10013829	UR	6	2	1	M	G6P4L2D2A1 WITH 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH POST DATISM IN LATENT LABOUR	40.2		P5L3D2A1/ FTVD/ FEMALE/ 2.6 KG/ 2: 09 AM ON 14/10/23	2.6	12	39	400	10	33	1.8	6.1	36.05	3430	49	146	23	580	Yes	No	No	Yes	Yes	No	No	No	No	No	misoprostol, methergin
A251	100096	23	10013613	R	3	2	0	M	G3P2L2 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P3L3/ FTVD/ MALE/ 3.1 KG/ 7: 58 AM ON 13/10/23	3.1	12	38	150	12	40	0.1	1.8	38.8	4550	65	162	24.8	211	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A252	100097	25	10013738	UR	2	1	0	M	G2P1L0 WITH 40 WEEKS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40		P2L1/ FTND/ 3.6 KG/ FEMALE/ 9: 40 PM ON 13/10/23	3.6	9.6	31	300	8.3	29	1.3	2.5	29.95	3850	55	159	21.8	321	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A254	100098	21	10013448	R	1	0	0	P	PRIMIGRAVIDA WITH 34 WEEKS 2 DAYS WITH PRE-ECLAMPSIA WITH INCREASED RESISTANCE ON DOPPLER	34.2	LBW	P1L1/ PTVD / MALE/ 2.1 KG/ 3:23 PM ON 12/10/23	2.1	9.1	30	50	9.4	30	0.3	0.4	29.9	4900	70	166	25	65	Yes	No	No	no	Yes	No	No	No	No	No	
A255	100099	22	10013860	R	1	0	1	P	G2A1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.4		P1L1A1/ FTND/ 2.5KG/ MALE/ 12: 18 PM ON 14/10/23	2.5	12	38	350	10	34	2.1	3.6	35.8	3920	56	160	21.8	394	Yes	Yes	No	no	Yes	No	No	No	No	No	
A259	100100	32	10013900	UR	3	2	0	M	G3P2L2 WITH 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH POST DATISM AND LATENT LABOUR	40.2		P3L3/ FTND/ MALE/ 3.1 KG/ 4: 32 PM ON 14/10/23	3.1	13	43	500	11	35	1.9	8	38.6	3360	48	147	22.2	696	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol
A262	100101	27	10013871	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 6 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.6		P1L1/ FTND/ FEMALE/ 2.9 KG/ 8: 15 PM ON 14/10/23	2.9	14	43	450	11	32	3.2	11	37.65	3220	46	150	20.4	899	Yes	Yes	No	no	Yes	No	No	No	No	No	methergin
A263	100102	20	10013825	R	2	0	1	P	G2A1 WITH 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.1		P1L1A1/ FTND/ MALE/ 2.57KG/ 2: 57 AM ON 15/10/23	2.5	11	38	200	11	36	0.7	2.4	36.8	3710	53	154	22.32	241	Yes	Yes	No	no	Yes	No	No	No	No	No	
A265	100103	22	10013915	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESNETATION IN LATENT LABOUR	40.2		P1L1/ FTND/ MALE/ 3.45 KG/ 1: 00AM ON 15/10/23	3.4	10	36	200	8	37	2.2	1	36.3	4760	68	165	25	131	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A267	100104	30	10013608	R	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 6 DAYS WITH CEPHALIC PRESENTATION WITH LATE ONSET FGR	36.6	LBW	P1L1/ PTVD/ MALE/ 2.1 KG/ 6: 48 PM ON 14/10/23	2.1	9.8	35	50	11	35	0.8	0.6	35	4620	66	164	24.6	79.2	Yes	No	No	Yes	Yes	No	No	No	No	No	
A270	100105	28	10014046	R	4	3	0	M	G4P3L3 WITH 38 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH LATE ONSET FGR	38.4		P4L4/ FTND/ MALE/ 2.5 KG/ 2: 47 AM ON 16/10/23	2.5	13	39	200	14	41	0.8	2.3	39.65	3710	53	155	22	215	Yes	Yes	No	no	Yes	No	No	No	No	No	
A271	100106	26	10013533	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM	39.1		P2L2/ FTND/ FEMALE/ 3.1 KG/ 2: 42 AM ON 17/10/23	3.1	11	36	250	11	33	0.6	2.3	34.45	3850	55	157	22.3	257	Yes	Yes	No	no	Yes	No	No	No	No	No	
A272	100107	27	10014390	UR	3	2	0	M	G3P2L2 WITH 34 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH PRETERM LABOUR	34.2	LBW	P3L3/ PTVD/ FEMALE/ 2.3 KG/ 8: 15 AM ON 17/10/23	2.3	12	36	250	10	33	1.2	2.4	34.5	4060	58	154	24.4	282	Yes	No	No	no	Yes	No	No	No	No	No	
A275	100108	21	10014285	R	2	1	0	M	G2P1L1 WITH 40 WEEKS 3 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.3		P2L2/ FTND/ FEMALE/ 3.1 KG/ 4: 13 PM ON 17/10/23	3.1	11	35	350	9.8	31	1.4	4.1	33.05	3430	49	151	21.4	425	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A276	100109	25	10014437	R	2	1	0	M	G2P1L1 WITH 4O WEEKS 4 DAYS POG WITH POST DATISM WITH RH NEGATIVE PREGNANCY WITH HBSAG POSITIVE STATUS	40.4	LBW	P2L2/ FTVD/ FEMALE/ 2.4 KG/ 3: 40 PM / 17/10/23	2.4	9.6	31	350	8.4	27	1.2	3.8	28.6	3290	47	148	21.4	437	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A277	100110	22	10014618	R	3	0	2	P	G3A2 WITH 40 WEEKS 1 DAY POG WITH OI CONCEPTION	40.1		P1L1A2/ FTND/ FEMALE/ 3.1 KG/ 6: 35 AM ON 18/10/23	3.1	11	36	450	9.1	30	2	5.7	32.7	3640	52	150	23.11	634	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A279	100111	24	10014549	R	3	2	0	M	G3P2L2 WITH 38 WEEKS 4 DAYS POG WITH RH NEGATIVE PREGNANCY IN ACTIVE LABOUR	38.4		P3L3/ FTND/ MALE/ 4 KG/ 2: 09 AM ON 19/10/23	4	9.9	31	200	8.9	30	1	1.4	30.5	4550	65	161	25	208	Yes	Yes	No	no	Yes	No	No	No	No	No	
A281	100112	21	10014880	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.2		P1L1/ FTND/ MALE/ 3.3 KG/ 12: 01 AM ON 20/10/23	3.3	11	34	600	8.8	27	2.3	6.8	30.7	3360	48	149	21.6	744	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	carboprost

A283	100113	34	10015195	UR	3	1	1	M	G3P1L1A1 WITH 39 WEEKS 2 DAYS WITH CEPHALIC PRESENTATION WITH LATE ONSET FGR WITH RH NEGATIVE PREG FOR IOL	39.2		P2L2A1/ FTVD/MALE/ 2.8 KG/ 11: 13 PM ON 19/10/23	2.8	13	43	450	11	34	2.3	9	38.8	3290	47	152	20.3	763	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A284	100114	27	10015307	R	2	0	0	M	G2P1L0 WITH 38 WEEKS 4 DAYS POG WITH PROM	38.4		P2L1D1/ FTND/ MALE/ 3.1 KG/ 8: 10 PM ON 20/10/23	3.1	12	37	400	11	33	1.4	4.4	35.2	3780	54	155	22.5	472	Yes	Yes	No	Yes	Yes	No	No	No	No	No	methergin
A285	100115	29	10014404	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS POG WITH DECREASED FETAL MOVEMENTS WITH UTI	39		P1L1/ FTVD/ MALE/ 2.5 KG/ 1: 59 AM ON 22/10/23	2.5	9.1	33	300	8.6	31	0.5	2.3	31.9	4480	64	162	24.42	323	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A288	100116	19	10015669	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH IUFD	40		P1L0/ FTVD/ MALE/ 2.7 KG/ 10: 18 PM ON 21/10/23	2.7	14	43	250	13	40	1.2	2.7	41.15	4760	68	165	25	312	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A291	100117	23	10015225	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38		P1L1/ FTND/ MALE/ 2.9 KG/ 5: 44 AM ON 22/10/23	2.9	11	35	50	11	35	0.3	0.1	34.65	4900	70	166	25	14	Yes	Yes	No	no	Yes	No	No	No	No	No	
A292	100118	20	10015625	UR	2	1	0	M	G2P1L1 WITH 41 WEEKS 1 DAY POG WITH HYPOTHYROIDISM FOR IOL	41.1		P2L2/ FTVD/ MALE/ 3.6 KG/ 1: 28 PM ON 22/10/23	3.6	11	35	700	8.6	26	2.8	9.4	30.7	3360	48	144	23.1	1028	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol, methergin, carboprost
A296	100119	35	1005755	R	3	2	1	M	G3P2L2A1 WITH 40 WEEKS 1 DAY POG IN LATENT LABOUR	40.1		P3L3A1/ FTND/ FEMALE/ 2.8 KG/ 7: 03 AM ON 23/10/23	2.8	12	40	100	12	39	0.2	1.1	39.05	4690	67	164	25	132	Yes	Yes	No	no	Yes	No	No	No	No	No	
A300	100120	21	10015853	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 2 DAYS POG WITH FETUS WITH CDH	39.2		P1L1/ FTND/ MALE/ 2.9 KG/ 9: 27 AM ON 24/10/23	2.9	12	38	400	10	31	2.2	6.4	34.6	3220	46	143	22.5	595	Yes	Yes	No	no	Yes	No	No	No	No	No	
A301	100121	31	10015858	UR	3	1	0	M	G3P1L1 WITH 39 WEEKS 2 DAYS POG IN LATENT LABOUR	39.1		P3L2/ FT VENTOUSE DELIVERY/ MALE/ 3.2 KG/ 11: 51 PM ON 23/20/23	3.2	11	37	450	8.9	29	2.1	7.5	32.95	3430	49	146	23	780	Yes	Yes	No	no	Yes	No	No	No	No	No	
A303	100122	35	10016505	UR	4	1	3	M	G4P1L1A3 WITH 36 WEEKS 5 DAYS POG WITH GESTATION HTN WITH CERVICAL STITCH IN SITU IN LATENT LABOUR	36.5	LBW	P2L2A3/ PTVD/ MALE/ 2.1 KG/ FEMALE/ 2: 35 AM ON 27/10/23	2.1	14	42	100	13	41	0.5	1.1	41.35	4620	66	164	24.6	123	Yes	No	No	no	Yes	No	No	No	No	No	
A306	100123	19	10016927	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG IN ACTIVE LABOUR	38		P1L1/ FT VENTOUSE DELIVERY/ FEMALE/ 3 KG/ 9: 12 PM ON 28/10/23	3	12	36	650	8.8	28	3.1	7.9	32.05	3500	50	154	21.09	862	Yes	Yes	No	no	Yes	No	yes	No	No	No	misoprostol, methergin, carboprost
A307	100124	27	10016749	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 2 DAYS POG FOR IOL	40.2		P1L1/ FTND/ FEMALE/ 3.4 KG/ 2: 18 PM ON 29/10/23	3.4	11	35	300	10	33	1	2.3	34.15	4480	64	160	25	301	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A309	100125	22	10016202	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 3 DAYS POG WITH DECREASED FETAL MOVEMENTS	38.3		P1L1/ FTND/ MALE/ 2.6 KG/ 8: 34 PM ON 29/10/23	2.6	11	36	450	9.9	31	1	4.9	33.05	3430	49	150	21.7	508	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A312	100126	25	10017015	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 1 DAY POG WIN LATENT LABOUR	38.1		P1L1/ FTND/ MALE/ 2.9 KG/ 11: 25 PM ON 29/10/23	2.9	12	38	450	10	31	1.9	6.3	34.45	3220	46	147	21.2	588	Yes	Yes	No	no	Yes	No	No	No	No	No	
A314	100127	30	10017024	UR	3	2	0	M	G3P2L2 WITH 38 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH GESTATIONAL HTN WITH HYPOTHYROIDISM	38.6		P3L3/ FTND/ FEMALE/ 3.4 KG/ 6: 22 AM ON 30/10/23	3.4	10	32	450	8.7	29	1.5	3.7	30.55	4060	58	156	23.86	491	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A315	100128	29	10016725	R	3	0	2	P	G3A2 WITH 39 WEEKS 2 DAYS WITH CEPHALIC PRESENTION WITH HYPOTHYROIDISM IN LATENT LABOUR	39.2		P1L1A2/ FTVD/ FEMALE/ 2.8 KG/ 1: 20 PM ON 28/10/23 WITH HYPOTHYROIDISM	2.8	12	39	800	7.9	27	4.3	12	33.15	3360	48	151	21	1185	Yes	Yes	No	no	Yes	No	yes	No	No	No	misoprostol, methergin, carboprost
A317	100129	21	10017730	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATAIONIN ACTIVE LABOUR	39.6		P2L2/ FTND/ FEMALE/ 3.1 KG/ 6:55 PM ON 1/11/23	3.1	13	39	300	12	36	0.9	3.2	37.4	4410	63	164	23.5	377	Yes	Yes	No	no	Yes	No	No	No	No	No	

A320	100130	23	10017641	R	2	1	0	M	G2P1L1 WITH 39 WEEKS POG WITH EARLY ONSET FGR IN LATENT LABOUR	39		P2L2/ FTND/ MALE/ 2.6 KG/ 8: 40 AM ON 1/11/23	2.6	11	35	350	10	32	0.8	3.1	33.35	3990	57	155	23.7	370	Yes	Yes	No	no	Yes	No	No	No	No	No	
A322	100131	24	10017707	UR	3	2	0	M	G3P2L2 WITH 39 WEEKS 2 DAYS POG IN ACTIVE LABOUR	39.2		P3L3/ FTND/ MALE/ 3.8 KG/ 4: 16 PM ON 1/11/23	3.8	11	34	550	7.9	27	2.6	7	30.6	3500	50	152	21.6	800	Yes	Yes	No	no	Yes	No	Yes	No	No	No	misoprostol, methergin
A323	100132	23	10017371	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 3 DAYS POG WITH HYPOTHYROIDISM IN LATENT LABOUR	39.3		P1L1/ FTND/ FEMALE/ 3 KG/ 12: 20 AM ON 1/11/23	3	10	33	150	8.9	32	1.5	0.3	32.55	5040	72	167	25	46.4	Yes	Yes	No	no	Yes	No	No	No	No	No	
A325	100133	21	10017748	R	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 5 DAYS POG WITH PPROM	36.5	LBW	P1L1/ PTVD/ FEMALE/ 2.4 KG/ 2: 07 AM ON 3/11/23	2.4	13	39	400	11	33	1.8	5.5	36.05	3780	54	154	22.78	576	Yes	Yes	No	no	Yes	No	No	No	No	No	
A327	100134	21	10017873	R	3	0	2	P	G3A2 WITH 35 WEEKS 6 DAYS POG CEPHALIC WITH GDM WITH PPROM	35.6	LBW	P1L1A2/ PTVD/ MALE/ 2.1 KG/ 3: 17 AM ON 3/11/23	2.1	11	40	650	8.1	28	2.8	12	34.15	3500	50	153	21.3	1178	Yes	Yes	No	no	Yes	No	No	No	No	No	
A328	100135	23	10017306	UR	2	1	0	M	G2P1L1 WITH 28 WEEKS 4 DAYS POG WITH MULTIPLE FETAL ANOMALIES	28.4	LBW	P2L1/ PTVD/ MALE/ 630 G/ 4 AM ON 4/11/23	630g	12	38	400	11	34	1.3	4.2	35.7	4690	67	163	25	551	Yes	no	No	no	Yes	No	No	No	No	No	
A330	100136	20	10018021	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P1L1/ FTND/ FEMALE/ 2.5 KG/ 6: 29 AM / 3/11/23	2.5	11	33	100	10	32	0.5	0.5	32.65	4970	71	167	25	149	Yes	Yes	No	no	Yes	No	No	No	No	No	
A334	100137	20	10018040	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG WITH LATENT LABOUR	38		P1L1/ FTND/ MALE/ 2.6 KG/ 6: 14 AM ON 3/11/23	2.6	11	34	450	8.6	27	2.6	6.8	30.3	3430	49	146	23	769	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A335	100138	22	10018272	R	2	1	0	M	G2P1L1 WITH 40 WEEKS 3 DAYS POG WITH LATE ONSET FGR IN LATENT LABOUR	40.3		P2L2/ FTVD/ FEMALE/ 2.6 KG/ 4: 59 PM ON 4/11/23	2.6	9	32	100	8.9	31	0.1	1	31.2	4760	68	164	25	152	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A337	100139	22	10018272	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	38.2		P1L1/ FTND/ FEMALE/ 3.1 KG/ 9: 20 PM / 4/11/23	3.1	9	32	100	8.9	31	0.1	1	31.2	4620	66	165	24.2	148	Yes	Yes	No	no	Yes	No	No	No	No	No	
A338	100140	27	10018543	R	5	1	3	M	G5P1L1A3 WITH 37 WEEKS 5 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37.5		P3L3A2/ FTND/ MALE/ 2.7KG/ 11: 59 AM ON 9/11/23	2.7	9.5	31	100	9.4	30	0.1	0.8	30.2	4830	69	164	25	127	Yes	Yes	No	no	Yes	No	No	No	No	No	
A341	100141	23	10018923	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH LATE ONSET FGR WITH IGT	39.1		P1L1/ FTVD/ MALE/ 2.6 KG/ 2: 40 AM ON 7/11/23	2.6	13	41	450	11	35	2.3	6.6	38.1	3220	46	144	22.2	557	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A343	100142	25	10018954	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH GDM IN 2ND STAGE OF LABOUR	38.3		P2L2/ FTND/ MALE/ 4 KG/ 11: 11 AM ON 6/11/23	4	11	36	300	9.9	34	1.2	2.4	34.1	4550	65	162	24.8	320	Yes	Yes	No	no	Yes	No	No	No	No	No	
A346	100143	23	10018890	UR	2	1	0	M	G2P1L1 WITH 38 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.2		P2L2/ FT VENTOUSE DELIVERY/ MALE/ 2.7 KG/ 9: 44 PM ON 6/11/23	2.7	13	41	350	12	35	1.6	5.1	37.9	3500	50	156	20.5	470	Yes	Yes	No	no	Yes	No	No	No	No	No	
A348	100144	21	10018674	UR	2	1	0	M	G2P1L1 WITH 40 WEEKS 2 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.2		P2L2/ FTND/ FEMALE/ 3.1 KG/ 8: 37 AM ON 6/11/23	3.1	12	40	100	12	40	0.2	0.8	39.9	4970	71	166	25	99.6	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A349	100145	30	10018854	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH LESS LIQUOR WITH RH NEGATIVE PREGNANCY	40		P1L1/ FTVD/ FEMALE/ 2.7 KG/ 10: 07 AM ON 7/11/23 WITH CU T INSERTION	2.7	13	42	200	13	39	0	2.8	40.5	3430	49	151	21.4	237	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A353	100146	23	10018963	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.5		P1L1/ FTND/ MALE/ 2.7 KG/ 8: 39 AM ON 7/11/23	2.7	11	41	450	8.8	32	2.1	8.3	36.45	3360	48	144	23.1	765	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A358	100147	31	10019221	R	5	2	2	M	G5P2L2A2 WITH 40 WEEKS 2 DAYS WITH CEPAHLIC PRESENTATION IN LATENT LABOUR	40.2		P2L3A2/ FTND/ FEMALE/ 2.6 KG/ 3: 47 AM ON 8/11/23	2.6	12	40	200	12	37	0	3.1	38.45	3290	47	151	20.6	265	Yes	Yes	No	no	Yes	No	No	No	No	No	
A361	100148	25	10019250	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.4		P2L2/ FTND/ FEMALE/ 3.2 KG/ 10: 16 AM ON 8/11/23	3.2	11	34	450	8.6	29	1.9	5.7	31.45	3570	51	152	22.07	648	Yes	Yes	No	no	Yes	No	No	No	No	No	oxytocin, misoprostol

A366	100149	20	10019779	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.5		P1L1/ FTND/ FEMALE/ 3.1 KG/ 4: 53 PM ON 10/11/23	3.1	14	42	450	10	31	3.5	11	36.3	3220	46	149	20.7	958	Yes	Yes	No	no	Yes	No	No	No	No	No	
A372	100150	26	10019674	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	39		P1L1/ FTND/ MALE/ 3.8 KG/ 8: 17 AM ON 10/11/23	3.8	10	33	350	9.3	30	1.1	3	31.9	4060	58	154	24.4	381	Yes	Yes	No	no	Yes	No	No	No	No	No	
A374	100151	28	10019658	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.2		P1L1/ FTND/ MALE/ 2.8 KG/ 4: 02 PM ON 11/11/23 WITH PPIUCD INSERTION	2.8	11	35	400	10	31	1	4.5	32.95	3500	50	148	22.8	477	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A380	100152	20	10019839	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION WITH LATE ONSET FGR	40		P1L1/ FTND/ FEMALE/ 2.6 KG/ 5: 51 PM ON 11/11/23	2.6	13	42	450	11	34	2.1	7.9	38.25	3360	48	151	21	693	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A386	100153	19	10019606	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM	38.4	LBW	P1L1/ FTVD/ FEMALE/ 2.3 KG/ 1: 10 AM ON 12/11/23	2.3	9.4	32	100	9.2	32	0.2	0.6	31.8	4620	66	165	24.2	145	Yes	no	No	no	Yes	No	No	No	No	No	
A392	100154	18	10018972	UR	1	0	0	P	PRIMIGRAVIDA WITH 34 WEEKS 4 DAYS POG WITH FGR WITH LESS LIQUOR IN PRETERM LABOUR	34.4	LBW	P1L1/PTVD/ FEMALE/ 1.2 KG/ 7: 31 PM ON 8/11/23	1.2	11	35	100	11	36	0.8	1.1	35.65	4760	68	163	25	146	Yes	no	No	no	Yes	No	No	No	No	No	
A404	100155	23	10020135	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 3 DAYS POG IN LATENT LABOUR	39.3		P1L1/ FTND/ FEMALE/ 3.2 KG/ 6: 42 PM ON 13/11/23	3.2	14	44	400	12	38	2.1	6.8	40.9	3640	52	153	22.22	605	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A412	100156	23	10020202	UR	3	1	1	M	G3P1L1A1 WITH 40 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.3		P2L2A1/ FTND/ MALE/ 3.1 KG/ 12: 38 AM ON 15/11/23	3.1	12	37	400	10	33	1.2	4.2	34.7	3780	54	155	22.5	457	Yes	Yes	No	Yes	Yes	No	No	No	No	No	misoprostol
A418	100157	23	10020198	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40		P1L1/ FTVD/ FEMALE/ 3.1 KG/ 4: 22 AM ON 15/11/23	3.1	13	41	450	9.8	33	3	8.3	36.35	3500	50	156	20.5	799	Yes	Yes	No	no	Yes	No	No	No	No	No	
A428	100158	24	10020249	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH RH NEGATIVE PREGNANCY	39.2		P1L1/ FTVD/ MALE/ 3 KG/ 3: 53 AM ON 15/11/23	3	12	39	750	8.4	27	3.9	12	32.95	3360	48	151	21	1193	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol, methergin , carboprost, oxytocin
A432	100159	21	10019952	UR	2	0	1	P	G2A1 WITH 40 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH POST DATISM	40.4		P1L1A1/ FTND/ FEMALE/ 2.9 KG/ 12: 03 PM ON 12/11/23	2.9	11	37	500	8.7	29	2.4	7.7	33.15	3220	46	146	21.5	747	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol, methergin
A446	100160	28	10019428	R	2	1	0	M	G2P1L1 WITH 34 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH SEVERE PE WITH HYPOTHYROIDISM	34.6	LBW	P2L2/ PTVD/ MALE/ 1.7 KG/ 9: 07 AM ON 10/11/23	1.7	11	34	300	9.7	32	0.9	2.7	32.95	4480	64	163	24.15	367	Yes	Yes	No	no	Yes	No	No	No	No	No	
A450	100161	19	10020793	R	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION	40		P1L1/ FTVD/ FEMALE/ 3.2 KG/ 4: 41 PM ON 17/11/23	3.2	11	37	350	9.7	33	0.9	4.2	34.7	3500	50	149	22.5	423	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A454	100162	27	10021044	R	3	1	1	M	G3P1L1A1 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION FOR IOL	40.1		P2L2A1/ FTVD/ MALE/ 3.4 KG/ 6: 36 AM ON 18/11/23	3.4	13	39	50	12	39	1.3	0.5	39.15	4690	67	165	24.6	59	Yes	No	No	Yes	Yes	No	No	No	No	No	
A456	100163	21	10021053	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.6		P1L1/ FTND/ FEMALE/ 2.6 KG/ 8: 25 AM ON 18/11/23	2.6	14	43	450	10	33	3.4	11	37.9	3570	51	153	21.7	998	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A459	100164	25	10020814	UR	1	0	0	P	PRIMIGRAVIDA WITH 36 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	36.3	LBW	P1L1/ PTVD/ 2.24 KG/ 1: 55 PM ON 17/11/23	2.2	12	37	350	11	33	1.6	4.3	35.25	3640	52	150	23.1	444	Yes	no	No	no	Yes	No	No	No	No	No	
A460	100165	28	10021071	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION WITH INCREASED RESISTANCE ON DOPPLER WITH HYPOTHYROIDISM	38		P1L1/ FTND/ FEMALE/ 2.8 KG/ 4: 29 PM ON 18/11/23	2.8	12	37	500	9.4	31	2.2	6.3	33.75	3290	47	151	20.6	615	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol, carboprost
A463	100166	34	10021264	R	3	2	0	M	G3P2L2 WITH 40 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION FOR IOL	40.4		P3L3/ FTVD/ FEMALE/ 3.2 KG/ 11: 20 PM ON 18/11/23	3.2	12	36	50	12	36	0.1	0.1	35.5	5040	72	168	25	41	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A464	100167	20	10021055	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 3 DAYS WITH RH NEGATIVE PREGNANCY WITH GESTATIONAL HTN	39.3	LBW	P1L1/ FTVD/ FEMALE/ 2.3 KG/ 3: 15 PM ON 19/ 11/23	2.3	11	36	650	8.2	26	2.5	10	31.2	3640	52	154	21.9	1190	Yes	Yes	No	Yes	Yes	No	yes	No	No	No	misoprostol

A467	100168	22	10020785	R	1	0	0	P	PRIMIGRAVIDA WITH 35 WEEKS 5 DAYS WITH OLIGOHYDRAMNIOS WITH CEPHALIC PRESENATATION	35.5		P1L1/ PTVD/ FEMALE/ 2.7 KG/ 6: 35 PM ON 19/11/23	2.7	12	36	350	11	33	1.4	3.1	34.45	4270	61	164	22.7	384	Yes	Yes	No	no	Yes	No	No	No	No	No	
A469	100169	25	10020969	UR	3	0	2	P	G3A2 WITH 37 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37.5		P1L1A1/ FTVD/ MALE/ 3.5 KG/ 8: 35 AM ON 18/11/23 WITH 2 PERINEAL TEAR	3.5	13	40	400	11	36	2	4.2	38.1	4410	63	160	24.6	486	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A472	100170	24	10021265	R	2	1	0	M	G2P1L1 WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40		P2L2/ FTND/ MALE/ 3.2 KG/ 3: 21 PM ON 19/11/23	3.2	11	36	750	7.9	27	3.3	9	31.6	3710	53	158	21.2	1056	Yes	Yes	No	no	Yes	No	yes	yes	No	No	misoprostol, methergin, carboprost, oxytocin
A474	100171	24	10021333	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.6		P1L1/ FTND/ MALE/ 2.6 KG/ 9: 26 PM ON 19/11/23	2.6	13	42	450	10	32	3.3	10	37.2	3430	49	146	23	558	Yes	Yes	No	no	Yes	No	No	No	No	No	
A476	100172	30	10021382	UR	3	2	0	M	G3P2L2 WITH 39 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.3		P3L3/ FTVD/ MALE/ 2.6 KG/ 11: 06 AM ON 20/11/23	2.6	10	33	450	8.1	27	2.3	5.7	30.25	3500	50	152	21.6	659	Yes	Yes	No	no	Yes	No	No	No	No	No	
A477	100173	25	10021662	R	2	1	0	M	G2P1L1 WITH 37 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION WITH FETAL HYDROPS FOR EVALUATION	37.2		P2L2/ FTVD/ MALE/ 3.4 KG/ 6: 07 AM ON 21/ 11/ 23	3.4	11	36	400	9.7	31	1.3	5.2	33.8	3360	48	148	21.9	516	Yes	Yes	No	no	Yes	No	No	No	No	No	methergin
A478	100174	22	10020817	UR	1	0	0	P	PRIMIGRAVIDA WITH 29 WEEKS POG WITH SEVERE PE WITH AEDF	29	LBW	P1L0/ PTVD/ MALE/ 700GRAMS/ 10: 00 AM ON 18/11/23	700g	12	39	50	12	39	0.2	0.2	38.8	4690	67	166	24.3	24	Yes	no	No	no	Yes	No	No	No	No	No	
A479	100175	31	10021926	R	5	3	1	M	G5P3L3A1 WITH 38 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.6		P4L4A1/ FTND/ MALE/ 3.2 KG/ 6: 08 PM ON 21/11/23	3.2	13	41	50	11	41	1.4	0.5	41.05	4200	60	164	22.3	51	Yes	Yes	No	no	Yes	No	No	No	No	No	
A480	100176	28	10021943	R	3	2	0	M	G3P2L2 WITH 38 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.5		P3L3/ FTND/ MALE/ 3.7 KG/ 10: 55 PM ON 21/11/23	3.7	9.5	32	300	8.6	30	0.9	2.5	30.75	3780	54	155	24	307	Yes	Yes	No	no	Yes	No	No	No	No	No	
A481	100177	28	10021541	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH LESS LIQUOR	37.4		P1L1/ FTVD. FEMALE/ 2.8 KG/ 4: 23 AM ON 22/11/23	2.8	11	34	250	9.4	32	1.2	1.9	32.55	4480	64	163	24.1	261	Yes	Yes	No	no	Yes	No	No	No	No	No	
A483	100178	23	10021712	UR	2	0	1	P	G2A1 WITH 29 WEEKS 5 DAYS POG WITH PPROM	29.5	LBW	P1L1A1/ PTVD/ MALE/ 1.4 KG/ 3: 49 PM ON 22/11/23	1.4	10	36	200	10	37	0.2	1.6	36.3	3990	57	154	24	175	Yes	no	No	no	Yes	No	No	No	No	No	
A486	100179	19	10021880	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.2		P1L1/ FTND/ MALE/ 3 KG/ 6: 17 PM ON 22/11/23	3	12	39	300	11	36	1.6	3	37	3500	50	148	22.8	283	Yes	Yes	No	no	Yes	No	No	No	No	No	
A487	100180	33	10022509	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.2		P2L2/ FTND/ MALE/ 3.8 KG/ 6: 14 AM ON 24/11/23	3.8	13	41	350	10	32	2.5	8.5	36.25	3360	48	147	22.22	387	Yes	Yes	No	no	Yes	No	No	No	No	No	misoprostol
A489	100181	29	10022504	R	3	1	1	M	G3P1L1A1 WITH 37 WEEKS POG WITH CEPHALIC PRESENTATION WITH PIH	37		PL2A1/ FTVD/ FEMALE/ 2.5 KG/ 8 PM ON 23/11/23	2.5	9.8	33	100	9.1	29	0.7	3.7	31.25	3640	52	149	23.4	116	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A490	100182	25	10021440	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38		P1L1/ FTVD/ MALE/ 3 KG/ 5: 50 AM ON 20/11/23	3	13	42	400	11	36	1.4	6.3	39.25	3500	50	153	21.3	561	Yes	Yes	No	no	Yes	No	No	No	No	No	
A492	100183	22	10022565	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 4 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.4		P1L1/ FTND/ MALE/ 3 KG/ 7: 25 PM ON 24/11/23	3	13	40	650	9.9	33	3.2	7.6	36.5	3290	47	147	21.7	685	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	misoprostol, methergin , oxytocin
A493	100184	23	10022710	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 1 DAY WITH CEPHALIC PRESENTATION WITH IUI CONCEPTION	38.1		P1L1/ FTND/ FEMALE/ 2.8 KG/ 5: 30 AM ON 25/11/23	2.8	11	36	100	11	35	0.7	1	35.2	4060	58	154	24.4	115	Yes	Yes	No	no	Yes	No	No	No	No	No	
A495	100185	29	10022880	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 4 DAYS 1 DAY POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.4		P2L2/ FTND/ FEMALE/ 2.6 KG/ 11: 47 PM ON 25/11/23	2.6	11	36	400	10	32	1.2	4	33.7	3920	56	155	24.8	465	Yes	No	No	no	Yes	No	No	No	No	No	
A497	100186	28	10022909	R	2	0	1	P	G2A1 WITH 39 WEEKS 1 DAY WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.1		P1L1A1/ FTVD/ MALE/ 2.9 KG/ 4 AM ON 26/11/23	2.9	12	36	150	11	35	0.3	1.6	35.3	4340	62	164	23.1	196	Yes	Yes	No	no	Yes	No	No	No	No	No	

A499	100187	23	10022466	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 2 DAYS POG WITH CEPHALIC PRESENATION WITH OVULATION INDUCTION CONCEPTION	38.2	LBW	P1L1/ FTVD/ FEMALE/ 2.4 KG/ 6: 34 AM ON 26/11/23	2.4	11	35	550	9.9	29	1.4	5.9	32.25	3500	50	154	21	640	Yes	Yes	No	no	Yes	No	Yes	No	No	No	methergin
A503	100188	31	10023081	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38.3		P2L2/ FTND/ MALE/ 3.2 KG/ 5: 51 PM ON 27/11/23	3.2	12	38	200	11	36	0.6	1.9	37.15	4130	59	164	22	211	Yes	Yes	No	no	Yes	No	No	No	No	No	
A504	100189	23	10023457	R	3	2	2	M	G3P2L2 WITH 39 WEEKS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM	39		P3L3/ FTND/ MALE/ 3.2 KG/ 12: 56 AM ON 29/11/23	3.2	12	36	150	11	34	0.5	1.7	34.9	4410	63	167	22.6	214	Yes	Yes	No	no	Yes	No	No	No	No	No	
A505	100190	20	10023238	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 5 DAYS POG WITH FGR WITH OLIGOHYDRAMNIOS	39.5		P1L1/ FT VENTOUSE DELIVERY/ MALE/ 2.9 KG/ 9: 39 PM ON 28/11/23	2.9	12	38	450	9.3	30	2.2	7.3	33.95	3150	45	150	20	677	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A508	100191	21	10023160	R	2	0	1	P	G2A1 WITH 29 WEEKS 6 DAYS POG WITH IUFD	29.6	LBW	P1L0/ PTVD/ IUD/ MSB/ 520 G/10:56 PM ON 28/11/23	520g	12	37	400	10	31	2.2	5.4	34.1	3430	49	146	23	543	Yes	No	No	Yes	Yes	No	No	No	No	No	oxytocin, carboprost
A510	100192	29	10023625	R	3	1	1	M	G3P1L1A1 WITH 38 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH POLYHYDRAMNIOS	38.1		P2L2A1/ FTVD/ MALE/ 3.4 KG/ 6: 52 AM ON 30/11/23	3.4	10	37	450	9	32	1.1	5.1	34.65	3570	51	150	22.6	525	Yes	Yes	No	no	Yes	No	No	No	No	No	
A512	100193	23	10023671	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 6 DAYS POG WITH RH NEGATIVE PREGNANCY	37.6		P1L1/ FTVD/ FEMALE/ 2.75 KG/ 6: 20 AM ON 30/11/23	2.75	12	37	250	11	34	0.6	3.2	35.3	3640	52	147	24	329	Yes	Yes	No	no	Yes	No	No	No	No	No	
A513	100194	22	10023965	R	1	1	0	M	G2P1L1 WITH 40 WEEKS 1 DAY WITH CEPHALIC PRESENTATION IN LATENT LABOUR	40.1		P2L2/ FTND/ 3.4 KG/ MALE/ 1/12/23	3.4	12	37	100	12	36	0.3	1.4	36.4	4200	60	164	22.3	161	Yes	Yes	No	no	Yes	No	No	No	No	No	
A514	100195	29	10023727	R	3	1	1	M	G3P1LA1 WITH 40 WEEKS 1 DAY WITH CEPHALIC PRESENTATION FOR IOL	40.1		P2L2A1/ FTND/ MALE/ 3 KG/ 3: 09 PMON 30/11/23	3	12	39	150	12	37	0.1	1.8	37.6	3850	55	156	22.6	184	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A518	100196	21	10024006	UR	3	1	0	M	G3P1L1D1 WITH 39 WEEKS 2 DAYS POG IN LATENT LABOUR	39.2		P2L2D1 / FTVD/ MALE/ 2.7 KG/ 2: 26 AM ON 1/12/23	2.7	13	40	650	10	30	2.5	9.5	35.15	3150	45	147	20.8	850	Yes	Yes	No	No	Yes	No	Yes	No	No	No	misoprostol, methergin
A522	100197	25	10023984	R	2	1	0	M	G2P1L1 WITH 37 WEEKS 3 DAYS POG WITH CEPHALIC PRESENATTION IN LATENT LABOUR	37.3		P2L2/ FTND/ FEMALE/ 2.6 KG/ 11: 58 AM ON 1/12/23	2.6	12	39	50	12	38	0.2	0.2	38.4	5040	72	167	25	26.2	Yes	Yes	No	No	Yes	No	No	No	No	No	
A526	100198	26	10019962	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 1 DAY POG WITH MILD ANEMIA IN LATENT LABOUR	38.1		P2L2/ FTND/ MALE/ 2.8 KG/ 2: 04 AM ON 1/12/23	2.8	10	33	100	9.7	31	0.4	1.3	32.05	3500	50	149	22.5	141	Yes	Yes	No	No	Yes	No	No	No	No	No	
A529	100199	31	10023015	R	2	1	0	M	G2P1L1 WITH 40 WEEKS POG WITH FETUS WTH CTEV WITH SEVERE PE	40		P2L2/ FTND/ MALE/ 2.9KG/ 1: 49 AM ON 27/11/23	2.9	11	35	350	10	32	0.7	3.2	33.4	3850	55	151	24.1	368	Yes	Yes	No	Yes	Yes	No	No	No	No	No	
A533	100200	20	10023737	UR	2	0	1	P	G2A1 WITH 35 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH PRETERM LABOUR	35.4	LBW	P1L1A1/ PTVD/ FEMALE/ 2.1 KG/ 12: 33 AM ON 30/11/23	2.1	13	41	450	11	36	2.1	5.6	38.3	3360	48	148	21.9	511	Yes	no	No	No	Yes	No	No	No	No	No	
A537	100201	23	10024010	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH GESTATIONAL HTN WITH TRIVIAL MR	38.5		P1L1/ FTVD/ FEMALE/ 2.6 KG/ 4: 19 AM ON 9/12/23	2.6	12	38	700	8.4	28	3.8	9.8	32.8	3220	46	150	20.4	962	Yes	Yes	No	No	Yes	No	yes	No	No	No	misoprostol, oxytocin, methergin, carboprost
A539	100202	22	10024001	UR	1	0	0	P	PRIMIGRAVIDA WITH 28 WEEKS POG WITH SEVERE PE WITH SEVERE LOIGOHYDRAMNIOS	28	LBW	P1L0/ PTVD/ FEMALE/ 530 GRAMS/ 3: 29 PM ON 2/12/23	530g	11	35	450	8.6	31	2.3	4.2	32.8	3990	57	161	22	510	Yes	no	No	No	Yes	No	yes	No	No	No	misoprostol, methergin
A540	100203	27	10024414	R	2	1	0	M	G2P1L1 WITH 40 WEEKS 1 DAY POG WITH HYPOTHYROIDISM	40.1		P2L2/ FTVD/ MALE/ 2.9 KG/ 11: 16 AM ON 3/12/23	2.9	12	38	450	10	32	1.8	6	35.4	3500	50	148	22.8	593	Yes	Yes	No	YES	Yes	No	yes	No	No	No	misoprostol, methergin
A543	100204	34	10024521	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION HYPOTHYROIDISM	40.2		P1L1/ FTVD/ FEMALE/ 2.8 KG/ 10: 22 AM ON 4/12/23	2.8	12	37	450	9.8	32	2.2	5.1	34.2	4060	58	154	24.4	605	Yes	Yes	No	YES	Yes	No	No	No	No	No	misoprostol
A546	100205	29	10024558	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 6 DAYS POG IN LATENT LABOUR	39.6		P2L2/ FTVD/ MALE/ 3 KG/ 9: 08 AM ON 4/12/23	3	11	36	50	11	35	0.3	0.6	35.3	4480	64	161	24.7	76	Yes	Yes	No	No	Yes	No	No	No	No	No	

A547	100206	27	10024559	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.2		P2L2/ FTVD/ MALE/ 3.1 KG/ 12: 36 PM ON 5/12/23	3.1	11	33	300	9.7	31	1	2.4	31.9	3990	57	156	23.4	300	Yes	Yes	No	No	Yes	No	No	No	No	No		
A548	100207	36	10025073	R	4	3	0	M	G4P3L3 WITH 39 WEEKS 6 DAYS POG WIYJ CEPHALIC PRESENTATION IN LATENT LABOUR	39.6		P4L4/ FTND/ FEMALE/ 3 KG/ 12: 39 AM ON 6/12/23	3	13	40	30	12	40	0.2	0.1	39.7	4760	68	163	25	11.9	Yes	no	No	No	Yes	No	No	No	No	No		
A549	100208	23	10025079	UR	2	1	0	M	G3P2L2 WITH 38 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LL	38.2		P3L3/ FT VENTOUSE DELIVERY / FEMALE/ 2.8 KG/ 3: 25 AM ON 6/12/23	2.8	13	41	600	10	33	3.2	8.4	37.2	3500	50	152	21.6	790	Yes	Yes	No	No	Yes	No	yes	No	No	No	misoprostol, methergin	
A550	100209	23	10025168	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH PROM IN LATENT LABOUR	38.3		P1L1/ FT VENTOUSE DELIVERY/ FEMALE/ 2.78 KG ON 6/12/23	2.78	11	37	450	9.5	32	1.6	5.2	34.8	4060	58	156	23.8	606	Yes	Yes	No	No	Yes	No	No	No	No	No		
A552	100210	25	10025346	R	4	2	1	M	G4P2L2A1 WITH 39 WEEKS 5 DAYS POG WITH ECPHALIC PRESENTATION IN LATENT LABOUR	39.5		P3L3A1/ FTVD/ FEMALE/ 2.8KG/ 5: 02 AM ON 7/12/23	2.8	11	35	50	10	34	0.5	0.9	34.6	3360	48	150	21.3	87	Yes	Yes	No	No	Yes	No	No	No	No	No		
A553	100211	21	10025231	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 6 DAYS WITH CEPHALIC PRESENTATION WITH FETAL MACROSOMIA IN LATENT LABOUR	39.6		P1L1/ FTND/ FEMALE/ 3.2 KG/ 10: 23 PM ON 6/12/23	3.2	12	38	400	10	32	2	6.1	35.15	3290	47	147	21.7	570	Yes	Yes	No	No	Yes	No	No	No	No	No	misoprostol	
A555	100212	27	10025093	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG WITH CEPHALIC WITH LATE ONSET FGR WITH PV LEAK IN LATENT LABOUR	38	LBW	P1L1 FTVD/ FEMALE/ 2.2KG/ 6: 18 AM ON 6/12/23	2.2	11	36	300	9.2	33	1.6	3.5	34.35	3780	54	152	23.3	385	Yes	Yes	No	YES	Yes	No	No	No	No	No		
A556	100213	21	10025109	R	2	0	1	P	G2A1 WITH 39 WEEKS 6 DAYS WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.6		P1L1A1/ FTND/ MALE/ 2.7 KG/ 2: 42 PM ON 6/12/23	2.4	14	44	500	12	36	2.2	7.7	39.9	3500	50	155	20.8	675	Yes	Yes	No	No	Yes	No	yes	no	No	No	misoprostol, methergin	
A558	100214	27	10025477	R	3	2	0	M	G3P2L2 WITH 39 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39		P3L3/ FTND/ FEMALE/ 3.2 KG/ 10: 11 PM ON 7/12/23	3.2	9.4	32	50	9.1	32	0.3	0.2	47.3	4760	68	167	24.4	20.1	Yes	Yes	No	No	Yes	No	No	No	No	No		
A559	100215	36	10025524	R	6	2	2	M	G6P2L2A2 WITH 38 WEEKS 6 DAYS POG WTH CEPHALIC PRESENTATION WITH CEPHALIC PRESENTATION WITH DECREASED FETAL MOVEMENTS	38.6		P4L2A2D2/ FTVD/ MALE/ 2.7 KG/ 1: 47 AM ON 8/12/23	2.7	12	37	450	9.9	30	2.3	7	33.5	3430	49	152	21.2	716	Yes	Yes	No	YES	Yes	No	No	No	No	No		
A560	100216	25	10025612	R	2	1	0	M	G2P1L1 WITH 37 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	37.1	LBW	P2L2/ FTND/ FEMALE/ 2.3 KG/ 4: 57 AM ON 8/12/23	2.3	13	44	850	9.3	30	4.1	14	36.9	4620	66	164	24.6	1715	Yes	no	No	No	Yes	No	yes	no	No	No	misoprostol, carboprost, oxytocin	
A561	100217	20	10025598	UR	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH FGR WITH RH NEGATIVE PREGNANCY	39.3	LBW	P1L1/ FTVD/ MALE/ 2.4 KG/ 8: 59 PM ON 8/12/23	2.4	10	33	40	10	33	0.4	0.1	33.35	4900	70	165	25	14.6	Yes	Yes	No	YES	Yes	No	No	No	No	No		
A563	100218	27	10025661	R	3	1	1	M	G3P1L1A1 WITH 37 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH RH NEGATIVE PREGNANCY IN 2ND STAGE OF LABOUR	37.6		P2L2A1/ FTND/ MALE/ 2.9 KG/ 11: 30 AM ON 8/12/23	2.9	14	44	300	12	40	1.5	4.1	41.9	4060	58	156	23.8	397	Yes	Yes	No	No	Yes	No	No	No	No	No		
A564	100219	23	10025648	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 1 DAY WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37.1	LBW	P1L1/ FTVD/ MALE/ 2.4 KG/ 12: 37 PM ON 8/12/23	2.4	11	35	300	9.8	32	1	2.8	33.7	4130	59	159	23.4	343	Yes	Yes	No	No	Yes	No	No	No	No	No		
A567	100220	22	10025543	UR	3	1	1	M	G3P1L1A1 WITH 37 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37	LBW	P2L2A1/ FTND/ FEMALE/ 2.5 KG/ 8: 07 AM ON 9/12/23	2.5	11	36	200	11	34	0.5	2.1	35.1	3850	55	153	23.5	230	Yes	Yes	No	No	Yes	No	No	No	No	No		
A568	100221	23	10025333	UR	2	1	0	M	G2P1L1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM IN LL	39.4		P2L2/ FTVD/ MALE/ 2.7 KG/ 2: 11 PM ON 7/12/23	2.7	12	37	800	8.8	29	3.3	8.1	33.05	3710	53	146	24.8	909	Yes	Yes	No	No	Yes	No	yes	no	No	No	misoprostol, methergin, carboprost	
A569	100222	26	10025948	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS POG WITH CEPHALIC PRESENTATION WITH PROM	40		P1L1/ FTVD/ MALE/ 2.7 KG/ 12: 05 AM ON 10/12/23	2.7	13	42	100	13	41	0.1	1.1	41.15	4760	68	164	25	127	Yes	Yes	No	YES	Yes	No	No	No	No	No		
A570	100223	24	10025247	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS POG WITH FGR FOR IOL	38	LBW	P1L1/ FTVD/ 2.32 KG/ FEMALE/ 7: 30 AM ON 9/12/23	2.32	10	35	350	9.3	32	0.9	2.9	33.05	4340	62	160	24.2	380	Yes	Yes	No	YES	Yes	No	No	No	No	No		

A572	100224	19	10025936	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH RH NEGATIVE PREGNANCY IN LL	38.3	LBW	P1L1 / FTND/ MALE/ 2.3 KG/ 9: 53 PM ON 9/12/23	2.3	9.8	33	150	9.8	32	0	0.9	32.2	5040	72	167	25	140	Yes	Yes	No	No	Yes	No	No	No	No	No		
A573	100225	28	10025610	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALC PRESENTATION IN LL	39.4		P2L2/ FT VENTOUSE DELIVERY/ FEMALE/ 3.5 KG/ 11: 30 AM ON 8/12/23	3.5	9.3	31	450	8.1	26	1.2	4.9	28.8	3710	53	162	20.2	631	Yes	Yes	No	No	Yes	No	No	No	No	No		
A575	100226	20	10026031	UR	1	0	0	P	PRIMIGRAVIDA WITH 34 WEEKS 3DAYS POG WITH CEPHALIC PRESENTATION IN 2ND STAGE OF LABOUR	34.3	LBW	P1L1/ PTVD/ MALE/ 1.5 KG/ 5: 44 AM ON 10/12/23	1.5	11	39	100	11	38	0.2	1.2	38.1	3500	50	154	21	110	Yes	no	No	No	Yes	No	No	No	No	No		
A576	100227	30	10026111	R	4	3	0	M	G4P3L3 WITH 39 WEEKS 3 DAYS POG IN 2ND STAGE OF LABOUR	39.3		P4L4/ FTND/ MALE/ 3 KG/ 3: 20 AM ON 11/12/23	3	9.2	32	300	8.5	29	0.7	3.2	30.8	3640	52	151	22.8	378	Yes	Yes	No	No	Yes	No	No	No	No	No		
A577	100228	21	10026069	R	2	0	1	P	G2A1 WITH 37 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION IN ACTIVE LABOUR	37.5		P1L1A1/ FTND/ MALE/ 2.7 KG/ 2: 11 PM ON 10/12/23	2.7	10	32	100	9.6	32	0.5	0.5	32.05	4690	67	163	25	73	Yes	Yes	No	No	Yes	No	No	No	No	No		
A576	100229	36	10026279	UR	2	1	0	M	G2P1L1 WITH 39 WEEKS 4 DAYS POG WITH FGR FOR IOL	39.4		P2L2/ FTVD/ FEMALE/ 2.5 KG/ 10: 45A M ON 12/12/23	2.5	11	36	300	9.5	32	1.6	3.6	34	3570	51	154	21.5	378	Yes	Yes	No	yes	Yes	No	No	No	No	No		
A578	100230	24	10026124	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 6 DAYS POG WITH EARLY ONSET FGR FOR IOL	38.6		P1L1/ FTND/ MALE/ 2.5 KG/ 1: 04 AM ON 12/12/23	2.5	14	45	550	11	36	3.4	8.9	40.15	3500	50	148	22.8	775	Yes	Yes	No	yes	Yes	No	No	No	No	No		
A579	100231	33	10025975	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM IN LL	39.4		P2L2/ FTVD/ MALE/ 2.9 KG/ 8: 25 PM ON 12/12/23	2.9	12	38	200	11	36	0.7	2.1	36.65	3850	55	151	24.1	220	Yes	Yes	No	No	Yes	No	No	No	No	No		
A580	100232	26	10026440	UR	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 1 DAY WITH FETAL MACROSOMIA IN LL	38.1		P1L1/ FTVD/ MALE/ 3.3KG/ 1: 27 AM ON 13/12/23	3.3	9.1	33	600	7.6	26	1.5	6.5	29.3	3710	53	153	22.6	823	Yes	Yes	No	No	Yes	No	yes	No	No	No	misoprostol, carboprost	
A583	100233	25	10026286	UR	2	1	0	M	G2P1L1 WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENTATION WITH FGR IN LL	40.1		P2L2/ FTVD/ FEMALE/ 3.4 KG/ 5: 10 PM ON 12/12/23	3.4	9.8	35	450	7.8	29	2	6.3	32.05	3500	50	151	21.9	687	Yes	Yes	No	yes	Yes	No	No	No	No	No		
A584	100234	26	10026817	R	3	2	0	M	G3P2L2 WITH 38 WEEKS 5 DAYS POG WITH CEPHALIC PRESENTATION WITH HBSAG POSITIVE STATUS	38.5		P3L3/ FTND/ MALE/ 3.5 KG/ 3: 42 PM ON 13/12/23	3.5	9.6	34	400	8.9	30	0.7	3.7	32.15	3850	55	153	23.5	443	Yes	Yes	No	No	Yes	No	No	No	No	No		
A585	100235	29	10026618	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 3 DAYS POG WITH CEPHALIC PRESENTATION WITH GDM	38.3		P1L1/ FTVD/ 2.7 KG/ MALE/ 6: 30 PM ON 14/12/23	2.7	8.7	30	300	8.6	27	0.1	3.5	28.45	3990	57	149	25	490	Yes	Yes	No	No	Yes	No	No	No	No	No		
A587	100236	23	10027138	R	2	1	0	M	G2P1L1 WITH 38 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LL	38.6	LBW	P2L2/ FTVD/ FEMALE/ 2.45 KG/ 10: 44 PM ON 15/12/23	2.45	12	38	450	10	30	2.2	7.9	34.15	3360	48	147	22.2	777	Yes	Yes	No	No	Yes	No	No	No	No	No		
A589	100237	24	10027007	UR	2	1	0	M	G2P1L1 WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	38	LBW	P2L2/ FTND/ MALE/ 2.2KG/ 6: 28 AM ON 15/12/23	2.2	8.9	31	300	8.7	28	0.2	3.1	29.45	3640	52	151	22.8	383	Yes	no	No	No	Yes	No	No	No	No	No		
A590	100238	28	10027337	UR	2	0	1	P	G2A1 WITH 33 WEEKS 2 DAYS WITH PRETERM LABOUR	33.2	LBW	P1L1A1/ PTVD/ FEMALE/ 1.7 KG/ 10: 17 PM ON 15/12/23	1.7	14	46	300	13	42	1.2	3.3	43.9	4270	61	159	24.2	320	Yes	no	No	No	Yes	No	No	No	No	No		
A591	100239	30	10027313	UR	4	3	0	M	G4P3L3 WITH 40 WEEKS 3DAYS WITH CEPHALIC PRESENTATION WITH SEVERE OLIGOHYDRAMNIOS	40.3		P4L4/ FTND/ FEMALE/ 3.3 KG/ 4: 30 AM ON 16/12/23	3.3	11	33	250	10	31	1.1	2.2	32.1	4480	64	160	25	307	Yes	Yes	No	yes	Yes	No	No	No	No	No		
A594	100240	33	10027324	R	2	0	1	P	G2A1 WITH 40 WEEKS 1 DAY WITH GDM WITH PROM	40.1		P1L1A1/ FT VENTOUSE DELIVERY/ FEMALE/ 3.2 KG/ 4: 48 AM ON 16/12/23	3.2	8.4	28	300	7.7	26	0.7	1.7	27.05	4760	68	164	25	299	Yes	Yes	No	yes	Yes	No	No	No	No	No		
A595	100241	23	10027389	R	2	0	1	M	G2A1 WITH 38 WEEKS POG WITH RH NEGATIVE PREG IN LL	38		P1L1A1/ FTND/ MALE/ 3 KG/ 3: 16 PM ON 16/12/23	3	12	36	200	12	38	0.2	1.7	37.05	4620	66	165	24.2	211	Yes	Yes	No	No	Yes	No	No	No	No	No		

A597	100242	30	10027551	R	2	1	0	M	G2P1L1 WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LL	39.9		P2L2/ FT VENTOUSE DELIVERY/ MALE/ 3 KG/ 2: 52 AM ON 17/12/23	3	13	41	200	13	44	0.1	3.1	42.7	3990	57	158	22.8	289	Yes	Yes	No	No	Yes	No	No	No	No	No		
A596	100243	22	10027378	R	1	0	0	P	PRIMIGRAVIDA WITH 37 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	37.6	LBW	P1L1/ FTVD/ FEMALE/ 2.1 KG/ 6: 55 AM ON 16/12/23	2.1	10	34	450	8.8	29	1.6	4.9	31.45	3500	50	153	21.3	545	Yes	no	No	No	Yes	No	No	No	No	No		
A598	100244	24	10027322	UR	5	2	2	M	G5P2L2A2 WITH 28 WEEKS 5 DAYS POG WITH IUD	28.5	LBW	P3L2A2D1/ PTVD/ FEMALE/ IUD/ 690 GRAMS/ 5: 47 AM ON 16/12/23	690 G	10	36	500	9.3	29	1	6.9	32.05	3780	54	146	25	813	Yes	no	No	yes	Yes	No	No	No	No	No		
A600	100245	23	10027565	UR	2	0	1	P	G2A1 WITH 28 WEEKS 3 DAYS POG WITH PRETERM LABOUR	28.3	LBW	P1L1A1/ PTVD/ 720 GRAMS/ MALE/ 4: 59 AM ON 17/12/23	720 G	11	40	450	10	34	1.1	5.4	36.8	3570	51	148	23.2	523	Yes	no	No	No	Yes	No	No	No	No	No		
A601	100246	21	10027460	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION IN LL	38.6	LBW	P1L1/ FTND/ MALE/ 2.1 KG/ 8: 54 PM ON 17/12/23	2.1	13	40	400	11	35	1.8	4.6	37.3	3920	56	153	23.9	483	Yes	Yes	No	No	Yes	No	No	No	No	No		
A602	100247	24	10027007	R	2	1	1	M	G2P1L1 WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION IN LL	38	LBW	P2L2/ FTND/ MALE/ 2.27 KG/ 6: 28 AM ON 15/12/23	2.27	8.9	31	250	8.7	28	0.2	3.1	29.4	3640	52	148	23.7	383	Yes	Yes	No	No	Yes	No	No	No	No	No		
A604	100248	23	10027550	R	2	0	1	P	G2A1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.4		P1L1A1/ FTND/ FEMALE/ 3.2 KG/ 3: 24 PM ON 17/12/23	3.2	13	37	450	10	32	2.2	4.9	34.6	3780	54	151	23.6	535	Yes	Yes	No	No	Yes	No	No	No	No	No		
A606	100249	32	10027845	UR	1	0	0	P	PRIMIGRAVIDA WITH 34 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH PPROM	34.6	LBW	P1L1/ PTVD/ FEMALE/ 2.4 KG/ 6: 37 PM ON 18/12/23	2.4	13	40	300	12	37	1	3.7	38.4	3500	50	149	22.5	337	Yes	Yes	No	No	Yes	No	No	No	No	No		
A608	100250	27	10027666	R	1	0	0	P	PRIMIGRAVIDA WITH 39 WEEKS 6 DAYS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM	39.6		P1L1/ FTVD/FEMALE/ 2.6KG/ 2: 09 PM PN 18/12/23	2.6	13	41	650	9.9	31	2.9	10	36.2	3500	50	152	21.6	945	Yes	Yes	No	No	Yes	No	yes	No	No	No	misoprostol	
A609	100251	23	10027565	UR	2	0	1	P	G2A1 WITH 29 WEEKS 1 DAY POG WITH PRETERM LABOUR	29.1	LBW	P1L1/ PTVD/ 1.7 KG/ MALE/ 4: 59 AM ON 17/12/23	1.7	11	40	400	10	34	1.1	5.4	36.8	3780	54	146	25	554	Yes	no	No	No	Yes	No	No	No	No	No		
A611	100252	21	10027460	R	1	0	0	P	PRIMIGRAVIDA WITH 38 WEEKS 6 DAYS POG WITH CEPHALIC PRESENATATION IN LL	38.6	LBW	P1L1/ FTND/ MALE/ 2.1 KG/ 8: 54 PM ON 17/12/23	2.1	13	40	350	11	35	1.8	4.6	37.3	3710	53	149	23.8	457	Yes	Yes	No	No	Yes	No	No	No	No	No		
A613	100253	24	10027007	R	2	1	0	M	G2P1L1 WITH 38 WEEKS POG WITH CEPHALIC PRESENTATION IN LL	38	LBW	P1L1/ FTND/ MALE/ 2.27 KG/ 6: 28 AM ON 15/12/23	2.27	8.9	31	350	8.7	28	0.2	3.1	29.45	3920	56	153	23.9	412	Yes	Yes	No	No	Yes	No	No	No	No	No		
A614	100254	23	10027550	R	2	0	1	P	G2A1 WITH 39 WEEKS 4 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.4		P1L1A1/ FTND/ FEMALE/ 3.2 KG/ 3: 24 PM ON 17/12/23	3.2	13	37	400	10	32	2.2	4.9	34.6	3500	50	148	22.8	495	Yes	Yes	No	No	Yes	No	No	No	No	No		
A615	100255	25	10027848	UR	2	1	0	M	G2P1L1 WITH 39 WEEKS 2 DAYS POG WITH CEPHALIC PRESENTATION IN LATENT LABOUR	39.2		P2L2/ FTND / MALE/ 3.1 KG/6: 26 AM ON 19/12/23	3.1	11	38	550	9.6	31	1.2	7.5	34.6	3360	48	148	21.9	728	Yes	Yes	No	No	Yes	No	No	No	No	No	misoprostol	
A616	100256	27	10028159	R	2	1	0	M	G2P1L1 WITH 40 WEEKS 1 DAY POG WITH ECPHALIC PRESENTATION FOR IOL	40.1		P2L2/ FTND/FEMALE/ 2.6 KG/ 10: 14 PM ON 19/12/23	2.6	12	36	50	12	36	0.5	0.3	35.7	4830	69	166	25	41.2	Yes	Yes	No	yes	Yes	No	No	No	No	No		
A618	100257	26	10028138	R	3	2	0	M	G3P2L2 WITH 39 WEEKS 1 DAYS POG WITH CEPHALIC PRESENTATION WITH HYPOTHYROIDISM IN LL	39.1		P2L2D1/ FTND/ FEMALE/ 2.6 KG/ 2: 12 AM ON 20/12/23	2.6	14	43	400	12	37	1.5	6.3	40.25	3430	49	146	23	536	Yes	Yes	No	No	Yes	No	No	No	No	No		
A620	100258	23	10028396	UR	1	0	0	P	PRIMIGRAVIDA WITH 40 WEEKS 1 DAY POG WITH CEPHALIC PRESENATTION IN LL	40.1		P1L1/ FT VENTOUSE DELIVERY /FEMALE/ 2.7 KG/ 8: 43 AM ON 21/ 12/23	2.7	12	40	450	10	32	1.6	7.5	35.8	3290	47	148	21.4	689	Yes	Yes	No	No	Yes	No	No	No	No	No		