# DELAYED CORD CLAMPING VERSUS UMBILICAL CORD MILKING IN TERM AND NEAR-TERM NEONATES -A RANDOMIZED CONTROLLED TRIAL



## THESIS

Submitted to All India Institute of Medical Sciences, Jodhpur In partial fulfillment of the requirement for the degree of DOCTOR OF MEDICINE (MD) (OBSTETRICS & GYNECOLOGY)

**JUNE 2022** 

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#### **DECLARATION**

I hereby declare that the thesis titled **"Delayed cord clamping versus Umbilical cord milking in term and near-term neonates- A Randomized Controlled Trial"** embodies the original work carried out by the undersigned in All India Institute of Medical Sciences, Jodhpur.

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## **CERTIFICATE**

This is to certify that the thesis titled "Delayed cord clamping versus Umbilical cord milking in term and near-term neonates- A Randomized Controlled Trial" is the bonafide work of Dr. Aashim Garg carried out under our guidance and supervision, in the Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Jodhpur.

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#### <u>Acknowledgement</u>

No one who achieves success does so without acknowledging the help of others. The wise and confident acknowledge this help with gratitude. -Alfred North Whitehead

First and foremost, I would like to thank my greatest teacher of all: God. I know that I am here and that I am able to write all of this for a reason. I will do my best in never forgetting what a great fortune I have had in just being here, and that it comes with a lesson and a responsibility. I hope I am doing the work you have planned for me to do.

I would like to gratefully acknowledge the contribution of all the people who provided valuable support to me during the course of this thesis. I would not be at this landmark moment without the trust and patient patronage of Dr. Shashank Shekhar, my MD thesis Guide and Professor, Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Jodhpur.

I am truly honored and grateful for the opportunity to learn under his tutelage. Whilst the sensation of doing something that would impress everybody was short-lived, those first few days of uncertainty that you pulled with me are ones that I will not ever forget. Thank you for believing in me. Every piece of this work bears the reflection of your trust in my efforts.

I am grateful to Dr. Pratibha Singh, Professor and Head, Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Jodhpur, for allowing me to carry the work under this thesis project. Her untiring efforts, enthusiasm and insistence for perfection have always inspired me at every step.

I am also indebted to my Co-guides Dr. Neeraj Gupta, Additional Professor, Department of Paediatrics, Dr. Manu Goyal, Associate Professor, Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Jodhpur and Dr. Manisha Jhirwal, Assistant Professor, Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Jodhpur. Their step by step support and guidance has been instrumental in creating the environment of success and excellence needed for a dissertation from our esteemed institute. I will always remember their support and care that encouraged me to carry forward any work that has been assigned to me. I acknowledge the nurturance I have received from my seniors. Without their help and reprimands, I would be clueless as to how to proceed with the work involved in this dissertation. I also thank my juniors who helped me in follow up of my patients.

Family is the backbone that has prevented me from ever faltering in the quest for excellence and knowledge. I am grateful to my parents, Ashok Kumar and Saroj Devi, their guidance and blessings helped me to reach the present status in life and my brother Lovenish Garg for his immense support and understanding.

All the faculties of the Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Jodhpur have been pillars of support and understanding and this would not have been possible without them.

I am also thankful to my friends who played a crucial part in this endeavor by always encouraging me to chase excellence and by being available as sympathetic listeners. I would like to specially acknowledge my best friend and philosopher, Prashant Jindal for keeping me calm and stress-free.

Finally and most importantly, I express my sincere thanks to all my patients for their overwhelming cooperation.

Dedicated to my family

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|       |   | LIST OF ABBREVIATIONS          |
|-------|---|--------------------------------|
| UCM   | : | Umbilical Cord Milking         |
| DCC   | : | Delayed Cord Clamping          |
| ICC   | : | Immediate Cord Clamping        |
| ECC   | : | Early Cord Clamping            |
| I-UCM | : | Intact Umbilical Cord Milking  |
| C-UCM | : | Cut Umbilical Cord Milking     |
| IVH   | : | Intraventricular Hemorrhage    |
| RBC   | : | Red Blood Cell                 |
| who   | : | World Health Organization      |
| NRP   | : | Neonatal Resuscitation Program |
| RCT   | : | Randomized Controlled Trial    |
| UC    | : | Umbilical Cord                 |
| POG   | : | Period of Gestation            |
| СІ    | : | Confidence Interval            |
| LCER  | : | Late Clamping Event Rate       |
| NICU  | : | Neonatal Intensive Care Unit   |
| ANCs  | : | Absolute Neutrophil Counts     |
| ВМІ   | : | Body mass index                |

| Hct | : | Hematocrit                      |
|-----|---|---------------------------------|
| Hb  | : | Hemoglobin                      |
| NCC | : | Newborn Care Corner             |
| ААР | : | American Academy of Paediatrics |
| SD  | : | Standard Deviation              |
| IQR | : | Interquartile Range             |
| AGA | : | Appropriate for gestational age |
| SGA | : | Small for gestational age       |
| LGA | : | Large for gestational age       |

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#### **ABSTRACT**

**Background:** Anemia in infancy is common in developing countries. Delayed cord clamping (DCC) and Umbilical cord milking (UCM) allow the transfer of additional blood volume from the placenta to the newborn infant and thus improve the infant's iron stores. UCM has been endorsed as an alternative to DCC, which is the current standard of care.

**Objective:** To compare the effect of delayed cord clamping vs milking of umbilical cord on initial haematocrit in term and near-term neonates.

**Methods**: This randomized controlled trial included 374 pregnant women of more than 34 weeks period of gestation. They were randomized into UCM group and DCC group. In UCM group, 119 underwent vaginal delivery and 68 underwent caesarean section. In DCC group, 117 underwent vaginal delivery and 70 underwent caesarean section. Main outcome measures included hematocrit at birth and at 30±6 hours, requirement of phototherapy and neonatal intensive care unit (NICU) admission. Statistical analysis was done using SPSS software. *P* value less than 0.05 was considered significant.

**Results**: Mean hematocrit in cord sample was  $47.02 \pm 7.13\%$  in UCM group and  $48.04 \pm$ 8.36% in DCC group and the difference was not statistically significant (p = 0.21). Mean hematocrit at  $30 \pm 6$  hours was  $54.48 \pm 5.84\%$  in UCM group and  $50.9 \pm 7.1$  in DCC group and the difference was statistically significant (p = 0.01). Requirement of phototherapy in UCM group was 18.18% and in DCC group was 19.25% (p =0.79). Rate of NICU admission was 2.67% in UCM group and 7.49% in DCC group (p=0.034). In newborn born to anemic mothers, mean hematocrit in cord sample was  $45.9 \pm 6.4\%$  in UCM group and  $48.8 \pm 8.4\%$  in DCC group which was statistically significant (P value 0.02). However, mean hematocrit at  $30 \pm 6$  hours was not statistically significant (P value 0.11) in newborn born to anemic mothers. In newborn born to non-anemic mothers, mean hematocrit in cord sample was not statistically significant (P value 0.98). However, mean hematocrit at  $30 \pm 6$  hours was  $55.0 \pm$ 5.5% in UCM group and 50.5  $\pm$  7.4% in DCC group which was statistically significant (P value 0.0001). In Preterm neonates, mean hematocrit in cord sample as well as at 30±6 hours was not statistically significant. In Term neonates, mean hematocrit in cord sample was not statistically significant (P value 0.23). However, mean hematocrit at  $30 \pm 6$  hours was  $54.5 \pm$ 5.7% in UCM group and 50.8  $\pm$  7.1% in DCC group which was statistically significant (P value 0.0001). In Appropriate for Gestational Age (AGA) neonates, mean hematocrit in cord sample was not statistically significant (P value 0.25). However, mean hematocrit at  $30 \pm 6$ 

hours was  $53.8 \pm 5.6\%$  in UCM group and  $50.3 \pm 6.9\%$  in DCC group which was statistically significant (P value 0.0001). In Small for Gestational Age (SGA) neonates, mean hematocrit in cord sample as well as at  $30 \pm 6$  hours was not statistically significant.

**Conclusion**: UCM lead to significant increase in hematocrit levels without increasing the requirement of phototherapy and NICU admissions. Hence, UCM can be used as an alternative to DCC in both term and near-term neonates.



## **INTRODUCTION**

Anaemia in infancy is common in developing countries. According to National Family Health Survey 2019-21, incidence of anaemia in 6 months to 5 years children in India is 67%<sup>(1)</sup>. To prevent or decrease the incidence of infant anaemia, the concept of placental transfusion has come into practice<sup>(2)</sup>. Placental transfusion refers to the transfer of more blood components to the infant during the first few minutes after birth<sup>(3)</sup>. It leads to decreased mortality in preterm infants and improved developmental outcomes in term infants<sup>(4,5)</sup>. Different strategies for ensuring placental transfusion to the baby include delayed cord clamping, milking of intact umbilical cord and milking of the cut umbilical cord<sup>(3)</sup>. Umbilical cord milking (UCM) has been endorsed as an alternative to delayed umbilical cord clamping (DCC), which is the current standard of care<sup>(4)</sup>.

In DCC, the cord is clamped after a short delay after birth and in UCM, cord blood is stripped or milked towards the baby. Both the strategies, prevent anaemia in infants by allowing transfer of additional blood volume and haemoglobin from placenta to the newborn<sup>(2,6)</sup>.

On the contrary, when the umbilical cord is clamped immediately after birth (i.e., immediate cord clamping, ICC), a significant amount of the foetal blood remains in the placenta leading to relatively lower red blood cell (RBC) volume in the newborn<sup>(7)</sup>.

For full-term infants, a Cochrane review of 15 trials involving 3911 women-and-infant pairs showed DCC to improve haemoglobin and haematocrit levels postnatally and reduced iron deficiency at three to six months of age without increasing any maternal complication<sup>(3,8)</sup>. The only drawback reported was an increased requirement of phototherapy. The reduction of iron deficiency and iron deficiency anaemia can have a significant impact on children's health and long-term neurodevelopment not only for developing countries where iron deficiency is more common but also for high-income countries<sup>(9,10)</sup>.

## Physiology

If the umbilical cord is not clamped at birth, the blood flow between the baby and the placenta continues for few minutes<sup>(11,12)</sup>. This is a part of physiological transition from the foetal circulation to the neonatal circulation<sup>(13,14,15)</sup>.

The infant must move from the foetal circulation to his/her own independent circulation after birth. Therefore, as soon as the baby is born, the umbilical circulation slows and the pulmonary vascular resistance falls, rapidly increasing the pulmonary blood flow. It is a part of physiological mechanisms assisting the baby to make transition from intra-uterine to extrauterine life. These physiological mechanisms are not fully developed in preterm infants, so it might take longer for them to adapt without major consequences<sup>(13,16,17,18)</sup>.

For term infants, the blood flows through the umbilical arteries from the infant to the placenta mainly during the first 20 to 25 seconds after birth but is negligible by about 40 to 45 seconds. On contrary, blood flow in the umbilical vein continues from the placenta to the infant up to at least 3 minutes after delivery, after which blood flow is insignificant<sup>(19)</sup>. This gives an additional 80 ml to 100 ml of blood volume to the term infant<sup>(13,20)</sup>.

However, for preterm infants, physiology of placental transfusion is not very well understood, but is believed may take longer than the term neonate<sup>(13,21,22)</sup>. A delay of 30 to 45 seconds leads to an increase in blood volume of approximately 8% to 24%<sup>(19)</sup>.

Classic studies from the 1960s showed that the rate of placental transfusion is rapid at first and then slows down in a stepwise fashion, with approximately 25% of the transfer occurring in the first 15 to 30 seconds after the uterine contractions of birth, 50% to 78% of the transfer by 60 seconds and the remaining transfer by 3 minutes<sup>(19)</sup>.

Foetal haemoglobin has enhanced oxygen-binding capacity which allows sufficient oxygen transfer to the foetus in the absence of gas exchange with the external environment. Since, the intrauterine environment is relatively hypoxic, the haemoglobin level in a near-term foetus or term infant is relatively high. The normal haemoglobin concentration for a term newborn is  $19.3\pm2.2 \text{ g/dL}$  ( $193\pm220 \text{ g/L}$ ), with a haematocrit of  $61\%\pm7.4\%$  ( $0.61\pm0.074$ ), values that continue to rise until they reach a maximum at about 2 hours after birth. Within the first week after delivery, haemoglobin and haematocrit values begin to drop in response to the higher ambient oxygen concentration outside the uterus<sup>(19)</sup>.

## Factors affecting placental transfusion:

The rate and amount of transfer can be affected by several factors-

1. **Timing of Clamping-** The optimal timing of umbilical cord clamping has been debated in the scientific literature for over a century.

According to World Health Organisation (WHO), Early cord clamping (ECC) is generally carried out in the first 60 seconds after birth (mostly within the first 15–30 seconds), whereas DCC is carried out more than 1 min after the birth or when cord pulsation has ceased<sup>(23)</sup>.

According to latest Neonatal Resuscitation Guidelines, for term and preterm infants who do not require resuscitation at birth, DCC for longer than 30 seconds is recommended whereas for those who require resuscitation at birth, there is insufficient evidence to recommend ECC versus DCC<sup>(24)</sup>.

2. Uterine Contractions- The uterine contraction that occurs between 1 and 3 minutes after the birth is responsible for last step of placental transfusion. Hence, it can accelerate the rate of transfer of blood volume<sup>(23)</sup>.

**3.** Uterotonic agents- Ergot alkaloids used intravenously might increase the placental transfusion, but they have been replaced by oxytocin. A study conducted by Farrar and colleagues did not find a significant effect on placental transfusion of intramuscular oxytocin because of small sample size<sup>(23)</sup>.

**4. Gravity-** Studies performed in the 1960's and 1970's showed that if the infant was held below the level of the uterus, gravity increased the rate of transfer, but did not change the total amount of blood transferred.

On the other hand, if the infant was held high above the uterus (around 50 to 60 cm), placental transfusion was prevented by stopping the blood flow through the umbilical vein. Between 10 cm above or below the level of the uterus, the amount and rate of transfer was approximately similar<sup>(23)</sup>.

5. Mode of delivery- Some studies suggested that placental transfusion was reduced or did not occur in caesarean section because of uterine atony due to the uterine incision, the anaesthesia used for the surgery, or the timing of administration of the uterotonic  $drug^{(23)}$ .

**6. Milking of umbilical cord-** also known as cord stripping. The umbilical cord is milked from the placental end towards the infant, forcing the blood in the cord towards the infant, prior to clamping the cord.

It has shown to have similar effects on neonatal outcomes—such as haemoglobin or haematocrit—as delayed clamping in both term and preterm infants<sup>(23)</sup>.

Hence, UCM can be a good alternative to DCC.

## **Benefits of Delayed Cord Clamping**<sup>(23)</sup>

#### 1. <u>Immediate Benefits:</u>

- **Term** Provides adequate blood volume and birth iron stores
  - Increases haematocrit and haemoglobin levels

#### **Preterm** - Decreases risk of:

- Intra-ventricular haemorrhage (IVH),
- Necrotizing enterocolitis, and
- Late-onset sepsis
- Decreases need for:
  - Blood transfusions for anaemia or low blood pressure
  - Surfactant
  - Mechanical ventilation
- Increases:
  - Haematocrit
  - Haemoglobin
  - Blood pressure
  - Cerebral oxygenation
  - Red blood cell flow

#### 2. Long Term Benefits:

| Term | - Improves haematological status (haemoglobin and haematocrit) at 2 to 4 |
|------|--|
|      | months of age  |

- Improves iron status through 6 months of age
- **Preterm** Increases haemoglobin at 10 weeks of age
  - May be a benefit to neurodevelopmental outcomes in male infants

## **Concerns Related to DCC**

**1. Delayed Resuscitation:** Neonates which are non-vigorous at birth require resuscitation and hence require ICC. DCC might become a barrier to this resuscitation and may lead to IVH or death of the newborn<sup>(3,25)</sup>.

**2. Over-transfusion:** Sometimes, DCC may lead to over-transfusion of the foetus through the placenta leading to symptomatic polycythaemia or significant jaundice requiring phototherapy in both term and preterm neonates<sup>(3)</sup>. However, DCC is recommended if treatment for jaundice requiring phototherapy is available. Increased provision of phototherapy with DCC should be weighed against the reduced incidence of iron deficiency anaemia, which might impact the long-term neurodevelopmental outcomes<sup>(3)</sup>.

**3.** Placental transfusion in caesarean delivery: There is a limited data indicating whether DCC performed during caesarean deliveries can improve placental transfusion. Hence, as per previous studies there is not much benefit of DCC in caesarean delivery as compared to vaginal delivery with respect to placental transfusion<sup>(3,26,27)</sup>.

## **Umbilical Cord Milking (UCM)**

Two types of UCM methods have been described-

- 1. Intact UCM (I-UCM)
- 2. Cut cord milking (C-UCM)

Intact UCM (I-UCM) refers to the milking of the attached cord in which the uncut umbilical cord (UC) is grasped gently between the thumb and the fingers and squeezed three to four times from the placental end towards the infant allowing 1-2 seconds of cord refill time in between each milking manoeuvre. After three or four milkings of the cord, an infant receives

about 17 mL/kg of extra blood volume [30]. It provides similar blood volume to 2 min of DCC in term infants as measured by residual placental blood volume<sup>(3, 28)</sup>.

Cut cord milking (C-UCM) refers to clamping and cutting of a long segment of umbilical cord length attached to the baby, the UC is then untwisted, and entire contents of the UC are milked into the baby<sup>(3)</sup>. A study by McAdams et al in 2017 demonstrated that the blood volume transferred by I-UCM was more than the C-UCM in term newborns<sup>(29)</sup>.

The main difference between DCC and UCM is the mechanism of cord blood transfer to the newborn. In DCC, there is a passive transfer of blood that occurs at a slow rate, whereas in UCM, there is an active transfer of blood that occurs at a rapid rate within a short time which may or may not be beneficial to neonates, especially preterm neonate<sup>(30)</sup>.

## **Benefits of UCM**<sup>(3,13,31)</sup>

#### 1. <u>Immediate Benefits:</u>

Term - Provides adequate blood volume and birth iron stores

- Increases: Haematocrit and Haemoglobin levels
- Minimal delay to resuscitation
- Decrease risk of hypothermia

#### Preterm - Decreases risk of-

- All grades IVH
- Bronchopulmonary dysplasia
- Necrotizing enterocolitis
- Hypothermia
- Decreases need for:
  - Blood transfusions for anaemia or low blood pressure
- Increases:
  - Haematocrit
  - Haemoglobin
  - Blood pressure
  - Urine output
  - Cerebral oxygenation

- Blood volume in caesarean section
- Minimal delay to resuscitation

#### 2. Long Term Benefits:

Preterm - Improves haematological status (haemoglobin and haematocrit) at 6 weeks

- Higher ferritin levels at 6 weeks of age

## **Concerns related to UCM**

The exact physiological impact of UCM on neonatal adaptation is not very clear.

All available clinical data from different trials show no adverse effects of UCM but were limited by small sample size, especially of extremely preterm infants, and lack of sufficient data on long-term neurodevelopmental outcomes<sup>(3)</sup>. According to latest Neonatal resuscitation guidelines for infants born at less than 28 weeks of gestation, UCM is not recommended because it is associated with brain injury (intraventricular haemorrhage)<sup>(24)</sup>.

#### Effect of timing of cord clamping on Maternal Outcomes

McDonald et al reviewed all the studies which included the maternal outcomes and came to conclusion that timing of cord clamping has no effect on postpartum haemorrhage, maternal postpartum haemoglobin, need for blood transfusion, need for manual removal of the placenta, or the length of the third stage of labour<sup>(8)</sup>.

Despite numerous studies on UCM, a universal standardized protocol for UCM has not been established. According to Neonatal resuscitation program (NRP) guidelines, ECC can be considered for cases where placental transfusion is unlikely to occur, such as maternal haemorrhage or hemodynamic instability, placental abruption, or placenta previa<sup>(24)</sup>. In such cases, UCM may prove to be of some benefit<sup>(3)</sup>.

There have been many studies comparing neonatal outcome after ECC vs  $DCC^{(8,32,33)}$  and ECC vs  $UCM^{(34,35,36,37)}$ . People have also compared I-UCM vs C-UCM<sup>(29)</sup>. Recent studies have demonstrated that UCM and DCC result in comparable increases in hemoglobin in premature babies<sup>(4,31,38)</sup>. But there is limited literature available on comparison of DCC vs UCM in term neonates.

Therefore, we decided to do a randomized controlled trial (RCT) comparing neonatal outcomes in UCM and DCC in more than 34 weeks period of gestation in both vaginal as well as caesarean delivery.



## AIM AND OBJECTIVES

## AIM OF STUDY:

To compare the effect of delayed cord clamping vs milking of umbilical cord on initial hematocrit in term and near-term neonates.

## **OBJECTIVES:**

## **PRIMARY OBJECTIVE:**

To compare the effect of delayed cord clamping vs milking of umbilical cord on initial hematocrit of cord sample and at 30 +/- 6 hours in term and near-term neonates.

## **SECONDARY OBJECTIVE:**

- 1. To evaluate hematologic parameters of S. ferritin and Hemoglobin at 14 weeks of age.
- 2. To evaluate the prevalence of jaundice in neonates requiring phototherapy.
- 3. To evaluate the need for NICU care.



## **REVIEW OF LITERATURE**

In 2007, Baenziger *et al*<sup>(39)</sup> investigated the effect of placentofetal transfusion on cerebral oxygenation by near-infrared spectroscopy in preterm infants. It was a randomized controlled trial. Total 39 preterm infants with median gestational age of 30.4 weeks were included in the study and were randomly assigned to control group (n=24) and experiment group (n=15). In the experimental group, the delivery of the baby was immediately followed by oxytocin administration to the mother, the infant was then placed 15cm below the placenta and delayed cord clamping was done (60 to 90 seconds). In the control group, baby was delivered conventionally, and early cord clamping was done (<20 seconds). Cerebral hemoglobin concentrations, cerebral blood volume, and regional tissue oxygenation at 4 and 24 hours of life were measured by near-infrared spectroscopy. The cerebral blood volume at 4 hours (6.1 vs 5.8 mL/100 g of tissue) and 24 hours of life (6.2 vs 6.2 mL/100 g of tissue) was not significantly different between the two groups. However, mean regional tissue oxygenation at 4 hours (69.9% vs 65.5%) and 24 hours (71.3% vs 68.1%) of life was significantly higher in the experimental group. They concluded that delayed cord clamping improved cerebral oxygenation in first 24 hours in preterm infants.

In 2010, Ranjit *et al*<sup>(33)</sup> did a study to compare the effect of DCC and ECC on hematocrit and serum ferritin levels at 6 weeks of life in preterm neonates. It was a randomized controlled trial conducted in delivery room and neonatal intensive care unit of a tertiary hospital. 100 preterm neonates born between 30 0 /7 and 36 6 /7 weeks were randomized to either DCC or ECC group. In DCC group, the cord was clamped 2 min after the baby was delivered and in ECC group, the cord was clamped immediately after the delivery of the baby. The mean serum ferritin (136.9±83.8 ng/mL vs. 178.9±92.8 ng/mL, p value 0.037) and mean hematocrit (27.3±3.8 % vs. 31.8±3.5 %, p value 0.00) were significantly higher in the neonates randomized to DCC group as compared to ECC group. The hematocrit on day 1 was also significantly higher in the DCC group (50.8 ±5.2 % vs. 58.5 ±5.1 %, p value 0.00). The risk of polycythemia and requirement of phototherapy (55.3±40.0 h vs. 36.7±32.6 h, p value 0.016) was significantly higher in DCC group. They concluded that DCC significantly improves the hematocrit value at birth and this beneficial effect continues till at least 2nd month of life.

In 2011, Andersson *et al*<sup>(32)</sup> investigated the effect of delayed cord clamping and early cord clamping on iron status of the infant at 4 months of age in European setting. It was a</sup>

randomized controlled trial done in the setting of Swedish country hospital. It included 400 full term infants born after a low-risk pregnancy. These 400 infants were randomized into DCC group (>180 seconds after delivery) and ECC group (<10 seconds after delivery). The infants showed no significant differences in hemoglobin concentration between the two groups at 4 months of age, but infants with delayed cord clamping had 45% (95% confidence interval [CI] 23% to 71%) higher mean ferritin concentration (117 µg/L v 81 µg/L, P<0.001) and a lower prevalence of iron deficiency (1 (0.6%) v 10 (5.7%), P=0.01, relative risk reduction 0.90; number needed to treat=20 (17 to 67)). The prevalence of neonatal anemia at two days of life (2 (1.2%) v 10 (6.3%), P=0.02, relative risk reduction 0.80, number needed to treat 20 (15 to 111)) was lower in the delayed cord clamping group. Postnatal respiratory symptoms, polycythemia, or hyperbilirubinemia requiring phototherapy showed no significant difference in the two groups. They concluded that delayed cord clamping resulted in improved iron status and reduced prevalence of iron deficiency at 4 months of age, and reduced prevalence of neonatal anemia, as compared to early cord clamping group, without any demonstrable adverse effects. Since iron deficiency in infants is associated with impaired development of the infant, delayed cord clamping benefits full term infants.

In 2011, Rabe H *et al*<sup>(40)</sup> did a randomized controlled trial to compare the effect of UCM and DCC on placenta-fetal blood transfusion in preterm neonates before 33 weeks period of gestation (POG). Women at risk for singleton preterm deliveries were recruited in the study and all of them delivered before 33 completed weeks of gestation. It was a single centre trial in which women were randomized into either UCM (4 times) or DCC (>30 seconds). Out of 58 neonates included in the trial, 27 were allocated to UCM group and remaining 31 were allocated to DCC group. Mean birth weight was 1,235±468 g in the UCM group and 1,263±428 g in the DCC group, with mean gestational age of 29.5±2.7 weeks and 29.2±2.3 weeks, respectively. Mean hemoglobin concentration value at 1 hour of life for UCM group was 17.5 g/L and for DCC group was 17.3 g/L (p value = 0.71). There was no significant difference in number of neonates requiring blood transfusion (UCM group, 17; DCC group, 15; P=.40) or the median number of transfusions required within the first 42 days of life (median [range]: UCM group 0 [0–20]; DCC group 0 [0–7]; P=.76). They concluded that milking the cord four times or DCC for at least 30 seconds achieved a similar amount of placenta-fetal blood transfusion.

In 2012, Erickson *et al*<sup>(41)</sup> did a study to compare the effect of Umbilical cord miking and immediate cord clamping on hematocrit levels at 36 to 48 hours of life in term infants delivered by caesarean section. It was a randomized controlled trial in which 24 women scheduled for elective caesarean section were included and randomized to either ICC (<10 seconds) or UCM (5 times by obstetrician) at birth. Placental residual blood volume (13.2±5.6 vs 19.2±5.4 ml kg<sup>-1</sup>, *P*=0.01) was smaller and hematocrit levels at 36 to 48 hours of life (57.5±6.6 vs 50.0±6.4 %, *P*=0.01) were higher in UCM group. Five infants (42%) in the ICC group had hematocrit of  $\leq$ 47%, indicative of anemia.

In 2013, Upadhyay et  $al^{(2)}$  did a study to compare the effect of UCM and ECC on hematological parameters at six weeks of life in term and near-term neonates. It was a randomized controlled trial. The eligible neonates (>35 weeks gestation) were randomized into control and intervention groups of 100 each. Early cord clamping (within 30 seconds) was done in both the groups. In the control group, cord was clamped near (2-3cm) the umbilicus and no milking was done, whereas in the intervention group milking was performed after cutting and clamping the cord at 25cm from the umbilicus. Both the groups received similar routine care thereafter. For statistical analysis, unpaired student t test and fisher exact test was used. Baseline characteristics were comparable in both the groups. Mean hemoglobin concentration (Hb) (11.9 [1.5] g/dL) and mean serum ferritin (355.9 [182.6]  $\mu$ g/L) were significantly higher in the intervention group as compared with the control group (10.8 [0.9] g/dL) and (177.5 [135.8] µg/L), respectively, at 6 weeks of life. Also, the hematocrit and mean hemoglobin at 12 hours and 48 hours of life was significantly higher in the intervention group with p value = 0.0001. The mean blood pressure of the neonate at 30 minutes, 12 hours, and 48 hours of life was significantly higher but within the normal range in intervention group. There was no significant difference observed in the respiratory rate, heart rate, polycythemia, serum bilirubin, and the need for phototherapy in the two groups. They concluded that UCM is a safe procedure and it improved hematological parameters at six weeks of life in term and near-term neonates.

**In 2013, March** *et al*<sup>(42)</sup> did a randomized controlled study to determine the need for neonatal red blood cell transfusion in extremely preterm neonates in UCM as compared to ICC. Women expected to deliver between 24 to 28 completed weeks in tertiary care centre were randomized into UCM before clamping or ICC. Total 113 women were enrolled in the study and randomized, out of which 56 were allocated to UCM group with 36 remaining eligible

and completing the study and 57 were allocated to the ICC group with 39 remaining eligible and completing the study. Neonates in the UCM group were less likely to receive blood transfusion as compared to the ICC group, though it was not statistically significant (Relative risk: 0.86; 95% CI: 0.73 to 1.0). Neonates in UCM were less likely to develop intraventricular hemorrhage (p=0.0195) and had higher hematocrits at birth (p=0.004). They concluded that UCM of a preterm neonate is an easy intervention with the potential to improve perinatal outcomes.

In 2013, McDonald et al<sup>(8)</sup> did Cochrane review of the randomized controlled trials comparing ECC and DCC. Policies for timing of cord clamping varied, with ECC carried out in the first 60 seconds after birth, whereas DCC usually involved clamping the UC more than one minute after the birth or when cord pulsation ceased. 15 trials involving a total of 3911 women and neonate pairs were included in the study. They determined the effects of ECC and DCC on maternal and neonatal outcomes. There were no significant differences in the maternal outcomes between the two groups. There was no significant difference in the primary outcome of neonatal mortality [Relative Risk 0.37, 95% CI 0.04 to 3.41, two trials, 381 infants with a late clamping event rate (LCER) of ~1%] in the two groups. Need for phototherapy was less in ECC group as compared to DCC (Relative Risk 0.62, 95% CI 0.41 to 0.96, data from seven trials, 2324 infants with a LCER of 4.36%,  $I^2 0\%$ ). Hemoglobin concentration in neonates at 24 to 48 hours was significantly lower in the ECC group (Mean difference -1.49 g/dL, 95% CI -1.78 to -1.21; 884 infants, I<sup>2</sup> 59%). Neonates in the ECC group were twice as likely to be iron deficient at 3 to 6 months as compared to neonates in DCC group (Relative risk- 2.65, 95% CI- 1.04 to 6.73, five trials, 1152 infants,  $I^2$  82%). Mean birthweight was higher in DCC group as compared to ECC group (101 g increase 95% CI 45 to 157, random-effects model, 12 trials, 3139 infants, I<sup>2</sup> 62%). There were no significant differences in other neonatal morbidity outcomes like Apgar score less than seven at five minutes or admission to Neonatal Intensive Care Unit (NICU). They concluded that DCC increased early hemoglobin concentrations and iron stores in term neonates, hence it is beneficial if treatment for jaundice requiring phototherapy is available.

In 2015, Wassia *et al*<sup>(30)</sup> performed a systemic review and meta-analysis to look for efficacy and safety of UCM in full term and preterm neonates. 7 randomized controlled trials involving 501 neonates, which compared the UCM with other methods of umbilical cord management in full term and preterm neonates were included in the study. Neonates of less

than 33 weeks POG allocated to UCM showed no difference in the risk for mortality (risk ratio, 0.75 [95% CI, 0.35 to 1.64]; risk difference, -0.02 [95% CI, -0.09 to 0.04]), hypotension requiring volume expanders (risk ratio, 0.71 [95% CI, 0.41 to 1.25]; risk difference, -0.09 [95% CI, -0.22 to 0.05]), or inotrope support (risk ratio, 0.77 [95% CI, 0.51 to 1.17]; risk difference, -0.10 [95% CI, -0.25 to 0.05]) as compared to the control group. UCM group showed higher initial levels of hemoglobin (mean difference, 2.0 [95% CI, 1.3-2.7] g/dL) and hematocrit (mean difference, 4.5% [95% CI, 1.5%-7.4%]). Reduced oxygen requirement at 36 weeks (risk ratio, 0.42 [95% CI, 0.21 to 0.83]; risk difference, -0.14 [95% CI, -0.25 to -0.04]) and reduced risk for intraventricular hemorrhage of all grades (risk ratio, 0.62 [95% CI, 0.41 to 0.93]; risk difference, -0.12 [95% CI, -0.22 to -0.02]) was identified in the UCM group. Among infants with POG of more than 33 weeks, UCM was associated with higher hemoglobin levels in the first 48 hours of life in 224 neonates (mean difference, 1.2 [95% CI, 0.8-1.5] g/dL) and at 6 weeks of life in 170 neonates (mean difference, 1.1 [95% CI, 0.7-1.5] g/dL). They concluded that UCM was associated with some benefits and no adverse effects in the immediate postnatal period in preterm neonates at POG <33 weeks.

In 2015, Katheria *et al*<sup>(31)</sup> did a randomized controlled trial on neonates <32 weeks POG born by caesarean section to determine the effect of DCC and UCM on systemic blood flow to the neonates. It was a two-centre trial. Neonates delivered caesarean section were randomly assigned to UCM (4 strippings) or DCC (45-60 seconds) group. Neonates delivered by vaginal delivery were also assigned separately. Total 197 neonates of mean POG 28  $\pm$  2 weeks were enrolled in the study. Out of which 154 neonates were delivered by caesarean section and rest 43 neonates by vaginal delivery. Neonates in the UCM group delivered by caesarean section (n=75) were observed to have higher superior vena cava flow and right ventricular output in first 12 hours of life as compared to DCC group. Neonates in UCM group also had higher delivery room temperature, hemoglobin, blood pressure over the first 15 hours, and urine output in the first 24 hours of life. No significant difference was found in neonates delivered by vaginal delivery. Hence, they concluded that UCM could be an efficient technique to improve blood volume in premature infants especially delivered by caesarean section.

In 2015, Jaiswal *et al*<sup>(43,44)</sup> did a study to compare the effect of UCM on hematological parameters (serum ferritin and hemoglobin) at 6 weeks of life in term neonates as compared to DCC. It was a randomized controlled trial conducted during 2012 to 2013 in a teaching</sup>

hospital in India. Total 200 neonates of more than 36 weeks POG were enrolled in the study and randomized to DCC (60 to 90 seconds) and UCM group (done on 25cm cord length). Baseline characteristics were comparable in both the groups. Mean hemoglobin (11.0 gm/dl [2.4]) and mean serum ferritin (134.0 ng/ml [89.8]) in UCM group was comparable to mean hemoglobin (11.3 gm/dl [2.6]) and mean serum ferritin (142.7 ng/ml [87.1]) in DCC group at 6 weeks of life. There was no difference in cranial Doppler indices, hemodynamic status, and adverse neonatal outcomes among the two groups. They concluded that both UCM and DCC had similar effects on hematological parameters at 6 weeks of life in term neonates.

**In 2015, Kilcdag H** *et al*<sup>(34)</sup> did a randomized controlled study to investigate the effect of UCM on the absolute neutrophil counts (ANCs) and the neutropenia frequency of preterm neonates. 58 pregnant women were randomly assigned to one of the UCM and control groups. A total of 54 preterm neonates (gestational age less than or equal to 32 weeks) were enrolled into the study. UCM was performed in 29 neonates before clamping whereas in remaining 25 neonates, UC was clamped immediately after birth. They found that ANCs were statistically significantly lower in the UCM group as compared to the control group on days 1, 3 and 7 of life. The frequency of neutropenia was also higher in the UCM group. They concluded that UCM plays a role on the ANCs of preterm neonates.

**In 2017, El-kotb AM** *et al*<sup>(45)</sup> did a study to compare the short-term benefits and risks of DCC and UCM in full term neonate delivered by elective caesarean section. It was a randomized controlled trial done in Ain Shams Maternity teaching hospital, Egypt. A total of 300 patients were enrolled in the study and were randomized into two groups of 150 each. Group 1 was UCM group, in which clamps were applied after milking the UC 5 times towards the neonate and Group 2 was DCC group, in which clamps were applied after 2 minutes of birth of the neonate. On comparing the two groups, mean hemoglobin was 9.95  $\pm$  0.88 mg/dl in group 1 and 9.86  $\pm$  0.71 mg/dl in group 2 with a p value of 0.338 which not significant. In UCM group, 12 neonates were admitted to NICU for jaundice which represents (10.7%) with a p value 0.427 which was not significant. They concluded that both DCC and UCM have similar benefits in improving the hematological parameters at 6 weeks of life without producing any significant adverse effects on neonatal outcomes in initial 6 weeks of life. DCC has been formulated as standard of care in all deliveries by American Academy of Paediatrics, UCM can be recommended in all deliveries in which DCC is not

feasible or not practiced for any reason. UCM can be done in cases where neonate requires resuscitation.

In 2017, McAdams *et al*<sup>(29)</sup> did a study to determine placental transfusion blood volumes with intact UCM and cut UCM in term neonates. Total 60 women at  $\geq$ 37 weeks gestation were enrolled in the study. For I-UCM, the cord was milked 3-4 times while attached to the placental circulation. For C-UCM, a 10, 20, or 30 cm cord segment was cut separately and milked four times. Mean blood volume was increased with I-UCM (x4) as compared to 30 cm C-UCM technique (48.5 ± 19.0 vs. 24.8 ± 4.0 mL, P < 0.001). For C-UCM, blood volume increased proportionally to cord length and, by the second milking, 98.1 ± 4.5% of blood volume was delivered. They concluded that I-UCM provides a greater blood volume than C-UCM. With C-UCM, milking the cord more than twice has no additional advantage.

In 2018, Alzaree *et al*<sup>(46)</sup> did a study to compare the effect of UCM and DCC on hemoglobin at 6 weeks of life among term neonates. It was a randomized controlled study in which participants were allocated into two groups of 125 each. This study was conducted at El-Galaa Teaching Hospital, labour suite, Cairo, Egypt. 250 pregnant women starting from  $\geq$  37 weeks POG were included in the study. They found that UCM was associated with higher hemoglobin levels at 6 weeks of life as compared to DCC and was statistically significant but clinically there was no difference between the two groups (10.4 ± 0.5 and 10.6 ± 0.5 respectively, P < 0.001). They also found positive correlation between hemoglobin of the mother and the newborn during the first day and after 6 weeks with r = 0.349 and 0.283 respectively and a P value < 0.001. Also, there was a positive correlation between the hemoglobin of the foetus after the first day and foetus at 6 weeks with r = 0.534 and a P value < 0.001. For other outcomes like positive pressure ventilation, APGAR score, poor neonatal outcomes such as respiratory distress syndrome there were no significant differences between the two groups. They concluded that UCM can be recommended in term babies when DCC is not available.

In 2018, Mohan *et al*<sup>(35)</sup> did a randomized controlled trial to evaluate the effect of UCM on short term morbidity and hematologic parameters at 6 weeks of life in preterm neonates requiring resuscitation. 60 preterm neonates requiring resuscitation were allocated into two groups: UCM group and no milking group. Neonates in UCM group had higher hemoglobin (10.07 g/dl vs 8.9 g/dl; p 0.003) and higher serum ferritin level (244.8ng/ml vs 148.5ng/ml; p 0.04) as compared to no milking group. They concluded that UCM can be used to increase

placental transfusion in preterm neonates requiring resuscitation with no significant side effects.

**In 2018, Nagano** *et al*<sup>(47)</sup> did a systemic review and meta- analysis to compare the short- and long-term effects of DCC and UCM on neonates born at less than 37 weeks of POG. They included two trials (255 preterm neonates, 23 0/7 to 32 6/7 weeks of gestation) in the analysis. It was seen that UCM was associated with fewer intraventricular hemorrhages (IVHs) (two trials, 255 preterm neonates; relative risk 0.45, 95% confidence interval [CI] 0.20 to 0.98, low quality of evidence) and also an increased proportion of infants with a Bayley score at 2 years of age (two trials, 174 infants; Cognitive: relative risk 1.14, 95% CI 1.03 to 1.26, Language: relative risk 1.24, 95% CI 1.03 to 1.49, low quality of evidence) as compared to DCC. They concluded that UCM did not reduce mortality or need for transfusion when compared to DCC but lowered the risk of IVH and improved certain neurodevelopmental outcomes.

In 2019, Samantha et al<sup>(38)</sup> did a study to compare the effect of UCM versus DCC on initial hematocrit concentration in preterm neonates, incidence of intraventricular hemorrhage, necrotizing enterocolitis and need for blood transfusion. The study was an unblinded randomized controlled trial of singleton preterm neonates between 23 to 34 weeks 6 days POG assigned randomly into two groups: DCC (>60 seconds) and UCM (4 times). Out of total 204 patients, 104 were allocated to DCC group and 100 to UCM group. No significant difference was found in baseline maternal characteristics between the two groups. The initial hematocrit concentration was higher in UCM group as compared to DCC group, but it was not significant (51.8 [6.2%] vs 49.9 [7.7%]; P=.07]. The incidence of blood transfusion (15.5% vs 9.1%; P=.24), necrotizing enterocolitis (5.8% vs 3.0%; P=.49), and intraventricular hemorrhage (15.5% vs 10.1%; P=.35) was lower in UCM group but was not statistically significant. Need for phototherapy and peak serum bilirubin levels were comparable between the two groups. They demonstrated that UCM could be an acceptable alternative to DCC because of the similar effects on hematological parameters and need for neonatal transfusions. Also, there was no increased risk of complications or neonatal morbidity observed in UCM group. So, UCM can offer an efficient and timely method of providing increased blood volume to the neonate.

**In 2019, Lago Leal V** *et al*<sup>(48)</sup> assessed the effects of UCM and ECC in neonates born before 37 weeks of gestation. Total 138 neonates at 24 to 36 weeks 6 days POG were included in the

study and was allocated to UCM and ECC groups randomly. Initial hematocrit concentration was significantly higher by 5.36% (p value < 0.05) and initial hemoglobin by 1.675 g/dl (p value < 0.05) in UCM group but there was no difference in the need for blood transfusion in neonate during first 30 days after delivery (relative risk 0.8; 95% CI 0.22–2.85). However, need for phototherapy was also higher in UCM group as compared to ECC group (relative risk 1.62; 95% CI 1.1–2.38). There was no significant difference in platelet transfusion, need for oral iron supplementation, patent ductus arteriosus, intraventricular hemorrhage, respiratory distress syndrome, periventricular leukomalacia, necrotizing enterocolitis, use of surfactant, meconium aspiration syndrome, days of oxygen supplementation, need for vasopressors, length of NICU stay or postpartum hemorrhage. It was concluded that UCM did not reduce the need for phototherapy and red blood cell transfusions in preterm neonates.

In 2019, Balasubramanian *et al*<sup>(7)</sup> conducted a systemic review and meta-analysis of safety and efficacy of UCM in preterm neonates. All the RCT's that compared UCM with DCC/ICC in preterm infants were identified by searching databases, clinical trial registries and reference list of relevant studies in November 2019. Mortality and morbidities in preterm neonates were the main outcome measures. A total of 19 studies including 2014 preterm neonates were included. Among 19 studies, 14 studies (n=1092) compared UCM with ICC, whereas five studies (n=922) compared UCM with DCC. UCM reduced the need for blood transfusion as compared to ICC (risk ratio: 0.56 (95% CI 0.43 to 0.73), p<0.001). When compared to DCC, UCM significantly increased the risk of intraventricular hemorrhage (grade III or more) (risk ratio:1.95 (95% CI 1.01 to 3.76), p=0.05). Information on long-term neurodevelopmental outcomes was limited. Hence, they concluded that UCM cannot be considered as placental transfusion strategy in preterm infants based on the currently available evidence.

In 2019, Zanardo *et al*<sup>(36)</sup> did a study to evaluate the effect of intact UCM and ICC in enhancing placental transfusion after elective caesarean delivery. Volume of placental transfusion was assessed by change in hematocrit value between neonatal cord blood sample and capillary heel blood sample at 48 hours of life, corrected for the change in body weight. It was a randomized controlled trial conducted between 1 October 2018 and 31 January 2019. Total 167 women were enrolled in the study. There were no significant differences in cord blood mean hematocrit (Hct) values at birth (UCM, 44.5  $\pm$  4.8 vs. ICC, 44.9  $\pm$  4.2%, p <sup>1</sup>/<sub>4</sub> 0.74) in the two groups. UCM group had higher capillary heel hematocrit values at 48 hours

of life (UCM,  $53.7 \pm 5.9$  vs. ICC,  $49.8 \pm 4.6\%$ , p < 0.001) which was statistically significant. Hence, UCM group had higher placental transfusion volume ( $\Delta$  Hct, UCM 9.2 ± 5.2 vs. ICC  $4.8 \pm 4.7$ , p < 0.001), despite comparable neonatal body weight decrease (UCM, -7.3 vs. ICC, -6.8%, p = 0.77). They concluded that intact UCM was an efficacious and safe procedure among neonates born via elective caesarean delivery to enhance placental transfusion.

In 2020, Mangla *et al*<sup>(49)</sup> did a randomized controlled trial to study the effect of intact UCM and DCC on hematocrit concentration at 48 ( $\pm$ 6) hours of life in term and late preterm neonates. All term and late preterm neonates of more than 35 weeks POG delivered by either normal delivery or caesarean section were included in the study. They were randomly assigned into either UCM (four times; n=72) or DCC group (more than 60 seconds; n=72). The mean (Standard Deviation) hematocrit at 48 ( $\pm$ 6) hours in the UCM group was higher as compared to DCC group [57.7 (4.3) *vs*. 55.9 (4.4); *P*=0.002]. Venous hematocrit at 6 ( $\pm$ 1) weeks was higher in UCM group as compared to DCC group [mean (Standard Deviation), 37.7 (4.3) *vs*. 36 (3.4); mean difference 1.75 (95% CI 0.53 to 2.9); *P*=0.005]. Other parameters like incidence of polycythemia requiring partial exchange transfusion, incidence of hyperbilirubinemia requiring phototherapy, and serum ferritin levels at 6 ( $\pm$ 1) weeks of age were similar in the two groups. They concluded that venous hematocrit at 48 ( $\pm$ 6) hours in late preterm and term neonates is higher in UCM group when compared to DCC.

In 2020, Josephsen *et al*<sup>(37)</sup> did a single centre randomized controlled trial to assess potential benefits of UCM in extremely preterm infants when compared to ICC. 56 Neonates from 24 0/7 to 27 6/7 weeks' gestation were enrolled in the study. In UCM group, 18 cm of the UC was milked three times. Baseline characteristics were similar in both the groups with a mean gestational age of  $26.1 \pm 1.2$  weeks and a mean birth weight of  $815 \pm 204$  g. There were no differences in the mean initial hemoglobin in the ICC group when compared with the UCM group,  $13.8 \pm 2.6$  g/dL and  $13.7 \pm 2.0$ , respectively (p = 0.95). Also, there was no difference in median number of blood transfusions after birth between the ICC group and the UCM group, 2 (interquartile range [IQR]: 1–4) versus 2.5 (IQR: 1–5) (p = 0.40). There was no differences in the rate of severe IVH in two groups. There were no differences in neurodevelopmental outcomes at 15 to 18 months corrected gestational age. They concluded that there was no significant difference between UCM and ICC in extremely preterm infants.

In 2020, Fuwa *et al*<sup>(50)</sup> did a systemic review and meta-analysis to compare the effects of DCC and UCM on term neonates. They included three trials (650 term neonates). It was seen that UCM was associated with higher hemoglobin levels at 6 weeks of life [neonates, 621; mean difference, 0.17; 95% confidence interval, 0.05–0.29] as compared to DCC. There were no statistical differences in hemoglobin levels at birth, serum bilirubin levels at 48 hours of life, or hematocrit levels at 48 hours of life. They concluded that UCM is as beneficial as DCC in term neonates.



# **MATERIAL AND METHODS**

#### **Ethical Consideration:**

Prior to the commencement of data collection, the study protocol was reviewed and approved by Institutional Ethics Committee (AIIMS/IEC/2020/2070).

The study is also registered at Clinical Trial Registry of India (CTRI/2020/02/023364).

**Study Setting**: Study was conducted in the Department of Obstetrics and Gynecology and Department of Neonatology, AIIMS Jodhpur.

Study design: Randomized controlled trial.

Study population: Neonates born at 34 completed weeks or more.

Study Period: This study was conducted from March 2020 to August 2021

#### **INCLUSION CRITERIA:**

All singleton infants of more than or equal to 34 weeks of completed gestation, delivered either by caesarean section or by vaginal delivery at AIIMS, Jodhpur.

#### **EXCLUSION CRITERIA:**

- Short umbilical cord length (25 cm),
- Limp at birth,
- Non-vigorous babies
- Delivery by caesarean section for fetal compromise,
- Twin pregnancy or higher order gestation
- Instrumental deliveries,
- Delivery to Rh-negative mothers,
- Major congenital anomalies,
- Cord prolapse,
- Hydrops fetalis,
- Placenta previa,
- Placental abruption,

- Cord abnormalities such as true knots.
- Fetal growth restriction.

# RANDOMIZATION

All subjects fulfilling the above-mentioned criteria and parents willing to participate were approached for enrolment into the study. Parents were counselled and informed written consent was taken. For randomization, we used computer generated random numbers in the blocks of 10. Computer generated random sequences were generated by online software (https://www.sealedenvelope.com/simple-randomiser/v1/lists) by an individual not involved in enrolment, treatment and follow up of the study. The numbers were written on small slips and placed in serially numbered opaque sealed envelopes. Randomization was stratified based on mode of delivery- Vaginal delivery vs caesarean section. The envelopes for vaginal delivery were kept in the labour room whereas the envelopes for caesarean section were kept in operation theatre.

Immediately after delivery of the baby, the baby was kept on mother's abdomen in both vaginal delivery as well as in caesarean section. If the baby was vigorous and the length of umbilical cord was more than 25cm, then envelopes were opened by the attending nurse who was not involved in the enrolment, treatment and follow up of the study. According to the code written in the envelope, patients were randomized to either of the following groups:

Group 1- Umbilical cord milking (Intervention Group)

Group 2- Delayed cord clamping (Control Group)

#### **Group 1- Umbilical cord milking (Intervention Group)**

This group included manual milking or stripping of approximately 20 cm of umbilical cord from the placental end to the infant's umbilicus 4 times by holding the UC in between the thumb and the fingers at the speed of 10cm/sec. Around 1-2 seconds of time was allowed for refill of the UC in between each milking maneuver. After milking the UC four times, early cord clamping (ECC) was done, and the UC was cut. This whole process of UCM took nearly 20-25 seconds from the delivery of the baby. After cutting the UC, the baby was kept under the radiant warmer in the Newborn Care Corner (NCC) of our labour room or operation theatre unless they required admission to NICU for standard indications.



Figure 1: Umbilical Cord Milking

# Group 2- Delayed cord clamping (Control Group)

This group included clamping the UC using the clamps after a time lapse of at least 60 seconds or till the cord pulsations ceased. Then the UC was cut, and the baby received routine care similar to the intervention group.

The time to clamping and milking the umbilical cord was measured by wall mounted quartz clocks.

According to our protocol, we used intramuscular oxytocin routinely after vaginal delivery and intravenous oxytocin in caesarean section.

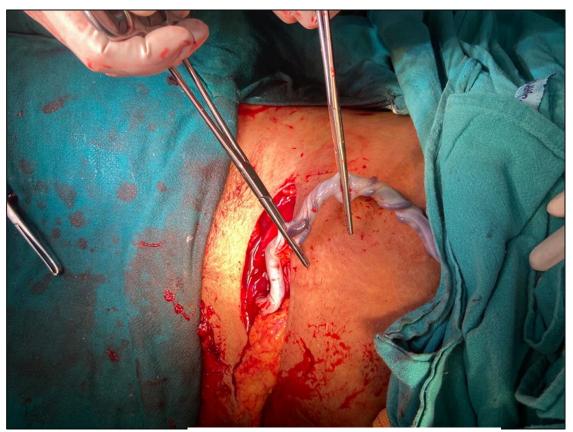


Figure 2: Delayed Cord Clamping



Figure 3: Radiant Warmer In Newborn Care Corner In Our Labour Room

After the umbilical cord was cut, around 2 ml of cord blood was obtained in EDTA vial and sent for the evaluation of the hematocrit to hematology lab. Another sample for hematocrit was obtained at 30 +/- 6 hours of life by the neonatologist. Hematocrit was evaluated using Mindray BC-6200 Automatic Hematology Analyzer.

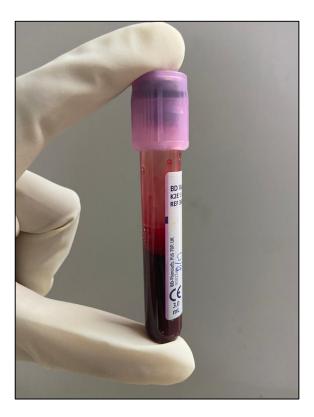


Figure 4: Around 2ml Blood Collected in EDTA Vial



Figure 5: Mindray BC-6200 Automatic Hematology Analyzer

The newborn was evaluated for the development of jaundice and the need for phototherapy. The newborn requiring phototherapy was kept under phototherapy machine emitting light in blue-green spectrum at a wavelength of 460 nm.

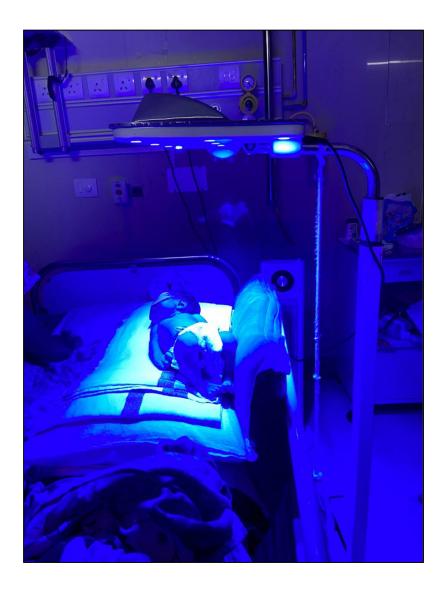


Figure 6: Newborn Receiving Phototherapy

#### SAMPLE SIZE CALCULATION

Sample size calculation was based on previous study by Katheria et al [3]. In the study by Katheria et al, mean birth hemoglobin in delayed cord clamping group was  $15.6 \pm 2.2g\%$  and in umbilical cord milking group was  $16.3 \pm 2.4g\%$ . Based on difference in mean birth hemoglobin in two groups, with alpha error of 5%, power of study set as 80% and assuming an attrition rate of 10%, a total of 374 pregnant women were included in the study, with 187 in each group.

$$N = 2 \times \left(\frac{z_{1-\frac{\alpha}{2}} + z_{1-\beta}}{\delta_0}\right)^2 \times p \times (1-p)$$

#### STATISTICAL ANALYSIS

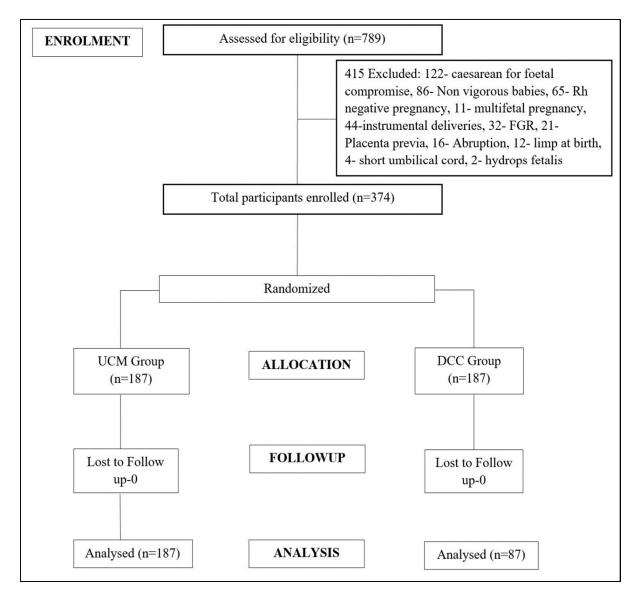
Data was entered in Microsoft Excel Sheet. All the analysis was performed by using Statistical package for social sciences (SPSS) software 21. Bell shaped curve and One-sample Kolmogorov- Smirnov test was used to check normal distribution of continuous data. Student *t* test was used to analyze normally distributed and Mann Whitney U test was used for non-normally distributed data. For categorical variables, chi-square test was used at a two-sided significant level of 0.05 for testing the differences between two groups.



# **RESULTS**

During the study period from March 2020 to August 2021, 789 pregnant women were assessed for enrolment out of which a total of 374 cases were enrolled in the study who met the inclusion criteria. They were randomized into UCM group and DCC group. In UCM group, 119 underwent vaginal delivery and 68 underwent caesarean section. In DCC group, 117 underwent vaginal delivery and 70 underwent caesarean section. No patien was lost to follow up for primary outcome analysis and secondary outcome analysis till 72 hrs. However, evaluation of hemoglobin and ferritin at 14 weeks could not be done due to prevailing COVID-19 pandemic. Total 187 participants were analysed in each group.

Flow chart of the study participants is as follows:



#### Figure 7: CONSORT FLOW CHART

|   | UCM group<br>(n=187)        | DCC group<br>(n=187)        | P value |
|---|-----------------------------|-----------------------------|---------|
| Age (years) <sup>^</sup>                                      | $26.7 \pm 4.6$              | $26.6 \pm 4.2$              | 0.69    |
| Body Mass Index<br>(kg/m2) <sup>^</sup>                       | $26.2 \pm 3.2$              | 26.1 ± 2.9                  | 0.80    |
| Area of Residence <sup>#</sup><br>Rural<br>Urban              | 48 (25.67%)<br>139 (74.33%) | 37 (19.79%)<br>150 (80.21%) | 0.17    |
| Period of Gestation<br>(weeks) <sup>^</sup>                   | 38.7 ± 1.3                  | 38.7 ± 1.2                  | 0.53    |
| Intake of iron<br>supplements <sup>#</sup>                    | 177 (94.65%)                | 175 (93.58%)                | 0.60    |
| Anemia<br>(Hemoglobin<br><11g%) <sup>#</sup>                  | 62 (33.16%)                 | 71 (37.97%)                 | 0.47    |
| Mode of delivery <sup>#</sup><br>Vaginal<br>Caesarean section | 119 (63.64%)<br>68 (36.36%) | 117 (62.57%)<br>70 (37.43%) | 0.83    |

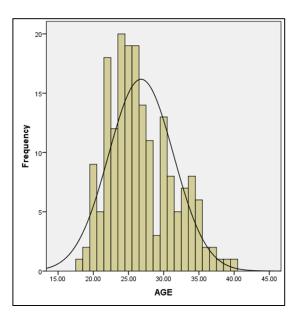
# **Table 1: Baseline Maternal Characteristics**

DCC-Delayed cord clamping; UCM-Umbilical cord milking ^Data is in Mean ± Standard Deviation #Data is in n (%)

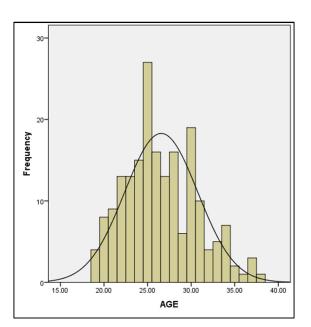
# **BASELINE MATERNAL CHARACTERISTICS:**

#### **1.** Age:

Age distribution in UCM and DCC groups are shown in Figure 8 and 9 respectively. The bell-shaped curves in Figures 8 and 9 denote that age was normally distributed in both groups.



**Figure 8: Age Distribution In UCM Group** 



**Figure 9: Age Distribution In DCC Group** 

| Age group (years)            | UCM group (n=187) | DCC group (n=187) | P value |
|------------------------------|-------------------|-------------------|---------|
| Mean ± Standard<br>Deviation | $26.7 \pm 4.6$    | $26.6 \pm 4.2$    | 0.69    |

#### **Table 2: Comparison Of Age In Both Groups**

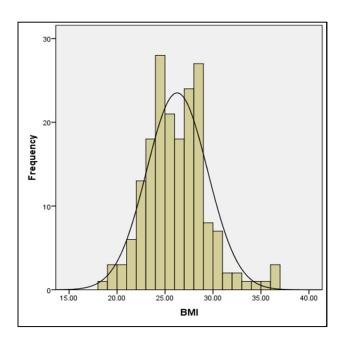
DCC-Delayed cord clamping; UCM-Umbilical cord milking

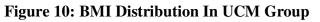
Table 2 shows that Mean age was 26.7 years with standard deviation of 4.6 in UCM group, and Mean age was 26.6 years with standard deviation of 4.2 in DCC group.

Age in both groups was compared by Unpaired t test. P value was 0.69 which was > 0.05, thus both groups are comparable in terms of age.

## 2. Body Mass Index (BMI):

The distribution of BMI in UCM and DCC group is given in Figure 10 and 11 respectively. The bell-shaped curves in Figures 10 and 11 denote that BMI was normally distributed in both study groups.





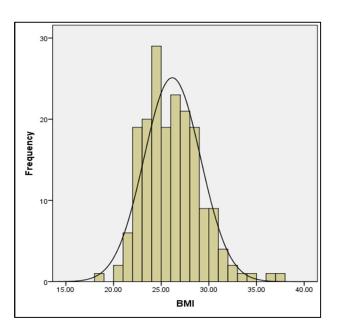


Figure 11: BMI Distribution In DCC Group

| Body Mass Index              | UCM group      | DCC group  | P value |
|------------------------------|----------------|------------|---------|
| (BMI) kg/m <sup>2</sup>      | (n=187)        | (n=187)    |         |
| Mean ± Standard<br>Deviation | $26.2 \pm 3.2$ | 26.1 ± 2.9 | 0.80    |

#### **Table 3: Comparison Of BMI In Both Groups**

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 3 shows that mean BMI in UCM group was  $26.2 \pm 3.2 \text{ kg/m}^2$  and in DCC group was  $26.1 \pm 2.9 \text{ kg/m}^2$ . Figure 12 shows that normal BMI was seen in 13.37% pregnant women in UCM group and 14.97% pregnant women in DCC group, whereas obesity was present in 61.5% pregnant women in UCM group and 58.82% in DCC group respectively.

Both the groups are comparable with respect to BMI with p value 0.80.

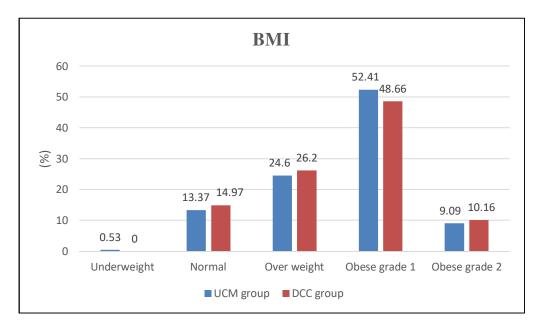


Figure 12: Comparison Of BMI In Both Groups

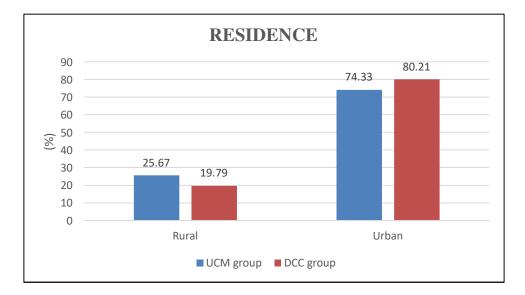
#### 3. Area of Residence:

Table 4 and Figure 13 shows that in DCC group, 19.79% (37) pregnant women belonged to rural area and 80.21% (150) pregnant women belonged to urban area. In UCM group, 25.67% (48) pregnant women belonged to rural area and 74.33% (139) pregnant women belonged to urban area. Hence, in both the groups majority population lived in urban areas of Rajasthan.

 Table 4: Comparison Of Residential Status In Both Groups

|       | UCM group (n=187) | DCC group (n=187) | P value |
|-------|-------------------|-------------------|---------|
| Rural | 48 (25.67%)       | 37 (19.79%)       | 0.17    |
| Urban | 139 (74.33%)      | 150 (80.21%)      | 0.17    |

DCC-Delayed cord clamping; UCM-Umbilical cord milking



## Figure 13: Comparison Of Residential Status In Both Groups

Both the groups were comparable to each other with respect to residence with p value 0.17.

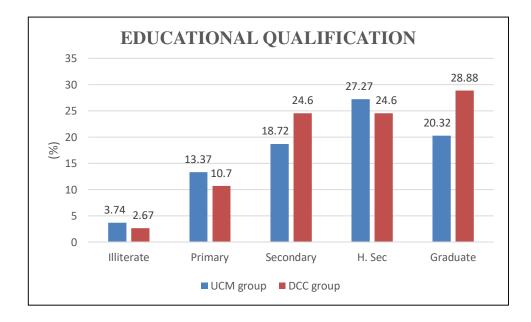
#### 4. Educational Qualification:

Table 5 and Figure 14 shows that in UCM group most of the pregnant women were high school pass outs (27.27%), 20.32% were graduates and 18.72% were educated till middle school level. In DCC group, most of the pregnant women were graduates (28.88%), 24.6% were educated till high school and middle school level.

|                | UCM group (n=187) | DCC group (n=187) | P value |
|----------------|-------------------|-------------------|---------|
| Illiterate     | 7 (3.74%)         | 5 (2.67%)         |         |
| Primary School | 25 (13.37%)       | 20 (10.7%)        |         |
| Middle School  | 35 (18.72%)       | 46 (24.6%)        | 0.07    |
| High School    | 51 (27.27%)       | 46 (24.6%)        |         |
| Graduate       | 38 (20.32%)       | 54 (28.88%)       |         |

 Table 5: Comparison Of Educational Qualification In Both Groups

DCC-Delayed cord clamping; UCM-Umbilical cord milking



## Figure 14: Comparison Of Educational Qualification In Both Groups

Both the groups were comparable to each other with respect to educational qualification with p value 0.07.

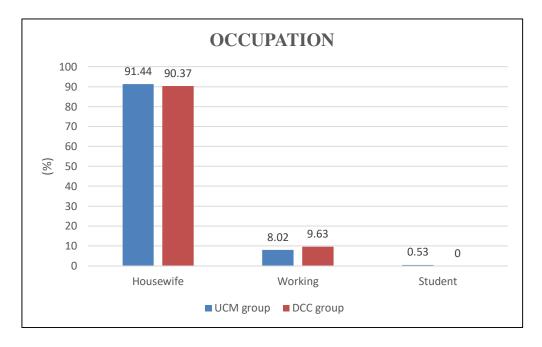
# 5. Occupation:

Table 6 and Figure 15 shows that in DCC group 90.37% of pregnant women and in UCM group 91.44% pregnant women were homemakers. Hence, majority of pregnant women in both groups were homemakers. Both groups were comparable to each other with p value of 0.52.

|           | UCM group (n=187) | DCC group (n=187) | P value |
|-----------|-------------------|-------------------|---------|
| Homemaker | 171 (91.44%)      | 169 (90.37%)      |         |
| Working   | 15 (8.02%)        | 18 (9.63%)        | 0.52    |
| Student   | 1 (0.53%)         | 0 (0%)            |         |

 Table 6: Comparison Of Occupation In Both Groups

DCC-Delayed cord clamping; UCM-Umbilical cord milking



**Figure 15: Comparison Of Occupation In Both Groups** 

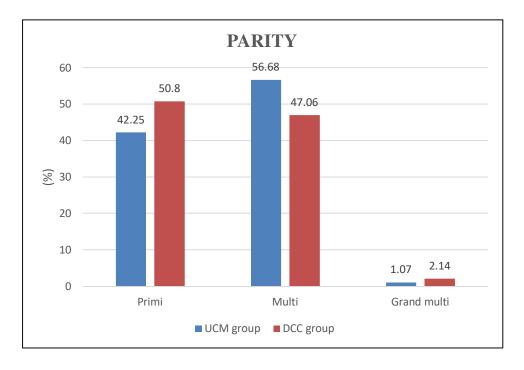
# 6. Parity of patients:

Table 7 and figure 16 shows that in DCC group majority of pregnant women were primigravida 50.8%, In UCM group majority of pregnant women were multigravida 54.9%. Both the groups were comparable to each other as p value was 0.15.

|             | UCM group (n=187) | DCC group (n=187) | P value |
|-------------|-------------------|-------------------|---------|
| Primi       | 79 (42.25%)       | 95 (50.8%)        |         |
| Multi       | 106 (56.68%)      | 88 (47.06%)       | 0.15    |
| Grand multi | 2 (1.07%)         | 4 (2.14%)         |         |

 Table 7: Comparison Of Parity In Both Groups

DCC-Delayed cord clamping; UCM-Umbilical cord milking



## Figure 16: Comparison Of Parity In Both Groups

## 7. Period of Gestation (POG):

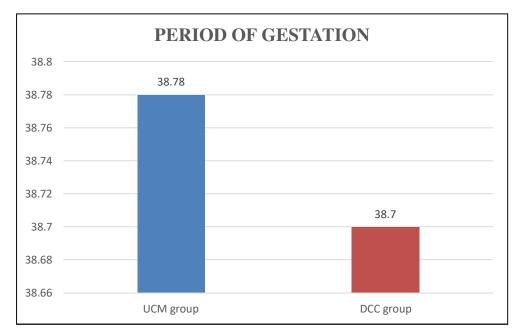
Table 8 and Figure 17 shows that Mean POG was 38.7 with standard deviation of  $\pm$  1.3 in UCM group, and Mean POG was 38.7 with standard deviation of  $\pm$  1.2 in DCC group.

| Period of Gestation          | UCM group (n=187) | DCC group (n=187) | P value |
|------------------------------|-------------------|-------------------|---------|
| Mean ± Standard<br>Deviation | $38.7 \pm 1.3$    | $38.7 \pm 1.2$    | 0.53    |

## **Table 8: Comparison Of POG In Both Groups**

DCC-Delayed cord clamping; UCM-Umbilical cord milking

On applying unpaired student t test, both the groups were comparable to each other with p value of 0.53 which was non-significant.



# Figure 17: Comparison Of POG In Both Groups

#### 8. Intake of Iron Supplements:

Table 9 and Figure 18 shows that 94.65% women in UCM group and 93.58% women in DCC group took iron supplements regularly throughout the pregnancy.

|                  | UCM group (n=187) | DCC group (n=187) | P value |
|------------------|-------------------|-------------------|---------|
| Iron supplements | 177 (94.65%)      | 175 (93.58%)      | 0.60    |

 Table 9: Comparison Of Intake Of Iron Supplements In Both Groups

DCC-Delayed cord clamping; UCM-Umbilical cord milking

On applying chi square test, both the groups were comparable to each other with p value of 0.6, which was non-significant.

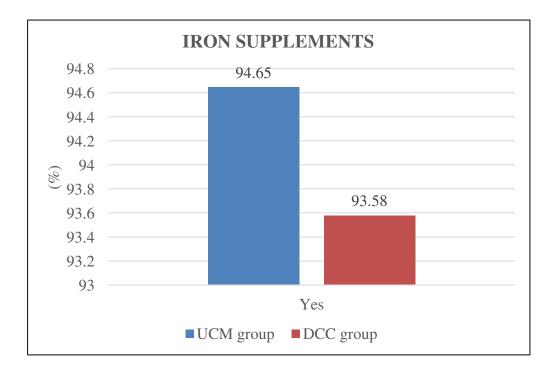


Figure 18: Comparison Of Intake Of Iron Supplements In Both Groups

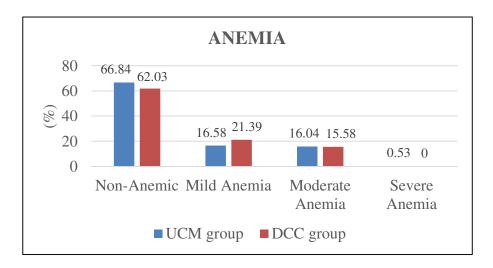
#### 9. Incidence of Anemia in Pregnancy:

Table 10 and Figure 19 shows that in both groups majority of pregnant women did not have anemia. In UCM group, 66.85% pregnant women did not have anemia, 16.58% had mild anemia and 16.04% had moderate anemia. In DCC group, 62.03% pregnant women did not have anemia, 21.39% had mild anemia and 16.58% had moderate anemia.

|                      | UCM group (n=187) | DCC group (n=187) | P value |
|----------------------|-------------------|-------------------|---------|
| Non-Anemic           | 125 (66.84%)      | 116 (62.03%)      |         |
| Mild Anemia          |                   |                   |         |
| (10.0-10.9g%)        | 31 (16.58%)       | 40 (21.39%)       | 0.47    |
| Moderate Anemia      |                   |                   | 0.17    |
| ( <b>7.0-9.9</b> g%) | 30 (16.04%)       | 31 (16.58%)       |         |
| Severe Anemia        |                   |                   |         |
| (< <b>7.0</b> g%)    | 1 (0.53%)         | 0 (0%)            |         |

 Table 10: Comparison Of Incidence Of Anemia In Pregnancy In Both Groups

DCC-Delayed cord clamping; UCM-Umbilical cord milking



## Figure 19: Comparison Of Incidence Of Anemia In Pregnancy In Both Groups

Both the groups were comparable to each other with p value 0.47, which was not significant.

## **10. Mode of delivery:**

Table 11 and Figure 20 shows that in UCM group 63.64% pregnant women underwent vaginal delivery and 36.36% underwent caesarean section. In DCC group, 62.57% pregnant women underwent vaginal delivery and 37.43% underwent caesarean section.

Table 11: Comparison Of Mode Of Delivery In Both Groups

|                   | UCM group (n=187) | DCC group (n=187) | P value |
|-------------------|-------------------|-------------------|---------|
| Vaginal Delivery  | 119 (63.64%)      | 117 (62.57%)      | 0.83    |
| Caesarean section | 68 (36.36%)       | 70 (37.43%)       |         |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

On applying chi-square test, both the groups were comparable to each other with p value of 0.83 which was not significant.

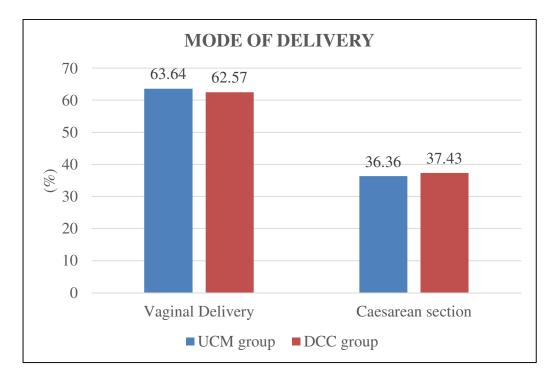


Figure 20: Comparison Of Mode Of Delivery In Both Groups

|  | UCM group                 | DCC group                  | P value |
|--|---------------------------|----------------------------|---------|
|  | ( <b>n=187</b> )          | ( <b>n=187</b> )           |         |
| Birth weight<br>(grams) <sup>^</sup>                             | $3043.4 \pm 426.1$        | 3048.7 ± 390.6             | 0.90    |
| MATURITY <sup>#</sup><br>Preterm<br>Term                         | 7 (3.74%)<br>179 (96.26%) | 10 (5.35%)<br>177 (94.65%) | 0.46    |
| Apgar at 1min <sup>*</sup>                                       | 8 (8-8)                   | 8 (8-8)                    | -       |
| Apgar at 5 min <sup>*</sup>                                      | 9 (9-9)                   | 9 (9-9)                    | -       |
| INTRAUTERINE<br>GROWTH<br>STATUS <sup>#</sup><br>Appropriate for |                           |                            |         |
| Gestational Age<br>(AGA)   | 151 (80.75%)              | 160 (85.56%)               | 0.35    |
| Small for<br>Gestational Age<br>(SGA)                            | 33 (17.65%)               | 26 (13.90%)                |         |

# **Table 12: Newborn Characteristics**

DCC-Delayed cord clamping; UCM-Umbilical cord milking ^Data is in Mean ± Standard deviation <sup>#</sup>Data is in n (%)

\*Data is in Median (Interquartile range)

# **NEWBORN CHARACTERISTICS**

# 1. Birth weight:

Table 13 and Figure 21 shows that in UCM group, mean birth weight of neonate was 3043.4 grams with standard deviation of 426.1 grams and in DCC group, mean birth weight of neonate was 3048.7 grams with standard deviation of 390.6 grams.

# Table 13: Comparison Of Birth Weight Of Neonate In Both Groups

| Birth weight (grams)      | UCM group (n=187) | DCC group (n=187) | P value |
|---------------------------|-------------------|-------------------|---------|
| Mean ± Standard Deviation | 3043.4 ± 426.1    | 3048.7 ± 390.6    | 0.90    |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Birth weight of neonate in both groups was compared using unpaired t test. P value was 0.90 which was non-significant.

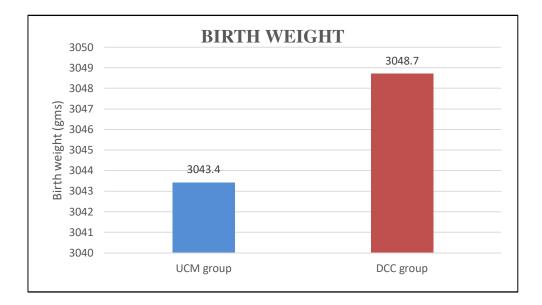


Figure 21: Comparison Of Birth Weight Of Neonate In Both Groups

# 2. Maturity of neonate:

Table 14 and Figure 22 shows that in UCM group, 96.26% were term deliveries and 3.74% were preterm deliveries and in DCC group, 94.65% were term deliveries and 5.35% were preterm deliveries.

|         | UCM group (n=187)                     | DCC group (n=187) | P value |
|---------|---------------------------------------|-------------------|---------|
| Preterm | 7 (3.74%)                             | 10 (5.35%)        | 0.46    |
| Term    | <b>Term</b> 179 (96.26%) 177 (94.65%) |                   | 0.40    |

Table 14: Comparison Of Maturity Of Neonate In Both Groups

DCC-Delayed cord clamping; UCM-Umbilical cord milking

On applying chi-square test, both the groups were comparable to each other with p value 0.46, which was non- significant.

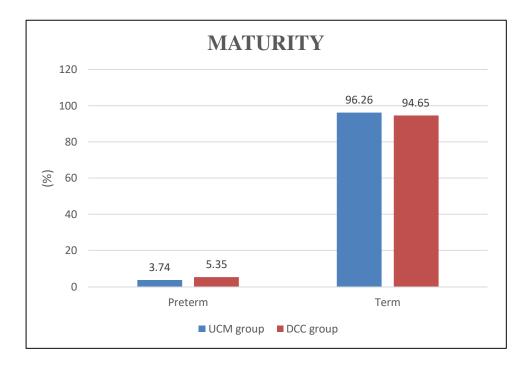


Figure 22: Comparison of Maturity of Neonate in both groups

# **3.** APGAR score:

Table 15 shows that Apgar at 1 min in both UCM group and DCC group was 8 and at 5 min was 9. Hence, both the groups were comparable to each other.

|                | UCM group (n=187)<br>Median (IQR) | DCC group (n=187)<br>Median (IQR) |
|----------------|-----------------------------------|-----------------------------------|
| Apgar at 1 min | 8 (8-8)                           | 8 (8-8)                           |
| Apgar at 5 min | 9 (9-9)                           | 9 (9-9)                           |

 Table 15: Comparison Of Apgar In Both Groups

DCC-Delayed cord clamping; IQR- Interquartile range; UCM-Umbilical cord milking

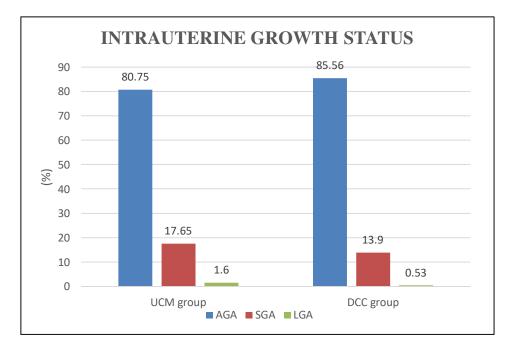
#### 4. Intrauterine growth status

Table 16 and Figure 23 shows that in UCM group, 80.75% neonates were AGA and 17.65% were SGA and in DCC group, 85.56% neonates were AGA, and 13.90% neonates were SGA. On applying chi square test, both groups were comparable to each other (P value 0.35).

**Table 16: Comparison Of Intrauterine Growth Status In Both Groups** 

|  | UCM group (n=187) | DCC group (n=187) | P value |
|--|-------------------|-------------------|---------|
| Appropriate for<br>Gestational Age (AGA) | 151 (80.75%)      | 160 (85.56%)      |         |
| Small for Gestational<br>Age (SGA)       | 33 (17.65%)       | 26 (13.90%)       | 0.35    |
| Large for Gestational<br>Age (LGA)       | 3 (1.60%)         | 1 (0.53%)         |         |

DCC-Delayed cord clamping; UCM-Umbilical cord milking



#### **Figure 23: Comparison Of Intrauterine Growth Status In Both Groups**

|   | UCM group<br>(n=187) | DCC group<br>(n=187) | P value |  |
|---|----------------------|----------------------|---------|--|
| Primary Outcome                             |                      |                      |         |  |
| Hematocrit in cord<br>sample <sup>^</sup>   | 47.0 ± 7.1           | 48.0 ± 8.3           | 0.21    |  |
| Hematocrit at 30±6<br>hours^                | 54.4 ± 5.8           | 50.9 ± 7.1           | <0.01   |  |
| Secondary Outcomes                          |                      |                      |         |  |
| Phototherapy <sup>#</sup>                   | 34 (18.18%)          | 36 (19.25%)          | 0.79    |  |
| NICU admissions <sup>#</sup>                | 5 (2.67%)            | 14 (7.49%)           | 0.03    |  |
| Polycythemia in<br>cord sample <sup>#</sup> | 2 (1.07%)            | 5 (2.67%)            | 0.25    |  |
| Polycythemia at<br>30±6 hours <sup>#</sup>  | 4 (2.14%)            | 3 (1.6%)             | 0.70    |  |

# **Table 17: STUDY OUTCOMES**

DCC-Delayed cord clamping; NICU- Neonatal intensive care unit; UCM-Umbilical cord milking ^Data is in Mean ± Standard deviation \*Data is in n (%)

## **STUDY OUTCOMES**

#### **Primary Outcome:**

- 1. Hematocrit of cord blood sample and at  $30 \pm 6$  hours
- A. DATA DISTRIBUTION
- a) Cord blood hematocrit in UCM group: Bell shaped curve in figure 24 denotes that hematocrit in UCM group at birth was normally distributed.

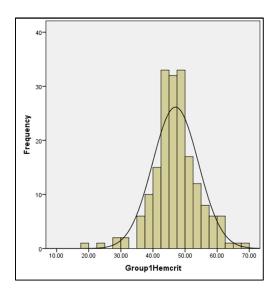


Figure 24: Distribution Of Cord Blood Hematocrit In UCM Group

**b)** Cord blood hematocrit in DCC group: Bell shaped curve in figure 25 denotes that hematocrit in DCC group at birth was normally distributed.

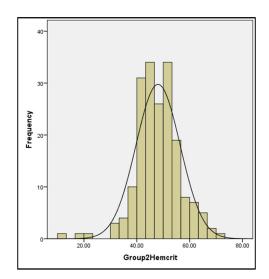


Figure 25: Distribution Of Cord Blood Hematocrit In DCC Group

c) Hematocrit in UCM group at  $30 \pm 6$  hours: Bell shaped curve in figure 26 denotes that hematocrit in UCM group at  $30 \pm 6$  hours was normally distributed.

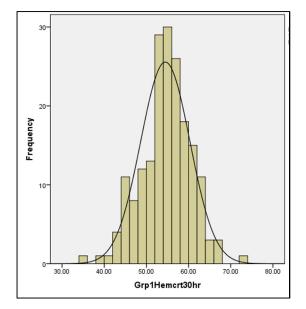


Figure 26: Distribution Of Hematocrit In UCM Group at 30 ± 6 hours

d) Hematocrit in DCC group at  $30 \pm 6$  hours: Bell shaped curve in figure 27 denotes that hematocrit in DCC group at  $30 \pm 6$  hours was normally distributed.

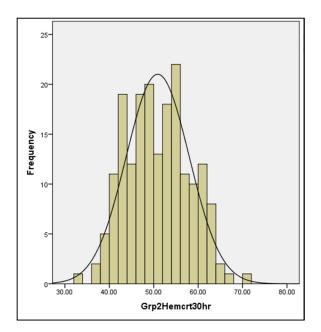


Figure 27: Distribution Of Hematocrit In DCC Group at 30 ± 6 hours

#### **B.** Comparison of Hematocrit of cord blood sample and at $30 \pm 6$ hours:

Table 18 and Figure 28 shows that in UCM group, mean hematocrit in cord sample was 47.0% with standard deviation of 7.1% and in DCC group, mean hematocrit in cord sample was 48.0% with standard deviation of 8.3%. On applying unpaired t test, mean hematocrit in cord sample was comparable to each other in both the groups with P value of 0.21 which was non-significant.

Table 18: Comparison Of Hematocrit In Both Groups In Cord Blood Sample and at 30± 6 hours

|             | UCM group (n=187)         | DCC group (n=187)         | D       |
|-------------|---------------------------|---------------------------|---------|
| Hematocrit  | Mean ± Standard Deviation | Mean ± Standard Deviation | P value |
| Cord sample | $47.0 \pm 7.1$            | $48.0 \pm 8.3$            | 0.21    |
| 30±6 hours  | $54.4 \pm 5.8$            | $50.9 \pm 7.1$            | <0.01   |
|             |                           |                           |         |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 18 and Figure 28 shows that in UCM group, mean hematocrit at  $30 \pm 6$  hours was 54.4% with standard deviation of 5.8% and in DCC group, mean hematocrit at  $30 \pm 6$  hours was 50.9% with standard deviation of 7.1%. Hematocrit in both groups was compared using unpaired t test. p value was 0.01 which was statistically significant.

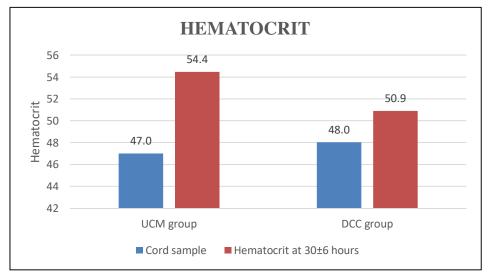


Figure 28: Comparison Of Hematocrit In Both Groups In Cord Sample and at  $30 \pm 6$ 

#### hours

### **Secondary Outcomes:**

#### 1. Requirement of Phototherapy:

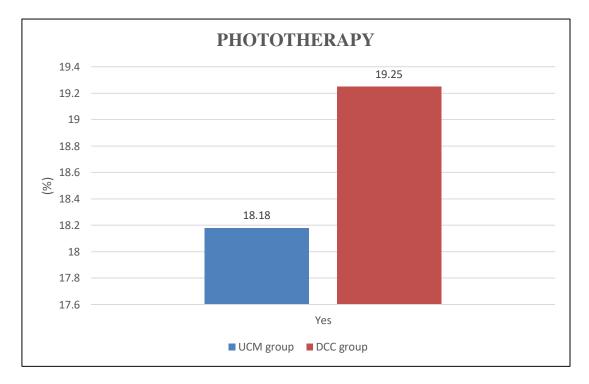
Table 19 and Figure 29 shows that in UCM group, only 18% of the neonates required phototherapy and in DCC group, 19% of the neonates required phototherapy.

On applying chi-square test, both the groups were comparable to each other with p value of 0.79 which was non-significant.

|              | UCM group<br>(n=187) | DCC group<br>(n=187) | P value |
|--------------|----------------------|----------------------|---------|
| Phototherapy | 34 (18.18%)          | 36 (19.25%)          | 0.79    |

#### **Table 19: Comparison Of Requirement Of Phototherapy In Both Groups**

DCC-Delayed cord clamping; UCM-Umbilical cord milking



### Figure 29: Comparison Of Requirement Of Phototherapy In Both Groups

#### 2. Neonatal Intensive Care Unit (NICU) admission:

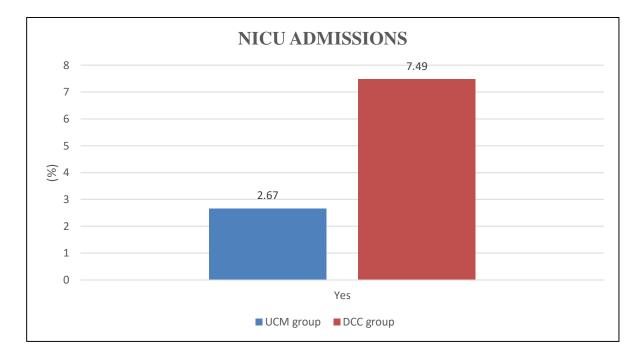
Table 20 and Figure 30 shows that in UCM group, only 2.67% of the neonates required NICU admission and in DCC group, 7.49% of the neonates required NICU admission.

On applying chi-square test, p value was 0.034 which was statistically significant.

 Table 20: Comparison Of NICU Admissions In Both Groups

|                | UCM group<br>(n=187) | DCC group<br>(n=187) | P value |
|----------------|----------------------|----------------------|---------|
| NICU admission | 5 (2.67%)            | 14 (7.49%)           | 0.03    |

DCC-Delayed cord clamping; NICU-Neonatal Intensive Care Unit; UCM-Umbilical cord milking



### Figure 30: Comparison Of NICU Admissions In Both Groups

#### **3. Incidence of Polycythemia:**

Table 21 and Figure 31 shows that in UCM group, incidence of polycythemia at birth was 1.07% and at  $30 \pm 6$  hours was 2.14% whereas in DCC group, incidence of polycythemia at birth was 2.67% and at  $30 \pm 6$  hours was 1.6%.

Both the groups were comparable to each other as on applying chi-square test p value was <0.05 which was non-significant.

# Table 21: Comparison Of Incidence Of Polycythemia (Hematocrit >65%) In Both Groups

|               | UCM group (n=187) | DCC group (n=187) | P value |
|---------------|-------------------|-------------------|---------|
| Cord sample   | 2 (1.07%)         | 5 (2.67%)         | 0.25    |
| At 30±6 hours | 4 (2.14%)         | 3 (1.6%)          | 0.70    |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

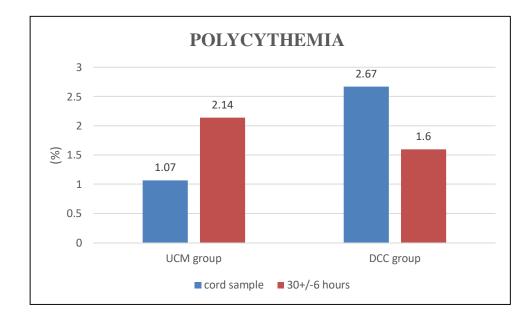


Figure 31: Comparison Of Incidence Of Polycythemia (Hematocrit >65%) In Both Groups

# Table 22: SUBGROUP ANALYSIS

| ANAEMIC                                       |                |                |          |
|---|----------------|----------------|----------|
| PATIENTS                                      | UCM group      | DCC group      | P value  |
| (Hemoglobin <11g%)                            |                |                |          |
| Hematocrit in cord<br>sample                  | $45.9 \pm 6.4$ | $48.8 \pm 8.4$ | 0.02     |
| Hematocrit at 30±6<br>hours                   | $53.2 \pm 6.1$ | 51.5 ± 6.4     | 0.11     |
| NON-ANAEMIC<br>PATIENTS<br>(Hemoglobin >11g%) | UCM group      | DCC group      | P value  |
| Hematocrit in cord<br>sample                  | $47.5 \pm 7.4$ | 47.5 ± 8.3     | 0.98     |
| Hematocrit at 30±6<br>hours                   | $55.0 \pm 5.5$ | $50.5 \pm 7.4$ | < 0.0001 |
| PRETERM<br>(<37 weeks)                        | UCM group      | DCC group      | P value  |
| Hematocrit in cord<br>sample                  | 53.5 ± 9.4     | 51.6 ± 7.5     | 0.65     |
| Hematocrit at 30±6<br>hours                   | $55.5 \pm 4.3$ | 51.7 ± 6.8     | 0.22     |
| TERM (>37 weeks)                              | UCM group      | DCC group      | P value  |
| Hematocrit in cord<br>sample                  | $46.8 \pm 6.7$ | 47.8 ± 8.3     | 0.23     |
| Hematocrit at 30±6<br>hours                   | 54.5 ± 5.7     | $50.8 \pm 7.1$ | < 0.0001 |
| Appropriate for<br>Gestational Age            | UCM group      | DCC group      | P value  |
| Hematocrit in cord<br>sample                  | $46.5 \pm 7.0$ | $47.5 \pm 8.4$ | 0.25     |
| Hematocrit at 30±6<br>hours                   | $53.8 \pm 5.6$ | $50.3 \pm 6.9$ | < 0.0001 |
| Small for<br>Gestational Age                  | UCM group      | DCC group      | P value  |
| Hematocrit in cord<br>sample                  | $49.1 \pm 7.4$ | $50.6 \pm 6.7$ | 0.44     |
| Hematocrit at 30±6<br>hours                   | $56.9 \pm 6.0$ | 54.0 ± 7.3     | 0.09     |

DCC-Delayed cord clamping; UCM-Umbilical cord milking All data is in Mean ± Standard deviation

## SUBGROUP ANALYSIS

# Comparison of Hematocrit of cord sample and at 30 ± 6 hours in anemic women (Hb<11g%):</li>

Table 23 and Figure 32 shows that in UCM group, mean hematocrit in cord sample was 45.9% with standard deviation of 6.4% and in DCC group, mean hematocrit in cord sample was 48.8% with standard deviation of 8.4%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.02 which was statistically significant.

 Table 23: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In Anemic

 Women

| Hematocrit    | UCM group (n=62)          | DCC group (n=71)          | P value |
|---------------|---------------------------|---------------------------|---------|
|               | Mean ± Standard Deviation | Mean ± Standard Deviation |         |
| Cord sample   | $45.9 \pm 6.4$            | $48.8 \pm 8.4$            | 0.02    |
| At 30±6 hours | $53.2 \pm 6.1$            | $51.5 \pm 6.4$            | 0.11    |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 23 and Figure 32 shows that in UCM group, mean hematocrit at  $30 \pm 6$  hours was 53.2% with standard deviation of 6.1% and in DCC group, mean hematocrit at  $30 \pm 6$  hours was 51.5% with standard deviation of 6.4%. Hematocrit in both groups was compared using unpaired t test. P value was 0.11 which was non-significant.

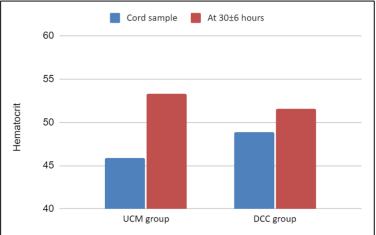


Figure 32: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In Anemic Women

# 2. Comparison of Hematocrit of cord sample and at 30 ± 6 hours in non-anemic women (Hb >11g%):

Table 24 and Figure 33 shows that in UCM group, mean hematocrit in cord sample was 47.5% with standard deviation of 7.4% and in DCC group, mean hematocrit in cord sample was 47.5% with standard deviation of 8.3%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.98 which was non-significant.

| Table 24: Comparison Of Hematocrit Of Cord Sample and at $30 \pm 6$ hours In Non- |
|---|
| Anemic Women  |

| Hematocrit    | UCM group (n=125)         | DCC group (n=116)         | P value  |
|---------------|---------------------------|---------------------------|----------|
|               | Mean ± Standard Deviation | Mean ± Standard Deviation |          |
| Cord sample   | $47.5 \pm 7.4$            | $47.5 \pm 8.3$            | 0.98     |
| At 30±6 hours | $55.0 \pm 5.5$            | $50.5 \pm 7.4$            | < 0.0001 |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 24 and Figure 33 shows that in UCM group, mean hematocrit at  $30 \pm 6$  hours was 55.0% with standard deviation of 5.5% and in DCC group, mean hematocrit at  $30 \pm 6$  hours was 50.5% with standard deviation of 7.4%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.0001 which was highly significant.

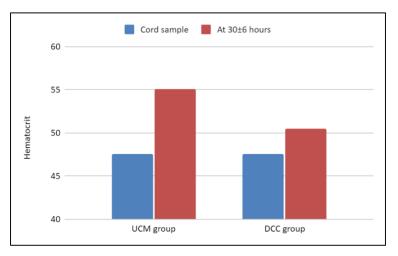


Figure 33: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In Non-Anemic Women

# 3. Comparison of Hematocrit of cord sample and at 30 ± 6 hours in preterm neonates (<37 weeks):

Table 25 and Figure 34 shows that in UCM group, mean hematocrit in cord sample was 53.5% with standard deviation of 9.4% and in DCC group, mean hematocrit in cord sample was 51.6% with standard deviation of 7.5%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.65 which was non-significant.

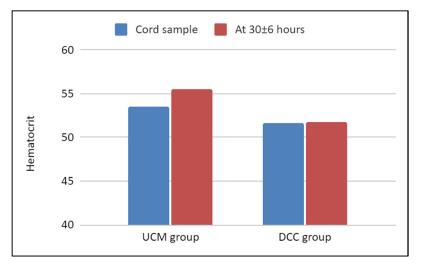
# Table 25: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In Preterm Neonates

| Hematocrit    | UCM group (n=7)           | DCC group (n=10)          | P value |
|---------------|---------------------------|---------------------------|---------|
|               | Mean ± Standard Deviation | Mean ± Standard Deviation |         |
| Cord sample   | 53.5 ± 9.4                | 51.6 ± 7.5                | 0.65    |
| At 30±6 hours | $55.5 \pm 4.3$            | 51.7 ± 6.8                | 0.22    |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 25 and Figure 34 shows that in UCM group, mean hematocrit at  $30\pm6$  hours was 55.5% with standard deviation of 4.3% and in DCC group, mean hematocrit at  $30\pm6$  hours was 51.7% with standard deviation of 6.8%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.22 which was non-significant.





# 4. Comparison of Hematocrit of cord sample and at 30 ± 6 hours in term neonates (>37 weeks):

Table 26 and Figure 35 shows that in UCM group, mean hematocrit in cord sample was 46.8% with standard deviation of 6.7% and in DCC group, mean hematocrit in cord sample was 47.8% with standard deviation of 8.3%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.23 which was non-significant.

 Table 26: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In Term

 Neonates

| Hematocrit    | UCM group (n=180)         | DCC group (n=177)         | P value  |
|---------------|---------------------------|---------------------------|----------|
|               | Mean ± Standard Deviation | Mean ± Standard Deviation |          |
| Cord sample   | $46.8 \pm 6.7$            | 47.8 ± 8.3                | 0.23     |
| At 30±6 hours | 54.5 ± 5.7                | 50.8 ± 7.1                | < 0.0001 |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 26 and Figure 35 shows that in UCM group, mean hematocrit at  $30 \pm 6$  hours was 54.5% with standard deviation of 5.7% and in DCC group, mean hematocrit at  $30 \pm 6$  hours was 50.8% with standard deviation of 7.1%. Hematocrit in both groups was compared using unpaired t test. P value was <0.0001 which was highly significant.

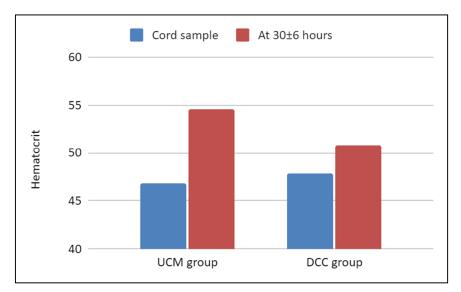


Figure 35: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In Term Neonates

#### 5. Comparison of Hematocrit of cord sample and at $30 \pm 6$ hours in AGA neonates:

Table 27 and Figure 36 shows that in UCM group, mean hematocrit in cord sample was 46.5% with standard deviation of 7.0% and in DCC group, mean hematocrit in cord sample was 47.5% with standard deviation of 8.4%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.25 which was non-significant.

 Table 27: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In AGA

 Neonates

| Hematocrit    | UCM group (n=151)         | DCC group (n=160)         | P value  |
|---------------|---------------------------|---------------------------|----------|
|               | Mean ± Standard Deviation | Mean ± Standard Deviation |          |
| Cord sample   | $46.5 \pm 7.0$            | $47.5 \pm 8.4$            | 0.25     |
| At 30±6 hours | $53.8 \pm 5.6$            | $50.3 \pm 6.9$            | < 0.0001 |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 27 and Figure 36 shows that in UCM group, mean hematocrit at  $30 \pm 6$  hours was 53.8% with standard deviation of 5.6% and in DCC group, mean hematocrit at  $30 \pm 6$  hours was 50.3% with standard deviation of 6.9%.

Hematocrit in both groups was compared using unpaired t test. P value was <0.0001 which was highly significant.

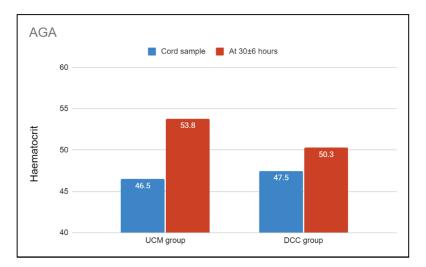


Figure 36: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In AGA Neonates

#### 6. Comparison of Hematocrit of cord sample and at $30 \pm 6$ hours in SGA neonates:

Table 28 and Figure 37 shows that in UCM group, mean hematocrit in cord sample was 49.1% with standard deviation of 7.4% and in DCC group, mean hematocrit in cord sample was 50.6% with standard deviation of 6.7%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.44 which was non-significant.

# Table 28: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In SGA Neonates

| Hematocrit    | UCM group (n=33)          | DCC group (n=26)          | P value |
|---------------|---------------------------|---------------------------|---------|
|               | Mean ± Standard Deviation | Mean ± Standard Deviation |         |
| Cord sample   | $49.1 \pm 7.4$            | $50.6 \pm 6.7$            | 0.44    |
| At 30±6 hours | $56.9 \pm 6.0$            | 54.0 ± 7.3                | 0.09    |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Table 28 and Figure 37 shows that in UCM group, mean hematocrit at  $30 \pm 6$  hours was 56.9% with standard deviation of 6.0% and in DCC group, mean hematocrit at  $30 \pm 6$  hours was 54.0% with standard deviation of 7.3%.

Hematocrit in both groups was compared using unpaired t test. P value was 0.09 which was non-significant.

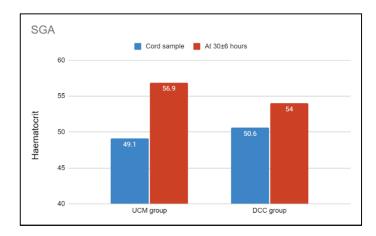


Figure 37: Comparison Of Hematocrit Of Cord Sample and at 30 ± 6 hours In SGA Neonates



# **DISCUSSION**

This randomized controlled trial was done to compare the effect of UCM and DCC on various hematological parameters in term as well as near term neonates in both vaginal and caesarean delivery.

The mean age of participants was  $26.7 \pm 4.6$  years in UCM group and  $26.6 \pm 4.2$  years in DCC group which was comparable to most of the previous studies as shown in Table 29.

|  | UCM group (years)                | DCC group (years)                | P value |  |
|--|----------------------------------|----------------------------------|---------|--|
|  | Mean age ±<br>Standard Deviation | Mean age ±<br>Standard Deviation |         |  |
| Rabe <i>et al</i> <sup>(40)</sup> (2011)         | $30.8 \pm 6.3$                   | 29.1 ± 5.6                       | 0.27    |  |
| Katheria <i>et al</i> <sup>(31)</sup><br>(2015)  | 31 ± 5                           | 30 ± 6                           | 0.26    |  |
| Alzaree F <i>et al</i> <sup>(46)</sup><br>(2018) | $26.2 \pm 4.4$                   | 25.6 ± 3.2                       | 0.23    |  |
| Samantha <i>et al</i> <sup>(38)#</sup><br>(2019) | 28 (22-32)                       | 28 (23-33)                       | 0.33    |  |
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)    | 29.1 ± 4.2                       | 28.3 ± 3.3                       | 0.20    |  |
| Index Study                                      | $26.7 \pm 4.6$                   | $26.6 \pm 4.2$                   | 0.69    |  |

#### Table 29: Age Distribution In Various Studies

DCC-Delayed cord clamping; UCM-Umbilical cord milking <sup>#</sup>Data is in Median (Interquartile range)

The mean gestational age was  $38.7 \pm 1.3$  weeks in UCM group and  $38.7 \pm 1.2$  in DCC group which was comparable to studies conducted by Jaiswal *et al*<sup>(43)</sup>, Alzaree F *et al*<sup>(46)</sup> and Mangla *et al*<sup>(49)</sup>. However, mean gestational age was lower in studies conducted by Rabe *et al*<sup>(40)</sup>, Katheria *et al*<sup>(31)</sup> and Samantha *et al*<sup>(38)</sup>. These studies were conducted only in preterm neonates which contributed to this difference in gestational age. Gestational age can have significant impact on the hematological parameters of the neonate.

|  | Mean gestational<br>age in UCM group<br>(weeks) | Mean gestational<br>age in DCC group<br>(weeks) | P value |  |
|--|---|---|---------|--|
| Rabe <i>et al</i> <sup>(40)</sup> (2011)         | 29.5 ± 2.7                                      | $29.2 \pm 2.3$                                  | 0.61    |  |
| Katheria <i>et al</i> <sup>(31)</sup><br>(2015)  |   |   | 1.0     |  |
| Jaiswal <i>et al</i> <sup>(43)</sup><br>(2015)   | 38.3 ± 1.13                                     | 38.2 ± 1.1                                      | 0.83    |  |
| Alzaree F <i>et al</i> <sup>(46)</sup><br>(2018) | 38.9 ± 0.9                                      | 38.9 ± 0.9                                      | 0.606   |  |
| Samantha <i>et al</i> <sup>(38)#</sup><br>(2019) | 32.1 (29.5-34.0)                                | 32.0 (29.2-34.0)                                | 0.462   |  |
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)    | 37.9 ± 1.0                                      | 37.8 ± 1.6                                      | 0.65    |  |
| Index Study                                      | 38.7 ± 1.3                                      | 38.7 ± 1.2                                      | 0.53    |  |

**Table 30: Gestational Age Distribution In Various Studies** 

DCC-Delayed cord clamping; UCM-Umbilical cord milking <sup>#</sup>Data is in Median (Interquartile range)

Mean birth weight of the neonate in UCM group was  $3043.4 \pm 426.1$  grams and in DCC group was  $3048.7 \pm 390.6$  grams which was comparable to studies conducted by Mangla *et al*<sup>(49)</sup>, Jaiswal *et al*<sup>(43)</sup> and Upadhyay *et al*<sup>(2)</sup>. However, mean birth weight was lower in studies conducted by Katheria *et al*<sup>(31)</sup>, Samantha *et al*<sup>(38)</sup> and Rabe *et al*<sup>(40)</sup>. This difference was mainly because of the difference in the study population. These studies were conducted in preterm infants, hence mean birth weight was lower in these studies. Birth weight has a significant impact on hematocrit of the newborn.

|   | Mean birth weight<br>(grams) in UCM<br>group | Mean birth weight<br>(grams) in DCC<br>group | P value |  |
|---|--|--|---------|--|
| <b>Rabe</b> <i>et al</i> <sup>(40)</sup> (2011) | $1235 \pm 468$                               | $1263 \pm 428$                               | 0.81    |  |
| Upadhyay <i>et al</i> <sup>(2)</sup><br>(2013)  | $2750 \pm 410$                               | $2640 \pm 320$                               | 0.92    |  |
| Katheria <i>et al</i> <sup>(31)</sup><br>(2015) | 1255 ± 413                                   | 1132 ± 392                                   | 0.0598  |  |
| Jaiswal <i>et al</i> <sup>(43)</sup><br>(2015)  | 2760 ± 330                                   | 2750 ± 390                                   | 0.89    |  |
| Samantha <i>et al</i> <sup>(38)</sup><br>(2019) |  |  | 0.617   |  |
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)   | 3038 ± 436                                   | 2909 ± 435                                   | 0.077   |  |
| Index Study                                     | $3043.4 \pm 426.1$                           | 3048.7 ± 390.6                               | 0.90    |  |

DCC-Delayed cord clamping; UCM-Umbilical cord milking

The primary objective of our study was to compare the effect of UCM and DCC on hematocrit of the neonate in term and near-term neonates. In our study mean hematocrit in cord sample was slightly higher in DCC group  $(48.0 \pm 8.3\%)$  as compared to the UCM group  $(47.0 \pm 7.1\%)$ . However, the difference was not statistically significant. Samantha *et al*<sup>(38)</sup> reported mean hematocrit of  $49.9 \pm 7.7\%$  at birth in DCC group and  $51.8 \pm 6.2\%$  in UCM group and the difference was not statistically significant. Rabe *et al*<sup>(40)</sup> reported mean hematocrit of 51.0  $\pm$  7.0% at birth in DCC group and 52.0  $\pm$  8.0% in UCM group and the difference was not statistically significant. Another study by Jaiswal *et al*<sup>(43)</sup> reported mean hematocrit of  $50.9 \pm 6.4\%$  at birth in UCM group and  $50.3 \pm 6.8\%$  in DCC group which was statistically non-significant (p value 0.46). In study conducted by Katheria et  $al^{(31)}$ , birth hemoglobin was compared in between the two groups instead of hematocrit. Mean birth hemoglobin in DCC group was reported as  $15.6 \pm 2.2$ g% and in UCM group was  $16.3 \pm$ 2.4g% which was found to be statistically significant (p <0.05). Thus, this difference could be due to different parameter used for assessment of anemia and difference in the period of gestation and mode of delivery of the study population. The studies which used hematocrit for the assessment of anemia at birth had non-significant results.

|  | Mean hematocrit at<br>birth in UCM group | Mean hematocrit at<br>birth in DCC group | P value |  |
|--|--|--|---------|--|
| <b>Rabe</b> <i>et al</i> <sup>(40)</sup> (2011)  | 52.0 ± 8.0%                              | 51.0 ± 7.0%                              | 0.65    |  |
| Jaiswal <i>et al</i> <sup>(43)</sup><br>(2015)   | 50.9 ± 6.4%                              | 50.3 ± 6.8%                              | 0.46    |  |
| Samantha <i>et al</i> <sup>(38)</sup><br>(2019)  | 51.8 ± 6.2%                              | 49.9 ± 7.7%                              | 0.07    |  |
| Katheria <i>et al</i> <sup>(31)#</sup><br>(2015) | 16.3 ± 2.4g%                             | 15.6 ± 2.2g%                             | <0.05   |  |
| Index study                                      | 47.0 ± 7.1%                              | 48.0 ± 8.3%                              | 0.21    |  |

 Table 32: Comparison Of Mean Hematocrit At Birth In Various Studies

DCC-Delayed cord clamping; UCM-Umbilical cord milking <sup>#</sup>Mean Hemoglobin

In our study mean hematocrit at  $30 \pm 6$  hours in UCM group was higher (54.4 ± 5.8%) as compared to DCC group (50.9 ± 7.1%) and the difference was found to be statistically significant (P value <0.01). The study conducted by Mangla *et al*<sup>(49)</sup> reported that mean hematocrit at 48±6 hours in UCM group was 57.7 ± 4.3% and in DCC group was 55.9 ± 4.4% and the difference was statistically significant (p value 0.02).

Both the studies showed similar results although there was slight variation in the duration at which hematocrit level was measured.

Another study conducted by Jaiswal *et al*<sup>(43)</sup> showed mean hematocrit at 48 hours in UCM group was  $48.51 \pm 6.8\%$  and in DCC group was  $48.0 \pm 6.8\%$  which was lower than that observed in our study and was statistically non-significant. This difference was probably because of the milking technique. In this study, the umbilical cord was cut and then milked which prevented refilling of the cord from placenta. Also, they milked the cord only three times, whereas we milked the cord four times in our study. This could have led to lower hematocrit values and insignificant results in their study.

|  | Mean hematocrit<br>beyond 24 hours in<br>UCM group | Mean hematocrit<br>beyond 24 hours in<br>DCC group | P value |
|--|--|--|---------|
| Jaiswal <i>et al</i> <sup>(43)</sup><br>(2015)<br>(At 48 hours)  | 48.5 ± 6.8%  | 48.0 ± 6.8%  | 0.60    |
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)<br>(At 48±6 hours) | 57.7 ± 4.3%  | 55.9 ± 4.4%  | 0.02    |
| Index study<br>(At 30±6 hours)                                   | 54.4 ± 5.8%  | 50.9 ± 7.1%  | <0.01   |

Table 33: Comparison Of Mean Hematocrit Beyond 24 Hours In Various Studies

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Over-transfusion of the neonate can lead to polycythemia and significant jaundice requiring phototherapy. Hence it is essential to look for the side effects of UCM and DCC.

In our study, slightly higher number of neonates received phototherapy in DCC group (19.25%) as compared to UCM group (18.18%). However, the difference was statistically non-significant (P value 0.79). In a study conducted by Samantha *et al*<sup>(38)</sup>, 88% neonates received phototherapy in DCC group and 85.9% received phototherapy in UCM group with non-significant results (P value 0.65). This huge difference was probably due to the difference in the period of gestation. This study was conducted in neonates of <34 weeks POG whereas our study was conducted in neonates >34 weeks POG. Study by Mangla *et al*<sup>(49)</sup>, showed that only 1.4% neonates in each group required phototherapy. None of the studies showed increased requirement of phototherapy in either of the two groups. Hence, UCM can be a good alternative to DCC without increasing the risk of phototherapy requirement.

|   | Phototherapy<br>received in UCM<br>group | Phototherapy<br>received in DCC<br>group | P value |
|---|--|--|---------|
| Samantha <i>et al</i> <sup>(38)</sup><br>(2019) | 85.9%                                    | 88%                                      | 0.65    |
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)   | 1.4%                                     | 1.4%                                     | -       |
| Index study                                     | 18.18%                                   | 19.25%                                   | 0.79    |

Table 34: Comparison Of Phototherapy Requirement In Various Studies

DCC-Delayed cord clamping; UCM-Umbilical cord milking

In our study, NICU admissions were slightly higher in DCC group (7.49%) as compared to UCM group (2.67%). The difference was found to be statistically significant.

In a study conducted by Mangla *et al*<sup>(49)</sup>, NICU admissions were higher in DCC group (2.8%) and lower in UCM group (1.4%), but the result was not statistically significant. Similarly, in study conducted by Jaiswal *et al*<sup>(43)</sup>, 11% neonates were admitted in NICU in DCC group and 6% in UCM group with non-significant results. This could possibly be because there are various factors which might be responsible for NICU admissions which were not included in the study.

|  | NICU admissions in<br>UCM group | NICU admissions in<br>DCC group | P value |  |
|--|---------------------------------|---------------------------------|---------|--|
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)  | 1.4%                            | 2.8%                            | >0.05   |  |
| Jaiswal <i>et al</i> <sup>(43)</sup><br>(2015) | 6%                              | 11%                             | 0.2     |  |
| Index study                                    | 2.67%                           | 7.49%                           | 0.03    |  |

Table 35: Comparison Of NICU Admissions In Various Studies

DCC-Delayed cord clamping; NICU- Neonatal intensive care unit; UCM-Umbilical cord milking

In our study, incidence of polycythemia was 1.07% and 2.14% in UCM group as compared to 2.67% and 1.6% in DCC group in cord sample and at  $30 \pm 6$  hours respectively. However, the difference was not statistically significant. In a study by Katheria *et al*<sup>(31)</sup>, polycythemia was seen in 2.66% neonates in UCM group and 5.06% neonates in DCC group and the difference was found to be statistically non-significant. In a study by Mangla *et al*<sup>(49)</sup>, polycythemia was seen only in DCC group (2.8%). Hence, UCM does not increase the risk of polycythemia making it a good alternative to DCC.

|   | Polycythemia in<br>UCM group | Polycythemia in<br>DCC group | P value      |  |
|---|------------------------------|------------------------------|--------------|--|
| Katheria <i>et al</i> <sup>(31)</sup><br>(2015) | 2.66% 5.06%                  |                              | >0.05        |  |
| Mangla <i>et al</i> <sup>(49)</sup><br>(2020)   | 0%                           | 2.8%                         | >0.05        |  |
| Index study<br>Cord sample<br>At 30±6 hours     | 1.07%<br>2.14%               | 2.67%<br>1.6%                | 0.25<br>0.70 |  |

Table 36: Comparison Of Polycythemia In Various Studies

DCC-Delayed cord clamping; UCM-Umbilical cord milking

Apart from this we also did subgroup analysis of hematocrit in cord sample and at  $30 \pm 6$  hours of life in anemic and non-anemic mothers, and in term and preterm neonates. Ours is the first study to do this subgroup analysis. None of the previously published studies did this subgroup analysis.

In newborn born to anemic mothers, mean hematocrit in cord sample was  $45.9 \pm 6.4\%$  in UCM group and  $48.8 \pm 8.4\%$  in DCC group which was statistically significant (P value 0.02). However, mean hematocrit at  $30 \pm 6$  hours was not statistically significant (P value 0.11) in newborn born to anemic mothers. But the rate of increase of mean hematocrit from cord sample to  $30 \pm 6$  hours was higher in UCM group as compared to DCC group. Therefore, UCM was more beneficial in anemic patients than DCC.

In newborn born to non-anemic mothers, mean hematocrit in cord sample was not statistically significant (P value 0.98). However, mean hematocrit at  $30 \pm 6$  hours was  $55.0 \pm 5.5\%$  in UCM group and  $50.5 \pm 7.4\%$  in DCC group which was statistically significant (P value 0.0001). Furthermore, the rate of increase of mean hematocrit from cord sample to  $30 \pm 6$  hours was higher in UCM group as compared to DCC group. Hence, even in non-anemic patients, UCM was more effective than DCC.

In Preterm neonates, mean hematocrit in cord sample as well as at  $30\pm6$  hours was statistically non-significant. Since there were limited number of preterm neonates in each group, we could not reach significant results.

In Term neonates, mean hematocrit in cord sample was statistically non-significant (P value 0.23). However, mean hematocrit at  $30 \pm 6$  hours was  $54.5 \pm 5.7\%$  in UCM group and  $50.8 \pm 7.1\%$  in DCC group which was statistically significant (P value 0.0001). Hence, for term neonates, UCM can be a good alternative with improved hematological outcomes as compared to DCC.

In AGA neonates, mean hematocrit in cord sample was statistically non-significant (P value 0.25). However, mean hematocrit at  $30 \pm 6$  hours was  $53.8 \pm 5.6\%$  in UCM group and  $50.3 \pm 6.9\%$  in DCC group which was statistically significant (P value 0.0001). Hence, UCM can be a good substitute to DCC in AGA neonates.

In SGA neonates, mean hematocrit in cord sample as well as at  $30 \pm 6$  hours was statistically non-significant. Since the number of SGA neonates in each group was less, we could not reach conclusive results.

# STRENGTHS AND LIMITATIONS

- Main strength of our study was that it was a randomized controlled trial conducted in both term and near-term neonates. There are very few studies comparing the effect of UCM and DCC in both term and near-term neonates. Previous studies published by Katheria *et al*<sup>(31)</sup>, Samantha *et al*<sup>(38)</sup> and Rabe *et al*<sup>(40)</sup> were all conducted only in preterm neonates.
- Also, our randomization was stratified into vaginal delivery and caesarean section which was not done by any other study.
- Another strength of our study was large sample size of 374. Large sample size provides more accurate mean values and hence the data is more reliable. Most of the previously published studies have modest sample size of less than two hundred; Katheria *et al*<sup>(31)</sup> had 154, Rabe *et al*<sup>(40)</sup> had 58, Upadhyay *et al*<sup>(2)</sup> had 200, Mangla *et al*<sup>(49)</sup> had 144 and Jaiswal *et al*<sup>(43)</sup> had 200.
- Another high point of our study was the technique which was utilized for umbilical cord milking. We did intact-UCM four times which allowed refilling of the cord from the placenta in between each milking maneuver, which might have led to higher hematocrit values. Previous study published by Jaiswal *et al*<sup>(43)</sup> did UCM after cutting the umbilical cord.
- Another very strong point of our study was that we did subgroup analysis of hematocrit in cord sample and at 30 ± 6 hours of life in anemic and non-anemic mothers; in term and preterm neonates and in AGA and SGA neonates which was not done by any other study published so far.
- Our study had few limitations too. Our follow up included evaluation of S. ferritin and hemoglobin at 14 weeks of life which we were not able to complete because of prevailing COVID-19 pandemic. Long term follow up is desired to establish whether initial increase in hematocrit sustains later in infancy and early childhood. Also, this study was not powered to assess the side effects of each method conclusively.



# **SUMMARY AND CONCLUSION**

- This was a Randomized controlled trial to compare the effect of Delayed cord clamping and Umbilical cord milking in term and near-term neonates.
- It was conducted in the Department of Obstetrics and Gynecology and Department of Neonatology, AIIMS Jodhpur from March 2020 to August 2021.
- A total of 789 women were assessed for enrolment out of which 374 cases were enrolled in the study who met the inclusion criteria. They were randomized into UCM group and DCC group.
- In UCM group, 119 underwent vaginal delivery and 68 underwent caesarean section. In DCC group, 117 underwent vaginal delivery and 70 underwent caesarean section. All the neonates born at 34 completed weeks or more were included in the study.
- The mean age of mother in UCM group was 26.7 ± 4.6 years and in DCC group was 26.6 ± 4.2 years. Mean BMI in UCM group was 26.2 ± 3.2 kg/m<sup>2</sup> and in DCC group was 26.1 ± 2.9 kg/m<sup>2</sup>. Hence, mean age and mean BMI were comparable to each other in two groups.
- Mean gestational age in UCM group was 38.7 ± 1.3 weeks and in DCC group was 38.7 ± 1.2 weeks, which was comparable in both groups.
- Mean birth weight of neonates was also comparable between two groups. Mean birth weight in UCM group was 3043.4 ± 426.1 grams and in DCC group was 3048.7 ± 390.6 grams.
- Mean hematocrit in cord sample in UCM group was 47.0 ± 7.1% and in DCC group was 48.0 ± 8.3, which was comparable in both groups.
- Mean hematocrit at 30 ± 6 hours in UCM group was 54.4 ± 5.8% and in DCC group was 50.9 ± 7.1%. Hence, mean hematocrit at 30 ± 6 hours was higher in UCM group as compared to DCC group and was statistically significant (p<0.01).</li>
- In UCM group, 18.18% neonates required phototherapy and in DCC group, 19.25% neonates required phototherapy. Requirement of phototherapy was comparable in both the groups with non-significant results (p value 0.79).
- In UCM group, 2.67% neonates required NICU admission and in DCC group, 7.49% neonates required NICU admission. Hence, NICU admissions were slightly more in DCC group as compared to UCM group which was statistically significant (p value 0.034).
- Incidence of polycythemia in cord sample in UCM group was 1.07% and in DCC group was 2.67% and incidence of polycythemia at 30 ± 6 hours in UCM group was 2.14% and

in DCC group was 1.6%. Both the groups were comparable to each other with non-significant results.

- In newborn born to anemic mothers, mean hematocrit in cord sample was 45.9 ± 6.4% in UCM group and 48.8 ± 8.4% in DCC group which was statistically significant (P value 0.02). Mean hematocrit at 30 ± 6 hours was 53.2 ± 6.1% in UCM group and 51.5 ± 6.4% in DCC group which was statistically non-significant (P value 0.11). However, the rate of increase of mean hematocrit from cord sample to 30±6 hours was higher in UCM group as compared to DCC group.
- In newborn born to non-anemic mothers, mean hematocrit in cord sample was 47.5 ± 7.4% in UCM group and 47.5 ± 8.3% in DCC group which was statistically non-significant (P value 0.98). Mean hematocrit at 30 ± 6 hours was 55.0 ± 5.5% in UCM group and 50.5 ± 7.4% in DCC group which was statistically significant (P value 0.0001). Also, the rate of increase of mean hematocrit from cord sample to 30±6 hours was higher in UCM group as compared to DCC group.
- In Preterm neonates, mean hematocrit in cord sample was 53.5 ± 9.4% in UCM group and 51.6 ± 7.5% in DCC group which was statistically non-significant (P value 0.65). Mean hematocrit at 30 ± 6 hours was 55.5 ± 4.3% in UCM group and 51.7 ± 6.8% in DCC group which was statistically non-significant (P value 0.22).
- In Term neonates, mean hematocrit in cord sample was 46.8 ± 6.7% in UCM group and 47.8 ± 8.3% in DCC group which was statistically non-significant (P value 0.23). Mean hematocrit at 30 ± 6 hours was 54.5 ± 5.7% in UCM group and 50.8 ± 7.1% in DCC group which was statistically significant (P value 0.0001).
- In AGA neonates, mean hematocrit in cord sample was statistically non-significant (P value 0.25). However, mean hematocrit at 30 ± 6 hours was 53.8 ± 5.6% in UCM group and 50.3 ± 6.9% in DCC group which was statistically significant (P value 0.0001).
- In SGA neonates, mean hematocrit in cord sample as well as at 30 ± 6 hours was statistically non-significant.
- It can be concluded from our study that UCM lead to significant increase in hematocrit levels at 30 ± 6 hours without increasing the side effects like jaundice requiring phototherapy, polycythemia and NICU admissions in term and near term neonates. UCM lead to significant increase in hematocrit in AGA neonates as compared to DCC. Additionally, the rate of increase of hematocrit from cord sample to 30 ± 6 hours was higher in UCM group as compared to DCC in newborn born to both anemic and non-

anemic mothers. Another benefit of UCM is that it does not interfere with resuscitation as it can be performed in lesser time unlike DCC. As DCC has been accepted as standard of care by AAP, UCM can be recommended as an alternative to DCC in all deliveries where DCC is not possible or could not be practiced for any reason.



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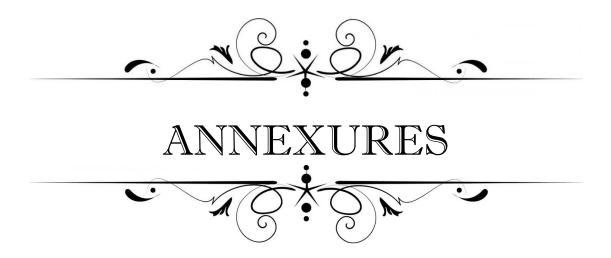
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# List of Annexures

| ANNEXURE NO. | : | TITLE                                |
|--------------|---|--------------------------------------|
| 1            | : | IEC Certificate                      |
| 2            | : | Patient Information sheet in English |
| 3            | : | Patient Information sheet in Hindi   |
| 4            | : | Consent form in English              |
| 5            | : | Consent From in Hindi                |
| 6            | : | Case record form                     |
| 7            | : | Master chart                         |

# ANNEXURE - I



अखिल भारतीय आयुर्विज्ञान संस्थान, जोधपुर All India Institute of Medical Sciences, Jodhpur संस्थागत नैतिकता समिति Institutional Ethics Committee

No. AIIMS/IEC/2020/2070

Date: 01/01/2020

#### ETHICAL CLEARANCE CERTIFICATE

Certificate Reference Number: AIIMS/IEC/2019-20/950

Project title: "Delayed cord clamping versus umbilical cord milking in term and near term neonates - A randomized controlled trial"

| Nature of Project: | Research Project  |
|--------------------|---|
| Submitted as:      | M.D. Dissertation   |
| Student Name:      | Dr.Aashim Garg  |
| Guide:             | Dr.Shashank Shekhar   |
| Co-Guide:          | Dr.Neeraj Gupta, Dr.Pratibha Singh, Dr.Manu Goyal, Dr.Manisha Jhirwal |
|                    | & Dr. Prasenjit Mitra   |

This is to inform that members of Institutional Ethics Committee (Annexure attached) met on 23-12-2019 and after through consideration accorded its approval on above project. Further, should any other methodology be used, would require separate authorization.

The investigator may therefore commence the research from the date of this certificate, using the reference number indicated above.

Please note that the AIIMS IEC must be informed immediately of:

- Any material change in the conditions or undertakings mentioned in the document.
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.
- In case of any issue related to compensation, the responsibility lies with the Investigator and Co-Investigators.

The Principal Investigator must report to the AIIMS IEC in the prescribed format, where applicable, bi-annually, and at the end of the project, in respect of ethical compliance.

AIIMS IEC retains the right to withdraw or amend this if:

- · Any unethical principle or practices are revealed or suspected
- · Relevant information has been withheld or misrepresented

AIIMS IEC shall have an access to any information or data at any time during the course or after completion of the project.

On behalf of Ethics Committee, I wish you success in your research.

Enclose:

1. Annexure 1

Dr. Praveen Sharma Member secretary Institutional Ethics Committee AllMS, Jodhpur

Page 1 of 2

Basni Phase-2, Jodhpur, Rajasthan-342005, Website: www.aiimsjodhpur.edu.in, Phone: 0291-2740741 Extn. 3109 Email: ethicscommittee@aiimsjodhpur.edu.in Annexure 1

# Institutional Ethics Committee All India Institution of Medical Sciences, Jodhpur

Meeting of Institutional Ethics committee held on 23-12-2019 at 10:00 AM at Committee Room, Admin Block AIIMS Jodhpur.

Following members were participated in the meeting:-

| S/No. | Name of Member              | Qualification                                   | Role/Designation in<br>Ethics Committee |
|-------|-----------------------------|---|---|
| 1.    | Dr. F.S.K Barar             | MBBS, MD (Pharmacology)                         | Chairman                                |
| 2.    | Justice N.N Mathur          | LLB   | Legal Expert                            |
| 3.    | Dr. Varsha Sharma           | M.A (Sociology)                                 | Social Scientist                        |
| 4.    | Mr. B.S.Yadav               | B.Sc., M.Sc. (Physics), B.Ed.                   | Lay Person                              |
| 5.    | Dr. K.R.Haldiya             | MD (General Medicine)                           | Clinician                               |
| 6.    | Dr. Arvind Mathur           | MBBS, MS (General Medicine)                     | Clinician                               |
| 7.    | Dr. Surajit Ghatak          | MBBS, MS (Anatomy)                              | Basic Medical Scientist                 |
| 8.    | Dr. Vijaya Lakshmi Nag      | MBBS, MD (Microbiology)                         | Basic Medical Scientist                 |
| 9.    | Dr. Sneha Ambwani           | MBBS, MD (Pharmacology)                         | Basic Medical Scientist                 |
| 10.   | Dr. Kuldeep Singh           | MBBS, MD (Paediatric), DM<br>(General Medicine) | Clinician                               |
| 11.   | Dr. Abhinav Dixit           | MBBS, MD (Physiology), DNB<br>(Physiology)      | Basic Medical Scientist                 |
| 12.   | Dr. Pradeep Kumar<br>Bhatia | MBBS, MD (Anaesthesiology)                      | Clinician                               |
| 13.   | Dr. Tanuj Kanchan           | MBBS, MD (Forensic Medicine)                    | Basic Medical Scientist                 |
| 14.   | Dr. Pankaj Bhardwaj         | MBBS, MD (CM&FM)                                | Clinician                               |
| 15.   | Dr. Praveen Sharma          | M.Sc., Ph.D. (Biochemistry)                     | Member Secretary                        |

Dr. Praveer Sharma ember secretary titutional Ethics Committee AllMS, Jodhpur

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#### Patient Information sheet (PIS)

You are invited to take part in this study entitled "Delayed cord clamping versus Umbilical cord milking in term and near-term neonates- A Randomized Controlled Trial"

It is informed that it is entirely voluntary, and you may refuse to take part or discontinue at any time without losing your right to adequate gynecological care.

The research is aimed at comparing hematocrit in cord sample and at 30+/-6 hours, hematologic parameters at 14 weeks and need for phototherapy and NICU care in the baby following delivery. Consent will be taken from you, then just after delivery, your babies will be divided into two groups. In group 1, umbilical cord milking will be done 4 times while in group 2, delayed cord clamping will be done. Even if you refuse to participate in this study the investigations and the appropriate treatment will be carried out as a regular protocol.

The expected duration of your participation in this study is 14 weeks. There is no specific complication due to the study.

All the records will be kept confidential.

You have the right to ask for any further information that you require.

In case of any doubt regarding the study you are welcome to contact the undersigned personally or by telephone.

Primary Investigator- Dr Aashim Garg

Phone no- 8860346840

# रोगी सूचना पत्र (पीआईएस)

आपको इस ध्ययन में भाग लेने के लिए आमंत्रित किया गया है जिसका शीर्षक है " टर्म में और टर्म के निकट नवजात शिशुओं में विलंबित कॉर्ड क्लैम्पिंग बनाम गर्भनाल की दुहना - एक यादच्छिक नियंत्रित परीक्षण। "

यह सूचित किया जाता है कि यह पूरी तरह से स्वैच्छिक है और आप पर्याप्त स्त्रीरोग संबंधी देखभाल के धिकार को खोए बिना किसी भी समय हिस्सा लेने या बंद करने से इनकार कर सकते हैं। नुसंधान का उद्देश्य प्रसव के बाद बच्चे में हेमटोक्रिट, 14 सप्ताह में हेमाटोलॉजिक पैरामीटर और फोटोथेरेपी और NICU में देखभाल की जरुरत की तुलना करना है। पहले आपसे सहमति ली जाएगी, फिर डिलीवरी के तुरंत बाद, आपके शिशुओं को दो समूहों में विभाजित किया जाएगा। समूह 1 में, गर्भनाल की दुहना 4 बार की जाएगी जबकि समूह 2 में, विलंबित कॉर्ड क्लैंपिंग की जाएगी। यहां तक कि गर आप इस ध्ययन में भाग लेने से इनकार करते हैं तो जांच और उचित उपचार नियमित प्रोटोकॉल के रूप में किया जाएगा। इस ध्ययन में आपकी भागीदारी की पेक्षित वधि 14 सप्ताह है। ध्ययन के कारण कोई विशिष्ट जटिलता नहीं है।

सभी रिकॉर्ड गोपनीय रखे जाएंगे। आपके पास कोई और जानकारी मांगने का धिकार है, जिसकी आपको आवश्यकता है।

ध्ययन के संबंध में किसी भी संदेह के मामले में, आपका व्यक्तिगत रूप से या टेलीफोन द्वारा संपर्क करने के लिए स्वागत है।

प्राथमिक जांचकर्ता- डॉ आशिम गर्ग

फोन नंबर- 8860346840

#### All India Institute of Medical Sciences

#### Jodhpur, Rajasthan

#### **Informed Consent Form**

Title of Thesis/Dissertation: Delayed cord clamping versus Umbilical cord milking in term and near-term neonates- A Randomized Controlled Trial

| Name of PG Student: Dr. Aashim Garg   | Tel. No.: 8860346840 |
|---------------------------------------|----------------------|
| Patient/Volunteer Identification No.: |                      |
| I,                                    | _ W/o or D/o         |
| R/o                                   |                      |

give my full, free, voluntary consent to be a part of the study "A randomized controlled study of Delayed cord clamping versus Umbilical cord milking in term and near term neonates "The procedure and nature of which has been explained to me in my own language to my full satisfaction. I confirm that I have had the opportunity to ask questions. I fully understand that any of the above mentioned observation can be given to me, still I want to be a part of trial. I understand that my participation is voluntary and am aware of my right to opt out of the study at any time without giving any reason. I understand that the information collected about me and any of my medical records may be looked at by responsible individual from AIIMS, Jodhpur or from regulatory authorities. I give permission for these individuals to have access to my records.

| Date:                                |                                       |
|--------------------------------------|---------------------------------------|
| Place:                               | Signature/Left thumb impression       |
| This to certify that the above conse | ent has been obtained in my presence. |
| Date:                                |                                       |
| Place:                               | Signature of PG Student               |
| Witness 1                            | 2. Witness                            |
| Signature                            | Signature                             |
| Name                                 | Name:                                 |
| Address:                             | Address:                              |
|                                      |                                       |

# ऑल इंडिया इंस्टिट्यूट ऑफ मैडिकल साईंसिस

#### जोधपुर, राजस्थान

# सूचित सहमति प्रपत्र

| थीसिस / शोध प्रबंध का शीर्षक: टर्म में और टर्म के निकट न | ावजात शिशुओं में विलंबित कॉर्ड क्लैम्पिंग |
|--|---|
| बनाम गर्भनाल की दुहना - एक यादच्छिक नियंत्रित परीक्षण।   |   |
| पीजी छात्र का नाम: डॉ आशिम गर्ग फोन नंबर: 8860346        | 5840                                      |
| रोगी / स्वयंसेवक पहचान संख्याः                           |   |
| मैं पति /  | पिता                                      |

पता

पताः

ध्ययन का एक हिस्सा बनने के लिए मेरी पूर्ण, स्वतंत्र, स्वैच्छिक सहमति दें "विलंबित कॉर्ड क्लैम्पिंग बनाम गर्भनाल की दुहना में एक यादच्छिक नियंत्रित ध्ययन, टर्म में और टर्म के निकट नवजात शिशुओं में " जिसकी प्रक्रिया और प्रकृति मुझे पनी भाषा में व्याख्या की गई है। मैं पुष्टि करता/करती हूं कि मुझे सवाल पूछने का वसर मिला है। मैं पूरी तरह से समझता/समझती हूं कि उपर्युक्त वलोकन में से कोई भी मुझे दिया जा सकता है, फिर भी मैं परीक्षण का हिस्सा बनना चाहता/चाहती हूं। मैं समझता/समझती हूं कि मेरी भागीदारी स्वैच्छिक है और बिना किसी कारण के किसी भी समय ध्ययन से बाहर निकलने के मेरे धिकार से वगत हूं। मैं समझता/समझती हूं कि मेरे और मेरे किसी भी मेडिकल रिकॉर्ड के बारे में एकत्रित जानकारी को एम्स, जोधपुर के जिम्मेदार व्यक्ति या नियामक धिकारियों से देखा जा सकता है। मैं इन व्यक्तियों को पने रिकॉर्ड तक पहुंचने की नुमति देता/देती हूँ।

| स्थानः                     | हस्ताक्षर / बाएंंगूठे का निशान                               |
|----------------------------|--|
| यह प्रमाणित करने के लिए कि | <sup>5</sup> मेरी उपस्थिति में उपरोक्त सहमति प्राप्त हुई है। |
| जगह:                       | पीजी छात्र के हस्ताक्षर                                      |
| गवाह 1                     | गवाह 2   |
| हस्ताक्षर                  | हस्ताक्षर  |
| नामः                       | नाम:   |

पताः \_\_\_\_\_

#### **CASE RECORD SHEET:-**

NAME:

AGE:

OCCUPATION:

REG. ID:

QUALIFICATION:

**RESIDENCE:** 

PHONE NO-

• Chief complaint-

• HOPP

|                   | Yes | No |
|-------------------|-----|----|
| Iron supplements  |     |    |
| Anemia            |     |    |
| Chronic           |     |    |
| Hypertension      |     |    |
| Pre-eclampsia     |     |    |
| Diabetes Mellitus |     |    |
| Fetal Growth      |     |    |
| Restriction       |     |    |
| Preterm labour    |     |    |
| PPROM             |     |    |
| Circlage          |     |    |
| Placental/cord    |     |    |
| abnormality       |     |    |

EDD-

• Menstrual History:

Menstrual cycle

LMP-

POG-

- Obstetric History:
- Past History:
- Personal History:

#### On Examination:

- General condition
- Pulse- rate /min
- Blood pressure- mmHg
- Respiratory rate- /min
- Temperature-
- Pallor- Icterus- Cyanosis- Clubbing- Lymphadenopathy- Edema-
- Weight (Kg): Height(cm): Body Mass Index (Kg/m2):
- Central Nervous System:
- Respiratory System:
- Cardio-Vascular System:
- Per-Abdomen:

Final Diagnosis:

Investigations-

|             | Date- |
|-------------|-------|
| Blood Group |       |
| CBC-        |       |
| Hb          |       |
| TLC-        |       |
| Plt         |       |

#### CASE RECORD SHEET OF NEONATE:-

| Baby of (Name of Mother)        |              | REG. ID:_ |                   |
|---------------------------------|--------------|-----------|-------------------|
| • Name of Father                |              |           |                   |
| • Date and Time of Birth        |              |           |                   |
| • Sex (male/ Female/ Ambiguous) | )            |           |                   |
| Birth weight-                   | Apgar Score- |           | Mode of delivery: |

Liquor:

Study group- Umbilical cord milking/delayed cord clamping

#### **Neonatal Parameters:**

| Hematocrit in % |  |
|-----------------|--|
| Cord Sample     |  |
| At 30+/-6 hours |  |

|                    | YES | NO |
|--------------------|-----|----|
|                    |     |    |
| Jaundice requiring |     |    |
| phototherapy       |     |    |
| Need for NICU care |     |    |
|                    |     |    |

## Follow Up

| S. ferritin at 14 weeks |  |
|-------------------------|--|
| Hemoglobin at 14 weeks  |  |

| Registration ID Age Qualification   | on Occupation Basilance BM(RgHD) Grades Parity  | POG iron supplements Amernia   | Associated Pregnancy Complications Blood Group   | Haemoglobin Begistration ID OF NCOWNTE See OF BABY Maturity  | Birth weight (grams) AGA/SGA/LGA Apgar at 1 min  | Apgar at 5 min Mode of delivery Study Group   | Hematocrit in cord sampi Hematocrit at 20+/ 6 hos laundice requiring p   | hoto Need for NCU care Ferritin at 34 weeks Haemoglobin at 34 weeks             |
|---|---|--|--|--|--|---|--|---|
| AMAK(2H)(2020)(8)(023465 22) For Graduat<br>AMAK(2H)(2020)(8)(023022 20) Higher Seco<br>AMAK(2H)(2020)(20)(0682 25 Graduation<br>AMAK(2H)(2020)(7)(06409 25 III)erete<br>AMAK(2H)(2020)(7)(06409 28 Graduation<br>AMAK(2H)(2020)(7)(06479 28 Graduation   | Bit (bgb)         October         Party           Naturality         <  | POG         Hon supplements         Advents           0 33+-1         VES         Advant           2 38+-2         VES         Mod           1 37-4         VES         Advant           0 41-2         NO         Advant           0 33+2         VES         Advant           0 41-2         NO         Advant           1 32         VES         Advant           0 43-4         VES         Advant           0 40-1         NO         Moderntrat  | None D<br>None B<br>None D   | Haemopticin         Bargistration ID OF SIXCINIT.         Son OF Balary         Manuary           14 arXiv:01/01/22/03/02/03/02         Franting         Tam   | 3178 AGA<br>2720 AGA<br>2517 AGA<br>3277 AGA<br>3277 AGA   | B 9 Vaginal Umbilical cord n     B 9 Vaginal Delayed cord n     B 9 Vaginal Umbilical cord n  | Ráng         44.5         46.6 NO           spöng         42.9         42.1 NO           Ráng         41.1         52.1 NO           Ráng         48.9         53.1 NO           Ráng         48.9         53.1 NO   | NO<br>NO<br>NO<br>NO  |
| AMAK(24)(2020)(3)(006866 27 Secondary 5<br>AMAK(24)(2020)(3)(001176 20 Millerate<br>AMAK(24)(2020)(3)(00176 24 Secondary 5<br>AMAK(24)(2020)(3)(202729 27 Higher Seco<br>AMAK(24)(2020)(3)(20279 27 Higher Seco   | h         Housevelle         Urban         232125         2           Microardine         Aural         20.57         3           Histourelle         Aural         20.59         3           Microardine         Aural         20.59         3           Solidi         Histourelle         Urban         21.1         1           Solidi         Histourelle         Urban         21.2         1           Histourelle         Aural         21.238         1  | 0 40+3 NO Moderate<br>0 36+6 YES Abuent<br>0 38+6 YES Abuent<br>0 38+0 YES Mild  | Note a<br>Diabete matibas O<br>Note A<br>1950 A<br>19500 A<br>19500 A<br>1950 A<br>1950 A<br>1950 A<br>195   | 11.6 A AMAGU24/22023(M 2002384 Fernale Term<br>8.1 A AMAGU242023(S) (2010) Fernale Term<br>11.2 AMAGU24/22023(S) (2010) Male Preterm<br>12.2 AMAGU24/22023(S) (2020) Fernale Term<br>10.6 A AMAGU24/22023(S) (2020) Fernale Term   | 2289 SGA<br>2530 SGA<br>2622 AGA<br>2815 AGA<br>2815 AGA   | Societariana Constancia de la constancia de la<br>Societaria de la constancia de la constancia de la constancia de la constancia de la<br>Societaria de la constancia de la constancia de la consta   | Ring 45.1 56.3 NO<br>Ring 61.8 54.4 YES<br>Ring 18.6 58.1 NO   | NG<br>NG<br>NG  |
| AMAC_CEN_(CD2202)QD20575         24         Secondary 7           AMAC_CEN_(CD2202)QD205770         27         Hyper Factor           AMAC_CEN_(CD2202)QD205770         20         Bit Secondary 7           AMAC_CEN_(CD2202)QD205770         21         Bit Secondary 7           AMAC_CEN_(CD2202)QD205770         21         Bit Secondary 7           AMAC_CEN_(CD2202)QD20570         21         Bit Secondary 7           AMAC_CEN_(CD2202)QD205771         21         Bit Secondary 7           AMAC_CEN_(CD2202)QD205777         20         Generatory 7           AMAC_CEN_(CD2202)QD205777         20         Generatory 7   | Good         Own  | 0 41 NO Mild<br>1 37 YES Absent  | hypothyroldium A<br>None D<br>Gestsfonal Hypertension B<br>Diabetes mellitus, Hegastis & Positive D  | 11.4 ABM5/054/2020/02/005511 Male Term<br>10.3 ABM5/054/2020/05/00568 Male Term<br>10.1 ABM5/02/2020/05/00509 Fermit Term<br>12.2 ABM5/054/2020/05/00509 Male Term   | 2620 SGA<br>3479 AGA<br>3371 AGA   | B 9 Cassarean Debuyed cont cl     B 9 Vaginal Debuyed cont cl     B 9 Vaginal Debuyed cont cl     7 9 Cassarean Umbilical cont n     B 9 Cassarean Umbilical cont n   | rping 52.9 55.8 NO<br>rping 29.5 55.2 NO<br>Iking 40.6 44.4 NO   | ND<br>ND<br>ND  |
| AIM5/JDH/2020/01/028189 19 Secondary S  | School Housewife Urban 22.19 1  | 3         34-5         VES         Absent           2         24-5         VES         Moderate           1         39         VES         Absent           0         34-5         VES         Absent           0         34-5         VES         Absent           0         39-5         VES         Absent  | Diabetes melitzur, Hepatitis & Poditie O<br>Diabetes melitzus O<br>Diabetes melitzus O<br>Pre eclampaia A<br>Preterm labour O<br>Hypotynolism, short stature B   | 1.2.3 A MARG/194/2023/0/200500 Male Term<br>1.2.7 A MARG/194/2023/0/2015201 Fernal Term<br>9.4 A MARG/194/2023/0/2015728 Male Term<br>1.4.6 A MARG/194/2023/0/2015021 Fernals Term<br>1.1.7 A MARG/194/2023/0/2015022 Fernals Preferent<br>1.1.4 A MARG/194/2023/0/2015022   | 2380 SGA<br>3221 AGA<br>2886 AGA<br>2288 SGA<br>2777 AGA<br>3232 AGA   | B 9 Caesarean Umbilical conf n     9 9 Caesarean Umbilical conf n     9 9 Caesarean Umbilical conf n     9 9 Caesarean Umbilical conf n     8 9 Vaginal Umbilical conf n   | lking 50.6 59.9 NO<br>lking 46.7 54.8 NO   | ND<br>ND<br>ND<br>ND<br>VS  |
| AMM5(204)2020/10/000556 22 Illiterate<br>AMM5(204)2020(09/00/0911 22 Graduation<br>AMM5(204)2020(09/1017A22 26 Graduation<br>AMM5(204)2020(02/004562 21 Higher Secon  | Housewife         Aural         22.38         1           Housewife         Aural         22.34         2           N         Working         Ustan         2.56         5           ombry         Housewife         Ustan         2.26         4           N         Housewife         Ustan         2.27         2           N         Housewife         Ustan         2.27         2   | 0 28+6 YES Absent<br>1 28+6 YES Mild<br>2 28+1 NO Moderate<br>2 29+2 YES Moderate  | None D<br>None A<br>None A<br>None A   | 11.4 AIM5()254/2020/11/000200 Fermale Term<br>10 AIM5()254/2020/11/00123 Fermale Term<br>7.5 AIM5()2020/10/2021/001264 Fermale Term<br>8.7 AIM5()254/2020/02/00266 Fermale Term  | 2248 AGA<br>2265 AGA<br>3535 AGA<br>3630 AGA<br>3677 AGA<br>2554 AGA   | B 9 Vaginal Delayed cord cl     B 9 Vaginal Delayed cord cl     B 8 8 Censurean Delayed cord cl     B 9 Cansurean Delayed cord cl   | 100         54.7         62.4         NO           mping         54.6         44.5         YES           mping         24.6         45.2         YES           mping         44.8         52.7         NO           mping         43.9         45.2         NO           Mon         50         52.7         NO  | ON<br>22Y<br>ON<br>ON   |
| AMAGAD(2023)24(9)(2012) 1 Graduation<br>AMAGAD(2023)24(9)(2012) 2 2 Binner<br>AMAGAD(2012)24(9)(2012) 2 2 Binner<br>AMAGAD(2012)24(9)(2012) 2 2 Graduation<br>AMAGAD(2012)24(9)(2012) 2 3 Hope (no<br>AMAGAD(2012)24(9)(2012) 3 Hope (no<br>AMAGAD(2012)24(9)(2012) 2 1 Hope (no<br>AMAGAD(2012)24(9)(2012) 2 Hope (no<br>AMAGAD(2012)24(9)(2012  | Handh         Rad         7.23         1           Handh         Rad         2.14         2.1         2           Handh         Rad         2.14         2         2           other         Bandh         Bandh         2.14         2         2           other         Bandh         Usin         2.07         4         3           Handh         Usin         2.17         2         4           Handh         Usin         2.17         2         1           Handh         Usin         2.16         1         1         1           Handh         Usin         2.16         1   | 0.31-6         VIS         Annert           1.31-6         VIS         Mdd           2.31-1         NO         Moderata           2.31-1         VIS         Moderata           1.32-6         VIS         Annert           1.32-6         VIS         Annert           0.32-5         VIS         Moderata           0.33-5         VIS         Moderata           0.33-6         VIS         Moderata           0.33-6         VIS         Moderata           0.33-6         VIS         Annert           0.33-6         VIS         Annert  | None A<br>hypothyvoldium with gestational hyportensio A<br>Pre eclampsia, Hypothyroldiam B<br>None A<br>Hillo With Severe MS with hypothyroldiam B   | L 3 AMAC/0122203(2)20020     Final Term     L 3 AMAC/0122203(2)20020     Final Term     13 AMAC/0122203(2)201210     Final Term     3 AMAC/0122203(2)201210     Final Term     3 AMAC/0122203(2)201210     Final Term     3 AMAC/0122203(2)2012012     Final Term     2 J AMAC/0122203(2)2012012     Final Term     2 J AMAC/0122203(2)2012012     Maca Term     2 J AMAC/0122203(2)2012012     Maca Term     2 J AMAC/0122203(2)2012012     Final Term     2 J AMAC/0122203(2)2012012     Maca Term     2 J AMAC/0122203(2)201201     Maca Term     2 J AMAC/0122203(2)2012012     Final Term     2 J AMAC/0122203(2)201201     Maca Term     2 J AMAC/0122203(2)201201     Maca Term     2 J AMAC/0122203(2)201201     Maca Term     2 J AMAC/0122203(2)201201     Final Term     J J J J J J J J J J J J J J J J J  | 3677 AGA<br>2554 AGA<br>2638 SGA<br>2638 SGA<br>2948 AGA<br>2940 AGA   | Constraint Unabled out      Vegel     Veg   | 41.8         41.1         NO           Nong         50         52.7         NO           Nong         51.4         56.6         NO           Nong         41.4         56.9         NO           Nong         65         47.1         NO           Nong         51.3         58.8         NO           Nong         41.4         45.3         YIS  | ND<br>ND<br>ND<br>ND  |
| AIM5/JDH/2020/01/030865 26 Secondary Se   | School Housewife Rural 22.9 3   | 0         324         218         6         348-5         100         348-5  | Highlmanka, Alori tatura B<br>Kara Sana Sana Sana Sana Sana Sana Sana S  | 12.7 ABM5/024/2220/02/000441 Maile Term<br>12.7 ABM5/024/2220/02/00646 Maile Term<br>13.7 ABM5/024/2220/02/02488 Fernale Term<br>10.4 ABM5/024/2220/0220/02367 Fernale Preterm   | 2147 ACA<br>2955 ACA   | B         9         Vaginal         Debyed cond cl           9         10         Vaginal         Debyed cond cl           8         9         Vaginal         Debyed cond cl   | mping 46.4 56.4 NO   | NC<br>NC<br>NC  |
| AMAGUAU(20194000-27 10 HIMINY DOS<br>AMAGUAU(20204000-622 12 2 Pot 6 Finally<br>AMAGUAU(20204000-621 12 Pot 6 Finally<br>AMAGUAU(2020400-0612) 12 Pot 6 Finally<br>AMAGUAU(2020400-0612) 12 Pot 6 Finally<br>AMAGUAU(202040-0612) 12 Pot 6 Finally<br>AMAGUAUU(202040-0612) 12 Pot 6 Finally<br>AMAGUAUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU  | vistore         Ustran         22.50         1           Maxareffe         Ustra         23         6           N         Housewife         Ustra         23.05         1           Sodial         Housewife         Ustra         23.05         1           Sodial         Housewife         Ustra         23.23         1           Sodial         Housewife         Ustra         23.27         4           Sodiary         Housewife         Ustra         23.27         4  | Direction         Add YES         Abuent           S 31+6         WES         Mild           O 37+5         WES         Moderate           O 37+2         WES         Abuent           2 40+2         WES         Moderate           2 40+2         WES         Moderate           1 40+1         WES         Abuent   | Geststional Hypertension B<br>None B<br>None B<br>None B<br>None B   | 12.8 ABM5/124/2020/11/008422 Male Term<br>10.4 ABM5/124/2020/12/00120 Ferale Term<br>9.4 ABM5/124/2020/72009/15 Ferale Term<br>11.6 ABM5/124/2020/700825 Ferale Term<br>9.2 ABM5/124/2020/7008155 Ferale Term  | 2003 AGA<br>2033 SGA<br>2049 SGA<br>2049 SGA<br>2042 SGA<br>2042 SGA<br>2042 SGA<br>2043 AGA   | O 20 Vagnal Delayad and California   | Marg         46.1         5.1.9         NO           mping         5.1.3         6.2.3         NO           mping         5.1.3         6.2.3         NO           mping         4.1.1         5.1.7         YS           mping         4.2.4         5.2.7         NO           mping         4.2.4         5.2.7         NO  | NO<br>NO<br>NO<br>NO  |
| AMAC(20)(23)(24)(20)(27)<br>AMAC(20)(23)(24)(20)(27)<br>AMAC(20)(23)(24)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(20)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(23)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)<br>AMAC(20)(27)(27)(27)(27)(27)(27)(27)(27)(27)(27   | South         Usame         22.27         1           Numerie         Usam         22.27         4           Numerie         Usam         22.27         4           ondrey         Numerie         Usam         22.43         2           staty         Numerie         Usam         22.43         2           staty         Numerie         Usam         22.43         2           staty         Numerie         Usam         22.47         1           staty         Numerie         Usam         22.47         1           staty         Numerie         Usam         22.47         1           staty         Staty         22.47         1         1  | 1 42 YES Absent<br>0 35+0 YES Absent<br>0 37+5 YES Absent  | Pretem labour O<br>Censtration Uprotensions B<br>Note B<br>Note B<br>Note B<br>Note B<br>Note O<br>Note C<br>Dubers melliou, PROM A<br>Note B  | A 81M5(704/2020)/56(700120 Female Term<br>13.8 A M3M5(704/2020)/50(7010) Female Post term<br>13.4 A M3M5(704/2020)/62/20204 Female Preterm<br>13.4 A M3M5(704/2020)/62/20204 Female Term   | 2400 AGA<br>2169 AGA<br>2815 AGA<br>3154 AGA<br>2403 SGA   | B 9 Vaginal Umbiliai cord r     B 9 Vaginal Umbiliai cord r     B 9 Vaginal Umbiliai cord r     F 9 Vaginal Umbiliai cord r     7 9 Vaginal Debays Cord 1     8 9 Vaginal Umbiliai cord r   | Ring 54.5 62.6 NO<br>ming 46.6 49 NO   | ND<br>ND<br>ND  |
| AIM5/JDH/2020/12/002743 34 Graduation   | n Housewife Rural 23.66 6<br>School Housewife Rural 23.7 1  | 1 40+1 YES Moderate<br>4 38+1 YES Absent   | Diabetes melibus A<br>None AB<br>None AB<br>None B<br>None B   | 1.3 # AMARC/1914/2023/05/00/0777 Multie Term     11.5 AMARC/1914/2023/07/070740 Multie Term     10.2 AMARC/1914/2023/07/10/07490 Multie Term     1.1 AMARC/1914/2023/07/01/01/0716 Multie Term     12.2 AMARC/1914/2023/07/01/01/0716 Term     11.4 AMARC/1914/2023/07/01/01/0716 Term   | 2963 AGA   | 8 9 Vaginal Delayed cord ch   | mping 51.9 54.2 NO   | ND<br>ND<br>ND  |
| AMAL(20)(2023)(2)(2)(2)(2)(2)         2)         Spenchary (s)           AMAL(20)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)  | Instands         Mate         1.2.7         2           Mate         1.2.8         1.2.1         1.2.1           Mate         1.2.1         1.2.1         1.2.1           Mate         1.2.1 <td< td=""><td>1         4-1         95         Maderate           4         3-1         50         Anter           3         3-1         60         Maderate           3         3-1         60         Maderate           4         3-1         60         Maderate           5         3-1         60         Maderate           6         6-2         95         Abaset           7         15         Maderate         64           2         2         95         Maderate           0         17-0         95         Maderate           0         17-0         Maderate         164           1         17-0         17         95         Maderate           0         17-0         165         Maderate         164           1         17-0         17         95         Maderate</td><td>Nord         I           Nord         I</td><td>11.8 AMM5/1241(2320)/02/03027 Female Term     8.4 AMM5/104(2320)/05/030579 Female Term     12 AMM5/124(2320)/05/02046 Female Term     12.9 AMM5/1241(2320)/02/0326 Male Term     10 2 AMM5/1241(2320)/02/0326 Male Term</td><td>2161 AGA<br/>2007 AGA<br/>2008 AGA<br/>2008 SGA<br/>2007 AGA<br/>2007 AGA<br/>300 AGA<br/>2007 AGA<br/>2007 AGA<br/>2007 AGA</td><td>B Vignal Unbillion of F     Vignal Unbillion of F     Vignal Unbillion of F     Vignal Unbillion     Vignal Unbillion     Vignal Delivery of the f     Vignal Delivery of the f</td><td>Along         44.6         54.4         153           Along         2.1         4.1         153           Along         2.2         4.1         154           Along         2.5         2.3         154           Along         4.6         4.8         100           Marking         4.2         4.8         100           Marking         4.2         4.8         100           Marking         4.2         4.2         100           Marking         4.3         5.2         100           Marking         4.4         5.2         100</td><td>ND<br/>ND<br/>ND<br/>ND</td></td<>  | 1         4-1         95         Maderate           4         3-1         50         Anter           3         3-1         60         Maderate           3         3-1         60         Maderate           4         3-1         60         Maderate           5         3-1         60         Maderate           6         6-2         95         Abaset           7         15         Maderate         64           2         2         95         Maderate           0         17-0         95         Maderate           0         17-0         Maderate         164           1         17-0         17         95         Maderate           0         17-0         165         Maderate         164           1         17-0         17         95         Maderate   | Nord         I  | 11.8 AMM5/1241(2320)/02/03027 Female Term     8.4 AMM5/104(2320)/05/030579 Female Term     12 AMM5/124(2320)/05/02046 Female Term     12.9 AMM5/1241(2320)/02/0326 Male Term     10 2 AMM5/1241(2320)/02/0326 Male Term  | 2161 AGA<br>2007 AGA<br>2008 AGA<br>2008 SGA<br>2007 AGA<br>2007 AGA<br>300 AGA<br>2007 AGA<br>2007 AGA<br>2007 AGA                                      | B Vignal Unbillion of F     Vignal Unbillion of F     Vignal Unbillion of F     Vignal Unbillion     Vignal Unbillion     Vignal Delivery of the f  | Along         44.6         54.4         153           Along         2.1         4.1         153           Along         2.2         4.1         154           Along         2.5         2.3         154           Along         4.6         4.8         100           Marking         4.2         4.8         100           Marking         4.2         4.8         100           Marking         4.2         4.2         100           Marking         4.3         5.2         100           Marking         4.4         5.2         100  | ND<br>ND<br>ND<br>ND  |
|   | School Housewife Aural 22.55 1<br>h Housewife Aural 24.056 3<br>School Housewife Aural 24.066 2<br>h Housewife Urban 24.12 1  | O         33-1         NO         American           1         33-1         NO         American           0         34-2         15         American           1         34-1         15         American           0         34-1         15         Malit           0         34-1         15         Malit           0         34-1         15         Malit           0         34-1         15         Malit           0         2         27         15         Malit           0         34-2         15         Malit         Malit           0         34-2         15         Malit         Malit           1         34-2         15         Malit         Malit  | Nore O<br>Diabetes melitus A<br>Nore O<br>Pre eclampsia Ala  | E.4. AMAC/2012/2016/02/1077 Finner/a     Term     12. AMAC/2012/2016/02/1071     Emm     3. AMAC/2012/2016/02/02/10     Mac/2012/2016/10/2016     Mac/2012/2016/10/2016     Finner/a     E.3. AMAC/2012/2016/10/20179     Finner/a     Emm     3.3. AMAC/2012/2016/10/20179     Finner/a     Emm     3.4. AMAC/2012/2016/10/20179     Finner/a     Emm     12.4. AMAC/2012/2016/10/20179     Finner/a     Emm     12.4. AMAC/2012/2016/10/20179     Finner/a     Emm     12.4. AMAC/2012/2016/10/20179     Finner/a     Emm  |  | B B Vaginal Umbilical cord r     B 9 Cassarean Debyed cord:     9 00 Cassarean Umbilical cord r     B 9 Vaginal Umbilical cord r  | spate         1         4.5.4         10.7           spate         4.4         4.2.2         10.7           spate         4.4         4.2.2         10.7           spate         4.4         4.2.2         10.7           spate         4.4         5.2.1         10.7           spate         4.3.1         5.6.2         10.7           spate         4.3.1         5.6.2         10.7           spate         4.3.1         5.6.2         10.7           spate         4.4.4         6.6.5         NO           Ring         4.2.6         4.7.9         NO   | ND<br>ND<br>ND  |
|   | h         Houseville         Uthan         24.12         1           N         Working         Uthan         24.13         3           ondray         Houseville         Uthan         24.13         3           n         Houseville         Uthan         24.15         3           houseville         Uthan         24.15         1           School         Houseville         Uthan         24.25         1           Houseville         Uthan         24.23         2   | Mild         231         C=66         0           Mild         X23         Y         S=46         1           Mild         X33         Y         S=46         0           Mild         X33         Y         S=46         1  | None Ali<br>None B<br>None O<br>Graves disease O<br>Clabes mellous Ali   | 9.4 AMM/304(2302)1/1000212 Female Term<br>10.8 AMM/504(2302)1/2000109 Female Term<br>11.2 AMM/504(2302)0200109 Female Term<br>12.7 AMM/504(2302)02/00019 Female Term<br>11.5 AMM/504(2302)02/00019 Female Term   | 2519 AGA<br>2825 AGA<br>2802 AGA<br>2641 SGA<br>2343 AGA   | O       |  | NG<br>NG<br>NG  |
| AMA5(JDH/02020/11/000501 22 Illiterate<br>AMA5(JDH/02020/07/00559 23 Primary Sche<br>AMA5(JDH/02020/07/003478 24 Post Graduar<br>AMA5(JDH/02020/05/0000 30 Post Graduar   | Nonsentity         Using         14.165         1           Manuardis         Karaf         32.2         1           Manuardis         Galaria         32.3         1           Manuardis         Galaria         32.3         1           Manuardis         Galaria         32.3         1           Manuardis         Galaria         32.3         1           Manuardis         Galaria         32.4         2           Manuardis         Galaria         32.4         2           Manuardis         Galaria         32.4         3           Manuardis         Manuardis         34.4         3  | 0 38+3 YES Absent<br>1 40+3 NO Mild<br>0 37+3 YES Absent   | None A<br>None O<br>None O<br>None a   | 1.3.5 AMARG/1941/2023/0.1 (1902/200) Mole Term<br>10.0 AMARG/1941/2023/0.1 (1902/2017) Foreial Term<br>11.1 AMARG/1941/2023/0.1 (1900/2017) Foreial Term<br>11.1 AMARG/1941/2023/0.1 (1902/2016) Mole Term<br>10.5 AMARG/1941/2023/0.1 (1902/2016) Mole Term<br>10.5 AMARG/1941/2023/0.1 (1902/2016) Foreial Term  | 2916 ACA<br>3500 ACA<br>2759 ACA   | soughet Constraints      constraint constraint      constraint constraint       | Bing         41.7         57.2         NO           Ring         36.1         42.2         NO           Ring         26.1         42.8         NO           mping         36.1         42.8         NO   | ND<br>ND<br>ND  |
| AIMS/3DH/2020/08/001784 31 Higher Secon   | usion         Data         24.4         2           Sould Houseville         Uitan         24.0         3           v         Working         Uitan         24.5         1           othy         Houseville         Uitan         24.5         2           othy         Houseville         Uitan         24.5         2           onthy         Houseville         Uitan         24.5         3  | 0 37+1 YES Mild  | None B<br>None O   | 11.2 AMM/2164/2302/11/00216 Mule Term<br>10.5 AMM/2162/2302/11/00516 Ferralie Term<br>9.8 AMM/2162/2302/10/00536 Mule Term<br>11.4 AMM/2162/2302/02/00536 Mule Term<br>12.6 AMM/2162/2302/02/0018 Mule Term  | 4046 AGA<br>2002 AGA<br>2003 AGA<br>2722 SGA<br>2005 AGA<br>2346 AGA   | 8 9 Vaginal Delayed cord ct<br>8 9 Varinal Umbilical cord r   | mping 43 45.3 NO<br>mping 46 42.6 NO   | NG<br>NG<br>NG  |
| AIM5/JDH/2020/06/001171 26 Secondary Se   | Name         Name         Name         Name         Name           Name         Na   | 2 28+4 YES Absent<br>0 29+5 YES Absent   | Diates millar a<br>alghydramsas a<br>Nor A<br>Nor O<br>Nor O<br>Diates millar a<br>Nor B<br>Nor B<br>Nor A<br>Nor A<br>N   | 13.3 ABM5/054/2020/05/001820 Fernale Term<br>11.7 ABM5/054/2020/05/000728 Male Term<br>13.5 ABM5/054/2020/05/00727 Fernale Term<br>11.4 ABM5/054/2020/05/001559 Male Term  | 2265 SGA<br>2470 AGA<br>2260 AGA<br>2260 AGA<br>2260 AGA<br>2527 SGA<br>2264 SGA<br>2164 AGA   | A Constant Const   | Bing         35.9         61.7         NO           Bing         51.3         48.1         VES           Bing         56.4         56.6         NO           mping         43.3         39.2         NO  | NO<br>NO<br>NO  |
| AMAK_2101/02300/005066 26 Primary Sci.<br>AMAK_2101/023011/0005076 27 Priet Graduar<br>AMAK_2101/023011/0005070 28 Graduar<br>AMAK_2101/023011/0005070 28 Graduar<br>AMAK_2101/023011/0005076 24 Primary Sci.<br>AMAK_2101/023011/0005076 24 Primary Sci.<br>AMAK_2101/023011/0005076 24 Primary Sci.<br>AMAK_2101/023011/0005076 24 Primary Sci.   | Shoat         Nouseen         Ustan         24.65         1           Shoat         Nouseen         Ustan         24.65         1           Shoat         Nouseen         Ustan         24.67         1           Shoate         Nouseen         April 10         24.07         1           Shoate         Nouseen         April 20         2         3           Shoate         Nouseen         Ustan         24.77         3           Shoate         Nouseen         Ustan         24.77         3   | 1         0007         1017         1017           2         1076         218         Adomit           0         201         105         Moderate           0         201         105         Adomit           2         201         105         Adomit           2         201         105         Adomit           2         101         105         Moderate           2         101         105         Moderate           0         200         105         Mod           0         200         105         Mod   | None O<br>Cibbetes melitus B<br>None B<br>Pre eclampsia AB<br>None AB  | 1.4         AMAC/2012/2006/02136         Male         Tem           8.4         AMAC/2012/2006/02137         Male         Tem           1.5         AMAC/2012/2006/02137         Male         Tem           7.7         AMAC/2012/2006/02137         Male         Tem           8.4         AMAC/2012/2006/02136         Kinds         Tem           1.5         AMAC/2012/2006/021321         Male         Tem           1.3         AMAC/2012/2006/021321         Kinds         Tem           1.1         AMAC/2012/2006/021321         Male         Tem           1.2         AMAC/2012/2006/021321         Male         Tem           1.7         AMAC/2012/2006/021321         Male         Tem   | 2428 SGA<br>2188 AGA<br>2177 AGA<br>2176 AGA<br>2186 AGA<br>2555 SGA   | B 9 Casement Delayed cord 6     B 20 Vaginal Delayed cord 6     9 20 Vaginal Umbilical cord n     B 9 Casement Umbilical cord n     B 9 Casement Umbilical cord n   | 41 232 NO<br>mpring 52.6 64.4 NO<br>mpring 52.7 64.4 NO<br>Ricing 24.7 44.3 NO<br>Ricing 52.4 54.5 NO<br>mpring 47 48 YES<br>mpring 52.9 522 NO  | NG<br>NG<br>NG  |
| ABM5/304/2016/12/002678 28 Post Graduar   | ondary Houseville Urban 24.77 2<br>adon Working Urban 24.78 2<br>adon Working Urban 24.78 2<br>bol Houseville Urban 24.8 2<br>bol Houseville Rural 24.9 1   | 1 28+2 YES Absent<br>1 28+5 YES Mid<br>0 29+1 YES Absent   |  | 10.3 AMM/(304/(2320)/10001200 Fermile Term<br>11.3 AMM/(304/(2320)/93/0011205 Maile Term<br>10 AMM/(30230)/2300058 Maile Term<br>11.7 AMM/(304/(2320)/2300644 Maile Term   | 2234 AGA<br>2188 AGA<br>2162 AGA   | 8 9 Caesarean Delayed cord ch   | nping 56.2 48.4 NO   | NG<br>NG<br>NG  |
| AMACCAN(2023)(2013)         27         Higher face           AMACCAN(2023)(2013)         27         Higher face           AMACCAN(2023)(2013)(2014)         21         Face           AMACCAN(2023)(2013)(2014)         21         Graduation           AMACCAN(2023)(2014)(2014)         21         Graduation           AMACCAN(2023)(2014)(2014)         21         Graduation           AMACCAN(2023)(2014)(2014)         21         Graduation           AMACCAN(2023)(2014)(2014)         21         Graduation           AMACCAN(2023)(2014)(2   | andray         Julian         246         1           Machano         Unitaria         2,60         2           Machano         Unitaria         2,60         2           Machano         Machano         2,14         2           Machano         Machano         2,14         2           Machano         Machano         2,12         4           Machano         2,12         4         4  | 0 334-6 VES Abaset<br>3 27-5 VES Abaset<br>1 23-5 VES Abaset<br>0 32 25 Abaset<br>1 23-5 VES Abaset<br>1 24-5 VES Abaset<br>1 40-1 VES Abaset<br>0 40-2 VES Abaset<br>0 40-2 VES Abaset  | Hypothyroldium B<br>None B<br>None B<br>None B   | 11.2 AMA/C/34/02321/10/03218 Male Term<br>12.3 AMA/C/34/023201/02518 Fernár Term<br>12.2 AMA/C/34/02320/34/05576 Fernár Term<br>12.4 AMA/C/34/02320/34/05577 Marie Term<br>12.4 AMA/C/34/02320/4/05127 Fernár Term<br>12.5 AMA/C/34/02304/050214 Fernár Term   | 2020 SCA<br>2007 ACA<br>1961 SCA<br>2266 SCA<br>2465 ACA<br>2586 ACA   | Young Control Con   | Riking         62.8         62.8         Riking           Riking         64.7         54.2         RO           Riking         52.2         66.5         RO           Riking         64.6         52.8         RO           Riking         64.6         52.8         RO           mping         63.8         64.1         RO           mping         63.8         115         RO   | ND<br>ND<br>ND  |
| AMAK12H1203203/03/06/245 27 Graduation<br>AMAK12H1203203/03/06/255 27 Graduation<br>AMAK12H1203203/03/002053 23 Graduation<br>AMAK12H1203203/03/002753 23 Higher Secon<br>AMAK12H1203203/03/02753 28 Graduation   | n Houavelle Urban 25.3 1<br>n Houavelle Urban 25.9 4<br>n Houavelle Urban 25.63 1<br>n Houavelle Urban 25.67 5<br>n Houavelle Urban 25.67 1   | 0 27-5 YES Absent<br>1 40-1 YES Absent<br>- 40-3 YES Absent<br>2 29-5 NO Absent<br>- 0 29-1 YES Mild   | None B<br>None A<br>None O<br>None A<br>None B   | 12.5 AMM/304/2020/00042 Female Term<br>11.4 AMM/2012/0220/01/2022 Male Term<br>11.8 AMM/304/2020/02000669 Female Term<br>34.6 AMM/304/2020/20207562 Male Term<br>20 AMM/504/2020/2020/2056 Male Term   | 2902 AGA<br>2716 SGA<br>2765 AGA   | S     Vaginal Debayed cont d     Vaginal Umbiliant cont n     Vaginal Umbiliant cont n     S     Oceaarean Debayed cont d     S     Oceaarean Umbiliant cont n     S     Oceaarean Debayed cont d   | sping         SA         S1 VES           Biling         44.2         45.7 NO           sping         70.8         62 NO           Biling         42.8         44.2 NO           sping         56.7         53 NO  | NG<br>NG<br>NG  |
| AIM5/JDH/2020/01/026253 19 Secondary Se   | h         Housevelle         Urban         26.07         1           Soudi Hiouxevelle         Aural         26.07         2           ondray         Urban         25.0         1           statis         Hiouxevelle         Urban         25.09         1           statis         Hiouxevelle         Urban         25.09         1           h         Hiouxevelle         Urban         25.09         1           h         Hiouxevelle         Urban         25.0         1   | 0 27 YES Absent<br>0 27+4 YES Absent   | None O<br>None O<br>None O<br>Hypothyroldum B  | 12 AMARG/1914/2020/12/005666 Male Term<br>13.4 AMARG/1914/2020/11/005166 Male Term<br>13.6 AMARG/1914/2020/11/0051480 Fernals Term<br>13.6 AMARG/1914/2020/09/001202 Fernals Term<br>13.6 AMARG/1914/2020/09/0120546 Male Term<br>13.6 AMARG/1914/2020/11/005176 Fernals Term  | 2046 ACA<br>2061 ACA<br>2230 ACA<br>2330 ACA<br>3634 ACA<br>3634 ACA   | 8 9 Vaginal Umbilical cord n  | lking 42 53.1 ND   | NO<br>NO<br>NO  |
| AMAC(20)(2023)(1)(2014) 21 Higher Accord<br>AMAC(20)(2023)(1)(2014) 21 Higher Accord<br>AMAC(20)(2023)(2)(2014) 21 Gendungs<br>AMAC(20)(2023)(2)(2014) 21 Higher Accord<br>AMAC(20)(2023)(2)(2013) 21 Higher Accord<br>AMAC(20)(2023)(2)(2)(2)(2) Higher Accord<br>AMAC(20)(2)(2)(2)(2)(2)(2)(2) Higher Accord<br>AMAC(20)(2)(2)(2)(2)(2)(2)(2) Higher Accord<br>AMAC(20)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)  | Handbar         Handbar         T.S.         L           Mandbar         Handbar         T.S.         L  | 0         0-3         YES         Mail           0         10-4         YES         Almont           0         10-5         YES         Almont           0         10-5         YES         Almont           0         10-5         YES         Almont   | Arbydraamsios B<br>None D<br>None D  | 113 AMB/(AV2202110037) & remain lemm<br>12 AMB/(24)20220(200903 Fernia Termin<br>11 AMB/(24)20220(200903 Fernia Termin<br>11 AMB/(24)20220(200903 Fernia Termin<br>11 AMB/(24)2020(2007) Main Termin<br>11 AMB/(24)2020(2007) Main Termin<br>13 AMB/(24)2020(2003) Main Termin<br>14 AMB/(24)2020(2003) Main Termin<br>15 AMB/(24)2020(2003) Main Termin<br>16 AMB/(24)2020(2003) Main Termin<br>17 AMB/(24)2020(2003) Main Termin<br>18 AMB/(24)2020(2003) Main Termin<br>1   | 2004 AGA<br>2004 AGA<br>2400 SGA<br>2502 SGA<br>2502 SGA<br>2502 SGA<br>2503 SGA<br>2508 SGA   | B Vignal Unbillion of F     Vignal Unbillion of F     Vignal Unbillion of F     Vignal Unbillion     Vignal Unbillion     Vignal Unbillion     Vignal Unbillion     Vignal Unbillion     Vignal Unbillion     Vignal     Vignal Unbillion     Vignal     Vignal Unbillion   | All No.         44.9         44.00           All No.         54.00         12.100           All No.         12.100         10.00           All No.         12.000         10.00           All No.         12.000         10.000           All No.         12.000         10.000           All No.         12.000         10.000  | NG<br>YES<br>NG   |
|   | n Wooking Unban 25.79 1<br>andary Hounwiffe Unban 25.9 1<br>n Hounwiffe Unban 25.9 1<br>School Hounwiffe Unban 25.9 1<br>n Hounwiffe Unban 25.9 1   | 0 23+5 YES Abanet<br>0 23+5 YES Mild<br>0 25-5 YES Mild<br>0 50 40 YES Abasent<br>0 29 YES Moderate  | Getational HTN B<br>None O<br>Dibbetes mellitus, Pretern labour A<br>Dibbetes mellitus, Hypothyroidism O<br>None O   | 12.1 A AMAG/124/2023/21/2018/22 Male Term     10.0 A AMAG/124/2023/01/1005/20     10.0 Fernint     10.0 A AMAG/124/2023/01/1007200 Male Preterm     11.5 AMAG/124/2023/01/1007200 Male Term     14. AMAG/124/2023/01/201727 Fernint Term     14. AMAG/124/2023/01/201727   | 2618 SCA<br>2452 AGA<br>2015 AGA<br>2947 AGA<br>2847 AGA<br>2847 AGA   |   |  | ND<br>ND<br>ND  |
|   | Incurrently         Labor         2.5.04         1           solarsetifie         Utban         25.06         1           ondary         Housewife         Utban         26.14         1           shool         Housewife         Utban         26.15         2           School         Housewife         Utban         36.2         1  | 0 23+1 115 Abaest<br>0 23+1 115 Abaest<br>0 23+4 115 Mild<br>1 27+5 115 Abaest<br>0 23+6 115 Abaest  | None D<br>None D   | 1.4 AMA(242)230(7)2007572 Male Term     10 AMA(242)230(7)2007572 Male Term     10 AMA(242)24(7)200(7)2007575 Fermile Term     13.4 AMA(242)2420(7)2004702 Fermile Term     12.7 AMA(242)2420(7)20575 Fermile Term  | 2000 AGA<br>2008 AGA<br>2008 SGA<br>2211 AGA   | B     Vaginal Delayed cont d     Vaginal Delayed cont d     Vaginal Umbiliad cont n     Vaginal Umbiliad cont n     Vaginal Umbiliad cont n     S     D Casearean Umbiliad cont n     S     D S0 Vaginal Delayed cont d   | upret         41.4         10.0           paper         41.4         15.5           nateg         41.1         51.6           paper         41.7         51.6           paper         51.2         50.0           paper         52.2         50.0           paper         45.4         10.0           paper         41.1         24.8           paper         51.1         24.8  | NG<br>NG<br>NG  |
| AMAK_10H_02055/10/03/372 30 Ford Candbar<br>AMAK_10H_02030(202455 24 Beondary 5<br>AMAK_10H_02030(202455 30 Higher Seco<br>AMAK_10H_02030(2005168 25 Graduation<br>AMAK_10H_02030(2005168 26 Graduation<br>AMAK_10H_02030(200516 20 Higher Seco   | Instands         Ubins         X.M.         1           Scient         Hausends         Ubins         X.D.         2           Scient         Hausends         Ubins         X.D.         1           Manuards         Ubins         X.D.         1         1           Manuards         Ubins         X.D.         1         1           Manuards         Ubins         X.D.         1         1         1           Manuards         Ubins         X.D.         1         1         1           Manuards         Ubins         X.D.         1         1         1         1           Manuards         Ubins         X.D.         X.M.         1         1         1         1           Manuards         Ubins         X.M.         X.M.         1 <td>0         40         251         0</td> <td>Not         A           Not         A           Not</td> <td>11.8         A MARG/1264/2023(21) (200509)         Formality         Team           11.8         A MARG/1264/2023(20) (2005018)         Male         Team           8.6         A MARG/1264/2023(21) (200518)         Formality         Team           10.0         A MARG/1264/2023(21) (200518)         Formality         Team           10.0         A MARG/1264/2023(21) (200518)         Male         Team           10.0         A MARG/1264/2023(7) (20123)         Male         Team           10.0         A MARG/1264/2023(7) (20123)         Male         Team</td> <td>2250 AGA<br/>2775 AGA<br/>2880 AGA<br/>2641 SGA<br/>2073 AGA<br/>2023 AGA</td> <td>O Conservant Delayed and C<br/>Vaginal Unabliad and P<br/>O Conservant Unabliad and P<br/>O Conservant Unabliad and P<br/>O Conservant Unabliad and P<br/>O Conservant Delayed and C<br/>O Conservant Delayed and C<br/>O Conservant Delayed and C<br/>O Vaginal Delayed</td> <td>ping         24         24         ping           ping         LLB         and         ping         ping         ping         SLL         No         ping         ping         SLL         No         ping         SLL         No         ping         SLL         SLL         No         ping         SLL         SLL&lt;</td> <td>กนั<br/>พ.ม.<br/>พ.ม.<br/>พ.ม.<br/>พ.ม.</td> | 0         40         251         0   | Not         A           Not  | 11.8         A MARG/1264/2023(21) (200509)         Formality         Team           11.8         A MARG/1264/2023(20) (2005018)         Male         Team           8.6         A MARG/1264/2023(21) (200518)         Formality         Team           10.0         A MARG/1264/2023(21) (200518)         Formality         Team           10.0         A MARG/1264/2023(21) (200518)         Male         Team           10.0         A MARG/1264/2023(7) (20123)         Male         Team           10.0         A MARG/1264/2023(7) (20123)         Male         Team  | 2250 AGA<br>2775 AGA<br>2880 AGA<br>2641 SGA<br>2073 AGA<br>2023 AGA   | O Conservant Delayed and C<br>Vaginal Unabliad and P<br>O Conservant Unabliad and P<br>O Conservant Unabliad and P<br>O Conservant Unabliad and P<br>O Conservant Delayed and C<br>O Conservant Delayed and C<br>O Conservant Delayed and C<br>O Vaginal Delayed   | ping         24         24         ping           ping         LLB         and         ping         ping         ping         SLL         No         ping         ping         SLL         No         ping         SLL         No         ping         SLL         SLL         No         ping         SLL         SLL<  | กนั<br>พ.ม.<br>พ.ม.<br>พ.ม.<br>พ.ม.   |
| AIMS/UDH/2019/02/011627 27 Secondary Se   | School Housewife Urban 26.63 1<br>School Housewife Urban 26.6 1   | 0 28-4 WTS Moderate<br>0 29 WTS Mild<br>1 28-1 WTS Moderate<br>0 28-3 WTS Absent<br>0 29-3 WTS Absent  | Gestational HTN AB<br>hepatitis B B<br>None A  | 8.6 AMM/2124/2323/4/012274 Male Term<br>10.8 AMM/2124/2323/7/901247 Fernale Term<br>8.6 AMM/2154/2323/7/904466 Fernale Term<br>12 AMM/2154/2323/84/10562 Male Term<br>12 AMM/2154/2323/84/10562 Male Term  | AGA<br>3206 AGA  | 9 10 Vaginal Delayed cord ch  | mping 51.7 61.4 ¥ES  | NO<br>NO<br>NO  |
| AMAC(20)(2032)(7):121         25         Security 5           AMAC(20)(2032)(7):1205         21         Graduation           AMAC(20)(2032)(7):1205         23         Graduation           AMAC(20)(2032)(7):1205         24         Graduation           AMAC(20)(2032)(7):1205         24         Graduation           AMAC(20)(2032)(7):1205         24         Graduation           AMAC(20)(2032)(7):1205         25         Graduation           AMAC(20)(2032)(7):1205         25         Becnoting Y           AMAC(20)(2032)(7):1207         26         Becnoting Y           AMAC(20)(7):120377         26         Higher Alexa           AMAC(20)(7):120377         26         Higher Alexa           AMAC(20)(7):120377         26         16  | Housewife         Urban         25G-3         1           School         Housewife         Aural         26.7         1           h         Housewife         Urban         26.71         2           h         Housewife         Urban         26.72         4           ndmp         Housewife         Urban         26.62         1  | 0 34 YES Absent<br>0 39+0 YES Mild   | Olghydrawrias O<br>Prefent Hoar A<br>Nore B<br>Nore S<br>Nore S<br>Nore S<br>Nore O<br>Nore B<br>Nore B<br>Diatet nafibar A<br>Prefent Maar A  | 13.7 ABM5/U24/2020/11/000499 Female Preterm<br>10.6 ABM5/U24/2020/01/01093 Male Term   | 2020 SGA<br>1070 AGA<br>2021 AGA<br>2023 AGA<br>2023 AGA<br>2028 AGA<br>2028 AGA<br>2028 AGA<br>2029 AGA<br>2029 AGA                                     | B     Constraint  | sping         \$6.4         \$2.1 YES           Biolog         41.9         44.7 NO           Biolog         42.5         44.5 NO           sping         42.4         \$2.8 YES           Biolog         51.2         \$4.2 NO  | NC<br>NC<br>NC<br>NC  |
| AMR6/18/10/2017/19/16/16<br>AMR6/18/10/2017/10/20166<br>AMR6/19/10/2017/10/20166<br>AMR6/19/10/2017/10/20167<br>AMR6/19/10/2017/10/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017/12/20167<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2017<br>AMR6/19/10/2  | Annual         Balandh         Dial         2.1         2.1           Manadh         Manadh         A.1         2.1         2.1           Manadh         Manadh         A.2         2.1         2.1         2.1           Manadh         Manadh         A.2         3.1         2.1   | Autor         200           MM         201           March         201   | None O<br>None B<br>None B<br>Diabetes mellous A<br>Program Indexor  | L 1 4 MANG/WATURA LOUBLE MAN<br>L 2 A MANG/WATURA LOUBLE<br>4 6 A MANG/WATURA LOUBLE<br>1 2 A MANG/WATURA LOUBLE<br>1 4 A MANG/WATURA LOUBLE<br>1 4 A MANG/WATURA LOUBLE<br>4 A MANG/WATUR | 2600 AGA<br>2209 AGA<br>2209 AGA<br>2871 SGA   | E      Canaaraan Debayed cont cl     B     Vaginal Debayed cont cl     B     Vaginal Debayed cont cl     F     Vaginal Debayed cont cl     F     O Canaaraan Debayed cont cl     P  | Subset         1.1         11.0           Marging         4.2.4         1.1         11.0           Marging         4.2.5         4.6.8         NO           Marging         4.2.4         5.8.8         NO           Marging         4.2.4         5.8.8         NO           Marging         5.1.1         5.4.4         NO           Marging         5.1.2         5.4.4         NO           Marging         5.1.4         4.6         4.6.4         NO           Marging         6.0         5.8.9         NS         Marging           Marging         6.0         5.8.9         NS         Marging         Marging <td< td=""><td>NG<br/>NG<br/>NG<br/>NG</td></td<> | NG<br>NG<br>NG<br>NG  |
| AllMS/L04(2018)C3/001016 30 Higher Secon<br>AllMS/L04(2018)C3/005(066 25 Pest Gedar<br>AllMS/L04(2012)L05(0062 21 Pest Gedar  | ander Housewife Urban 27.14 2<br>union 27.16 2  | 2         34-6         11         Absent           2         37-6         VES         Absent           1         40-0         VES         Absent           0         28+6         VES         Absent           0         28+6         VES         Absent           0         28+6         VES         Absent           0         28+6         VES         Absent   | None B<br>Diabetes mellitus O  | 11.7 AMM/124/22021/021296 Fermin Preterm<br>12.8 AMM/124/22021/041296 Mole Term<br>13.1 AMM/1261/223201/12001A4 Mole Term<br>12.4 AMM/1261/2232011/12001A4 Mole Term<br>9.2 AMM/1261/2232011/12001A4 Mole Term   | 2169 AGA<br>2116 AGA<br>2116 AGA   | 8 9 Vaginal Delayed cord ct   | ning 46 56.3 NO  | NO<br>NO<br>NO  |
| AMM5(26)(2220)(23)038827 22 Post Gradwa<br>AMM5(26)(2220)(23)03894 24 Higher Seco<br>AMM5(26)(2223)(23)038284 21 Primary Sch<br>AMM5(26)(2223)(23)038865 25 Secondary 5<br>AMM5(26)(222)(23)03656 23 Higher Seco  | aristia Waviking Ushan 27.26 1<br>1440 Waviking Ushan 27.24 1<br>2015 Ushan 27.24 2<br>2016 Waviking Ushan 27.4 2<br>156 Mar Mausenfer Ushan 27.4 4<br>156 Mar Mausenfer Ushan 27.46 1  | O alt+0         max         Autom           0 alt+6         YLS         Moderate           0 alt+6         YLS         Abunt           1 alt+0         YLS         Mild           2 alt+6         YLS         Mild           0 alt+6         YLS         Mild           1 alt+0         YLS         Mild           1 alt+0         YLS         Abunt           1 alt+2         YLS         Moderate  | None All<br>None A<br>None A<br>None B<br>Diabetes mellitus A  | 9.2 AMA/124/02/02/11/02/01/14 Mole Term<br>12.1 AMA/124/02/02/01/02/02/01 Fernár<br>10.3 AMA/214/02/02/02/01/01/01/14 Mole Term<br>10.2 AMA/214/02/02/01/01/01/14 Mole Term<br>12.4 AMA/214/02/02/01/01/01/14 Fernár   | 2806 AGA<br>2214 SGA<br>3653 AGA<br>2518 AGA   | s     vognul     umeluca con r     vognul     umeluca con r     vognul     vognul     umeluca con r     vognul     umeluca con r     vognul     vognu   | nping 48.5 44 NO<br>nping 33.1 45.4 NO   | NO<br>NO<br>NO  |
| AMM5(U04(2020)02)016288 20 Secondary S<br>AMM5(U04(2020)02)027055 23 Post Gradual<br>AMM5(U04(2010)02)02560 38 Secondary S<br>AMM5(U04(2010)02)0202067 22 Higher Seco   | School Houseville Urban 27.5 1<br>uston Houseville Urban 27.53 3<br>School Houseville Rural 27.6 3  | 0 41+2 YES Absent<br>1 29+6 YES Absent<br>2 40+5 YES Absent  | Alstinia a<br>None B<br>Diabetes melikus, Gestational HTN B<br>Thyroid swelling A  | 9.1. AMM/(304/2320)/2002.47 Maile Term<br>12.4. AMM/(304/2320)/03/2023 Fermale Term<br>12.3. AMM/(304/2320)/03/20347 Fermale Term<br>12.2. AMM/(304/2320)/03/00466 Maile Term  | 2121 AGA<br>2122 SGA<br>3454 AGA<br>2293 AGA<br>2090 AGA   | E Calcurean Delayed cond co     B 9 Vaginal Delayed cond co     B 9 Vaginal Delayed cond co     B 9 Vaginal Umbilical cond n     B 9 Vaginal Umbilical cond n   | npong ARA 44.0 MU<br>mping 46.2 48.5 MO<br>Ring 43 44.2 YES<br>Ring 48.4 54.3 MO<br>Ring 53 54.5 YES   | NG<br>NG<br>NG<br>NG  |
| AMM5/XDH/2020/07/000514 30 Post Graduat<br>AMM5/XDH/2020/07/000813 26 Higher Second   | ation Working Urban 27.82 1<br>andary Housewife Urban 27.9 2  | 0 40 2014 2015 Abuent<br>0 204-6 VES Abuent<br>1 204-3 VES Abuent<br>1 204-3 VES Abuent<br>1 204-2 VES Abuent<br>0 204-5 VES Midd  | Noce B<br>Noce B<br>Diabetes melitos O<br>Diabetes melitos O<br>Noce A   | 1.2 a ALARG/1241/2023(07)006648 Male Term<br>1.1 a ALARG/1241/2023(07)005640 Fernált Term<br>1.2 a ALARG/1241/2023(01)1001914 Male Term<br>1.2 a ALARG/1241/2023(01)1001914 Male Term<br>1.2 a ALARG/1241/2023(01)1001914 Male Term<br>1.0 a ALARG/1241/2023(01)1001914 Fernált Term   | 2234 SCA<br>3608 ACA<br>2407 ACA<br>2927 ACA<br>2029 ACA   | 7 9 Vaginal Umbilical cord r<br>8 9 Casesmen Umbilical cord r<br>8 9 Vaginal Umbilical cord r<br>7 9 Vaginal Umbilical cord r   | Ming         61.9         58.2 NO           Ming         49.6         61.2 NO           Bing         41.2         56.8 NO           Bing         36.3         42.6 YES   | NO<br>NO<br>NO  |
| AMAC(20)(2514)(27)(2516)<br>AMAC(20)(2514)(27)(2516)<br>AMAC(20)(2502)(14)(2511)<br>AMAC(20)(2502)(14)(2511)<br>AMAC(20)(2502)(14)(2511)<br>AMAC(20)(2502)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2512)(12)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AMAC(20)(2511)<br>AM  | other         Dirac         Dirac         Dirac         Dirac         A           Mark         Dirac         Dirac <tddirac< td=""> <tddirac< td=""> <tddirac< td=""></tddirac<></tddirac<></tddirac<>  | 0 38-5 VIS Mid<br>24-2 VIS Middenne<br>1 28 VIS Absent<br>0 37-4 VIS Absent<br>0 37-4 VIS Absent<br>1 38-2 VIS Absent<br>0 37-3 VIS Absent<br>1 39-4 VIS Absent  | None O<br>None O<br>None O<br>None O   | 10.1 AMM/304(2320)11002164 Female Term<br>8.6 AMM204(2320)1100255 Male Term<br>12.1 AMM3(J04(2320)11005497 Female Term<br>7.3 AMM3(J04(2320)0105403 Female Term<br>11.4 AMM3(J04(2320)010043 Male Term   | 3049 AGA<br>3158 AGA<br>2462 SGA<br>2715 AGA<br>3621 AGA   | 7 9 Vaginal Limbilical cord n<br>8 9 Caesarean Limbilical cord n<br>8 9 Caesarean Debaad cord ch  | Ming         45.2         54.3 NO           Bing         50.1         54.3 NO           Bing         47.2         53.2 NO           mping         43.3         40.5 NO           mping         62.4         55.7 NO  | NG<br>NG<br>NG  |
|   | Union         Utan         32.2         3           Gold         Hasseth         Kard         32.3         2           Gold         Hasseth         Utan         32.4         2           Gold         Hasseth         Utan         3.4         1           Hasseth         Utan         3.4         1         1           Hasseth         Utan         3.6         1         1           Hasseth         Utan         3.6         1         1           Hasseth         Utan         3.6         2         1           Hasseth         Utan         3.6         2         2   | Absent         214         Left 0           1 39-2         VES         Absent           1 39-2         VES         Absent           0 27-4         VES         Absent           1 29+6         VES         Absent           1 29+6         VES         Absent           1 29+6         VES         Absent  | None O<br>None O<br>None A<br>None B   | E 4 AMAC/01222011/02022     Marke Term     L1 AMAC/0122011/02012     Finals Term     1 AMAC/0122011/0201201     Finals Term     1 AMAC/0122011/0201201     Finals Term     1 AMAC/0122011/0201201     Market     1 AMAC/01201200101201     Market     1 AMAC/012012001012012     Market     1 AMAC/01201200101201     Market     1 AMAC/01201200101201     Market     1 AMAC/01201200101201   | 2005 AGA<br>2257 AGA<br>2202 AGA<br>2012 AGA   | B Grassman Delayed cord cl     Gressman Delayed cord cl     G 9 Cassarean Delayed cord cl     B 9 Vaginal Delayed cord cl     B 9 Vaginal Delayed cord cl     B 9 Vaginal Delayed cord cl   | sping         42.4         56.7         NO           mping         55.5         54.3         NO           mping         52.6         41.2         NO           mping         46.7         42.5         NO           mping         64.7         44.6         NO   | YES<br>NG<br>NG   |
| AMAK(241(2232)(37)(2077)8 18 Secondary 5<br>AMAK(241(2232)(37)(2077)8 26 Graduation<br>AMAK(241(2232)(34)(2004)05 29 Ford Graduat<br>AMAK(241(2232)(34)(3011)0 30 Graduation<br>AMAK(241(2232)(34)(3011)0 31 20 Graduation<br>AMAK(241(2232)(34)(3011)0 3432 24 Ford Graduat  | School         Hourewife         Uitean         28.54         1           Hourewife         Uitean         28.55         1           adion         Hourewife         Uitean         28.56         2           h         Hourewife         Uitean         28.56         2           adion         Hourewife         Uitean         28.6         3           adion         Hourewife         Runal         28.6         1   | 1 28+4 YES Abuent<br>0 28+5 YES Mid<br>0 28+3 YES Mid<br>1 28+6 YES Mid<br>1 28+2 YES Abuent<br>0 41+2 YES Abuent  | None AB<br>NOne B<br>NOne A<br>Chronic hypertension, Circlage, hypothyroidi B<br>None B  | 10.7 AMAK/1241(22030/94/051312 Female Term<br>10.7 AMAK/1241(22030/94/051325 Male Term<br>10.3 AMAK/1241(22030/93/050766 Male Term<br>11.3 AMAK/1241(22030/94/051226 Male Preterm<br>12.8 AMAK/041(22030/970416 Female Term  | 2732 AGA<br>1069 AGA<br>2796 AGA<br>2872 AGA<br>3872 AGA   | Dir Volgen     Schwarts and Schwarts an   |  | ND<br>ND<br>ND<br>ND  |
| AMA5(JDH/2017)06(I00812 20 Primary Sche<br>AmA5(JDH/2018)02128 31 Secondary 5<br>AMA5(JDH/2018)021571 28 Higher Secon<br>AMA5(JDH/2012)054735 20 Secondary 5  | Internet         Utata         D.5.6         2           Naturado         Utata         2.4.6         3           Naturado         Utata         2.4.6         3           Naturado         Utata         2.7.8         1           Naturado         Utata         2.7.9         1  | 0 29+4 YES Absent<br>1 40+0 YES Absent<br>0 29+6 YES Absent  | Distante multita         0           Distante multita         0           Rater multita         0           Nater         0  | 11333  | 2967 AGA<br>3400 AGA<br>3400 AGA<br>2000 AGA   | Conservent Unbilication     Society Statement     Society Sta   | upung         u1.2         u1.8         no           nalog         45.7         54.8         NO           nalog         47.8         54.0         NS           nalog         45.5         52.3         NS           nalog         44.6         52.1         NS  | ND<br>ND<br>YES   |
| AIM5/304/2020/09/009038 22 Graduation   | n Housewife Rural 29.56 1   | 1 39+1 NO Moderate<br>0 35+5 YES Absent  | None O<br>Pretern labour, hypothyroidism, asthma B<br>None O<br>Pretern labour, PRRCM O<br>None O  | 11.3 AMM/2124/22320/10/05/111 Mule Term<br>8.1 AMM/2124/22320/8/10/0018 Mule Preterm<br>9.7 AMM/2164/22320/8/10/01842 Mule Term<br>12 AMM/2164/22320/8/10/0185 Mule Preterm<br>11.5 AMM/2164/22321/21/201817 Mule Term   | 2341 AGA<br>2671 AGA<br>2875 AGA<br>2797 AGA<br>2296 SGA   | 7 7 Vaginal Umbilical conf n     7 8 Vaginal Umbilical conf n     8 Vaginal Umbilical conf n     8 9 Vaginal Delayed conf cl     8 9 Vaginal Umbilical conf n   | mping 43.2 47.8 NO<br>mping 43.2 41.3 NO   | ND<br>ND<br>ND<br>ND  |
| AIM65(2014)2020/12/002041 26 Graduation<br>AIM65(201202030)01/023813 24 Higher Seco<br>AIM65(2014)202020645 20 Primary Sch<br>AIM65(2014)2020(02)012465 28 Post Graduat   | n Housewife Littan 28.63 2<br>ondary Housewife Littan 28.64 3<br>hou Housewife Littan 28.99 1<br>adion Housewife Littan 20.07 2   | 1 27+5 YES Absent<br>2 29 YES Mild<br>0 49+5 YES Absent<br>1 28+2 YES Moderate   | None B<br>None B<br>None O<br>None A   | 11.3 ABM5/054/2020/12/002246 Male Term<br>10.6 ABM5/054/2020/07/07/0736 Female Term<br>11.5 ABM5/02/2020/05/05053 Male Term<br>9.7 ABM5/054/2020/05/06178 Female Term  | 2278 AGA<br>2409 SGA<br>2228 AGA<br>2220 AGA   | B 9 Vaginal Umbilical cord n     B 9 Casearean Delayed cord cl     B 9 Casearean Umbilical cord n     B 9 Vaginal Umbilical cord n  | liking 29.7 46.7 NO<br>nping 50.2 60.9 NO<br>Riking 20 47.9 NO<br>liking 50.8 56.2 NO  | ND<br>ND<br>ND  |
| AMAC(20)(2023)212011         25         Graduation           AMAC(20)(2023)21200001         26         26           AMAC(20)(2023)21200001         26         36           AMAC(20)(2023)2120001         20         Implify from           AMAC(20)(2023)2120101         20         Implify from           AMAC(20)(2023)2120101         20         Implify from           AMAC(20)(2023)2120101         27         Implify from           AMAC(20)(2023)21201027         29         Implify from           AMAC(20)(2023)21201027         29         Implify from           AMAC(20)(2023)21201027         20         Graduation           AMAC(20)(2023)21201027         20         Graduation           AMAC(20)(2023)21201027         20         Implify from           AMAC(20)(2023)21201027         20         Graduation           AMAC(20)(2023)21201027         20         Implify from           AMAC(20)(2023)212         20         Graduation           AMAC(20)(2023)212         20         Graduation           AMAC(20)(2023)212         20         Graduation           AMAC(20)(2023)212         20         Graduation   | Nome         Water         Part of the second   | 10-1         00         Moderate           10-1         00         Statu         Statu           10-0         000         Statu         Statu           11-0         000         Statu         Albert           11-0         000         Statu         Statu           11-0         000         Statu         Statu           11-0         000         Statu         Albert  | Name         Name  | 1 AMAC/02/22004/07447 Frendra Term     11 AMAC/02/22004/07447 Male     100     11 AMAC/02/22004/07447 Male     100     11 AMAC/02/22004/07447 Male     100     11 AMAC/02/22004/07448 Frendra     11 AMAC/02/22004/07448     100   | 2265 5004<br>2278 4004<br>2000 5004<br>2000 5004<br>2000 4004<br>2000 4004<br>2000 4004<br>2001 4004<br>2001 4004<br>2001 4004<br>2001 4004              | E Vegel     Event   | Aling         41.9         6.7         NO           Marging         5.2         4.7         NO           Marging         5.2         4.2         NO           Marging         5.2         4.2         NO           Marging         6.2         5.2         NO           Marging         4.5         5.4         NO           Marging         4.5         5.2         NO           Marging         4.4         1.2         NO           Marging         4.4         1.2         NO           Marging         4.4         5.2         NO           Marging         4.4         1.2         NO           Marging         4.4         1.2         NO   | NG<br>NG<br>NG<br>NG  |
| ABM5/304/2017/12/000522 37 Post Graduar   | andary Houseville Rural 20.5 2<br>Dodary Houseville Urban 20.00 2<br>adam Houseville Urban 20.73 3<br>andary Houseville Rural 20.84 2   | 2 37+1 YES Moderate<br>1 29+6 YES Mid<br>1 29+6 YES Mid  | None O<br>Hypothyroidium B<br>Hypothyroidium B<br>None A   | 11.2 ARM5(704/2020)11/000469 Male Term<br>9.5 ARM5(704/2020)11/000401 Male Term<br>10.6 ARM5(702020)11/000700 Fermile Term<br>10.2 ARM5(704/2020)01/00200 Fermile Term   | 2/31 AGA<br>2020 AGA<br>2415 A/24  | B      O Cressrean     Umblical cord r     B     O Consumma     Delayed cord cl     B     O Consumma     Delayed cord cl     B     O Cressrean     Umblical cord  | nping 50 48.3 NO   | ND<br>ND<br>ND  |
| ABB4(205)(2320)(2300205) 34 Higher Seco.<br>ABB4(205)(2320)(2000768) 34 Feld Cindad<br>ABB4(205)(2320)(2007002 25 Secondery 5<br>ABB4(205)(2320)(201702)<br>ABB4(205)(2320)(201711 28 Feld Cindad<br>ABB4(205)(2320)(201711 28 Feld Cindad<br>ABB4(205)(2320)(201711 28 Feld Cindad   | Open         Data         Data <thdata< th="">         Data         Data         <thd< td=""><td>Biold         217         4+6.1           meads         227         2           meads         227         2           bldk         237         2+6.0           bldk         237         2-6.0           bldk         237         1-6.1           meads         237         1-6.1</td><td>Diabetes mellica, hypothynaidism O<br/>None A<br/>Gestational HTN O<br/>None O<br/>Hypothynoidism A</td><td>11.8. AMMC/D24 (2023QM/D2A11 Fermin Term<br/>12.5. AMMC/D24/2023(2)/D/000800 Fermin Term<br/>10.7. AMMC/D24/2023(2)/D0456 Fermin Term<br/>10.9. AMMC/D24/2023(2)/D0457 Fermin Term<br/>12.3. AMMC/D24/2023(2)/D0457 Fermin Term</td><td>2020 AGA<br/>2025 AGA<br/>2027 AGA<br/>2027 AGA<br/>2027 AGA<br/>2027 AGA</td><td>Constraint Contraction of the Constraint of Constraint Constraint Constraint of Constraint Constrai</td><td>OW         ALL         C.W         gam           214         0         1.4         0         1.6</td><td>NG<br/>NG<br/>NG</td></thd<></thdata<>  | Biold         217         4+6.1           meads         227         2           meads         227         2           bldk         237         2+6.0           bldk         237         2-6.0           bldk         237         1-6.1           meads         237         1-6.1  | Diabetes mellica, hypothynaidism O<br>None A<br>Gestational HTN O<br>None O<br>Hypothynoidism A  | 11.8. AMMC/D24 (2023QM/D2A11 Fermin Term<br>12.5. AMMC/D24/2023(2)/D/000800 Fermin Term<br>10.7. AMMC/D24/2023(2)/D0456 Fermin Term<br>10.9. AMMC/D24/2023(2)/D0457 Fermin Term<br>12.3. AMMC/D24/2023(2)/D0457 Fermin Term  | 2020 AGA<br>2025 AGA<br>2027 AGA<br>2027 AGA<br>2027 AGA<br>2027 AGA   | Constraint Contraction of the Constraint of Constraint Constraint Constraint of Constraint Constrai   | OW         ALL         C.W         gam           214         0         1.4         0         1.6   | NG<br>NG<br>NG  |
| AMAC_CINIC/2020/2020/2020         J4         Higher Enclosed           AMAC_CINIC/2020/2020/2020         J4         Higher Enclosed           AMAC_CINIC/2020/2020/2020         J5         Benning Michael           AMAC_CINIC/2020/2020/2020         J5         Benning Michael           AMAC_CINIC/2020/2020/2020         J5         Benning Michael           AMAC_CINIC/2020/2020/2020         J7         Benning Michael           AMAC_CINIC/2020/2020/2020         J7         Genature Michael           AMAC_CINIC/2020/2020/2020         J6         Genature Michael           AMAC_CINIC/2020/2020/2020         J6         Genature Michael           AMAC_CINIC/2020/2020/2020         J6         Genature Michael           AMAC_CINIC/2020/2020/2020         J6         Genature Michael   | Mondrag         Unitant         1.12         1           Mondrag         Unitant         1.12         1           Scheel         Nonservelle         Unitant         1.12         1           Scheel         Nonservelle         Unitant         1.12         1           A         Nonservelle         Unitant         1.15         2           A         Nonservelle         Unitant         2.77         2           N         Nonservelle         Unitant         2.79         2           N         Nonservelle         Unitant         2.74         2           N         Nonservelle         Unitant         2.32         2  | 1         27         127         Absent           1         244         251         Made           2         344         125         Made           1         345         126         345           1         345         126         346           1         345         126         Made           1         345         126         Made           0         345         125         Made           0         345         125         Absent           1         345         125         Absent           0         345         126         Absent           0         345         126         Absent           0         345         126         Absent           0         345         126         Absent   | Pretern bibour A<br>Cibeters mellituu A<br>Anthras O<br>Cibeters mellituu, 19900M, Gestational HTN B<br>Gestational HTN, hypothycoldium, Prauligo of B<br>Nace O<br>Gestational HTN O  | 10.8 ARM5(104/3202)/10/002201 Male Preterm<br>10.6 AM85(24(2202)/10/0026 Male Term<br>11.7 AM85(24(2202)/11/0026 Male Term<br>14.5 AM85(204/2202)/11/002782 Male Preterm   | 2108 AGA<br>2081 AGA<br>2018 AGA<br>1955 AGA<br>2056 AGA   | Constraint Orthodical cost      C   | www.g.         x1.2         x8.4         NO           mping         43.2         2.6         NO           mping         5.1.2         2.4.4         NO           mping         5.1.2         5.1.2         NO           Ring         4.5.1         5.5.5         NO           mping         4.5.5         2.4.4         NO           mping         4.5.5         2.4.4         NO           mping         4.5.5         2.4.4         NO           mping         4.5.5         2.4.4         NO  | ND<br>ND<br>ND<br>YES   |
| AIM5/3DH/2020/05/003436 25 Post Graduar   | ۱         Housevelle         Uthan         23.2         1           Massarelle         Uthan         21.64         2           utsin         Housevelle         Uthan         24.04         2           utsin         Housevelle         Uthan         24.04         3           0         Working         Uthan         24.64         3           onthry         Housevelle         Uthan         26.65         2           onthry         Housevelle         Uthan         26.61         4  | 0 29+3 TES Absent<br>2 39+3 YES Absent<br>2 43+4 YES Moderate  | Gestational (FR), hypothycoldium, Prasigo of, B<br>None O<br>Gestational (FRN O<br>Diabetes mellitus A<br>None B   | 11.7 AMARG/194/2020/22/00209 Male Term<br>12.7 AMARG/194/2020/7/001126 Male Term<br>9.1 AMARG/194/2020/12/007920 Male Term<br>9.1 AMARG/194/2020/02/009/00920 Fensite Term<br>11.7 AMARG/194/2020/02/009453 Male Term<br>12.7 AMARG/194/2020/07/00545 Fensite Term   | 3615 AGA<br>3181 AGA   | 9 9 Gaesarean Umblical cord o   | Ring 58.3 63.4 NO  | NG<br>NG<br>NG  |
| AMAC(20)(2023)(2015)(2017)     20     Pred Castar     MAAC(20)(2023)(2015)(2017)     All Castar     AMAC(20)(2023)(2017)(2017)     21     Higher Heat     AMAC(20)(2023)(2017)(2017)     21     Higher Heat     AMAC(20)(2023)(2015)(2017)     All Heat     All Heat     AMAC(20)(2023)(2015)(2017)     All Heat     AMAC(20)(2023)(2015)(2017)     All Heat     AMAC(20)(2023)(2015)(2017)     All Heat     All Heat     AMAC(20)(2023)(2015)(2017)     All Heat     All Hea   | andary Houseville Urban 36.1 4<br>usten Houseville Urban 36.3 3<br>Houseville Urban 36.5 2<br>Houseville Urban 36.5 2   | 1 40+3 YES Absent<br>1 02+3 YES Absent<br>1 27 YES Absent<br>1 37+1 YES Absent<br>1 36+6 YES Absent  | Galitabola kin D<br>Dabetes mellitur, A<br>None B<br>Dabetes mellitur, Hypothyrciden, Obity B<br>Dabetes mellitur, Hypothyrciden, Obity B<br>Dabetes mellitur, Getational hypertension, B<br>Pre scianguia, Athma, ASD closure B<br>None B   | 12.2 AIM5(2014230)(07)005078 Female Term<br>11.2 AM56(2014)(2020)(020402 Male Term<br>12 AM56(2014)(2020)(1)(00406 Male Term<br>13.7 AM56(2014)(2020)(1)(00300 Female Preterm  | 4.003 LUA<br>2006 AGA<br>2009 AGA<br>2003 AGA<br>2138 AGA<br>2206 SGA  | B Vignal Unbial or of A     Converse Delegation of A  | Instruct         Instruct         Instruct           Training         43.2         44.3         NO           Training         60         6.2.4         NO           Rising         60         6.2.4         NO           Rising         69.1         55.6         NO   | ND<br>ND<br>ND  |
|   |   | 1         1.0         1.0         1.0         Makering           1         1.0         2.0         0.0         Marrier           1         2.0         0.0         Marrier           1         2.0         0.0         Marrier           2         2.0         0.0         Marrier           3         2.0         0.0         Marrier           3         3.0         0.0         Marrier           4         3.0         0.0         Marrier           5         3.0         0.0         Marrier           6         3.0         0.0         Marrier           6         3.0         0.0         Marrier           7         3.0         0.0         Marrier           8         3.0         0.0         Marrier           9         3.0         0.0         Marrier           1         3.0         0.0         Marrier   | Pre ecamplia, nitrala, not ostarle il<br>None il<br>Oronoit hypertension O<br>Oronoit hypertension (PROM O<br>Hypothyrodian il<br>None il<br>Profesionapola, Dubetes mellitar O  | 11.2 AMAC/02/022010/02642 Male Tem<br>12 AMAC/02/022010/02642 Male Tem<br>13 AMAC/02/022010/02563 Menne Person<br>14 AMAC/02/022010/02563 Menne Tem<br>14 AMAC/02/022010/02563 Male Person<br>14 AMAC/02/022010/02563 Male Tem<br>14 AMAC/02/022010/02563 Menne Tem<br>14 AMAC/02/022010/02563 Menne Tem   | 3531 ACA<br>2725 SGA<br>1920 AGA<br>3720 AGA<br>2320 AGA   | B 9 Cassarean Debyed cond ch     B 9 Cassarean Umbilical code f     B 9 Cassarean Umbilical code f     B 9 Cassarean Debyed cond ch     B 9 Cassarean Debyed cond ch  | mping 40 41.6 NO<br>Riding 59.4 72 NO<br>Riding 51.4 51 1475<br>mping 48.9 55.9 1475<br>Riding 52.1 64 1475  | NU<br>YIS<br>YIS<br>NO<br>NO  |
| AMAK(204)(2030)11002250 21 Secondary 2<br>AMAK(204)(2030)11002250 25 Graduation<br>AMAK(204)(2030)11004167 26 Higher Secon<br>AMAK(204)(2030)11004167 26 Higher Secon<br>AMAK(204)(2030)11005460 26 Higher Secon  | School         Housewife         Urban         24.5         2           n         Housewife         Urban         27.55         1           ondary         Housewife         Urban         2.8.9         1           ondary         Housewife         Urban         2.6.9         4           ondary         Housewife         Urban         2.6.9         4  | 0 40+3 YES Abanet<br>0 28+4 YES Mild<br>0 28 YES Moderate<br>2 29+2 YES Mild<br>2 40+3 YES Abanet  | None O<br>Pre eclampsia, Diabetes mellitus O<br>None A<br>None B<br>None D   | 12.7 AMMQ124V(22021)(02040) Fermale Term<br>10.8 AMMQ124V(22021)(1)(02123) Fermale Term<br>0.7 AMMQ124V(22021)(1)(0242) Male Term<br>10.5 AMMQ124V(22021)(1)(05774 Male Term<br>11.6 AMMQ124V(22021)(1)(05775 Male Term  | 2200 AGA<br>2188 AGA<br>2038 AGA<br>28800 AGA<br>3600 AGA  | B     9 Canannan     Umblical cond n      8     9 Canannan     Delayed cond cl      7     9 Canannan     Umblical cond n      8   | Ring         52.3         64         ¥E5           mping         18.1         48.6         NO           Ring         48.3         45.9         NS           Ring         48.3         52.5         NO           Ring         48.9         42.6         NO           mping         47.2         44.3         NO   | ND<br>ND<br>ND  |
| AMM5/JDH/2020/11/000403 25 Higher Secon<br>AMM5/JDH/2020/05/000855 25 Graduation<br>AMM5/JDH/2020/08/002813 25 Post Graduat   | namb         band         band <td>0         20         20         Mathem           1         20</td> <td>Pre claropol, Cublets mellou O<br/>None A<br/>Nore B<br/>Oliphyticamenia A<br/>Highthyticalini, Certalianal hysertenian O<br/>Highthyticalini, Anthra A<br/>Pre schorpol, Petrial ALLY, Nema Decasi A<br/>Pre schorpol, Petrial ALLY, Nema Decasi A<br/>Nore Mittae, Machine A<br/>Diceter Index, Machine J</td> <td>1.1.446(24)(24)(25)(2)(20)(24)<br/>1.2.446(24)(24)(22)(20)(25)(4)<br/>Fermia Term<br/>3.1.446(24)(22)(21)(20)(25)<br/>Fermia Term<br/>1.9.446(24)(22)(20)(20)(24)<br/>Fermia Term<br/>1.9.446(24)(22)(20)(25)(25)<br/>Fermia Term<br/>1.9.446(24)(22)(20)(25)(25)<br/>Fermia Term</td> <td>2810 AGA<br/>2850 AGA<br/>2840 AGA</td> <td>Constraint Unbiling Configuration     Constraint Unbiling Config     Constraint Unbiling Config     Constraint Delayed Config     P Constraint Delayed Config</td> <td>sping 42.2 42.100<br/>sping 42.2 42.100<br/>lking 55.4 61.2 115<br/>sping 61.4 54.6 100</td> <td>NG<br/>NG<br/>NG<br/>NG</td>  | 0         20         20         Mathem           1         20   | Pre claropol, Cublets mellou O<br>None A<br>Nore B<br>Oliphyticamenia A<br>Highthyticalini, Certalianal hysertenian O<br>Highthyticalini, Anthra A<br>Pre schorpol, Petrial ALLY, Nema Decasi A<br>Pre schorpol, Petrial ALLY, Nema Decasi A<br>Nore Mittae, Machine A<br>Diceter Index, Machine J   | 1.1.446(24)(24)(25)(2)(20)(24)<br>1.2.446(24)(24)(22)(20)(25)(4)<br>Fermia Term<br>3.1.446(24)(22)(21)(20)(25)<br>Fermia Term<br>1.9.446(24)(22)(20)(20)(24)<br>Fermia Term<br>1.9.446(24)(22)(20)(25)(25)<br>Fermia Term<br>1.9.446(24)(22)(20)(25)(25)<br>Fermia Term  | 2810 AGA<br>2850 AGA<br>2840 AGA   | Constraint Unbiling Configuration     Constraint Unbiling Config     Constraint Unbiling Config     Constraint Delayed Config     P Constraint Delayed Config   | sping 42.2 42.100<br>sping 42.2 42.100<br>lking 55.4 61.2 115<br>sping 61.4 54.6 100   | NG<br>NG<br>NG<br>NG  |
| AMA5(204)(2015)(20)202899 34 Higher Seco<br>AMA5(20)(2020)(30)(306412 31 Post Gradual<br>AMA5(20)(2020)(30)(306412 30 Gradual<br>AMA5(20)(2010)(30)(31)(2164 36 Post Gradual  | h         Houseville         Uthen         22.4         2           ontry         Houseville         Uthen         22.9         2           option         Houseville         Uthen         22.09         3           houseville         Uthen         27.07         3           houseville         Uthen         26.44         2           addin         Houseville         Uthen         26.44         2           addinty         Houseville         Uthen         26.46         2   | 0 40 Absent<br>1 28+5 VIS Absent<br>1 28+3 VIS Absent<br>1 29+3 VIS Absent<br>1 27 NO Moderate<br>0 29+2 VIS Absent  | Diabetes melitzus A<br>None B<br>Diabetes melitzus, Hypothyroldism O<br>Placenta Previo, Oligichydraamolos A<br>Gestational Hypotheniaio, 79HCD O  | 11.9 AMMQ124/22021/2205190 Fermalie Term<br>11.2 AMMQ124/22021/2205190 Fermalie Term<br>11.1 AMMQ124/22021/2205243 Fermalie Term<br>9.3 AMMQ126/22021/2202344 Maile Term<br>11.6 AMMQ126/22021/2202344 Maile Term  | 2005 AGA<br>3160 AGA<br>3600 SGA<br>3611 AGA<br>2427 AGA<br>4644 LGA   | B     9 Cassarean     Delayed cord cl     8     9 Cassarean     Unabilitat cord r      7 Cassarean     Unabilitat cord     8     9 Cassarean     Unabilitat cord     8     9 Cassarean     Unabilitat     0 Cassarean     Unabilitat     0     Cassarean     Unabilitat   | lking 25.4 55.6 NO<br>mping 11.4 55.6 NO   | ND<br>ND<br>ND  |
| AIM5/304/2020/10/006754 24 Graduation   | Antang Proversive unture 22.00 1<br>h Stateful Uithan 22.00 1<br>h Housewife Uithan 26.3 2<br>h Working Uithan 26.6 2<br>School Housewife Uithan 26.59 4  | 137-b         197           137-b         27           14000         27           15000         27           14000         27           15000         27           15000         27           15000         27           15000         2452           15000         2452           15000         2452           15000         2462           15000         2452           15000         2452           15000         2452           15000         2452           15000         2452           15000         2452           15000         2452           15000         2452           15000         2452           15000         2454           15000         15000           15000         25000           15000         25000           15000         25000           15000         25000           15000         25000           15000         25000           15000         25000           15000         25000           15000         25000   | A         A           Scalar Area, Suphysher, No.         A           Scalarea, Suphysher, No.         A <td>12 AMM/24/2020/12/00/06/24 Male Term     9.6 AMM/24/22/02/22/00/22/86 Female Term     8.7 AMM/26/22/02/22/02/208 Female Term     11 AMM/26/222/02/22/02/25 Female Term</td> <td>500 50A<br/>3330 AGA<br/>3146 AGA<br/>2667 AGA<br/>2555 AGA<br/>3174 AGA</td> <td>B Conservan Unshibilion of f     Conservan     Conser</td> <td>Marg         Mar         January           Ring         48.9         56.4 NO           sping         51.7         52.7 NO           mping         45.8         52.8 NO           Ring         45.4         52.4 NO</td> <td>NG<br/>NG<br/>NG<br/>NG</td> | 12 AMM/24/2020/12/00/06/24 Male Term     9.6 AMM/24/22/02/22/00/22/86 Female Term     8.7 AMM/26/22/02/22/02/208 Female Term     11 AMM/26/222/02/22/02/25 Female Term   | 500 50A<br>3330 AGA<br>3146 AGA<br>2667 AGA<br>2555 AGA<br>3174 AGA  | B Conservan Unshibilion of f     Conservan     Conser   | Marg         Mar         January           Ring         48.9         56.4 NO           sping         51.7         52.7 NO           mping         45.8         52.8 NO           Ring         45.4         52.4 NO   | NG<br>NG<br>NG<br>NG  |
| A ABALE (2012) (  | No         Model         Hale         2.2.8         1           Version         2.8.9         2.8.9         2.8.9           Version         2.8.9         2.8.9         2.8.9           Monta         2.8.9         2.8.9         2.8.9   | 1 39-2         VIS         Modernit           2 39-2         VIS         Absent           0 34-6         VIS         Absent           1 37-1         VIS         Absent           0         2 VIS         Mid           0         2 VIS         Mid           0         2 VIS         Absent           1 37-1         VIS         Absent           0         3 VIS         Absent           1 32-3         NO         Modernity  | Pre eclampsia, Hypothyroldiam A<br>None AB<br>Dilabetes mellitus, Overweight, Polyhydroam A<br>None D<br>None AB   | 11 AMAC(2012202,00)(21212) Forma's Term<br>12.4 AMAC(201222)(2012)(2123) Mala Term<br>13.4 AMAC(20122)(2012)(2012) Mala Term<br>14.5 AMAC(20122)(2012)(2013) Mala Term<br>15.4 AMAC(20122)(2012)(2015) Mala Term<br>16.4 AMAC(20122)(2012)(2015) Mala Term<br>16.4 AMAC(20122)(2012)(2015) Mala Term<br>16.1 AMAC(20122)(2012)(2015) Mala Term<br>16.1 AMAC(20122)(2012)(2015) Mala Term<br>17.1 AMAC(2012)(2012)(2015) Mala Term<br>17.1 AMAC(2012)(2012)(2015) Mala Term<br>17.1 AMAC(2012)(2015)(2015) Mala Term<br>17.1 AMAC(2012)(2015)(2015) Mala Term<br>17.1 AMAC(2012)(2015)(2015) Mala Term<br>17.1 AMAC(2015)(2015)(2015) Mala   | 2575 AGA<br>2174 AGA<br>2657 AGA<br>2004 AGA<br>2767 AGA<br>2102 SGA   | 7         9         Canazaran         Delayad cord d.           8         9         Vaginal         Delayad cord d.           8         9         Vaginal         Delayad cord d.           8         9         Vaginal         Unabled cord d.           7         9         Vaginal         Unabled cord d.           8         9         Vaginal         Delayad cord d.           7         9         Vaginal         Delayad cord d.   | Aling         44.9         54.4 NO           mping         1.12         2.2 NO           mping         44.8         5.2 NO           mping         44.8         5.2 NO           mping         40.4         5.4 NO           mping         40.4         5.4 NO           mping         40.4         5.2 NO           mping         64.6         6.4 NO           mping         44.4         5.2 NS           mping         44.4         5.2 NS           mping         4.4 NO         5.2 NS   | NG<br>NG<br>NG<br>NG  |
| AIM5/JDH/2020/06/006772 28 Primary Scho   | Alloui Housewiffe Rural 28.67 2<br>hoal Housewiffe Rural 28.67 2<br>hoal Housewiffe Rural 25.64 2<br>hoal Housewiffe Urban 22.21 1<br>hoal Housewiffe Urban 22.97 3   | 0 28-6 YES Absent<br>1 29+3 NO Moderate<br>0 40 YES Mild<br>0 29+3 YES Mild<br>0 29+4 YES Absent   | None B<br>None O<br>None O<br>None O<br>None AB  | 10 Mathylevy(2021)0212055 Fermile Term     10.1 AMM(2021)02102055 Fermile Term     10.1 AMM(2024)021021056 Maile Term     10.1 AMM(2024)02101010266 Fermile Term     10.1 AMM(2024)021020102568 Fermile Term   | 2826 SCA<br>2221 ACA<br>2716 SCA   | B Vaginal Delaye Cord C     B 9 Vaginal Delaye Cord C     9 10 Vaginal Utrebilical cord r     7 9 Vaginal Delayed cord C     B 9 Vaginal Utrebilical cord r   | mping 52.5 56.4 NO   | NG<br>NG<br>NG  |
| AMAC(24)(2523)(2525)14 25 Generality 2<br>AMAC(24)(2523)(2525)14 22 Heary Sci<br>AMAC(24)(2523)(2525)11 22 Heary Sci<br>AMAC(24)(2523)(2525)15 22 Heary Sci<br>AMAC(24)(2523)(2525)16 25 Heary Sci<br>AMAC(24)(2523)(2525)16 24 Heary Sci<br>AMAC(24)(2523)(2525)16 24 Heary Sci<br>AMAC(24)(2523)(2525)12 44 H  | School         Housewife         Urbin         20.1         1           Marcian Price         Urbin         2.00         1           Marci         Urbin         2.00         1           Marci         Marci         2.05         1           Marci         2.05         2         1           Marci         2.02         1         1           Marcine         Urban         2.06         4           Marcine         Urban         2.06         4           Marcine         Urban         2.06         4   | 0 49-5 VES Mid<br>0 39-4 VES Alonent<br>0 77-6 VES Alonent<br>1 20 0 VES Alonent<br>1 20 1 27 KES Alonent<br>0 49-1 27 KES Alonent<br>0 49-4 VES Mid<br>0 37-4 VES Mid   | None A<br>None D<br>None D<br>None D   | 10.3         AMAC/3042232,0(2)(2):200         Female         Terms           13         AMAC/304223,0(2)(2):000         Kinale         Terms           14         AMAC/304223,0(2)(2):000         Female         Terms           12.4         AMAC/304223,0(2)(2):000         Kinale         Terms           13.5         AMAC/304223,0(2)(2):0101311         More         Terms           14.5         AMAC/304223,0(2)(2):013131         More         Terms           12.7         AMAC/304223,0(2)(2):021323         More         Terms           12.4         AMAC/304223,0(2)(2):021327         More         Terms  |  | O 20 Vagonal Cambridge Cambridg   | ANAU         4.2.5         MO           sping         6.1.7         4.2.8         MO           sping         4.0.1         4.2.4         MO           sping         4.1.1         4.2.1         MO           sping         4.1.2         4.2.1         MO           sping         4.2.2         4.2.1         MO           sping         4.2.2         4.2.2         MO           sping         4.2.2         4.2.5         MO           sping         4.2.2         4.2.5         MO           sping         4.2.2         5.4.3         MO           sping         4.2.2         5.4.3         MO           sping         4.2.2         5.4.3         MO           sping         4.2.2         5.4.3         MO           sping         4.2.2         5.2.3         MO  | NG<br>NG<br>NG  |
| AMAK(24)(2020)(2000548 28 Higher Secon<br>AMAK(24)(2020)(2000548 28 Higher Secon<br>AMAK(24)(2020)(2000527 24 History Sch<br>AMAK(24)(2020)(2000522 29 Secondry 5<br>AMAK(24)(2020)(2000522 24 History Sch  | School         Housewift         Uthin         22.2         1           Marking         Hausewift         Uthin         27.66         4           ondray         Hausewift         Uthin         36.06         2           andray         Hausewift         Uthin         36.06         1           Administration         Administration         37.56         1           School         Hausewift         Uthin         27.74         1  | 0 28+1 YES Absent<br>0 40+2 YES Absent<br>0 29+2 YES Absent<br>0 29+4 YES Mild<br>0 27+4 YES Mild  | Pre ecanyosa Pre ecanyosa Pre ecanyosa Pre ecanyosa Pre ecanyosa Pre econyosa Pre econyo   | 1.1.1 Antimity (2012) (2012) (2012) Maile Term<br>1.2.7 AMM/(2012) (2012) (2012) (2013) Maile Term<br>1.2.7 AMM/(2014) (2012) (2012) (2013) Maile Term<br>1.0.4 AMM/(2014) (2012) (2012) Fermile Term  | 2224 AGA<br>2091 AGA<br>2425 SGA   | E 9 Vaginal Umbiliai conf<br>B 9 Vaginal Umbiliai conf<br>B 9 Vaginal Umbiliai conf<br>B 9 Vaginal Debyed cont di<br>B 9 Vaginal Debyed | mping 48.8 51.1 YES  | NG<br>NG<br>NG  |
| AIMS/3DH/2018/10/006250 27 Primary Scho   | andany Houseville Urban 26.9 2<br>hoad Houseville Runal 2564 2<br>donly Houseville Urban 2787 1<br>School Houseville Urban 2681 2<br>hout Houseville Urban 279 1  | 1 37+1 YES Absent<br>0 38+3 YES Absent<br>0 39+4 YES Absent  | None A<br>Diabetes mellitus B<br>None D<br>None B<br>None D  | 11.4         AMARC/101/02210.01/020041         Male         Term           12.7         AMARC/101/02210.01/02008         Fernals         Term           11.1         AMARC/101/02210.01/02008         Fernals         Term           14.1         AMARC/101/02210.01/02008         Male         Term           13.1         AMARC/101/02210.01/02008         Male         Term           14.1         AMARC/101/02210.01/02008         Male         Term   | 2748 AGA<br>3419 AGA<br>3115 AGA<br>2715 SGA<br>3000 KDA   | 8 9 Vaginal Umbilical cond n<br>8 9 Vaginal Umbilical cond n  | lking 54.8 60 NO<br>lking 45.3 54 NO   | NG<br>NG<br>NG  |
| MAKCON(202309/00004         Die Higher Host           MAKCON(202309/000040         Die Honterly           MAKCON(202121)/000040         Die Honterly           MAKCON(202121)/000040         Die Honterly           MAKCON(202121)/000040         Die Honterly           MAKCON(202121)/000040         Die Honterly           MAKCON(20212)/000050         Die Honterly           MAKCON(20230)/0100070         Die Higher Honte           MAKCON(20230)/0100070         Die Higher Honte           MAKCON(20230)/0100070         Die Higher Honte           MAKCON(20230)/0200050         Die Higher Honte   | Stand         Data         2.12         2           Massardh         Ustan         2.12         1           Massardh         2.12         1         1           Massardh         Araf         2.12         1           Massardh         Araf         2.12         1           Massardh         Barandh         2.12         1           Massardh         Massardh         2.12         1           Massardh         Massardh         2.12         1           Massardh         Massardh         2.12         1           Massardh         Massardh         2.13         1           Massardh         Massardh         2.14         1           Massardh         Massardh         2.14         1           Massardh         Massardh         2.13         1           Massardh         Massardh         2.13         1   | 0         40-5         VIS         Adusti           0         40-6         VIS         Adusti           1         40-2         VIS         Adusti           1         0-2         VIS         Madernia           1         0-41         VIS         Adusti           1         0-41         VIS         Adustinia           1         0-42         VIS         Adustinia           1         0-43-1         VIS         Adustinia           0         24-1         VIS         Adustinia           0         24-2         VIS         Adustinia  | None A<br>Presclampsia A<br>None B<br>None B   | 11.6 AMM5/104/2021/01/021877 Female Term<br>12.6 AMM5/04/2021/021841 Female Term<br>7.9 AMM5/04/2021/0202030 Female Term<br>13.1 AMM5/104/2021/02020 Female Term   | 1155 AGA<br>2155 SGA<br>3060 SGA<br>3168 AGA<br>3188 AGA<br>3282 AGA<br>3282 AGA<br>3282 AGA<br>3282 AGA<br>3282 AGA                                     | B Vignal Constraints of the Vignal Cons   | Nong         51.7         54.2 NO           why         6.0         4.1 NG           Nong         6.1 NG         1.2 NG           why         6.1 MG         1.2 NG           why         7.1 MG         1.2 NG           why         6.1 MG         1.2 NG           why         7.1 MG         1.2 NG           why         7.1 MG         1.2 NG  | ND<br>ND<br>ND  |
|   |   | 0 40+2 YES Mild  | Note al<br>Note O<br>Diabetes melitus A<br>Note B<br>Note A  | 1.2.4         AMAC/01022210,00121441         Finemia         Termin           7.3         AMAC/0102210,00120130         Finemia         Termin           1.1         AMAC/0102210,0012000         Finemia         Termin           1.2.1         AMAC/0102210,0012000         Finemia         Termin           1.3         AMAC/0102201,00100000         Finemia         Termin           1.4         AMAC/0102201,001000000         Finemia         Termin           1.5         AMAC/0102201,001000000         Finemia         Termin           1.4         AMAC/0102201,001000000         Minemia         Termin           1.4         AMAC/01000000,000000000         Finemia         Termin           1.4         AMAC/01000000,0000000000         Finemia         Termin   |  | B 9 Vaginal Delayed cord ci     B 9 Vaginal Limbilical cord r     B 9 Vaginal Limbilical cord r     B 9 Vaginal Limbilical cord r     S 9 Vaginal Limbilical cord r   |  | NG<br>NG<br>NG  |
|   | boll         Houreville         Urban         26.09         2           bodl         Houreville         Urban         26.45         2           Soold         Houreville         Runil         26.46         1           1         Houreville         Urban         25.55         1           1         Houreville         Urban         26.77         2  | 1 28+2 VES Absent<br>1 28+4 VES Moderate<br>0 28+6 NO Absent<br>0 28+2 VES Absent<br>1 27+5 VES Absent   | Diabetes melitus AB<br>Diabetes melitus, Hypothyroidium B<br>None AB<br>Geststional Hypertension A<br>None P   | 12.1 AMM_2124(2212)(201232) Feralle Term<br>0.6 AMM_21222(22)(20123) Feralle Term<br>11.7 AMM_2124(222)(22)(2012) Malle Term<br>12.7 AMM_2124(222)(22)(2014) Malle Term<br>12.5 AMM_2124(222)(22)(2014) Malle Term   | 2512 AGA<br>2914 AGA<br>3117 AGA<br>2800 AGA<br>2800 AGA   | B 9 Vaginal Umbilial cord r     B 9 Vaginal Debuged cost 6:     S 9 Vaginal Umbilial cord r     B 9 Vaginal Umbilial cord r     B 10 Vaginal Debuged cost 6:     B 10 Vaginal Debuged cost 6:   |  | NG<br>NG<br>NG<br>NG  |
| AMAC(2012)22(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)  | Noil         Match         Match         Add         2           Massach         March         Add  | 1         30-0         MS         Abunt           0         40 YES         Abunt         0   | Diates nellas, legativestan a<br>Nore Aa<br>Genational Apportantion A<br>Nore B<br>North Antonio A<br>Nore B<br>North Antonio A<br>Nore O<br>Diates nellas B<br>Nore B<br>Nore B<br>Nore B<br>North Antonio A<br>Nore B<br>North Antonio A<br>Nore B<br>North Antonio A<br>North Anton   | 1.2.4         ALMANC/1014/2021/02/1004048         Maltie         Termin           1.1.5         ALMANC/1014/2021/02/1004068         Fernality         Termin           1.0.8         ALMANC/1014/2021/02/1004068         Maltie         Termin           1.2.6         ALMANC/1014/2021/02/100406         Maltie         Termin           1.2.7         ALMANC/1014/2021/02/1004144         Fernality         Termin           1.2.7         ALMANC/1014/2021/02/1004144         Fernality         Termin           1.2.7         ALMANC/1014/2021/02/1004044         Maltie         Termin  | 2213 AGA<br>2631 SGA<br>2221 AGA   | 2 Si Vegnal     2 Vegnal   | 44.9         41.1 NO           Ring         53.1         42.3 NO           rping         48.7         52.3 NO           Ring         48.8         52.6 YES           Ring         44.8         54.6 YES  | ND<br>ND<br>ND  |
| AMA5/324(2020)03(00204 23 Secondary S<br>AMA5/324(2020)03(012764 25 Secondary S<br>AMA5/324(2020)02(00089 24 Secondary S  | b         Working         Ustan         25.59         3           Montry         Missawelf         Ustan         34.67         1           School         Missawelf         Ustan         32.54         1           School         Missawelf         Ustan         23.54         2           School         Missawelf         Ustan         23.77         2           School         Missawelf         Ustan         24.64         1  | 1         20 YES         Abuent           0         24-4         YES         Abuent           0         24-2         YES         Abuent           1         20 YES         Abuent           1         40-2         YES         Abuent           1         40-2         YES         Abuent           0         24-5         YES         Abuent  | Genital psoriasis with folliculitis D  | L.2 AMM/1942/2012/2001246 Vertille Lemm     L1 AMM/1942/2012/2012/2016 Male Term     L4 AMM/1942/2012/2010130 Male Term     L4 AMM/194/2021/20210832 Male Term     L3 AMM/194/2021/20210826 Fermile Term   | 2768 AGA<br>2460 AGA<br>2376 AGA<br>2264 SGA<br>2074 AGA<br>22074 AGA  | 8 9 Vaginal Delayed cord ch   | Iking 49.4 55.4 NO<br>mping 45.5 43.2 NO   | NG<br>NG<br>NG  |
| ABAK5/2041/2023/03/026571 35 Higher Secon<br>ABAK5/2042/023/0230586 23 Primary Scho<br>ABAK5/2042/0230/12/00642 24 Primary Scho<br>ABAK5/2042/0230/13/00642 19 Illiferate<br>ABAK5/2042/0230/13/000000 20 Primary Scho  | Insurantifi         Unitan         20.01         2           Incol         Housewife         Uitan         23.09         3           Incol         Housewife         Uitan         23.09         1           Incol         Housewife         Uitan         25.0         1           Housewife         Baral         27.6         1           Housewife         Uitan         10.0         1   | 1         27-2         YES         Abuent           2         28-1         YES         Abuent           0         28-4         YES         Abuent           0         28-2         YES         Abuent  | None D<br>None D<br>None D<br>None D   | 12.4 ABM5/1242/2221/22/201238D Female Term<br>11.6 ABM5/1264/2221/22/2012493 Male Term<br>12.3 ABM5/1264/2221/22/2012695 Female Term<br>13.3 ABM5/1264/2221/22/202240 Male Term<br>13.4 ABM5/1264/2221/202240  | 2100 SGA<br>2861 AGA<br>3122 AGA<br>2663 SGA   | Polytical Contract Contra   | Non         22.8         61.4         YES           Ricing         45.6         55.4         NO           Ricing         45.6         55.2         NO           Training         45.6         45.4         NO           Training         45.6         45.4         NO  | NG<br>NG<br>NG  |
| AMACCONC20210(21288)         24 Higher Host           AMACCONC20210(21287)         25 Higher Host           AMACCONC20210(21288)         23 Pinnary Sch.           AMACCONC20210(21288)         23 Pinnary Sch.           AMACCONC20210(21288)         23 Pinnary Sch.           AMACCONC20210(21288)         24 Pinnary Sch.           AMACCONC2020(202000)         24 Pinnary Sch.           AMACCONC2020(202000)         25 Pinnary Sch.           AMACCONC2020(202000)         26 Pinnary Sch.   | Instand         Ustan         A.d.         I           Massach         Ustan         A.D.         I  | 0 23+2 YES Absent<br>0 23+4 YES Absent   | Nore O<br>Nore O<br>Nore O<br>Outside O<br>Nore O<br>Nore O<br>Nore O<br>Distrimmina a<br>Nore A   | 11.3         AMAC/324(322)(22)(2020)         Male         Term           12.4         AMAC/324(322)(22)(21)(21)(23)         Male         Term           12.4         AMAC/324(32)(22)(21)(21)(21)(21)(21)(21)(21)(21)(2  | 2225 AGA<br>2001 AGA<br>2009 AGA<br>2009 AGA<br>2022 AGA<br>2020 SGA   | B     B Vagent Unshiption of F     F Vagent Unshiption of F     B Vag   | Ring         41.9         55.2         NO           mping         41.6         51.3         NO           mping         42.8         51.3         NTS           Ring         21.4         46         VTS           mping         27.1         43.2         NO           mping         50.1         51.2         NO           mping         43.9         66.6         NO           mping         43.9         60.6         NO  | NG<br>NG<br>NG  |
| AMM5/12H(2020)12/007869 20 Secondary St<br>AMM5/12H(2020)12/007869 21 Secondary St  | School Housewife Urban 27.9 1<br>School Housewife Urban 22.91 1   | 0 40+3 YES Absent<br>0 20+1 YES Absent<br>0 27+6 YES Mild  | None All   | 10.9 AMMQ1254(72212)02(721502) Fernale Term<br>12.1 AMMQ1264(7221)02(721502) Fernale Term<br>11.6 AMMQ126(7221)02(10)12012 Fernale Term<br>10 AMMQ1264(7221)02(10)12012 Mille Term<br>8.6 AMMQ1264(7221)01(10)12012 Mille Term   | 2870 SGA<br>2478 SGA<br>2260 AGA<br>2013 AGA<br>2810 AGA   | 8 9 Caesarean Delayed cord ch<br>8 9 Caesarean Delayed cord ch  | rping 462 47.3 ND<br>rping 45.7 46.2 ND  | ND<br>ND<br>ND  |
| ALMAC/EN-(02291/10/06144 23 h)gher Secon<br>ALMAC/EN-(0229110,000306 25 Primary Ech<br>ALMAC/EN-(0229110,000702 34 Pot Ensays Ech<br>ALMAC/EN-(022912,000702) 34 Secondary 5<br>ALMAC/EN-(022912,000727) 27 Secondary 5<br>ALMAC/EN-(022912,000727) 29 Secondary 5<br>Secondary 5<br>ALMAC/EN-(022912,000727) 29 Secondary 5<br>Secondary 5<br>ALMAC/EN-(022912,000727) 29 Secondary 5<br>Secondary 5<br>Se | Control Within         Match  | 1 A7-5 NO MORENDA<br>2 A1-3 VIS Abuent<br>1 37-1 VIS Abuent<br>1 32-5 VIS Mild<br>0 35-5 VIS Abuent<br>0 38-2 VIS Abuent<br>1 39-4 VIS Modernte  | None B<br>None B<br>Dabeter melliou, Splagay Ab<br>Gestational Hypertension B<br>Dabeter melliou, Gestational Hypertension B<br>Gestational Hypertension B<br>Knews  | II. AMIN/1942/2021/01/01/01/III.     Indiv     Indindiv     Indiv     Indiv     Indindiv     Indiv     Indiv   | 2208 AGA<br>2208 AGA<br>2504 AGA<br>2504 AGA<br>2208 AGA<br>2208 AGA   | 6 Consumers Unbillion conf<br>8 O Consumers Debuged conf di<br>8 O Consumers Debuged conf di<br>8 O Consumers   | No.0         04.1         54.1         NO           Ring         22.9         34.3         NO           Ring         44.4         56.3         NO           Ring         46.3         47.3         NO           mping         47.3         52.3         NO   | ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>а |
| AMM4[UR1/02021/0]003854 29 Graduation<br>AMM4[UR1/02020]009056 30 Graduation<br>AMM4[UR1/02020]1000085 40 higher Secon<br>AMM4[UR1/02021/1]000015 28 higher Secon<br>AMM4[UR1/02021/1]000583 28 higher Secon  | h Houseville         Uitean         20.77         1           Working         Uitean         20.61         3           ondary         Houseville         Uitean         26.721         5           ondary         Houseville         Uitean         24.059         2           ondary         Houseville         Uitean         24.059         2           ondary         Houseville         Uitean         27.9         1  | 2 2/ 11/5 Mild<br>0 38+5 YES Absent  |  | 12.5 A MARG/AV27210/102/MIS Male Mem<br>01.1 AMAG/64/022210/20181 Male Term<br>11.1 AMAG/64/022210/20181 Male Fertern<br>0.1 AMAG/64/022210/201804 Male Term<br>9 AMAG/64/022210/201804 Fernile Term<br>12.1 AMAG/64/022210/201801 Fernile Term<br>12.1 AMAG/64/022210/201801 Fernile Term<br>0.0 AMAG/64/022210/201801 Fernile Term   | 2014 ACA<br>2022 ACA<br>2058 ACA   | B 9 Caesarean Umblical cord r<br>7 9 Caesarean Delawal cord c   | Ring 50 563 NO<br>mping 52.4 54 NO   | NG<br>NG<br>NG  |
| AIM5/30H/2020/08/002523 26 Secondary Se   | ondry Hourwife Urban 22.9 1<br>School Hourwife Runal 22.75 1<br>School Hourwife Runal 22.6 1<br>Indray Hourwife Urban 22.6 4<br>I Hourwife Urban 22.7 4   | 0 27 VIS Mid<br>0 27-46 VIS Absent<br>0 28-6 VIS Absent<br>2 28-5 VIS Absent<br>0 28-4 VIS Absent  | None O<br>None O<br>None O   | 10.9 AMM/12/12/2012/02/00/208 Fermals Term<br>12.9 AMM/12/4/2231/02/00/2066 Fermals Term<br>12.2 AMM/21/2231/02/02/12/14 Fermals Term<br>12.3 AMM/21/2012/02/02/02/14/14 Mails Term<br>11.3 AMM/21/2012/02/02/02/04/16 Mails Term  | 2703 AGA<br>2797 AGA<br>2892 AGA<br>2892 AGA<br>2244 AGA<br>3675 AGA   | 8 9 Caesarean Umbilical cord r<br>6 9 Caesarean Delayed cord ch   | Bing 42 64.3 ND  | ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>ал<br>а |
| AMAGADI(2012)(12013) 2 b ligher facts<br>AMAGADI(2012)(12013)2013<br>AMAGADI(2012)(12013)2013<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGADI(2012)(12013)201<br>AMAGA  | n Houseville Urban 2866 2<br>School Houseville Urban 365 1<br>School Houseville Urban 265 3<br>School Houseville Urban 248 3  | 2 B/5         YES         Assent           3 B/4         YES         Assent           1 3/3-1         YES         Assent           2 3/7-6         YES         Assent           2 3/7-6         YES         Assent           1 3/3-1         YES         Assent           2 3/7-6         YES         Assent           0 4/5-5         YES         Moderate           0 3/3-6         YES         Moderate           0 3/3-6         YES         Assent           1 3/3-7         YES         Assent   | None B<br>None O<br>hypothyroidium A<br>Diabetes mellitus O  | 1.1 AMAC(30022),02(3),02(3),0340     16, mode Term     1.2 AMAC(30022),02(3),02(3),044     16, mode Term     1.4 AMAC(30022),02(3),02(3),024     16, mode Term     7.5 AMAC(30022),02(3),02(3),055     16, mode Term     1.3 AMAC(30022),02(3),02(3),055     16, mode Term     1.3 AMAC(30022),02(3),02(3),025     16, mode Term     1.3 AMAC(30022),02(3),02(3),026     16, mode Term     1.3 AMAC(3002),02(3),02(3),026     16, mode Term     17     16, mode Term     17     17     16, mode Term     17  | 200 AGA<br>200 AGA<br>200 AGA<br>200 AGA<br>200 AGA<br>200 AGA<br>200 AGA<br>200 AGA<br>200 AGA<br>200 AGA   | E Conservan Derlander dool 6     Conservan Conservation     Sonoren   | sping         54.4         52.6         153.           sping         2.5         4.3         NO           sping         2.5         5.1         NO           sping         2.5         4.3         NO           sping         2.5         4.3         NO           sping         3.5         5.1         NO           sping         4.2         5.5         NO           sping         4.4         5.6         NO           sping         4.4         5.6         NS           sping         4.4         5.6         NS  | NG<br>NG<br>NG  |
| AMMAYLAVIU2219121876 22 4/2500000<br>AMMAYLAVIU221912080 27 Graduation<br>AMMAYLAVIU221910210680 30 higher Secon<br>AMMAYLAVIU22191020200 35 higher Secon<br>AMMAYLAVIU2219101006642 22 Graduation  | Note         Market         Like         Like <thlike< th="">         Like         Like         <t< td=""><td>0 49-5 11.5 MOderapy<br/>0 28-6 1155 Mild<br/>0 26-4 1155 Absent<br/>1 27-2 1155 Absent<br/>1 49-1 1155 Absent</td><td>node a<br/>Diabetes mellitus B<br/>Pretem labour, PPRDM AB<br/>Noce O<br/>Diabetes mellitus, Hygothyroldism AB</td><td>1.3         Anticipic (2015) (2015)         Anticipic (2015) (2015) (2015) (2015)         Anticipic (2015) (2</td><td>4115 LUA<br/>2007 AGA<br/>2220 AGA<br/>2008 AGA<br/>2531 AGA</td><td>9 30 Vaginal Londeau com<br/>8 9 Vaginal Delayed cont ci<br/>10 50 Vaginal Umbilical cont n<br/>9 50 Vaginal Umbilical cont n<br/>5 7 Vaginal Delayed cont ci</td><td>Mong         46.1         SHI NU           pring         S1         48.7 NO           Ring         41.4         S0.6 YES           Ring         44.7         S2.1 NO           pring         S1.8         6.15 NO</td><td>NG<br/>NG<br/>NG<br/>NG</td></t<></thlike<>  | 0 49-5 11.5 MOderapy<br>0 28-6 1155 Mild<br>0 26-4 1155 Absent<br>1 27-2 1155 Absent<br>1 49-1 1155 Absent   | node a<br>Diabetes mellitus B<br>Pretem labour, PPRDM AB<br>Noce O<br>Diabetes mellitus, Hygothyroldism AB   | 1.3         Anticipic (2015) (2015)         Anticipic (2015) (2015) (2015) (2015)         Anticipic (2015) (2   | 4115 LUA<br>2007 AGA<br>2220 AGA<br>2008 AGA<br>2531 AGA   | 9 30 Vaginal Londeau com<br>8 9 Vaginal Delayed cont ci<br>10 50 Vaginal Umbilical cont n<br>9 50 Vaginal Umbilical cont n<br>5 7 Vaginal Delayed cont ci   | Mong         46.1         SHI NU           pring         S1         48.7 NO           Ring         41.4         S0.6 YES           Ring         44.7         S2.1 NO           pring         S1.8         6.15 NO  | NG<br>NG<br>NG<br>NG  |
| AIM5/JDH/2021/03/006171 24 Primary Scho   | Month         Match         Diat         27.2         2         2           Match         Match         2.4         2.4         2.4         2.4           Match         Withen         2.6         2.4         2.4         2.4           Match         Withen         2.6         2.4         <   | 0         2         32         12         Mail           2         32         44         43         43         44         43         44         43         44         43         44 <td>Board Andraha, Sacitataria Japanesa.         B           Board Andrahamanesa.         B           Board A</td> <td>1.2.7 AMAQUULY 2021/20200021      4 remai term     1.1.7 AMAQUULY 2021/20200217      Termin     1.1.6 AMAQUULY 2021/2021/2021      Termin     1.1.6 AMAQUULY 2021/2021/2021/2021     Termin     1.2.7 AMAQUULY 2021/2021/2021/2021     Male     Term     1.2.7 AMAQUULY 2021/2021/2021/2021     Male     Term</td> <td>2810 AGA</td> <td>9 10 Vaginal Umbilical cord r</td> <td>Ring 45.2 53.4 ND</td> <td>NG<br/>NG<br/>NG<br/>NG</td> | Board Andraha, Sacitataria Japanesa.         B           Board Andrahamanesa.         B           Board A  | 1.2.7 AMAQUULY 2021/20200021      4 remai term     1.1.7 AMAQUULY 2021/20200217      Termin     1.1.6 AMAQUULY 2021/2021/2021      Termin     1.1.6 AMAQUULY 2021/2021/2021/2021     Termin     1.2.7 AMAQUULY 2021/2021/2021/2021     Male     Term     1.2.7 AMAQUULY 2021/2021/2021/2021     Male     Term  | 2810 AGA   | 9 10 Vaginal Umbilical cord r   | Ring 45.2 53.4 ND  | NG<br>NG<br>NG<br>NG  |
| AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2012)21(2)2021<br>AMAC(2  | s         service<br>working         Uthen         27.5         I           Model         Uthen         22.33         I           Model         Model         Uthen         22.03         I           Model         Model         Uthen         22.03         I           Model         Model         Model         23.01         I           School         Mousewide         More         22.01         I           School         Mousewide         Uthen         21.09         I           School         Mousewide         More         27.09         I  | 1 39-2         VIS         Abuset           1 39-4         VIS         Abuset           1 39-5         VIS         Abuset           0 39-4         VIS         Abuset           0 39-4         VIS         Abuset           0 40-1         VIS         Abuset           0 40-1         VIS         Abuset           0 40-1         VIS         Abuset           0 40-1         VIS         Abuset           0 39-1         VIS         Abuset  | Hypothyreidism B<br>None B<br>None O<br>None O   | 11.8         AMAC/GIO222,02,021         Mark         Termin           12.3         AMAC/GIO222,02,021         Mark         Termin           13.3         AMAC/GIO222,02,021         Mark         Termin           13.3         AMAC/GIO222,02,021         Termin         Termin           13.3         AMAC/GIO222,02,021         Termin         Termin           13.3         AMAC/GIO222,02,021         Termin         Termin           13.3         AMAC/GIO222,02,021         Mark         Termin           12.4         AMAC/GIO222,02,021         Mark         Termin           13.3         AMAC/GIO222,02,021         Mark         Termin           14.3         AMAC/GIO222,02,021         Mark         Termin           15.3         AMAC/GIO222,02,021         Mark         Termin  | 3403 MGA<br>3477 MGA<br>2287 MGA<br>2260 MGA<br>2260 MGA<br>2260 MGA<br>2260 MGA<br>2260 MGA<br>2260 MGA   | So Vaginal Delayed and Colored     So Vaginal  | upping         4.3         4.2. NO           mping         4.1.3         4.2. NO           mping         4.4.4         4.6.1 NO           mping         5.5.5         6.2 YES           RANG         4.2.2         5.2.2 NO           mping         45.3         4.8.0 NO           Rang         45.3         4.2.7 YES  | ND<br>ND<br>ND  |
| ABMS/3DH/2020/12/005405 29 Primary Scho   | ondary housewife Uitban 28.4 3<br>hool housewife Uitban 22.09 1<br>uiton werking Uitban 22.8 1  | 0 23-1 YES Mid<br>0 40-1 YES Abuent<br>2 41-6 NO Moderate<br>0 23-2 YES Abuent<br>0 20-2 YES Abuent  | Diabetes mellitus A<br>Gestational hypertension A<br>None O<br>None A<br>Hypothyroidism ^  | 11.7 AMAR(1514)(2021)(20)(202277 Male Term<br>10.9 AMAR(1514)(2021)(20)(2015454 Male Term<br>11.2 AMAR(1514)(2021)(20)(201203 Male Term<br>9.2 AMAR(1514)(2021)(20)(20230 Male Term<br>12.2 AMAR(1514)(2021)(20)(20230 Termale Term<br>12.1 AMAR(1514)(2021)(20)(20230 Termale Term  | 2180 AGA   | L0         L0         Vaginal         Delayed cond clip           9         L0         Vaginal         Umbilical cond right           9         L0         Vaginal         Umbilical cond right           7         E         Vaginal         Umbilical cond right           10         L0         Vaginal         Umbilical cond right   | Ring 43.5 51.5 NO  | NC<br>NC<br>NC<br>NC  |
| AMAK/101/0230(10)00006 25 pet Graduat<br>AMAK/101/0230(10)00232 22 Graduation<br>AMAK/101/023011004799 28 Graduation<br>AMAK/101/023011004799 28 Jihgher Secon<br>AMAK/101/02301(10)0205 28 Pittemary Sch   | uston working Uitan 22.8 1<br>working Uitan 22.6 1<br>beservelle Uitan 22.9 1<br>ondary boosevelle Uitan 25.5 1<br>ond hoosevelle Uitan 27.4 1  |  | Operations O<br>Noce O<br>Noce AB<br>Gestational Hypertension, Asthma A<br>Diabetes mellitos B   | 12 AMM/2124/2021/2021/2021/2021/2021/2021/2021   | 4001 AAAA<br>2022 AGA<br>2605 AGA<br>2703 AGA<br>2139 AGA  | 8         20         Vegeta         Unbillioned and Statistical Later.           9         10         10         Unbillioned and Statistical Later.           9         10         Vegeta         Unbillioned and Statistical Later.           10         10         Vegeta         Unbillioned and Statistical Later.           10         10         Vegeta         Unbillioned and Statistical Later.           11         10         Vegeta         Unbillioned and Statistical Later.           12         10         Vegeta         Unbillioned and Statistical Later.           13         Vegeta         Unbillioned and Statistical Later.           14         10         Vegeta         Unbillioned and Statistical Later.           15         10         Vegeta         Unbillioned and Statistical Later.           16         10         Vegeta         Unbillioned and Statistical Later.           16         10         Vegeta         Unbillioned and Statistical Later.           16         10  | Höng         41.5         50.7 NO           Böng         44.1         54.2 NO           möng         55.9         61.2 NO           Höng         27.9         42.7 YES           Höng         52.1         58.3 NO   | ND<br>NO<br>NO  |
| AMALCO/C02300(R00006         25 pert Crists           AMALCO/C02300(R00026)         26 construint           AMALCO/C02300(R00026)         26 construint           AMALCO/C02300(R00026)         26 construint           AMALCO/C02300(R00026)         26 construint           AMALCO/C02300(R00026)         27 Primary Grid           AMALCO/C02300(R00026)         20 primary Grid           AMALCO/C02300(R00026)         20 primary Grid           AMALCO/C02300(R00026)         20 primary Grid           AMALCO/C02300(R00026)         21 primary Grid           AMALCO/C02300(R00026)   | Net/T         Mark         7.2         1           Net/T         Mark         7.2         1           Mark         7.2         1         1           Mark         7.2         1         1           Mark         7.2         1         1           Mark         7.2         2         2           Mark  | Bable         VES         Alment           0         84-44         VES         Alment           0         84-44         VES         Alment           0         94-44         VES         Alment           0         94-44         VES         Alment           0         94-44         VES         Alment           0         94-45         VES         Alment           1         84-54         VES         Alment           1         64-54         VES         Alment           1         94-54         VES         Alment           1         34-34         VES         Alment           1         34-34         VES         Alment  | None A<br>None D<br>None B<br>None O<br>None O   | 1.3         Antipological 2019/E15.  | 2007 AGA<br>2007 AGA<br>2009 AGA<br>2009 AGA<br>2019 AGA<br>2018 AGA<br>2018 SGA<br>2018 SGA<br>2014 SGA<br>2014 SGA<br>2014 SGA<br>2015 SGA<br>2015 AGA | 20         30         Vagend         Lonship can private           20         Vagend         Lonship can private         Lonship can private           8         3         Vagend         Lonship can private           9         3         30         Vagend         Lonship can private           8         4         Vagend         Lonship can private         Lonship can private           9         5         Vagend         Lonship can private         Lonship can private           8         4         Vagend         Delayed and private         Lonship can private           8         5         Vagend         Delayed and private         Lonship can private           8         5         Vagend         Lonship can private         Lonship can private  | 1.9         4.1         1.0           Rolg         2.1         5.1         1.0           Rolg         4.2         5.1         1.0           Rolg         4.2         4.2         1.0           sping         4.6         6.0         115           sping         5.8         5.2         1.0           Rolg         5.1.4         5.5         1.0           sping         5.4         5.5         1.0           Rolg         5.1.4         5.5         1.0   | ND<br>NO<br>NO<br>NO  |
| AMA(204)(232)(23)(2030)66 36 Graduation<br>AMA(204)(232)(20)(2030)4 38 Secondary 5<br>AMA(204)(232)(20)(2030)4 31 Secondary 5<br>AMA(204)(232)(20)(232) 31 Secondary 5<br>AMA(204)(232)(20)(232) 32 Secondary 5<br>AMA(204)(232)(23)(23)(23) 32 Secondary 5<br>AMA(204)(23)(23)(23)(23)(23)(23)(23)(23)(23)(23  | n bocavelle Littan 22.5 2<br>Solo bocavelle Littan 22.6 1<br>School bocavelle Littan 27.3 3<br>notry bocavelle Littan 20.5 3<br>boli Bocavelle Raral 19.9 3<br>school Bocavelle Raral 19.9 3  | 1 41+5 VES Mild<br>0 29+5 NO Absent<br>1 27+4 VES Mild<br>2 28+-3 VES Moderate<br>1 29+4 VES Absent<br>0 29-7 NO Absent  | 0<br>None 8<br>None 0<br>Diabetes melitous 0<br>None AB  | 10.8. AMM/2104/2021.04/000500 Mule Term<br>12.1. AMM/2104/2021.04/000501 Fernale Term<br>10.5. AMM/2104/2021.04/000518 Fernale Term<br>9.7. AMM/2104/2021.04/0005175 Fernale Term<br>12.9. AMM/2104/2021.04/000575 Mule Term<br>12.9. AMM/2104/2021.04/000575 Mule Term  | 2220 AGA<br>2236 AGA   | B 9 Vaginal Umbilical corf     S 00 Vaginal Debugsd conf ci     B 9 Vaginal Debugsd conf ci     B 9 Vaginal Umbilical corf     B 9 Vaginal Debugsd conf ci     B 9 Vaginal Debugsd conf ci     B 90 Vaginal Debugsd conf ci     B 90 Vaginal Debugsd conf ci  | mping 52.4 50.8 NO   | NO<br>NO<br>NO  |
| AMAC(20)(2023)(2023)(2014) 11 legnation (2)<br>AMAC(2012)(2023)(2015)(2) 12 legnation (2)<br>AMAC(2012)(2023)(2023)(2) 12 Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2) 12 Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) 12 Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2) 12 Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) 12 Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) 12 Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2) Jegnation (2)<br>AMAC(2012)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2  | tanto working Uthan 24.67 1<br>ordery basewife Uthan 22.1 2<br>Johd basewife Baral 20.5 3<br>ordery basewife Baral 24.6 2<br>Soal basewife Baral 24.7 3   | 2.32+5         NO         Abuntt           0.29+4         VLS         Abuntt           0.29+4         VLS         Abuntt           1.29+6         VLS         Moderate           2.29+6         VLS         Abuntt           2.29+6         VLS         Abuntt           2.29+6         VLS         Abuntt           2.29+6         VLS         Mild   | noce B<br>Diabetes melitus, Hypothyroldism O<br>Noce O<br>Noce A<br>Diabetes melitus, Preterm Jabore Oblinka r A   | 1.1.9         AMAC(54)(323)(324)(303)302         Malo         Term           1.7         AMAC(54)(323)(324)(324)         Fernár         Term           3.7         AMAC(54)(323)(42)(324)         Malo         Term           1.7         AMAC(54)(323)(42)(3150)         Malo         Term           1.2         AMAC(54)(323)(42)(40)(1510)         Malo         Term           1.4         AMAC(54)(323)(40)(40)(41)(51)         Malo         Term           1.8         AMAC(54)(32)(40)(40)(41)(51)         Malo         Term   | 2016 AGA<br>3406 AGA<br>4055 LGA<br>2255 AGA<br>2254 AGA<br>2254 AGA   | 20 Vaginal Contension contra<br>20 Vaginal Delayed control     20 Vaginal Delayed control   | No.         No.           Ricking         44.9         56.9         NGS           Ricking         44.9         56.9         NGS           Ricking         48.9         50.9         NO           Ricking         48.7         56.2         NO           Ricking         48.7         56.2         NO           Ricking         48.8         51.7         YES           Riphing         48.6         48.8         NO  | Сл<br>Си<br>ОЛ<br>207   |
| AIM5/U04/2021/02/004668 10 higher Secon<br>AIM5/U04/2021/03/011927 26 primary Scho  | ondary houseville Urban 21.66 2<br>hool houseville Rural 25.9 1   | 2 0000         0.0<  | Namentani A<br>Kara O<br>Control Hapforeira, Adam A<br>Galan andra Control Hapforeira, Adam A<br>Radian andra O<br>Kara  | 1.7         AMACID/02021_04/04/1240         Mole         Term           1.6         AMACID/02221_04/04/0480         Mole         Termin           0.8         AMACID/02221_04/04/0480         Fermin         Termin           1.6         AMACID/02221_04/04/0480         Mole         Termin           1.6         AMACID/02221_04/04/0480         Mole         Termin           1.6         AMACID/02221_04/04/0480         Mole         Termin           1.5         AMACID/02221_04/04/0480         Termin         Termin           1.5         AMACID/02221_04/04/04/04         Mole         Termin           1.5         AMACID/02221_04/04/04/04         Mole         Termin           1.6         AMACID/02221_04/04/04/04/04/04/04/04/04/04/04/04/04/0  | 2189 AGA<br>2876 AGA<br>2596 AGA   | E      Vaginal  | sping         44.0         51.7         YES           mping         42.6         43.8         NO           mping         53.4         53.1         NO           mping         42.6         44.8         NO           mping         53.4         53.1         NO           Ring         32.4         52.2         YES           Numa         67.6         67.3         YES  | NO<br>NO<br>NO  |
| ABM5/3DH(2021/01/019628 37 higher Secon<br>ABM5/3DH(2021/02/007953 24 Secondary S   | nodry bosowife Urban 28.6 7<br>Snikol bosowife Urban 28.4 7<br>Snikol bosowife Urban 26.9 1<br>Nod bosowife Urban 26.9 1<br>Nod bosowife Urban 26.9 1   | 1 27+6 ¥ES Absent<br>0 27+1 ¥ES Absent<br>0 28+6 ¥ES Mid<br>0 28+6 ¥ES Mid<br>0 40+1 ¥ES Mid<br>1 28+5 ¥ES Absent  | Pre eclampsia, Osbetes neellitus B<br>Diabetes neilitus, destational Hypentension B<br>Nace A<br>Nace O<br>Astòma O  | 12.8 AMMC/1221 (2023) (20105022 Male Term<br>12.8 AMMC/1221/2023) (20105020 Male Term<br>20.3 AMMC/1221/2023) (2010471 Male Term<br>12.8 AMMC/1221/2023) (20170471 Male Term<br>12.8 AMMC/1221/2023) (20170471 Female Term<br>12.0 AMMC/1221/2023) (20170471 Female Term   | 2587 AGA<br>2040 AGA   | 7 9 Vaginal Umbilical cond n<br>8 9 Vaginal Umbilical cond n  | Ring 48.8 54.9 YES   | NG<br>NG<br>NG  |
| MALCO/COSCIQUEDEA 23 Secondary 52<br>MALCO/COSCIQUEDEA 22 primas/mice<br>Add/CO/COSCIQUEDEA 22 primas/mice<br>Add/CO/COSCIQUEDEA 22 primas/mice<br>Add/CO/COSCIQUEDEA 22 primas/mice<br>Add/CO/COSCIQUEDEA 22 primas/mice<br>Add/CO/COSCIQUEDEA 22 primas/mice<br>Add/CO/COSCIQUEDEA 23 primas/mice<br>Add/CO/COSCIQUEDEA 24 primas/mice<br>Add/CO/  | Mathem         Barla         24         2           Antical         Standa         <  | 0.34-6         YES         Mdf           0.45-1         YES         Mdf           1.34-6         YES         Annent           1.34-6         YES         Mdf           0.45-1         YES         Annent           0.35-5         YES         Annent           0.33-6         YES         Molectrate           0.33-7         YES         Molectrate           0.33-8         YES         Annent           2.34-5         YES         Annent           2.34-5         YES         Annent           2.34-5         YES         Annent   | Chronic hypertension, Pre eclampsia A<br>None O<br>None O<br>None O<br>None O  | 11         A Math(s) (2012) (2012)         Annual A         Start           11         A Math(s) (2012) (2012)         Annual A         Start           12         A Math(s) (2012) (2014) (2014)         Annual A         Start           13         A Math(s) (2012) (2014) (2014)         Annual A         Start           14         A Math(s) (2012) (2014) (2014)         Annual A         Start           15         A Math(s) (2012) (2014) (2014)         Annual A         Start           16         A Math(s) (2012) (2014) (2014)         Annual A         Start           17         A Math(s) (2012) (2014) (2014)         Annual A         Start           18         A Math(s) (2012) (2014) (2014)         Annual A         Start           19         A Math(s) (2012) (2014) (2014)         Annual A         Start           10         A Math(s) (2014) (2014) (2014)         Annual A         Start           11         A Math(s) (2014) (2014) (2014) (2014)         Annual A         Start           12         A Math(s) (2014) (201   | 1180 AGA<br>2006 AGA<br>1180 AGA<br>2180 AGA<br>2180 AGA<br>2180 AGA<br>2180 AGA<br>2184 AGA<br>2280 SGA<br>2280 SGA<br>2280 SGA                         | S Vaginal Delayed and Calify   | sping         So 7         Si 1 NO           Ridig         47.7         48.3 YES           sping         40.1         42.5 NO           Ridig         45.9         52.2 NO           sping         46.5         44.4 NO           sping         47.5         54.4 NO   | NO<br>NO<br>NO  |
|   | Working         Urbans         26.9         2           Shoall         Hassawife         Rural         26.1         6           Shoall         Hassawife         Rural         23.9         6           Hassawife         Urbans         28.4         3           ondary         Hassawife         Urbans         28.6         2           ondary         Hussawife         Urbans         26.2         2   | 0 28+2 115 Moderate<br>1 28+6 115 Moderate<br>4 27 115 Absent<br>2 28+5 115 Absent<br>0 28+4 115 Moderate  | receir A<br>Pre eclampsia B<br>None O<br>Diabetes melitous B<br>None O   | 11.1 AMAC/04/0221,20,2010309 Female Terms<br>12.4 AMAC/04/2021,20,1002002 Female Terms<br>12.1 AMAC/04/2021,20,1002002 Female Terms<br>4.4 AMAC/04/2021,20,1002002 Female Terms<br>4.4 AMAC/04/2021,20,1002008 Female Terms<br>12.5 AMAC/04/2021,20,1002008 Female Terms<br>12.4 AMAC/04/2021,20,1002008 Female Terms<br>12.4 AMAC/04/2021,20,1002008 Female Terms<br>12.4 AMAC/04/2021,20,1002008 Female Terms  | 2254 AGA<br>2640 AGA<br>2283 SGA<br>2154 AGA<br>2504 AGA   | B      O Creaseran Debayed cont of<br>O Creaseran Debayed cont of<br>O Creaseran Umbilial cont of<br>B      O Creaseran Debayed cont of<br>O Document Umbilial   | mping         43.1         4.5.5         h0.3           mping         45.9         5.6.2         h0.3           mping         45.5         4.6.4         h0.3           mping         2.2.2         5.1.4         h0.3           mping         2.3.8         5.1.6.4         h0.3           mping         2.3.3         5.1.9         h0.3           mping         2.3.3         4.3.7         h0.3           mping         2.3.4         4.7.7         h0.3           mping         2.3.7         5.2.7         h0.3  |   |
| AIM5/304/2020/09/011370 23 Graduation   | Math         Apr         22 a         1           Nearding         Apr         22 a         2           Nearding         Nearding         2         2         2   | 1 36-4         451         Mat           0 46-1         0 46-4         0 46-4           0 46-4         0 46-4         64-6           0 36-4         0 46-4         46-6           0 36-4         10 46-7         64-6           1 36-6         12 46-7         46-6           2 36-4         13 46-7         46-6           1 36-5         16-6         46-6           2 36-4         16-7         46-6           1 36-7         16-7         46-6           1 36-7         16-7         46-6           1 36-7         16-7         46-6           1 36-7         16-7         46-6           1 36-8         45-5         46-6           1 36-4         16-7         46-6           1 37-6         16-7         46-6           1 37-6         16-7         46-6           1 37-6         16-7         46-6           1 37-6         16-7         46-6           1 37-6         16-7         46-6           1 37-6         16-7         46-6  | None B<br>None A<br>Diabetes melitus O<br>Diabetes melitus, Gestational Huserbroxion A<br>Diabetes melitus, Gestational Huserbroxion A   | 12.5 # AMM/1021(202108/12.12)7 Mole Term<br>10.6 #AMM/1021(2021)23/103/1054587 Mole Term<br>10.4 #AMM/102123(2021)23/10210589 Mole Term<br>10.5 #AMM/102123(2021)23/1021059 Fermale Term<br>9.8 #AMM/102123(2021)203/102108 Fermale Term   | 2004 AGA<br>2468 SGA<br>2200 AGA<br>2007 AGA<br>2007 AGA<br>2003 AGA   | 10 10 Caesarean Umbilical cord n  | Ring         50.7         57.7         NO           Ring         44.1         56.2         NO           Ring         48.8         51.6         NO           mping         64.5         63.1         YES  | NC<br>NC<br>NC<br>NC  |
| AMAC(2010)2012002         25         Gradienty           AMAC(2010)2012002         25         Gradienty           AMAC(2010)2012002016         10         Gradienty           AMAC(2010)2012002016         21         Pressy Cell           AMAC(2010)2012002016         24         Pressy Cell           AMAC(2010)2012012018         22         Benning Viet           AMAC(2010)2012012018         22         Benning Viet           AMAC(2010)201201201201         26         Pressy Cell           AMAC(2010)201201201201         26         Pressy Cell           AMAC(2010)201201201201         26         Pressy Cell           AMAC(2010)201201201201         26         Pressy Cell   | hoal Housewife Rural 22.9 2<br>School Housewife Urban 28.8 2<br>School Housewife Urban 24.2 2   | 1 $10$ $10$ $10$ $2$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$ $10$ $10$ $10$ $10$ $2$ $10$  | <ul> <li>A company, Abardan walkan</li> <li>B calatan walkan, Kalatan Kalatan</li></ul>  | 12 AMAC/301223,02,021530 Male Term<br>20.5 AMAC/301223,02,021540 Feature Term<br>8.8 AMAC/301223,02,021,021640 Feature Term<br>1.1 AMAC/301223,02,021630 Male Term<br>1.7 AMAC/301223,02,001535 Male Term<br>1.2 AMAC/301223,02,001535 Male Term<br>3.4 AMAC/301223,04,001536 Meren Term<br>3.4 AMAC/301223,04,001546 Fermine Term   | 2027 AGA<br>31G3 AGA<br>32G2 AGA<br>32G8 AGA<br>32G8 AGA<br>32G8 AGA<br>34G7 AGA<br>32G7 AGA<br>32G8 AGA<br>32G8 AGA<br>32G8 AGA                         | Comman   | ALA         4.5.9         TLS           mping         2.8.4         4.0.9         NO           Rking         2.2.1         4.6.6         NO           mping         2.2.6         4.2.2         NO           mping         4.2.8         4.0.1         NO           mping         4.2.8         4.0.1         NO           mping         4.1.5         A.0.9         TLS   | NO<br>NO<br>NO<br>NO  |
| AM5/201/2020/11/02981 24 liberate   | Housewife Rural 22.9 5  | 1 27-5 YES Moderate<br>0 27-1 YES Abuent<br>0 28-1 YES Abuent<br>1 27-2 YES Moderate<br>1 28 YES Abuent<br>1 28 YES Abuent   | None O<br>IHCP, Hypothynaidium, Aathma, Thnambooptr.B<br>None AB<br>None A<br>Diabater mellinu O   | 13.8 A8M5/104/2021/04/023666 Male Term<br>9.1 A8M5/104/2021/05/003847 Male Term<br>12.4 A8M5/104/2021/05/003847 Male Term  | 2215 AGA<br>2757 AGA   | 9 9 Caesarean Umbilical cord n<br>8 9 Caesarean Umbilical cord n  | Ring 42.6 55.8 NO<br>Ring 40.8 52.4 NO   | VIS<br>NO<br>NO<br>NO   |
| AMAN, ANY   | visaniy Houveele Usan 24.6 2<br>School Houveele Rural 25.5 2<br>School Houveele Rural 20.2 3<br>Nather Houveele Usan 26.5 3<br>N Working Usan 28.5 4<br>N Working Usan 24.3 1   | 1         23-2         VES         Moderate           1         28         28         24         28           2         28+2         VES         Abunnt           2         29-2         VES         Moderate           0         40         VES         Abunnt           1         41         VES         Abunnt           0         28         VES         Abunnt  | IIICP, Irigeothysolisis, Aethma, Thorsboopt B<br>Note A Constraints (Constraints)<br>Note A Constraints (Constraints)<br>Dabetes mellitan O<br>Note O<br>Notes (Constraints)<br>Dabetes mellitan O   | 11.2 AMAG(201/321)(5/(301126 Fermals Term<br>6.6 AMAG(201/321)(5/(30143 Fermals Term<br>1.2 AMAG(201/321)(5/(30044 Fermals Term<br>1.1 AMAG(201/321)(5/(30024 Make Term<br>1.1 AMAG(201/321)(5/(30024 Make Term  | 2005 AGA<br>2022 AGA<br>2022 AGA<br>2026 AGA<br>2027 AGA   | s     s     catalogue     Construction     Construct   | Wing         SS.8         G2.3         NO           rping         36.7         40.1         NO           mping         38.7         40.6         NO           mping         32.7         40.6         NO           mping         42.4         X42         NO   | nd<br>NG<br>NG<br>NG  |
|   |   |  |  |  |  |   |  |   |