Situation Analysis of Active Management of Third Stage of Labour (AMTSL) for Post- Partum Haemorrhage (PPH) Prevention

Presented By:

IPE Global & IIHMR Delhi

SUMMER INTERNSHIP AT

IPE GLOBAL

(April 18 to JUNE 18 2022)

Situation Analysis of Active Management of Third Stage of Labour (AMTSL) for Post- Partum Haemorrhage (PPH) Prevention

IN DEWAS, MADHYA PRADESH

A REPORT BY

DR JAGANJEET KAUR RANDHAWA

(PG/21/40)

PGDM (Hospital and Health Management)

IIHMR DELHI

INTERNATIONAL INSTITUTE OF HOSPITAL MANAGEMENT RESEARCH (IIHMR), DELHI

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **DR JAGANJEET KAUR RANDHAWA** student of PGDHM from the IIHMR Delhi has undergone internship training**.** The candidate has successfully fulfilled his roles **at IPE GLOBAL FROM APRIL 18 TO JUNE 18, 2022**. The responsibilities designated to her during internship training and approach to concerned program have been sincere, scientific and analytical. The Internship is in fulfilment of the course requirements. I wish him all the success in all his shinning future.

DEAN
(IIHMR DELHI)

DR SIDHARTH SEKHAR MISHRA
ASSISSITANT PROFESSOR

CERTIFICATE OF APPROVAL

The following summer internship project if titled **"SITUATIONAL ANALYSIS OF ACTIVE MANAGEMENT OF THIRD STAGE OF LABOR "** at **IPE GLOBAL,** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Hospital and Health Management** for which it has been submitted by **DR JAGANJEET KAUR RANDHAWA .**It is understood that by this approval the undersigned do not necessarily endorse or approve the report only for the purpose it is submitted.

DR SUMESH KUMAR
ASSOCIATE DEAN

CERTIFICATE OF SCHOLAR

This is to certify that the report "**Situational analysis of active management of third stage of labor** " submitted by **DR JAGANJEET KAUR RANDHAWA** Enrolment no. PG/21/040 under the supervision of Dr Sidharth Sekhar Mishra, MBBS MD, Associate Professor, IIHMR Delhi for award of PGDHM carried out during the period **18 April 2022 to 18 June 2022** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

Signature

ACKNOWLEDGEMENT

It is esteemed pleasure to present this research project by thanking each and every one who helped me in this task.

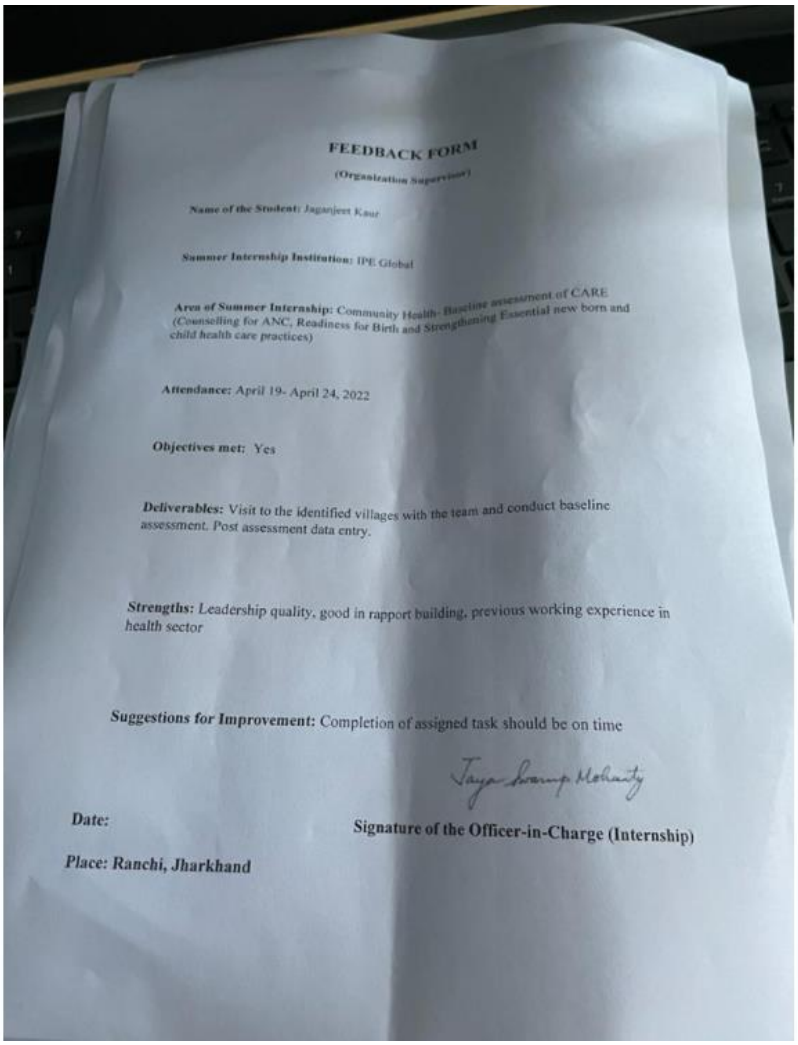
I would like to express my sincere gratitude towards my guide **Dr Siddharth Sekhar Mishra,** Assistant professor IIHMR, who helped me immensely throughout the tenure of my summer internship. He inspired me greatly to work in this project with his valuable guidance, support, interest, encouragement, involvement and advice.

I would like to thanks**, IPE GLOBAL team** for allowing us to experience such great opportunities and for providing data for our learning.

I would also like to express my special thanks to **Dr Sumesh Kumar and Dr Nikita Sabherwal and** IIHMR placement team and Dean for providing such great opportunity which helps in to grow and learn about many interesting aspects.

And I would like special thanks to my team members for all the help, guidance and support which makes this project possible

ORGANIZATION FEEDBACK FORM



FEEDBACK FORM

(Organization Supervisor)

Name of the Student: Jaganjeet Kaur

Summer Internship Institution: IPE Global

Area of Summer Internship: Community Health- Baseline assessment of CARE (Counselling for ANC, Readiness for Birth and Strengthening Essential new born and child health care practices)

Attendance: April 19- April 24, 2022

Objectives met: Yes

Deliverables: Visit to the identified villages with the team and conduct baseline assessment. Post assessment data entry.

Strengths: Leadership quality, good in rapport building, previous working experience in health sector

Suggestions for Improvement: Completion of assigned task should be on time

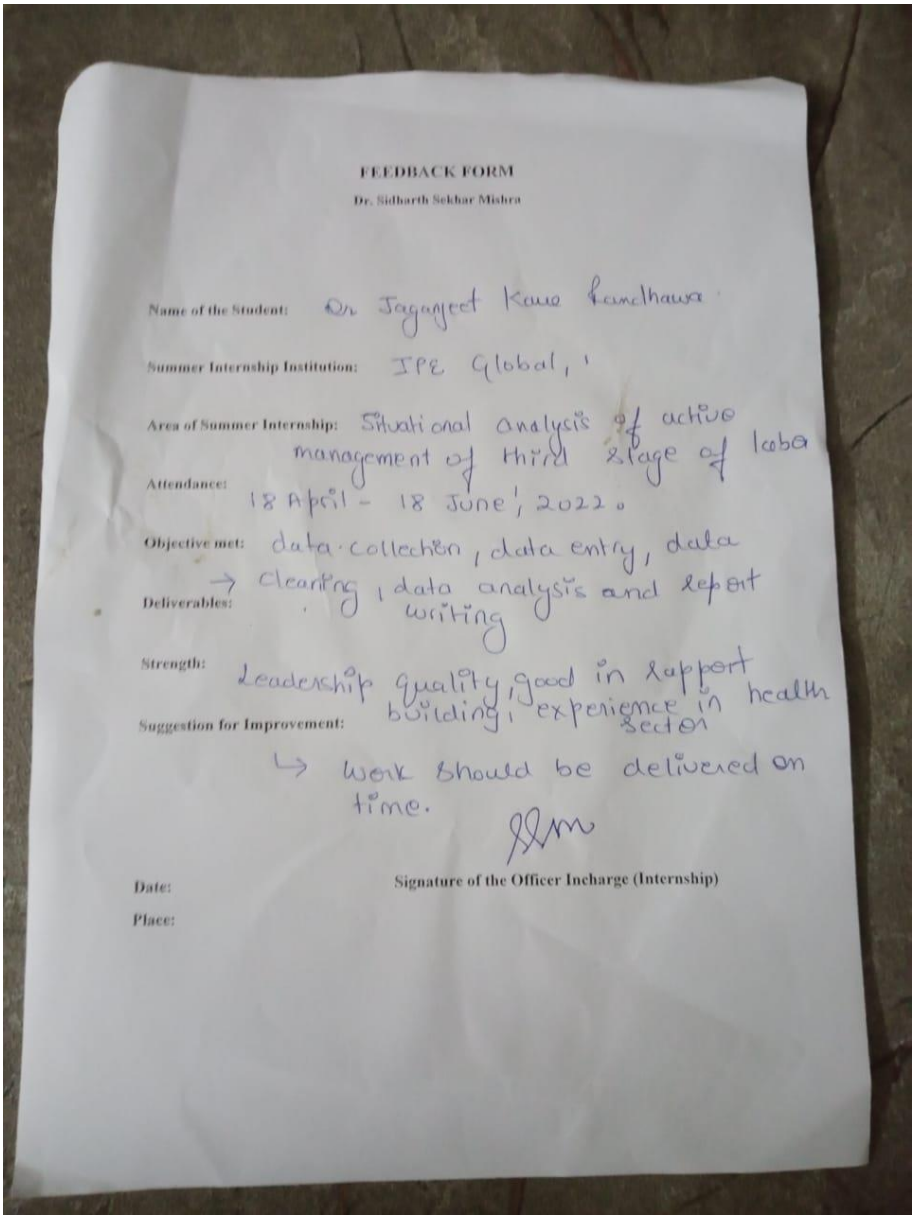
Jaya Swarup Mohanty

Date:

Signature of the Officer-in-Charge (Internship)

Place: Ranchi, Jharkhand

MENTOR FEEDBACK FORM



FEEDBACK FORM

Dr. Sidharth Sekhar Mishra

Name of the Student: Dr Jagajeet Kaur Ranchhawa

Summer Internship Institution: IPE Global,

Area of Summer Internship: Situational analysis of active management of third stage of labo

Attendance: 18 April - 18 June, 2022.

Objective met: data collection, data entry, data cleaning, data analysis and report writing

Deliverables:

Strength: Leadership quality, good in rapport building, experience in health sector

Suggestion for Improvement:

→ Work should be delivered on time.

Signature of the Officer Incharge (Internship)

Date:

Place:

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INTRODUCTION

Commented [BS1]: This section should capture purpose of study clearly.

World Health Organization (WHO) defines Maternal Mortality Ratio (MMR) as annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy. [(1)]

The major complications that account for nearly 75% of all maternal deaths are severe bleeding (mostly bleeding after childbirth), infections (usually after childbirth), high blood pressure during pregnancy (pre-eclampsia and eclampsia), complications from delivery and unsafe abortion. The remainder are caused by or associated with infections such as malaria or related to chronic conditions like cardiac diseases or diabetes. [(1)]

Maternal mortality is a big challenge globally - in 2020, the global MMR was 152 deaths per 100,000 live births, up from 151 deaths per 100,000 live births in 2019. This trajectory projects 133 deaths per 100,000 live births in 2030, nearly double the Sustainable Developmental Goal (SDG) target. MMR in South-east Asia was 62 per 100,000 live births. [(1).]

As per SRS report released in March 2022, with reference year of 2017- 19; India has an MMR of 103 per 100,000 live births. There are wide state differentials with Assam topping the list with the highest MMR. Madhya Pradesh being one of the states with a high burden (MMR of 163). [(2)] WHO statistics suggests that 25% of maternal deaths are due to PPH. In India, PPH accounts for 38% of maternal deaths. [(3)]

As per NHP (National Health Policy) 2017, the target for MMR was to achieve 100 per 1,00,000 live births by 2020. India has committed itself to the latest United Nations (UN) target for the SDGs for MMR at 70 per 1,00,000 live births by the year 2030. [(4)]

Postpartum hemorrhage (PPH) is commonly defined as blood loss of 500 ml or more within 24 hours after birth, while severe PPH is defined as a blood loss of 1000 ml or more within the same timeframe according to World Health Organization (WHO). Every year about 14 million women around the world suffer from PPH. The incidence of PPH is reported as 2% - 4% after vaginal delivery and 6% after c – section. The most frequent cause of PPH is uterine atony in about 50% cases. [(5)]

Government of India (GoI) adopted the Reproductive, Maternal, New-born, Child and Adolescent Health (RMNCH+A) framework in 2013. It essentially aims to address the major causes of mortality and morbidity among women and children. GoI has launched multiple programs to address different causes of MMR directly and indirectly like the Janani Suraksha Yojana (JSY), Janani Shishu Suraksha Karyakaram (JSSK), Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), Intensified National Iron Plus Initiative (INIPI) and Labour room Quality improvement Initiative (LaQshya). For the training of service providers Skill Birth Attendant (SBA) and, DAKSHATA training was introduced by the GoI in the last decade. [6]

There are different strategies for management of PPH but one of the most effective methdos is Active Management of Third Stage of Labour (AMTSL) has been defined in various ways and current international definition comprises three components: administration of uterotonic drug (Injection Oxytocin-10 IU, IM or Tab Misoprostol-600mcg, oral), Controlled cord traction (CCT) and Uterine massage. AMTSL helps in expulsion of placenta and reduction in blood loss to mother. [6] Approximately 66% cases of PPH can be prevented if AMTSL is done in all cases after delivery. The AMTSL guidelines were introduced in 2003, modified in 2006[7]. In India it AMSTL was introduced in national guidelines in the year __.

According to WHO prophylactic management by provision of uterotonics provided by the SBA during AMTSL is a lifesaving procedure. Uterotonics have a critical role in obstetrics, notably for prevention and treatment of PPH. Prophylactic use of uterotonics especially oxytocin is the accepted standard of care globally. [3] The issues with usage of Oxytocin are to maintain a proper supply chain. However, due to its susceptibility to degradation from exposure to heat leads to its reduced effectiveness in preventing PPH from uterine atony. In low resource setting where generally electrical appliance (refrigerator) to maintain cold chain is not available and hence the efficacy of Oxytocin is challenged.

This led to the initiation of the research question which was a joint collaborative project of IPE Global and IIHMR Delhi. This study is part of the Systems Approach for MNCH focusing on Vulnerable Geographies (SAMVEG) project. USAID India awarded the SAMVEG project to IPE Global led consortium with project partners DIMAGI Inc., World Health Partners (WHP) and John Snow India (JSI) Private Limited through a Cooperative Agreement for a period of four years beginning from July 27th, 2021. The project will fill critical gaps in health systems, encourage innovations, scale-up and sustain interventions and help India progress towards ‘self-reliance’ in MNCH. The overarching goal of SAMVEG is to accelerate efforts to improve

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maternal, newborn and child health outcomes in identified vulnerable geographies of India. The objective of SAMVEG is to 'accelerate efforts to reduce maternal, neonatal, and infant mortality in 3 states and 25 Aspirational Districts through several catalytic and innovative interventions. The project will work closely with governments in Jharkhand, Madhya Pradesh, and Uttarakhand and focus on 25 Aspirational Districts in Jharkhand (19), Uttarakhand (2), Punjab (2), Haryana (1) and Himachal Pradesh (1). SAMVEG will work on critical MNCH issues across the continuum of care. The project activities will be distributed across the MNCH priority periods of pregnancy, care at birth, post-natal care, newborn care & child health and cross cutting systemic issues.

IIHMR- Delhi is part of the Society for Indian Institute of Health Management Research (IIHMR), which was established in 1984 under the Societies Registration Act 1958. It was setup in 2008 with a focus on national and international health to cater to the growing needs of the country and the Asia-Pacific region. We undertake capacity building of health professionals through different short term management development programs, skill building workshops, and executive training programs. We also conduct locally relevant research to meet the requirements of the national health program and policies.

RATIONALE OF THE STUDY

Existing knowledge was there that primary prevention of PPH can be done through AMTSL (Active Management of Third Stage of Labour) and Oxytocin was recommended universally as the medication of choice for PPH prevention in vaginal deliveries. There are certain gaps in the knowledge regarding availability, storage, supply chain management of uterotonics and AMTSL implementation practices. These gaps in existing knowledge lead to the initiation of our research question.

REVIEW OF LITERATURE

An intervention study published by Tsu Vivien D et al in the year 2006 on reducing PPH in Vietnam in 3607 participants; AMTSL was associated with reduced risks for prolonged third stage beyond 30 min, supplemental oxytocin and bimanual compression and AMTSL was associated with a 34% reduction in PPH. [8]

A study published by Guerra G V et al. in the year 2009 on factors and outcomes associated with the induction of labour in Latin America it was found that out of the total deliveries, 11.4% were induced and induced labour is, however, associated with poorer maternal and perinatal outcomes than spontaneous labour. [9]

A systematic review published by Gizzo S et al in the year 2013 on which uterotonic is better to prevent PPH – it was found that Oxytocin is the first choice for PPH prophylaxis, Ergot alkaloids, syntometrine, and prostaglandins are second- line uterotonic agents, Misoprostol is not effective as oxytocin but it may be used when the latter is not available and Carbetocin should be used instead of continuous oxytocin infusion in elective caesarean sections for PPH prevention and to decrease the need for therapeutic uterotonics. [10]

A qualitative study published by Mannheimer SS et al on experiencing challenges when implementing AMTSL, in 12 midwives in Ghana; it was found that uterine massage was not implemented and there is need for delegating certain steps of AMTSL to other health care staff, i.e., task shifting. [11]

A cohort study published by Anne G et al in the year 2014 on the benefits of cord blood collection (CBC) in the prevention of PPH; 25% vaginal deliveries were benefited from CBC and CBC was found to be protective factor of PPH. [12]

A study published by Joshua DD et al in the year 2015 on Prevention and management of PPH: a comparison of 4 national guidelines, all organizations, (except the American College of Obstetrician and Gynaecologists), recommended AMTSL for primary prevention of PPH in all vaginal deliveries and Oxytocin was recommended universally as the medication of choice for PPH prevention in vaginal deliveries. [13]

A study published by Begley CM et al in the year 2015 on the Active versus expectant management for women in third stage of labour; it was reported that women at mixed levels of risk of bleeding, active management showed a reduction in the average risk of maternal primary haemorrhage at time of birth. [14]

A cross sectional study published by Felarmine M et al in the year 2016 on 431 facility factors influencing utilization of AMTSL among skilled birth attendants in Kenya; they commented that AMTSL was utilized by 31.5% of the birth attendants. Controlled cord traction (96.5%) was the most utilized and utilization was higher in facilities with a fridge and in facilities with standards documents in the labour ward. [15]

A study published by Priyankur R et al in the year 2016 on the Placental Blood Drainage as a Part of AMTSL after Spontaneous Vaginal Delivery; they commented that the incidence of PPH was 1% in study group and 9 % in control group and the mean drop in Hb % level was 0.6 gm/dl in study group and 1.1 gm/dl in control group. [16]

A study published by Wattar BHA et al in the year 2017 on the management of obstetric PPH: a national service evaluation of current practice in the UK; they commented that 50%of cases were minor PPH and the remaining were moderate PPH and severe PPH. The majority of women received AMTSL most commonly with Syntometrine IM and there was poor involvement of consultant obstetricians and anaesthetists in managing PPH cases, which was more prevalent when managing major PPH. [17]

A study published by Elise EN et al in the year 2018 on the Physiologic childbirth and AMTSL: A latent class model of risk for PPH; they commented that A four- class solution best fit the data; each class was clinically distinct. The two largest Classes (A and B) represented women with term births and lower average parity, with higher rates of null parity in Class B. Class A women had more physiologic birth elements and less labour induction or labour dysfunction compared with Class B. PPH and AMTSL use was higher in Class B. In Class B, AMTSL lowered risk for PPH. However, in Class A, AMTSL was associated with higher risk for PPH and delayed placental delivery (>30 minutes). [18]

A study published by Bishanga DR et al in the year 2018 on the Improvement in the AMTSL for the prevention of PPH in Tanzania; they commented that the proportion of deliveries receiving all three AMTSL steps improved significantly by 19 percentage point. [19]

A secondary analysis published by Chikkamath SB et al. in the year 2021 on the duration of third stage labour and postpartum blood; they commented that blood loss rose steeply with third stage duration in the first 10 min, but more slowly after 10 min and this trend was observed for both Oxytocin and heat stable carbetocin and the difference in the trends for both drugs was statistically insignificant. [20]

A retrospective Review of Time to Uterotonic Administration and Maternal Outcomes After Postpartum Hemorrhage by Knoll William et al. in the year 2021; commented that Each 5-minute delay in uterotonic treatment was associated with 26% higher odds of hypotension following delivery of any type. For vaginal deliveries, each 5-minute delay was associated with 31% and 34% higher odds of hypotension and transfusion, respectively [21].

A study published by Muyanga D et al. in the year 2022 on the knowledge and skills on AMSTL for prevention of PPH among health care providers in Tanzania; commented that of all HCPs (Health Care Providers), 171 (50.3%) had adequate knowledge whereas 153 (45.0%) had adequate skills on AMTSL. [22]

Table 1 provides summary on the studies done on AMTSL.

Table A: Review of Literature

Title	**Author, Journal, Year of publication**	**Methodology**	**Sample size**	**Results**
Reducing postpartum haemorrhage in Vietnam: assessing the effectiveness of active management of third-stage labor	Tsu Vivien D et al. 2006	Quasi experimental study: AMTSL was introduced for all births attended by govt midwives in one district while standard practice without AMTSL was continued in three neighbouring districts Oxytocin (10 IU) was administered.	3607	• AMTSL was associated with reduced risks for prolonged third stage beyond 30 min • AMTSL was associated with a 34% reduction in PPH
Factors and outcomes associated with the induction of	Guerra G V et al. 2009	Bivariate and multivariate analyses. Analysis of the 2005 WHO global survey database.	120	• Out of the total deliveries 11.4% were induced.

labour in Latin America				• Some adverse perinatal outcomes were also higher: low 5-minute Apgar score, very low birthweight, admission to neonatal ICU and delayed initiation of breastfeeding.
Which uterotonic is better to prevent PPH Latest news in terms of clinical efficacy, side effects, and contraindications	Salvatore Gizzo et al. 2013	Systemetic Review	-	Oxytocin is the first choice for PPH prophylaxis.
Experiencing challenges when implementing AMTSL with midwives in Accra, Ghana	Schack Stina Mannheimer et al. 2014	Iin- depth interviews labour ward of midwives who all had previous training in AMTSL.	12	• Uterine massage, was not implemented. • Need for delegating certain steps of AMTSL to other health care staff,
Benefits of cord blood collection (CBC) in the	Guillaume Anne et al. 2014	Retrospective cohort	7810	• 25% NVD were benefited from CBC as it is a

prevention of PPH: a cohort study				protective factor for PPH.
Prevention and management of PPH: a comparison of 4 national guidelines	Dahlke Joshua D et al. 2015	Descriptive analysis of guidelines from American College of Obstetrician and Gynaecologists (ACOG), Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Royal College of Obstetrician and Gynaecologists (RCOG), and Society of Obstetricians and Gynaecologists of Canada on PPH	4	• All organizations, (except ACOG, recommended AMTSL for primary prevention of PPH in all vaginal delivery • Oxytocin was recommended universally as the medication of choice for PPH prevention in vaginal deliveries
Facility factors influencing utilization of AMTSL among skilled birth attendants in Kiambu county, Kenya	Muiruri Felarmine et al. 2016	Cross sectional study among 431 skilled birth attendants in 52 health facilities.	431	• AMTSL was utilized by 31.5% of the birth attendants. • Controlled cord traction (96.5%) was the most utilized. • Utilization was higher in facilities with a fridge and in facilities with

				standards documents in the labour ward.
Placental Blood Drainage as a Part of AMTSL after Spontaneous Vaginal Delivery	Roy Priyankur et al. 2016	Pregnant patients with 37 or more weeks of gestation, who had spontaneous vaginal delivery were studied. Patients were randomized equally into two groups.	200	• Incidence of PPH was 1 % in study group and 9 % in control group • Mean drop in Hb % level was 0.6 gm/dl in study group and 1.1 gm/dl in control group.

Management of obstetric PPH : a national service evaluation of current practice in the UK	Bassel H Al Wattar et al. 2017	National multicentre prospective service evaluation study was done over one calendar month and current performance was compared to national standards for managing PPH.	98 obstetric units	• 50% of cases were minor PPH • Majority of women received AMTSL most commonly with Syntometrine IM.
Physiologic childbirth and AMTSL: A latent class model of risk for PPH.	Erickson Elise N et al. 2018	Outcomes of 2322 vaginal births from a hospital midwifery service in the US to examine risks for PPH and effectiveness of AMTSL. A four-class solution best fit the data; each class was clinically distinct.	2322	The two largest Classes (A and B) represented women with term births and lower average parity, with higher rates of null parity in Class B. Class A women had more physiologic birth elements and less labour induction or labour dysfunction compared with Class B. PPH and AMTSL use was higher in Class B. In Class B, AMTSL lowered risk for PPH. However, in

				Class A, AMTSL was associated with higher risk for PPH and delayed placental delivery (>30 minutes)
Improvement in the AMTSL for the prevention of PPH in Tanzania: a cross-sectional study	Dunstan R Bishanga et al. 2018	Cross-sectional study was conducted in 52 health facilities pre and post training intervention	2010-489 2012-558	Proportion of deliveries receiving all three AMTSL steps improved significantly by 19 percentage points after training
Duration of third stage labour and postpartum blood loss: a secondary analysis of the WHO CHAMPION trial data	Chikkamath SB et al. 2021 Reproductive Health Journal	Secondary data analysis of WHO CHAMPION trial conducted in twenty-three sites in ten countries.	10,040	• Blood loss rose steeply with third stage duration in the first 10 min, but more slowly after 10 min. • Both Oxytocin and Heat Stable carbetocin are equally effective in controlling PPH
Retrospective Review of Time to Uterotonic Administration and Maternal Outcomes After	Knoll William et al. 2021	Reviewed all cases of PPH that occurred at an academic centre between June 2015 and September 2017.	128	• Each 5-minute delay in uterotonic treatment was associated with 26% higher odds of

Postpartum Hemorrhage				hypotension following delivery of any type. • For vaginal deliveries (n = 86), each 5-minute delay was associated with 31% and 34% higher odds of hypotension and transfusion, respectively.
Knowledge and skills on AMTSL for PPH prevention of PPH, Tanzania	Muyanga D et al. 2022 Feb 11, BMC Women's Health .	Cross- sectional analytical hospital-based study	340	• 171 (50.3%) had adequate knowledge • 153 (45.0%) had adequate skills on AMTSL

OBJECTIVES OF THE STUDY

1. Assess AMTSL implementation practices in all levels of public health facilities.
2. Assess capacity needs for AMTSL.
3. Assess availability, storage and supply chain management of key uterotonics

METHODOLOGY.

A. Study design:

Quantitative Cross- Sectional study

The Situational Analysis included:

I	Record review	Labour Room (LR) and store documents: delivery load, complications, PPH deaths, confounding factors etc.
II	Interview of Providers at LR & Drug Store	Prevailing practices for AMTSL
III	Interview of beneficiaries	Assess perception
IV	Observation	Facility readiness in terms of IEC, drugs, storage/ stocks., cold chain equipment

B. Study Setting

The situational analysis was done in 15 delivery points of Dewas District of Madhya Pradesh. The reasons behind selecting district Dewas was that it has facilities with significant number of deliveries conducted, from DH to SHCs. There is a total of 31 delivery points in Dewas but only 15 are identified as delivery points based on the inclusion criteria.

Map: Dewas District of Madhya Pradesh

The district gets its name from the district headquarters town, Dewas which is said to have been derived on the basis of two traditions. One is that Dewas lies on the foot of a conical hill, known as Chamunda hill about 300 ft. above the ground level on top of which the shrine of Chamunda is located. The image of the Goddess is cut in rocky wall of a cave. It is, therefore, known as Devi Vashini or the Goddess's residence. From this the name Dewas (dev-vas) seems to have been derived. The other view of the probable origin is from the name of the founder of the village Dewasa Bania.

The present Dewas district broadly corresponds to the twin treaty States in Malwa Political charge of the Central India Agency, divided into a Senior and a Junior branch of the early twentieth century with some adjustments of other territories. There were two district chief ships with separate administrations, acting independently in most matters, sharing the same capital town of Dewas. Consequent upon the merger of princely States and the formation of Madhya Bharat State in 1948 there was reconstitution of boundaries and thus the district in the present form was constituted. The reconstituted district was, however, formed by merging 242 villages of the two tahsils of Dewas of the former Senior and Junior State, 452 villages of Sonkatch tahsil and of 99 villages of Ujjain tahsil of former Gwalior state, 99 villages of Nimanpur tahsil of former Dhar state, one village of Jawar tahsil of former Bhopal State, and then the existing tahsils of Kannod and Khategaon of former Holkar State. With the reorganization of States on linguistic basis on 1st November 1956, Madhya Bharat, with other territories got merged to form the new state of Madhya Pradesh and thus Dewas continues to be one of the districts in it.

The district is now divided in to 9 tehsils viz. Sonkatch, Dewas, Bagli, Kannod, Tonk-Khurd, Khategaon, Satwas, Hatpipliya and Udainagar. Dewas tehsil is situated on the north-western part of the district, Sonkatch on the north-eastern part, Bagli on the south, Kannod on the south-central part and Khategaon on the South-east. Weather road connects all the tahsil headquarters. The Head-quarters of Dewas tehsil, which is also the district headquarters, is situated on The Bombay-Agra National Highway No.3 and is also connected by broad-gauge railway line of western Railway. [(7)]

C. Study participants

a. Service providers at delivery points: specialists, Medical Officers (MO), staff nurses,ANM.
b. Store in-charge in district, block and delivery point facilities
c. Women (mothers) during immediate post-partum period at Post Natal Care (PNC) wards

Commented [BS3]: Include ANMs

Eligibility Criteria:

Inclusion Criteria: All service providers, post partum females and store in charge of the selected facilities.

Commented [AN4]: Interviews were conducted with service providers who were less then 6 months in the job. Most mothers interviewed were within 24 hours post-partum

Exclusion Criteria:

- Any postpartum female who was clinically unstable to be part of the study
- Any person who refused to provide consent

D. Sample size

$n = Z^2pq/ d^2$

n = sample size required in each group

Z: for 5% this is 1.96, Confidence = 95%

•n = 4 * 92 * 8/ 5 * 5 = 113

•Final sample size for post-partum females = 113 + 6 = 119

- We took institutional delivery rate as the outcome variable, which is 92% as per NFHS 5 fact sheet
- Accounting for drop- in response rate of 5%

E. Sampling:

- Convenient Sampling was done to select the facilities based on the criteria.

The criteria for selection of delivery points as per the financial year data (2020-21) were:

1. Facility has a minimum caseload of deliveries (SHC, PHC, non-FRU CHC)

- SHC/ HWC: 2 or more deliveries per month
- PHC: 25 or more deliveries per month
- Non-FRU CHC: 75 or more deliveries per month

2. Availability of Comprehensive services

- FRU CHC/ SDH: availability of CEmONC
- District Hospital: availability of CEmONC

• Out of 31 delivery points, 15 facilities fitting into the selection criteria were selected for the study.

- Participants were planned to be interviewed in every facility based on convenient sampling

Level	Subjects to be interviewed	Total
1	Service Providers (staff nurses, medical officers, ANM,store keepers/ in-charge) (1 in subcentre, 2 in PHC each, 3 in CHC each and 5 per DH)	35 (2 sub centre + 8 * 2 in PHC + 4 * 3 in CHC + 5 * 1 DH)
2	PNC Mothers (2 in subcenter, 5 in PHC each, 12 in CHC each and 40 in DH)	119 (2 sub centre + 5 * 8 in PHC each + 12 * 4 in CHC each + 40 * 1 DH)
	Total	154

Commented [BS5]: We have interviewed ANMs as well.

Commented [BS6]: Need to mention somewhere (in result section) that we could not achieve the desired number of respondents from each of the targeted facilities (SHCs, PHCs and CHCs) and thus we have taken remaining respondents from DH.

F. Study Variables

Exposure variables- This is not an interventional study so there is no exposure variable.

Outcome variables – An understanding was developed on knowledge and practices of providers on:

a. AMTSL
b. Supply chain management including availability of cold chain
c. Perceptions of mothers on quality of care.

G. Data collection –

Primary data was collected by conducting interviews using semi structured pre tested questionnaires in local language (Hindi). For the purpose of data collection following 3 different questionnaires were used:

- Situation Analysis Tool Questionnaire for providers including store in-charge
- Situation Analysis Tool Questionnaire for Mothers
- Situation Analysis Tool Questionnaire for Facility readiness

Physical orientation on the tools was completed in 2 days followed by the field assessment. There were 3 teams (X, Y and Z) comprising of 2 members each required for this i.e., 6 interviewers in total. The data collection and compilation were completed in 4 days by the teams (additional reserve 1 day for data compilation). A total of 7 working days was utilized for completing the assessment and data collection.

The details of the field plan followed are mentioned in the **Annexure 1.**

H. Data management:

a) Data collection – Data was collected on hardcopy and then entered on excel sheet. For quality check a discussion was done and quality parameters were met.

b) Data validation – Data collected was cross checked by the state SAMVEG team. Code validation was done for the codes assigned to the participants. Data was checked for completeness and accuracy.

c) Data analysis - The data was analyzed and presented as a descriptive study. Dummy tables were made for each quantitative variable. Frequency and percentage were calculated of each variable and checked for normal distribution. Mean and standard deviation were calculated. Each component of knowledge and practices by providers was presented as proportion (%). We correlated the knowledge with practices to gain a deeper understanding of the situation.

I. Ethical consideration:

Privacy and confidentiality were maintained throughout the study. Informed consent was taken from the participants. There was voluntary participation by the potential participants and everything was explained to them regarding the interview in local language. Anonymity was

maintained by assigning codes. There was no potential harm to the participants from the study. Data was kept password protected. Approval was taken by Student Review Board (SRB). Consent was taken from the district Chief Medical Officer (CMO) to conduct the study.

RESULTS

We could not achieve the desired number of respondents from each of the targeted facilities (SHCs, PHCs and CHCs) and thus we have taken remaining respondents from District Hospital (DH).

I. Situational Analysis of Mothers

All 134 (100%) female respondents delivered in the hospital facility, out of which 85 (63%) women had undergone normal vaginal delivery (NVD) and 49 (37%) had undergone lower segment caesarean section (LSCS) delivery. Out of total respondents, 103 (77%) deliveries were conducted at DH with 49 of them (48%) being LSCS. **(Table 1)**

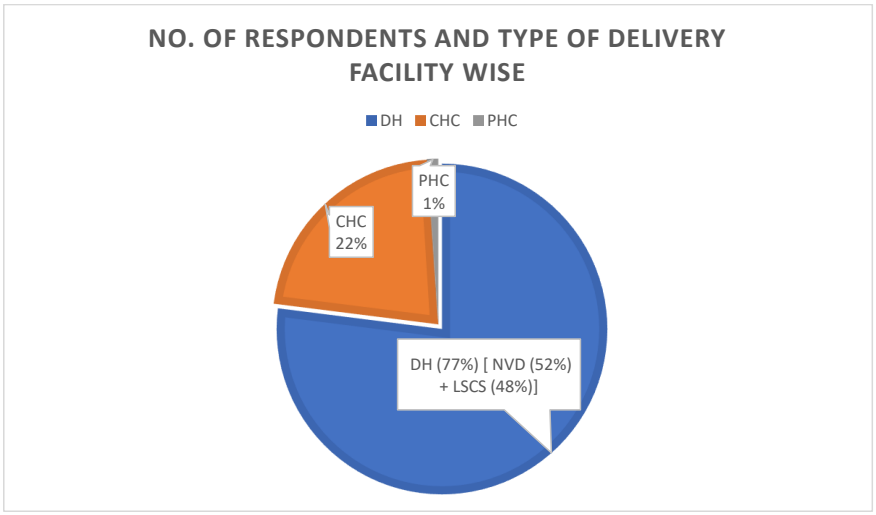
Commented [BS7]: Respondents instead of deliveries

Commented [BS8]: No. of respondents and not deliveries

Table 1: Facility wise Distribution of Respondents

	Number of Respondents	Frequency
Hospital Delivery	134	100%
DH	103	77%
• DH NVD	54	52%
• DH LSCS	49	48%
CHC	29	22%
PHC	2	1%
Subcentre	0	0

Fig I. 1



Out of total of 134 females, 116 (86%) of the women were informed about the procedures/ practices i.e., administration of drugs, induction/ augmentation of labour) being carried out **(Table 2)**

Table 2: Information about Procedures/ Practices

Informed consent taken about the procedures/ practices (i.e., administration of drugs, induction/ augmentation of labour)	**Frequency**	**Percentage**
Yes	116	86%
No	17	13%
Do not remember	1	1%
N	134	100%

Only 21 females (16%) received uterotonics for induction of labour. All of these 21 females knew that they were being administered uterotonics. **(Table 3)**

Table 3: Usage of Uterotonics for Induction of Labour

Did you receive any drug(s) (uterotonics) for induction of labour?	**Frequency**	**Percentage**
Yes	21	16%
No	110	82%
Do not remember	3	2%
N	134	100%

Commented [AN9]: Mismatch: 1. 35 received uterotonics for induction
2. 24 knew they were administered uterotonics
3. 21 knew about drugs that can induce/ augment
For all these questions, responses came from PP mothers. If only 21 knew about uterotonics only 21 can respond 'yes' if they have been asked for administration of uterotonics. How we got number 35?

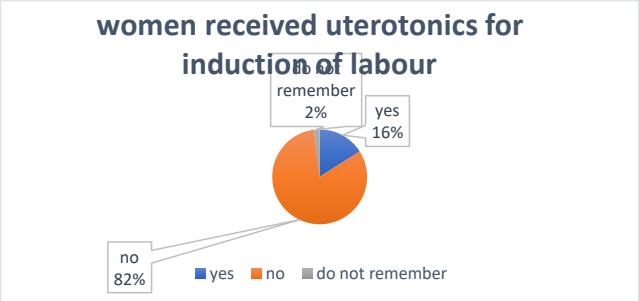


Fig I. 2

Only 21 (16%) females know about drug(s) that can induce/ augment labour. Out of these 21, 2 females had requested for administration of the drug. **(Table 4)**

Table 4: Knowledge about Drug Inducing/ Augmenting Labour

Know about drug(s) that can induce/ augment labour?	**Frequency**	**Percentage**
Yes	21	16%
No	113	84%
N	134	100%

66 (49%) women were aware that there is danger of excess bleeding after delivery and out of which 18 (27%) were aware that there are drug(s) that can prevent and treat such bleeding. **(Table 5)**

Table 5: Awareness about Post- Partum hemorrhage

Are you aware that there is danger of excess bleeding after delivery?	**Frequency**	**Percentage**
Yes	66	49%
No	68	51%
N	134	100%

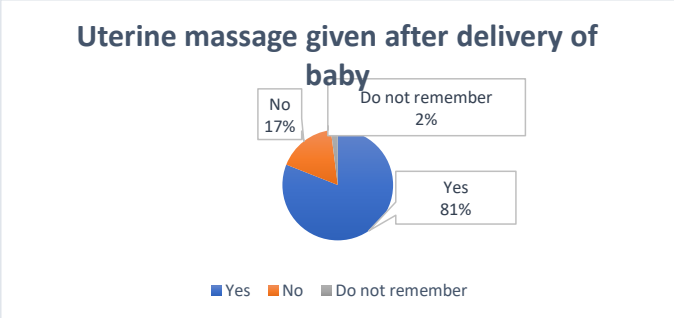
Out of the 85 females who had undergone NVD, 81% (69) of the women were given uterine massage after delivery of baby. **(Table 6)**

Table 6: Usage of Uterine Massage after delivery of Baby

Uterine massage after delivery of baby	Frequency	Percentage
Yes	69	81%
No	14	17%
Do not remember	2	2%
n	85	100%

Commented [BS10]: n for NVD is not matching

Fig I.3



Only 104 (78%) women were encouraged to start early breastfeeding (EBF) (within an hour of childbirth). **(Table 7)** 63 (47%) women started breastfeeding their baby within an hour of birth, 32% women started after an hour of birth and 21% women did not even start at the time of interview (i.e., more than 2 hours after birth).

Commented [BS11]: It will be good if we can provide this breakup for NVD and LSCS. If it is significantly poor among LSCS cases then this can be covered in capacity building session with special focus.

Table 7: Encouragement for EBF

Encouragement to start early breastfeeding (within an hour of childbirth)?	Frequency	Percentage
Yes in NVD cases	76	57%
Yes in LSCS cases	28	21%
No	29	21%
Do not remember	1	1%
N	134	100%

II. Situational Analysis of facility readiness

Out of 15 facilities, AMTSL posters were displayed in 5 facilities in the labour room, in 2 facilities in the patient waiting area, in 2 facilities in the nursing area and in 2 facilities posters were displayed in areas other than these. **(Table 1 & Table 2)**

Commented [BS12]: Doesn't look appropriate. I think it is better to keep n=15 for questions related to facility readiness.

Commented [AN13R12]: Question on AMTSL posters was to be responded after observation (i.e. not to be asked to providers/ other personnel)
Investigators visited 15 facilities only so n can only be 15

Table 1: Availability of AMTSL poster

Protocol for preventing PPH – AMTSL poster is available in health facility? (By observation)	**Frequency**	**Percentage**
Yes	9	60%
No	6	40%
N	15	100%

Table 2: Places where AMTSL poster were displayed

Places where the AMTSL poster is displayed in your facility? (observe) Multiple answers	**Frequency**
In Emergency receiving area	0
In Labor Room	5
Patient waiting area	2
Nursing area	2
Any other place (Medical Officer cabin)	1
N	9

Commented [BS14]: Would be great if we can specify this

Out of 15 facilities, 7 maintain the record of the administration of preventive doses of uterotonic in register ,5 maintain the record in casesheet while 5 facilities do not maintain any record at all. (**Table 3)**

Table 3: Record maintenance of uterotonics

Where record of the administration of preventive doses of uterotonic is maintained? Multiple Answers (Multiple Response) (interview & record review)	Frequency
Case Sheet	5
Register	7
Others	0
No records	5
N	15

Out of total of 15 facilities, only 4(27%) facilities maintain the record of time of administration of uterotonics.

Out of total of 15 facilities, PPH tray was available in only 9 (60%) facilities.

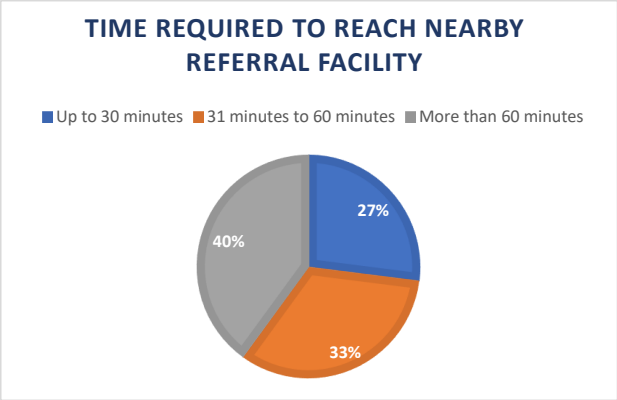
In case of requirement of emergency referral, from 4 facilities it takes up to 30 minutes, from 5 facilities it takes 31 minutes to 60 minutes and from 6 facilities it takes more than 60 minutes to reach the nearby referral facility. (**Table 4)**

Table 4: Time required to reach nearby referral facility

Commented [BS15]: From a particular facility respondents informed different time taken to reach the next facility. This is creating confusion as the purpose from this question was to understand time required to reach the nearby next level of facility.

In case of requirement of emergency referral, how much time it generally takes to reach nearby referral (BEmONC/ CEmONC) facility? (interview)	Frequency	Percentage
Up to 30 minutes	4	27%
31 minutes to 60 minutes	5	33%
More than 60 minutes	6	40%
N	15	100%

Fig II.1



Out of 35 interviews of service providers, 6 service providers have undergone SBA training alone , 2 has undergone DAKSHATA training alone, 2 have undergone training other than these, 13 service providers have undergone SBA, DAKSHATA and other trainings and 12 have not undergone any training.

Table 5: Training on LR practices

Have you undergone any training on LR practices inc. PPH prevention and management? Multiple Answers (interview)	**Frequency**
SBA	19
DAKSHATA	11
Others	5
No training	12
N	35

Commented [BS16]: Would be great if we can specify

Commented [NS17R16]: we cant because majority of the answers are others only nothing specified

Commented [BS18]: Total of n is more than 35. Few providers must have undergone more than 1 training. In the description this detail should be captured.

III. Situational Analysis of Service Providers

In all 15 facilities according to the previous year record **(01st April 2021 to 31st March 2022)** total number of deliveries was 16,895. Out of these 16,895, 14,468 were normal vaginal deliveries (NVD) and 2,427 were lower segment caesarean section (LSCS). LSCS was done in district hospital (DH) only. Number of PPH cases in the same year were 44, 10 PPH cases were referred out and total maternal deaths were 3. Out of these 3, maternal death due to PPH were 2. (**Table 1). Annexure 2** provides facility wise details of delivery.

Table 1: Number of deliveries in all facilities

Total number of Deliveries	16895
Vaginal Deliveries	14468
Assisted Deliveries	0
Caesarean Deliveries	2427
Number of PPH Cases in last 1 year	44
Number of maternal deaths	3
Number of maternal deaths due to PPH	2
Number of PPH cases referred out	10

Commented [NS19]: correction done in the number of PPH cases .It is 44 instead of 45 .

Total maternal deaths due to PPH according to the previous year records were only 2. Out of these 2, anaemia and grand multipara were the risk factors in both cases. Additional history of uterine surgery was the risk factor in 1 and previous C- section was the risk factor in 1 case. (**Table 2).**

Commented [AN20]: Any details about uterine surgery?

Commented [NS21R20]: sunita maam said she can do this on Friday as she didn't came dewas yet

Table 2: Risk factors in died cases

Risk factors in cases who died due to PPH (01st April 2021 to 31st March 22) (There were multiple responses) Number of maternal deaths due to PPH=2, so n =2	**Frequency**
Anaemia	2
Past H/o uterine surgery	1
C-Section	1
Grand Multipara	2
Induction of labour, Primipara, No AMTSL, Preterm Birth, Genital Tract Injury, IUFD, Other	**0**

Out of 36 providers, 31 (86%) providers assess risk for PPH in all cases while 2 (6%) providers assess risk in some cases. From these 33 providers, we got multiple answers 25 document it in register, 9 document it in case sheet and 3 document it in other than these. In 3 facilities record is maintained in more than 1 place i.e. register, case sheet and other (**Table 3).**

Table 3: Risk assessment for PPH and documentation

(a) Do you assess risk for PPH in all cases coming in labour?	Frequency	PERCENTAGE
Yes, in all cases	31	86%
Yes, in some cases	2	6%
No, don't assess	3	8%
N	36	100%

(b) If yes, where do you document this? Multiple answers (n=36 as per table 3(a))	Frequency
Register	25
Case-sheet	9
Other	3

Commented [BS22]: In some of the facilities, records must be maintained in more than 1 place. In the description this detail should be captured.

Only 9 providers administer uterotonics routinely for augmentation of labour. From these 9 providers, we got multiple answers, 9 uses injection oxytocin while 5 uses tablet misoprostol whereas none use Inj. Ergometrine / Methylergometrine or Inj. 15-Methyl Prostaglandin F2α.

All 36 service providers practice AMTSL to prevent PPH for all women routinely. From these 36 providers we got multiple answers, all 36 providers were using Injection Oxytocin, 16 providers were using Tab. Misoprostol and 3 providers were using Inj. 15-Methyl Prostaglandin F2α. Out of these 36, 33 providers know all three steps of AMTSL (**Table 4).**

Table 4: Practice of AMTSL for PPH prevention

Routinely practice Steps of AMTSL (Multiple Responses) n=36	Frequency
Use of Uterotonic	36
Controlled Cord Traction	34
Uterine Massage	34
None	0

Know all three steps	33

Commented [BS23]: As per previous analysis this was 29. Please check again.

Commented [AN24R23]: Can this be 33 if everyone (36) practice uterotonic & 34 each practice CCT and UM?

Commented [NS25R23]: I cross checked it with the latest excel sheet its 33 only

Drugs used for AMTSL. (Multiple answer) n =36 as per table 5(a)	Frequency
Injection Oxytocin	36
Tab. Misoprostol	16
Inj. Ergometrine/Methylergometrine	0
Inj. 15-Methyl Prostaglandin F2α	3
N	36

Out of 36 providers ,34(94%) providers administer uterotonic under AMTSL immediately after birth of baby and 2(6%) providers administer 5 minutes after the birth of baby (**Table 5).**

Table 5: Time of administration of uterotonic under AMTSL

Time for administering uterotonic under AMTSL	**Frequency**	**PERCENTAGE**
Immediately after birth of baby	34	94%
5 minutes after the birth of baby	2	6%
10 minutes after the birth of baby	0	0
N	36	100%

Out of total of 36 providers, 34(94%) providers inform the women prior to administering the uterotonic.(**Table 6)**

Table 6: Whether women is informed prior to administrating uterotonic

Do you inform the women prior to administering the uterotonic?	Frequency	PERCENTAGE
YES	34	94%
NO	2	6%
N	36	100%

Out of total 36 providers, according to 23 (64%) providers there are women who require additional uterotonics even after routine preventive dose under AMTSL, 20 (87%) providers

document such additional doses. The documentation is reported to be done in case sheet and register. (**Table 7).**

Table 7: Does women require additional uterotonics even after routine preventive dose under AMTSL and their documentation.

(a) Are there women who require additional uterotonics even after routine preventive dose under AMTSL?	Frequency	PERCENTAGE
YES	23	64%
NO	13	36%
N	36	100%

(b) Do you document such additional dose(s)? n=23 as per table 8(a)	frequency	PERCENTAGE
YES	20	87%
NO	3	13%
N	23	100%

(c) Where do you document such additional dose(s)? Multiple answers n=20 as per table 8(a)	Frequency
Register	10
Case-sheet	13
Other	2
N	20

From 36 providers we got multiple answers with maximum response of monitoring blood loss and maternal vitals in the immediate post-partum period (**Table 8).**

Table 8: Parameters monitored in the immediate post-partum period

What all parameters do you monitor in the immediate postpartum period? Multiple answers	Frequency
Uterine tonus	18
Blood loss	32

Maternal vitals	32
Emptying of bladder	19
Uterine height	11
Others	1

From 36 providers we got multiple answers, 31 providers diagnose PPH with loss of 500 ml or more of blood, 13 consider blood loss sufficient to cause signs and symptoms of hypovolemia is PPH and according to 20 providers woman who soaks 1 pad or cloth in <5 min are diagnosed with PPH. Out of 36 providers,16(44%) providers classify PPH cases into mild, moderate and severe (**Table 9).**

Table 9: Diagnosis of PPH

Identification/ diagnosis of PPH (till 24 hours postpartum) multiple answers	Frequency
Loss of 500 ml or more of blood	31
Blood loss sufficient to cause signs and symptoms of hypovolemia	13
Woman soaks 1 pad or cloth in <5 min	20
None of the above	2

(b) Do you classify PPH cases?	Frequency	PERCENTAGE
YES	16	44.%
NO	20	56%
N	36	100%

(c) If yes, what classification terminology you use? Multiple answers n=16 as per table 11(b)	Frequency
Mild	16
Moderate	16
Severe (blood loss ≥1000 ml)	16

Out of 15 facilities, in 14 facilities Injection Oxytocin, in 1 facility Tab. Misoprostol and in 1 facility Inj. 15-Methyl Prostaglandin F2α is stored in refrigerator**.**

Out of total 15 facilities, in 14 facilities refrigerator was available for storage of uterotonic at LR. In 7 facilities refrigerator and in 1 facility ILR was available at the drug store. At OT of district hospital there was no cold chain equipment (**Table 10.**

Table 10: Availability of cold chain equipment for uterotonic storage

Cold Chain Equipment for Storage of Uterotonic		
Labour Room		
	Frequency	PERECENTAGE
REFRIGERATOR	14	93%
NOT AVAILABLE	1	7%
N	15	100%
OT		
REFRIGERATOR	0	0
NOT AVAILABLE	2	100%
n (CEmOC)	2	
DRUG STORE		
REFRIGERATOR	7	54%
ILR	1	8%
NOT AVAILABLE	5	38%
N	13	100%

Commented [BS26]: n for drug store must be less than 15 as they are not available at sub centres.

In all 15 facilities, oxytocin was stored in refrigerator but not in Ice compartment and in 1 facility Inj. 15-Methyl Prostaglandin F2 α was stored in refrigerator but not in Ice compartment.

All 5 store personnel maintain cold chain while delivering Oxytocin from store to next level facilities.

Out of 15 facilities ,11 (73%) indent uterotonics monthly at facility store,1 (7%) indent quarterly ,1 (7%) indent weekly and 2 (13%) indent it for unspecified time interval (**Table 11).**

Out of 13 store personnel ,12(92%) maintain buffer stock at store.

Table 11: Frequency of indenting uterotonics at store

Frequency of indenting uterotonics at facility	Frequency	PERCENTAGE
Monthly	11	73%
Quarterly	1	7%
Weekly	1	7%
Unspecified	2	13%
N	15	100%

Out of 15 facilities, 11 indent uterotonics monthly at LR, 1 indent weekly, 1 indent quarterly and 2 indent uterotonics for an unspecified time interval (**Table 12).**

Table 12: Frequency of indenting uterotonics at LR

Frequency of indenting uterotonics at LR?	Frequency	PERCENTAGE
Monthly	11	74%
Weekly	2	13%
Quarterly	0	0
Unspecified	2	13%
N	15	

Out of 13 stores , oxytocin was stock out at 1 store and misoprostol was stock out at 1 store.

All 13 store personnel, have provision of local purchase in case of stock-out situation.

Out of total 15 facilities, 1 facility had stock-out of uterotonic in last 6 months at LR of carboprostol.

DISCUSSION

I. Situational Analysis of Mothers

Labour was induced in slightly more than 10% of deliveries and females were being informed before administration of the drugs. Similar findings were observed in the study on factors and outcomes associated with the induction of labour in Latin America where 11.4% were induced and induced labour is, however, associated with poorer maternal and perinatal outcomes than spontaneous labour [9]. Therefore, labour induction should only be done in complicated cases where natural birth is not possible.

81% (69) of the women were given uterine massage after delivery of the baby.

A qualitative study published by Mannheimer SS et al on experiencing challenges when implementing AMTSL, in 12 midwives in Ghana; it was found that uterine massage was not implemented and there is need for delegating certain steps of AMTSL to other health care staff, i.e., task shifting [11]. The difference could be due to the small sample size in the study done in Ghana and in the current study majority of the respondents were from DH who would be trained.

II. Situational Analysis of facility readiness

Almost all the facilities maintain the record of the administration of preventive doses of uterotonic in register, case sheet and others. The record of appropriate time of administration of uterotonics was maintained in only 4 facilities.

According to a retrospective review of Time to Uterotonic Administration and Maternal Outcomes After Postpartum Haemorrhage by Knoll William et al. in the year 2021; commented that Each 5-minute delay in uterotonic treatment was associated with 26% higher odds of hypotension following delivery of any type. For vaginal deliveries, each 5-minute delay was associated with 31% and 34% higher odds of hypotension and transfusion, respectively [21]. The difference is because they are not aware of the importance of time of uterotonic administration and they do not consider it worth mentioning.

Out of 35, 23 (66%) service providers have undergone training on LR practices including PPH prevention and management like SBA, DAKSHATA and others. 34% service providers have not undergone any training. The Ministry of Health and Family Welfare (MoHFW), GoI, has developed an initiative termed ‘Dakshata’ (means adroitness) to improve the quality of care at the delivery points .The initiative is strategic in nature as it ultimately tries to build capacity of

the providers to prevent and manage complications that are major causes of maternal and new born mortality during and after childbirth. GoI policy initiative to empower the ANM, LHV, SN and Multipurpose Health Worker – Female (MPHW-F) for undertaking certain life saving measures to make them competent. [6] · The gap is due to the lack of awareness and availability of such trainings. All the service providers must have awareness about the LR practices and its need, each facility must ensure that every provider is trained for LR practices including PPH prevention and management.

III. Situational Analysis of Service Providers

25% (9) providers administer uterotonics routinely for augmentation of labour and oxytocin was used more than any other uterotonics like – tablet misoprostol or Inj. 15-Methyl Prostaglandin F2α. A study published by Guerra G V et al.in the year 2009 on factors and outcomes associated with the induction of labour in Latin America among all women who gave birth during the study period in 120 participating institutions., it was found that out of the total deliveries, 11.4% were induced and induced labour is, however, associated with poorer maternal and perinatal outcomes than spontaneous labour. [9] Use of uterotonic for routine augmentation of labour should be discontinued and done only in complicated cases or where natural birth is not possible.

All the service providers practice AMTSL to prevent PPH for all women routinely and few of them do not remember all three steps of AMTSL. A study published by Bishanga DR et al in the year 2018 on the Improvement in the AMTSL for the prevention of PPH in Tanzania; they commented that the proportion of deliveries receiving all three AMTSL steps improved significantly by 19 percentage point. The quality of PPH prevention increase substantially in facilities that implemented competency-based training and quality improvement interventions [19]. The quality of care can be improved by promoting use of up-to-date guidelines and ensuring regular training and mentoring for health care providers so that they adhere to the guidelines for care of women during labour. These measures can reduce maternal and new born mortality.

Almost all providers were administrating uterotonic under AMTSL immediately after birth of baby and 6% (2) out of them administer 5 minutes after the birth of baby. According to a retrospective Review of Time to Uterotonic Administration and Maternal Outcomes After Postpartum Haemorrhage by Knoll William et al. in the year 2021; commented that Each 5-minute delay in uterotonic treatment was associated with 26% higher odds of hypotension

following delivery of any type. For vaginal deliveries, each 5-minute delay was associated with 31% and 34% higher odds of hypotension and transfusion, respectively. [21]

According to 64% providers there were women who require additional uterotonics even after routine preventive dose under AMTSL and documentation is reported to be done in case sheet and register of such cases.

All the providers store Inj. Oxytocin in refrigerator but not in Ice compartment, only some out of them store Tab. Misoprostol and Inj. 15-Methyl Prostaglandin F2α in refrigerator but not in Ice compartment**.** Refrigerator was available for storage of uterotonic at LR in 14 facilities only. Out of 13 drug stores, refrigerator was available in only 7 drug stores and ILR was available in 1 drug store. At OT of district hospital there was no cold chain equipment. They used to keep uterotonics at labour room refrigerator which is close to OT. Cold chain while delivering Oxytocin from store to next level facilities was maintained in all the drug stores. The issues with usage of Oxytocin are to maintain a proper supply chain. However, due to its susceptibility to degradation from exposure to heat leads to its reduced effectiveness in preventing PPH from uterine atony. [3]. Oxytocin has been shown to be a heat-sensitive product that requires refrigeration during transport, distribution, and storage at all points in the supply chain [23]. According to this existing literature cold chain equipment must be there at all facilities in order to maintain the efficacy of uterotonics.

Usually uterotonics are indented monthly at facility store and labour room. Only 12 store personnel maintain buffer stock at store. Out of 13 stores, oxytocin was stock out at 1 store and misoprostol was stock out at 1 store. Out of total 15 facilities, 1 facility had stock-out of carboprostol in last 6 months at labour room.

Recommendation

1. Availability of service providers in the facility and all service providers must have undergone training on LR practices including PPH prevention and management like –SBA, DAKSHATA and others. Providers must remember all the three steps of AMTSL and uterotonics must be administered immediately after the birth of baby.
2. Use of uterotonics routinely for the induction/ augmentation of labour should be discontinued.
3. The record of time of administration of uterotonics must be maintained in all facilities.

4. Cold chain equipment must be available in all the facilities at Labour Room and drug stores.
5. Buffer stock must be maintained in labour room and by store personnel at store in all facilities.

Limitation

- Convenient sampling
- Change from initial plan of data collection as required participants could not be achieved.

Conclusion

According to WHO prophylactic management by provision of uterotonics provided by the SBA during AMTSL is a lifesaving procedure. Uterotonics have a critical role in obstetrics, notably for prevention and treatment of PPH.

Unavailability of gynaecologist in CHC Bagli which is a CeMONC facility and no LSCS were conducted in the past one year.

In slightly more than 10% deliveries, uterotonics were being used for induction of labour. Although females were being informed prior to the administration of such drug(s). Out of 36 service providers, 9(25%) providers were administrating uterotonics routinely for augmentation of labour and oxytocin is used more than any other uterotonics

The record of appropriate time of administration of uterotonics was maintained in only 4 facilities.

34% service providers have not undergone training on LR practices including PPH prevention and management like SBA, DAKSHATA and others

3 (9%) service providers do not remember all the three steps of AMTSL,6%(2) service providers were administrating uterotonics 5 minutes after the birth of baby.

Refrigerator was not available for storage of uterotonic at LR in 1 facility. Out of 13 drug stores, cold chain equipment was available in only 8 drug stores.

Buffer stock was not maintained by one store personnel at store. Out of 13 stores, oxytocin was stock out at 1 store and misoprostol was stock out at 1 store. Out of total 15 facilities, 1 facility had stock-out of uterotonic in last 6 months at LR of carboprostol.

The study indicates need for AMTSL implementation practices in all levels of public health facilities, capacity needs for AMTSL and proper availability, storage and supply chain management of key uterotonics.

Nidha Shaikh

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References

1. https://www.who.int/news-room/fact-sheets/detail/maternal-mortality
2. https://www.gatesfoundation.org/goalkeepers/report/2021-report/progress-indicators/maternal-mortality/
3. SRS 2017-2019
4. https://main.mohfw.gov.in/sites/default/files/Annual%20Report%202020-21%20English.pdf
5. http://nhp.gov.in/disease/gynaecology-and-obstetrics/postpartum-haemorrhage
6. https://nhm.gov.in/index1.php?lang=1&level=1&sublinkid=794&lid=168

7. https://dewas.nic.in/en/general-information/

8. Tsu VD, Mai TT, Nguyen YH, Luu HT. Reducing postpartum hemorrhage in Vietnam: assessing the effectiveness of active management of third-stage labor. J Obstet Gynaecol Res. 2006 Oct;32(5):489-96. doi: 10.1111/j.1447-0756.2006.00436.x. PMID: 16984516.

9. G V Guerra 1, J G Cecatti, J P Souza, A Faúndes, S S Morais, A M Gülmezoglu, M A Parpinelli, R Passini Jr, G Carroli, World Health Organisation 2005 Global Survey on Maternal and Perinatal Health Research Group PMID: 19906020 DOI: 10.1111/j.1471-0528.2009.02348.x

10. Gizzo S, Patrelli TS, Gangi SD, Carrozzini M, Saccardi C, Zambon A, Bertocco A, Fagherazzi S, D'Antona D, Nardelli GB. Which uterotonic is better to prevent the postpartum hemorrhage? Latest news in terms of clinical efficacy, side effects, and contraindications: a systematic review. Reprod Sci. 2013 Sep;20(9):1011-9. doi: 10.1177/1933719112468951. Epub 2013 Jan 7. PMID: 23296037.

11. Schack SM, Elyas A, Brew G, Pettersson KO. Experiencing challenges when implementing active management of third stage of labor (AMTSL): a qualitative study with midwives in Accra, Ghana. BMC Pregnancy Childbirth. 2014 Jun 5;14:193. doi: 10.1186/1471-2393-14-193. PMID: 24903893; PMCID: PMC4057904.

12. Guillaume A, Sananès N, Poirier V, Gaudineau A, Fritz G, Boudier E, Viville B, Aissi G, Favre R, Nisand I, Langer B. Benefits of cord blood collection in the prevention of post-partum hemorrhage: a cohort study. J Matern Fetal Neonatal Med. 2015;28(17):2111-4. doi: 10.3109/14767058.2014.979401. Epub 2014 Nov 14. PMID: 25341670.

13. Dahlke JD, Mendez-Figueroa H, Maggio L, Hauspurg AK, Sperling JD, Chauhan SP, Rouse DJ. Prevention and management of postpartum hemorrhage: a comparison of 4 national guidelines. Am J Obstet Gynecol. 2015 Jul;213(1):76.e1-76.e10. doi: 10.1016/j.ajog.2015.02.023. Epub 2015 Feb 28. PMID: 25731692.

14. Begley CM, Gyte GM, Murphy DJ, Devane D, McDonald SJ, McGuire W. Active versus expectant management for women in the third stage of labour. Cochrane Database Syst Rev. 2010 Jul 7;(7):CD007412. doi: 10.1002/14651858.CD007412.pub2.PMID: 20614458

15. Felarmine M, Joachim O, Agina O. Facility factors influencing utilization of active management of third stage of labour among skilled birth attendants in Kiambu county, Kenya. Pan Afr Med J. 2016 Nov 26;25(Suppl 2):11. doi: 10.11604/pamj.supp.2016.25.2.9705. PMID: 28439335; PMCID: PMC5390064.

16. Roy P, Sujatha MS, Bhandiwad A, Biswas B, Chatterjee A. Placental Blood Drainage as a Part of Active Management of Third Stage of Labour After Spontaneous Vaginal Delivery. J Obstet Gynaecol India. 2016 Oct;66(Suppl 1):242-5. doi: 10.1007/s13224-016-0857-3. Epub 2016 Mar 12. PMID: 27651611; PMCID: PMC5016453.

17. Al Wattar BH, Tamblyn JA, Parry-Smith W, Prior M, Van Der Nelson H. Management of obstetric postpartum hemorrhage: a national service evaluation of current practice in the UK. Risk Manag Healthc Policy. 2017 Jan 17; 10:1-6. doi: 10.2147/RMHP.S121737. PMID: 28176919; PMCID: PMC5261839.

18. Erickson EN, Lee CS, Grose E, Emeis C. Physiologic childbirth and active management of the third stage of labor: A latent class model of risk for postpartum hemorrhage. Birth. 2019 Mar;46(1):69-79. doi: 10.1111/birt.12384. Epub 2018 Aug 30. PMID: 30168198; PMCID: PMC8191508.

19. Bishanga DR, Charles J, Tibaijuka G, Mutayoba R, Drake M, Kim YM, Plotkin M, Rusibamayila N, Rawlins B. Improvement in the active management of the third stage of labor for the prevention of postpartum hemorrhage in Tanzania: a cross-sectional study. BMC Pregnancy Childbirth. 2018 Jun 13;18(1):223. doi: 10.1186/s12884-018-1873-3. PMID: 29895276; PMCID: PMC5998542.

20. Chikkamath SB, Katageri GM, Mallapur AA, Vernekar SS, Somannavar MS, Piaggio G, Carroli G, de Carvalho JF, Althabe F, Hofmeyr GJ, Widmer M, Gulmezoglu AM, Goudar SS. Duration of third stage labour and postpartum blood loss: a secondary analysis of the WHO CHAMPION trial data. Reprod Health. 2021 Nov 14;18(1):230. doi: 10.1186/s12978-021-01284-8. PMID: 34775959; PMCID: PMC8591926.

21. William Knoll, Rachel Phelan, Wilma M Hopman, Anthony M-H Ho, Marta Cenkowski, Glenio B Mizubuti, Nader Ghasemlou, Gregory Klar Retrospective Review of Time to Uterotonic Administration and Maternal Outcomes After Postpartum Hemorrhage. PMID:34844004 DOI: 10.1016/j.jogc.2021.11.011

22. Muyanga DL, Joho AA. Knowledge and skills on active management of third stage of labor for prevention of post-partum haemorrhage among health care providers in Lake Zone, Tanzania: a cross sectional study. BMC Womens Health. 2022 Feb 11;22(1):36. doi: 10.1186/s12905-022-01616-1. PMID: 35148752; PMCID: PMC8832659.

23. WHO. The International Pharmacopeia, Eight Edition, 2018. 2018. http://apps.who.int/phint/en/p/about/.

Annexure 1

Field Plan Followed

Commented [AN27]: Mid-course changes were done in the field plan, it should be captured

S. No	Facility	Team X	Team Y	Team Z
1	DH Dewas	Day 1 ,2 and 3		Day 4
2	CHC Bagli		Day 2	
3	CHC Khategaon			Day 1
4	CHC Sonkatch		Day 1	
5	PHC Udainagar		Day 2	
6	CHC Satwas	Day 2		
7	PHC Baijakwada	Day 3		
8	PHC Kamlapur		Day 3	
9	PHC Kusmaniya	Day 3		
10	PHC Kantaphod			Day 2
11	PHC Harangaon			Day 1
12	PHC Bawdikheda	Day 3		
13	PHC Pipalranwa		Day 1	
14	SHC Karnavad			Day 3
15	SHC Sannod			Day 3
Total	15	5	5	5

Annexure 2

Facility Wise Delivery Status

Facility	Number of deliveries*	Number of PPH Cases in last 1 year	Number of maternal deaths	No. of maternal deaths due to PPH	Number of PPH cases refereed out
DH	8275	15	2	2	1
CHC Satwas	948	1	-	-	1
PHC Kusmania	445	-	-	-	-
PHC Bawdikheda	11	-	-	-	-
CHC Sonkach	1468	17	-	-	1
CHC Bagli	1268	9	1	-	5
PHC Kamlapur	345	1	-	-	1
PHC Pipalranwa	376	-	-	-	-
PHC Udainagar	1044	1	-	-	1
CHC Khategaon	1263	1	-	-	-
PHC Kantaphod	385	-	-	-	-
SHC Sannod	18	-	-	-	-
PHC Harangaon	451	-	-	-	-
PHC Baijakwada	390	-	-	-	-
SHC Karnavat	208	-	-	-	-
Total					

- Out of the 8275 deliveries in DH; 5848 (71%) were NVD and 2427 (29%) LSCS were conducted; no facility of LSCS in any of the other facility

I Participant Information Sheet- Provider

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Kindly read this information sheet carefully. You are free to clarify any queries regarding the mentioned study. You are requested to participate in this study being carried out by the investigator (Dr. Anil Nagendra).

Aim of Study: The purpose of Situation Analysis is to understand the current practices of service providers for PPH prevention particularly AMTSL, availability, storage and supply chain management of uterotonics etc. and knowledge of mothers at various levels of public health facilities

Method of Study: If you agree to take part in this study, you will be interviewed using an interview schedule. Questions will be asked and your responses shall be documented.

Expected Benefits from This Study: Situation Analysis of 15 facilities in district Dewas, Madhya Pradesh for preventive practices for PPH. An understanding shall be developed on knowledge and practices of providers, delivery loads, incidence of PPH, risk factors for PPH, supply chain management including availability of cold chain and perceptions of mothers on quality of care.

Risks Associated with the Study: There is no risk associated with this study.

Right to Withdraw from the Study: Your participation in this study is voluntary. You have right to refuse to participate, discontinue participation, or skip any questions you don't wish to answer at any time without penalty or loss of the benefits to which you are otherwise entitled. You will not be asked any reason for your withdrawal & you won't be forced to continue your participation.

Issue of Confidentiality: If you agree to participate in this study, the information obtained will be kept confidential. At the time of publication of this study, no personal identifying information will be disclosed. Consent form will not be attached with the questionnaire.

Clarification of Queries: Questions about this research study can be directed to me, the primary investigator Dr. Anil Nagendra (phone number 8989123104).

This interview would take 15- 20 minutes

I Informed Consent Form-Provider

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Protocol/Study Number :

Participant identification Number :

Name of Principle Investigator : Dr Anil Nagendra

Contact No. of Principle Investigator : 08989123104

The content of the information sheet dated..... (Version)..... that was provided have been read carefully by me /explained to me, in a language that I comprehend, and I have fully understood the content. I conform that I have had the opportunity to ask questions regarding this study.

The nature and purpose of the study and risks related to the study and its potential risks/benefits and expected duration of the study, and other relevant details of the study have been explained to me in detail. I understood that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal right being affected.

I understand that the information collected about me from my participation in this study may be looked at by responsible authority and my identity will be kept confidential. I give permission for these individuals to have access to my records.

I agree to take part in the above study

..... Date.....

(Signature/left thumb impression) Place.....

Name of the participant.....

Address of participant.....

.....

.....

This is to certify that above consent has been obtained in my presence.

.....

Signature of the principle investigator/ team lead

1) Witness-I

.....

Signature

NAME

ADDRESS

2) witness-II

.....

Signature

NAME

ADDRESS

I प्रतिभागी सूचना पत्र: प्रदाताओं की सहमति प्रपत्र

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

कृपया इस सूचना पत्र को ध्यान से पढ़ें। आप उल्लिखित अध्ययन के संबंध में किसी भी प्रश्न को स्पष्टता से समझने के लिए स्वतंत्र हैं। आपसे अनुरोध है कि अन्वेषक (डॉ. अनिल नागेंद्र) द्वारा किए जा रहे इस अध्ययन में भाग लें।

अध्ययन का उद्देश्य: इस स्थिति विश्लेषण का उद्देश्य पीपीएच रोकथाम के लिए सेवा प्रदाताओं की वर्तमान प्रथाओं को समझना है, विशेष रूप से एएमटीएसएल, उपलब्धता, भंडारण और आपूर्ति श्रृंखला प्रबंधन, यूटरोटोनिक्स आदि और सार्वजनिक स्वास्थ्य सुविधाओं के विभिन्न स्तरों पर माताओं के ज्ञान को समझना।

अध्ययन का तरीका: यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं, तो एक साक्षात्कार अनुसूची का उपयोग करके आपका साक्षात्कार लिया जाएगा, प्रश्न पूछे जाएंगे और आपकी प्रतिक्रियाओं का दस्तावेजीकरण किया जाएगा।

इस अध्ययन से अपेक्षित लाभ: प्रदाताओं के ज्ञान और प्रैक्टिस, डिलीवरी लोड, पीपीएच की घटनाओं, पीपीएच के लिए जोखिम कारक, कोल्ड चेन की उपलब्धता सहित आपूर्ति श्रृंखला प्रबंधन और देखभाल की गुणवत्ता पर माताओं की धारणाओं पर एक समझ विकसित की जाएगी।

अध्ययन से जुड़े जोखिम: इस अध्ययन से जुड़ा कोई जोखिम नहीं है।

अध्ययन से हटने का अधिकार: इस अध्ययन में आपकी भागीदारी स्वैच्छिक है। आपको भाग लेने से इंकार करने, भागीदारी बंद करने, या किसी भी ऐसे प्रश्न को छोड़ने का अधिकार है जिसका आप किसी भी समय उत्तर नहीं देना चाहते हैं, बिना दंड या उन लाभों के नुकसान के जिसके आप अन्यथा हकदार हैं। आपसे आपकी वापसी का कोई कारण नहीं पूछा जाएगा और आपको अपनी भागीदारी जारी रखने के लिए बाध्य नहीं किया जाएगा।

गोपनीयता का मुद्दा: यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं, तो प्राप्त जानकारी को गोपनीय रखा जाएगा। इस अध्ययन के प्रकाशन के समय, किसी भी व्यक्तिगत पहचान संबंधी जानकारी का खुलासा नहीं किया जाएगा। प्रश्नावली के साथ सहमति प्रपत्र संलग्न नहीं किया जाएगा।

प्रश्नों का स्पष्टीकरण: इस शोध अध्ययन के बारे में प्रश्न मुझे (डॉ अनिल नागेंद्र, प्राथमिक अन्वेषक - फोन नंबर 8989123104) से निर्देशित किया जा सकता है।

I सूचित सहमति प्रपत्र

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

प्रोटोकॉल/अध्ययन संख्या:

प्रतिभागी पहचान संख्या:

प्रमुख अन्वेषक का नाम: डॉ अनिल नागेंद्र

मुख्य अन्वेषक का संपर्क नंबर: 08989123104

प्रदान की गई सूचना पत्र की सामग्री दिनांक ..... (संस्करण) ..... मेरे द्वारा ध्यान से पढ़ा गया/मुझे ऐसी भाषा में समझाया गया हैं जिसे मैं समझता/समझती हूं, और मैंने सामग्री को पूरी तरह से समझ लिया है। मैं पुष्टि करता/करती हूं कि मुझे इस अध्ययन के संबंध में प्रश्न पूछने का अवसर मिला है।

अध्ययन की प्रकृति और उद्देश्य और अध्ययन से संबंधित जोखिम और इसके संभावित जोखिम/लाभ और अध्ययन की अपेक्षित अवधि, और अध्ययन के अन्य प्रासंगिक विवरणों के बारे में मुझे विस्तार से बताया गया है। मैं समझ गया था कि मेरी भागीदारी स्वैच्छिक है और मैं अपने कानूनी अधिकार को प्रभावित किए बिना, बिना कोई कारण बताए किसी भी समय वापस लेने के लिए स्वतंत्र हूं।

मैं समझता हूं कि इस अध्ययन में मेरी भागीदारी से मेरे बारे में एकत्र की गई जानकारी को जिम्मेदार प्राधिकारी द्वारा देखा जा सकता है और मेरी पहचान को गोपनीय रखा जाएगा। मैं इन व्यक्तियों को अपने रिकॉर्ड तक पहुंच की अनुमति देता हूं।

मैं उपरोक्त अध्ययन में भाग लेने के लिए सहमत हूं

…… दिनांक.....

(हस्ताक्षर/बाएं अंगूठे का निशान) स्थान.....

प्रतिभागी का नाम.....

प्रतिभागी का पता.....

……

यह प्रमाणित किया जाता है कि उपरोक्त सहमति मेरी उपस्थिति में प्राप्त की गई है।

मुख्य अन्वेषक/टीम लीड के हस्ताक्षर

1) गवाह-I	2) गवाह-II
.....	.....
हस्ताक्षर	हस्ताक्षर
नाम	नाम
पता	पता

I Assessment Tool for service providers

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Name of Assessor:	_____	Date of Assessment:	_____
State:	_____	District:	_____
Facility Name:	_____	Facility Type (BEmONC / CEmONC):	_____

Section A: Service Statistics of previous year (April 2021 to March 2022) (through Record Review)

A1	**Total number of Deliveries (see records)**	
A1.1	Vaginal Deliveries	
A1.2	Assisted Deliveries	
A1.3	Cesarean Deliveries	
A2	**Number of PPH Cases in last 1 year (see records)**	
A2.1	Number of maternal deaths	

A2.2	Number of maternal deaths due to PPH	
A2.3	Number of PPH cases refereed out	
A3	**Risk factors in died cases because of PPH (review available records from April 2021 to March 22)**	

Sr. No.	Risk Factors	Yes (count all yes and put before each risk factor)	Cases with specific risk factor/ total deaths due to PPH*100
1	Anemia		
2	Past H/o uterine surgery		
3	Primipara		
4	Grand Multipara		
5	Induction of labor		
6	No AMTSL		
7	Preterm Birth		
8	Genital Tract Injury		
9	C-Section		
10	IUFD		
11	Other		

Section B: PPH Prevention related practices (Interview with respondents)

Sr. No.	Question	Response	Skip Pattern
B1	Do you assess risk for PPH in all cases coming in labour?	☐ Yes, in all cases ☐ Yes, in some cases ☐ No, Do not assess	If NO, skip to B3
B2	If yes, where do you document this?	☐ Register ☐ Case-sheet ☐ Other……	
B3	Do you routinely augment labor by administration of Uterotonics?	☐ Yes ☐ No	If No, skip to B5
B4	If yes, which uterotonic(s) do you use?	☐ Injection Oxytocin ☐ Tab. Misoprostol ☐ Inj. Ergometrine/Methylergometrine ☐ Inj. 15-Methyl Prostaglandin F2α	
B5	Do you routinely practice Active Management of Third stage of labour (AMTSL) to prevent PPH for all women?	☐ Yes ☐ No	If No, skip to B9
B6	If yes, what all AMTSL steps you practice? (Multiple Responses)	☐ Use of Uterotonic ☐ Controlled Cord Traction ☐ Uterine Massage ☐ None	If No, skip to B13

Sr. No.	Question	Response	Skip Pattern
B7	If yes, which drugs do you use for AMTSL	☐ Injection Oxytocin ☐ Tab. Misoprostol ☐ Inj. Ergometrine/Methylergometrine ☐ Inj. 15-Methyl Prostaglandin F2α	
B8	When do you administer uterotonic under AMTSL?	☐ Immediately after birth of baby ☐ 5 minutes after the birth of baby ☐ 10 minutes after the birth of baby	
B9	Do you inform the women prior to administering the uterotonic?	☐ Yes ☐ No	
B10	Are there women who require additional uterotonics even after routine preventive dose under AMTSL?	☐ Yes ☐ No	
B11	Do you document such additional dose(s)?	☐ Yes ☐ No	
B12	Where do you document such additional dose(s)?	☐ Register ☐ Case-sheet ☐ Other……	
B13	Do you routinely initiate breastfeeding within one hour of childbirth?	☐ Yes ☐ No	
B14	What all parameters do you monitor in the immediate postpartum period?	☐ Uterine tonus ☐ Blood loss	

Sr. No.	Question	Response	Skip Pattern
		☐ Maternal vitals ☐ Emptying of bladder ☐ Uterine height ☐ Others……	
B15	How do you identify/ diagnose PPH (till 24 hours postpartum)	☐ Loss of 500 ml or more of blood ☐ Blood loss sufficient to cause signs and symptoms of hypovolemia ☐ Woman soaks 1 pad or cloth in <5 min ☐ None of the above	
B16	Do you classify PPH cases?	☐ Yes ☐ No	If No, skip to C1
B17	If yes, what classification terminology you use?	☐ Mild ☐ Moderate ☐ Severe (blood loss ≥1000 ml) ☐ Any other (specify)……	

Section C: Storage and Supply chain related practices

C1	Which uterotonic do you store in refrigerator? (interview)	☐ Injection Oxytocin ☐ Tab. Misoprostol	

		☐ Inj. Ergometrine/Methylergometrine ☐ Inj. 15-Methyl Prostaglandin F2α	
C2	What cold-chain equipment is/ are available at your facility for storage of uterotonic? (interview)		
C2.1	At Labor Room		
C2.2	At OT		
C2.3	At Drug Store (interview store personnel)		
C3	Where is Oxytocin stored in this facility? (Multiple Response) (observation)	☐ Delivery Tray ☐ Labour Table ☐ Refrigerator in Ice compartment ☐ Refrigerator but not in Ice compartment ☐ Other……..	
C4	Where is Inj. Ergometrine/ Methylergometrine stored in this facility? (Multiple Response) (interview)	☐ Delivery Tray ☐ Labour Table ☐ Refrigerator in Ice compartment ☐ Refrigerator but not in Ice compartment ☐ Other…….	

		☐ Not applicable	
C5	Where is Inj. 15-Methyl Prostaglandin F2α generally stored in this facility? (Multiple Response) (interview)	☐ Delivery Tray ☐ Labour Table ☐ Refrigerator in Ice compartment ☐ Refrigerator but not in Ice compartment ☐ Other……. ☐ Not applicable	
C6	Whether cold chain is maintained while delivering Oxytocin from your store to next level facilities? (Applicable for Drug Store Only) (interview store personnel)	☐ Yes ☐ No ☐ Not applicable	
C7	What is the frequency of indenting uterotonics at facility store? (interview store personnel)	☐ Monthly ☐ Quarterly ☐ Fortnightly ☐ Unspecified	
C8	Do you maintain buffer stock at store? (interview) (interview store personnel)	☐ Yes ☐ No	
C9	What is the frequency of indenting uterotonics at LR? (interview)	☐ Monthly ☐ Quarterly ☐ Fortnightly ☐ Unspecified	

C10	Whether any stock-out of uterotonic in last 6 months at store? (see records) (interview store personnel)	☐ Yes ☐ No	If No, skip to C12
C11	If 'Yes', please mention the names of uterotonic		
C12	Do you have provision of local purchase in case of stock-out situation? (interview store personnel)	☐ Yes ☐ No	
C13	Whether any stock-out of uterotonic in last 6 months at LR? (see record or interview if record is not available)	☐ Yes ☐ No	If No, skip to D1
C14	If 'Yes', please mention the names of uterotonic		

Key Information for Assessor

* Basic Emergency Obstetrics and Newborn Care (BEmONC) Provider is a Level 2 Public or Private health facility or Hospital capable of performing emergency obstetric functions: (1) parenteral administration of oxytocin in the third stage of labor; (2) parenteral administration of loading dose of anti-convulsant; (3) parenteral administration of initial dose of antibiotics; (4) performance of assisted deliveries in imminent breech; (5) removal of retained placental products ; and (6) manual removal of retained placenta. (7) Performs basic neonatal resuscitation (e.g. with bag and mask)

The CEmONC level of healthcare facility is Level 3 Public or Private healthcare facility or hospital capable of providing all BEmONC services in addition to providing C-section facilities and blood transfusion.

Convey thanks for all the information and for time given towards this project. Please inform, in case of any further query, the person will be contacted either through email or call on above details.

I अस्पताल हेतु मूल्यांकन प्रश्नावली

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

असेसर का नाम: _____ मूल्यांकन की तिथि: _____

राज्य: _____ जिला: _____

अस्पताल का नाम: _____ सुविधा प्रकार (BEmONC / CEmONC): _____

सेक्शन A: पिछले वर्ष की सेवा सांख्यिकी (अप्रैल 2021 से मार्च 2022) (रिकॉर्ड समीक्षा के माध्यम से)

A1	**डिलीवरी की कुल संख्या (रिकॉर्ड देखें)**	
A1.1	योनिगत प्रसव	
A1.2	असिस्टेड प्रसव	
A1.3	सिजेरियन डिलीवरी	
A2	**पिछले 1 वर्ष में पीपीएच मामलों की संख्या (रिकॉर्ड देखें)**	
A2.1	मातृ मृत्यु की संख्या	

A2.2	पीपीएच के कारण मातृ मृत्यु की संख्या	
A2.3	रेफर किए गए पीपीएच मामलों की संख्या	
A3	**पीपीएच के कारण मृत्यु के मामलों में जोखिम कारक (अप्रैल 2021 से 22 मार्च तक उपलब्ध रिकॉर्ड की समीक्षा करें)**	

क्रम संख्या	जोखिम कारक	हां (सभी हां गिनें और प्रत्येक जोखिम कारक से पहले रखें)	विशिष्ट जोखिम कारक वाले मामले / पीपीएच के कारण कुल मौतें * 100
1	रक्ताल्पता		
2	पिछले गर्भाशय सर्जरी का इतिहास		
3	प्रिमिपारा		
4	ग्रैंड मल्टीपारा		
5	प्रसव का प्रेरण		
6	कोई एएमटीएसएल नहीं		
7	अपरिपक्व जन्म		
8	जननांग पथ की चोट		
9	सी-सेक्शन		
10	आईयूएफडी		
11	अन्य		

सेक्शन B: पीपीएच रोकथाम संबंधी प्रक्टिसेस (उत्तरदाताओं के साथ साक्षात्कार)

क्रमांक	प्रश्न	उत्तर	स्किप पैटर्न
B1	क्या आप प्रसव के दौरान आने वाले सभी मामलों में पीपीएच के जोखिम का आकलन करती हैं?	☐ हाँ, सभी मामलों में ☐ हाँ, कुछ मामलों में ☐ नहीं, आकलन मत करो	यदि नहीं, तो B3 पर जाएं
B2	यदि हां, तो आप इसे कहां नोट करते हैं?	☐ रजिस्टर ☐ केस-शीट ☐ अन्य ……	
B3	क्या आप यूटेरोटोनिक्स के उपयोग द्वारा नियमित रूप से लेबर में प्रेरन करते हैं?	☐ हाँ ☐ नहीं	यदि नहीं, तो B5 पर जाएं
B4	यदि हाँ, तो आप किस यूटरोटोनिक (ओं) का उपयोग करते हैं?	☐ इंजेक्शन ऑक्सीटोसिन ☐ टैबलेट मिसोप्रोस्टोल ☐ इंज. एर्गोमेट्रिन / मिथाइलर्जोमेट्रिन	

क्रमांक	प्रश्न	उत्तर	स्किप पैटर्न
		☐ इंज. 15-मिथाइल प्रोस्टाग्लैंडीन F2α	
B5	क्या आप सभी महिलाओं के लिए पीपीएच को रोकने के लिए प्रसव की तीसरे चरण (एएमटीएसएल) के सक्रिय प्रबंधन का नियमित रूप से अभ्यास/प्रैक्टिस करते हैं?	☐ हाँ ☐ नहीं	यदि नहीं, तो B9 पर जाएं
B6	यदि हां, तो आप किन सभी एएमटीएसएल चरणों का अभ्यास/ प्रैक्टिस करते हैं? (एकाधिक प्रतिक्रियाएं)	☐ यूटेरोटोनिक का उपयोग ☐ नियंत्रित कॉर्ड ट्रैक्शन ☐ गर्भाशय की मालिश ☐ कोई नहीं	यदि नहीं, तो B13 पर जाएं
B7	यदि हाँ, तो आप AMTSL के लिए किन दवाओं का उपयोग करते हैं?	☐ इंजेक्शन ऑक्सीटोसिन ☐ टैबलेट मिसोप्रोस्टोल ☐ इंज. एर्गोमेट्रिन / मिथाइलर्जोमेट्रिन ☐ इंज. 15-मिथाइल प्रोस्टाग्लैंडीन F2α	
B8	आप एएमटीएसएल के तहत यूटेरोटोनिक का कब उपयोग करते हैं?	☐ बच्चे के जन्म के तुरंत बाद ☐ बच्चे के जन्म के 5 मिनट बाद ☐ बच्चे के जन्म के 10 मिनट बाद	

क्रमांक	प्रश्न	उत्तर	स्किप पैटर्न
B9	क्या आप महिलाओं को uterotonic को प्रशासित करने से पहले सूचित करते हैं?	☐ हाँ ☐ नहीं	
B10	क्या ऐसी महिलाएं हैं जिन्हें एएमटीएसएल के तहत नियमित निवारक खुराक के बाद भी अतिरिक्त यूटरोटोनिक्स की आवश्यकता होती है?	☐ हाँ ☐ नहीं	
B11	क्या आप ऐसी अतिरिक्त खुराक का दस्तावेजीकरण/ नोट करते हैं?	☐ हाँ ☐ नहीं	
B12	आप ऐसी अतिरिक्त खुराक का दस्तावेजीकरण/ नोट कहां करते हैं?	☐ रजिस्टर ☐ केस-शीट ☐ अन्य ……	
B13	क्या आप बच्चे के जन्म के एक घंटे के भीतर नियमित रूप से स्तनपान कराती हैं?	☐ हाँ ☐ नहीं	
B14	तत्काल प्रसवोत्तर अवधि में आप किन सभी मापदंडों की निगरानी करते हैं?	☐ गर्भाशय का टोन ☐ खून की कमी ☐ मातृ जीवन ☐ मूत्राशय का खाली होना ☐ गर्भाशय की ऊंचाई ☐ अन्य……	

क्रमांक	प्रश्न	उत्तर	स्किप पैटर्न
B15	आप पीपीएच की पहचान/निदान कैसे करते हैं (24 घंटे के बाद तक)	☐ 500 मिली या अधिक रक्त की हानि ☐ रक्त की कमी हाइपोवोल्मिया के लक्षण और लक्षण पैदा करने के लिए पर्याप्त है ☐ महिला 1 पैड या कपड़ा <5 मिनट . में भिगोती है ☐ उपरोक्त में से कोई नहीं	
B16	क्या आप पीपीएच मामलों को वर्गीकृत करते हैं?	☐ हाँ ☐ नहीं	यदि नहीं, तो C1 पर जाएं
B17	यदि हाँ, तो आप किस वर्गीकरण शब्दावली का प्रयोग करते हैं?	☐ हल्का ☐ मध्यम ☐ गंभीर (खून की कमी 1000 मिली) ☐ कोई अन्य (निर्दिष्ट करें)……	

सेक्शन C: भंडारण और आपूर्ति श्रृंखला संबंधित प्रैक्टिस

C1	आप रेफ्रिजरेटर में कौन सा यूटरोटोनिक स्टोर करते हैं? (साक्षात्कार)	☐ इंजेक्शन ऑक्सीटोसिन ☐ टैबलेट मिसोप्रोस्टोल ☐ इंज. एर्गोमेट्रिन / मिथाइलर्जोमेट्रिन ☐ इंज. 15-मिथाइल प्रोस्टाग्लैंडीन F2α	
C2	यूटेरोटोनिक के भंडारण के लिए आपकी सुविधा में कौन से कोल्ड-चेन उपकरण उपलब्ध हैं/हैं? (साक्षात्कार)		
C2.1	लेबर रूम में		
C2.2	ओटी . में		
C2.3	ड्रग स्टोर पर (साक्षात्कार स्टोर कर्मी)		
C3	इस अस्पताल में ऑक्सीटोसिन कहाँ संग्रहीत किया जाता है? (एकाधिक प्रतिक्रिया) (देखें)	☐ डिलीवरी ट्रे ☐ लेबर टेबल ☐ फ्रिज में बर्फ के डिब्बे ☐ फ्रिज लेकिन बर्फ के डिब्बे में नहीं ☐ अन्य……..	
C4	इस अस्पताल में इंज. एर्गोमेट्रिन / मिथाइलर्जोमेट्रिन कहाँ संग्रहीत किया जाता है? (एकाधिक प्रतिक्रिया) (देखें)	☐ डिलीवरी ट्रे ☐ लेबर टेबल ☐ फ्रिज में बर्फ के डिब्बे	

		☐ फ्रिज लेकिन बर्फ के डिब्बे में नहीं ☐ अन्य……	
C5	इस अस्पताल में इंज. इंज. 15-मिथाइल प्रोस्टाग्लैंडीन F2α कहाँ संग्रहीत किया जाता है? (एकाधिक प्रतिक्रिया) (देखें)	☐ डिलीवरी ट्रे ☐ लेबर टेबल ☐ फ्रिज में बर्फ के डिब्बे ☐ फ्रिज लेकिन बर्फ के डिब्बे में नहीं ☐ अन्य……	
C6	क्या ऑक्सीटोसिन को आपके स्टोर से अगले स्तर की सुविधाओं तक पहुंचाते समय कोल्ड चेन बनाए रखा जाता है? (केवल ड्रग स्टोर के लिए लागू) (साक्षात्कार स्टोर कर्मियों के लिए)	☐ हाँ ☐ नहीं ☐ लागू नहीं	
C7	अस्पताल के स्टोर पर यूटेरोटोनिक्स इंडेंटिंग की आवृत्ति क्या है? (साक्षात्कार स्टोर कर्मियों)	☐ मासिक ☐ त्रैमासिक ☐ पाक्षिक ☐ अनिर्दिष्ट	
C8	क्या आप स्टोर पर बफर स्टॉक रखते हैं? (साक्षात्कार) (साक्षात्कार स्टोर कर्मियों)	☐ हाँ ☐ नहीं	

C9	प्रसव कक्ष में uterotonics को इंडेंट करने की आवृत्ति क्या है? (साक्षात्कार)	☐ मासिक ☐ त्रैमासिक ☐ पाक्षिक ☐ अनिर्दिष्ट	
C10	क्या स्टोर पर पिछले 6 महीनों में यूटेरोटोनिक का कोई स्टॉक आउट हुआ है? (रिकॉर्ड देखें) (साक्षात्कार स्टोर कर्मियों)	☐ हाँ ☐ नहीं	यदि नहीं, तो C12 पर जाएं
C11	यदि 'हाँ', तो कृपया uterotonic के नामों का उल्लेख करें		
C12	क्या आपके पास स्टॉक आउट होने की स्थिति में स्थानीय खरीद का प्रावधान है? (साक्षात्कार स्टोर कर्मियों)	☐ हाँ ☐ नहीं	
C13	क्या लेबर कक्ष में पिछले 6 महीनों में यूटेरोटोनिक का कोई स्टॉक आउट हुआ है? (रिकॉर्ड देखें या रिकॉर्ड उपलब्ध नहीं होने पर साक्षात्कार)	☐ हाँ ☐ नहीं	यदि नहीं, तो D1 पर जाएं
C14	यदि 'हाँ', तो कृपया uterotonic के नामों का उल्लेख करें		

असेसर के लिए महत्वपूर्ण सूचना

* बुनियादी आपातकालीन प्रसूति और नवजात देखभाल (बीईएमओएनसी) प्रदाता एक लेवल 2 का सार्वजनिक या निजी स्वास्थ्य सुविधा या अस्पताल है जो आपातकालीन प्रसूति कार्यों को करने में सक्षम है: (1) प्रसव के तीसरे चरण में ऑक्सीटोसिन का पैरेन्टेरल उपयोग; (2) ऐंठन-रोधी की लोडिंग खुराक का पैरेन्टेरल उपयोग;(3) एंटीबायोटिक दवाओं की प्रारंभिक खुराक का पैरेन्टेरल उपयोग;(4) निकटस्थ ब्रीच में सहायक प्रसव की सुविधा; (5) अनुरक्षित अपरा उत्पादों को हटाना; और (6) बरकरार प्लेसेंटा को मैन्युअल रूप से हटाना। (7) बुनियादी नवजात पुनर्जीवन करता है (जैसे बैग और मास्क के साथ)

स्वास्थ्य सुविधा का CEmONC स्तर के अस्पताल लेवल 3 के सार्वजनिक या निजी स्वास्थ्य सुविधा या अस्पताल है जो सी-सेक्शन सुविधाएं और रक्त आदान प्रदान करने के अलावा सभी BEmONC सेवाएं प्रदान करने में सक्षम है।

सभी का जानकारी के लिए और इस परियोजना के लिए दिए गए समय के लिए धन्यवाद व्यक्त करें। कृपया सूचित करें, किसी और पूछताछ के मामले में, उस व्यक्ति से या तो ईमेल के माध्यम से संपर्क किया जाएगा या उपरोक्त विवरण पर कॉल किया जाएगा।

II Participant Information Sheet - Facility Readiness

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Kindly read this information sheet carefully. You are free to clarify any queries regarding the mentioned study. You are requested to participate in this study being carried out by the investigator (Dr. Anil Nagendra).

Aim of Study: The purpose of Situation Analysis is to understand the current practices of service providers for PPH prevention particularly AMTSL, availability, storage and supply chain management of uterotonics etc. and knowledge of mothers at various levels of public health facilities.

Method of Study: If you agree to take part in this study, you will be interviewed using an interview schedule. Questions will be asked and your responses shall be documented.

Expected Benefits from This Study: An understanding shall be developed on knowledge and practices of providers, delivery loads, incidence of PPH, risk factors for PPH, supply chain management including availability of cold chain and perceptions of mothers on quality of care.

Risks Associated with the Study: There is no risk associated with this study.

Right to Withdraw from the Study: Your participation in this study is voluntary. You have right to refuse to participate, discontinue participation, or skip any questions you don't wish to answer at any time without penalty or loss of the benefits to which you are otherwise entitled. You will not be asked any reason for your withdrawal & you won't be forced to continue your participation.

Issue of Confidentiality: If you agree to participate in this study, the information obtained will be kept confidential. At the time of publication of this study, no personal identifying information will be disclosed. Consent form will not be attached with the questionnaire.

Clarification of Queries: Questions about this research study can be directed to me, the primary investigator Dr. Anil Nagendra (phone number 8989123104).

This interview would take 15- 20 minutes

II Informed Consent Form-Facility Readiness

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Protocol/Study Number :

Participant identification Number :

Name of Principle Investigator : Dr Anil Nagendra

Contact No. of Principle Investigator : 08989123104

The content of the information sheet dated..... (Version)..... that was provided have been read carefully by me /explained to me, in a language that I comprehend, and I have fully understood the content. I conform that I have had the opportunity to ask questions regarding this study.

The nature and purpose of the study and risks related to the study and its potential risks/benefits and expected duration of the study, and other relevant details of the study have been explained to me in detail. I understood that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal right being affected.

I understand that the information collected about me from my participation in this study may be looked at by responsible authority and my identity will be kept confidential. I give permission for these individuals to have access to my records.

I agree to take part in the above study

..... Date.....

(Signature/left thumb impression) Place.....

Name of the participant.....

Address of participant.....

This is to certify that above consent has been obtained in my presence.

.....

Signature of the principle investigator/ team lead

1) Witness-I	2) witness-II
.....	.....
Signature	Signature
NAME	NAME
ADDRESS	ADDRESS

॥ प्रतिभागी सूचना पत्रक: अस्पताल की तयारी सम्बंधित मूल्यांकन में शामिल कर्मियों के पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

कृपया इस सूचना पत्र को ध्यान से पढ़ें। आप उल्लिखित अध्ययन के संबंध में किसी भी प्रश्न को स्पष्टता से समझने के लिए स्वतंत्र हैं। आपसे अनुरोध है कि अन्वेषक (डॉ. अनिल नागेंद्र) द्वारा किए जा रहे इस अध्ययन में भाग लें।

अध्ययन का उद्देश्य: इस स्थिति विश्लेषण का उद्देश्य पीपीएच रोकथाम के लिए सेवा प्रदाताओं की वर्तमान प्रथाओं को समझना है, विशेष रूप से एएमटीएसएल, उपलब्धता, भंडारण और आपूर्ति श्रृंखला प्रबंधन, यूटरोटोनिक्स आदि और सार्वजनिक स्वास्थ्य सुविधाओं के विभिन्न स्तरों पर माताओं के ज्ञान को समझना।

अध्ययन का तरीका: यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं, तो एक साक्षात्कार अनुसूची का उपयोग करके आपका साक्षात्कार लिया जाएगा, प्रश्न पूछे जाएंगे और आपकी प्रतिक्रियाओं का दस्तावेजीकरण किया जाएगा।

इस अध्ययन से अपेक्षित लाभ: प्रदाताओं के ज्ञान और प्रैक्टिस, डिलीवरी लोड, पीपीएच की घटनाओं, पीपीएच के लिए जोखिम कारक, कोल्ड चेन की उपलब्धता सहित आपूर्ति श्रृंखला प्रबंधन और देखभाल की गुणवत्ता पर माताओं की धारणाओं पर एक समझ विकसित की जाएगी।

अध्ययन से जुड़े जोखिम: इस अध्ययन से जुड़ा कोई जोखिम नहीं है।

अध्ययन से हटने का अधिकार: इस अध्ययन में आपकी भागीदारी स्वैच्छिक है। आपको भाग लेने से इंकार करने, भागीदारी बंद करने, या किसी भी ऐसे प्रश्न को छोड़ने का अधिकार है जिसका आप किसी भी समय उत्तर नहीं देना चाहते हैं, बिना दंड या उन लाभों के नुकसान के जिसके आप अन्यथा हकदार हैं। आपसे आपकी वापसी का कोई कारण नहीं पूछा जाएगा और आपको अपनी भागीदारी जारी रखने के लिए बाध्य नहीं किया जाएगा।

गोपनीयता का मुद्दा: यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं, तो प्राप्त जानकारी को गोपनीय रखा जाएगा। इस अध्ययन के प्रकाशन के समय, किसी भी व्यक्तिगत पहचान संबंधी जानकारी का खुलासा नहीं किया जाएगा। प्रश्नावली के साथ सहमति प्रपत्र संलग्न नहीं किया जाएगा।

प्रश्नों का स्पष्टीकरण: इस शोध अध्ययन के बारे में प्रश्न मुझे (डॉ अनिल नागेंद्र, प्राथमिक अन्वेषक - फोन नंबर 8989123104) से निर्देशित किया जा सकता है।

II सूचित सहमति प्रपत्र

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

प्रोटोकॉल/अध्ययन संख्या:

प्रतिभागी पहचान संख्या:

प्रमुख अन्वेषक का नाम: डॉ अनिल नागेंद्र

मुख्य अन्वेषक का संपर्क नंबर: 08989123104

प्रदान की गई सूचना पत्र की सामग्री दिनांक ..... (संस्करण) ..... मेरे द्वारा ध्यान से पढ़ा गया/मुझे ऐसी भाषा में समझाया गया हैं जिसे मैं समझता/समझती हूं, और मैंने सामग्री को पूरी तरह से समझ लिया है। मैं पुष्टि करता/करती हूं कि मुझे इस अध्ययन के संबंध में प्रश्न पूछने का अवसर मिला है।

अध्ययन की प्रकृति और उद्देश्य और अध्ययन से संबंधित जोखिम और इसके संभावित जोखिम/लाभ और अध्ययन की अपेक्षित अवधि, और अध्ययन के अन्य प्रासंगिक विवरणों के बारे में मुझे विस्तार से बताया गया है। मैं समझ गया था कि मेरी भागीदारी स्वैच्छिक है और मैं अपने कानूनी अधिकार को प्रभावित किए बिना, बिना कोई कारण बताए किसी भी समय वापस लेने के लिए स्वतंत्र हूं।

मैं समझता हूं कि इस अध्ययन में मेरी भागीदारी से मेरे बारे में एकत्र की गई जानकारी को जिम्मेदार प्राधिकारी द्वारा देखा जा सकता है और मेरी पहचान को गोपनीय रखा जाएगा। मैं इन व्यक्तियों को अपने रिकॉर्ड तक पहुंच की अनुमति देता हूं।

मैं उपरोक्त अध्ययन में भाग लेने के लिए सहमत हूं

…… दिनांक.....

(हस्ताक्षर/बाएं अंगूठे का निशान) स्थान.....

प्रतिभागी का नाम.....

प्रतिभागी का पता.....

……

……

यह प्रमाणित किया जाता है कि उपरोक्त सहमति मेरी उपस्थिति में प्राप्त की गई है।

.....

मुख्य अन्वेषक/टीम लीड के हस्ताक्षर

1) गवाह-I	2) गवाह-II
.....	.....
हस्ताक्षर	हस्ताक्षर
नाम	नाम
पता	पता

II Situation Analysis Tool

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Name of Assessor:	_____	Date of Assessment:	_____
State:	_____	District:	_____
Facility Name:	_____	Facility Type (BEmONC / CEmONC):	_____

Facility Readiness

Sr. No.	Question	Response	Skip Pattern
D1	Protocol for preventing PPH – AMTSL poster is available in health facility? (observe)	☐ Yes ☐ No	If 'No', skip to D3
D2	Observe the places where the AMTSL poster is displayed in your facility? (observe)	☐ In Emergency receiving area ☐ In Labour Room ☐ Patient waiting Area ☐ Nursing Area ☐ Any other place……..	
D3	Where record of the administration of preventive doses of uterotonic is maintained? (Multiple Response) (interview & record review)	☐ Case Sheet ☐ Register ☐ Other Specify ….	
D4	Is the time of administration is recorded? (e.g. within 1 min etc.) (record review)	☐ Yes ☐ No	

Sr. No.	Question	Response	Skip Pattern
D5	Whether PPH tray is available at LR? (interview)	☐ Yes ☐ No	
D6	In case of requirement of emergency referral, how much time it generally takes to reach nearby referral (BEmONC/ CEmONC) facility? (interview)	☐ Up to 30 minutes ☐ 31 minutes to 60 minutes ☐ More than 60 minutes	
D7	Have you undergone any training on LR practices inc. PPH prevention and management? (Multiple Response) (interview)	☐ SBA ☐ DAKSHATA ☐ Other Specify …..	

Key Information for Assessor

* Basic Emergency Obstetrics and Newborn Care (BEmONC) Provider is a Level 2 Public or Private health facility or Hospital capable of performing emergency obstetric functions: (1) parenteral administration of oxytocin in the third stage of labor; (2) parenteral administration of loading dose of anti-convulsant; (3) parenteral administration of initial dose of antibiotics; (4) performance of assisted deliveries in imminent breech; (5) removal of retained placental products ; and (6) manual removal of retained placenta. (7) Performs basic neonatal resuscitation (e.g. with bag and mask)

The CEmONC level of healthcare facility is Level 3 Public or Private healthcare facility or hospital capable of providing all BEmONC services in addition to providing C-section facilities and blood transfusion.

Convey thanks for all the information and for time given towards this project. Please inform, in case of any further query, the person will be contacted either through email or call on above details.

II स्थिति विश्लेषण प्रश्नोत्तरी

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

असेसर का नाम: _____ मूल्यांकन की तिथि: _____

राज्य: _____ जिला: _____

अस्पताल का नाम: _____ सुविधा प्रकार (BEmONC / CEmONC): _____

Facility Readiness

क्रमांक	**प्रश्न**	**उत्तर**	**स्किप पैटर्न**
D1	पीपीएच को रोकने के लिए प्रोटोकॉल - एएमटीएसएल पोस्टर स्वास्थ्य सुविधा में उपलब्ध है? (देखें)	☐ हाँ ☐ नहीं	अगर 'नहीं', तो D3 पर जाएं
D2	उन स्थानों का निरीक्षण करें जहां अस्पताल में एएमटीएसएल पोस्टर प्रदर्शित होता है? (देखें)	☐ आपातकालीन प्राप्त क्षेत्र में ☐ लेबर रूम में ☐ रोगी प्रतीक्षा क्षेत्र ☐ नर्सिंग क्षेत्र ☐ कोई अन्य स्थान……	
D3	यूटेरोटोनिक की निवारक खुराक दिए जाने का रिकॉर्ड कहाँ रखा जाता है? (एकाधिक प्रतिक्रिया) (साक्षात्कार और रिकॉर्ड समीक्षा)	☐ केस शीट ☐ रजिस्टर ☐ अन्य निर्दिष्ट करें….	

क्रमांक	प्रश्न	उत्तर	स्किप पैटर्न
D4	क्या खुराक दिए जाने का समय रिकॉर्ड किया जाता है? (जैसे 1 मिनट के भीतर आदि) (रिकॉर्ड की समीक्षा करें)	☐ हाँ ☐ नहीं	
D5	क्या पीपीएच ट्रे डिलीवरी कक्ष में उपलब्ध है? (पूंछे)	☐ हाँ ☐ नहीं	
D6	आपातकालीन रेफरल की आवश्यकता के मामले में, आम तौर पर नजदीकी रेफरल (BEmONC/CEmONC) सुविधा तक पहुंचने में कितना समय लगता है? (पूंछे)	☐ 30 मिनट तक ☐ 31 मिनट से 60 मिनट ☐ 60 मिनट से अधिक	
D7	क्या आपने पीपीएच रोकथाम और प्रबंधन के सहित लेबर रूम प्रैक्टिस पर कोई प्रशिक्षण प्राप्त किया है? ? (एकाधिक प्रतिक्रिया) (पूंछे)	☐ एसबीए ☐ दक्षता ☐ अन्य निर्दिष्ट करें….	

असेसर के लिए महत्वपूर्ण सूचना

* बुनियादी आपातकालीन प्रसूति और नवजात देखभाल (बीईएमओएनसी) प्रदाता एक लेवल 2 का सार्वजनिक या निजी स्वास्थ्य सुविधा या अस्पताल है जो आपातकालीन प्रसूति कार्यों को करने में सक्षम है: (1) प्रसव के तीसरे चरण में ऑक्सीटोसिन का पैरेन्टेरल उपयोग; (2) ऐंठन-रोधी की लोडिंग खुराक का पैरेन्टेरल उपयोग;(3) एंटीबायोटिक दवाओं की प्रारंभिक खुराक का पैरेन्टेरल उपयोग;(4) निकटस्थ ब्रीच में सहायक प्रसव की सुविधा; (5) अनुरक्षित अपरा उत्पादों को हटाना; और (6) बरकरार प्लेसेंटा को मैन्युअल रूप से हटाना। (7) बुनियादी नवजात पुनर्जीवन करता है (जैसे बैग और मास्क के साथ)

स्वास्थ्य सुविधा का CEmONC स्तर के अस्पताल लेवल 3 के सार्वजनिक या निजी स्वास्थ्य सुविधा या अस्पताल है जो सी-सेक्शन सुविधाएं और रक्त आदान प्रदान करने के अलावा सभी BEmONC सेवाएं प्रदान करने में सक्षम है।सभी का जानकारी के लिए और इस परियोजना के लिए दिए गए समय के लिए धन्यवाद व्यक्त करें। कृपया सूचित करें, किसी और पूछताछ के मामले में, उस व्यक्ति से या तो ईमेल के माध्यम से संपर्क किया जाएगा या उपरोक्त विवरण पर कॉल किया जाएगा।

III Participant Information Sheet –Mothers

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Kindly read this information sheet carefully. You are free to clarify any queries regarding the mentioned study. You are requested to participate in this study being carried out by the investigator (Dr. Anil Nagendra).

Aim of Study: The purpose of Situation Analysis is to understand the current practices of service providers for PPH prevention particularly AMTSL, availability, storage and supply chain management of uterotonics etc. and knowledge of mothers at various levels of public health facilities

Method of Study: If you agree to take part in this study, you will be interviewed using an interview schedule. Questions will be asked and your responses shall be documented.

Expected Benefits from This Study: Perceptions of mothers on quality of care shall be understood. Apart from this an understanding shall be developed on knowledge and practices of providers, delivery loads, incidence of PPH, risk factors for PPH, supply chain management including availability of cold chain.

Risks Associated with the Study: There is no risk associated with this study.

Right to Withdraw from the Study: Your participation in this study is voluntary. You have right to refuse to participate, discontinue participation, or skip any questions you don't wish to answer at any time without penalty or loss of the benefits to which you are otherwise entitled. You will not be asked any reason for your withdrawal & you won't be forced to continue your participation.

Issue of Confidentiality: If you agree to participate in this study, the information obtained will be kept confidential. At the time of publication of this study, no personal identifying information will be disclosed. Consent form will not be attached with the questionnaire.

Clarification of Queries: Questions about this research study can be directed to me, the primary investigator Dr. Anil Nagendra (phone number 8989123104).

This interview would take 15- 20 minutes

III Informed Consent Form

Assessment of Active Management of Third Stage of Labor (AMTSL) for PPH Prevention Practices

Protocol/Study Number :

Participant identification Number :

Name of Principle Investigator : Dr Anil Nagendra

Contact No. of Principle Investigator : 08989123104

The content of the information sheet dated..... (Version)..... that was provided have been read carefully by me /explained to me, in a language that I comprehend, and I have fully understood the content. I conform that I have had the opportunity to ask questions regarding this study.

The nature and purpose of the study and risks related to the study and its potential risks/benefits and expected duration of the study, and other relevant details of the study have been explained to me in detail. I understood that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal right being affected.

I understand that the information collected about me from my participation in this study may be looked at by responsible authority and my identity will be kept confidential. I give permission for these individuals to have access to my records.

I agree to take part in the above study

..... Date.....

(Signature/left thumb impression) Place.....

Name of the participant.....

Address of participant.....

.....

.....

This is to certify that above consent has been obtained in my presence.

.....

Signature of the principle investigator/ team lead

1) Witness-I 2) witness-II

....

Signature Signature

NAME NAME

ADDRESS ADDRESS

III प्रतिभागी सूचना पत्रक: माता की सहमति प्रपत्र

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

कृपया इस सूचना पत्र को ध्यान से पढ़ें। आप उल्लिखित अध्ययन के संबंध में किसी भी प्रश्न को स्पष्टता से समझने के लिए स्वतंत्र हैं। आपसे अनुरोध है कि अन्वेषक (डॉ. अनिल नागेंद्र) द्वारा किए जा रहे इस अध्ययन में भाग लें।

अध्ययन का उद्देश्य: इस स्थिति विश्लेषण का उद्देश्य पीपीएच रोकथाम के लिए सेवा प्रदाताओं की वर्तमान प्रथाओं को समझना है, विशेष रूप से एएमटीएसएल, उपलब्धता, भंडारण और आपूर्ति श्रृंखला प्रबंधन, यूटरोटोनिक्स आदि और सार्वजनिक स्वास्थ्य सुविधाओं के विभिन्न स्तरों पर माताओं के ज्ञान को समझना।

अध्ययन का तरीका: यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं, तो एक साक्षात्कार अनुसूची का उपयोग करके आपका साक्षात्कार लिया जाएगा, प्रश्न पूछे जाएंगे और आपकी प्रतिक्रियाओं का दस्तावेजीकरण किया जाएगा।

इस अध्ययन से अपेक्षित लाभ: देखभाल की गुणवत्ता पर माताओं की धारणा को समझा जाएगा। इसके अलावा प्रदाताओं के ज्ञान और प्रैक्टिस, डिलीवरी लोड, पीपीएच की घटनाओं, पीपीएच के लिए जोखिम कारक, कोल्ड चेन की उपलब्धता सहित आपूर्ति श्रृंखला प्रबंधन पर एक समझ विकसित की जाएगी।

अध्ययन से जुड़े जोखिम: इस अध्ययन से जुड़ा कोई जोखिम नहीं है।

अध्ययन से हटने का अधिकार: इस अध्ययन में आपकी भागीदारी स्वैच्छिक है। आपको भाग लेने से इंकार करने, भागीदारी बंद करने, या किसी भी ऐसे प्रश्न को छोड़ने का अधिकार है जिसका आप किसी भी समय उत्तर नहीं देना चाहते हैं, बिना दंड या उन लाभों के नुकसान के जिसके आप अन्यथा हकदार हैं। आपसे आपकी वापसी का कोई कारण नहीं पूछा जाएगा और आपको अपनी भागीदारी जारी रखने के लिए बाध्य नहीं किया जाएगा।

गोपनीयता का मुद्दा: यदि आप इस अध्ययन में भाग लेने के लिए सहमत हैं, तो प्राप्त जानकारी को गोपनीय रखा जाएगा। इस अध्ययन के प्रकाशन के समय, किसी भी व्यक्तिगत पहचान संबंधी जानकारी का खुलासा नहीं किया जाएगा। प्रश्नावली के साथ सहमति प्रपत्र संलग्न नहीं किया जाएगा।

प्रश्नों का स्पष्टीकरण: इस शोध अध्ययन के बारे में प्रश्न मुझे (डॉ अनिल नागेंद्र, प्राथमिक अन्वेषक - फोन नंबर 8989123104) से निर्देशित किया जा सकता है।

III सूचित सहमति प्रपत्र

पीपीएच रोकथाम के लिए महत्वपूर्ण प्रसव की तृतीय अवस्था का सक्रीय प्रबंधन (एएमटीएसएल) का आकलन

प्रोटोकॉल/अध्ययन संख्या:

प्रतिभागी पहचान संख्या:

प्रमुख अन्वेषक का नाम: डॉ अनिल नागेंद्र

मुख्य अन्वेषक का संपर्क नंबर: 08989123104

प्रदान की गई सूचना पत्र की सामग्री दिनांक ..... (संस्करण) ..... मेरे द्वारा ध्यान से पढ़ा गया/मुझे ऐसी भाषा में समझाया गया हैं जिसे मैं समझता/समझती हूं, और मैंने सामग्री को पूरी तरह से समझ लिया है। मैं पुष्टि करता/करती हूं कि मुझे इस अध्ययन के संबंध में प्रश्न पूछने का अवसर मिला है।

अध्ययन की प्रकृति और उद्देश्य और अध्ययन से संबंधित जोखिम और इसके संभावित जोखिम/लाभ और अध्ययन की अपेक्षित अवधि, और अध्ययन के अन्य प्रासंगिक विवरणों के बारे में मुझे विस्तार से बताया गया है। मैं समझ गया था कि मेरी भागीदारी स्वैच्छिक है और मैं अपने कानूनी अधिकार को प्रभावित किए बिना, बिना कोई कारण बताए किसी भी समय वापस लेने के लिए स्वतंत्र हूं।

मैं समझता हूं कि इस अध्ययन में मेरी भागीदारी से मेरे बारे में एकत्र की गई जानकारी को जिम्मेदार प्राधिकारी द्वारा देखा जा सकता है और मेरी पहचान को गोपनीय रखा जाएगा। मैं इन व्यक्तियों को अपने रिकॉर्ड तक पहुंच की अनुमति देता हूं।

मैं उपरोक्त अध्ययन में भाग लेने के लिए सहमत हूं

…… दिनांक.....

(हस्ताक्षर/बाएं अंगूठे का निशान) स्थान.....

प्रतिभागी का नाम.....

प्रतिभागी का पता.....

……

……

यह प्रमाणित किया जाता है कि उपरोक्त सहमति मेरी उपस्थिति में प्राप्त की गई है।

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मुख्य अन्वेषक/टीम लीड के हस्ताक्षर

1) गवाह-I	2) गवाह-II
.....	.....
हस्ताक्षर	हस्ताक्षर
नाम	नाम
पता	पता

III Assessment Tool: Questionnaire for Mothers

Assessment of perceptions of women for care provided around childbirth

Name of Assessor: _____ Date of Assessment: _____

State: _____ District: _____

Facility Name: _____

Name of mother……. Unique ID……..

Age……..

Education…….

Questions	Response	Skip pattern
1. Have you delivered in this facility?	☐ Yes ☐ No	If No, stop interview
2. Was it a normal or caesarian delivery?	☐ Normal ☐ Caesarian delivery	
3. Whether you have been informed/ consent taken about the procedures/ practices (ie administration of drugs, induction/ augmentation of labor)	☐ Yes ☐ No ☐ Do not remember	
4. Did you receive any drug(s) (uterotonics) for induction of labor?	☐ Yes ☐ No ☐ Do not remember	If No, skip to 6

5. If yes, were you informed about the drug(s) (uterotonic)?	☐ Yes ☐ No ☐ Do not remember	
6. Do you know about drug(s) that can induce/ augment labor? (*in other words:* do you know about drugs that can increase labor pain?)	☐ Yes ☐ No	If No, skip to 8
7. If yes, did you request for administration of such drug(s)	☐ Yes ☐ No ☐ Do not remember	
8. Are you aware that there is danger of excess bleeding after delivery?	☐ Yes ☐ No	If No, skip to 10
9. If yes, are you aware, there are drug(s) that can prevent and treat such bleeding?	☐ Yes ☐ No	
10. Were you given uterine massage after delivery of baby?	☐ Yes ☐ No ☐ Do not remember	
11. Were you encouraged to start early breastfeeding (within an hour of childbirth)?	☐ Yes ☐ No ☐ Do not remember	
12. When did you start breastfeeding your newborn?	☐ Within an hour of birth ☐ After an hour of birth ☐ Not started yet	

* The cohort will be recently delivered mothers in PNC ward

III माताओं के लिए प्रश्नावली

प्रसव के आसपास प्रदान की जाने वाली देखभाल के लिए महिलाओं की धारणाओं का आकलन

असेसर का नाम: _____ मूल्यांकन की तिथि: _____

राज्य: _____ जिला: _____

अस्पताल का नाम: _____

माता का नाम_____ यूनिक ID_____

आयु _____

शिक्षा_____

प्रश्न	**उत्तर**	**स्किप पैटर्न**
1. क्या आपने इस अस्पताल में डिलीवरी कराइ है?	☐ हाँ ☐ नहीं	यदि नहीं, तो साक्षात्कार बंद करें
2. क्या यह नॉर्मल डिलीवरी थी या सिजेरियन डिलीवरी?	☐ नॉर्मल ☐ सिजेरियन डिलीवरी	
3. क्या आपको प्रक्रियाओं के बारे में सूचित किया गया है/सहमति ली गई है? (अर्थात दवाओं का उपयोग, प्रसव पीड़ा को शुरू करना/बढ़ाना)	☐ हाँ ☐ नहीं ☐ याद नहीं	
4. क्या आपको प्रसव पीड़ा शुरू करने के लिए कोई दवा (यूटरोटोनिक्स) मिली है?	☐ हाँ ☐ नहीं	यदि नहीं, तो 6 . पर जाएं

	☐ याद नहीं	
5. यदि हां, तो क्या आपको दवा (ओं) (यूटेरोटोनिक) के बारे में सूचित किया गया था?	☐ हाँ ☐ नहीं ☐ याद नहीं	
6. क्या आप उन दवाओं के बारे में जानते हैं जो प्रसव को प्रेरित/बढ़ाने में सक्षम हैं? (दूसरे शब्दों में: क्या आप उन दवाओं के बारे में जानते हैं जो प्रसव पीड़ा को बढ़ा सकती हैं?)	☐ हाँ ☐ नहीं	यदि नहीं, तो 8 . पर जाएं
7. यदि हां, तो क्या आपने ऐसी दवाओं के उपयोग करने हेतु के लिए अनुरोध किया था)	☐ हाँ ☐ नहीं ☐ याद नहीं	
8. क्या आप जानती हैं कि डिलीवरी के बाद ज्यादा ब्लीडिंग होने का खतरा होता है?	☐ हाँ ☐ नहीं	यदि नहीं, तो 10. पर जाएं
9. यदि हां, तो क्या आप जानते हैं कि ऐसी दवाएं उपलब्ध हैं जो इस तरह के रक्तस्राव को रोक सकती हैं और उसका इलाज कर सकती हैं?	☐ हाँ ☐ नहीं	
10. क्या आपको बच्चे के जन्म के बाद गर्भाशय की मालिश की थी?	☐ हाँ ☐ नहीं ☐ याद नहीं	

11. क्या आपको (बच्चे के जन्म के एक घंटे के भीतर) जल्दी स्तनपान शुरू करने के लिए प्रोत्साहित किया गया था?	☐ हाँ ☐ नहीं ☐ याद नहीं	
12. आपने अपने नवजात शिशु को स्तनपान कब शुरू किया?	☐ जन्म के एक घंटे के भीतर ☐ जन्म के एक घंटे बाद ☐ अभी शुरू नहीं हुआ	

* हाल ही में प्रसव के बाद पीएनसी वार्ड में माता को कोहॉर्ट में शामिल करे