Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia

Second Year Annual Report

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LIST OF ACRONYMS

AMU	Aligarh Muslim University
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AYUSH	Ayurvedic Yoga Unani Sidha and Homeopathic
BMGF	Bill & Melinda Gates Foundation
CCSP	Comprehensive Child Survival Program
CHC	Community Health Centre
CM&PH, KGMU	Community Medicine and Public Health department, King George Medical University
CS	Child Survival
DWH	District Women's Hospital
ECEB	Essential Care for Every Baby
ENCNR	Essential Newborn Care and Neonatal Resuscitation Skills
ENCR	Essential Newborn Care and Resuscitation
GOI	Government of India
GoUP	Government of Uttar Pradesh
HBB	Helping Baby Breathe
HF	Health Facility
IAP	Indian Academy of Pediatrics
IMNCI	Integrated Management of Newborn and Childhood Illnesses
IRB	Internal Review Board (for ethical clearance)
JNMC	Jawaharlal Nehru Medical College
KMC	Kangaroo Mother Care
KPC	Knowledge, Practices, and Coverage (survey)
LHV	Lady Health Visitor
MCHIP	Mother and Child Health Integrated Project
MO	Medical Officer
NHM	National Health Mission
NM	Nurse Mentor
NSSK	*Navjaat Shishu Suraksha Karyakram*

NNF	National Neonatalogy Forum
NR	Neonatal Resuscitation
OR	Operations Research
OSCE	Objectively Structures Clinical Examination
PHC	Primary Health Centre
PI	Principal Investigator
PNDA	Perinatal Death Audit
RMNCHA+	Reproductive Maternal Newborn Child and Adolescent Health
SBA	Skilled Birth Attendant
SBR	Stillbirth Rate
SC	Save the Children
SR	Simplified Resuscitator
SW	Strategic Workplan
TOT	Training of Trainers
TSU	Technical Support Unit
UP	Uttar Pradesh
USAID	United States Agency for International Development
VA	Verbal Autopsy

I. Introduction, Key Progress, and Main Accomplishments

1. Background

Infant Mortality in India continues to be high at 40; in Uttar Pradesh (UP), it is 50[1]. India, and especially UP, are far from realizing the Millennium Development Goal. An estimated 70% of these infant deaths occur in the neonatal period. In order to address the challenge of maternal and child mortality, the Government of India (GOI) launched its RMNCH+A Approach in February 2013. Besides identifying key technical interventions and laying them down as a 5x5 Matrix, the GOI also identified High Priority Districts across all states and specified which development partner would be working in a specific state. A number of guidelines for technical interventions were also launched over the year[2].

The challenge of neonatal mortality is recognized at both the political and administrative levels in the GOI: The "State of India's Newborns" report and the "India Newborn Action Plan" were launched in September, 2014. The National Neonatology Forum (NNF) and the Indian Academy of Paediatrics (IAP), which advise the government on training skilled birth attendants (SBAs) on neonatal care, have trained more than 20,000 trainers and providers from the governmental health department in NSSK (government programme to train SBAs on NR skills). They have also trained around 66,000 private sector health professional in Basic and Advanced Newborn Care and Resuscitation: recently conducted a stakeholder meeting for "Helping 100,000 Babies Survive and Thrive", and in conjunction with the GOI, have begun to update the GOI's *Navjaat Shishu Suraksha Karyakram* (NSSK). They have also helped to create the National Urban Health Mission, designed to strengthen the Urban RMNCH+A Programme[3].

For the UP project team, these developments led to increased deliberations with the Government of UP and other stakeholders, notably the Bill and Melinda Gates Foundation (BMGF), which is the development partner for the RMNCH+A Programme in UP. Intense discussions were held around the training modules, the establishment of skills labs, and the need to work along with the development partner. These useful developments are reflected in this report.

2. Situational Analysis

Our project partner, INCLEN, conducted a Situational Analysis (see Annex 5). Key findings include:

- All facilities need infrastructure strengthening for the provision of delivery and newborn care, signal functions, adequate availability of essential drugs and equipment, availability of guidelines, and infection control measures.
- Most staff had limited knowledge of newborn care and a skill gap existed as none was able to demonstrate steps correctly and in sequence.
- 70% of project deliveries are institutional; and 73% were attended by a SBA.
- Breastfeeding initiated first hour <50% newborns; colostrum given in 74% of newborns.
- Stillbirth rate was 7%; majority of deliveries occurred at the hospital attended by an SBA.
- Newborn bathing delayed for 24 hours postpartum (70% of cases); fewer than half of the mothers initiated breastfeeding within an hour.

[1] SRS Bulletin (2013); Registrar General of India, New Delhi

[2] Of relevance to our Project are the Guidelines on Home Based Neonatal Care, Use of Gentamycin, Use of Antenatal Corticosteroids, Use of Vitamin K, Application of Kangaroo Mother Care, and Establishment of Skill Labs for Maternal and Neonatal Care

[3] Ref document….

Table 1: Summary of Major Year Two Project Accomplishments

Project Inputs	Activities	Outputs	Outcomes
• **Training package on ENCR Strengthened** • **Capacity building of SBAs on ENCR**	• NSSK Training suitably modified: -3 Day Module with emphasis on practical and demonstrations -Training Aids developed post review of NSSK, ECEB and HBB Modules; vetted and finalized by a National Committee. • All SBAs in project areas trained.	• Set of 8 Job Aids developed and displayed at delivery points • Pool of 12 MOs and 4 paramedics trained as district level master trainers • 143 / 150 SBAs trained • All batches supervised by IAP/NNF experts	Increased confidence levels of SBAs
• **Establishment of Skill Labs**	• Purchase of equipment • Schedule for Practice Sessions • Supportive Supervision Schedule	• 8 Skill Labs established as per GOI Guidelines • 35 SBAsreceived refresher training	Work in progress
• **Nested Operation Research on 'Simplified Resuscitator'**	• OR protocols developed by Save the Children India, AMU, PATH after receipt of final bench testing of Simplified Resuscitator report in April, 2013 • Draft protocols reviewed by National Experts viz. Dr. Vinod Paul, Dr. Siddhartha Ramji, Dr. Harish Chelani, Dr. Gautam Gambhir, Dr. Arvind Sailli-May, 2014	• OR Protocols for Simplified resuscitator finalized for initial testing on computerized mannequin with two groups-frequent user and infrequent user group working in peripheral health centers • PI nominated -Manjari from PATH, Rinku from Save the Children, India, Prof Syed Manazir Ali from JNMC	Draft protocols for Simplified Resuscitator developed and finalized

II. Discussion of Implementation Activities and Results

The GOI initiated a two-day SBA training in neonatal resuscitation under NSSK in 2008; a group of 25 ANMs/SNs were trained at the district level by two district trainers. The training included 1-2 NeoNatalie, presentations, videos and the presentation of a NSSK manual focused on reading and case studies. The training program was a one-time activity and there was no provision of further follow up, refresher training or supportive supervision. There has been no significant change in knowledge and skills in NSS- trained and non-trained SBAs, reflected in Figure 1 below.

Project activities began in September, 2013 and a great deal of work was conducted in preparation and development for the training package, roll out of training, establishment of skill labs and initiating perinatal death audit activities. These activities included:

- **Training Aids:** Review of available training material on Essential Newborn Care (ENC) and Neonatal resuscitation done. After reviewing HBB,ECEB, NSSK & SBA manuals, a set of 8 jobs aids developed which was vetted by committee of experts including State government officials, Medical College Faculties and other stakeholders - TSU & UNICEF. The material field tested at HFs and finalized and approved by state GoUP to use as training material as well as job aids (please see Annex 6).
- **Training of trainers on ENCNR:** A pool of trainers by JNMC, AMU, Aligarh and State NSSK trainers participated in a three-day TOT course. This refresher training focused on skill stations, a visit to clinical settings, orientation with training aids and training skills. A total of 12 doctors and four paramedics from two project districts were trained.
- **Capacity building of SBAs in ENCNR**:
  GoUP named ENCNR training as a 'NSSK refresher' and approved its implementation in May 2014, job aids approved in June. Training began in July 2014 and included topics

beginning with birth preparations, through care at time of discharge from the health facility (HF), to additional postpartum care. Training aids used to build SBA capacity include: video clips developed by NNF, job aids, assessment checklists for MCHIP ENC skill station trainings, and OSCE checklists for HBB and ECEB skill assessment.

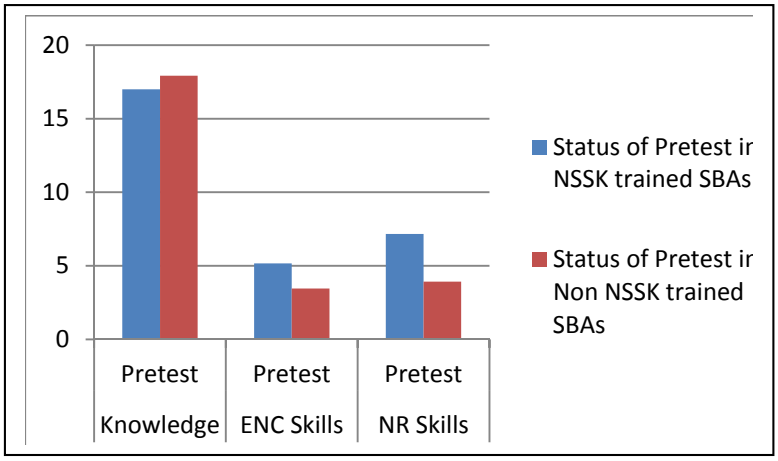

Figure 1: SBA skill and knowledge change.

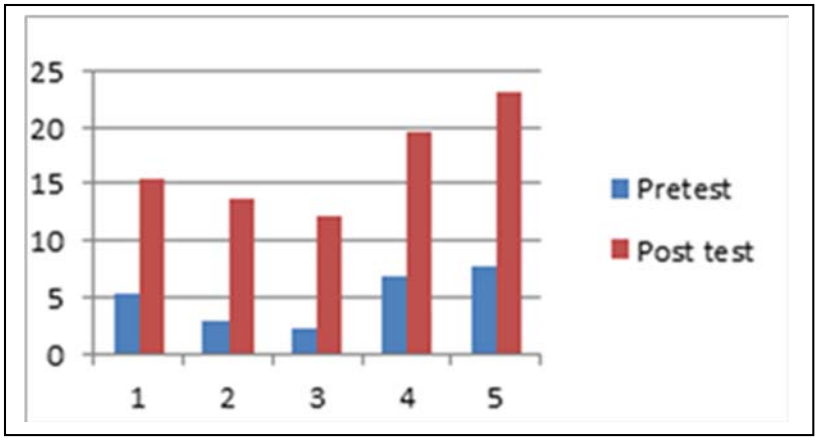

Figure 2: Neonatal resuscitation skill gain in SBAs in NSSK refresher training.

Additionally, visits were conducted to the District Women's Hospital (DWH) which included labor and delivery room observations, visits to the Newborn Stabilization Unit for a session on radiant warmers, KMC, and breast feeding. The trainer-to-trainee ratio was kept at 1:6 in order to ensure an emphasis on individual practice at the skill stations, based on job aids which emphasized the importance of time - the 'Golden Minute'. Some key findings include:

- Knowledge gained ranged from 5-35%, while the improvement in ENC skills was 31-60% and 55-86% in neonatal resuscitation skills;
- None of the participants knew how to disassemble the Bag and Mask in order to clean it despite being trained during one of the newborn care training areas (NSSK, CSSP, IMNCI, SBA, ENCR (MCHIP));
- Participants requested more time for practice with neonatal resusitation on NeoNatalie. Many used their lunch break to continue practicing and peer-to-peer learning occurred when

one highly competant SBA assisted another SBA with skill development; and each participant liked the job aids and requested copies for display at their work site.

Establishment of Skill Labs: To provide an opportunity to SBAs for more hands on practice at their block level site, skill labs were established in coordination with district health authorities. These sites were evaluated and then qualified and strengthened as 'ENCNR Demo sites' in collaboration of NHM. The names of skill lab were changed as ENCNR Demo sites. These sites were established at HFs and close to the labor and delivery rooms. They were equipped with basic furniture, NeoNatalie, Bag & Mask, and required training aids. They were also with a Radiant Warmer which is powered by inverter in order to avoid interruption of services due to irregular electrical supply in peripheral HFs. A total of eight sites were established in project districts. These sites are being attached to blocks nearby so that SBAs working in peripheral HFs will able to visit skill labs on a regular basis to practice ENCNR skills. Practice sessions were initiated in three skill labs and are monitored by the labor room In-charge, the facility In-charge and district trainers. Practice sessions have been organized and are expected to be conducted in 'low dose high frequency' model; participants will receive orientation and skills building in small groups and regular practice will be frequent. The main lead will be taken by the facility labor room and facility In-charge in organizing and conducting practice sessions supported by the project team. A total of three practice sessions were conducted in three ENCNR demonstration sites, and a total of 35 SBAs were trained in NSSK refresher training.

Facility Assessment for Functional Newborn Corners: One of the prerequisites for transferring learned skills into practice, is the presence of necessary equipment, instruments and consumable items required for newborn care and resuscitation at the work site. In order to determine the status of functional newborn care corners, as assessment of 252 HFs were conducted through a checklist developed based on GOI guidelines for functional newborn corners. The main findings were:

- **Manpower**: There is a major scarcity of human resources.
- **Training status:** Most of the facilities have at least one service provider trained in at least one of the training areas including: SBA, NSSK, IMNCI, and CCSP.
- **Equipment/Instruments for ENCNR**: Few block level HFs have Radiant Warmers, many of which were not installed. Bag & Masks were not available. There was an inadequate supply of disposable supplies required for ENC at every birth.
- **Medicine:** Emergency drugs were present, however there was acute shortage of Vitamin K, and service providers were not clear about its dose and application.
- **ENCNR Referral Contact Information:** SBA contact information was available at almost all of the block-level facilities; however this information was not available at PHCs and sub-centers. Details for requesting ambulance services were available in 30-40% of facilities (PHCs and sub-centers), respectively.
- **Records**: The recommended registers were not available in any of the facility and there was no uniformity in records. In short, none of the facilities qualified for Functional Newborn Care Corner status. Further, peripheral health centers were lacking basic equipment and medicine.

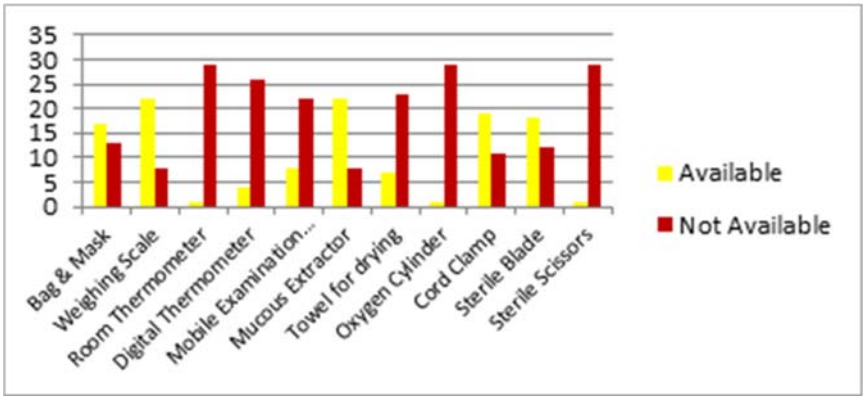

Figure 3: Status of availability of basic equipment/instrument/consumables for basic newborn services in peripheral HFs-sub-centers.

Progress in Perinatal Death Audit: Perinatal Death Audit (PDA) activities initiated from one block of Gonda District, in collaboration with the Department of Community Health and Public Health, King George Medical College. District and facility staff were oriented and a total of 22 ANMs and 108 ASHAs received training on the importance of PNDA, neonatal death data collection and reporting within 7 days of birth. The CS-28 team also trained them how to perform a verbal autopsy (VA). VA of facility level death initiated; a total of 10 VAs were conducted. This activity is ongoing and will expand to other blocks in coordination with GoUP.

Postpartum follow-up of newborns: In almost all of the facilities, with the exception of the district hospital, mothers are being discharged 2-6 hours after birth. Postpartum follow up of neonates who were preterm, low birth weight or had asphyxia, were contacted at their door steps to check on their wellbeing. Around >650 neonates received this follow-up by the CS-28 team at the community level. Although there is no functional system for postpartum follow up by frontline health workers, in some cases ASHA and even the facility In-charge accompanied the CS-28 team member for these visits. Newborns with danger signs were referred to HFs and some of the facilities reported increased postpartum check-up visits. Fortunately no neonatal deaths were reported in these cases.

Engagement with policymakers: Policymakers were engaged and involved in a regular manner at the state level while other stakeholders were engaged at the national level.

- **State:** In the state of UP, the health department was kept informed about project progress on an ongoing basis through development partner meetings, small meetings with Officers from the NHM and the directorate, and an exchange of progress and plans with stakeholders, including the government. Project progress was shared with BMGF, which leads TSU in UP and work was initiated in collaboration with the Gonda District; an area in common for TSU and CS-28.
- **Stakeholders**: IAP, Lucknow was engaged and appraised about the project and is providing support of district-level trainings. The NNF at the national level agreed to provide support and collaboration has begun.
- **National :**
  - GOI: Officers of the GOI Health Department have been appraised about the project.

- USAID/India: The Save the Children-India Team has been in regular touch with the USAID Mission in India. A brief report was shared with USAID,-India team by Rinku Srivastava and later through presentation by Ishaprasad Bhagwat. Steve Wall and Diana Myers met with USAID during their visit and shared the progress. Project details were also shared with Ms. Lily Kak, USAID/US by Ishaprasad Bhagwat.
- Rinku Srivastava participated in Neocon held in 2013 and participated in "Helping 100,000 Babies Survive and Thrive", appraised stakeholders about CS-28 progress, and contributed to discussions.

The above led to strategic thinking and the GoUP appreciated the job aids and is planning to scale-up distribution statewide. They would also like to expand the program to more districts and discussions have been initiated for this possibility through PIP. A great deal of appreciation has been expressed at the NNF (who advise the GOI on newborn), for the job aids and three-day training package.

Challenges faced during implementation:

- Project was designed before RMNCHA+ was launched in India and took considerable time to convince the government to include it in state level plan.
- NSSK training was considered a success by GoUP and GOI although they have accepted the need to modify the package; during project initiation, lots of resistance was faced. In Gonda District, MCHIP has conducted ENCNR training and the GOI was unsure about the need for activities proposed in the project.
- PDAs are still a new phenomenon in health services; they are perceived as fault finding and it has taken a lot of time to convince health authorities to initiate and take up this activity.

Implementation Lessons Learned:

Expansion required in adjoining district: One of the lessons learned during this year of program implementation was the need to adjust the project site. In Gonda District, the TSU funded by BMGF, has begun activities and is working in 7 of the 16 rural blocks. Two of the sites established as CS-28 ENC& NR demonstration sites fall within the TSU program area. TSU has developed a pool of Nurse Mentors (NMs) for the RMNCHA+ component of their program. These NMs have initiated visits to block HFs on a routine basis and are providing onsite training and supervision. These NMs are carrying all of the required equipment and training aids with them and they are also going to develop skill labs for the RMNCHA+ component. Since project implementation began in Gonda District, three skill labs were establish in a rural health center and one was establish at the DWH with two overlapped at the block level; therefore one skill lab has been designated for delivering project data. Thus, CS-28 can use data from only one skill lab as the other data will be contaminated by activities supported by the BMGF TSU.

In Aligarh District, data from two skill labs located in periurban sites will fulfill the project requirement. Considering the project mandate, additional skill labs in adjoining districts where there is no contamination of data need to be establish. Therefore, it is propose to expand project activities to the neighboring Raibareili District as it is a non-HPD district and there is increase in NMR from last year. The main population is rural and has 15 blocks with around 250 HFs. The plan is to develop four skill labs in rural blocks and train 150 service providers in ENCNR training. The rest of the activities will be carried out as in the previous two districts.

In order to complete all of the proposed project activities, a no cost extension of six months is proposed, with expansion in one more district. Details of activities and budget is attached (Annex 7).

Table 2: Summary of Key Analysis and Use of Findings

Expected Results	Actual Results	Analysis (what worked, what didn't, and why)	Stakeholders Engaged in Analysis	Lessons Learned and Recommendations	Use of Findings (for course corrections, policy, etc.)
IR-1 Capacity building of 150 service providers in ENCNR	Trained 143 SBAs	**Worked:** Simple job aids, hands on practice at skill stations may have helped build SBA confidence for ENCNR. Presence of experts ensured quality. It is too early to make conclusions about what has worked.	Liasoning and active participation of state and district health authorities facilitated trainee participation.	Getting permission for starting activities delayed project activities for > 7 months in Year 2. Make sure to seek permission earlier in the process. Priority was given to SBAs from accredited delivery points. Supportive supervision needs to be provided at the SBAs worksites. Training of AYUSH doctors as trainers proved to very important why? Provide capacity building of trainers in order to enlarge the pool of trainers.	Regular interactions with govt. sometimes fails and don't always give desirable results. Project staff provided post- training follow up onsite. The pool of trainers expanded beyond doctors Refresher TOT planned. Plan to officially hand over the skill lab to NHM Orientation on methodology for skill lab facility, labor room In-charge and district authority, to conduct peer learning sessions, role for proper implementation on skill lab. Expansion in other district to fulfill project objective and avoid contamination of data. Two studies proposed to assess skill retention and cost effectiveness
IR-2 Improve SBA mentoring on ENCNR for providing quality NR through on-site skill labs in 15 HFs in project area.	Established 8 skills labs	**Worked:** 3 practice sessions were organized end of September 2014 in 3 skill labs. It is too early to fully analyze as all 8 sites were inaugurated in September2014.	NHM engagement facilitated the selection of an appropriate site.	Role of skill lab, facility In-charge and guidelines for making it functional need to be circulated by NHM for skill lab ownership Overlap of similar newborn care practice/skill activities by other project in two skill labs at Gonda.	.

Perinatal death audit	Initiated in one block only.	**Worked:** Collaboration with CM&PH, KGMU, helped in initiating activity in the short term.. Project staff trained in VA. District, facility, ANMs, ASHA oriented for importance of missed opportunity in intrapartum and newborn care. Too early to comment conclusively.	NHM was very reluctant and took major time for giving permission for PNDA Facility based PNDA challenge because of lack of information	Extensive support of project staff required for VA. Review of VA tool required. Data of early newborn death <7 days is a challenge. As women after discharged from HF after 2-6 hours do not come for checkup and there is no system of postpartum follow up. So any death happening with 7 days of birth is not reported	Sensitization of facility staff for maintaining proper records, analyzing the cause of death at facility Strengthening of VA tool Capacity building of pool of experts for interpretation of VA findings Development of software for analysis of facility based PNDA activities and progress monitoring .
IR-3 Strengthened stakeholder	Project activities were shared on a regular basis at the district, state, and national levels.	**Worked:** Regular sharing, involvement in training, and monitoring by state NHM officials helped all of the stakeholders to better understand project activities. Progress made and plans were shared with stakeholders through an e-newsletter. The NNF agreed to support CS-28 as an external consultant; the consultancy agreement is in process	NHM officials visited both project areas and reviewed the project activities.	There is a need for regular structured review meetings and workshops to ensure the dissemination of findings.	Sharing of findings at national level- Neocon/IPAS etc. Regular sharing with national stakeholders, GOI through workshop/meeting Dissemination of information at district/state/national Promotional visits are to the project area and within states to enhance dissemination of learning and continue advancing buy-in has been proposed.These visits will be conducted in year three and provision of three such visits were made

Table 3: OR Study Progress and Achievements in Year Two: Oct. 2013 – Sept 2014

Intermediate Result 1 (IR 1): Increased ***availability*** of Skilled Birth Attendants (SBAs) *trained and equipped* to provide neonatal resuscitation.

Input	Activities (Processes)	Output	Outcomes (sub IR)	Impact (IR)
Strengthened curriculum Trainers Training equipment	Improve the learning methods and tools of NSSK training package for SBAs.	Pedagogy and Training Aids for NSSK improved in consensus with Key Stakeholders in UP Situational Analysis of PHCs / UHCs in the Project Area completed and engagement with Government is in progress to ensure all necessary equipment are in place	Pedagogy and Training Aids are accepted by the GoUP for replication across the State	Monitoring of births at the Government Hospital has commenced; over the reporting period, 34625 births reported and 80 deaths due to neonatal asphyxia

Trainers Mentors Supportive supervision schedule	Strengthen capacity of SBAs to perform effective neonatal resuscitation integrated with ENC	16 master trainers trained 143 SBAs trained 10 Govt. Hospitals in project have ENCR job aids developed by project	Updated knowledge of 137 SBAs on ENCR Skills	
Nested Operations Research				
IRB Approval for SR testing Supply of SR and mannequins Protocols for training and testing Supply training kits User satisfaction survey formats	Protocol finalisation IRB Approval Approval from the GoUP for the deputation of staff for the OR Purchase of Kits needed for the Research	Study Protocols have been finalised IRB Approval sought GoUP will soon be formally approached for deputation of staff Kits purchased for research	Research will commence by in late first quarter of year 3	NA
Intermediate Result 2 (IR 2): Improved ***quality*** of neonatal resuscitation at the health centres				
Input	**Activities (Processes)**	**Output**	**Outcomes (sub IR)**	**Impact (IR)**
Standards developed for Skill Labs ' Practice drills Peer learning techniques Identify sites for Skill Labs	Develop Guidelines for Skill Labs Purchase of Equipment Establish Training Schedules Work with GoUP to identify sites	8 Skill Labs set up with standard practice drills and peer learning techniques as per GOI Guidelines 35 SBAs are undergoing refresher training in the Skill Labs	Skill retention will be studied at three months interval through a low dose high frequency training plan	Work in progress
VA formats Project staff trained in the application of VA Data entry software developed Organize strategic advocacy meetings	Finalisation of VA Formats Training of Project Staff on VA Development of Data Entry Software	VA Formats developed in consensus with key stakeholders 5 Staff Trained on use of VA formats 10 VAs conducted	Work in progress	Work in progress
Intermediate Result 3 (IR 3): Strengthened ***stakeholder and policy environment*** for *sustained* availability and quality of intrapartum and early newborn care (including neonatal resuscitation) at health centres in UP.				
Input	**Activities (Processes)**	**Output**	**Outcomes (sub IR)**	**Impact (IR)**
Strategic advocacy documents developed by the Project Team Participation in the RMNCH+A Coalition Meetings	Engage Maternal Newborn and Child Health and Nutrition Coalition at Ministry of Health and Family Welfare (MOHFW) to establish a national steering committee to oversee policy and resource allocations for ENC and neonatal resuscitation	Project brief developed Training Aids and Job Aids developed 2 Meetings with GOI to update them on project progress	Work in progress	Work in progress
Strategic advocacy documents developed by the Project Team Meetings with Stakeholders	Facilitate UP program platforms to adopt and scale up the neonatal resuscitation package by involving the GoUP, local institutions (e.g., state medical colleges), professional bodies (e.g., state medical societies), and other implementation partners (e.g., UNICEF) in all stages of the project.	Meetings organized with BMGF, KGMC and IAP Partnership Agreement with NNF at the National Level	Work in progress	Work in progress

Strategic advocacy documents developed by the Project Team Meetings with Stakeholders	Engage with key urban health stakeholders to adopt, implement and ensure use of ENC and neonatal resuscitation best practices.	Work in progress	Work in progress	Work in progress

III. Operations Research Progress

The final benchmark testing report for the Simplified Resuscitator (SR), was received in April, 2014. The performance results indicate that NeoNatalie and URs are both capable of delivering the minimum required tidal volumes to newborns; however, the Simplified Resuscitator provided a significant reduction in the percentage of inadequate ventilations (< 12.5 ml) compared to the NeoNatalie. Use of the SR may be clinically relevant in addressing inadequate ventilations. The performance and acceptability of the Simplified Resuscitator among this user population (all 38 participants were new to the Simplified Resuscitator) suggest that the device may be suitable for infrequent users in low-resource settings. The Simplified Resuscitator should be tested in such a setting. The subjective acceptability and disassembly/assembly tests are supportive of the new design. One issue noted was that clear view of the infant's chest is obstructed by the Upright design, and users may need to shift their head to a side view to observe the chest. The usefulness of chest rise as a subjective measure of device performance should be explored further. Mask leakage seems to be less of an issue overall with the Simplified Resuscitator, although both devices demonstrated mask leakage under all test conditions. An assessment of the durability of the resuscitator and the impact this has on performance would provide valuable input upon which future design improvements could be made.

The OR protocol developed for the Simplified Resuscitator for India is a comparative evaluation of the performance and acceptability of two resuscitator designs i.e. evaluation of the Laerdal 220 ml resuscitator with mask #1 (also known as "Neonatal") and the Simplified Resuscitator. Testing will be conducted on a mannequin with a sample of up to 42 participants from the less experienced/less frequent user group and an additional 10 participants from the experienced/frequent user group. All participants will be invited to attend up to four user evaluation sessions. Ventilation will be evaluated based on tidal volume, as follows: Proportion of *adequate* ($\geq$15 ml), inadequate(<15 ml) and excessive (>45 ml) ventilations based on tidal volume. Study performance end points will be tidal volume achieved by participants and Peak Inspiratory Pressure.

The final protocols are ready and PATH is in the process of getting IRB approval. It is proposed that Phase I testing will be conducted twice on mannequins in Year Three. Phase II will be planned based on the results of Phase I.

Annexes

Annex 1: **Workplan**

Annex 2: **Updated Performance Monitoring Indicator Table**

Annex 3: **Project Data Form**

Annex 4: **Operations Research Brief**-Optional

Annex 5: **Reports and Informational Products Requested during the SW Consultation-Situational Analysis Baseline Report-Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situation Analysis**

Annex 6: **Papers, Presentations, News Coverage about Project, and Products**

Annex 6A: **Job Aids Developed**

Annex 6B: **Skill Lab Trainings**

Annex 7: **Other-Budget Notes**

Annex 1: CS-28 Workplan for Year Three

Activities			Responsible Staff/Org.	Year-3				NCE	
				Q1	Q2	Q3	Q4	Q1	Q2
1.	**Intermediate Result 1: Increased availability of Skilled Birth Attendants (SBAs) trained and equipped to provide neonatal resuscitation.**								
1.1	**Recruitment of project staff**								
	1.1.1	Complete recruitment of project staff	NM(H&N), PI						
1.2	**Finalize MOUs with key stakeholders**								
	1.2.1	Finalize MOUs with GoUP, AMU, and INCLEN	NM (H&N), PI						
1.3	**Conduct baseline survey with KPC tools**								
	1.3.1	Finalize data collection tool with INCLEN	PI, NM(H&N), KM Team						
	1.3.2	Conduct baseline assessment and submit report	INCLEN						
1.4	**Conduct SBA training**								
	1.4.1	Finalize tools for SBA training	PI, AMU						
	1.4.2	Identify and train master trainers	DCs, AMU						
	1.4.3	Conduct training in skills labs in Gonda & Aligarh	MTs						
2	**Intermediate Result 2: Improved quality of neonatal resuscitation at the PHCs / UHCs**								
2.1	**Facility assessment of PHCs/UHCs**								
	2.1.1	Finalize tools with INCLEN for facility assessment	PI						
	2.1.2	Conduct facility readiness assessment	INCLEN						
	2.1.3	Engage with government to strengthen facilities for neonatal resuscitation	PI, DCs						

Activities			Responsible Staff/Org.	Year-3				NCE	
				Q1	Q2	Q3	Q4	Q1	Q2
2.2	**Establish skills labs**								
	2.2.1	Engage with government to adequately equip the skills labs	PI, DCs						
2.3	**Conduct perinatal death audits**								
	2.3.1	Finalize tools for perinatal death audits	PI, NM(H&N)						
	2.3.2	Train facility staff to conduct perinatal death audits	PI						
	2.3.3	Conduct perinatal death audits	DCs, FCs						
	2.3.4	Feedback results into the system	DCs, FCs						
2.4		Study on newborn care	PI,NM (H&N), NM (R),DC						
2.4	**Design and implement the OR protocols**								
2.4.1	**Design of protocols**		PATH, AMU, PI						
2.4.2	**IRB approval**		AMU						
2.4.3	**Implementation of Study on Mannequin**		AMU,PI						
3	**Intermediate Result 3: Strengthened stakeholder and policy environment for sustained availability and quality of intrapartum and early newborn care (including neonatal resuscitation) at PHCs/ UHCs in UP.**								
3.1	**Engage with the government on a six monthly basis to provide project updates and scale up of quality services**								
	3.1.1	Engage with Government of India	NM(H&N), PI						

Activities			Responsible Staff/Org.	Year-3				NCE	
				Q1	Q2	Q3	Q4	Q1	Q2
	3.1.2	Engage with the government of Uttar Pradesh on a six monthly basis to provide project updates and promote scale up of quality services	NM(H&N), PI						
3.2	**Engage with other stakeholders**								
	3.2.1	Engage with the National Neonatology Forum and Indian Academy of Pediatrics to provide project updates and include project learning's in NSSK	NM(H&N), PI						
	3.2.2	Conduct stakeholder meeting at national level	NM(H&N), PI						
	3.2.3	Dissemination and sharing of project learnings at different forum-Conferences/workshops/meeting and exchange of knowledge through exposure visits on regular basis	PI						
3.3		**End line assessment**	INCLEN						
3.4		**Endterm Dissemination workshop**	NM(H&N), PI						

DC: CS-28 District Coordinator. **FC**: CS-28 Field Coordinator. **NM (H&N)**: SC/I National Manager for Health & Nutrition. **MT**: Master Trainer. **PI**: CS-28 Principal Investigator

Annex 2. Updated Performance Monitoring Indicator Table

Performance Indicator Table							
Indicator	**Definition**	**Gonda**		**Aligarh**		**Total**	**Remarks**
	Data period	**December,13- August,14**		**December,13- August,14**			
	No of facilities	16 Rural block health facilities(CHC/BPHCs) & 1 DWH		1 DWH, 1 Sub DH, 2 Periurban Health facilities where Skill labs are strengthened			
		Numerator	Denominator	Numerator	Denominator	Ratio	
Treatment Ratio*	Ratio of resuscitated cases to total estimated cases of birth asphyxia	379	4128	142	2324	8	Based on reports made available by facilities but quality of data is not reliable as in Government reporting this data is not captured.
SBA Ratio	Ratio of SBAs trained in newborn resuscitation in the target areas who are deployed appropriately to PHCs / UHC		78		71		Deployment of trained SBAs is to be done by Government. In project, we have trained SBAs as nominated by district authorities
Resuscitation Equipment(Upright Resuscitator)	Percent of PHCs / UHCs in the target area equipped with a functioning upright resuscitator	0		0		0	
Birth Asphyxia Death Ratio*	Total number of neonatal deaths due to birth asphyxia	4	21903	72	12722	80	Based on reports made available by facilities but quality of data is not reliable as in Government reporting this data is not captured.
Skill Labs	Percent of PHCs / UHCs in the target area which conducted an on-site newborn resuscitation skills lab with a NeoNathalie mannequin in the previous 6 months.	1	17	2	13	10	

Performance Indicator Table							
Indicator	**Definition**	**Gonda**		**Aligarh**		**Total**	**Remarks**
	Data period	**December,13- August,14**		**December,13- August,14**			
Perinatal Death Audit	Percent of PHCs / UHCs in the target area which conducted a perinatal death audit and implemented improvements in the previous year.	0	17	0	13	0	**
SBA Resuscitations Skills	Percent of SBAs able to apply resuscitation skills satisfactorily	66	66	71	77	96	
Facility Improvement Ratio	Numbers of PHCs / UHCs adequately equipped to provide skilled birth attendance, intrapartum and newborn care	4	17	4	13	8	***

* Data as reported from Govt Health facilities

** PNDA initiated in one block only and in this current year

*** Mentioning only Block Health facilities where Skill labs have been established.

Data source is government registers and its quality is in question because standardized register for data capturing are not available in health facilities and incomplete data captured by service providers

Annex 3: Project Data Form

Child Survival and Health Grants Program Project Summary

Oct-27-2014

Save the Children
(India)

General Project Information

Cooperative Agreement Number:	AID-OAA-A-12-00091
SC Headquarters Technical Backstop:	Eric Starbuck
SC Headquarters Technical Backstop Backup:	
Field Program Manager:	Rinku Srivastava
Midterm Evaluator:	
Final Evaluator:	
Headquarter Financial Contact:	Carmen Weder
Project Dates:	9/30/2012 - 9/29/2015 (FY2012)
Project Type:	Scale
USAID Mission Contact:	Manju Ranjan Seth
Project Web Site:	

Field Program Manager

Name:	Rinku Srivastava (CS-28 Principal Investigator)
Address:	
	Lucknow , UP India
Phone:	
Fax:	
E-mail:	r.srivastava@savethechildren.in
Skype Name:	

Alternate Field Contact

Name:	Ishaprasad Bhagwat (National Manager (Health and Nutrition))
Address:	Save the Children India 3rd Floor, Vardhaman Trade Centre, 9-10-11 Nehru Place New Delhi 110009 India
Phone:	+91-11-4229-4900
Fax:	+91-11-4229-4990
E-mail:	i.bhagwat@savethechildren.in
Skype Name:	

Grant Funding Information

USAID Funding: $1,750,000 **PVO Match:** $583,450

General Project Description

Save the Children Federation, Inc. (SC) supports USAID's FY12 Child Survival and Health Grant Program priorities. This SCALE/MNCH project, Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia ("CS-28" for short) will build evidence for new and promising solutions through operations research and an approach that collaborates effectively with the Indian government and stakeholders to lay a foundation for scale-up and sustainability. The project addresses intrapartum neonatal deaths and still births associated with low quality delivery services at health centres in Uttar Pradesh (UP); and demonstrates how important missed opportunities can be minimized.

The Challenge: An increasing proportion of deaths in children under 5 are in the neonatal period; and birth asphyxia is the cause for 19% of these deaths. India's neonatal mortality rate (NMR) is 35 per 1,000 live births, but is higher in UP - 45 per 1,000 live births - exact numbers of still births remain unknown. Interventions to prevent deaths due to birth asphyxia include prevention and management of intra-uterine hypoxia and neonatal resuscitation. The government promotes these interventions through the National Rural Health Mission (NRHM; provision of equipment), Janani Suraksha Yojana (JSY; promotion of institutional deliveries), Navjaat Shishu Suraksha Karyakram (NSSK; training of health care providers in essential newborn care and resuscitation), and Janani Shishu Suraksha Karyakram (JSSK; free medical care for sick newborns). These initiatives have rapidly increased deliveries at health centres, but critical challenges must be addressed, such as inadequate skills, equipment, and use of data to improve quality.

Save the Children's Project: Building on SC's current work through MCHIP to address birth asphyxia in health centres in UP, the project will test a sustainable and scalable package to increase access to effective newborn resuscitation. The strategy includes: (1) testing, and then using a simplified resuscitator to improve resuscitation skills retention among limited-experience providers; (2) health centre on-site peer learning, supportive supervision, and skills practice; and (3) perinatal death audits for quality improvement. The project goal is to reduce intrapartum deaths in Uttar Pradesh; and the strategic objective is to increase use of effective newborn resuscitation. The principal operations research question is: Will use of an innovative, simplified ("upright" bag-and-mask) resuscitator contribute to correct use, and ease of use; and better retention of skills for newborn resuscitation at health centers in the project site?

Over a 3 year period (October 2012 through September 2015), the project will serve a population of 3.56 million (including 455,000 children under five and 982,000 million women in the reproductive age group) in rural Gonda District and the slums of Aligarh City in UP; and will train 150 health care providers on neonatal resuscitation and skills retention. To maximize sustainability and potential for scaling up, the project will collaborate with local stakeholders including government entities at the municipal, district, state, and national level, as well as professional organizations. Key partners are the Medical College of Aligarh Muslim University, which will obtain ethical approvals, participate in and monitor OR activities, and generate evidence; the UP State National Rural Health Mission, which will facilitate scale up of the CS-28 project interventions, the International Clinical Epidemiology Network (INCLEN), an in-country research partner that will conduct baseline and final surveys; and the National Neonatology Forum. PATH will support testing of the simplified resuscitator.

Project Location

Latitude: 27.57	**Longitude:** 80.10
Project Location Types:	Peri-urban Rural
Levels of Intervention:	District Hospital Health Center
Province(s):	Uttar Pradesh
District(s):	rural Gonda District and the slums of Aligarh City
Sub-District(s):	--

Operations Research Information

OR Project Title:	Will use of an innovative, simplified ("upright" bag-and-mask) resuscitator contribute to correct use, and ease of use; and better retention of skills for newborn resuscitation at health centers in the project site?
Cost of OR Activities:	--
Research Partner(s):	Save the Children India, PATH, Medical College of Aligarh Muslim University
OR Project Description:	In India and beyond, an increasing percentage of deaths in children under five years of age are in the neonatal period. Birth asphyxia is associated with a substantial proportion of these newborn deaths. Neonatal resuscitation can substantially reduce mortality associated with birth asphyxia, but successful resuscitation requires prompt intervention by trained staff using an appropriate device. Difficulty maintaining the seal between the mask and the face of the newborn is a common challenge during resuscitation, even for well-trained birth attendants. Leakage of ventilated breaths results in ineffective ventilation. A decline in skills in the months after training is expected, especially for those who resuscitate infrequently, and the most challenging skill to retain is maintaining the mask-to-face seal. Another challenge with resuscitators in current use is their complexity, making them virtually impossible to sterilize, and difficult to clean.

We will test the effectiveness of a simplified, easy-to-use, novel "Upright Resuscitator" in health facilities in Uttar Pradesh. Preliminary testing of the Upright Resuscitator shows improved ease of use, less mask leakage, increased frequency of adequate ventilated breaths, and improved skill retention by SBAs. We will test the Upright Resuscitator against the standard device, measuring the adequacy of ventilated breaths by SBAs on a computerized mannequin, and compare skills retention in adequacy of ventilated breaths six months post-training. Assuming that testing on mannequins in UP confirms the Upright Resuscitator to be superior to the standard device, we will conduct field testing to compare provider confidence in clinical use.

We hope to demonstrate improved adequacy of ventilated breaths by SBAs on computerized mannequins using the Upright Resuscitator compared to the standard device, improved skills retention six months post-training, and improved provider confidence in clinical use of the Upright Resuscitator. We hope that involving important stakeholders in this operations research will contribute to scaling up the use of this technology, thereby contributing to improved effectiveness at scale of resuscitation for birth asphyxia.

Partners

PATH (Program for Appropirate Technology in Health) (Subgrantee)	$126,402
Save the Children India (Subgrantee)	$1,323,766
Medical College of Aligargh Muslim University (Subgrantee)	$39,263
Laerdal (Collaborating Partner)	$0
INCLEN (International Clinical Epidemiology Network) (Subgrantee)	$43,010
UP State National Rural Health Mission (Gov. of India) (Collaborating Partner)	$0
National Neonatology Forum (Collaborating Partner)	$0

Strategies

Health Services Access Strategies:	Implementation in a geographic area that the government has identified as poor and underserved
Health Systems Strengthening:	Supportive Supervision Developing/Helping to develop clinical protocols, procedures, case management guidelines Review of clinical records (for quality assessment/feedback)
Strategies for Enabling Environment:	Advocacy for revisions to national guidelines/protocols Stakeholder engagement and policy dialogue (local/state or national)
Tools/Methodologies:	Rapid Health Facility Assessment

Capacity Building

Local Partners:	Health Facility Staff

Interventions & Components

Maternal & Newborn Care (100%) - Newborn Care	HF Training

Operational Plan Indicators

Number of People Trained in Maternal/Newborn Health			
Gender	**Year**	**Target**	**Actual**
Female	2013	157	
Female	2013		0
Male	2013		0
Male	2013	0	
Female	2014		132
Male	2014		25
Female	2015	650	
Male	2015	68	
Number of People Trained in Child Health & Nutrition			
Gender	**Year**	**Target**	**Actual**
Female	2013	0	
Female	2013		0
Male	2013		0
Male	2013	0	
Female	2014		0
Male	2014		0
Female	2015	0	
Male	2015	0	
Number of People Trained in Malaria Treatment or Prevention			
Gender	**Year**	**Target**	**Actual**
Female	2013		0
Female	2013	0	
Male	2013		0
Male	2013	0	
Female	2014		0
Male	2014		0
Female	2015	0	
Male	2015	0	

Locations & Sub-Areas

Slums of Aligarh City	367,000
Rural Gonda district	3,162,000
Total Population:	3,529,000

Target Beneficiaries

	Slums of Aligarh City	Rural Gonda district	Total
Children 0-59 months	47,000	408,000	455,000
Women 15-49 years	101,000	881,000	982,000
Beneficiaries Total	148,000	1,289,000	1,437,000

Rapid Catch Indicators: DIP Submission

Sample Type: 30 Cluster

Antenatal Care

Description -- Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child

Numerator: Enter the number of mothers with children age 0-23 months who had at least four antenatal visits while pregnant with their youngest child

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City	59	150	39.3%	11.1
Rural Gonda district	89	442	20.1%	5.3

Maternal TT Vaccination

Description -- Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child

Numerator: Enter the number of mothers with children age 0-23 months who received at least two tetanus toxoid vaccinations before the birth of their youngest child

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City	106	150	70.7%	10.3
Rural Gonda district	343	442	77.6%	5.5

Skilled Birth Attendant

Description -- Percentage of children age 0-23 months whose births were attended by skilled personnel

Numerator: Enter the number of children age 0-23 months whose birth was attended by a doctor, nurse, midwife, auxiliary midwife, or other personnel with midwifery skills

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City	111	150	74.0%	9.9
Rural Gonda district	324	442	73.3%	5.8

Current Contraceptive Use Among Mothers of Young Children

Description -- Percentage of mothers of children age 0-23 months who are using a modern contraceptive method

Numerator: Enter the number of mothers with children age 0-23 months who are using a modern contraceptive method

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Post-Natal Visit to Check on Newborn Within the First 2 Days After Birth

Description -- Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth

Numerator: Enter the number of children age 0-23 months who received a post-natal visit within two days after birth by an appropriate health worker

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City	71	150	47.3%	11.3
Rural Gonda district	235	442	53.2%	6.6

Exclusive Breastfeeding

Description -- Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours

Numerator: Enter the number of children age 0-5 months who drank breast milk in the previous 24 hours AND did not drink any other liquids in the previous 24 hours AND was not given any other foods or liquids in the previous 24 hours

Denominator: Enter the total number of children age 0-5 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City	43	147	29.3%	10.4
Rural Gonda district	184	435	42.3%	6.6

Infant and Young Child Feeding

Description -- Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices

Numerator: Enter the number infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices

Denominator: Enter the total number of children age 6-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Vitamin A Supplementation in the Last 6 Months

Description -- Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall

Numerator: Enter the number of children age 6-23 months who received a dose of Vitamin A in the last 6 months (mother's recall or card verified)

Denominator: Enter the total number of children age 6-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Measles Vaccination

Description -- Percentage of children age 12-23 months who received a measles vaccination

Numerator: Enter the number of children age 12-23 months who received a measles vaccination by the time of the interview as seen on the card or recalled by the mother

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Access to Immunization Services

Description -- Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey

Numerator: Enter the number of children age 12-23 months who received a DTP1 at the time of the survey according to the vaccination card/child health booklet or mother's recall

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Health System Performance Regarding Immunization Services

Description -- Percentage of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey

Numerator: Enter the number of children age 12-23 months who received DTP3 at the time of the survey according to the vaccination card/child health booklet or mother's recall

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Treatment of Fever in Malarious Zones

Description -- Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began

Numerator: Enter the number of children age 0-23 months with a febrile episode in the last two weeks AND whose mother/caretaker sought treatment for the child within 24 hours AND who were treated with an appropriate anti-malarial drug

Denominator: Enter the total number of children age 0-23 months with a febrile episode in the last two weeks

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

ORT Use

Description -- Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids

Numerator: Enter the number of children age 0-23 months with diarrhea in the last two weeks AND who received oral rehydration solution (ORS) and/or recommended home fluids

Denominator: Enter the total number of children age 0-23 months who had diarrhea in the last two weeks

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Appropriate Care Seeking for Pneumonia

Description -- Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider

Numerator: Enter the number of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider

Denominator: Enter the total number of children with chest-related cough and fast and /or difficult breathing in the last two weeks

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Point of Use (POU)

Description -- Percentage of households of children age 0-23 months that treat water effectively

Numerator: Enter the number of households of mothers of children 0-23 months that treat water effectively

Denominator: Enter the total number of households of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Appropriate Hand Washing Practices

Description -- Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing

Numerator: Enter the number of mothers with children age 0-23 months who live in households with soap at the place for hand washing

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Child Sleeps Under an Insecticide-Treated Bednet

Description -- Percentage of children age 0-23 months who slept under an insecticide-treated bednet (in malaria risk areas, where bednet use is effective) the previous night

Numerator: Enter the number of children age 0-23 months who slept under an insecticide-treated bednet the previous night

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Underweight

Description -- Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to the WHO/NCHS reference population)

Numerator: Enter the number of children 0-23 months with weight/age -2 SD for the median weight for age, according to the WHO/NCHS reference population

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Rapid Catch Indicators: Mid-term

Sample Type:

Antenatal Care

Description -- Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child

Numerator: Enter the number of mothers with children age 0-23 months who had at least four antenatal visits while pregnant with their youngest child

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Maternal TT Vaccination

Description -- Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child

Numerator: Enter the number of mothers with children age 0-23 months who received at least two tetanus toxoid vaccinations before the birth of their youngest child

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Skilled Birth Attendant

Description -- Percentage of children age 0-23 months whose births were attended by skilled personnel

Numerator: Enter the number of children age 0-23 months whose birth was attended by a doctor, nurse, midwife, auxiliary midwife, or other personnel with midwifery skills

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Current Contraceptive Use Among Mothers of Young Children

Description -- Percentage of mothers of children age 0-23 months who are using a modern contraceptive method

Numerator: Enter the number of mothers with children age 0-23 months who are using a modern contraceptive method

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Post-Natal Visit to Check on Newborn Within the First 2 Days After Birth

Description -- Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth

Numerator: Enter the number of children age 0-23 months who received a post-natal visit within two days after birth by an appropriate health worker

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Exclusive Breastfeeding

Description -- Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours

Numerator: Enter the number of children age 0-5 months who drank breast milk in the previous 24 hours AND did not drink any other liquids in the previous 24 hours AND was not given any other foods or liquids in the previous 24 hours

Denominator: Enter the total number of children age 0-5 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Infant and Young Child Feeding

Description -- Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices

Numerator: Enter the number infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices

Denominator: Enter the total number of children age 6-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Vitamin A Supplementation in the Last 6 Months

Description -- Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall

Numerator: Enter the number of children age 6-23 months who received a dose of Vitamin A in the last 6 months (mother's recall or card verified)

Denominator: Enter the total number of children age 6-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Measles Vaccination

Description -- Percentage of children age 12-23 months who received a measles vaccination

Numerator: Enter the number of children age 12-23 months who received a measles vaccination by the time of the interview as seen on the card or recalled by the mother

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Access to Immunization Services

Description -- Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey

Numerator: Enter the number of children age 12-23 months who received a DTP1 at the time of the survey according to the vaccination card/child health booklet or mother's recall

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Health System Performance Regarding Immunization Services

Description -- Percentage of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey

Numerator: Enter the number of children age 12-23 months who received DTP3 at the time of the survey according to the vaccination card/child health booklet or mother's recall

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Treatment of Fever in Malarious Zones

Description -- Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began

Numerator: Enter the number of children age 0-23 months with a febrile episode in the last two weeks AND whose mother/caretaker sought treatment for the child within 24 hours AND who were treated with an appropriate anti-malarial drug

Denominator: Enter the total number of children age 0-23 months with a febrile episode in the last two weeks

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

ORT Use

Description -- Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids

Numerator: Enter the number of children age 0-23 months with diarrhea in the last two weeks AND who received oral rehydration solution (ORS) and/or recommended home fluids

Denominator: Enter the total number of children age 0-23 months who had diarrhea in the last two weeks

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Appropriate Care Seeking for Pneumonia

Description -- Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider

Numerator: Enter the number of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider

Denominator: Enter the total number of children with chest-related cough and fast and /or difficult breathing in the last two weeks

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Point of Use (POU)

Description -- Percentage of households of children age 0-23 months that treat water effectively

Numerator: Enter the number of households of mothers of children 0-23 months that treat water effectively

Denominator: Enter the total number of households of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Appropriate Hand Washing Practices

Description -- Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing

Numerator: Enter the number of mothers with children age 0-23 months who live in households with soap at the place for hand washing

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
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Child Sleeps Under an Insecticide-Treated Bednet

Description -- Percentage of children age 0-23 months who slept under an insecticide-treated bednet (in malaria risk areas, where bednet use is effective) the previous night

Numerator: Enter the number of children age 0-23 months who slept under an insecticide-treated bednet the previous night

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Underweight

Description -- Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to the WHO/NCHS reference population)

Numerator: Enter the number of children 0-23 months with weight/age -2 SD for the median weight for age, according to the WHO/NCHS reference population

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Rapid Catch Indicators: Final Evaluation

Sample Type:

Antenatal Care

Description -- Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child

Numerator: Enter the number of mothers with children age 0-23 months who had at least four antenatal visits while pregnant with their youngest child

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Maternal TT Vaccination

Description -- Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child

Numerator: Enter the number of mothers with children age 0-23 months who received at least two tetanus toxoid vaccinations before the birth of their youngest child

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Skilled Birth Attendant

Description -- Percentage of children age 0-23 months whose births were attended by skilled personnel

Numerator: Enter the number of children age 0-23 months whose birth was attended by a doctor, nurse, midwife, auxiliary midwife, or other personnel with midwifery skills

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Current Contraceptive Use Among Mothers of Young Children

Description -- Percentage of mothers of children age 0-23 months who are using a modern contraceptive method

Numerator: Enter the number of mothers with children age 0-23 months who are using a modern contraceptive method

Denominator: Enter the total number of mothers of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Post-Natal Visit to Check on Newborn Within the First 2 Days After Birth

Description -- Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth

Numerator: Enter the number of children age 0-23 months who received a post-natal visit within two days after birth by an appropriate health worker

Denominator: Enter the total number of children age 0-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Exclusive Breastfeeding

Description -- Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours

Numerator: Enter the number of children age 0-5 months who drank breast milk in the previous 24 hours AND did not drink any other liquids in the previous 24 hours AND was not given any other foods or liquids in the previous 24 hours

Denominator: Enter the total number of children age 0-5 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Infant and Young Child Feeding

Description -- Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices

Numerator: Enter the number infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices

Denominator: Enter the total number of children age 6-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Vitamin A Supplementation in the Last 6 Months

Description -- Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall

Numerator: Enter the number of children age 6-23 months who received a dose of Vitamin A in the last 6 months (mother's recall or card verified)

Denominator: Enter the total number of children age 6-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Measles Vaccination

Description -- Percentage of children age 12-23 months who received a measles vaccination

Numerator: Enter the number of children age 12-23 months who received a measles vaccination by the time of the interview as seen on the card or recalled by the mother

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Access to Immunization Services

Description -- Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey

Numerator: Enter the number of children age 12-23 months who received a DTP1 at the time of the survey according to the vaccination card/child health booklet or mother's recall

Denominator: Enter the total number of children age 12-23 months in the survey

Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
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Sub Area Name	Numerator	Denominator	Percent(calculate)	Confidence Limits
Slums of Aligarh City			%	
Rural Gonda district			%	

Rapid Catch Indicator Comments

Because the project is focused on newborns, the survey was conducted among mothers of infants born in the previous 6 months. The denominators above are for live births, except for the exclusive breastfeeding indicator, which includes only infants alive at the time of the survey.

Annex 4: Operations Research Brief

Optional-Not applicable.

Annex: 5

CS-28 USAID
Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis

SBA taking care of newborn in NICU.
Photo Credit: INCLEN

Display of job aids in Skill Lab.
Photo credit: INCLEN

First newborn resuscitated on Radiant Warmer provided under CS -28.
Photo credit: Save the Children

Facility Readiness for Emergency Obstetric and Newborn Care | **Knowledge and Skill of Care Providers** | **Coverage of Interventions for Mothers and Newborns** | 2014

Newborn and Maternal Health Care at Facilities in Gonda and Aligarh Districts of Uttar Pradesh

THE INCLEN TRUST INTERNATIONAL

CS-28 USAID
Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis

Report

Prepared by

The INCLEN Trust International
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For

Save the Children-Bal Raksha Bharat

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- District Health Officials, District Gonda and Aligarh;
- All the staff posted at selected health facilities in Aligarh and Gonda;
- All stakeholders who agreed to share their perceptions and views about maternal and newborn care;
- All the heads (Gram Pradhans/Sarpanchs/Ward Members) of selected clusters (villages/wards) for extending their help;
- All the mothers and their families for sparing their valuable time to answer the questions asked by the community assessment team;
- Department of Community Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi; and
- Department of Community Medicine, Jawahar Lal Nehru Medical College, Aligarh Muslim University, Aligarh

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Acronyms

AD syringes	Auto Disable syringes
AMU	Aligarh Muslim University
AMTSL	Active Management of Third Stage of Labor
ANC	Antenatal Care
ANMs	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
AYUSH	Ayurvedic Yoga Unani Sidha and Homeopathic
BCG	Bacillus Calmette Guerin
BF	Breastfeeding
BHU	Banaras Hindu University
BPL	Below Poverty Line
BP	Blood Pressure
CCT	Central Coordinating Team
CHC	Community Health Centre
CMO	Chief Medical Officer
CS	Cesarean Section
DH	District Hospital
DPM	Divisional Project Manager
EAG	Empowered Action Group
ENC	Essential Newborn Care
FRU	First Referral Unit
GOI	Government of India
HIV	Human Immunodeficiency Virus
HMSC	Health Ministry Screening Committee
ICMR	Indian Council for Medical Research
ID	Identification
IDIs	In-depth interviews
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
IMS	Institute of Medical Sciences
Inj	Injections
IPHS	Indian Public Health Standard
IV	Intravenous
JLNMC	Jawaharlal Nehru Medical College
JSY	Janani Suraksha Yojana
KMC	Kangaroo Mother Care
KPC	Knowledge, Practice and Coverage
LBW	Low Birth Weight
LHV	Lady Health Visitor
NMR	Neonatal Mortality Rate
NB	Newborn

NRHM	National Rural Health Mission
NSSK	Navjaat Shishu Suraksha Karyakram
OBC	Other Backward Class
OPV	Oral Polio Vaccine
OT	Operation Theatre
PHC	Primary Health Centre
PMTCT	Prevention of Mother to Child Transmission
PNC	Postnatal Care
PPH	Postpartum Hemorrhage
PPS	Population Proportionate to Services
PPV	Positive Pressure Ventilation
PROM	Premature Rupture of Membranes
RCH	Reproductive and Child Health
SBA	Skilled Birth Attendant
SC	Sub-centre
SDH	Sub-district Hospital
SN	Staff Nurse
ST	Schedule Tribe
TT	Tetanus Toxoid
UP	Uttar Pradesh
USAID	United States Agency for International Development

Table of Contents

CS-28 USAID
Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis

Executive Summary

Newborn survival continues to be a challenge in India. With an annual estimate of 779,000 newborn deaths, India leads the world for global burden of newborn deaths. It is also estimated that a quarter of global stillbirths occur in India, and the rates are higher in rural areas than in urban areas. Newborn deaths contribute to 55% of all under-five deaths in India. Almost 50% of newborn deaths occur in the first day after birth and 19% are due to birth asphyxia. The Government of India's Janani Suraksha Yojana (JSY) - a demand side intervention to promote safe deliveries, has led to a multifold rise in institutional deliveries, but the impact on neonatal survival is yet to be documented.

The project "*Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia* ("CS-28"), under USAID's FY12 Child Survival and Health Grant Program, is implementing the interventions to improve quality of care and thereby improve newborn survival through the training of health care providers on neonatal resuscitation and skills retention in Gonda (rural) and Aligarh (urban) Districts of Uttar Pradesh. This work fits into a broad portfolio of the CS-28 project led by Save the Children, with Aligarh Muslim University as implementation research partner and INCLEN as the evaluation partner. The current study conducted a situational analysis to document the facility readiness of the public health facilities in Gonda District, and selected facilities in Aligarh, for delivering maternal and newborn services and community level maternal and newborn indicators. The current report represents a descriptive analysis of observations and interactions with the care providers and officials at the health facilities, knowledge and skill assessment of the care providers (doctors, nurses and ANMs) and women who delivered in last 6 months. Facility and community data collection teams from IMS, BHU, Varanasi and JLNMC, AMU in Aligarh, were trained before data collection began and the data collected was checked by double-data entry and matching, and analyzed using STATA 12 and INCLEN Qualitative Data Analysis Software.

Facility assessment was undertaken at 30 public health facilities including two district hospitals, one sub-district hospital, 17 community health centres (CHCs), five primary health centres (PHCs) and five sub-centres in the two districts, to measure their ability to provide maternal and newborn care services. Knowledge assessment was conducted among 27 doctors and 29 nurses/ANMs, while a skill assessment was performed on 19 doctors and 27 nurses/ANMs. Additionally, we conducted 62 IDIs at the facility, district and state levels (26 doctors, 28 nurses/ANMs, two CMOs, two additional CMOs/RCH Officers, two DPMs and two General Managers at the state level). Household level data was collected from 642 women from 40 clusters (30 clusters in Gonda and 10 clusters in Aligarh), who delivered in the last 6 months. These women were interviewed and evaluated for their understanding of the knowledge,

practices and care related to pregnancy and newborn care.

It was found that only district and sub-district hospitals were prepared to provide adequate delivery and newborn care services. All the facilities, including district and sub-district hospitals, need strengthening for the provision of delivery and newborn care especially with respect to infrastructure, provision of signal functions, adequate availability of essential drugs and supplies, availability of guidelines, and infection control measures put in place. Almost all the facilities had a shortage of manpower compared to the facilities visited in the project site. Although all the facilities had at least one doctor on staff, the doctors' involvement was minimal during labor and delivery, and newborn care. Most of the doctors and nurses/ANMs had inadequate knowledge about all of the components of essential newborn care (ENC) and care of a non-breathing newborn. A little more than half of the doctors and nurses/ANMs, were able to demonstrate some of the critical steps necessary during skills assessment. Not one doctor or nurse/ANM was able to demonstrate all of the appropriate steps in order. A was significant knowledge-skill gap was observed, among both doctors and nurses.

The demonstration sites (skill labs) recently opened at the District Women's Hospital while CHC/FRUs in Gonda were not yet fully functional. The medical officers and nurse/ANMs in-charge of the facilities, had not yet transferred the knowledge and skills learned from the skill lab/demonstration site.

About half of the women who participated in the study were illiterate. The majority of the households had a mobile phone, while the TV was found in less than half of the households. More than three quarters of the women had at least one ANC contact, while 29% had four or more ANC contacts. While 64% of the ANCs were received from the government health sector, only 9% was received from private providers. Seventy-six percent (76%) of women received tetanus toxoid protection, only 21% received iron prophylaxis for 90 days. Although the number of ANC contacts was encouraging, the quality was poor, as most of the ANCs missed the essential components (weight, height, blood pressure, blood test, urine test, abdominal examination, breast examination and informed about their expected due date).

It was observed that 70% of deliveries occurred at an institution (health centre, hospital) and that overall, 73% of deliveries were attended by a skilled birth attendant (SBA). About one-third of women reported use of uterotonics at delivery. Among the home deliveries, clean practices were adopted in about three-fourth of cases except for the use of gloves by the birth attendant. More than half of the women who delivered at home did not feel the need to deliver at a facility. Bathing was delayed for more than 24 hours in 70% of newborns.

About half of the mother-baby dyads received postnatal care (PNC); this rate was similar for deliveries at hospitals or homes. The majority of the mother-baby pairs received PNC in first two days; however the quality of service during PNC contact was low as only 15% of mother-baby combination received all of the essential PNC components.

Less than half of the newborns were put to their mother's bare chest soon after delivery and breastfeeding was initiated within one hour of birth. Colostrum was given to 74% of newborns. Although 46% of infants were exclusively breastfed, only 38% infants were only breastfeed within the last 24 hours of the survey. Neonatal deaths were reported in 7% of households, whereas any neonatal illness was reported in 21% of households. Among newborns will illnesses, about 90% were taken to a care provider.

Among the 7% households where stillbirths occurred, the majority of the deliveries happened at the hospital and were attended by an SBA. The ANC and delivery indicators of the women who had stillbirths were not much different from those who had live births.

The study provided a snapshot of the level of facility readiness, service provision at these facilities, and the knowledge and skill set of the care providers along with the community level key antenatal, intrapartum and postpartum indicators in the two districts. Based on these findings, the areas of focus and strengthening will be addressed during program implementation.

CS-28 USAID
Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis

Detailed Report

1. Introduction and background

1.1. ***Infant Mortality in India and Uttar Pradesh:*** Newborn survival continues to be a challenge in India. Of the 25 million children born each year, almost 779,000 die within the first month of birth.[1] This represents nearly 30% of the global burden of newborn deaths;[2] it is estimated that a quarter of global stillbirths occur in India,[3] and the rates are higher in rural areas than in urban areas. Newborn deaths contribute to 55% of all under-five deaths In India.[4] Almost 50% of newborn deaths occur in the first day after birth and 75% by Day 7.[5] India must accelerate its efforts to reduce neonatal deaths to reduce the infant mortality and under-five mortality. Four EAG states (Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa) account for more than 50% of infant deaths in India;[6] and the targeted geographical areas suffer disproportionately compared to the rest of India. Within each of these states, there is also a wide variation in IMR and NMR between the districts. India continues to make progress in reducing infant mortality. During 1980-2008, the IMR in India declined from 114 to 50 and NMR declined 69 to 35; the under-five mortality rate (U5MR) declined from 193 to 80.[7] In UP, the IMR fell from 89 to 67 between 1998 and 2008, while NMR declined from 55 to 45.[8] In 2010, India fell short of its ambitious goals to achieve an Infant Mortality Rate (IMR) of less than 30 deaths per 1000 live births and a NMR of less than 20 per 1000 by 2010.[9] However, the 2011 IMR for India was 44 and that for Uttar Pradesh was 57 per 1000 live births.[10]Unfortunately, there is lack of reliable data on stillbirths.

1.2. ***Asphyxia as a cause of infant mortality in India and UP:*** According to WHO, an estimated 19% of newborn deaths in India are due to birth asphyxia.[11] A similar figure (18%) was found by the Million Death Study conducted by the Registrar General of India.[12] Other leading causes of death include preterm birth and infections. Community-based studies on causes of newborn deaths in India are few, with one conducted in rural Uttar Pradesh.[13] In rural Maharashtra, 20% of newborn deaths were a result of birth asphyxia.[14]

1.3. ***Recent efforts by India:*** The Government of India's Janani Suraksha Yojana (JSY)-a demand side intervention to promote safe deliveries-has led to a multifold rise in institutional deliveries, and a shift of more than 70% deliveries from district hospitals to PHCs.[18] A decrease in NMR has been documented due to JSY.[19] However, the impact of the quality of obstetric and newborn care in health facilities on NMR is being questioned. The increase in institutional deliveries has not been matched by enhanced skills of birth attendants or adequate equipment; creating missed opportunities to resuscitate non-breathing newborns. Institutional delivery increases have also increased the possibility of waning quality of care under duress of increased demand.

Under the National Rural Health Mission, GOI has augmented availability of neonatal resuscitation and ENC by SBAs. The SBA effort has been accelerated by the Navjaat Shishu Suraksha Karyakram (NSSK) to couple the promotion of institutional deliveries with the provision of skilled birth attendance for reducing birth asphyxia and newborn infections. The NRHM efforts are expected to be further consolidated and advanced under the National Health Mission (NHM).

2. Context of this study

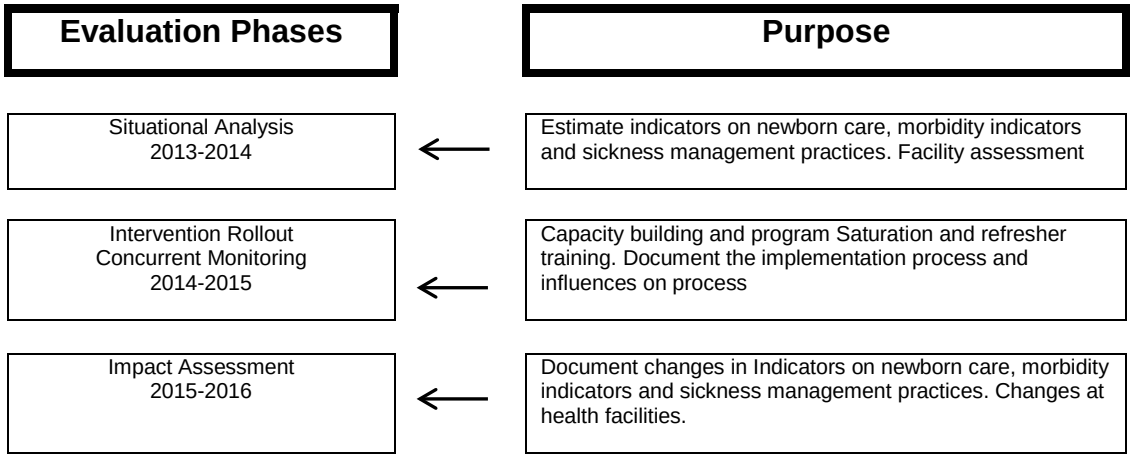
2.1. The overall package of the project

Save the children has been awarded a project titled "*Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia* ("CS-28)" under USAID's FY12 Child Survival and Health Grant Program priorities. The project addresses intra- partum neonatal deaths and stillbirths associated with low-quality delivery services at health centres in Uttar Pradesh (UP) and aims at demonstrating how important missed opportunities can be minimized. This three-year long project (October 2012 through September 2015) will implement the interventions in rural Gonda District and in the urban slums of Aligarh of Uttar Pradesh, covering about 3.56 million people (including 455,000 children under five and 982,000 million women of reproductive age). This project will train 150 health care providers on neonatal resuscitation and skills retention. The intervention package includes:

- Job aids and skills-based peer-interactive learning methods to improve skills acquisition compared to the current NSSK training methods for SBAs;
- On-site neonatal resuscitation refresher training and regular standard practice drills using an affordable mannequin in skills labs and self-directed and peer-interactive learning tools, to maintain life-saving resuscitation skills post-training;
- Regular perinatal (and possibly maternal) death audits linked to quality improvement action cycles to identify gaps and target best practices to be used;
- Improved ENC practices by all health care providers at facilities, coupled with resuscitation efforts; and
- A simplified resuscitation device designed to improve the effectiveness of neonatal resuscitation, particularly among inexperienced or infrequent users.

2.2. Phases of the Project

Figure 1: Phases of the CS-28 project



For documenting the impact of the project, the changes in indicators on newborn care, morbidity indicators and sickness management practices shall be documented. For appropriate packaging of the intervention, a situational analysis will be conducted. The current study undertook a situational analysis to document the current status, key indicators and gaps which need to be addressed as part of the intervention package during the life of the project. Following this situational analysis, concurrent monitoring and evaluation, and impact assessment after the completion of the intervention, will be performed.

2.3. The current study

The work fits into a broad portfolio of the CS-28 project being undertaken by the consortium led by Save the Children with Aligarh Muslim University as implementation research partner and INCLEN as the evaluation partner, funded by USAID. The current study was aimed at undertaking a situational analysis to document the facility readiness of the public health facilities in Gonda District and selected facilities in Aligarh District, for delivering maternal and newborn services and community-level maternal and newborn indicators. This study was to serve as the baseline to document the impact of interventions being implemented as part of the CS-28 program in these two districts.

3. Study Objectives

This situational analysis study in rural Gonda and urban Aligarh aimed to document the:

1. Assessment of facility readiness of public health facilities (that are conducting deliveries) for delivering the newborn resuscitation services and ENC services;
2. Assessment of practices of health care providers (doctors, nurses, and ANMs/LHVs) engaged in birthing care at these facilities related to NR and ENC;
3. Assessment of Knowledge Practice Coverage (KPC) indicators related to pregnancy and ENC practice and service delivery indicators focusing on: a. ANC and birth planning;

b. Birthing and perinatal care (SBA, birth weight, thermal care, cord care, early initiation of breastfeeding, resuscitation for breathing difficulties);
c. Postnatal care for newborn and mother (at facility and/or home);
d. Breastfeeding practices (early initiation, colostrum, pre-lacteal feeding and exclusive breastfeeding); and
e. Knowledge of the mothers of infants on maternal danger signs during pregnancy and the postnatal period, neonatal danger signs and the appropriate action to be taken.

The situational analysis outputs and key indicators shall inform refinement and finalization of the intervention package.

4. Methodology

4.1. Study design

This was a cross sectional study. The study had two broad types of activities: (1) Facility level activities; and (2) Community level activities. The specific components under each type of activity are detailed below.

4.2. *Study Area*

This situational analysis was conducted in rural Gonda District and urban Aligarh District of Uttar Pradesh, where the overall intervention package under the larger project funded by USAID is to be implemented. The total population of Gonda is 3,431,386 (Census 2011) with 93% rural. It has a population density of 857 per sq. km., a sex ratio of 922 females for every 1000 males, and an overall literacy rate of 61.1%. There are 16 administrative blocks with one district hospital, 5 CHCs, and 11 PHCs in Gonda District. The Aligarh urban area has a total population of 873,000 with a little less than half (367,000) of the population living in 114 slums spread across the city. There are 5 Urban Health Centres in the slums, one district hospital and the Aligarh Medical College Hospital also caters to a large proportion of the city. Thus, overall the population to be covered under this study is about 3,558,000.

Figure 2: Map of Uttar Pradesh with the two study districts

The facilities assessed and clusters surveyed in the two study districts are mapped in Figure 3 and Figure 4.

Figure 3: The facilities and community clusters surveyed in Gonda District

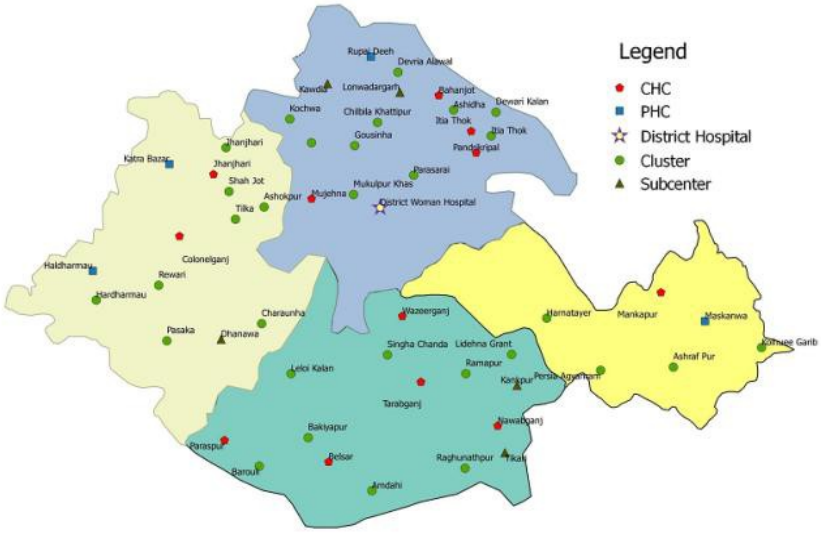


Figure 4: The facilities and community clusters surveyed in Aligarh District

4.3. Sample size and selection

Facility assessment: For the facility assessment, all Level 3 (1 district hospital), Level 2 (5 CHCs and 11 PHCs) and five selected Level 1 (sub-centres) public health facilities in the Gonda District were selected. In Aligarh District, two Level 3 (district hospital and sub-district hospital), six Level 2 (4 CHCs and 2 PHCs) in urban areas were identified for survey. Thus, in a total 2 district hospitals, 1 sub-district hospital, 22 CHCs/PHCs and 5 sub-centres were surveyed for facility assessment.

Table 1: Distribution of facilities surveyed among districts

District	District Hospital (DH)	Sub-district Hospital (SDH)	Community Health Centre (CHC)	Primary Health Centre (PHC)	Sub-centre (SC)	Total
Gonda	1	0	12	4	5	22
Aligarh	1	1	5	1	0	8
total	2	1	17	5	5	30

Knowledge and skill assessment: For the knowledge and skill assessment, we approached the health staffs (doctors, nurses/ANMs) engaged in attending delivery and newborns available on the day of survey. In total we were able to undertake knowledge assessment of 27 doctors and 29 nurses/ANMs at the facilities surveyed. The doctors and nurses/ANMs were given the knowledge assessment forms for self-administration and individual completion. The completed tools were collected by the field team. No prompting or interference was done by the field team member. The doctors, nurses/ANMs engaged in delivery and newborn care at the facilities available on the day of the visit were invited to participate in the skill assessment. If more than one staff of the same level/designation was available, the most senior staff person was invited. We were able to conduct a skill

assessment of 19 doctors and 27 nurses/ANMs. After completion of the knowledge assessment only the skill assessment was done. Skill assessment was done by the pediatricians/neonatologists who were trained in neonatal resuscitation. At four (4) facilities, the doctor was not available at the time of visit and at four (4) facilities; doctors (all at the PHC level in Gonda) excused themselves from the skill assessment. At two facilities (PHCs in Gonda) nurses/ANMs were not available to complete the skill assessment at the time of the visit.

Observation of newborn care at birth: To document the actual practices focusing on newborn care at birth, the deliveries which occurred during the visit were observed and the practices recorded. In total, five deliveries were observed and documented. The observation was done by the pediatricians/ neonatologists during their visit to the facilities.

In-depth interview: To obtain detailed input from the health staff regarding service delivery, practices, and challenges in service delivery, in-depth interviews (IDIs) were conducted with doctors, nurses, ANMs, and district and state level officials. We conducted a total of 62 IDIs including 26 doctors, 28 Nurses/ANMs, two Chief Medical Officers (CMOs), two additional CMOs (RCH Officers), two District Program Managers, and two General Managers at the state level. The suitable stakeholders available at the health facilities were invited for the interview. The IDI was conducted at a convenient place indicated by the staff involved. The doctor in the facility team discussed the topics using the IDI guide tool and the research assistant recorded the statements.

Community and household survey: We surveyed 642 households in 40 clusters (30 clusters in Gonda and 10 clusters in Aligarh) with a minimum 16 households from each cluster. The clusters were identified using PPS (population proportionate to size) technique. For Gonda only the rural area and for Aligarh only the urban area listed in the 2011 Census was used. One recently delivered woman (within 6 months prior to the survey) from each household was included in the survey. From each cluster, 16 households with the eligible mother of an infant were included for data collection. In each cluster, an attempt was made to include an equal number of males and females; 8 male infants and 8 female infants. From the 30 clusters, 482 subjects (households) from Gonda District and from 10 clusters in Aligarh District, 160 subjects (households) were included for household data collection. Basic information about the clusters focusing on the health care services was also obtained.

4.4. Study tools

In the study, seven types of study tools were used for data collection including five at the facility level and two at the community level.

The study tools used at the facilities were:

1. Assessment of health facility readiness;
2. Knowledge assessment of doctors and nurses/ANMs;
3. In-depth interviews with doctors and nurses/ANMs;
4. Skill assessment of doctors and nurses/ANMs; and
5. Labor and delivery observations.

The study tools used at the community level were:

6. Household tool; and
7. Village tool.

Facility assessment tool: The facility assessment tool focused on the infrastructure, training facilities, manpower, service delivery related to delivery and newborn care, practices, protocols, guidelines followed, communication, supplies, referral and transport facility, documentation and reporting, and monitoring and supervision at the facilities.

Knowledge and skill assessment tools: The knowledge and skill assessment tools were developed in reference to the modules and national guidelines for ENC and newborn resuscitation. The tools focused on preparing for care, ENC at birth, and care of non-breathing baby. Separate tools for doctors and nurses were developed. The tools were translated into Hindi and available in a bilingual version.

In-depth interview tools: The IDI tools explored the opinion and perception of the key stakeholders focusing on the current status, challenges, innovations and possible options for improvement in staffing, training and upgrading of skills, infrastructure, service delivery, supplies and logistics, referral and transport, and quality assurance measures in the current context.

Delivery observation tool: A ***d***elivery observation tool was developed in reference to the modules and national guidelines for ENC, newborn resuscitation and basic obstetric care.

Household tool: The household tool was developed to capture the information on key knowledge, practice and care indicators focusing on antenatal care, skilled birth attendance, perinatal care, ENC, postnatal care, and breastfeeding in reference to the index infant (born within the last 6 months of the survey).

Village tool: The village tool was used to capture general information about the cluster/village and the health facilities available in the village and access to the health services.

4.5. Training of the study teams

Two, day-long district level trainings for the study team members were done at Gonda and Aligarh. The trainings sessions were facilitated by the INCLEN team and CCT members. Presence of the CCT members ensured adherence to the training methodology and study protocol.

Figure 5: Training at Aligarh

Figure 6: Training at Gonda

4.6. Survey implementation

Partners: This situational analysis study was a collaborative effort between INCLEN and partner medical colleges in Uttar Pradesh (IMS, BHU, Varanasi and JLNMC, AMU, Aligarh) with support from Save the Children. This study was coordinated by the INCLEN Office located in New Delhi under the leadership of the Principal Investigator supported by the Co-Investigators and Research Staff.

Central Coordinating Team (CCT): A multidisciplinary CCT team composed of technical experts in child and newborn health, public health, epidemiology and social science provided technical guidance and quality assurance. The CCT reviewed and guided the development of study tools, an operational manual, conducted quality assurance visits to the study sites, program analysis and report writing.

Partner medical colleges: While field activities in Gonda District were conducted by the Department of Community Medicine, Institute of Medical Sciences, BHU, Varanasi, activities in Aligarh District were conducted by the Department of Community Medicine, JN Medical College, Aligarh.

Data Collection Teams: Two types of data collection teams were assembled at the partner medical colleges; a Facility Data Collection team and a Cluster Data Collection Team. For Gonda, six facility data collection teams (one Doctor and one Research Assistant in each team) were engaged and for Aligarh two such teams were engaged. For Gonda District, eight cluster data collection teams (one Supervisor and one Research Assistant in each team) and for Aligarh area two teams were engaged. The state level interviews were done by the INCLEN Investigator while the skill assessment was conducted by the pediatricians/neonatologists in the CCT.

4.7. Data management and analysis

Every study tool was given a unique ID number comprised of six digits. The collected data and forms were checked for completeness and quality by the Senior Investigators and the Field Supervisors in the teams. The tools were reviewed by the Study Site Investigators before being transferred to the INCLEN office. Data received at INCLEN were checked for

completeness, quality and consistency. Double data entry was done using customized data entry and quality check software (in-house developed at INCLEN using php and mysql platform). Two separate Data Entry Operators entered the data independently using the software programs. The entered data was matched by the software and any mismatches were flagged for attention. The mismatches were checked with the hard copy study tools and corrected by the Data Manager. The matched and clean data was passed to the final database. The data entry for the qualitative data was done using INCLEN Qualitative Data Analysis Software, after checking the audiotapes for transcriptions and translations. The database is accessible only to authorized personnel engaged in data analysis. The data is backed up daily on the server, to ensure data safety.

Descriptive statistics were used to summarize the facility, health staff and population characteristics. The infrastructure and services for mothers and newborns focusing on the 26 signal functions were derived. Student t-test or chi-square tests were performed to identify differences in knowledge and clinical skills between doctors and midwives. Quantitative data analysis was done using STATA 12.

Qualitative data analysis was done following the steps: 1) free listing; 2) domain Identification; 3) axial coding; and 4) cross tabulation. Data was analyzed separately for each stakeholder category and then compared between the stakeholders. Qualitative data analysis was done using INCLEN Qualitative Data Analysis Software.

4.8. Research ethics and regulatory approvals

This study was reviewed and approved by the INCLEN Institute Ethics Committee. Approval from the National Rural Health Mission of Uttar Pradesh and permission from the district authorities were also obtained. The study was reviewed and approved by the Health Ministry Screening Committee (HMSC) at the Indian Council for Medical Research (ICMR).

4.9. Timeline

The facility and community level surveys were conducted in August, 2014.

5. Health Facility Assessment Observations

5.1. Characteristics of the health facilities surveyed

A total of 30 public health facilities in two study districts were assessed for readiness for service delivery targeted at perinatal and newborn care. These facilities included two district hospitals, one sub-district hospital, 17 CentreCHCs, five CentrePHCs and five centre sub-centres. The 17 CHCs included four FRUs. The district-wide breakdown is provided in Table 1.

It was observed that the maternity hospitals at the district level were separate from the other general hospital in the district. Although the obstetric services were provided at the maternity hospital, the newborn care and pediatric services were available at both the maternity and main district hospitals. Newborns were being referred for admission

and long-term care at the general district hospital. Table 2 shows the deliveries conducted at these facilities in the past year (April 2013-Mar 2014) and first quarter of 2014 (April-June 2014) prior to the survey as reported by the facilities.

Table 2: Delivery load and outcomes at the facilities surveyed

Type of facility	N	Deliveries in last year (April 2013- March 2014)			Deliveries in last 3 months (April – June 2014)	
		Total no. of deliveries	Average deliveries per month	Live births (%)	Average deliveries per month	Live births (%)
DH	2	21005	1750	93	727*	95
SDH	1	606	50	99	27	99
CHC	17	33166	2763	98	2012	98
PHC	5	5971	497	97	328	99
SC	5	1594	132	97	65	89

** Data included only District Hospital Gonda (data for Aligarh was not provided by the officials).*

5.2. Status of signal functions for maternal and newborn health service delivery

We used 26 maternal and newborn care signal function indicators, focusing on delivery and postnatal care for assessing the readiness of the facilities for both routine and emergency care in health facilities[20]. These signal functions included general services and facilities (4 functions), routine obstetric care (3 functions), basic emergency obstetric care (5 functions), comprehensive obstetric care (2 functions), routine newborn care (3 functions), basic emergency newborn care (6+1 function) and comprehensive emergency newborn care (2 functions). The status of these signal functions at the surveyed facilities is displayed in Table 3.

Table 3: Status of the signal functions for maternal and newborn care

	Parameters/ services	DH/SDH (n=3) (%)	CHC (n=17) (%)	PHC (n=5) (%)	SC (n=5) (%)	Total (n=25) (%)
General services and facilities						
1.	Service Availability 24X7	100	85	70		86
1a	Service availability 24/7- Obstetric care	100	82	80		84
1b	Service availability 24/7- Newborn care	100	88	60		88
2.	Number of skilled providers@ (as per IPHS)	0	0	0	100	0
3.	Referral to higher level and communication tools	100	94	70	100	90
3a	Communication tools	100	100	80	100	96
3b	Referral service to higher-level care	100	88	60	100	84
4.	Reliable electricity & water supply, clean toilets	78	46	25	25	45
4a	24x7 reliable electricity*	100	29	0	0	32
4b	Availability of clean and functional toilet	33	56	0	50	42
4c	24x7 reliable water supply	100	53	75	25	62
4a(1)	Grid electricity connection	100	100	100	100	100
4b(1)	Availability of toilet**	100	94	80	80	92
Routine obstetric care						
5	Monitoring and management of labor using partograph	33	6^	0	0	8
6	Active management of 3rd stage of labor	67	35	25	20	37
7	Infection prevention measures	67	12	0	20	13
Basic emergency obstetric care						
8	Parenteral magnesium sulfate for (pre)eclampsia	67	37	25	25	39
9	Assisted vaginal delivery	67	0	0		8
10	Parenteral antibiotics for maternal infection	67	88	50	60	79
11	Parenteral oxytocic drugs for haemorrhage	100	76	50	100	75
12	Manual removal of placenta for retained placenta	100	87	25	80	78
Comprehensive emergency obstetric care						
13	Surgery (e.g., C-section)	50	0			6
14	Blood transfusion	67	0			6

	Parameters/ services	DH/SDH (n=3) (%)	CHC (n=17) (%)	PHC (n=5) (%)	SC (n=5) (%)	Total (n=25) (%)
Routine newborn care						
15	Thermal protection	100	69	0		63
16	Immediate and exclusive breastfeeding	100	88	80		76
17	Hygienic cord care	100	85	67		84
Basic emergency newborn care						
18	Antibiotics to mother if preterm or prolonged PROM	100	82	25	60	75
19	Corticosteroids in preterm labor	67	47	0	60	42
20	Resuscitation of non-breathing baby	100	54	67	60	36
21	KMC for premature/very small babies	100	69	25		65
22	Alternative feeding if baby unable to breastfeed	67	46	33		36
23	Injectable antibiotics for neonatal sepsis	100	23	0		24
24	PMTCT if HIV-positive mother	67	0	0		8.3
Comprehensive emergency newborn care						
25	Intravenous fluids	100	23			32
26	Safe administration of oxygen	100	46	33		53
	@Although none of the facilities have skilled staff as per IPHS standards, at least 1 skilled staff is present at most of the facilities for delivery (but not a separate staff for newborn care). ** 24 x 7 reliable electricity (electricity supply functioning at time of visit and presence of alternate/backup energy source).* *** Availability of clean and functional toilet (the toilet was clean and functional as observed at the time of visit).* *^ CHC Belsar (Gonda District) was using a partograph for monitoring and management of labor.*					

We observed that although a grid supply existed at all of the facilities, a reliable supply of electricity was a challenge at most of the PHCs. The alternative power back-up source was not available/not functional at most of the PHCs. Almost half of the DH/SDH and CHCs and none of the PHCs had clean and functional toilets for patient use; the patients and attendants had to use unsanitary toilets.. At the Belsar CHC and the District Hospital in Gonda the nurse/ANM reported using a partograph for monitoring the progress of labor, however the patient chart for a woman in labor, did not have the partograph attached at either of the facilities. While a majority of facilities had all of the components for routine newborn care, majority of them did not have all of the

components of routine obstetric care. More attention needs to be given to DH/SDH and CHCs to enhance the delivery of basic emergency and obstetric and neonatal care.

5.3. Infrastructure, availability of equipment and supplies

The status of infrastructure, equipment, instruments, medicines and supplies at the health facilities surveyed is provided in Table 4 below. It was apparent that even the district hospitals and women's hospitals were not fully prepared with functional equipment to adequately care for newborns. Almost all of the CHCs and PHCs were unprepared for managing newborn care or labor and delivery, especially when complications arose.

Table 4: Status of infrastructure, equipment, medicines and supplies at the facilities

Items	DH/SDH (n=3) (%)	CHC (n=17) (%)	PHC (n=5) (%)	Total (n=25) (%)
Equipment				
For general use				
Thermometer	100	100	80	96
Stethoscope	100	94	75	92
Blood pressure device with cuff	67	76	75	75
Wall clock	100	94	60	88
Functional sterilizer	33	12	20	16
For obstetric care				
Delivery Kit	100	41	25	52
Ventouse/vacuum apparatus	50	0	0	4
Needle holder	100	94	100	96
Speculum	100	75	75	78
Obstetrics forceps	100	12	0	21
Vacuum extractor	50	0	0	4
Scissors or Sterile blade	100	65	50	67
Manual vacuum aspirator	100	50	67	60
For newborn care				
Infant weighing scale	100	100	80	96
Radiant warmer	100	100	60	92
Bag and mask for resuscitation	100	94	60	84
Suction bulb for mucus extraction	100	94	80	92
Oxygen hood	67	27	50	37
Laryngoscope	100	65	0	56
Phototherapy unit	67	29	25	33
Oxygen Concentrator	67	6	0	12

Items	DH/SDH (n=3) (%)	CHC (n=17) (%)	PHC (n=5) (%)	Total (n=25) (%)
Medicines				
Inj Gentamicin	100	59	80	68
Inj Ampicillin	100	47	60	56
Inj Cephalosporin	100	76	60	76
Inj Metronidazole	100	76	60	76
Tab Cotrimoxizole	33	56	50	52
Cap Amoxicillin	100	40	50	50
Inj Oxytocin (Uterotonics)	100	88	40	80
Inj Corticosteroids	100	94	100	96
Inj Magnesium sulphate	100	71	40	68
Inj Diazepam	100	100	60	92
Local anaesthetics	100	59	60	64
Inj Adrenaline	100	76	80	80
Inj Vitamin K	100	33	20	40
Ferrous sulphate and folic acid	100	50	33	55
Sulphadoxine pyrimethamine	67	25	0	26
Tetracycline/eye ointment	33	6	0	9
Oxygen	100	82	80	84
Supplies				
IV infusion set	100	73	67	76
IV pediatric infusion drip set	100	36	25	43
IV fluids	100	75	75	78
Syringes/needles	100	57	75	67
AD syringes	100	94	100	96
Soap	100	71	100	79
Disinfectant	100	88	40	80
Suture material with needle	100	22	0	33
Disposable gloves	100	76	60	76
Umbilical clamp/tie	100	94	75	92
Suction catheters	100	94	80	92
Pediatric ET tubes	100	35	20	40
IV canulas (neonate)	100	88	25	79
Infant feeding tubes	100	43	50	52
Sharps container	100	46	50	55
Linen sheets for newborns	67	64	67	65
Diagnostics				
Pregnancy test kit	100	88	80	88
Malaria rapid test kits	67	41	0	36
Haemoglobin test	100	100	75	96

Items	DH/SDH (n=3) (%)	CHC (n=17) (%)	PHC (n=5) (%)	Total (n=25) (%)
Dextrostix	33	29	20	28
Urine dipstick	100	88	80	88
Partographs	33	7	0	9
Syphilis test kit	100	37	25	43
HIV rapid test kits	100	37	20	39
Blood grouping kits	100	35	20	40
Vaccines				
TT	67	88	60	80
BCG	67	88	60	80
OPV	67	82	60	76
Hepatitis B	67	88	60	80

The facilities lacked basic equipment like functional BP apparatus for detecting and monitoring complications. While all the CHCs and some of the PHCs had radiant warmers, the majority of them had not used them at all since they were installed. Some of the facilities continued using 200W bulbs instead of radiant warmers, as the staff did not know how to use them. The bag and mask for resuscitation were there in the facility but were not readily accessible even in the District Women's Hospital. The district and sub-district hospitals had the majority of the medicines and supplies available, however many of the CHCs and PHCs lacked drugs and supplies.

5.4. Facility readiness scores

A facility readiness score was prepared under eight components including: infrastructure; services; drugs; equipment; supplies; infection control practices; provider knowledge and skill; and availability of guidelines for case management. The readiness score is summarized below in Table 5. The item under each component is detailed in Annex 2. We considered three categories of score as >75% (ability to deliver majority of the items), 51%-74% (ability to deliver some of the items) and <50% (inability to deliver the majority of the items).

It was obvious from the table above that only district and sub-district hospitals (DH/SDH) scored 75% or more on the benchmarks set for facility readiness for providing delivery and newborn resuscitation care, and also for infrastructure, essential drugs and equipment, supplies for delivery services and signal functions provided for newborn care. Almost all of the other facilities were not in a majority of the service areas for delivery and newborn care, including resuscitation.

Table 5: Readiness scores of facilities for delivery and newborn care

	DH/SDH (%)	CHC (%)	PHC (%)	SC (%)	Aligarh: All facilities (%)	Gonda: All facilities (%)	Total: All facilities (%)
1.Infrastructure							
a. Delivery Care	81	54	53	46	64	60	56
b. NB Care	54	34	25		39	34	36
2. Signal functions							
a. Delivery Care	70	50	18	48	57	44	47
b. NB Care	85	42	31		55	42	47
3. Essential drugs							
a. Delivery Care	86	44	42	10	58	40	45
b. NB Care	57	40	59		64	37	46
4. Equipment and supplies							
a. Delivery Care	77	60	45	46	66	56	58
b. NB Care	61	46	44		64	37	48
5. Following infection control and prevention procedures							
a. Delivery Care	43	18	22	15	26	19	21
b. NB Care	15	13	5		9	14	12
6. Provider knowledge on newborn care including resuscitation							
a. Doctors	49	36	52	38	42	41	40
b. Nurses	45	40	37		41	41	41
7. **Provider skills on newborn care including resuscitation**							
a. Doctors	30	17	2		13	19	16
b. Nurses	29	18	2		64	60	56
8. Availability of guidelines							
a. Delivery Care	0	13	0	20	0	18	13
b. NB Care	54	4	0	20	9	17	11
9. Average	52	33	27	33	39	33	35

Note - Factors taken into account for deciding the score have been described in Annex 2

Score 75% and above | Score 51% to 74% | Score ≤ 50%

5.5. Manpower

Overall, the majority of health staff working at these facilities were ANMs followed by class IV support staff. Of the 403 clinical staff reported to be engaged in delivery and newborn care at the facilities, more than two-third were ANMs, followed by LHVs and staff nurses. At least one doctor was posted in all of the facilities and at least one ANM was employed in almost all of the facilities. The presence of staff nurses was limited up to the CHC level and 58% of the facilities had at least one staff nurse. The presence of specialists was limited to the district hospitals. In Gonda there was one pediatrician at the maternity hospital, while two more pediatricians were available at the district general hospital. One PHC in Aligarh did not have any ANM or staff nurse at the time of visit, as reported by the respondent; it was a newly created PHC. The profile of the staff available at the facilities in Gonda and Aligarh are reflected in Table 6 and Figures 7-12.

Table 6: Available manpower status at the facilities surveyed

Facility	Doctor				Staff Nurse (SN)	ANM	LHV	Others	Total
	Gynecologist	Pediatrician	Physician/ Surgeon/ Anesthetist	Medical Officer					
Gonda District									
Female District Hospital	**2**	**1**	**1**	**5**	**5**	**13**	**0**	**39**	**66**
Community Health Centre (CHC)									
Mankapur	0	0	0	2	1	4	2	20	29
Babhanjot	0	0	1	2	0	2	1	6	12
Wazeerganj	0	0	0	2	2	3	6	10	23
Paraspur	0	0	0	2	0	18	1	5	26
Pandikripal	0	0	0	1	0	2	1	7	11
Mujehna*	B	B	B	B	B	B	B	B	B
Belsar	0	0	0	2	3	3	4	10	22
Nawabganj	0	0	1	3	1	11	1	8	25
Colonelganj	0	1	1	1	1	4	2	5	15
Tarabganj	0	0	0	1	0	2	1	5	9
Itiyathok	0	0	1	1	0	3	4	8	17
Qazeedeewar	0	0	0	1	0	3	1	11	15
Total (CHC)	**0**	**1**	**4**	**18**	**8**	**55**	**24**	**95**	**204**
Primary Health Centre (PHC)									
Maskanwa	0	0	0	2	0	2	1	7	12
Rupaideeh	0	0	0	1	1	3	3	8	16
Hardarmau	0	0	0	2	B	3	1	6	12
Katrabazar	0	0	0	1	0	3	1	8	13
Total (PHC)	**0**	**0**	**0**	**6**	**1**	**11**	**6**	**29**	**53**

Facility	Doctor				Staff Nurse (SN)	ANM	LHV	Others	Total
	Gynecologist	Pediatrician	Physician/ Surgeon/ Anesthetist	Medical Officer					
Sub-Centre(SC)									
Lonwadgarh	0	0	0	0	0	1	0	2	3
Kankpur	0	0	0	0	0	1	0	0	1
Kawdia	0	0	0	0	0	1	0	0	1
Tikari	0	0	0	0	0	1	0	0	1
Dhanawa	0	0	0	0	0	1	0	12	13
Total (SC)	0	0	0	0	0	5	0	14	19
Total (Gonda)	**2**	**2**	**5**	**29**	**14**	**84**	**30**	**177**	**342**
Aligarh District									
Mohan Lal Gautam DH	2	1	0	6	8	0	0	39	56
Deen Dayal Hospital SDH	0	1	5	3	21	5	2	83	113
Community Health Centre (CHC)									
Iglas	0	0	0	1	1	25	5	13	45
Atrauli	0	0	0	1	2	23	4	15	45
Harduaganj	0	0	0	2	1	32	4	7	46
Chharra	0	0	0	0	0	16	0	4	20
Khair	0	1	0	1	1	18	4	9	34
Total (CHC)	0	1	0	5	5	114	17	48	190
Primary Health Centre (PHC)									
Barauli**	B	B	B	B	B	B	B	B	B
Total (Aligarh)	**2**	**3**	**5**	**14**	**34**	**119**	**19**	**170**	**359**
Grand Total	**4**	**5**	**10**	**43**	**48**	**203**	**49**	**347**	**701**

Others include-pharmacist, LT, OT attendant, registration clerk, blood bank technician, driver and class IV employee.

** The data not given by the respondent/official.*

*** It was a newly created PHC and the respondent was not clear about the exact staff composition.*

Figure 7: Distribution of staff at the facilities surveyed in both districts

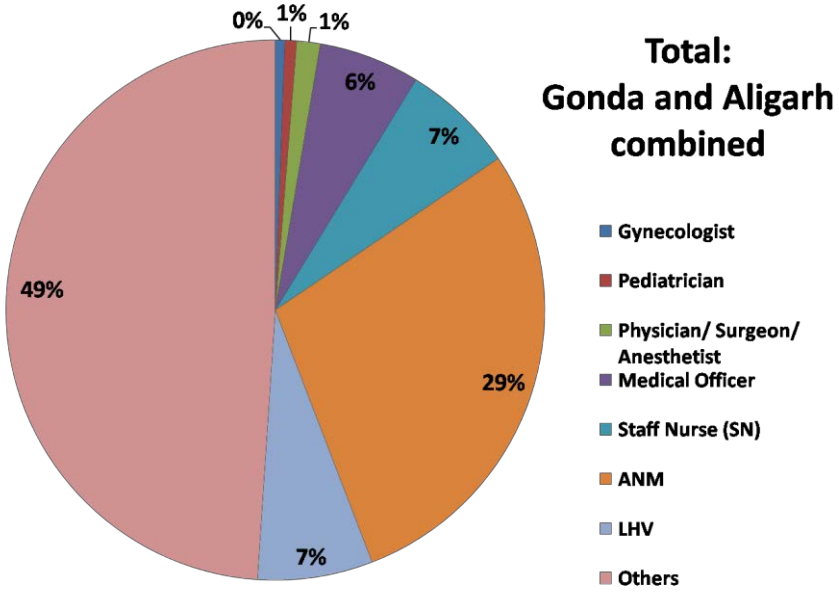


Figure 8: Distribution of staff at the facilities surveyed in Gonda

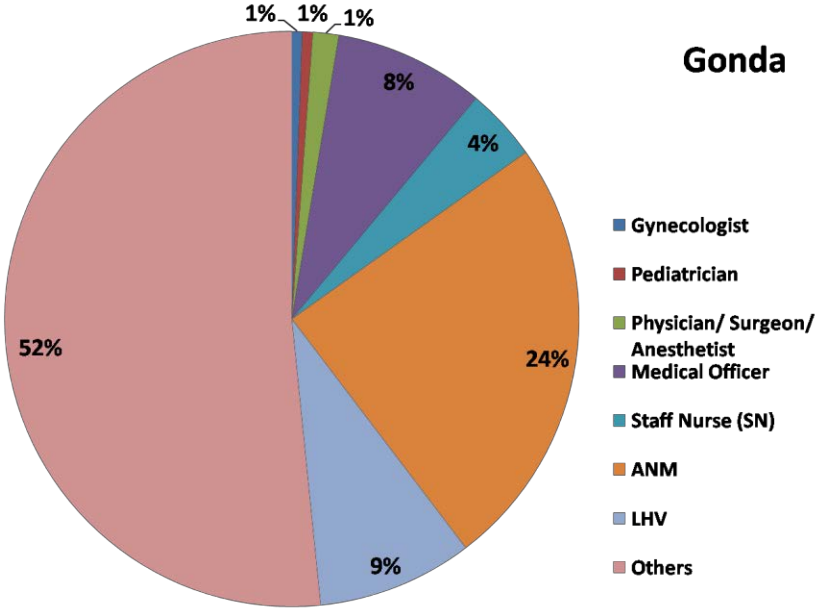
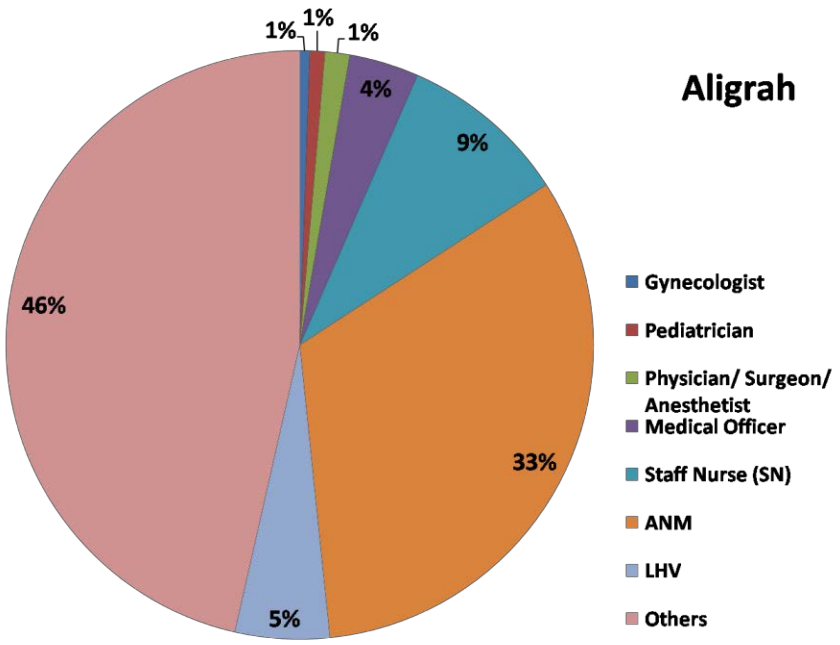


Figure 9: Distribution of staff at the facilities surveyed in Aligarh



The profile of all staff and skilled clinical staff, as reported at the facilities in the two districts, are reflected in Figures 10, 11 and 12.

Figure 10: Profile of skilled staff at all the facilities surveyed in two districts

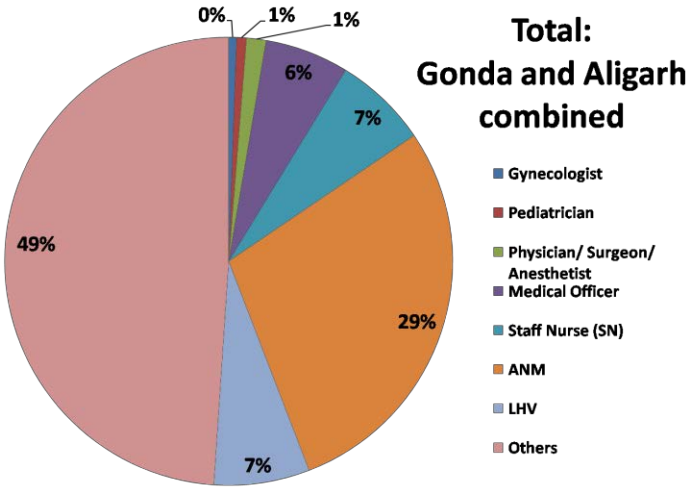


Figure 12: Profile of skilled staff at the facilities in Gonda

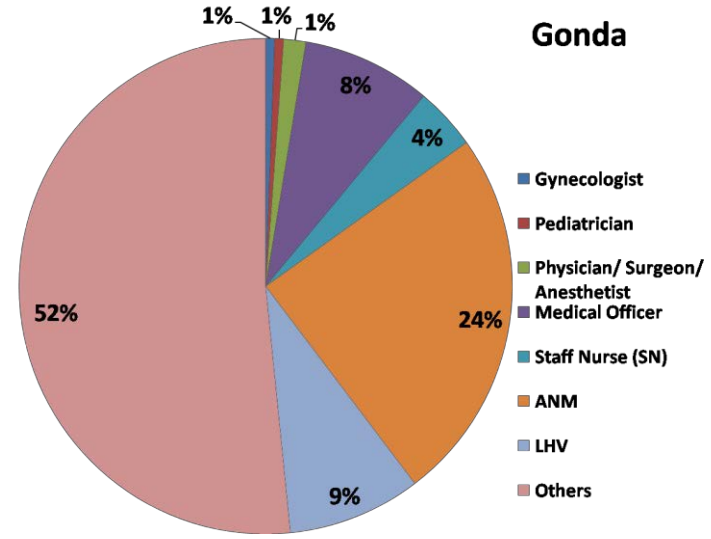
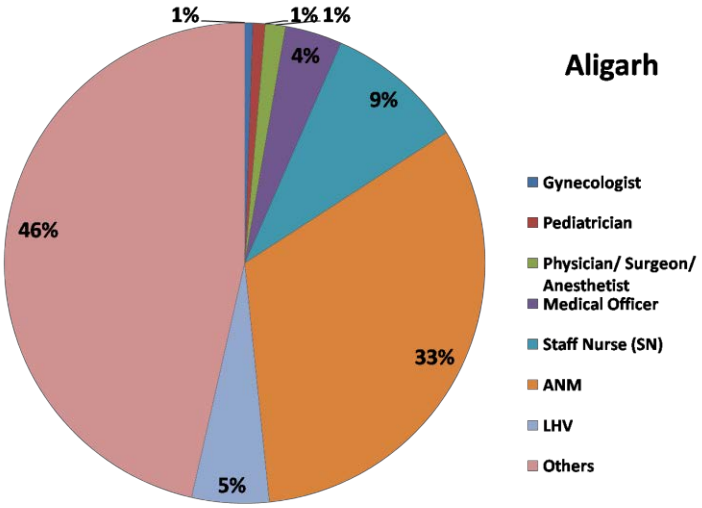


Figure 11: Profile of skilled staff at the facilities in Aligarh



5.6. Infection prevention and control practices

Hand washing: At 46% of the facilities, hand washing was observed among staff in labor room. Less than half (47%) of the facilities had elbow operated taps for hand washing in operation theatres.

Disinfection of the reusable equipment and devices (excluding sub-centres): Among the facilities surveyed, only a few facilities used a correct method for disinfection of the neonatal resuscitation bag and face mask, laryngoscope, suction apparatus, surgical instruments and thermometer in labor room/postnatal ward/newborn care unit/ operation theatre.

Table 7: Infection prevention and control practices in the labor rooms of the facilities

Devices	Districts		Level of facilities				
	Aligarh (n=8)	Gonda (n=17)	DH/SDH (n=3)	CHC (n=17)	PHC (n=5)	SC (n=5)	Total (n=30)
Neonatal face mask	14	14	33	6	25	25	14
Self-inflating bag	14	10	33	6	0	25	11
Thermometers	29	33	33	24	50	50	32
Suction apparatus	14	29	33	18	25	50	25
Laryngoscope	14	13	33	13	0		14
Surgical instruments	57	12	67	24	0		25
Hand washing with soap before every delivery	43	48	67	35	50	75	46

Figure 13: Hand washing facility Aligarh

Figure 14: Segregated biomedical at waste handling at Aligarh

Segregated biomedical waste management: Segregated biomedical waste management was observed in 42% of facilities. The practice of appropriate biomedical waste segregation was poor at the CHCs and PHCs, especially in Gonda District. Sharp and contaminated biomedical waste management was also poor at facilities in Gonda District, compared to those in Aligarh. Even at the district and sub-district hospitals, the practice of contaminated and sharp waste management was poor. General waste is mostly

managed by using municipal waste (32%) or burying it in a pit (28%).

Contaminated waste and sharps were appropriately managed in 33% and 26% of the facilities, respectively. No waste management system was in place in 58% of the facilities surveyed.

Table 8: Biomedical waste segregation and appropriate disposal

	Level of facilities				Districts	
	DH/SDH (n=3) (%)	CHC (n=17) (%)	PHC (n=5) (%)	Total (n=25) (%)	Aligarh (n=8) (%)	Gonda (n=17) (%)
Segregation of waste performed	100	38	20	42	57	35
General waste appropriately disposed	100	65	80	72	63	76
Contaminated waste appropriately disposed	0	29	75	33	50	25
Sharps appropriately disposed	0	24	50	26	50	13

5.7. Availability of guidelines and protocols

Only 9% of the facilities had SBA as well as neonatal resuscitation guidelines in the labor room. Partographs were found in only two of the labor rooms of the facilities assessed in Gonda District. ENC guidelines were found only in 13% of postnatal wards at the facilities. Only 11% of newborn care units had essential care guidelines and 10% of the newborn care units had newborn resuscitation guidelines.

5.8. Supervision at health facilities

There is a system of supervisory visits in place for the CHCs/PHCs by the district and state officials. District hospitals were visited by the CMO and state level officials. Although no definite schedule for supervisory visit was known, visits were usual made approximately once/month (6 in the last 6 months-calculated median). In the six months preceding the survey, 92% of facilities received a supervisory visit with the majority (72%) of the supervisory visits being routine in nature. Most of the supervisory visits focused on immunizations, JSY and other programs and services. According to the respondents, visits to the labor room or newborn care unit were not made by the supervisors.

6. Knowledge and skill assessment of service providers

6.1. Characteristics of health care providers who participated in knowledge assessment

There was no significant difference observed based on the geographic location where the health care providers (doctors and nurses) worked. The median age of service for

doctors and nurses was found to be 7 and 8 years, respectively. It was interesting to find that nurses had received significantly more training than doctors in the areas of pregnancy, childbirth, newborn care, and resuscitation.

Table 9: Characteristics of health care providers' knowledge assessment

Characteristics	Doctors (n=27) (%)	Nurses (n=29) (%)	p-value
Location of work (%)			
District/Sub-district Hospital	26	21	0.233
CHCs	63	48	
PHCs	11	17	
Sub centres	0	14	
Training on pregnancy, childbirth, newborn care, resuscitation (%)	11	76	0.000
Years of Service (median)	7 years	8 years	

6.2. Knowledge level

6.2.1. Knowledge among doctors in relation to training status

The doctors who claimed to be trained in ENC and resuscitation had better knowledge levels compared to their counterparts without training*. The knowledge difference was significant for routine newborn care** and positive pressure ventilation***.

6.2.2. Knowledge among nurses in relation to training status

There was no significant difference in knowledge levels among nurses based on their training status, except for the positive pressure ventilation component. The nurses who were trained in the past 6 months had significantly better knowledge related to positive pressure ventilation[1].

6.2.3. Knowledge variation between doctors and nurses

The knowledge patterns among the nurses and doctors who completed the knowledge assessment were similar. The performance of care providers from the two districts was also more or less similar. While doctors had better knowledge scores with regard to neonatal resuscitation, the knowledge scores of nurses/ANMs were better in newborn stimulation. Even for the thermoregulation, only 40% of nurses/ANMs and about half of the doctors had 75% correct responses. The nurses/ANMs responded poorly on the routine care and preparation for positive pressure ventilation. The pattern of responses is shown in Table 10 and Figure 15.

As reflected in the table below, few of the doctors and nurses/ANMs had adequate knowledge (score >75%) for routine care, initial steps for non-

breathing newborns and positive pressure ventilation components. About half of the doctors and less than half of the nurses/ANMs had adequate knowledge about thermoregulation steps. Nurses/ ANMs had better knowledge than doctors regarding stimulation for of a non-breathing newborn. Few of the doctors had knowledge about chest compression in newborn resuscitation.

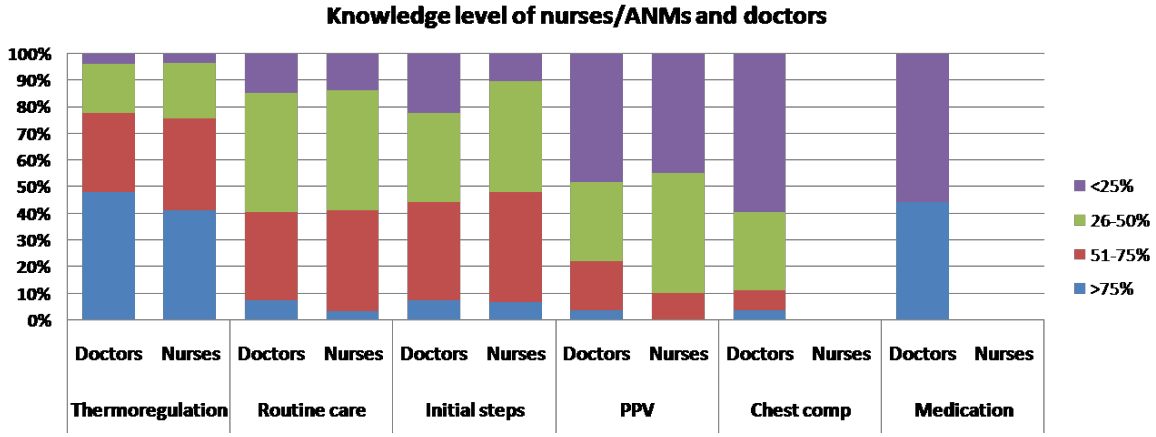
∗ Pearson chi2(1) = 5.3061 Pr = 0.021; Fisher's exact = 0.042; 1-sided Fisher's exact = 0.030
**Pearson chi2(1) = 19.4063 Pr = 0.000: Fisher's exact = 0.001: 1-sided Fisher's exact = 0.001
*** Pearson chi2(1) = 14.8500 Pr = 0.000: Fisher's exact = 0.003: 1-sided Fisher's exact = 0.003
1 Pearson chi2(1) = 5.6902 Pr = 0.017; Fisher's exact = 0.028; 1-sided Fisher's exact = 0.025

Table 10: Status of provider's knowledge on newborn care and resuscitation

Questions and correct responses	Doctors (n=27) (%)	Nurses (n=29) (%)	p-value
Thermoregulation			
Switches off fan and closes windows	63	83	0.133
Switches on radiant warmer/200 W bulb	33	14	0.116
Mentions KMC for low birth weight baby	48	41	0.788
Routine Care			
Presence of skilled person required at every birth	74	41	**0.017**
Ready availability of self-inflating bag and mask in the labor room	59	48	0.436
Nothing to be applied on umbilical cord	78	72	0.761
Baby bath is not essential	78	52	0.054
Start breastfeeding within 30 min after birth	41	59	0.285
Hand washing following steps	33	65	**0.031**
Hand washing	30	11	0.101
Clamping and cutting umbilical cord 1-3 min after birth	26	45	0.171
Normal axillary temperature of newborn	11	17	0.707
Vitamin K administration	7	21	0.254
Steroids for mothers developing preterm labor.	22	7	0.137
Antibiotics for mothers with PROM >24 hours	44	21	0.147
Initial steps			
Slapping the back is not recommended for stimulating a non-breathing baby	22	38	0.252
Flicking the sole as a recommended method for stimulating a non-breathing baby	70	83	0.349
Rubbing the back as a recommended method for stimulating a non-breathing baby	70	76	0.765
Slapping the sole is not a recommended method for stimulating a non-breathing baby	30	59	**0.035**
Squeezing the chest is not a recommended method for stimulating a non-breathing baby	52	69	0.274
Holding the child upside down is not a recommended method for stimulating a non-breathing baby	44	76	**0.028**
Positive pressure ventilation for baby not crying at birth	85	48	**0.005**
All babies born with meconium staining do not require endotracheal suctioning	18	7	0.244
If newborn is not crying and meconium is present; suctioning to be done in order mouth→nose →trachea	44	31	0.409

Questions and correct responses	Doctors (n=27) (%)	Nurses (n=29) (%)	p-value
Positive pressure ventilation with bag and mask			
Correct positioning of mask	44	48	0.795
Positive pressure ventilation using room air	22	21	1.000
Period for PPV before reassessment	52	48	1.000
Interval for assessment after PPV	22	14	0.497
Important signs of improvement after PPV	26	7	0.073
Need for PPV when heart rate is <100/min.	26	21	0.756
Chest compression and intubation			
Heart rate cutoff for initiating chest compression	33		
Time window for endotracheal intubation	4		
Position for chest compression	15		
Recommended rate of chest compression	4		
Medication			
Correct strength of adrenaline used in newborns	44		

Figure 15: The knowledge level of nurses and doctors



6.3. Skill level

Among the nurses/ANMs assessed for skill, none was able to perform all of the steps for ENC, positive pressure ventilation, or assessment of effectiveness of ventilation. Fifteen of the 27 nurses/ANMs were able to perform some of the critical steps of ENC and positive pressure ventilation correctly. The remaining nurses/ANMs performed the steps either incorrectly or inappropriately. Of the 19 doctors assessed, 12 were able to perform some of the critical steps of ENC and positive pressure ventilation correctly. The remaining doctors performed the steps either incorrectly or inappropriately. The skill status of the providers (doctors and nurses) assessed under the study is shown in Table 11 below. All of the nurses/ANMs were shown the appropriate steps for ENC, newborn resuscitation and use of a radiant warmer after the skill assessment.

Figure 16: Skill assessment of the doctors and nurses/ANMs

Table 11: Status of provider's skills on newborn care and resuscitation

Questions and correct responses	Doctors (n=19) (%)	Nurses (n=27) (%)	p-value
Thermoregulation			
Switches off fan and closes windows	10	22	0.440
Switches on radiant warmer/200 W bulb	10	18	0.682
Shifts the baby to warmer bed or put on mother's abdomen	21	22	1.000
Wipes the baby with clean, dry cloth and removes the wet cloth	26	26	1.000
Wraps the baby in dry clean cloth and puts the baby over warm surface	26	22	1.000
Routine care of newborn			
Correctly ties/clamps cord and cuts	32	37	0.762
Applies nothing on cord	42	41	1.000
Cleans eyes	10	15	1.000
Assess the baby using stethoscope	5	0	0.413
Administers Vitamin K	5	7	1.000
Initial steps of resuscitation			
Positions the baby using shoulder roll	26	18	0.719
Clear the airway of the baby (in correct sequence)	26	15	0.456
Provided tactile stimulation to the baby	26	11	0.246
Repositions and evaluates baby using stethoscope	10	7	1.000
Skills on positive pressure ventilation			
Assembles the self-inflating bag and mask	26	30	1.000
Correctly positions towards head of mannequin	32	30	1.000
Correctly applies mask and seals	26	18	0.719
Applies positive pressure ventilation in correct rate and correct rhythm	26	15	0.456
Achieves appropriate chest expansion as required	16	18	1.000

Questions and correct responses	Doctors (n=19) (%)	Nurses (n=27) (%)	p-value
Skills on corrective measures after positive pressure ventilation			
Checks the seal of mask and adjusts	16	26	0.488
Repositions the head	21	15	0.700
Clears airway	16	11	0.680
Opens mouth	10	11	1.000
Increases of compression of bag	10	11	1.000
Skills on chest compression			
Selects the correct site for chest compression	10		
Provides back support throughout	16		
Applies adequate compression	10		
Does not lift finger from chest in between	10		
Uses correct rate of chest compression	10		
Skills on endotracheal intubation			
Asks for correct size of blade and ET tube	5		
Holds laryngoscope and ET tube correctly	5		
Positions the head of the newborn	5		
Inserts laryngoscope correctly and inserts ET tube	5		
Checks correct placement using stethoscope	5		
Skills on preparation of Adrenaline administration			
Chooses correct syringe and draws correct dose	16		
Draws correct amount of normal saline and mixes	16		
Correctly calculates the dose	10		
Correctly administers via umbilical venous catheter	5		
Flushes catheter with normal saline	5		

None of the doctors or nurse/ANMs was able to demonstrate adequate skill for newborn resuscitation, positive pressure ventilation and chest compression. There was no significant difference between the skill levels of doctors and nurses for ENC and positive pressure ventilation.

Effect of trainings on skill level: The doctors who received training performed better for the initial steps of resuscitation only. There was no significant difference in skill level among the nurses, by training status.

6.4. Observation of skill during conducting delivery

The experts were able to observe five deliveries (two at a District Women's Hospital in Gonda; two at PHCs in Gonda, and one at a CHC in Aligarh). Out of these 4 deliveries were conducted by nurses and one by an ANM. The medical officer (or any other assisting care provider) was not present at any of the facilities.

6.4.1. Obstetric care

Sterile gloves were worn in all of the cases. In one case, the gloves were said to have been autoclaved. A partograph was not used during any of these deliveries. An episiotomy was done in one of the deliveries observed, and oxytocin was administered for management of the third stage of labor in one of the deliveries. Cord traction with supra-pubic counter traction was applied in two cases, and uterine massage was performed during one of the deliveries.

6.4.2. Newborn care

The fans were not switched off nor windows closed during any of the deliveries that were observed, in order to prevent newborn hypothermia. Clean towels were kept ready at two of the deliveries. A radiant warmer was not used at any of the deliveries, rather a 200W bulb was used at two of the deliveries. After drying the babies, two babies were put on the mother's abdomen. In two cases, the umbilical cord was cut 2-3 minutes after birth, and in all cases sterile scissors was used. Eyes were wiped for only one newborn.

6.4.3. Resuscitation care

None of the birth attendants prepared or checked supplies for resuscitation (including bag and mask). One newborn at the District Women's Hospital in Gonda required resuscitation, but the bag and mask was not available for resuscitation and the nurse assisting with delivery was too occupied caring for the mother. The baby was resuscitated by the expert from the study team, using positive pressure ventilation, using the bag and mask from the skill assessment kit. The nurse who joined later was not able to demonstrate the methods of resuscitation and positive pressure ventilation. One of the non-breathing babies was transferred to a referral facility.

6.4.4. Rooming in and breastfeeding

Three newborn babies were placed in skin-to-skin contact with the mother or alongside their mother. Adequate covering of the baby was observed in three cases. Three babies began breastfeeding within 15-20 minutes, and only two newborns were given Vitamin K.

6.4.5. Postnatal assessment

In none of the cases were the vital signs of the mother and baby checked at 15 minutes

after birth, with the exception of checking the skin color of one baby. One mother-baby dyad was released from the facility one hour after birth.

6.4.6. Resuscitation in a cesarean section case

A newborn was delivered at a District Women's Hospital in Gonda by cesarean section and was brought to the newborn care corner after about 45 minutes. The team was advised that CS was performed in response to demonstrated fetal distress. The baby did not cry at birth, but made some attempt to breathe. When the expert from the team evaluated the baby, the baby was lethargic and had poor peripheral circulation. Immediate care was initiated for the baby and the baby was later referred to the district hospital for further care. This case indicated a failure of initial resuscitation and support for the newborn at birth.

6.5. Knowledge-skill gap

It was interesting to note that all stakeholders (doctors and nurses) had a considerable gap in knowledge and skill in all areas of newborn care and resuscitation except for positive pressure ventilation. The doctors also had a smaller knowledge-skill gap regarding chest compressions. Although some of the recently trained nurses/ANMs were able to tell the steps, they were not able to perform the same steps appropriately and in sequence. Even one doctor, who was a trainer for the nurses/ANMs, was unable to demonstrate the critical steps satisfactorily. This demonstrates the need for a review of training methodology, and selection and preparation of trainers for the trainings. The scores and mapping of the skill versus the knowledge for each component is shown in Table 12 and Figures 17 and 18 below.

Table 12: Average scores (%) in different domains of Essential Newborn Care

Category	Thermo-regulation (%)		Routine care (%)		Resuscitation initial stapes (%)		Positive pressure ventilation (%)		Chest compression (%)		Medication (%)	
	K	S	K	S	K	S	K	S	K	S	K	S
Doctors	52	19	44	19	43	24	29	25	14	11	38	10
ANMs/ Nurses	53	22	42	20	47	18	26	22				
K=Knowledge; S=Skills												

Figure 17: knowledge-skill gap-Doctors

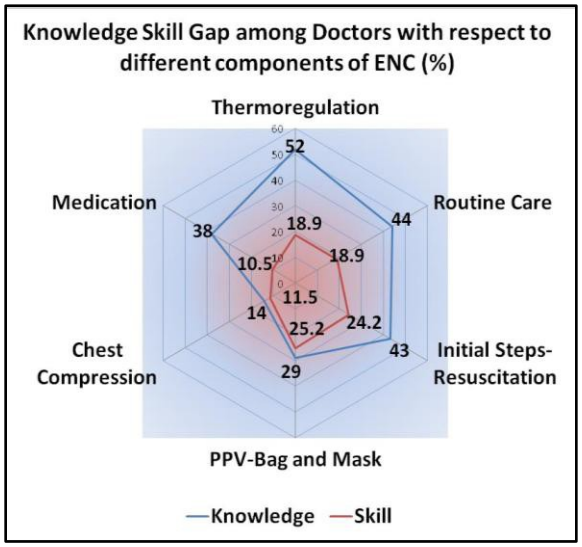
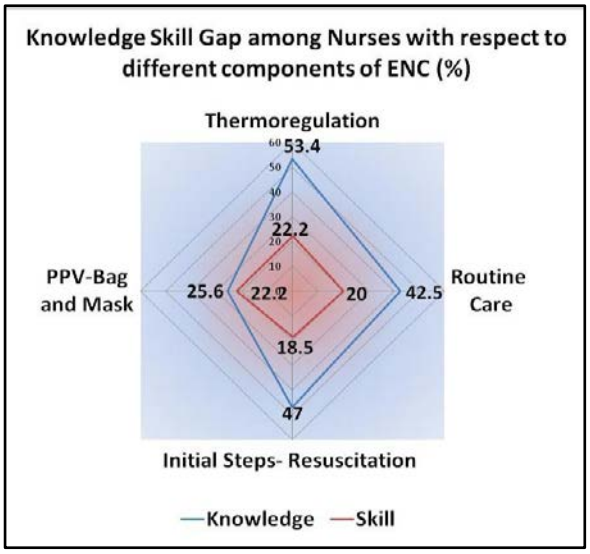


Figure 18: knowledge-skill gap-Nurses/ ANMs



7. Demonstration sites in Gonda

Demonstration sites were established at the District Women's Hospital and FRUs of Colonelganj and Mankapur in Gonda District. During the team's visit to these facilities, it was observed that these demonstration sites/FRU facilities were recently completed and opened. The skill lab in the district hospital was not accessible on two of the three attempts, as the key was with the In-Charge who was not present. The facility was not easily accessible. The FRU skill labs were accessible. The skill labs appeared to be new and clean compared to the other nearby areas. The medical officer and pediatrician from the facility were reported to be the officers in-charge of the facility. However, based on the interactions with the Medical Officers/Pediatricians and nurses/ANMs, it was apparent that these facilities had yet to start functioning as planned. The staff nurse/ANM and the doctor, both were not clear about the activities to be undertaken in the facility at the time of survey.

Figure 19: Demonstration site facility at a FRU in Gonda

8. Community and household survey

8.1. *Cluster characteristics: Availability of health care facilities*

Out of the 40 clusters surveyed, 32 clusters had sub-centres and 18 clusters had PHCs within the area. For the other clusters, the sub-centre/PHC were located within 5 kms. A higher proportion of clusters in Gonda had a government facility located in the cluster while in Aligarh, there was a higher proportion of private clinic/hospital in the clusters.

Table 13: Health facilities and services available within the cluster surveyed

Facilities available in cluster	Proportion of clusters		
	Aligarh (n=10) (%)	Gonda (n=30) (%)	Total (n=40) (%)
Government			
Sub-centre	60	90	82
PHC	30	43	40
Private			
Private Clinic	70	30	40
Private Hospital	40	13	22
Informal Practitioner	50	57	55
Services			
Chemist	90	30	45

8.2. Characteristics of households and women

A total of 642 women, 482 women in Gonda District and 160 women in Aligarh District, were included in the study. While 35% of these women lived in nuclear families, 65% were from joint families. The proportion of women from nuclear families was more in Aligarh (63%) compared to Gonda. The majority of the women interviewed were Hindu (73%), while 26% were Muslim. The women interviewed ranged from between 17-42 years old with the majority under 30 years old. The literacy status among the women interviewed was quite worrisome as almost half of them (48%) were illiterate. The proportion of illiterate women was a little higher in Aligarh (54%) compared to Gonda (46%). Among the husbands of these women, 30% were illiterate. While most of the women interviewed were housewives (92%), their husbands were unskilled laborers (28%), worked in agriculture or self-employed (25%), in service fields (15%) and skilled laborers (13%). A majority (87%) of the households surveyed had cell phones, with 83% in Aligarh and 88% in Gonda. The overall availability of a TV was reported in 39% of households, with fewer households in Gonda (28%) having a TV compared to Aligarh (70.6%). Out of these households, 30% had motorized, two-wheeled vehicle and 5.49% had four-wheel vehicles. About one-third (31%) of the families reported having BPL card with BPL card holder status higher in Gonda (37%) than Aligarh (11%). It was encouraging to find that 79% of the interviewed mothers knew about the ASHAs/AWWs in their respective areas, which was higher in Gonda (88%).

8.3. Care during pregnancy

8.3.1. Frequency of pregnancy care interactions

With respect to the index infant, their most recent pregnancy was their first-for 28% of the women. While 79% of the women had at least one ANC contact, only 29% of women had four or more ANC contacts. This was higher in the 20-34 year old group, women for whom this was their second or third pregnancy, and Hindus. Overall, women in general and especially those with ten or more years of education, were more likely to have had four or more ANC visits. Almost half (49%) of the women in Aligarh had four or more ANC contacts. On average the women had 2.9 ANC interactions (95% CI 2.7-3.0) during their last pregnancy. Almost two-thirds (64%) of the ANC care received by women was from the government sector (49% from health facilities and 15% from outreach sessions). Only 9% received ANC care from the private sector. The median age of gestation at their first ANC visit was 3 months.

Table 14: ANC received by women by background characteristics among live births

Characteristics	Any ANC (n=465) (%)	≥4 ANCs (n=148) (%)
Age at birth		
<20 Years	3	1
20-34 Years	90	94
35-49 Years	7	5
Birth order		
1	32	37
2-3	47	49
>4	21	14
Educational Status (years of completed education)		
No education	45	38
<5 years	2	1
5-9 years	25	21
10 or more years	28	40
Religion		
Hindu	75	76
Muslim	24	24
Caste/Tribe		
SC	22	17
ST	2	1
OBC	39	37
General	36	45

8.3.2. Quality of pregnancy care interactions

Although the number of ANC contacts was encouraging, the quality of care and services delivered during these contacts was poor. Most of the ANCs missed the essential service components like weight, height, blood pressure, blood test, urine test, abdominal examination, breast examination and mentioning the expected date of delivery. The quality of ANC services (components of ANC services) was better at private sector facilities when compared with public sector health care institutions. Only 9% of women received all of the essential components of ANC. TT vaccine was received by 76% of women. Counseling on breastfeeding was received by 47% women in Gonda and 44% in Aligarh. Just as expected, those women who received ANC at home were least likely to receive all of the essential ANC components.

Danger signs like vaginal bleeding (16%), convulsion (17%), abdominal pain (27%) and high blood pressure (12%) during pregnancy were discussed with a few women during ANC contacts and were also experienced by women during pregnancy.

Only 21% of the women took IFA tablets for 90 or more days during their most recent pregnancy. About one-fifth (21%) of the women took iron supplements for less than 90 days. About half (48%) of the women reported not taking any IFAs (even for a single day) during their most recent pregnancy.

Birth preparedness counseling was received by 40% and 29% women in Gonda and Aligarh, respectively. Of these women, only 45% had prepared for transport, 44% for clean delivery, 56% for finances, 20% identified a birth attendant and 6% had identified blood donors for the delivery as part of their birth preparedness.

Table 15: ANC services received by women by place of ANC among live births

Characteristics	Only public (n=351) (%)	Only private (n=145) (%)	Mixed public and private	Only home (n=26) (%)
ANC services provided				
Weighed	56	66	76	8
BP Checked	42	67	65	4
Urine sample taken	48	62	66	8
Blood sample taken	50	76	76	4
Abdomen examined	25	65	55	12
Breast examination	25	25	38	8
Ultrasound done	53	83	93	12
DD told	47	71	76	12
Percentage receiving information on specific pregnancy complications				
Vaginal Bleeding	18	20	24	0
Convulsion	18	21	31	8
Abdominal pain	29	31	41	4
High blood pressure	12	17	24	0

Table 16: Pregnancy complications in women with live births

Pregnancy Complication	Aligarh (n=150) (%)	Gonda (n=442) (%)	Total (n=592) (%)
Swelling of hands or face	12	22	19
Visual disturbances	2	8	6
Paleness	11	11	11
Excessive fatigue	16	38	32
Weak/no movement of fetus	9	11	10
Convulsions	1	10	8
Abnormal position of fetus	2	5	4
Excessive vomiting	3	18	14
Malaria or high fever	2	9	7
High BP	1	3	3
Excessive bleeding	0	2	2
Vaginal discharge with itching/foul smelling	2	8	6

As shown in Table 16 above , the most common pregnancy complication was excessive fatigue, followed by swelling of hands and feet, and excessive vomiting.

Table 17: ANC indicators by background characteristics among live births

Parameters	≥3 ANC visits (n=266) (%)	ANC in 1st trimester (n=326) (%)	Tetanus protection (2TTs) (n=449) (%)	Given/ bought ≥90 IFA tablets (n=119) (%)	Consumed IFA tabs for ≥90 days (n=117) (%)	Deworming (n=85) (%)
Mother's age at birth						
≤20 years	2	3	4	2	2	2
21-34 years	93	90	89	92	91	88
35-49 years	5	7	7	6	6	8
Birth Order						
1	33	33	33	39	35	32
2-3	46	46	46	42	44	45
4+	19	20	21	18	19	23
Residence						
Rural (Gonda)	70	72	76	81	80	98
Urban(Aligarh)	30	28	24	19	20	2
Education						
No education	42	37	45	32	33	38
≤5 years	1	2	1	1	1	2
5-9 years	20	25	23	29	28	33
≥ 10 years	34	29	25	37	37	23
Religion						
Hindu	74	74	77	75	75	81
Muslim	25	24	22	24	24	18
Caste						
SC	19	20	20	12	19	15
ST	1	3	1	0	0	0
OBC	35	40	40	39	38	39
General	40	34	34	42	42	39

**Higher consumption of IFA than received because of higher responses as don't know in consumption part.*
***25.7% responded as don't know.*

It is interesting to observe that most of the mothers in the 21-34 year old age group cared for their last pregnancies better in comparison with women from older and younger age groups. However, as women had more pregnancies, ANC indicators diminished. Women from rural area had better ANC care practices compared to women from urban areas. It was interesting to observe that women with no education behaved similarly to those with higher education, which were better than those women with some education. Muslims mothers lagged in usage

of TT, IFA and deworming services during pregnancy as compared to Hindu mothers. Women from the SC and ST categories had poorer ANC indicators than their counterparts from OBC and in general.

8.4. Intra-partum care

8.4.1. Place and type of delivery

Among the women interviewed, 70% delivered in a health facility, which was higher in Gonda (rural); 73% of deliveries were attended by skilled health personnel (doctor/nurse/ANM). This difference in rates of institutional deliveries and skilled attendance, could have been due to some non-institutional deliveries being attended by the skilled health personnel, as shown in Table 18 below. In addition, 2% of deliveries were attended by ASHAs and no birth assistance was received by 2% of the women. The proportion of deliveries assisted by doctors was higher in urban areas (Aligarh), whereas those assisted by ANMs was higher in rural areas (Gonda). It was interesting to note that more TBAs assisted a larger proportion of deliveries in urban areas (Aligarh). The overall caesarean rate was reported to be 7%, with a higher proportion in Aligarh (14%).

Table 18: Distribution of skilled birth attendance by place of delivery

	Institutional Delivery (n=414) (%)	Home Delivery (n=160) (%)	Total (n=574) (%)
Aligarh	97	25	74
Gonda	97	7	73
Total	97	13	73

Table 19: Care at delivery by place of delivery for live births

Parameters	Urban: Aligarh (n=150) (%)	Rural: Gonda (n=442) (%)	Total (n=592) (%)
Place of delivery			
Health facility	65	72	70
At home	32	25	27
On the way	0	1	0
Others (specify)	3	2	2
Assistance during delivery			
Doctor	41	29	32
ANM/Nurse/LHV	33	44	34
SBA	21	11	14
Dai	1	0	0
ASHA	0	3	2
AWW	0	0	0
Others	1	10	7

	Urban: Aligarh (n=48) (%)	Rural: Gonda (n=112) (%)	Total (n=160) (%)
No one	3	2	2
Any skilled provider	74	73	73
Caesarean section	14	5	7
For home delivery			
Hand washing before conducting delivery	59	81	75
Used gloves before conducting delivery	45	11	20
Delivery conducted on clean surface	62	79	74
Clean blade used to cut the cord	98	88	91

A significant proportion of deliveries, 25% in Gonda (rural) and 32% in Aligarh (urban) happened at home. Overall about three-fourths (73%) of the deliveries were attended by skilled personnel. While in Gonda 5% women delivered by cesarean section (CS), the CS rate was about three times that in Aligarh District.

Among home deliveries, 75% of birth attendants washed hands (more in Gonda, 81%), 74% of deliveries occurred on a clear surface (more in Gonda, 79%) and a clean blade was used to cut the cord in 91% of deliveries (more in Aligarh, 98%). The person helping with the delivery wore gloves in only 20% of the home deliveries.

Table 20: Place of delivery by background characteristics

Characteristics	Institutional delivery (n=414) (%)	Home delivery (n=160) (%)
Age of Mother		
<20 years	68	32
21-34 years	71	26
35-49 years	64	32
Birth Order		
1	76	21
2-3	69	28
4+	65	32
Residence		
Rural(Gonda)	72	25
Urban(Aligarh)	66	32
Years of education		
No education	63	34
<5 years	72	27

Characteristics	Institutional delivery (n=414) (%)	Home delivery (n=160) (%)
5-9 years	76	27
≥ 10 years	82	12
Religion		
Hindu	71	25
Muslim	66	32
Caste		
SC	64	32
ST	70	30
OBC	66	32
General	79	21
Presence of TV		
TV present	69	26
TV not present	70	28
Presence of Radio		
Radio present	81	17
Radio not present	68	29
ANC status		
ANC done	78	19
ANC not done	39	60
TOTAL	70	27

Delivery at an Institution was more prevalent among women in the 21-34 year old group, first gravid, urban (Aligarh), with 10 or more years of education and from the general caste.

8.4.2. Quality of intra-partum care interactions

Among the women who had live births (n=592), 14% experienced intra-partum complications. The complications experienced were premature labor, excessive bleeding, prolonged labor, difficult labor, breech presentation, convulsion, high blood pressure, high fever, retained placenta and anemia.

Table 21: Complications experienced by women during last delivery

Complications	Aligarh (n=150) (%)	Gonda (n=442) (%)	Total (n= 592) (%)
Premature labor	1	8	6
Excessive bleeding	1	5	4
Prolonged labor	3	5	5
Difficult labor	4	7	7
Breech presentation	2	2	2
Convulsions	0	9	7
High BP	1	5	4
High fever	1	8	6
Retained placenta	0	2	2
Anemia	24	10	14

Only one-third (33%) of women reported receiving an injection between the birth of their child and the delivery of the placenta to prevent excessive bleeding. Placenta deliveries requiring traction/pulling by the birth attendant were reported by 13% of the women. Uterine massage was received by half (50%) of the respondents after the delivery of the placenta. Anemia was the most common complication experienced by women during delivery, followed by difficult labor, premature labor, convulsions and fever.

Home delivery was conducted on a clean surface in 75% of cases and nothing was applied to the cord stump in 43% of newborns. Thread was used for tying the cord in almost (97%) of all cases. In response to the question regarding reasons for delivering at home, more than half (54%) of the women indicated that they did not feel a need for a hospital delivery, 17% indicated perceived cost of a facility delivery and 9% lacked confidence in the government health facility.

At the time of birth, 45% of women were told their baby's weight and most (95%) of the babies were dried and wrapped in a cloth after delivery.

8.5. Postpartum care

8.5.1. Frequency of postpartum care interactions

Table 22: Postnatal care received by background characteristics

Characteristics	Received any PNC (%)	Received PNC within 2 days (%)	Number of women (n)
Age of mother			
<20 years	58	47	19
21-34 years	58	52	520
35-49 years	52	48	50
Birth order			
1	60	54	177
2-3	56	50	274
4+	53	52	135
Residence			
Rural(Gonda)	59	53	442
Urban(Aligarh)	53	47	150
Years of Education			
No education	51	46	270
<5 years	73	55	11
5-9 years	67	62	144
≥ 10 years	61	55	130
Religion			
Hindu	55	50	431
Muslim	63	56	156
Caste			
SC	49	43	122
ST	60	50	10
OBC	55	50	241
General	62	58	190
Place of Delivery			
Hospital	58	53	414
Home	53	47	160
TOTAL	**57**	**52**	**370**

Overall little more than half of the women received the postnatal check-up (PNC). The PNC rates for institutional delivery and home delivery were not much different (53% vs. 47% respectively). Among those who received PNC, majority received it within two days after delivery.

Table 23: Timing of postnatal check-ups by residence

PNC contact timing	Urban: Aligarh (n=150) (%)	Rural: Gonda (n=442) (%)	Total (n=592) (%)
Timing of first postnatal checkup after delivery			
Had PNC contact	53	59	57
< 4 hours	44	46	46
4-23 hours	3	4	4
1-2 days	1	2	2
3-41 days	3	4	4
≥42 days	0	0	0
No PNC contact	45	40	42

Among those who had any PNC, little less than half (46%) received it within 4 hours of delivery. The proportion was not different for urban or rural areas (44% vs. 46% respectively). Rate of PNC contact was little higher for institutional deliveries compared to the home deliveries (58% vs. 46%). In first 10 days after delivery, 68% of the mother-newborn dyad had at least 3 PNCs.

Table 24: Timing of postnatal checkup by place of delivery

PNC contact timing	Institutional delivery (n=414) (%)	Home delivery (n=160) (%)	Total (n=574) (%)
Timing of first postnatal checkup after delivery			
Had post-natal checkup	58	46	57
< 4 hours	48	39	47
4-23 hours	3	5	4
1-2 days	2	3	2
3-41 days	3	1	4
≥42 days	0	0	0
No postnatal checkup	40	46	42

8.5.2. Quality of postnatal care

During PNC contacts, 31-42% of rural mothers (in Gonda) and 7-26% urban mothers (in Aligarh) remembered of receiving the key components the postnatal care. The quality of care was better in Gonda compared to Aligarh. Overall all the signal functions of PNC targeted at newborn (those mentioned in Table 25) were received by mere 15% (95% CI -0.16 – 0.46) of cases.

Table 25: Proportion of women with signal functions of postnatal care

Signal functions of PNC received	Aligarh (n=150) (%)	Gonda (n=442) (%)	Total (n=592) (%)
Counseling on cord care and cord checked	14	42	35
Counseling on danger signs of newborns	7	32	26
Assessed the baby's temperature	12	31	26
Counseling on breastfeeding and observed while breastfeeding	16	37	32
Weighed the baby	26	42	38

Bathing was delayed for at least 6 hours and 24 hours in 97% and 70% of the newborns respectively.

8.5.3. Breastfeeding practices

Less than half (44%) of the newborns were put to mother's bare chest soon after delivery. Breastfeeding was initiated within one hour in 42% newborns and colostrum was given to 74% newborns. While 46% newborns were reported to be exclusively breastfed at the time of survey (by the age of 1-6 months).

Table 26: Breast feeding pattern by background characteristics

Characteristics	Started BF within 1 hr (%)	Started BF in >1 hr <24 hrs (%)	Only BF in last 24 hrs (%)	Fed colostrum (%)
Residence				
Urban (Aligarh)	26	45	29	71
Rural (Gonda)	47	25	42	75
Sex of infant				
Male	45	26	36	75
Female	39	33	42	73
Mother's Education				
No education	40	33	35	74
<5 years	45	36	73	82
5-9 years	46	28	42	74
≥10 years	43	25	38	76
Religion				
Hindu	44	28	38	74
Muslim	36	48	36	74
Caste/Tribe				
SC	52	21	46	75
ST	10	70	60	80
OBC	37	34	36	68
General	43	29	35	80

Characteristics	Started BF within 1 hr (%)	Started BF in >1 hr <24 hrs (%)	Only BF in last 24 hrs (%)	Fed colostrum (%)
Delivery Assistance				
Skilled	46	31	42	79
Unskilled	29	32	27	64
None	46	8	38	46
Place of Delivery				
Facility	46	32	42	79
Home	30	29	26	61
Other	47	6	59	82
TOTAL	42	30	38	74
BF: Breastfeeding				

It was interesting to note that mothers, who breastfed within 1 hour were more from rural area (Gonda), had male newborns, Hindu by religion and SC by caste. The mothers who breastfed their newborns within 1 hour to 24 hours after delivery were more from urban area (Aligarh), with educational qualification of <5 years, Muslims, ST by caste and delivered by an unskilled birth attendant.

8.6. Neonatal morbidity and mortality

Neonatal death was reported in 7% of the households surveyed. Any illness during first month was reported in 21% of newborns by the mothers. The illnesses in newborns included fever, lethargy, difficult breathing, poor sucking, hypothermia, redness/discharge around cord, red/swollen eyes, yellow palms or soles, lethargy and unconsciousness as shown in the table below.

Table 27: Neonatal morbidity experienced in the newborns

Neonatal illnesses	Aligarh (n=150) (%)	Gonda (n=442) (%)	Total (n=592) (%)
Fever	7	16	14
Cold to touch	0	2	2
Poor sucking or feeding	3	4	4
Lethargy	1	6	5
Difficult breathing	6	4	5
Yellow palms/ soles/eyes	3	2	2
Unconsciousness	0	1	1
Redness around/ discharge from cord	0	1	1

Regarding care seeking during illness among newborns, more male newborns were taken to care provider compared to the female newborns. Care seeking practice during

illness was less among households with mothers without formal education and from ST caste. The care seeking practices by household background characteristics are given in Table 28.

Table 28: Care seeking for neonatal illnesses by background characteristics

Characteristics	Difficult breathing (%)	Fever (%)	No. of infants (n)	Difficult breathing		Fever	
				Sought treatment from facility/care provider (%)	No. of infants (n)	Sought treatment from facility/care provider (%)	No. of infants (n)
Sex							
Male	6	15	299	100	7	93	44
Female	4	13	282	75	4	89	38
Residence							
Urban (Aligarh)	6	7	150	100	1	100	10
Rural (Gonda)	4	16	442	90	10	90	72
Mother education							
No education	3	13	270	67	3	86	35
<5 years	9	9	11	100	1	100	1
5-9 years	8	13	144	100	4	100	19
≥ 10 years	5	15	130	100	3	95	20
Religion							
Hindu	4	14	431	86	7	93	59
Muslim	4	13	156	100	3	86	21
Caste /tribe							
SC	8	7	122	67	3	78	9
ST	10	30	10	100	1	100	3
OBC	3	14	241	100	4	89	35
General	4	16	190	100	3	97	31
Total	**5**	**14**	**592**	**89**	**27**	**91**	**82**

8.7. Characteristics of households with stillbirth

Among the households surveyed, stillbirth was reported in 43 (7%) households. More stillbirths (8%) were reported from Gonda rural area. Majority of the stillbirths were at the hospitals and were assisted by SBAs.

Table 29: Care at delivery by place of delivery among stillbirths

Parameters	Urban: Aligarh (n=5) (%)	Rural: Gonda (n=38) (%)	Total (n=43) (%)
Place of delivery			
Health facility	80	84	84
At home	20	13	14
Others (specify)	0	3	2
Assistance during delivery			
Doctor	80	37	51
ANM/Nurse/LHV	0	39	35
Dai	20	0	2
Others	0	13	12

The background characteristics of women who had stillbirth were not much different from those who had live births. Among the women who had stillbirth, 79% had any ANC contact, 42% had 3 or more ANC contacts, 74% had 2TT injections, 18 % consumed ≥90 IFA tablets and 24% received deworming agent. These ANC indicators were not much different from those of the pregnant women who had live birth.

Table 30: ANC by background characteristics of mothers who had stillbirths

Characteristics	Any ANC received (n=34) (%)	≥4 ANCs received (n=3) (%)
Age at birth		
<20 Years	3	0
20-34 Years	97	100
35-49 Years	0	0
Birth order		
1	42	67
2-3	36	33
>4	21	0
Educational Status (years of completed education)		
No education	50	0
<5 years	0	0
5-9 years	20	33
10 or more years	30	67
Religion		
Hindu	74	100
Muslim	26	0

Characteristics	Any ANC received (n=34) (%)	≥4 ANCs received (n=3) (%)
Caste/Tribe		
SC	18	33
ST	6	0
OBC	38	0
General	38	67
TOTAL	79	7

Compared to the women with live births, the women who had stillbirths experienced some complications during pregnancy (like weak/no fetal movement, convulsion and fever) and during delivery (like prolonged labor and high fever) more than their counterparts who had a live birth. In the first ten days after delivery, 72% of the mothers had at least three PNCs.

9. Discussion

This report includes the findings from the situational analysis of perinatal and newborn care service readiness of the facilities in Gonda and Aligarh Districts in Uttar Pradesh and coverage of critical indicators for mothers and newborns at household level. The study attempted to capture the components along the continuum of care between pregnancy and the newborn period at facility and community level. Overall, the survey findings present an insight into various components of maternal and newborn care in rural (Gonda) and urban (Aligarh) areas of Uttar Pradesh, and the status of the public health facilities for delivery of these services.

In the study districts, the district hospitals are handling about one third of the total delivery load for the districts. More than half of the deliveries are being conducted by the CHCs/FRUs. On an average, at the PHCs about 100 deliveries every month are being done. Only few deliveries are happening at the sub-centres. During April 2013-March 2014, while 97-99% of the deliveries at sub-district facilities resulted in live birth, about 7% of the deliveries at district hospital resulted in stillbirth. This may be due to more referral cases were being handled at DHs. The ready availability of 102 ambulances, limited availability and involvement of doctors in delivery, poor basic infrastructure and facilities may be the reasons for low delivery load at the PHCs.

Facilities faced an ongoing challenge with regard to continuous access to electricity. Additionally, the district and sub-district hospitals were not equipped fully with some of the basic facilities like toilets, adequate number of beds, and privacy for breastfeeding. The District Women's Hospital at Gonda had a newborn stabilization unit, which was not in a good state to deliver the desired newborn care services. Many of the sub-district hospitals, including the FRUs lacked many of the essential services for routine obstetric and newborn care. None of the facilities met all the criteria according to the IPHS. In addition to availability, easy accessibility to the essential equipment must be ensured; at many of the facilities, although the resuscitation bag and mask were available, they were not readily accessible. While most of the essential medicines were available at the district and sub-district hospitals, many of the sub-district hospitals didn't have all the medicines.

Most of the deliveries at these facilities were either conducted by staff nurses (at the DH and SDHs) or the ANMs (at the CHCs and PHCs). Although every facility had at least one doctor, involvement of doctors in obstetric and newborn care at the PHCs and CHCs was negligible, as reported by the staff and observed by the teams. At several facilities, lady AYUSH doctors were there, but most of them did not provide support during labor and delivery (due to lack of training and confidence). At one CHC, the AYUSH lady doctor was conducting a delivery, but she was never trained in SBA or newborn care in her more than two decades of service. Many of the existing staff positions were vacant at the time of the survey. The facilities appeared deserted after 1:00 PM even through the ANMs were available on an on-call basis.

Disinfection practices for the reusable items and equipment, and biomedical waste handling were poor. Hand washing practice needs improvement and attention. Availability of running water at many of the facilities was a challenge. Use of gloves during delivery at facilities was observed, but reuse of the gloves after cleaning was prevalent. The nurses/ ANMs reported disinfecting the gloves before use.

Guidelines and protocols for delivery and newborn care were available at very few facilities. This indicates a very limited practice of referring to, and most likely adherence to, the protocols. Supervisory visits were made at one-two month intervals, but the focus of the observation did not include labor and delivery, and newborn care. The primary focus of supervision visits was the immunization and incentive linked programs.

It was interesting to observe that only district and sub-district hospitals (DH/SDH) could score 75% or higher on the benchmarks set for facility readiness for providing delivery and

newborn resuscitation care, and also for only for a few parameters for delivery services and signal functions for newborn care. Almost all of the other facilities were not ready to adequately provide for the majority of the services for labor and delivery, and newborn care, including resuscitation.

A significantly smaller proportion of doctors was found to be trained in maternal and newborn care, compared to nurses/ANMs at these facilities. The knowledge levels of doctors and nurses/ANMs who received training were somewhat better, especially in relation to the positive pressure ventilation component, than their counterparts who were not trained. Very few of the doctors and nurses/ANMs had adequate knowledge on all of the components of ENC and care of a non-breathing newborn. The knowledge pattern among the nurses and doctors was similar. A considerable knowledge-skill gap was observed in all the areas of newborn care and resuscitation, except positive pressure ventilation for both doctors and nurses/ANMs. The special focus on positive pressure ventilation during the recent trainings they received may explain this.

Apart from the District Women's Hospital, two additional demonstration sites were recently opened at the CHCs/FRUs in Colonelganj and Mankapur in Gonda District. The demonstration sites are yet to be fully operational. The medical officers and nurses/ANMs, responsible for the activities at these demonstration sites were yet to assimilate the philosophy and begin activities at these facilities. A clear guideline and activity chart for these demonstration sites, which explains roles and responsibilities may be useful.

More than three-fourths of the women who had a live birth in the last six months had at least one ANC contact, only 29% completed four or more ANC contacts. About two-thirds of women received ANC care from the government sector. The majority of the ANC care was received from the health facilities and only 15% at outreach sessions. There were variations in the ANC care provided across the social strata. It was interesting to note that the majority of the households had mobile phones, but TV was found in only 40% of households.

It was apparent that many ANC contacts lacked quality and content however, only 9% of women had received the core components of pregnancy care by the end of their pregnancy. ANC care, including information about specific danger signs of pregnancy, was more complete among the women who attended private facilities. For mothers with higher numbers of pregnancies and fewer years of formal education, the number of ANC visits declined. While three-fourths of women received TT protection, only one-fifth of women received iron prophylaxis for 90 days, both of which were found to be highest among the mothers between 21-34 years old, for whom this was their first pregnancy, from rural (Gonda) areas and who had more years of education.

About 70% of the deliveries happened at a health facility and 73% of all deliveries were attended by a SBA. Among the women who had an institutional delivery, most were in the 21-34 year old group, this was their first pregnancy and they had more years of education. More than half of the women who delivered at home did not feel the need to deliver at a

facility. Among home deliveries, clean practices by the birth attendant like washing hands, delivering on a clean surface and use of clean blade to cut the cord were recalled by three quarters of women. However, use of gloves by birth attendant was reported by only one-fifth of the women.

About one-third of women reported use of uterotonics at delivery, and the practice of active management of the third stage of labor was low. Use of partograph was not observed during the visits to these facilities, although nurses at the district hospital and a CHC reported using them. Although the practice of recording birth weight was observed at the facilities, less than half of the women remembered being told about the birth weight of their baby. Anemia was the most common complication experienced by the women or told to them during delivery.

A little more than half of the women received any type of PNC, and most of them received it within the first two days after delivery. It was interesting that the PNC care for home deliveries was not much different than that received by the women who delivered at hospitals. The PNC care provided in rural area was not much different from urban area.

The quality of PNC was low as only 15% newborns were checked for the essential signal functions of PNC. The hospital stay for most of the women was less than 24 hours. The nurses/ANMs expressed that poor infrastructure and facilities at the hospitals, coupled with challenges related to security and food, prevent women for staying longer. Additionally, they also believed that the availability of ambulance services and no requirement for discharge slip for transfer were other reasons women did not stay longer in the hospital.

It was encouraging to find that bathing was delayed for more than 24 hours in 70% of newborns. Most of the newborns were dried and wrapped in cloth after delivery and less than half of the infants were put to their mother's bare chest soon after delivery. Colostrum was given and breastfeeding was initiated within one hour of birth in 74% and 42% of newborns, respectively. Although exclusively breastfed infants were 46% as reported by mothers, only 38% of infants were exclusively breastfeed within the 24 hours prior to the interview.

Neonatal deaths were reported in 7% of the live births. Among the 21% of newborns who had any neonatal illness, 90% were taken to a HF or a care provider for treatment.

Among the surveyed households, 7% reported a stillbirth during the most recent pregnancy. The majority of these had delivery at a health facility and were assisted by a SBA. The background characteristics and ANC care indicators were not much different from the households with live births. Some complications during pregnancy and delivery were more reported among these women.

Overall summary: Newborn care service availability, quality of care at delivery, and subsequently the quality of postpartum/postnatal care services were low and inadequate at most of the health facilities surveyed. The knowledge of the doctors and nurses/ANMs were not translated into skills. The skills of the nurses and ANMs were not up to an acceptable level at many facilities, including the district hospitals. Many of the recently trained nurses/ANMs found it challenging to demonstrate the methods and processes for resuscitation of a non- breathing newborn through positive pressure ventilation and assessment of effective ventilation. The skill status of the doctors was very poor and many of them were either not interested or refused to undertake the assessment.

The demonstration sites (skill labs) had been proposed as the focus of the skill building and skill retention effort. The recently opened facilities were yet to start functioning as envisioned. The philosophy and activities under the umbrella of demonstration sites have yet to spread to the drivers and facility users. The stewards of these demonstration sites must be made fully aware of the philosophy and activities provided in order to maximize gains in maternal and newborn health.

10. Limitations

There are few limitations that need to be considered while reading and interpreting the data collected. While the majority of the facility assessment components were observed, some assessments relied on the statements and narratives made by the respondents. The household level data which measured the behaviours and services received during pregnancy, intrapartum and newborn periods, may be susceptible both to recall error and recall bias. We tried to limit recall error by only including the women who delivered in the six months prior to the survey.

11. Next steps

The facility assessment, knowledge and skill assessment, and household survey are expected to be repeated after implementation of the intervention package. At the time of the endline survey, an analysis of change between baseline and endline indicators for the critical parameters will be made, adjusting for important contextual factors.

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Annex 1: The signal functions maternal and newborn care signal functions[20]

Dimensions of Facility Care Obstetric Newborn	Signal indicators	
General requirements for health facility	Service availability 24/7	
	Skilled providers in sufficient numbers	
	Referral service to higher-level care, communication tools	
	Reliable electricity and water supply, heating in cold climates, clean toilets	
A. Routine care (for all mothers and babies)	**Maternal**	**Newborn**
	Monitoring and management of labor using partograph	Thermal protection
	Active management of third stage of labor (AMTSL)	Immediate and exclusive breastfeeding
	Infection prevention measures (hand-washing, gloves)	Infection prevention including hygienic cord care
B. Basic emergency care (for mothers and babies with complications)	Parenteral magnesium sulfate for (pre-)eclampsia	Antibiotics for preterm or prolonged PROM to prevent infection
	Assisted vaginal delivery	Corticosteroids in preterm labor
	Parenteral antibiotics for maternal infection	Resuscitation with bag and mask of non-breathing baby
	Parenteral oxytocic drugs for haemorrhage	KMC for premature/very small babies
	Manual removal of placenta for retained placenta	Alternative feeding if baby unable to breastfeed
	Removal of retained products of conception	Injectable antibiotics for neonatal sepsis
		(PMTCT if HIV-positive mother)
C. Comprehensive emergency care (functions in addition to basic emergency care)	Surgery (e.g., C-section) including anaesthesia	Intravenous fluids
	Blood transfusion	Safe administration of oxygen

Annex 2: Components used for scoring of facilities for facility readiness

1(a) INFRASTRUCTURE (Delivery)
Presence of separate labor room and delivery room; sufficient light to perform tasks during day and night; separate electricity back up; has means of ventilation; curtains for privacy; waiting area for the visitors; functional clean toilets.
1(B) INFRASTRUCTURE (Newborn care)
Same as 1(a) except a separate labor and delivery room but in addition presence of dedicated areas for KMC and exclusive breastfeeding.
2(A) SERVICES PROVIDED (Delivery)
Use of partograph, CCT, oxytocin (injectable) or misoprostol, magnesium sulfate, injectable antibiotics, antibiotics in PROM and Corticosteroids in Preterm labor and antiretroviral drugs for prevention of vertical transmission of HIV along with availability of manual removal of retained placenta and assisted vaginal delivery.
2(B) SERVICES PROVIDED (Newborn care)
Availability of resuscitation services with bag and mask, initial care and stabilization of sick newborn, management of LBW babies, thermal protection, cord care, alternative feeding, oxygenation facility, intravenous administration of drugs and fluids, eye prophylaxis (at the end of first hour), intramuscular Vitamin K administration, immunization, nursery for newborns not born at the facility. Isolation of sick newborns.
3(C) ESSENTIAL DRUGS (Delivery)
Adequate availability of Methyldopa, Cotrimoxazole, Diazepam, Tetracycline eye ointment, Sulphadoxine pyremethamine, Ferrous and folic acid, Calcium gluconate, Capsule Amoxycillin-250mg, Misoprostol-200mcg oral/vaginal, Inj. Hydrocortisone, Salbutamol, Nifedipine, Inj. Naloxone, Inj. Betamethasone/Dexamethasone, Anti D immunioglobulin, Inj. Ethamsylate Povidone Iodine Ointment , Inj. Gentamycin, Inj. Ampicillin, Inj. Magnesium Sulphate-50%w/v; 10ml vials, containing 5g in total volume, Adrenaline, Atropine, Morphine/Pethidine, IV fluids, Inj. Lignocaine 2%w/v, Inj Vitamin K, Inj Metronidazole, Inj. Ampicillin-500mg.
3(B) ESSENTIAL DRUGS (Newborn care)
Availability of Gentian Voilet Paint, Oral Nystatin, Injection Vitamin K, Atropine, Inj. Adrenaline, Inj. Amikacin, Inj. Aminophyllin, Inj. Ampicillin, Inj. Augmentin, Inj. Calcium gluconate-, Inj. Dopamine, Inj. Dextrose (IV solution, Inj. Gentamycin, Inj. Phenobarbitone, Inj. Phenytoin, Inj. Potassium chloride, Inj. Sodium bicarbonate, Inj. Sodium chloride, Inj. Sterile water for IP-Each ampoule containing 5ml, Drops Paracetamol, Drops Domeperidone, Drops Dicyclomine.
4(A) EQUIPMENT AND SUPPLIES (Delivery)
Availability of Suction catheter (size 8,10), Cord clamp, Endotracheal tube (2.5mm, 3.0mm,3.5mm with adapter), all sizes of IV cannulas, needles and catheters , All sizes of gloves, Suction tube, Foleys Catheter, 16 No BIS, self-retaining catheter, Sanitary Napkins (2 pkts per case), b aby clothes for drying and receiving the baby (3 per child), Mucus extractor, drug tray kit complete and replenished, easily accessible ambulage with mask, Soap, Single use syringes needles, Sterile blade or scissors, disinfectant, waste receptacle with lid, Refrigerator (storage of medicine) and wall clock with seconds hand.

4(B) EQUIPMENT AND SUPPLIES (Newborn care)
Availability of Pediatric stethoscope, Baby weighing Scale, Thermometers, Radiant Warmer, Self-inflating bag and mask (size 0, 1), Laryngoscope for newborn (with blades of all sizes), Foot operated/electric Suction pump, Hub Cutter (syringe), Centralized oxygen distribution facility/ Full Oxygen cylinders with keys, flow meters, humidifiers, Oxygen hood (Small and Medium) & connecting tubes , Phototherapy unit , Syringe pump, Pulse oxymeter, Light for examination, Measuring tape (vinyl coated), Basin kidney (stainless steel/dressing tray) , Infantometer, Wall clock with seconds hand, Suction tube, Neonatal drip set, Pediatric IV drip set , Towels, Sterile gloves, Syringe, Disinfectant, Alcohol handrub/Sterile Gloves, Linen sheets and blankets, Multistix, Dextrometer, Cord clamp, Endotracheal tubes, Mucus extractor, feeding tubes, Oro-gastric tube.
5(A) GUIDELINES (Delivery)
Presence of guidelines of Skilled birth attendance (SBA), Navjat Shishu Suraksha Karykram (NSSK), Essential newborn, Neonatal Resuscitation, Breast feeding policy and supporting mother for breastfeeding, Care of LBW newborn and Prevention of MTCT of HIV and display of ENC guidelines, Newborn resuscitation, partograph and management of complicated delivery.
5(B) GUIDELINES (Newborn care)
Presence of guidelines of Essential Newborn care, Newborn Resuscitation, Navjat Shishu Suraksha Karykram, Management of Low Birth Weight babies, Thermal protection of the newborn, Kangaroo Mother Care, Exclusive Breastfeeding and National Immunization Schedule.
6(A) INFECTION PREVENTION (Delivery)
Neonatal face mask**,** Self-inflating bag **,** Thermometers **,** Suction apparatus **,** Laryngoscope **,** Surgical instruments being disinfected correctly and hand washed with soap before every delivery.
6(B) INFECTION PREVENTION (Newborn care)
Neonatal face mask, Self-inflating bag , Thermometers, Suction apparatus, Change tube connected to bottle daily, Laryngoscope and Feeding apparatus disinfected correctly.
7(A) 8(A) 7(B) 8(B)Provider Knowledge & Skill (Doctors/Nurses)
Doctors and nurses/ANMs were assessed on a self-administered tool for knowledge and asked to perform on a simulation exercise for skills with respect to various components of Neonatal Resuscitation namely Thermoregulation, Routine Care, Initial steps, PPV - Bag and Mask, Chest Compression and Intubation, Medication.

Annex 3: Broad areas for knowledge and skill assessment of doctors and nurses/ANMs

S. No.	Areas of knowledge and skill
1.	Thermoregulation
1.	Routine Care
2.	Initial Steps – Resuscitation
3.	PPV (Positive Pressure Ventilation)-Bag and Mask
4.	Chest Compression and Intubation
5.	Medication

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014) FACILITY ASSESSMENT TOOL (DH/SDH/CHC/PHC)

Partner Medical College:

State	Uttar Pradesh
District	
Date: _ _ /_ _ /2014	
Commencing Time	_ _ : _ _
Concluding Time	_ _ : _ _

Block	
Facility Name:	

Facility Type

1-District Hospital, 2-Sub-District Hospital,
3-FRU-CHC 4-CHC
5-FRU PHC 6-PHC/UHC
7-Any other (specify)…….. ☐

Instructions for filling the schedule:

1. The **officer in-charge** of health facility to be contacted to facilitate filling up this schedule.
2. For filling the specific components/areas, the **health functionary in-charge of the area** is to be contacted.
3. Observe the components which you can see/ check. Ask the health staff, to confirm or if you are unable to find.

Namaskar, I am _____ from _____ Medical College. I am here with my colleagues to do a survey focusing the services provided to pregnant women and their children in the district. In the context we are studying the readiness of the facility to deliver the desired services. Our team would like to observe the various areas in this facility and interact with concerned health staff. You are an important stakeholder in this study and therefore we would appreciate if you could spare some valuable time to discuss on these issues. This is expected to provide input for appropriate change in policy and program for improving the service delivery quality. Your name and responses will be kept confidential.

Health Facility Assessment

Primary respondent (Name): …….. Designation: ……..

Facility assessment **(District Hospital, Community Health Centre, Primary Health Centre and Urban Health centre)**			
SECTION 1 **Part I: FACILITY IDENTIFICATION INFORMATION**			
No.	**Question**	**Response**	**Skip to**
101	**Location of the facility :-** *Residential area..... 01* *Business/market area..... 02* *Institutional area..... 03* *Far from residential/business area..... 04* *Any other..... 05* *Don't Know..... 99*	☐☐	
102	**Accessibility & transport facility:** **102.1 Condition of the main road** *Good……01, Bad……..02, Don't Know…..99*	☐☐	
	102.2 Condition of the road connecting main road to the facility *Good……01, Bad……..02, Don't Know…..99*	☐☐	
103	**Is there water logging in the area/road leading to this facility** **103.1 During rainy season** Yes……01, No……00, *Don't Know…..99*	☐☐	
	103.2 Is the area flood prone Yes……01, No……00, *Don't Know…..99*	☐☐	
Part II: INFRASTRUCTURE INFORMATION			
104	**What is the usual pattern of electricity supply to this facility?** *Uninterrupted supply(24×7) ..... 01* *available most of the time in day ..... 02* *minimum of 8 hours a day..... 03* *predictable load shedding ..... 04* *Unpredictable load shedding..... 05*	☐☐	
105	**Is the electricity supply functioning at the time of visit?** *Yes….01, available in some areas….02, No……00*		
106	**What is/are the alternate/backup energy source(s) available to compensate electrical power failure?** *Generator (fuel operated)-01 Solar-02, Invertor-03* *Other(specify)…….-04, No backup availabale-00* *Don't Know-99*	☐☐	
107	**In last month, how many days the facility was without electricity?** (no. of days with <8 hours of electricity with back-up))	☐☐ Days	

108	**What is the main sources of water of this facility?** *Piped water ..... 01* *River/Pond .....04* *Handpump..... 02* *Other(specify).....05* *Well..... 03* *Don't Know .....99* *No water 00*	☐☐	
109	**What is the pattern of water supply?** *Piped from overhead tank-01, Bucket/pot & mug-02,* *Any other-03 No water-00 Don't Know-99*	☐☐	
110	**Is the running water currently available?** *Yes-01, Available in some areas-02, No-00,* *Don't Know-99*	☐☐	
111	**Is the water supply available for 24 hours in the facility?** *Yes-01, No-00, Don't Know-99*	☐☐	
112	**In last month, how many days the facility?** **112.1. was without water**	☐☐	
	112.2. had shortage of water	☐☐	
113	**Is there any facility for heating water in winters for use (like geysers)?** *Yes-01, Yes in some parts-02, No-00, Don't Know-99*	☐☐	
114	**Is there toilet available in the facility?** *Yes-01, No-00, Don't Know-99*	☐☐	**If No, Skip to 117**
115	**If yes, What is the arrangement of toilets?** Separate for each ward-01 Common for the whole facility-02 Available outside the facility-03	☐☐	
116	**If yes, What is cleanliness position of the toilets?** (check the postnatal/female ward if available) *Clean -01, Dirty -02, Not seen -00*	☐☐	
117	**Is the laundry facility available at facility?** *Yes -01, No -00, Outsourced -02*	☐☐	
118	**Do you have system for segregation of biomedical waste?** *Yes -01, No -00, Don't Know-99*	☐☐	
119	**How is the Biomedical waste disposed?** *Given to the municipal waste.....01* *Bury in pit .....02* *Thrown in common/ public Disposal pit...03* *Thrown outside the compound.....04* *Thrown inside the compound.....05* *Burning .....06* *Other (specify) .....07* *No waste disposal system .....00* *Don't Know.....99*	**119.1 General waste** ☐☐ **119.2 Contaminated waste** ☐☐ **119.3 Sharps** ☐☐	
120	**Are sharps disposed of in a special container to prevent accidents?** *Yes-01, No-00, Don't Know-99*	☐☐	

121	**Does the facility have a functional communication facility?**	*Yes-01, No-00, Don't Know-99*	
	121.1. Landline telephone	☐☐	
	121.2 Cell phone (owned by facility	☐☐	
	121.3 Cell phone (owned by individual staff)	☐☐	
	121.4 Public telephone (in the facility premises/nearby)	☐☐	
	121.5 Internet	☐☐	
122	**Where is the telephone facility located?** *In office of MO-01, In labor room-02, Other area (specify)-03 Don't Know-99*	☐☐	
123	**Is the telephone facility readily accessible 24×7?** *Yes-01, No-00, Don't Know-99*	☐☐	
124	**Does the facility have a drug store and medicines?** *Yes-01, No-00, Don't Know-99*	☐☐	
125	**Is there a private medicine shop available in vicinity?***Yes-01, No-00, Don't Know-99*	☐☐	

Part III: SERVICES AT THE FACILITY

126	**Does this facility provide any services for 24×7?** *Yes-01, No-00, Don't Know-99, If yes, specify_____*	☐☐	
127	**Which of the following services are provided 24X7 ?** *Yes-01, No-00, Don't Know-99*		

127.1.OPD service (general)	☐☐	**127.9. Blood bank/ storage services**	☐☐
127.2.Antenatal care (OPD)	☐☐	**127.10. Laboratory services**	☐☐
127.3. Delivery services (intranatal)	☐☐	**127.11. General surgery** (including anaesthesia)	☐☐
127.4. Postnatal care	☐☐	**127.12. Immunization services**	☐☐
127.5.Sick newborn care	☐☐	**127.13. Inpatient obstetrics/ Pediatric services**	☐☐
127.6.Obstetric surgery (e.g. cesarean)	☐☐	**127.14. Inpatient general services**	☐☐
127.7.Emergency services	☐☐	**127.15. Referral Transport Services**	☐☐
127.8.Family planning (CuT/OCP)	☐☐	**127.16. Prevention of HIV**	☐☐

128	**Does this facility provide the following newborn care services?** *Yes-01, No-00, Don't Know-99*				
	128.1. Basic newborn resuscitation		**128.6. Phototherapy**		
	128.2. Care of LBW babies		**128.7. Care of sick newborns (admission)**		
	128.3. Stabilization of newborn for referral		**128.8. Advanced resuscitation support**		
	128.4. Kangaroo mother care		**128.9. Others**		
	128.5 Hygienic cord care		**129.10 Exclusive breast feeding**		
129	**No. of beds available for the following? (Write number)** (If not available write …." 00 ")				
	129.1. Total beds ……..		**129.5. Female ward ……..**		
	129.2. Antenatal ward ……..		**129.6. Postpartum ward ……..**		
	129.3. Neonatal care unit ……..		**129.7. Labor room(beds) ……..**		
	129.4. Delivery room (tables) ……..				
130	**Does the facility have a room/dedicated area for the following?** *Yes-01, No-00, Don't Know-99*				
	130.1. Labor room		**130.8. Residential accommodation for doctors & nurses**		
	130.2. Labor and delivery room together		**130.9. Blood bank and laboratory together**		
	130.3. Delivery room		**130.10. Blood bank**		
	130.4. Operation theater		**130.11. Intensive care unit (ICU)**		
	130.5. Postpartum/postnatal ward		**130.12. Neonatal care unit/ Sick Newborn Unit**		
	130.6. Laboratory		**130.13. Casualty/ Emergency**		
	130.7. Female ward (for all female patients)				
131	**Does this facility have any designated area for following services?** *Yes-01, No-00, Don't Know-99*				
	131.1. Breastfeeding		**131.6. Duty room for doctors**		
	131.2. Kangaroo mother care		**131.7. Duty room for nurses**		
	131.3. Sterilizing & autoclaving		**131.8. Training area for staff**		
	131.4. Clean utility storage		**131.9. Drug Store**		
	131.5. Soiled utility storage				

132	**Does the facility has the provision of review/audit of maternal and newborn death on a routine basis?** *Yes-01, No-00, Don't Know-99* *Whether any death has occurred in last 1 year-02*		
133	**If yes, what is the frequency of audit?** *Monthly-01, Once in 3months-02, Once in 6 months-03* *Yearly-04, Never done-00, Don't Know-99* *As & when required-05*		
134	**What programmes related to RCH /maternal/newborn care are being implemented in the district?**	Yes-01, No-00, Don't Know-99	
	134.1-JSY (Janani Suraksha Yojana)		
	134.2-JSSK (Janani Shishu Suraksha Karyakaram)		
	134.3-NSSK (Navjat Shishu Surakhsha Karyakaram)		
	134.4 -Any other		

Part IV:TRANSPORTATION AND COMMUNICATION SERVICES

No.	Question	Coding categories		Skip to
135	**Does the facility have any of the functional vehicles as mentioned below for the referral service?**			
	Vehicle	***(A)*** *Available and functional-01* *Available but not functional-02* *Not available-00*	***(B)*** *Available for referral* *Yes-01, No-00,* *Don't know-99*	
	135.1. Ambulance			
	135.2. Jeep			
	135.3. Car			
136	**What other referral transportation services/facilities are available?** 108/102 Services/Janani Express ..... 01 Other non-profit ambulance by NGO/trust..... 02 Any other(specify) ..... 03 None 00			
137	**What is the modality of referral transportation for the patients/pregnant women/sick newborn?** *By the ambulance/ vehicle at facility(free of cost).....-01* *108/102/Janani Express .....-02* *Other not for profit ambulance (by NGO/Trust).....-03* *Arranged by patients.....-04* *Others(specify):_____.....-05* *No referral transportation.....-00*		**137.1 Usual** **137.2 Occasional**	

138	**If the govt vehicle/ambulance of the facility is used for referral, is there sufficient fuel available today for referral transportation?** *Yes-01, No-00, Not sure-99*	☐☐	
139	**Are there designated fund available for repair and maintenance if needed?** *Yes-1, No-00, Not sure-99*	☐☐	
140	**Is the referral transport facility available for 24×7?** *Yes-01 , No-00, Sometimes-02, Don't Know-99*	☐☐	
141	**Is there a stretcher facility available within immediate reach?** *Yes-01, No-00, Not sure -99*	☐☐	
142	**Which is the nearest Referral facility or centre?** Name…….. Place:…….. Level/type:……..		
143	**How far is this referral hospital from here?**	☐☐ Km	
144	**How long does it usually take to reach there?** (By ambulance/motorized transport)	h h m m	
145	**What is the condition of the road connecting the facility to the referral hospital?** *Good-01, Bad-02, No motorable road-00, Don't Know-99*	☐☐	
146	**What was the most common reason for their referral of patients in last one month? (***If possible, please check from the records of patient who were referred.)* Hospital did not have facilities/ resources.....01 Required services are not available.....02 Patient or attendant requested for that .....03 Hospital was overload .....04 Patient was too serious.....05 Patient was not capable to meet expenditure .....06 Other(specify).....07 Don't Know/Records could not be seen.....99	☐☐	

SECTION II: DELIVERY & NEWBORN CARE SERVICES

No.	Question					Skip to
201	**What is the duration of the routine availability of the OPD care for Pregnant ladies/ newborn / Sick newborn**					
		Start time (A)	**End time (B)**	**Duration (hrs) (C)**	**Type of Manpower (D)** *Doctor-01, Nurse-02, ANM-03 LHV-04, Others-05*	
	201.1. Weekdays				☐☐	
	201.2. Holidays					
202	**Is there 24 hour coverage for delivery and newborn** Yes-01, No-02, Don't Know-99				☐☐	

203	**What is the availability of doctors for delivery and newborn care**					
		Delivery:		**Newborn care:**		**Skip to**
		(A) **Type of Manpower** *MBBS Doctor-01 Specialist doctor-02 AYUSH doctor-03 Others-04*	**(B)** **Type of Availability** : *Present-01 On call-02 Not sure-99 Not available-00*	**(C)** **Type of Manpower** *MBBS Doctor-01 Specialist doctor-02 AYUSH doctor-03 Others-04*	**(D)** **Type of Availability** **:** *Present-01 On call-02 Not sure-99 Not available-00*	
	203.1. Monday to Friday					
	203.2. Saturday					
	203.3. Sunday					
	203.4.Public Holiday					
204	**What is the availability of Nurses/ANMs for delivery and newborn care**					**Skip to**
		Delivery:		**Newborn care:**		
		(A) **Type of Manpower** *Nurse-01 ANM-02 LHV-03 Others-04*	**(B)** **Type of Availability** : *Present-01 On call-02 Not sure-99*	**(C)** **Type of Manpower** *Nurse-01 ANM-02 LHV-03 Others-04*	**(D)** **Type of Availability** **:** *Present-01 On call-02 Not sure-99*	
	204.1. Monday to Friday					
	204.2. Saturday					
	204.3. Sunday					
	204.4.Public Holiday					

205	**Who Is the skilled person usually present at the facility or on call 24 hours a day, including holidays for the following services?** HEALTH STAFF : *Doctor-01, Nurse-02, ANM-03, LHV-04, Others-05, None-00*				
	Mother Care Services		**Newborn Care Services**		**Skip to**
	205.1. ANC	☐☐	**205.10. Care at delivery/Essential Newborn care**	☐☐	
	205.2. Normal Delivery	☐☐	**205.11. Resuscitation**	☐☐	
	205.3. Assisted Delivery (forceps, ventouse)	☐☐	**205.12. Vitamin K injection**	☐☐	
	205.4. Cesarean Section	☐☐	**205.13. Antibiotics**	☐☐	
	205.5. Vital sign monitoring	☐☐	**205.14. Immunization**	☐☐	
	205.6. Partograph	☐☐	**205.15. Breastfeeding**	☐☐	
	205.7. Management of PPH (postpartum hemorrhage)	☐☐	**205.16. Sick newborn care**	☐☐	
	205.8. Antenatal steroid administration for pre-term labor	☐☐	**205.17. Care of LBW (low birth weight) babies**	☐☐	
	205.9. Antibiotics for PROM (Premature rupture of membranes)	☐☐			
206	**If a pregnant lady comes to emergency with complications, where and how is she managed?** Managed in the emergency room ..... 01 Sent to the labor room ..... 02 Referred to other health facility ..... 03 Sent to maternal ward ..... 04 Not managed 00		☐☐		
207	**If a sick neonate comes to emergency with complications, where and how is the baby managed?** Managed in the emergency room ..... 01 Sent to the Neonatal care unit ..... 02 Referred to other health facility ..... 03 Referred to neonatal ward ..... 04 Not managed 00		☐☐		
208	**Does this facility have the following units?** *Yes-01, No-00, Don't Know-99*				**If no skip to 210**
	Unit				
	208.1. Blood bank				
	208.2. Blood storage		☐☐		
209	**If yes, what are the hours of operation per day?** If Don't Know- write 99		☐☐ Hrs		

210	**In the last one month, in how many cases blood /product was not available when it was needed**			Number	
SECTION III: DRUG STORE AND SUPPLY (Ask the Pharmacist)					
301	**What is the frequency of drug indenting and supply of drugs?** *Monthly –01, Thrice a month- 02, Whenever needed- 03* *No fixed schedule- 04, Not sure- 99*				
302	**Do you store drugs in refrigerator?** *Yes-01 , No-00, Don't Know-99*				
303	**Do you/the facility determine the quantity of drugs needed for this facility?** *Yes (indent is prepared and sent)-01* *No(decided by supplying store-) -00 , Mixed pattern- 03, Not sure- 99*				
304	**Usually how do you determine the quantity of drugs needed?** *Order to maintain fixed stock level- 01 fixed demand- 02* *Based on stock and utilization - 03 Other- 04 Not sure-99*				
305	**If there is a shortage of a specific medicine/supply between routine orders, what is the most common procedure followed by this facility?**				
	305.1 Special order- 01				
	305.2 Local purchase (use RCH funds)- 02				
	305.3 Local purchase(use RKS funds)- 03				
	305.4 Loan from other facilities- 04				
	305.5 Patients purchase- 05				
	305.6 No procedure followed- 00				
	305.7 Don't Know-99				
306	**Stock status of medicines/supplies in the drug store:**				
	Name	**(A) Status** *Available-01, Not Available-00, Don't Know-99*	**(B) Stock adequate for duration (estimated)**	**(C) Have you experienced stock out in last 3 months?** *Yes-01, No-00*	
	306.1. Ampicillin (oral/capsule's)				
	306.2. Ampicillin (injection)				
	306.3. Gentamicin (injection)				
	306.4. Metronidazole (injection)				
	306.5. Metronidazole (tablet)				
	306.6. Ceftriaxone				

	306.7. Cefotaxime				
	306.8. Aminophyllene				
	306.9. Adrenaline (Epinephrine)				
	306.10. Atropine				
	306.11. Calcium gluconate				
	306.12. Betamethasone				
	306.13. Dexamethasone				
	306.14. Prednisone (oral)				
	306.15. IV Fluids				
	306.16. Magnesium Sulphate (injection) 50% concentration				
	306.17. Diazepam (injection)				
	306.18. Methyldopa				
	306.19. Nifedipine				
	306.20. Misoprostol				
	306.21. Oxytocin				
	306.22. Hydrocortisone				
	306.23. Naloxone				
	306.24. Pethidine/Morphine				
	306.25. Salbutamol				
	306.26. Chloroquine				
	306.27. Artemisium-based combination therapy (ACT)				
	306.28. Quinine Dihydrochloride				
	306.29. Vitamin K				
	306.30. Anti-Rho(D) immune globulin				
	306.31. Vaccines TT				
	306.32. Vaccines Hep B				
	306.33. Vaccines BCG				
	306.34. Vaccines OPV				

SECTION IV : HUMAN RESOURCE AND THEIR FUNCTION

401 **Does the facility have following staff? If yes then write the number of staff in the given box.**

Staffs	**(A) Sanctioned Post**	**(B) In position (Total)**	**(C) Contractual** (Write number If none write '0')	**(D)** ***Write the duration for each, if more than 1 post is vacant***
401.1. Obstetrician/Gyn				
401.2. Pediatrician				
401.3. Physician (Med. Spec.)				
401.4. General Surgeon				

	401.5. Anesthetist/trained MO					
	401.6. General Medical Officer					
	401.7. Staff Nurse/Nurse					
	401.8. LHV					
	401.9. ANM					
	401.10. Pharmacist					
	401.11. Lab. Technician					
	401.12. OT Attendant					
	401.13. Registration Clerk					
	401.14. Class IV Employee (cleaning/utility staff)					
	401.15. Blood Bank Technician					
	401.16. Driver					
	401.17. Any other					

Training

402 **Does the following staff has received the training on :(Read it)**

SBA/ BEmOC 01
IMNCI 02
FMNCI 03
NSS 04
FBNC 05
MTP using MVA 06
Blood banking/ Storage 07
MVA 08
RTI/STI 09
IUCD 10
Minilap/Lap 11
NSV 12
EmOC 13
LSAS 14
MCTS, HIMS 15
Any other 16

Staff Name	**(A) Posted Since** (*Write Month/Year)*	**(B) Training received** (Codes as given above)	**(C) Period since last training** (In months)
402.1. Paediatrician			
402.2. Anaesthetist (senior most)			
402.3. Ob/Gyn (specialist) (senior most)			
402.4. Surgeon (senior most)			
402.5. Medical Officers (senior most)			
402.6. Nurses (senior most)			
402.7. ANMs (senior most)			
402.8.LHV (senior most)			
402.9. Lab Tech.(senior most)			
402.10. Pharmacist			
402.11. Data Manager (senior most)			

	402.12. Other support staff				
	# SBA - Skilled birth attendant; BEmOC – Basic Emergency Obstetric Care IMNCI – Integrated Management of Childhood Illnesses; NSSK – Navjaat Shishu Sureksha Yojna, MVA – Manual vacuum aspiration; RTI/STI – Reproductive Tract Infections/Sexually Transmitted Infections; IUCD – Intra Uterine Devices; NSV – Non Scalpel Vasectomy; EmOC – Emergency Obstetric Care; LSAS – Life saving anaesthesia skills. IMNCI-Integrated Management of Neonatal and Childhood Illnesses, MCTS – mother and child tracking system, HMIS – Health Management Information System				
403	**Is there any facility for training of staff in this facility/hospital?** *Yes -01, No-00, Not sure - 99*			☐☐	
404a	**Is there any mechanism/system for refresher training of the skills/knowledge of the health functionaries?** *Yes -01, No-00, Not sure - 99*			☐☐	**If no skip to 405**
404b	**If yes, please ask for details**				
	Supervision *This supervision question is for the staff cadre involved in delivery and newborn care services at the facility.*				
405	**How many routine supervision visits this facility has experienced within last 6 month** (write number)				☐☐
406	**Who visited last time for supervision of the facility?** Designation _____ Month _____				
407	**What was the reason for the last visit?** Routine-01, Response to negative incident-02, Other (specify)-03_____, Don't Know-99			☐☐	
408	**What all did supervisor check for during the last facility visit related to antenatal, intranatal, postnatal and neonatal care** *All the components-01, Few components-02, None-03,* Don't Know-99 Components include – Manpower (staff required), Equipment, Supplies, Drugs, Consumables, Knowledge of the staff, skills of the staff, infection prevention practices, guidelines and protocols for various deliverables, records and reports			☐☐	
409	**Did Supervisor give any written/verbal feedback to the facility in charge?** *Yes -01, No-00, Don't Know - 99*			☐☐	
410	**Did the supervisor enquire about the possible causes of maternal or neonatal death, if any?** *Yes -01, No-00, Don't Know – 99*			☐☐	

SECTION V:RECORDS AND REPORTS

501 **Patient load**

Indicate the total number of outpatient visits in pregnancy/pueriperium/neonatal period, emergency visits and admissions per year (indicate year; if any other period of time, e.g. semester is used, indicate the exact period) for pregnant women and neonates. Include all medical diagnosis but exclude women/neonates dead on arrival.

Year(2013-14)_____Any other period_____

	(A) Outpatient Visits	(B) Emergency visits	(C) Admission
501.1. Pregnant women			
501.2. Number of deliveries			
501.3. Neonates <24 hours			
501.4. Neonates 1-7 days			
501.5. Neonates 8-28 days			
501.6. Total Neonates			

502 **Delivery / birth figures at the Facility**

Please use the figures from available/register/document/verbal information for the available year (April 2013- March 2014), specify if for any other period

	(last year) April 2013- March 2014	April 2014	May 2014	June 2014
502.1. Number of deliveries				
502.2. Number of live births				
502.3. No. of stillbirths				
502.4. No. of preterm newborns delivered				
502.5. No. of LBW newborns s delivered				
502.6. No. of Sick newborns admitted				
502.7. No. of deaths among sick newborns				
502.8. Caesarean section deliveries				
502.9. Instrumental deliveries (forceps/ventouse)				
502.10. No. of women referred to higher levels				
502.11. No. of newborns referred to higher level				
502.12. Total Number of Deaths of Neonates of < 24 hours				
502.13. Total Number of Deaths of Neonates of 1-7 days				
502.14. Total Number of Deaths of Neonates of 8-28 days				
502.15. causes of neonates deaths				
502.15.A. Prematurity/LBW				
502.15.B. Birth Asphyxia				
502.15.C. Sepsis				
502.15.D. Congenital malformation				

	502.15.E. Others					
503	**What is the average length of stay? (write no. of days)**					
	503.1. After normal vaginal delivery (as informed)			Hours	Days	
	503.2. After assisted delivery (as informed)			Hours	Days	
	503.3 After Caesarean section (as informed)			Hours	Days	
504	**504.1. Are there regular meetings of all nurses/other staff/ doctors who work in maternity /postnatal/sick newborn ward?** *Yes-01, No-00, Don't Know-99*					
	504.2 If yes, write the last date of such meeting _ _ / _ _ / _ _ _ _					
505	**Is MCTS (mother and child tracking system) being used?** *Yes-01, No-00, Don't Know-99*					
506	**Is referral slip given to mother/patient while being referred?** *Yes-01, No-00, Don't Know-99*					
507	**Is a copy referral slip retained while being referred for records?** *Yes-01, No-00, Don't Know-99*					
	SECTION VI : LABOR ROOM					
601	**SERVICES PROVIDED**	**(A)** Yes-01, No-00, Don't know-99	**(B)** **If yes write in terms of duration since last done** Same day -01, 1-7 days back - 02, 8-30 days ago - 03, 31-180 days ago - 04, More than 180 days ago-05			
	601.1. How many deliveries have been performed in the last 24 hours? (write numbers)					
	601.2. Is Partograph being used for monitoring delivery?					
	601.3. Is controlled cord traction (CCT) practiced for deliveries?					
	601.4. Is oxytocin or misoprostol administered to pregnant women?					
	601.5. Is Magnesium sulfate administered prenatally for (pre)eclampsia					
	601.6. Is assisted Vaginal delivery performed here? (forceps/ventouse)					
	601.7. Are injectable antibiotics given for maternal infections					
	601.8. Is injectable oxytocin administered for Haemorrahge?					
	601.9. Is manual removal of retained placenta performed here?					

	601.10. Are antibiotics given to the mothers with PROM (premature rupture of membranes?			
	601.11. Are corticosteroids administered in case of pre-term labor			
	601.12. Are antiretroviral drugs given to mother and child for prevention of HIV transmission from mother to child			
602	**INFRASTRUCTURE**		Yes-01, No-00, Don't Know-99	
	602.1. Are labor room and delivery room separate or combined? Same-01, Separate-02, Not Known-99			
	602.2. How many pregnant ladies (expecting delivery) are there at the time of observation? (write numbers)		Number	
	602.3. How many deliveries are in progress at the time of observation? (write numbers)			
	602.4. No. of functional tables labor tables/total number of labor tables (write numbers) in delivery room			
	602.5. No. of functional beds/total number of beds in the labor room (write numbers)			
	602.6. Is there sufficient light source available to perform tasks during day ?			
	602.7. Is there sufficient light source to available perform tasks during night ?			
	602.8. Does this facility (labor room) have separate electricity back up system?			
	602.9. If yes, what is the source of power back up? Inverter-01, Generator-02, Others (specify)-03			
	602.10. What is the Means of ventilation(e.g. functional fan/air conditioner)			
	602.11. Is there provision of Curtains for privacy to the women			
	602.12. Is there any waiting area for the visitors (family) of the women			
	602.13. Is there any functional toilets (at the time of visit)			
	602.14. Is the toilet clean?			

603	**EQUIPMENTS**	**(A) Availability** All available-01, Some available -02 None available-00 Don't Know-99	**(B) Functionality** Yes -01, No-00, Don't Know=99	
	Are all equipment available adequately for conducting delivery?			
	GENERAL			
	603.1. Refrigerator (storage of medicine)			
	603.2. Wall clock with seconds hand			
	FOR MOTHER			
	603.3. Stethoscope			
	603.4. Delivery Kit (Artery forceps, sponge forceps, Dissecting forceps, Cord cutting scissors, Episiotomy scissors and straight stitching scissors)			
	603.5. If yes, how many delivery sets are available (write numbers)			
	603.6. If no, are all components of delivery kit are available separately			
	603.7. Ventouse/vacuum apparatus for assisted delivery			
	603.8. All sizes of forceps for assisted delivery			
	603.9. Speculum			
	FOR NEWBORN			
	603.10. Radiant Warmer			
	603.11. Mucus extractor			
	603.12. Thermometers			
	603.13. Weighing scale for baby			
	603.14. Self-inflating bag with masks (sizes 0,1,2)			
	603.15. Laryngoscope (all blades)			
	603.16. Phototherapy unit			
	603.17. Clamp			
	603.18. BP Cuff			
	OXYGENENATION			
	603.19. Centralized oxygen distribution facility			
	603.20. Oxygen cylinders			
	603.21. If yes for cylinders, what is status Full-01, Partly full-02, Empty-00			
	603.22. If yes for cylinders, are the keys available?			
	603.23. If yes for cylinders, are the flow meters available?			
	603.24. If yes for cylinders, are the humidifiers available?			
	603.25. Oxygen Concentrator			

604.	**MEDICINES**	**(A) Adequate Availability** All available-01, some- 02, none-00, Don't Know-99	**(B) How many times stock out has been experienced in the last 3 months**	
	604.1. Are all drugs and equipment available adequately to conduct deliveries?			
	604.2. Methyldopa			
	604.3. Cotrimoxazole			
	604.4. Diazepam			
	604.5. Tetracycline eye ointment			
	604.6. Sulphadoxine pyremethamine			
	604.7. Ferrous and folic acid			
	604.8. Calcium gluconate			
	604.9. Capsule Amoxycillin-250mg			
	604.10. Tab Misoprostol-200mcg oral/vaginal			
	604.11. Inj. Hydrocortisone			
	604.12. Salbutamol			
	604.13. Nifedipine			
	604.14. Inj. Naloxone			
	604.15. Inj. Betamethasone/Dexamethasone			
	604.16. Anti D immunioglobulin			
	604.17. Inj. Ethamsylate			
	604.18. Povidone Iodine Ointment			
	604.19. Inj. Gentamycin			
	604.20. Inj. Ampicillin			
	604.21. Inj. Magnesium Sulphate-50%w/v; 10ml vials, containing 5g in total volume			
	604.22. Adrenaline			
	604.23. Atropine			
	604.24. Morphine/Pethidine			
	604.25. IV fluids			
	604.26. Inj. Lignocaine 2%w/v			
	604.27. Inj Vitamin K			
	604.28 Inj Metronidazole			
	604.29. Inj. Ampicillin-500mg			

605	**SUPPLIES**	**(A) Adequate Availability** All available-01, some- 02, none-00, Don't Know-99	**(B) How many times stock out has been experienced in the last 3 months**	
	605.1. Suction catheter (size 8,10)			
	605.2. Cord clamp			
	605.3.Endotracheal tube (2.5mm, 3.0mm,3.5mm with adapter)			
	605.4. All sizes of IV cannulas, needles and catheters			
	605.5. All sizes of gloves			
	605.6. Suction tube			
	605.7. Foleys Catheter, 16 No BIS, self-retaining catheter			
	605.8. Sanitary Napkins (2pkts per case)			
	605.9. Baby clothes is for drying & receiving the baby (3 per child)			
	605.10 Mucus extractor			
	605.11.Is there an emergency drug tray kit available?			
	605.12. If yes, is it complete and replenished daily?			
	605.13. Is the ambu bag & mask for newborn accessible easily ?			
	605.14. Soap			
	605.15. Single use syringes needles			
	605.16. Sterile blade or scissors			
	605.17. Disinfectant			
	605.18. waste receptacle with lid			
606	**INFECTION PREVENTION** Please ask how do these items are disinfected at the facility usually?	Correct-01 Incorrect -02 No method used -00 Don't know -99		
	606.1. Neonatal face mask -disinfect daily and sterilize daily- Clean with detergent after each use -Immerse in 2% gluteraldehyde -Rinse with clean water and dry with clean linen			
	606.2. Self-inflating bag -disinfect daily and sterilize daily - Dismantle parts -Immerse in 2% gluteraldehyde -Rinse with clean water and dry with clean linen -Reassemble parts			

	606.3. Thermometers -Wipe with alcohol after use -Store in bottle containing dry cotton			
	606.4. Suction apparatus -Suction bottle should contain 3% phenol or 5% Lysol -Suction bottle cleaned with detergent and changed daily -Change tube connected to bottle daily Or flush with water and dry -Soak for infection in 2% gluteraldehyde -Ideally suction catheter should be for single use			
	606.5. Laryngoscope -Wipe with 70% isopropyl alcohol after use			
	606.6. Surgical Instruments -to be autoclaved			
	606.7. Hand washing with soap before every delivery -follow all 6 steps and should be done over a span of 2 minutes			
607	**GUIDELINES**			
	Are any of the following guidelines present in the labor room	**(A)** Yes-01, No-00	**(B)** **If yes are they referred** Regularly-01, Rarely-02, Never-00	
	607.1. Skilled birth attendance (SBA)			
	607.2. Navjat Shishu Suraksha Karykram (NSSK)			
	607.3. Essential newborn			
	607.4. Neonatal Resuscitation			
	607.5. Breast feeding policy and supporting mother for breastfeeding			
	607.6. Care of LBW newborn			
	607.7. Prevention of mother to child transmission of HIV			
	607.8. Is there any display of ENC-newborn care?			
	607.9. Is there any display of Newborn resuscitation?			
	607.10. Is there any display of partograph?			
	607.11. Is there any display of Management of complicated delivery?			
608	**Specific Comments-**			

	Section VII : WARD (ANTE NATAL/ POSTPARTUM/FEMALE)			
701	**How many days do women generally stay at the facility after Normal vaginal Delivery?**		Hours Days	
702	**How many days do women generally stay at the facility after Caesarean section?**		Hours ☐☐ Days ☐☐	
703	**SERVICES PROVIDED**	**(A)** Yes-01, No-00, Don't Know-99	☐☐ **(B)** ☐☐ **If yes write in terms of duration since last performed** Same day -01, 1-7 days back - 02, 8-30 days ago - 03, 31-180 days ago - 04, More than 180 days ago-05	
	703.1. Rooming in of newborns with mothers			
	703.2. Is Monitoring of vital signs (Heart Rate, Breathing rate etc.) of the mother and the newborn done			
	703.3. Are parenteral antibiotics administered here?			
	703.4. Do mothers have access to running water, soap and to an appropriate space, near the ward to wash themselves and their child and baby's clothing			
	703.5. Is Kangaroo mother care practiced here?			
	703.6. Is counseling on exclusive breastfeeding done here?			
	703.7. Is late onset postpartum hemorrhage managed here?			
	703.8. Are family planning services provided here			
	703.9 Are alternative feeding services to mother are provided if baby unable to breastfeed			
704	**INFRASTRUCTURE**		(Yes-01, No-00, Don't Know-99)	
	704.1. Number of beds (functional/available) in the ward (write numbers)			
	704.2. Is there sufficient light source available to perform tasks during day ?		☐☐ ☐☐	
	704.3. Is there sufficient light source to available perform tasks during night ?			
	704.4. Does this facility (ward) has a separate electricity backup system?			
	704.5. If yes, what is the source of power back up? Inverter-01, Generator-02, Others (specify)-03		☐☐	

	704.6. What is the Means of ventilation(e.g. functional fan/air conditioner)			
	704.7. Is there provision of Curtains for privacy to the women			
	704.8. is there any waiting area for the visitors (family) of the women			
	704.9. Is there any functional toilets (at the time of visit)			
	704.10. Is the toilet clean			
	704.11. Is there any area dedicated for Kangaroo mother care			
	704.12. Is there any area dedicated for counseling on exclusive breastfeeding			
	704.13. Is there any area dedicated for newborn care			
705	**Are all necessary/ essential equipment for postpartum care of mother & newborn available in the ward?** Yes -1, No- 0,Don't know-99			
	EQUIPMENT	**(A) Availability** Yes -01, No- 00, Don't know-99	**(B) Functionality** Yes -01, No- 00, Don't know-99	
	705.1. Is Oxygen supply available?			
	705.2. If yes, is it Centralized oxygen distribution facility			
	705.3. If yes, are Oxygen cylinders			
	705.4. If yes for cylinders, what is status 1-full, 2-partly full, 0-empty			
	705.5. If yes for cylinders, are the keys available?			
	705.6. If yes for cylinders, are the flow meters available?			
	705.7. If yes for cylinders, are the humidifiers available?			
	705.8. Baby weighing scale			
	705.9. Sphygmomanometer (blood pressure instrument)			
	705.10. Stethoscope			
	705.11. Laryngoscope for newborn			
	705.12. Thermometer			
	705.13. IV cannula for newborn			
	705.14 Feeding tube			
	705.15. Suction Catheter			

	705.16. Flteys Catheter			
	705.17. Gauze & Cotton			
	705.18 Sanitary Napkins			
	705.19.Adult bag and mask			
	705.20. Mouth Gag (for adults)			
	705.21. Ambu bag for newborn with all sizes of masks			
	SUPPLIES			
	705.22. Bed Sheets			
	705.23. feeding tube			
	705.24 I/V cannulas for adults			
	705.25. All sizes of gloves			
	705.26. Contraceptives (IUCD, Condoms, OCPs etc.)			
706	**Medicines**	**(A)** Yes -01, No- 00, Don't Know-99	**(B) No. of time experience stock out in last 3 months**	
	Are all essential medicines for postpartum care of mother and newborn care are available in the ward?			
	706.1. Tab Iron Folic Acid- (adult)			
	706.2. Tab Methyldopa eq. to Methyldopa anhydrous 250mg			
	706.3. Cap Nifedipine			
	706.4. Tab Nifedipine			
	706.5. Tab Labetalol			
	706.6. Tab Digoxin			
	706.7. Tab Folic Acid			
	706.8. Tab Ibuprofen			
	706.9. Tab/Cap Multivitamin			
	706.10. Tab Domperidone			
	706.11. Tab Chloroquin			
	706.12. Tab Quinidine dihydrochloride			
	706.13. Inj Calcium gluoconate			
	706.14. Inj Hydrocortisone			
	706.15. Inj. Labetalol			
	706.16. Inj. Magnesium Sulphate			
	706.17. Inj Adrenaline			
	706.18. Inj Atropine			
	706.19. Anti D Immunoglobulin			
	706.20. Inj Arteminisin			
	706.21. IV fluid Haemaccel			
	706.22.Is there an emergency drug tray kit available?			

	706.23. If yes, is it complete and replenished daily?			
	706.24. Is the ambu bag mask for newborn accessible easily ?			
707	**INFECTION PREVENTION**			
	Ideal methods of disinfection of apparatus		Correct-01, Incorrect -02 No method used -00, Don't know -99	
	707.1. Thermometers -Wipe with alcohol use -Store in bottle containing dry cotton			
	707.2. face mask -disinfect daily and sterilize daily- Clean with detergent after each use -Immerse in 2% glutraldehyde -Rinse with clean water and dry with clean linen)			
	707.3. Self-inflating bag -disinfect daily and sterilize daily - Dismantle parts -Immerse in 2% glutraldehyde -Rinse with clean water and dry with clean linen -Reassemble parts)			
708	**GUIDELINES** **Are any of the following guidelines present in the ward**	**(A)** Yes-01, No-00	**(B)** **If yes are they referred** Regularly-01, Rarely-02, Never-00	
	708.1. Essential newborn care			
	708.2. Initiating and supporting breastfeeding			
	708.3. Guideline and methods of provision of Kangaroo mother care			
	708.4. Guidelines and methods of Exclusive Feeding			
	708.5. . Navjat Shishu Suraksha Karykram Guidelines			
	708.6 Guidelines on the treatment of postpartum Hemorrhage			
	708.7. Prevention of mother to child transmission of HIV			
	708.8. Is there any display on breastfeeding			
	708.9. Is there any display on Danger sign in newborn			
	708.10. Is there any display on Danger sign in mother			

	708.11. Is there any display on Contraception			
	Specific Comments-			
Section VIII : NEWBORN CARE UNIT				
S.No.	**Questions**	**Coding categories**		**Skip**
801	**SERVICES PROVIDED**,	**(A)** Yes-01, No-00, Don't Know-99	**(B)** **If yes write in terms of duration since last done** Same day -01, 1-7 days back - 02, 8-30 days ago - 03, 31-180 days ago - 04, More than 180 days ago-05	
	801.1. Are Resuscitation services with bag and mask to the newborn are provided here?			
	801.2. Is initial care and stabilization of sick newborn provided here?			
	801.3. Are LBW babies managed here?			
	801.4. Is thermal protection to the newborn is provided here?			
	801.5. Is the cord care of the newborn provided here?			
	801.6. Is alternative feeding provided for the babies unable to breastfeed?			
	801.7. Is oxygenation facility for the newborn available here?			
	801.8. Is intravenous administration of drugs and fluids for sick newborns done here?			
	801.9. Are sick newborn babies kept separated from healthy babies here?			
	801.10. Is eye prophylaxis (at the end of first hour) is provided?			
	801.11. Is Vitamin K is given via intramuscular?			
	801.12. Is immunization done here?			
	801.13. Are out-born infants admitted in the nursery?			
	801.14. If so, are they admitted in a separate room?			

802	**INFRASTRUCTURE**		Yes-01, No-00, Don't Know-99	
	802.1. How many Number of beds (functional/available) in the Newborn care unit (write numbers)?			
	802.2. Is there sufficient light source available to perform tasks during day ?			
	802.3. Is there sufficient light source to available perform tasks during night ?			
	802.4. Does this facility (newborn care unit) have a separate electricity backup system?			
	802.5. If yes, what is the source of power back up? Inverter-01, Generator-02, Others (specify)-03			
	802.6. What is the means of ventilation(e.g. functional fan/air conditioner)			
	802.7. Is there provision of Curtains for privacy to the women			
	802.8. Is there any waiting area for the visitors (family) of the women			
	802.9. Is there any area dedicated for Kangaroo mother care?			
	802.10. Is there any area dedicated for counseling on exclusive breastfeeding?			
803	**EQUIPMENTS AND SUPPLY**			
	Are all equipment and supplies available adequately to provide newborn care and resuscitation services? Yes-01, No-00, Don't Know-99			
	EQUIPMENT	**(A) Availability** Yes -01, No- 00, Don't Know-99	**(B) Functionality** Yes -01, No- 00, Don't Know-99	
	803.1. Pediatric stethoscope			
	803.2. Baby weighing Scale			
	803.3. Thermometers			
	803.4. Radiant warmer			
	803.5. Self-inflating bag and mask (size 0, 1)			
	803.6. Laryngoscope for newborn (with blades of all sizes)			
	803.7. Foot operated/ electric suction pump			
	803.8. Hub Cutter (syringe)			
	803.9. Centralized oxygen distribution facility			
	803.10. Oxygen cylinders			
	803.11. If yes for cylinders, what is status Full-01, Partly full-02, Empty-00			
	803.12. If yes for cylinders, are the keys available			

	803.13. If yes for cylinders, are the flow meters available			
	803.14. If yes for cylinders, are the humidifiers available			
	803.15. Oxygen hood (Small and Medium) & connecting tubes			
	803.16. Phototherapy unit			
	803.17. Syringe pump			
	803.18. Pulse oxymeter			
	803.19. Light for examination			
	803.20. Measuring tape (vinyl coated)			
	803.21. Basin kidney (stainless steel/dressing tray)			
	803.22. Infantometer			
	803.23. Wall clock with seconds hand			
	SUPPLIES			
	803.24. Suction tube			
	803.25. Neonatal drip set			
	803.26. Pediatric IV drip set			
	803.27. Towels			
	803.28. Sterile gloves			
	803.29. Syringe			
	803.30. Disinfectant			
	803.31. Alcohol handrub/Sterile Gloves			
	803.32. Linen sheets and blankets			
	803.33.Multistix			
	803.34.Dextrometer			
	803.35.Cord clamp			
	803.36.Endotracheal tubes			
	803.37.Mucus extractor			
	803.38.feeding tubes			
	803.39. Oro-gastric tube			
804	**MEDICINES** (Are all drugs available adequately to provide newborn care and resuscitation services)	**(A)** **Adequate Availability** Yes-01, No-00, Don't Know-99	**(B)** **No. of times you experienced stock out in last 3 months** (write numbers)	
	804.1. Gentian Voilet Paint			
	804.2. Oral Nystatin			
	804.3. Injection Vitamin K			
	804.4. Atropine			
	804.5. Inj. Adrenaline			
	804.6. Inj. Amikacin			
	804.7. Inj. Aminophyllin			
	804.8. Inj. Ampicillin			

	804.9. Inj. Augmentin			
	804.10. Inj. Calcium gluconate-			
	804.11. Inj. Dopamine			
	804.12. Inj. Dextrose(IV Solution			
	804.13. Inj. Gentamycin			
	804.14. Inj. Phenobarbitone			
	804.15. Inj. Phenytoin			
	804.16. Inj. Potassium chloride			
	804.17. Inj. Sodium bicarbonate			
	804.18. Inj. Sodium chloride			
	804.19. Inj. Sterile water for IP-Each ampoule containing 5ml			
	804.20. Drops Paracetamol			
	804.21. Drops Domeperidone			
	804.22. Drops Dicyclomine			
805	**INFECTION PREVENTION**			
	Ideal Method of Disinfection of the equipment		Correct 01, Incorrect -02 No method used -00, Don't know -99	
	805.1. Neonatal face mask -disinfect daily and sterilize daily -Clean with detergent after each use -Immerse in 2% glutraldehyde -Rinse with clean water and dry with clean linen			
	805.2. Self-inflating bag -disinfect daily and sterilize daily -Dismantle parts -Immerse in 2% glutraldehyde -Rinse with clean water and dry with clean linen -Reassemble parts			
	805.3. Thermometers -Wipe with alcohol use -Store in bottle containing dry cotton			
	805.4. Suction apparatus -Suction bottle should contain 3% phenol or 5% Lysol -Suction bottle cleaned with detergent and changed daily **805.5. -Change tube connected to bottle daily** Or flush with water and dry -Soak for infection in 2% gluteraldehyde -Ideally suction catheter should be for single use			
	805.6. Laryngoscope -Wipe with 70% isopropyl alcohol after use - disposable feeding tube to be used			

	805.7. Feeding apparatus Cup, spoon, paladi boiled for at least 15 min before use		

806	**GUIDELINES**			
	Are any of the following guidelines present in the ward	**(A)** Yes-01, No-00	**(B)** **If yes are they referred** Regularly-01, Rarely-02, Never-00	
	806.1.Essential Newborn care guidelines			
	806.2. Newborn Resuscitation guidelines			
	806.3. Navjat Shishu Suraksha Karykram Guidelines			
	806.4. Guidelines on the management of Low Birth Weight babies			
	806.5. Guidelines on thermal protection of the newborn			
	806.6. Guidelines on Kangaroo Mother Care			
	806.7. Guidelines on Exclusive Breast Feeding			
	806.8. National Immunization Schedule			
	Specific Comments-			
Section IX : OPERTATION THEATRE				
901	**SERVICES PROVIDED**,	**(A)** Yes-01, No-00, Don't Know-99	**(B)** **If yes write in terms of duration since last done** Same day -01, 1-7 days back - 02, 8-30 days ago - 03, 31-180 days ago - 04, More than 180 days ago-05	
	901.1. Is Caesarean Section performed here?			
	901.2. Is blood transfusion performed here?			
902	**INFRASTRUCTURE**		Yes-01, No-00, Don't Know-99	
	902.1. No. of functional tables OT tables			
	902.2. Is there sufficient light source available day			
	902.3. Does this facility (OT) have a separate electricity backup system?			
	902.4. If yes, what is the source of power back up? Inverter-01, Generator-02, Others (specify)-03			
	902.5. Means of ventilation e.g. functional fan/air conditioner			
	902.6. Hand washing area with elbow operated taps			
	902.7. Geyser for hot water availability during winters			
	902.8. Clean functional toilets (at the time of visit)			
	902.9. Is there post-op recovery room attached to the OT?			

903.	**MEDICINES**	**(A) Adequate Availability** Yes -01, No- 00, Don't Know-99	**(B) No. of times you experience stock out in last 3 months**	
	Drugs required for C-Section			
	903.1. Inj. Metronidazole			
	903.2. Inj. Gentamycin-			
	903.3. Inj. Cefotaxime			
	903.4. Inj. Cloxacillin			
	903.5. Inj. Oxytocin			
	903.6. Inj. Sensorcain			
	903.7. Inj. Lignocaine Hydrochloride			
	903.8. Inj. Promethazine			
	903.9. Inj. Declofenac			
	903.10. Ringers lactate (RL)			
	903.11. Sodium Chloride IV Injection			
	903.12. Dextrose IV Injection			
	903.13. Sodium Bicarbonate IV Injection			
	903.14. Vitamin K			
	903.15. Inj. Pentazocine Lactate			
	903.16. Inj. Adrenaline			
	903.17. Inj. Atropine			
	903.18. Inj. Dopamine			
	903.19. Inj. Bupivacaine			
	903.20. Inj. Betamethasone			
	903.21. Halothane			
	903.22. Inj. Thiopentone			
	903.23. Inj. Vecuronium Bromide			
	903.24. Inj. Ketamine			
	903.25. Inj. Diazepam			
	903.26. Dexmethsone Injection			
	903.27. Etofyllin B Plus			
	903.28. Tab Frusemide			
	903.29. Tab Diazepam			
	903.30. Tab Salbutamol			

904	**EQUIPMENTS AND SUPPLY**	**(A) Availability** Yes -01, No- 00, Don't Know-99	**(B) Functionality** Yes -01, No- 00, Don't know-99	
	904.1. Are all equipment available for conducting the Caesarean section?			
	904.2. Are all equipment available adequately for conducting Neonatal Resuscitation?			
	EQUIPMENT FOR NEONATAL CARE AND RESUSCITATION Cord clamp /Cord tie			
	904.3. Stethoscope			
	904.4. Baby weighing Scale			
	904.5. Thermometers			
	904.6. Radiant Warmer			
	904.7. Self-inflating bag and mask (size 0, 1)			
	904.8. Laryngoscope for newborn (with blades of all sizes)			
	904.9. Endotracheal intubation tubes			
	904.10. Mucus extractor			
	904.11. Foot operated/ Electric Suction pump			
	904.12. Feeding tubes			
	904.13. Hub Cutter			
	904.14. Centralized oxygen distribution facility			
	904.15. Oxygen cylinders			
	904.16. If yes for cylinders, what is status Full-01, Partly full-02, Empty-00			
	904.17. If yes for cylinders, are the keys available			
	904.18. If yes for cylinders, are the flow meters available			
	904.19. If yes for cylinders, are the humidifiers available			
	904.20. Oxygen hood (Small and Medium)for newborn			
	904.21. Syringe pump			
	904.22. Pulse oxymeter			
	904.23. Sphygmomanometer			
	904.24. Wall clock with seconds hand			

	SUPPLIES	**(A) Availability** Yes -01, No- 00, Don't Know-99	**(B) Functionality** Yes -01, No- 00, Don't know-99	
	904.25. Povidone Iodine solution			
	904.26. Sticking Plaster (Surgical Tape)- 2.5cm×9.1m			
	904.27. Hypodermic syringes all sizes			
	904.28. Foley's Catheter			
	904.29. Intra-cath Cannulas for single use (all seizes)			
	904.30. Catguts			
	904.31. Suction Tubes			
	904.32. Spinal Needle Disposable Adult			
	904.33. Urobags			
	904.34. Gloves all sizes			
	904.35. Sponges			
	904.36. Sutures (silk , non-silk)			
	904.37. Suction tube			
	904.38. Neonatal drip set			
	904.39. Neonatal catheter			
	904.40. Towels			
	904.41. Sterile gloves			
	904.42. Syringe			
	904.43. Disinfectant			
	904.44. Alcohol handrub/Sterile Gloves			
	904.45. Linen sheets and blankets			
	Specific comments:-			
1001	**Section X : LABORATORY**			
	INFRASTRUCTURE		Yes-01, No-00, Don't Know-99	
	1001.1. Sufficient light source to perform tasks during day			
	1001.2. Sufficient light source to perform tasks during night			
	1001.3. Means of ventilation (fan, air conditioner)			
	1001.4. Running water			
	1001.5. Power back up separately the laboratory			
	1001.6. If power back yes then the kind of back up 1- Inverter, 2- Generator, 3- others(specify)			

1002	**EQUIPMENTS AND SUPPLY**	**(A)** **Availability** Yes -01, No- 00, Don't Know-99	**(B)** **Functionality** Yes -01, No- 00, Don't Know-99	
	1002.1. Are all equipment and supplies available adequately to conduct required tests?			
	1002.2. Centrifuge			
	1002.3. Microscope			
	1002.4. Bilirubinometer			
	1002.5. Glucometer			
	1002.6. Dextrostix			
	1002.7. Uristix			
	1002.8. HIV Test kits			
	1002.9. Blood group with Rh typing kits			
	1002.10 Malaria Rapid Test Kit			
	1002.11 Pregnancy test kit			
	1002.12 Syphilis test kit			
	1002.13 Haemoglobin test equipment			
1003	**SERVICES PROVIDED BY THE LABORATORY**			
	Services	**(A)** **Availability** *Round the clock-01* *During day only-02* *Not Available-00*	**(B)** **Cost** Free of cost-01 On payment-02	
	1003.1. Blood glucose			
	1003.2. Hemoglobin			
	1003.3. Full blood count			
	1003.4. Blood grouping and cross matching			
	1003.5. Blood Bilirubin			
	1003.6. Urine protein			
	1003.7. Urine microscopy			
	1003.8. Bacteriology (culture)			
	1003.9. Coagulation tests			
	1003.10. Liver function tests			
	1003.11. Renal function tests			
	1003.12. Electrolytes			
	1003.13. HIV test			
	1003.14. Coomb's test direct and indirect			
	1003.15. Serum protein and albumin			
	1003.16. Serologic test for syphilis			

Specific comments :

Thank you for giving your precious time

Overall comments:

Name of the Observer

Signature

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014) FACILITY ASSESSMENT TOOL (Sub centre)

Partner Medical College:

State	Uttar Pradesh
District	

Block	
Facility Name:	

Date: _ _ /_ _ /2014

Commencing Time	_ _ : _ _
Concluding Time	_ _ : _ _

Facility Type
01- Sub centre
02-Any other(specify)

Namaskar, I am _____ from _____ Medical College. I am here with my colleagues to do a survey focusing the services provided to pregnant women and their children in the district. In the context we are studying the readiness of the facility to deliver the desired services. Our team would like to observe the various areas in this facility and interact with concerned health staff. You are an important stakeholder in this study and therefore we would appreciate if you could spare some valuable time to discuss on these issues. This is expected to provide input for appropriate change in policy and program for improving the service delivery quality. Your name and responses will be kept confidential.

Instructions for filling up the schedules

1.The person in-charge (usually ANM) of health facility to be contacted to facilitate filling up this schedule.

Health Facility Assessment

Primary respondent: …….. Designation: ……..

Facility assessment (District Hospital, Community Health Centre, Primary Health Centre and Urban Health Centre)			
Part I: FACILITY IDENTIFICATION INFORMATION			
No.	**Question**	**Coding categories**	**Skip to**
101	**Location of the facility :-** *Residential area .....01* *Business/market area .....02* *Institutional area.....03* *Far from residential/business area .....04* *Any other.....05* *Don't Know.....99*	☐☐	
102	**Accessibility & transport facility:** **102.1 Condition of the main road** *Good……01, Bad……..02, Don't Know…..99*	☐☐	
	102.2 Condition of the road connecting main road to the facility *Good……01, Bad……..02, Don't Know…..99*	☐☐	
103	**Is there water logging in the area/road leading to this facility** **103.1 During rainy season** Yes……01, No……00*, Don't Know…..99*	☐☐	
	103.2 Is the area flood prone Yes……01, No……00*, Don't Know…..99*	☐☐	
Part II: INFRASTRUCTURE INFORMATION			
104	**What is the usual pattern of electricity supply to this facility?** *Uninterrupted supply(24×7) ..... 01* *available most of the time in day..... 02* *minimum of 8 hours a day ..... 03* *predictable load shedding..... 04* *Unpredictable load shedding 05*	☐☐	
105	**Is the electricity supply functioning at the time of visit?** *Yes….01, available in some areas….02, No……00*	☐☐	if no skip to 108
106	**What is/are the alternate/backup energy source(s) available to compensate electrical power failure?** *Generator (fuel operated)-01, Solar-02, Invertor-03* *Other(specify)…….-04, No backup availabale-00* *Don't Know-99*	☐☐	

☐☐

107	**In last month, how many days the facility was without electricity?** Don't know-99		

108	**What is the main sources of water of this facility?** *Piped water.....01* *River/Pond..... 04* *Handpump.....02* *Other(specify)..... 05* *Well.....03* *Don't Know..... 99* *No water 00*		
109	**What is the pattern of water supply?** *Piped from overhead tank-01, Bucket/pot & mug-02,* *Any other-03, No water-00, Don't Know-99*		
110	**Is the running water currently available?** *Yes-01,available in some areas-02,No-00,* *Don't Know-99*		
111	**Is the water supply available for 24 hours in the facility?** *Yes-01, No-00, Don't Know…….99*		
112	**In last month, how many days the facility:** **112.1.** was without water		
	112.2. had shortage of water		
113	**Is there any facility for heating water in winters for use (like geysers)?** *Yes-01, yes in some parts-02,No-00, Don't Know-99*		
114	**Is there toilet available in the facility?** *Yes……..01, No……..00, Don't Know-99*		If No, Skip to 117
115	**If yes, What is the arrangement of toilets?** separate for each ward-01 common for the whole facility-02 Available outside the facility-03		
116	**If yes, What is cleanliness position of the toilets?** (check the postnatal/female ward if available) *Clean-01, Dirty -02, Not seen -00*		
117	**Is the laundry facility available at facility?** *Yes -01, No -00, Outsourced -02*		
118	**Do you have system for segregation of biomedical waste?** *Yes -01, No -00, Don't Know-99*		
119	**How is the Biomedical waste disposed?** *Given to the municipal waste.....01* *Bury in pit.....02* *Thrown in common/ public Disposal pit...03* *Thrown outside the compound .....04* *Thrown inside the compound.....05* *Burning.....06* *Other (specify).....07* *No waste disposal system .....00* *Don't Know.....99*		

120	**Are sharps disposed of in a special container to prevent accidents?** *Yes…….01, No……..00, Don't Know…..99*		

121	**Does the facility have a functional communication facility?**	*Yes-01, No-00, Don't Know-99*	
	121.1. Landline telephone	☐☐	
	121.2 Cell phone (owned by facility)	☐☐	
	121.3 Cell phone (owned by individual staff)	☐☐	
	121.4 Public telephone (in the facility premises/nearby)	☐☐	
	121.5 Internet	☐☐	
122	**Is the telephone facility readily accessible 24×7?** *Yes-01, No-00, Don't Know-99*	☐☐	
123	**Does the facility have a drug store and medicines?** *Yes-01, No-00, Don't Know-99*	☐☐	
124	**Is there a private medicine shop available in vicinity?** *Yes-01, No-00, Don't Know-99*	☐☐	

Part III: SERVICES AT THE FACILITY

No.	Question	Coding categories	Skip to
125	**Does the facility provide following services?** *Yes-01, No-00, Don't Know-99*		
	125.1.OPD service(general) ☐☐	**125.5. Immunization services** ☐☐	
	125.2.Antenatal care (OPD) ☐☐	**125.6. Referral Transport Services** ☐☐	
	125.3. Delivery services (intranatal) ☐☐	**125.7.Family planning(CuT/OCP)** ☐☐	
	125.4. Postnatal care ☐☐		
126	**Does this facility provide any services for 24×7?** *Yes-01, No-00, Don't Know-99, if yes, specify* _____ ☐☐		
127	**Does this facility provide the following newborn care services?** *Yes-01, No-00, Don't Know-99*		
	127.1.Essential newborn care ☐☐	**127.2 Basic newborn resuscitation** ☐☐	
128	**No. of beds available for the following? (Write number) (If not available write " 00 ")**		
	128.1. Total beds	**128.2. Delivery room (tables) .....**	
129	**Does the facility have a room/dedicated area for the following?** *Yes-01, No-00, Don't Know-99*		
	129.1.Labor room ☐☐	**129.3.Residential accommodation for ANMs** ☐☐	
	129.2.Labor and delivery room together ☐☐	**129.4. Delivery room** ☐☐	

130	**Does the facility has the provision of review/audit of maternal and newborn death on a routine basis?** *Yes-01, No-00, Don't Know-99,* *Whether any death has occurred in last 1 year-02*	☐☐	
131	**If yes, what is the frequency of audit?** *Monthly-01, Once in 3months-02, Once in 6 months-03* *Yearly-04, Never done-00, Don't Know-99*	☐☐	
132	**What programmes related to RCH/newborn care are being implemented?**	Yes-01, No-00, Don't Know-99	
	132.1 JSY (Janani Suraksha Yojana)	☐☐	
	132. 2 JSSK (Janani Shishu Suraksha Karyakaram)	☐☐	
	132. 3 NSSK (Navjat Shishu Surakhsha Karyakaram)	☐☐	
	132. 4 Any other	☐☐	

Part IV:TRANSPORTATION AND COMMUNICATION SERVICES

No.	Question	Coding categories	Skip to
133	**What referral transportation services/facilities are available?** 108/102 Services/Janani Express.....01 Other nonprofit ambulance by NGO/trust .....02 Any other(specify).....03 None 00	☐☐	
134	**What is the modality of referral transportation for the patients/pregnant women/sick newborn?** *By the ambulance/ vehicle at facility(free of cost) ..... -01* *108/102/Janani Express..... -02* *Other not for profit ambulance (by NGO/Trust)..... -03* *Arranged by patients ..... -04* *Others(specify):_____..... -05* *No referral transportation ..... -00*	134.1 Usual ☐☐ 134.2 Occasional ☐☐	
135	**Is the referral transport facility available for 24×7?** *Yes-01 , No-00, Sometimes-02, Don't Know-99*	☐☐	
136	**Is there a stretcher facility available within immediate reach?** *Yes-01, No-00, 99-Not sure*	☐☐	
137	**Which is the nearest Referral facility or centre??** Name:……. Place:……. Level/type:……..		
138	**How far is this referral hospital from here?**	☐☐ Km	
139	**How long does it usually take to reach there?** (By ambulance/motorized transport)	h h ☐☐ m m ☐☐	

140	**What is the condition of the road connecting the facility to the referral hospital?** *Good-01, Bad-02, No motorable road-00, Don't Know-99*	☐☐	
141	**What was the most common reason for their referral of patients in last one month? (***If possible, please check from the records of patient who were referred.)* Hospital did not have facilities/ resources ..... 01 Required services are not available ..... 02 Patient or attendant requested for that..... 03 Hospital was overload ..... 04 Patient was too serious ..... 05 Patient was not capable to meet expenditure .... 06 Other(specify) ..... 07 Don't Know/Records could not be seen 99	☐☐	

SECTION II: DELIVERY & NEWBORN CARE SERVICES

No.	Question					Skip to
201	**Is there 24 hour coverage for delivery and newborn** Yes-01, No-00, Don't Know-99				☐☐	
202	**What is the availability of manpower for delivery and newborn care**					
		Delivery:		**Newborn care:**		**Skip to**
		(A) Type of Manpower *ANM-01 ASHA-02 AWW-03 Others-04*	**(B) Type of Availability** : *Present-01 On call-02 Not sure-99*	**(C) Type of Manpower** *ANM-01 ASHA-02 AWW-03 Others-04*	**(D) Type of Availability** **:** *Present-01 On call-02 Not sure-99*	
	202.1. Monday to Friday	☐☐	☐☐	☐☐	☐☐	
	202.2. Saturday		☐☐	☐☐	☐☐	
	202.3. Sunday	☐☐	☐☐	☐☐	☐☐	
	202.4.Public Holiday	☐☐	☐☐	☐☐	☐☐	

SECTION III: DRUG STORE AND SUPPLY(Ask the pharmacist)

301	**What is the frequency of drug indenting and supply of drugs?** *Monthly –01, Thrice a month- 02, Whenever needed- 03* *No fixed schedule- 04, Not sure- 99*	☐☐	
302	**Do you store drugs in refrigerator?** *Yes-01 , No-00, Don't Know-99*	☐☐	

303	**Do you/the facility determine the quantity of drugs needed for this facility?** *Yes (indent is prepared and sent)-01* *No(decided by supplying store-) -02 , Mixed pattern- 03, Not sure- 99*					
304	**Usually how do you determine the quantity of drugs needed?** *Order to maintain fixed stock level- 01 fixed demand- 02* *Based on stock and utilization - 03 Other- 04 Not sure- 99*					
305	**If there is a shortage of a specific medicine/supply between routine orders, what is the most common procedure followed by this facility?** *Special order- 01 , Local purchase (use RCH funds)- 02* *Local purchase(use RKS funds)- 03, Loan from other facilities- 04* *Patients purchase- 05, No procedure followed- 00, Don't Know-99*					
SECTION IV – HUMAN RESOURCE AND THEIR FUNCTION						
401	**Does the facility have following staff? If yes then write the number of staff in the given box.**					
	Staffs	**(A) Sanctioned Post**	**(B) In position (Total)**	**(C) Contractual** (Write number If none write '0')	**(D) *Write the duration for each, if more than 1 post is vacant***	
	401.1. ANM					
	401.2. Class IV Employee					
	401.3. Any other					
	401.4 ASHA					
Training						
402	**Does the following staff has received the training on :(read it)**					
	SBA..... 01 *IMNCI..... 02* *NSSK..... 03* *MVA..... 04*		*RTI/STI.....05* *IUCD.....06* *Any other 07*			
	Staff Name	**(A) Posted Since** (*Write Month/Year)*	**(B) Training received** (Codes as given above)	**(C) Period since last training** (In months)		
	402.1. ANMs					
	402.2. ASHA					
	402.3.Other					
	# SBA - Skilled birth attendant; IMNCI – Integrated Management of Childhood Illnesses; NSSK – Navjaat Shishu Sureksha Yojna, MVA – Manual vacuum aspiration; RTI/STI – Reproductive Tract Infections/Sexually Transmitted Infections; IUCD – Intra Uterine Devices					

	Supervision *This supervision question is for the staff cadre involved in delivery and newborn care services at the facility.*	
403	**How many routine supervision visits this facility has experienced within last 6 month** (write number)	
404	**Who visited last time for supervision of the facility?** Designation _____ Month _____	
405	**What was the reason for the last visit?** Routine-01, Response to negative incident-02, Other (specify)-03_____Don't Know-99	
406	**What all did supervisor check for during the last facility visit related to antenatal, intranatal, postnatal and neonatal care** *All the components-01, Few components-02, None-03,*Don't Know-99 Components include – Manpower (staff required), Equipment, Supplies, Drugs, Consumables, Knowledge of the staff, skills of the staff, infection prevention practices, guidelines and protocols for various deliverables,	
407	**Did Supervisor give any written/verbal feedback to you?** *Yes -01, No-00, Don't Know –99*	
408	**Did the supervisor enquire about the possible causes of maternal or neonatal death, if any?** *Yes -01, No-00, Don't Know –99*	

SECTION V:RECORDS AND REPORTS

501 Patient load

Indicate the total number of outpatient visits in pregnancy/pueriperium/neonatal period, emergency visits and admissions per year (indicate year; if any other period of time, e.g. semester is used, indicate the exact period) for pregnant women and neonates. Include all medical diagnosis but exclude women/neonates dead on arrival.

Year(2013-14)_____Any other period_____

	(A) Outpatient Visits	(B) Emergency visits
501.1. Pregnant women		
501.2. Number of deliveries		
501.3. Neonates 0-28 days		
501.4. Neonates 0-7 days		
501.5. Neonates 8-28 days		

502 Delivery / birth figures at the Facility

Please use the figures from available/register/document/verbal information for the available year (April 2013- March 2014), specify if for any other period

	(last year) April 2013- March 2014	April 2014	May 2014	June 2014
502.1. Number of deliveries				
502.2. Number of live births				
502.3. No. of stillbirths				
502.4. No. of preterms				

	502.5. No. of LBWs					
	502.6. No. of women referred to higher levels					
	502.7. No. of newborn babies referred to higher levels					
503	**What is the average length of stay after normal vaginal delivery (as informed) (write no. of days)**			☐☐ Days		
504	**Is MCTS (mother and child tracking system) being used** *Yes-01, No-00, Don't Know-99*			☐☐		
505	**Is referral slip given to mother/patient while being referred?** *Yes-01, No-00, Don't Know-99*			☐☐		
506	**Is a copy referral slip retained while being referred for records?** *Yes-01, No-00, Don't Know-99*			☐☐		
	SECTION VI LABOR ROOM					
601	**SERVICES PROVIDED**	**(A)** Yes-01, No-00, Don't know-99	**(B)** **If yes write in terms of duration since last done** Same day -01, A week ago-02, A month ago-03, Six months ago-04, > 6 months ago-05			
	601.1. How many deliveries have been performed in the last 24 hours? (write numbers)	☐☐				
	601.2. Is Partograph being used for monitoring delivery?					
	601.3. Is controlled cord traction (CCT) practiced for deliveries?					
	601.4. Is misoprostol administered to pregnant women?					
	601.5. Is Magnesium sulfate administered prenatally for (pre)eclampsia					
	601.6. Are injectable antibiotics given for maternal infections					
	601.7. is injectable oxytocin administered for Haemorrahge?					
	601.8. Is manual removal of retained placenta performed here?					
	601.9. Are antibiotics given to the mothers with PROM (premature rupture of membranes?					
	601.10. Are corticosteroids administered in case of pre-term labor					

602	**INFRASTRUCTURE**		Yes-01, No-00, Don't Know-99	
	602.1. Are labor room and delivery room separate or combined? Same-01, Separate-02, Not Known-99			
	602.2. How many pregnant ladies (expecting delivery) are there at the time of observation? (write numbers)		Number	
	602.3. How many deliveries are in progress at the time of observation? (write numbers)			
	602.4. No. of functional tables labor tables/total number of labor tables (write numbers) in delivery room			
	602.5. No. of functional beds/total number of beds in the labor room (write numbers)			
	602.6. Is there sufficient light source available to perform tasks during day?			
	602.7. Is there sufficient light source to available perform tasks during night?			
	602.8. Does this facility (labor room)have a separate electricity backup system?			
	602.9. If yes, what is the source of power back up? Inverter-01, Generator-02, Others (specify)-03			
	602.10. What is the means of ventilation(e.g. functional fan/air conditioner)			
	602.11. Is there provision of curtains for privacy to the women?			
	602.12. Is there any waiting area for the visitors (family) of the women?			
	602.13. Is there any functional toilets (at the time of visit)?			
	602.14. Is the toilet clean?			
603	**EQUIPMENTS**	**(A) Availability** All available-01, Some available -02 None available-00 Don't Know-99	**(B) Functionality** Yes -01, No-00, Don't Know=99	
	Are all equipment available adequately for conducting delivery?			
	GENERAL			
	603.1. Refrigerator (storage of medicine)			
	603.2. Wall clock with seconds hand			
	FOR MOTHER			
	603.3. Stethoscope			

	603.4. Delivery Kit (Artery forceps, sponge forceps, Dissecting forceps, Cord cutting scissors, Episiotomy scissors and straight stitching scissors)			
	603.5. If yes, how many delivery sets are available (write numbers)			
	603.6. If no, are all components of delivery kit are available separately			
	FOR NEWBORN			
	603.7. Radiant Warmer			
	603.8. Mucus extractor			
	603.9. Thermometers			
	603.10. Weighing scale for baby			
	603.11. Self-inflating bag with masks (sizes 0,1,2)			
	603.12. Laryngoscope (all blades)			
604.	**MEDICINES**	**(A) Adequate Availability** All available-01, Some- 02, None- 00, Don't Know-99	**(B) How many times stock out has been experienced in the last 3 months**	
	604.1. Are all drugs and equipment available adequately to conduct deliveries?			
	604.2. Methyldopa			
	604.3. Capsule Ampicillin			
	604.4. Calcium gluconate			
	604.5. Capsule Amoxycillin			
	604.6. Tab Misoprostol			
	604.7. Hydrocortisone			
	604.8. Salbutamol			
	604.9. Nifedipine			
	604.10. Naloxone			
	604.11. Betamethasone/Dexamethasone			
	604.12. Anti D immunioglobulin			
	604.13. Ethamsylate			
	604.14. Povidone Iodine Ointment			
	604.15. Inj. Gentamycin			
	604.16. Ampicillin Injection			
	604.17. Inj. Magnesium Sulphate			
	604.18. Adrenaline			
	604.19. Atropine			
	604.20. Morphine/Pethidine			
	604.21. IV fluids			
	604.22. Inj. Lignocaine			
	604.23. Inj Vitamin K			

605	**SUPPLIES**	**(A) Adequate Availability** All available-01, some- 02, none- 00, Don't Know-99	**(B) How many times stock out has been experienced in the last 3 months**	
	605.1. Suction catheter (size 8,10)			
	605.2. Cord clamp			
	605.3. All sizes of gloves			
	605.4. Suction tube			
	605.5. Foleys Catheter			
	605.6. Sanitary Napkins			
	605.7. Baby clothes is for drying & receiving			
	605.8. Mucus extractor			
	605.9. Is there an emergency drug tray kit available?			
	605.10. If yes, is it complete and replenished daily?			
	605.11. Is the ambu bag mask for newborn accessible easily ?			

606	**INFECTION PREVENTION** Please ask how do these items are disinfected at the facility usually?	Correct-01 Incorrect -02 No method used -00 Don't know -99	
	606.1. Neonatal face mask -disinfect daily and sterilize daily- Clean with detergent after each use -Immerse in 2% gluteraldehyde -Rinse with clean water and dry with clean linen		
	606.2. Self-inflating bag -disinfect daily and sterilize daily - Dismantle parts -Immerse in 2% gluteraldehyde -Rinse with clean water and dry with clean linen -Reassemble parts		
	606.3. Thermometers -Wipe with alcohol after use -Store in bottle containing dry cotton		
	606.4. Suction apparatus -Suction bottle should contain 3% phenol or 5% Lysol -Suction bottle cleaned with detergent and changed daily -Change tube connected to bottle daily Or flush with water and dry -Soak for infection in 2% gluteraldehyde -Ideally suction catheter should be for single use		
	606.5. Hand washing with soap before every delivery -follow all 6 steps and should be done over a span of 2 minutes		

607	GUIDELINES			
	Are any of the following guidelines present in the labor room	**(A)** Yes-01, No-00	**(B) If yes are they referred** Regularly-01, Rarely-02, Never-00	
	607.1. Skilled birth attendance (SBA)			
	607.2. Navjat Shishu Suraksha Karykram (NSSK)			
	607.3. Essential newborn guidelines			
	607.4. Neonatal Resuscitation Guidelines			
	607.5. Breast feeding policy and supporting mother for breastfeeding			
	607.6. Is there any display of essential newborn care			
	607.7. Is there any display of Newborn resuscitation?			
	607.8. Is there any display of partograph?			
608	**Specific Comments-**			

Name of Observer_____

Signature_____

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

KNOWLEDGE ASSESSMENT-Doctors

Partner Medical College:

State	Uttar Pradesh
District	
Date	_ _ /_ _ /2014
Commencing Time	_ _ : _ _
Concluding Time	_ _ : _ _

Facility Name	

Facility Type
1-District Hospital ,
2- FRU-CHC ,
3-CHC ,
4-FRU-PHC CHC ,
5- PHC , 6-Sub Centre

Health functionary
1-Medical officer,
2-Obstetrician/ Gynecologist,
3- Pediatrician
4- Any other (specify)

Namaskar, I am_____from _____ Medical College/Partner Organisation. I am here with my colleagues to do a survey of healthcare services delivered to mothers and newborn at the time of delivery at your facility. You are an important stakeholder in this survey. Your participation in the survey would contribute to improving health services in this health facility and other facilities in this district. Our team would like to undertake this assessment. Observe the practices related to newborn care. Therefore we would appreciate if you could allow us to undertake this assessment. Our observations will be confidential and in no way will reveal your identity.

Instructions for filling up the schedules

1. At each health facility, the designated health functionary is to be selected for knowledge assessment.
2. The health care provider managing delivery and neonatal resuscitation will be considered for knowledge assessment.
3. If more than one person is available at the same time, the senior is to be chosen.
4. Read out the standard instructions.
5. Do not make any judgments/comments/gesture while making the assessment.
6. The data collected is to be treated as confidential and not to be communicated to any other health official/functionary.

Instructions for Doctors for filling the format

1. Kindly read all the questions and carefully respond as indicated for specific question.
2. You can take your time while reading the questions and ask the research team member if there is any confusion.

KNOWLEDGE ASSESSMENT- DOCTORS

S.No.	Question	Responses
1	Number of months and years in service (number of years)	months years
2	Have you ever received any training on pregnancy/ childbirth/newborn care/ resuscitation? Yes -01, No -00 Don't Know -99	
3	If yes, when was the last training held? (MM/YYYY)	M M Y Y Y Y
4	Does your institution use Partograph to monitor labor? Mostly-01, Occasionally-02, Never-03	

Please put a tick mark (√) in front of true and (X) in front of false statement

Sl. no	Statement	Response
5	While preparing for the birth of the baby ceiling fans should be switched off and windows of the labor room should be closed.	
6	At every birth, presence of person skilled in neonatal resuscitation is not required; a skilled person is required only in conditions with increased risk of asphyxia.	
7	Self-inflating Bag and mask should be ready in the labor room only in conditions of increased risk of asphyxia, otherwise bag and mask should be kept in safe custody.	
8	All newborns require an initial assessment to determine whether resuscitation is needed or not.	
9	Following are the methods to stimulate the baby if not crying?	
	9.1 Slapping the back	
	9.2 Flicking the sole	
	9.3 Rubbing the back	
	9.4 Slapping the sole	
	9.5 Squeezing the chest	
	9.6 Holding the child upside down	
10	If not crying at birth, there is no activity and the baby is cyanosed, the baby is probably dead and there is no need to initiate ventilation.	

11	All babies born with meconium stained liquor require endotracheal suctioning.	☐
12	Essential components of newborn care are temperature maintenance, infection control, exclusive breastfeeding , and identification of danger signs. ,	☐
	Please write the correct option in the box provided alongside.	
13	Before the birth of the baby the radiant warmer or the bulb of 200 W should be kept switched on preferably _____ before expected time of birth. a.15 minutes b. 20 minutes c. 1/2 hour d. 1hour	☐
14	If newborn is not crying and meconium is present how would you do suction a. mouth-→ nose-→trachea b. trachea-→ nose-→mouth c. mouth-→ nose d. nose-→ mouth →trachea	☐
15	During resuscitation by bag and mask the mask should cover_____. a. chin, mouth and tip of nose but not the eyes b. part of chin, mouth, nose and eyes c. part of nose, mouth but not eyes and chin d. nose, chin and mouth completely but not the eyes	☐
16	If a term baby (born at 9 completed months) is not breathing at birth even after initial steps he/she can be resuscitated with bag and mask ventilation using ____. a. room air, even if oxygen is not available b. oxygen but no reservoir c. oxygen with reservoir d. room air with reservoir	☐
17	After taking corrective measures, positive pressure ventilation should be continued for at least _____seconds, before reassessing the situation (heart beat) a. 5 b. 10 c. 20 d. 30	☐

18	After cutting the cord what should be applied on it? a. Spirit b. Gentian violet c. Betadine solution d. Nothing	☐
19	Baby bath should be given to remove the vernix after_____time. a. bath not essential at all b. should be bathed within 1 hour after birth c. should be bathed at least after 6 hours after birth d. should be bathed after 24 hours after birth	☐
Please fill in the blanks for the following statements at appropriate places.		
20	After administration of _____ breaths of positive pressure ventilation heart rate of the baby is to be checked.	☐
21	_____ size suction catheter is required for meconium suctioning from mouth and nose in term newborn.	☐
22	Breast feeding should be started within _____ hours after birth.	☐
23	Hand washing involves ____ steps and done _____seconds.	☐
24	Many babies who do not breathe at birth may respond to stimulation however some need _____ to start breathing.	☐
25	Increase in _____ is a very important sign of improvement after bag and mask ventilation.	☐
26	Single most important step in neonatal resuscitation is _____ _____	☐
27	Umbilical cord should be cut _____(time) after birth with sterile scissors.	☐
28	Normal axillary temperature of newborn should be between __^{0}C to __^{0}C	☐
29	_____ is a very good method to maintain temp in low birth weight babies.	☐
30	New babies require birth dose of Hepatitis B vaccine and _____ administration after birth.	☐
31	Positive pressure ventilation is to be initiated when heart rate is _____	☐

32	_____should be given to mothers developing preterm labor. _____	_____
33	You shall start chest compression when the heart rate is _____/minute. /f	_____
34	Endotracheal intubation must be done within _____ seconds.	_____
35	_____fingers are used for chest compression in newborns.	_____
36	The recommended rate of chest compression in newborns is _____/ minute along with coordinated bag and mask ventilation _____/	_____
37	The strength of adrenaline used in newborns during resuscitation is 1:_____ 1:_____	_____
38	_____ are to be given to asymptomatic newborns of mothers who had prolonged rupture of membranes >24 hours of delivery. _____	_____

Thank you for giving your precious time.

Observer's name _____

Signature

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

KNOWLEDGE ASSESSMENT-Nurses and ANMs

Partner Medical College:

State	Uttar Pradesh
District	
Date	_ _ /_ _ /2014
Commencing Time	_ _ : _ _
Concluding Time	_ _ : _ _

Facility Name	

Facility Type 1-District Hospital , 2- FRU-CHC , 3-CHC , 4- PHC , 5 -Sub Centre	☐

Health functionary 1-Staff nurse, 2- LHV, 3- ANM, 4- Any other (specify)	☐

Namaskar, I am_____from ---------- Medical College/Partner Organisation. I am here with my colleagues to do a survey of healthcare services delivered to mothers and newborn at the time of delivery at your facility. You are an important stakeholder in this survey. Your participation in the survey would contribute to improving health services in this health facility and other facilities in this district. Our team would like to undertake this assessment. Observe the practices related to newborn care. Therefore we would appreciate if you could allow us to undertake this assessment. Our observations will be confidential and in no way will reveal your identity.

Instructions for filling up the schedules

1. At each health facility, the designated health functionary is to be selected for knowledge assessment.
2. The health care provider managing delivery and neonatal resuscitation will be considered for knowledge assessment.
3. If more than one person is available at the same time, the senior is to be chosen.
4. Read out the standard instructions.
5. Do not make any judgments/comments/gesture while making the assessment.
6. The data collected is to be treated as confidential and not to be communicated to any other health official/functionary.

Instructions for Health Staff for filling the format

1. Kindly read all the questions and carefully respond as indicated for specific question.
2. You can take your time while reading the questions and ask the research team member if there is any confusion.

KNOWLEDGE ASSESSMENT- NURSEs and ANMs

S.No.	Question	Responses
1	Number of months and years in service (number of years)	months years
2	Have you ever received any training on pregnancy/ childbirth/newborn care/ resuscitation? Yes -01, No -00 Don't Know -99	
3	If yes, when was the last training held? (MM/YYYY)	M M Y Y Y Y
4	Does your institution use Partograph to monitor labor? Mostly-01, Occasionally-02, Never-03	

Please put a tick mark (√) in front of true and (X) in front of false statement
(√) (X)

Sl. no	Statement	Response
5	While preparing for the birth of the baby ceiling fans should be switched off and windows of the labor room should be closed.	
6	At every birth, presence of person skilled in neonatal resuscitation is not required; a skilled person is required only in conditions with increased risk of asphyxia.	
7	Self-inflating Bag and mask should be ready in the labor room only in conditions of increased risk of asphyxia, otherwise bag and mask should be kept in safe custody.	
8	All newborns require an initial assessment to determine whether resuscitation is needed or not.	
9	Following are the methods to stimulate the baby if not crying?	
	9.1 Slapping the back	
	9.2 Flicking the sole	
	9.3 Rubbing the back	
	9.4 Slapping the sole	
	9.5 Squeezing the chest	
	9.6 Holding the child upside down	
10	If not crying at birth, there is no activity and the baby is cyanosed, the baby is probably dead and there is no need to initiate ventilation.	

11	All babies born with meconium stained liquor require endotracheal suctioning.	☐
12	Essential components of newborn care are temperature maintenance, infection control, exclusive breastfeeding , and identification of danger signs.	☐
	Please write the correct option in the box provided alongside.	
13	Before the birth of the baby the radiant warmer or the bulb of 200 W should be kept switched on preferably _____minutes before expected time of birth. a.15 minutes b. 20 minutes c. 1/2 hour 1/2 d. 1hour 1	☐
14	If newborn is not crying and meconium is present how would you do suction a. mouth-→ nose-→trachea b. trachea-→ nose-→mouth c. mouth-→ nose d. nose-→ mouth →trachea	☐
15	During resuscitation by bag and mask the mask should cover_____. a. chin, mouth and tip of nose but not the eyes b. part of chin, mouth, nose and eyes c. part of nose, mouth but not eyes and chin d. nose, chin and mouth completely but not the eyes	☐
16	If a term baby (born at 9 completed months) is not breathing at birth even after initial steps he/she can be resuscitated with bag and mask ventilation using a. room air, even if oxygen is not available b. oxygen but no reservoir c. oxygen with reservoir d. room air with reservoir	☐
17	After taking corrective measures, positive pressure ventilation should be continued for at least _____seconds, before reassessing the situation (heart beat) a. 5 b. 10 c.20 d.30	☐
18	After cutting the cord what should be applied on it? a. Spirit b. Gentian violet c. Betadine solution d. Nothing	☐

19	Baby bath should be given to remove the vernix after/time a. bath not essential at all b. should be bathed within 1 hour after birth c. should be bathed at least after 6 hours after birth d. should be bathed after 24 hours after birth	☐
Please fill in the blanks for the following statements at appropriate places.		
20	After administration of _____ breaths of positive pressure ventilation heart rate of the baby is to be checked.	_____
21	_____ size suction catheter is required for meconium suctioning from mouth and nose in term newborn.	_____
22	Breast feeding should be started within _____ hours after birth.	_____
23	Hand washing involves ____ steps and done _____ seconds.	_____
24	Many babies who do not breathe at birth may respond to stimulation however some need _____ to start breathing.	_____
25	Increase in _____ is a very important sign of improvement after bag and mask ventilation.	_____
26	Single most important step in neonatal resuscitation is _____ _____	_____
27	Umbilical cord should be cut _____ (time) after birth with sterile scissors.	_____
28	Normal axillary temperature of newborn should be between ___^{0}C to ___^{0}C	_____
29	_____ is a very good method to maintain temp in low birth weight babies. _____	_____
30	Newborn babies require birth dose of Hepatitis B vaccine and _____ administration after birth.	_____
31	Positive pressure ventilation is to be initiated when heart rate is less than _____ _____	_____
32	_____ should be given to mothers developing preterm labor.	_____

Thank you for giving your precious time.

Observer's name _____ Signature

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014) SKILL ASSESSMENT:DOCTORS

Partner Medical College

State	Uttar Pradesh	**Facility Name**	
District		**Facility Type** 1-District Hospital, 2-FRU-CHC, 3-CHC, 4-FRU-PHC, 5- PHC, 6-Sub Centre	
Date: _ _/_ _/2014			
Commencing Time		**Health functionary** 1-Medical officer, 2-Obstetrician/ Gynecologist, 3- Pediatrician 4- AYUSH doctor 5- Any other (specify)	
Concluding Time			

Namaskar, I am_____from _____ Medical College/Partner Organisation. I am here with my colleagues to do a survey of healthcare services delivered to mothers and newborn at the time of delivery at your facility. Being the staff engaged in conducting deliveries/newborn care, you are an important stakeholder in this study. Your participation in the study would contribute to improving health services in this health facility and other facilities in this district. Our team would like to discuss and understand the practices related to newborn care undertaken by you at this time of newborn care and resuscitation. Therefore we would appreciate if you could participate in assessment. Our observations will be confidential and in no way will reveal your identity.

Instructions for the observer undertaking the skill assessment

1. At each health facility, the designated health functionary is to be selected for skill assessment.
2. The doctor/health care provider managing delivery and neonatal resuscitation will be considered for skill assessment.
3. If more than one person is available at the same time, the senior is to be chosen.
4. Assessment is to be done using mannequin and self-inflating bag and masks
5. Read out the standard instructions and case scenario in the tool
6. Do not make any judgments/comments/gesture while making the assessment.
7. The data collected is to be treated as confidential and not to be communicated to any other health official/functionary.
8. Please ensure that all the supplies and items are present for assessment.

Standard instructions for to be read out by the Observer

Please explain and clarify the following to the health staff being assessed and read aloud:
As part of the study, I shall narrate a scenario that requires some action from your side as a care provider attending the newborn delivery. I shall request you to perform the skills required for the optimal resuscitation of this newborn baby (presented here as mannequin).
Following are the instructions which you have to follow during the assessment.

- When you begin the resuscitation, work quickly and efficiently as if this were a real newborn baby and real resuscitation.
- Please ask whatever you need to know about the progress of the baby; but don't assume progress or deterioration.
- We won't tell you how the baby is doing until you ask, and we will not give you hints about what to do next.

Now if you are ready, we shall start the process.

The items are to be kept ready in a tray-

1. ***2-3 linens/ clothes,***
2. ***shoulder roll,***
3. ***cap,***
4. ***cord clamp,***
5. ***scissor/ blade,***
6. ***Betadine,***
7. ***cotton swabs,***
8. ***saline,***
9. ***suction catheter,***
10. ***mucus trap,***
11. ***syringe***
12. ***Vitamin K.***

1. **SKILLS FOR IMMEDIATE THERMOREGULATION OF THE NEWBORN**

SCENARIO: You have been called in labor room where a recently born baby is lying wet and naked and breathing/ crying well. Demonstrate what you would do prevent heat loss and steps taken for immediate care.

Note for the assessor: Ensure the fan is on and the window is open and radiant warmer is switched off. The mannequin (with a long cord) is not kept under the warmer, are kept besides the baby.
Ensure that the mannequin has a long cord (either a catheter)
Where ever the sequence in not followed, mention as sub-optimal and comment appropriately.

S.NO	STEPS	Scores 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
1.1	Switches off ceiling fans (if on) and closes windows of labor room (if open)	
1.2	Puts the radiant warmer/ 200W bulb on	
1.3	Shifts the baby to the warmer bed/ warm corner (or comments that the he/she shall put the baby on mothers abdomen)	
1.4	Wipes of the baby with a dry clean cloth and removes the wet cloth	
1.5	Wraps in another dry clean cloth and puts the baby over a warm surface (or mother's chest/ abdomen)	
Comments:		

2. **SKILL FOR ROUTINE CARE OF THE NEWBORN**

SCENARIO: A baby has just been born; demonstrate how you would provide routine care to this baby.

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
2.1	Ties/clamps umbilical cord with sterile tie/clamp at 2.5 cm and cuts using sterile instrument/blade	
2.2	Applies nothing on the cord	
2.3	Cleans the eyes/ looks for cleaning the eyes	
2.4	Assesses the baby using the stethoscope	
2.5	Administers Vitamin K	
Comments		

3. **SKILL FOR THE INITIAL STEPS OF RESUSCITATION**

SCENARIO: A baby is born at term gestation and is having gasping respiratory efforts. The resuscitation has to be initiated on the baby, how you will perform the initial steps; ***kindly perform and speak aloud what you are doing***.

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
3.1	Dries / Places the baby under the dummy Warmer	
3.2	Positions the baby using a shoulder roll under the shoulder	
3.3	Clears the airway of the baby (by turning the head to the lateral side, suctions mouth first and then noses)	
3.4	Stimulates the baby by flicking the sole or the rubbing of the back	
3.5	Repositions the baby and evaluates the baby using stethoscope	
Comments		

4. **SKILL ON POSITIVE PRESSURE VENTILATION**

SCENARIO: Instruct the participant to perform positive pressure ventilation. ***Kindly perform and speak aloud what you are doing.***

If the candidate is making inadequate efforts, delay in initiation, showing inertia, please note in the comments section.

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
4.1	Assembles the self-inflating bag and the correct size mask	
4.2	Correctly positions himself/herself towards the head of the mannequin	
4.3	Correctly applies the mask and ensures the seal	
4.4	Applies PPV with the correct rate (40-60/min) and correct rhythm	
4.5	Achieves appropriate chest expansion as required	
Comments		

5. **SKILLS ON CORRECTIVE MEASURES AFTER POSITIVE PRESSURE VENTILATION**

SCENARIO: Demonstrate corrective measures for ineffective positive pressure ventilation on the mannequin. ***Kindly perform and speak aloud what you are doing.***

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
5.1	Checks for seal of the mask and adjusts	
5.2	Repositioning of head	
5.3	Clears airway (suctions mouth and then nose)	
5.4	Opens the mouth	
5.5	Increases pressure of compression of bag	
Comments		

6. **SKILL ON CHEST COMPRESSION**

SCENARIO: Demonstrate the methods of chest compression in the mannequin.
Kindly perform and speak aloud what you are doing.

S. No.	Steps	**Scores** 0=Not done, 1= incorrectly done , 2=incompletely/sub optimally done, 3. Correctly done
6.1	Selects the correct site for the compression	
6.2	Provides back support throughout	
6.3	Applies adequate compression	
6.4	Does not lift the finger from the chest in-between the compressions	
6.5	Uses correct rate of chest compressions (90/minute)	

Comments

7. **SKILLS ON ENDOTRACHEAL INTUBATION:**

SCENARIO: Demonstrate the method of intubation of the mannequin.
Kindly perform and speak aloud what you are doing.
Note for the assessor: Ensure that the laryngoscope, all sizes of ET tubes and stethoscope are available.

S No.	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=incompletely/sub optimally done, 3. Correctly done
7.1	Asks for correct size blade and ET tube (asks for weight of the baby)	
7.2	Holds the laryngoscope in left hand and ET tube in right hand	
7.3	Positions the newborn's head	
7.4	Inserts the laryngoscope correctly and lifts using correct motion	
7.5	Checks correct placement using stethoscope	
Comments		

8. **SKILL ON PREPARATION FOR ADRENALINE ADMINISTRATION**

SCENARIO: Demonstrate how you will prepare for Adrenaline administration.
Kindly perform and speak aloud what you are doing.

S.No	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=incompletely/sub optimally done, 3. Correctly done
8.1	Chooses the correct syringe (1 ml) and draws 0.1 ml of adrenaline	
8.2	Draws normal saline (0.9 ml) and mixes	
8.3	Correct estimation of dose (asks for weight of the baby)	
8.4	Administers the adrenaline via umbilical venous catheter RAPIDLY	
8.5	Flushes with 0.5 ml normal saline	
Comments		

Any other comments by the observer

Name of the Observer

Signature of the observer

UNIQUE ID:	

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

SKILL ASSESSMENT:NURSEs and ANMs

Partner Medical College

State	Uttar Pradesh	**Facility Name**	
District		**Facility Type** 1-District Hospital, 2-FRU-CHC, 3-CHC, 4-FRU-PHC, 5- PHC, 6-Sub Centre	
Date: _ _/_ _/2014		**Health functionary** 1-Staff nurse, 2- LHV, 3- ANM, 4- Any other (specify)	
Commencing Time			
Concluding Time			

Namaskar, I am_____from _____ Medical College/Partner Organisation. I am here with my colleagues to do a survey of healthcare services delivered to mothers and newborn at the time of delivery at your facility. Being the staff engaged in conducting deliveries/newborn care, you are an important stakeholder in this study. Your participation in the study would contribute to improving health services in this health facility and other facilities in this district. Our team would like to discuss and understand the practices related to newborn care undertaken by you at this time of newborn care and resuscitation. Therefore we would appreciate if you could participate in assessment. Our observations will be confidential and in no way will reveal your identity.

Instructions for the observer undertaking the skill assessment

1. At each health facility, the designated health functionary is to be selected for skill assessment.
2. The health care provider managing delivery and neonatal resuscitation will be considered for skill assessment.
3. If more than one person is available at the same time, the senior is to be chosen.
4. Assessment is to be done using mannequin and self-inflating bag and masks
5. Read out the standard instructions and case scenario in the tool
6. Do not make any judgments/comments/gesture while making the assessment.
7. The data collected is to be treated as confidential and not to be communicated to any other health official/functionary.
8. Please ensure that all the supplies and items are present for assessment.

Standard instructions for to be read out by the Observer

Please explain and clarify the following to the health staff being assessed and read aloud:
As part of the study, I shall narrate a scenario that requires some action from your side as a care provider attending the newborn delivery. I shall request you to perform the skills required for the optimal resuscitation of this newborn baby (presented here as mannequin).
Following are the instructions which you have to follow during the assessment.

- When you begin the resuscitation, work quickly and efficiently as if this were a real newborn baby and real resuscitation.
- Please ask whatever you need to know about the progress of the baby; but don't assume progress or deterioration.
- We won't tell you how the baby is doing until you ask, and we will not give you hints about what to do next.

Now if you are ready, we shall start the process.

The items are to be kept ready in a tray-

1. ***2-3 linens/ clothes,***
2. ***shoulder roll,***
3. ***cap,***
4. ***cord clamp,***
5. ***scissor/ blade,***
6. ***Betadine,***
7. ***cotton swabs,***
8. ***saline,***
9. ***suction catheter,***
10. ***mucus trap,***
11. ***syringe***
12. ***Vitamin K.***

1. **SKILLS FOR IMMEDIATE THERMOREGULATION OF THE NEWBORN**

SCENARIO: You have been called in labor room where a recently born baby is lying wet and naked and breathing/ crying well. Demonstrate what you would do prevent heat loss and steps taken for immediate care.

Note for the assessor: Ensure the fan is on and the window is open and radiant warmer is switched off. The mannequin (with a long cord) is not kept under the warmer, are kept besides the baby.
Ensure that the mannequin has a long cord (either a catheter)
Where ever the sequence in not followed, mention as sub-optimal and comment appropriately.

S.NO	STEPS	Scores 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
1.1	Switches off ceiling fans (if on) and closes windows of labor room (if open)	
1.2	Puts the radiant warmer/ 200W bulb on	
1.3	Shifts the baby to the warmer bed/ warm corner (or comments that the he/she shall put the baby on mothers abdomen)	
1.4	Wipes of the baby with a dry clean cloth and removes the wet cloth	
1.5	Wraps in another dry clean cloth and puts the baby over a warm surface (or mother's chest/ abdomen)	
Comments:		

2. **SKILL FOR ROUTINE CARE OF THE NEWBORN**

SCENARIO: A baby has just been born; demonstrate how you would provide routine care to this baby.

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
2.1	Ties/clamps umbilical cord with sterile tie/clamp at 2.5 cm and cuts using sterile instrument/blade	
2.2	Applies nothing on the cord	
2.3	Cleans the eyes/ looks for cleaning the eyes	
2.4	Assesses the baby using the stethoscope	
2.5	Administers Vitamin K	
Comments		

3. **SKILL FOR THE INITIAL STEPS OF RESUSCITATION**

SCENARIO: A baby is born at term gestation and is having gasping respiratory efforts. The resuscitation has to be initiated on the baby, how you will perform the initial steps; ***kindly perform and speak aloud what you are doing***.

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
3.1	Dries / Places the baby under the dummy Warmer	
3.2	Positions the baby using a shoulder roll under the shoulder	
3.3	Clears the airway of the baby (by turning the head to the lateral side, suctions mouth first and then noses)	
3.4	Stimulates the baby by flicking the sole or the rubbing of the back	
3.5	Repositions the baby and evaluates the baby using stethoscope	
Comments		

4. **SKILL ON POSITIVE PRESSURE VENTILATION**

SCENARIO: Instruct the participant to perform positive pressure ventilation. ***Kindly perform and speak aloud what you are doing.***

If the candidate is making inadequate efforts, delay in initiation, showing inertia, please note in the comments section.

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
4.1	Assembles the self-inflating bag and the correct size mask	
4.2	Correctly positions himself/herself towards the head of the mannequin	
4.3	Correctly applies the mask and ensures the seal	
4.4	Applies PPV with the correct rate (40-60/min) and correct rhythm	
4.5	Achieves appropriate chest expansion as required	
Comments		

5. **SKILLS ON CORRECTIVE MEASURES AFTER POSITIVE PRESSURE VENTILATION**

SCENARIO: Demonstrate corrective measures for ineffective positive pressure ventilation on the mannequin. ***Kindly perform and speak aloud what you are doing.***

S.NO	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence
5.1	Checks for seal of the mask and adjusts	
5.2	Repositioning of head	
5.3	Clears airway (suctions mouth and then nose)	
5.4	Opens the mouth	
5.5	Increases pressure of compression of bag	
Comments		

6. **SKILL ON PREPARATION FOR ADRENALINE ADMINISTRATION**

SCENARIO: Demonstrate how you will prepare for Adrenaline administration.
Kindly perform and speak aloud what you are doing.

S.No	STEPS	**Scores** 0=Not done, 1= incorrectly done , 2=incompletely/sub optimally done, 3. Correctly done
6.1	Chooses the correct syringe (1 ml) and draws 0.1 ml of adrenaline	
6.2	Draws normal saline (0.9 ml) and mixes	
6.3	Correct estimation of dose (asks for weight of the baby)	
6.4	Administers the adrenaline via umbilical venous catheter RAPIDLY	
6.5	Flushes with 0.5 ml normal saline	

Comments

Any other comments by the observer

Name of the Observer

Signature of the observer

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

LABOR AND DELIVERY OBSERVATION

Partner Medical College:

State	Uttar Pradesh

Facility Name	

District	

Facility Type 1-District Hospital, 2- FRUCHC, 3-CHC, 4-FRUPHC, 5- PHC, 6-Sub Centre	

Date: _ _ /_ _ /2014

Facility Name

Commencing Time	_ _ : _ _
Concluding Time	_ _ : _ _

INFORMATION FOR THE HEALTH CARE PROVIDER

Namaskar, I am _____ from _____ Medical College/Partner Organisation. I am here with my colleagues to observe the healthcare services delivered to mothers and newborn at the time of delivery at this facility. You are the service provider at this facility. Your participation in the study would contribute to improving health services in this health facility and other facilities in this district. The doctor in our team would like to observe the delivery and newborn care process. Our observations will be confidential and in no way will reveal your or client's identity.

INFORMATION FOR THE MOTHER

Namaskar, I am _____ from _____ Medical College/Partner Organisation. I am here with my colleagues to observe the healthcare services delivered to mothers and newborn at the time of delivery at this facility. You are the direct beneficiary of the services at this facility. Your participation in the study would contribute to improving health services in this health facility and other facilities in this district. Our team would like to observe the delivery and newborn care process. Therefore we would appreciate if you could allow us to undertake this observation. The observation of the delivery will be done by the doctor in the team. Our observations will be confidential and in no way will reveal your or your child's identity.

Instructions for filling up the schedules

1. At each health facility, the designated health functionary at the time of delivery has to be selected for observing the practices of delivery care and neonatal resuscitation.
2. If more than one delivery are undergoing then, the delivery with more complications has to be selected for observation.
3. Do not make any judgments/comments/gesture while making the observation.
4. The data collected to be treated as confidential and not to be communicated to any other health official/functionary.
5. Do intervene, if the life of the mother or the child is in danger and mention it on the tool.

LABOR AND DELIVERY OBSERVATION CHECKLIST

SECTION 1: IDENTIFICATION OF LABOR AND HEALTH FUNCTIONARIES		
101.	Labor No. being observed at the same facility	
102.	Health functionary attending the delivery 1-Obstetrician, 2- Pediatrician 3-Medical Officer 4-ANM/LHV 5-Nurse 6. ASHA 7-others(specify)……	tick as many apply (if more than one write number)
103.	Primary health functionary for mother (Designation and number)	
103.1	Primary health functionary for newborn (Designation and number)	
103.2	Assistant health functionary (Designation and number)	

SECTION 2: GENERAL INFORMATION			
Proceed only if the consent forms have been signed and permission has been given by the mother and the family members to observe the delivery process			
GENERAL INFORMATION ABOUT THE MOTHER			
201.	Gravida (write number)		
202.	Para (write number)		
203.	Any Known Complication during pregnancy or before 1- Yes, 0- No, 9- Not known (if yes, specify)		
204.	Is this case a referral or direct attendee at the facility? 1-Referral 2. Direct attendee 9-not known		
SECTION 3: INTERMITTENT OBSERVATION OF FIRST STAGE OF LABOR			
EXAMINATION & PROCEDURES		**Scores** 0=Not done, 1= incorrectly done , 2=Correctly done, not in sequence, 3=Correctly done in sequence	Comments/ skip
301.	Washes his/her hands with soap and water or uses alcohol hand rub prior to any examination of woman		
302.	Wears sterile surgical gloves		
303.	Drapes woman (one drape under buttocks, one over abdomen)		
304.	Explain procedures to woman (support person) before proceeding		
305.	Adopts universal precautions (use of masks, caps, plastic gown by the health functionary)		
306.	Charts Partograph		
307.	Administers antibiotics if required (PROM)		

SECTION 4: OBSERVATION OF SECOND & THIRD STAGE OF LABOR			
401.	Episiotomy done 1-Yes, 0-No		
402.	Supports perineum during delivery		
403.	Record time of the delivery of the baby		
404.	Checks for another baby prior to giving the uterotonic (oxytocin)		
405.	**Administers uterotonic (oxytocin) and records time, drug, route and dosage given.**		
406.	**Applies traction to the cord while applying suprapubic counter traction.**		
407.	**Performs uterine massage immediately following the delivery of the placenta.**		
408.	**Assesses completeness of the placenta and membranes delivered**		
409.	Assesses for perineal and vaginal lacerations		
410	Sex and status of the baby is informed to the mother		
SECTION 5: IMMEDIATE NEWBORN CARE			
PART 1 – PREPERATORY CARE			
501	Switches off ceiling fans and closes windows		
502	Clean towels and blankets kept ready		
503	Radiant warmer or 200W bulb kept switched on at least 20 minutes before expected time of delivery.		
504	**Prepares and checks the inventory for resuscitation (including bag and mask)**		
Part 2 - IMMEDIATE CARE (For babies not requiring resuscitation)			
505	Status of the newborn 0 - Dead and macerated 1- Not macerated		If dead and macerated go to 901
506	Immediately dries baby with towel 0-No, 1-yes, 9-Don't Know		
507	Is the baby breathing/ crying 0 - No, 1- Yes		
508	If baby crying, puts the baby on mothers abdomen. 0-No, 1-yes, 9-Don't Know		
509	Ties or clamps cords when pulsations stop/ 2-3 minutes after birth (not immediately after birth) 0-No, 1-yes, 9-Don't Know		
510	Cuts the cord 2.5-3 cms from the skin using sterile blade/ scissor 0-No, 1-yes, 9-Don't Know		If yes skip to 701, if no go to 601

SECTION 6: CHECKLIST FOR NEWBORN RESUSCITATION (for babies requiring resuscitation)					
601.	Immediately cuts the cord and takes the baby to warmer 0-No, 1-yes, 9-Don't Know				
602.	Positions the baby 0-No, 1-yes, 9-Don't Know				
603	Clears the airway of the baby if required (mouth and nose in case of non-MSL, trachea in case of MSL) 0-No, 1-yes, 9-Don't Know				
603.	Provides tactile stimulus for breathing (rubbing the back and stroking the soles) 0-No, 1-yes, 9-Don't Know				
604.	Assesses for breathing, heart rate (uses stethoscope) in 6 seconds 0-No, 1-yes, 9-Don't Know				If breathing/ crying, go to 701
605.	Starts PPV if indicated (adopting correct technique) 0-No, 1-yes, 9-Don't Know				
606.	Assesses the effect of PPV after 5 breaths 0-No, 1-yes, 9-Don't Know				
607.	If chest not rising or heart rate not rising after 5 breaths **takes corrective action** (reapply mask, reposition head, check secretions, opens mouth, increases pressure) 0-No, 1-yes, 9-Don't Know				
608	**Ventilates for 30 sec with appropriate rate and pressure (40-60 breaths/min)** 0-No, 1-yes, 9-Don't Know				
609	Assesses for breathing, heart rate (uses stethoscope) in 6 seconds 0-No, 1-yes, 9-Don't Know				
610.	Takes action according to heart rate 0-No, 1-yes, 9-Don't Know				
	if HR >100 /min , continues ventilation and assess after every 30 seconds for spontaneous breathing and gradually discontinues PPV	If HR 60-100 /min, continues ventilation and seeks advanced care or referral	If HR <60 /min, continues ventilation and initiates chest compression		If baby improves and PPV discontinued, go to 701
Stop here in case of a PHC or a peripheral health centre, but DO proceed in case of an FRU or a DH					
611.	Assesses for breathing, heart rate (uses stethoscope) in 6 seconds 0-No, 1-yes, 9-Don't Know				
612.	Assesses Heart rate, 0-No, 1-yes, 9-Don't Know				
	If HR >100/min and spontaneous breathing present, discontinues chest compression and weans off PPV	If HR >100 and poor spontaneous breathing present, discontinues chest compression and continues PPV	If HR <60/min, continues chest compression and PPV and gives medication		
613.	Records time that resuscitation actions ended (or time of death if baby died) 0-No, 1-yes, 9-Don't Know				

614.	Arranges transfer to special care either in facility or to outside facility 0-No, 1-yes, 9-Don't Know		
SECTION 7: POSTPARTUM CARE			
701	Places baby on mother's abdomen "skin to skin contact" 0-No, 1-yes, 9-Don't Know		
702	Covers babies head with cap covers both mother and baby in warm cloth 0-No, 1-yes, 9-Don't Know		
703	Wipes the eyes with a soft clean cloth 0-No, 1-yes, 9-Don't Know		
704	Initiated breastfeeding as soon as possible 0-No, 1-yes, 9-Don't Know		
705	Administers Vitamin K to newborn 0-No, 1-yes, 9-Don't Know		
706	Ask when to shift the baby to the mother 0-No, 1-yes, 9-Don't Know		
HEALTH CHECK			
707	Checks baby's temperature 15 minutes after birth 0-No, 1-yes, 9-Don't Know		
708	Checks baby's skin colour 15 minutes after birth 0-No, 1-yes, 9-Don't Know		
709	Takes mother's vital signs 15 minutes after birth 0-No, 1-yes, 9-Don't Know		
710	Palpates uterus 15 minutes after delivery of placenta 0-No, 1-yes, 9-Don't Know		
711	Ask when to shift the mother to ward/ bed 0-No, 1-yes, 9-Don't Know		
712	Checks the mother after 1 hour 0-No, 1-yes, 9-Don't Know		
713	Checks the baby after 1 hour 0-No, 1-yes, 9-Don't Know		
CLEAN-UP AFTER BIRTH			
714	Disposes of all sharps and contaminated waste in a puncture-proof container immediately after use 0-No, 1-yes, 9-Don't Know		
715	Decontaminates all reusable instruments in 0.5% chlorine solution and also sterilizes 0-No, 1-yes, 9-Don't Know		
SECTION 8: POTENTIALLY HARMFUL PRACTICES			
801.	Did you see any of the following harmful/ inappropriate practices by health workers that are not indicated? 0-No, 1-yes, 9-Don't Know		
With MOTHER			
801.1	Use of enema 0-No, 1-yes, 9-Don't Know		
801.2	Pubic shaving 0-No, 1-yes, 9-Don't Know		
801.3	Apply fundal pressure to hasten delivery 0-No, 1-yes, 9-Don't Know		
801.4	Lavage of uterus after delivery 0-No, 1-yes, 9-Don't Know		
801.5	Manual exploration of uterus after delivery 0-No, 1-yes, 9-Don't Know		
801.6	Stretching of the perineum 0-No, 1-yes, 9-Don't Know		

801.7	Shout, insult or threaten the woman 0-No, 1-yes, 9-Don't Know		
801.8	Slap, hit or pinch the woman during labor or after 0-No, 1-yes, 9-Don't Know		
	Any other, specify		
	With NEWBORN		
801.9	Slaps newborn 0-No, 1-yes, 9-Don't Know		
801.10	Holds newborn upside down 0-No, 1-yes, 9-Don't Know		
801.11	Milking the newborn's chest 0-No, 1-yes, 9-Don't Know		
801.12	Aspiration of newborn's mouth and nose as soon as head is born and the body is still in the process of delivery. 0-No, 1-yes, 9-Don't Know		
	Any other specify		
	SECTION 9 : DEAD BORN CHILD (to be filled only case of a dead born child)		
901.	If child is born dead, what is the status? 1-Child was a fresh stillbirth 2-Macerated		

Any other comments by the observer

Observer's name _____

Signature

NURSE

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)
INTERVIEW OF THE NURSE

Partner Medical College:

State [redacted]	Uttar Pradesh

1. 1 District	

1.3 Date	D	D	-	M	M	-	Y	Y

1.2 Facility	

1.4 Commencing Time	Hr	Hr	Min	Min
1.5 Concluding Time	Hr	Hr	Min	Min

Namaskar/ Salam Walekum. I am ……..from…….....**.....** Medical College. In partnership with INCLEN and Save the Children, we are undertaking a study to document the services and practices related to newborn care in this district. I am here with my colleague(s) to document the available services for newborns at this health facility. Our team would like to ask some questions pertaining to health services for newborns. Your participation in the survey would contribute to improve health services in this and other facilities. You are an important stake holder in this survey and therefore we would appreciate if you could spare your valuable time to discuss child health. Your responses will be treated as confidential and you may ask us to stop the interview at any time.

[redacted]

NURSE

Government Health Facility:[Please tick ✓ the appropriate health facility and qualification]			
1.6 Type of Health Facility		**1.7 Respondent Qualification**	
District Hospital	☐	Diploma in Nursing	☐
CHC	☐	Bachelors in Nursing	☐
Block PHC	☐	GNM for staff nurse	☐
24x7 PHC 24x7	☐	Any other (Specify…….)	☐
PHC	☐	**1.8 Designation**	
Dispensary	☐	A.N.M.	☐
Sub-centre	☐	Staff Nurse	☐
Any other (Specify…….)	☐	Others(specify)	☐

2. General			
2.1	How long have you been working in this health facility? (months/years)		
2.2	Total months/years of service		
2.3	What are your current roles and responsibilities with respect to maternal and newborn care?		
2.4	How many deliveries/newborn resuscitations have you attended in last 1 month?		
	2.4.1 No. of deliveries attended in last 1 month		
	2.4.2 No. of newborn resuscitations attended in last 1 month		
2.5	Trainings received related to:		
	Area	**Name of training**	**Year**
	A Care during delivery (SBA)		
	B Essential newborn care (NSSK)		

NURSE

	C	Care of sick newborns (FBNC)		

3. Service Delivery

3.1 What are the challenges faced by you and your colleagues for delivering the desired mother and newborn care services?

CHALLENGES FACED		
	MOTHER CARE	NEWBRON CARE
Infrastructure		
Equipment		
Drugs and supplies		
Support services		
Other		

3.2 What challenges do you face while delivering essential newborn care services and how do you manage these ?

Challenges	**How do you manage these Challenges ?**
Care at delivery	
Care in the ward	
Care of sick newborns	

NURSE

3.3	What challenges do you face while delivery of pregnant women with complication?	
	Components of delivery care	Challenges in delivery care of pregnant women
	Delivery without complication (Normal)	
	Delivery with complication	
	Caesarean section	
	Referred cases with complication [redacted]	
3.4	Where are the manuals and guidelines for birth, newborn care and neonatal resuscitation kept? [redacted]	
3.5	How long usually the mothers stay at the facility after the delivery?	
	3.5.1 After Normal Delivery	
	3.5.2 After Caesarean Delivery	
4. Manpower		
4.1	How many positions of staff nurse/ANM are lying vacant in your health facility? [redacted]	
4.2	What difficulties do you face in delivering maternal and newborn care services from your existing staff? (Doctors, Nurses and other staffs)	

NURSE

4.3	What are the challenges experienced by you regarding the current training mechanism and processes? (training opportunity, frequency, methodology, quality)
4.4	How do you find the current training mechanism in place related to skilled care at birth, essential newborn care and newborn resuscitation? *(probe: selection of candidate and frequency of training*)
4.5	What are the opportunities and mechanisms currently in place/adopted to retain the skills of Nurses/ANMs/Doctors?
4.6	What challenges do you have related of skills among the nurses and assisting staffs in delivery room, postnatal ward and newborn care units? In your opinion, how these can be handled?
4.7	How the training related to care during delivery and newborn period can be further improved?

NURSE

4.8	Are you aware of the skill labs or facility for refresher training at Gonda District or any other place?
4.9	What are the good things about this skill lab?
4.10	What are the challenges related to skill lab?
4.11	How does/How would the functional skill lab help in retention of skills related to neonatal resuscitation and newborn care?
5. Referral services	
5.1	In what situation usually the newborns/mothers are referred to the next level of healthcare?
5.2	Where the newborns/mothers are usually referred, what is the usual mode of transportation and how long does it take to reach the next level health facility in your area?
5.3	What facilitation is done from facility side for referral and what difficulties/challenges do you face while transporting the sick child to next level? *(Probe: monetary/logistics)*

NURSE

5.4	What are the challenges faced related to referral transport experienced by this facility and how are they handled?
6. Logistics & Supervision	
6.1	Are you aware of any shortage/irregular supply of drugs and/or supplies needed for care during delivery and newborn period in the last one year? What were the reasons for this shortage and how these situations were managed?
6.2	How frequently families/ parents asked to procure drugs from outside/ store?
6.3	What are the supervisory mechanisms in place at present for maternal and newborn care services?
	6.3.1. Who supervises?
	6.3.2. What is the frequency of supervisory visits

NURSE

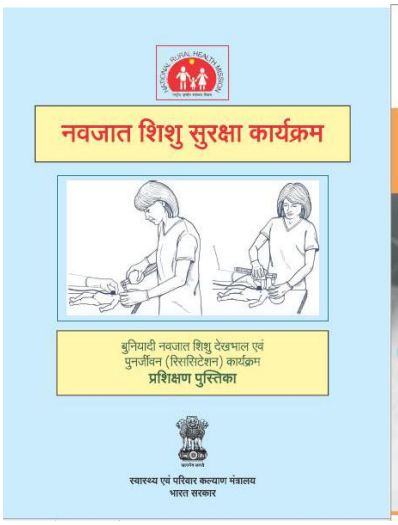
	6.3.3. Is any feedback/report provided after the supervision?
	6.3.4. What actions are taken after last supervisory visit?
6.4	Please let us know about the last supervisory visit to the facility related to maternal and newborn care services?
	6.4.1. Who came for last supervisory visit?
	6.4.2. How long ago the supervisory visit took place?
	6.4.3. What all components were observed?
	6.4.4. What feedback was given and what actions were taken?
7. Others	
7.1	How do you record stillbirth at your facility? [redacted]
7.2	How do you record birth asphyxia and neonatal resuscitation procedures done at your facility?
7.3	How much in detail do you record / document the events in the discharge/ record slip? [redacted]
7.1	In your view, what are the perceived barriers among families in utilizing public health services for their pregnant women newborns?

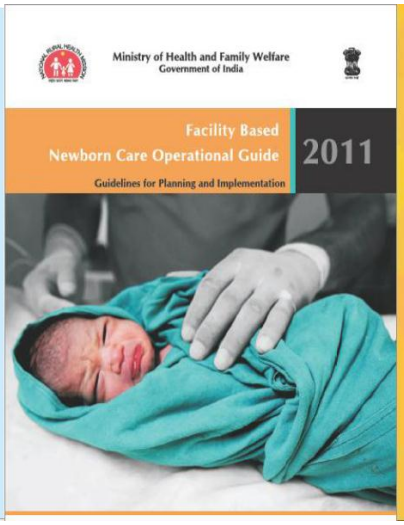
	How these barriers can be overcome? [redacted]
7.2	What is your view about establishing facilities for self-learning and skill revision at hospitals?
7.3	What additional efforts are required for reducing neonatal mortality in your area? [redacted]
7.6	*Interviewer's Observation* 1. Attitude of the respondent a. Very co-operative [redacted] b. Co-operative c. Non co-operative

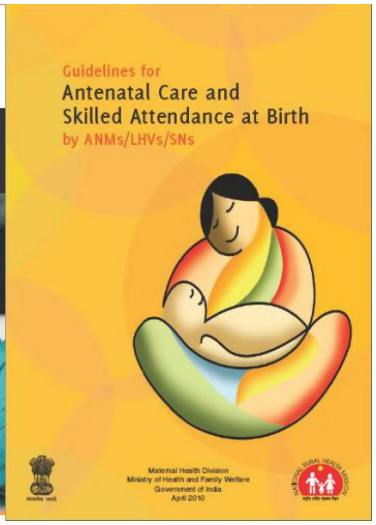
Thank the respondent.

Signature

Name of Interviewer_____







NSSK FBNC SBA

DOCTOR

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)
INTERVIEW OF THE DOCTOR

Partner Medical College:

1. State	Uttar Pradesh

1. 1 District	
1.2 Facility	

1.3 Date	D	D	-	M	M	-	Y	Y

1.4 Commencing Time	Hr		Min	
1.5 Concluding Time	Hr		Min	

Namaskar/ Salam Walekum. I am ……..from…….....
Medical College. In partnership with INCLEN and Save the Children, we are undertaking a study to document the services and practices related to newborn care in this district. I am here with my colleague(s) to document the available services for newborns at this health facility. Our team would like to ask some questions pertaining to health services for newborns. Your participation in the survey would contribute to improve health services in this and other facilities. You are an important stake holder in this survey and therefore we would appreciate if you could spare your valuable time to discuss child health. Your responses will be treated as confidential and you may ask us to stop the interview at any time.

DOCTOR

Government Health Facility:(Please tick ✓ the appropriate health facility and qualification) ✓			
1.6 Type of Health Facility		**1.7 Respondent Qualification**	
District Hospital	☐	MBBS	☐
CHC	☐	MD/ MS	☐
Block PHC	☐	BAMS/BHMS	☐
24x7 PHC 24x7	☐	**1.8 Designation**	
PHC	☐	MO I/C	☐
Dispensary	☐	Medical Officer	☐
Sub-centre	☐	Specialist (Pediatrician, Gynecologist)	☐
Any other (Specify…….)	☐	AYUSH doctor	☐
		Others(Specify)	☐

2. General

2.1	How long have you been working in this health facility? (months/years)	
2.2	Total months/years of service	
2.3	What are your current roles and responsibility with respect to maternal and neonatal care?	
2.4	How many deliveries and resuscitations of newborns have you attended in last 1 month?	
	A. No. of deliveries attended in last 1 month	
	B. No. of newborn resuscitations attended in last 1 month	

2.5 Trainings received related to:

	Area (see picture of modules at the end)	**Name of training**	**Year (in which training received)**
A	Care during delivery (SBA)		
B	Essential newborn care (NSSK)		
C	Care of sick newborns (FBNC)		

DOCTOR

3. Service Delivery

3.1 In routine practice, which health staff performs the following services?

Services	Staff performing the services
Delivery without complication	
Delivery with complication/ high risk delivery	
Caesarean section	
Newborn care at birth	
Sick newborn care	
Breastfeeding support	

3.2 What are the challenges faced by you and your colleagues for delivering the desired mother and newborn care services?

Challenges faced	How do you manage these challenges
3.2.1 Infrastructure	
3.2.2 Equipment	
3.2.3 Drugs and supplies	
3.2.4 Support services	
3.2.5 Other	

3.3 What challenges do you face while delivering essential newborn care services and how do you manage these?

Challenges faced	How do you manage these challenges
Care at delivery	
Care in the ward	

DOCTOR

	Care of sick newborns	

3.4 What challenges do you face while delivery of pregnant women with complication?

Challenges faced	How do you manage these challenges
Delivery without complication	
Delivery with complication	
Caesarean section	
Referred cases with complication	

3.5 How long usually the mothers stay at the facility after the delivery?

3.5.1 Normal Delivery	
3.5.2 Caesarean Delivery	

3.6 Where are the manuals and guidelines for birth, newborn care and neonatal resuscitation kept?

4. Manpower

4.1 How many positions of doctors are lying vacant in your health facility?

4.2 What difficulties do you face in delivering the services from your colleagues and existing staff? (Doctors, Nurses and other staffs)

Staff type	Difficulties faced in delivering services
Doctors	
Nurses	

DOCTOR

	other staffs [redacted]	
4.3	How do you find the current training mechanism in place related to skilled care at birth, essential newborn care and newborn resuscitation? (probe for selection of candidates for training, frequency of training) [redacted]	
4.4	What are the challenges experienced by you regarding the current training mechanism and processes? (training opportunity, frequency, methodology, quality)	
4.5	What are the opportunities and mechanisms currently in place/adopted to retain the skills of Nurses/ANMs/Doctors?	
4.6	What challenges do you have related to skill among the nurses and assisting staffs in delivery room, postnatal ward and newborn care units? In your opinion, how these can be handled?	
4.7	How the training related to care during delivery and newborn period can be further improved?	
4.8	Are you aware of the skill labs or facility for refresher training at Gonda District or any other place in district?	

DOCTOR

4.9	What are the good things about this skill lab?
4.10	What are the challenges related to skill lab?
5. Referral services	
5.1	In what situation usually the newborns/mothers (pregnant/recently delivered) are referred to the next level of healthcare?
5.2	Where the newborns/ pregnant women/ mothers are usually referred, what is the usual mode of transportation and how long does it takes to reach the next level health facility in your area?
5.3	What facilitation is done from facility side for referral and what difficulties/challenges do you face while transporting the sick newborn and mother to next level? *(Probe: monetary/logistics)*
5.4	What are the challenges faced related to referral transport experienced by this facility and how are they handled?
6. Logistics	
6.1	Are you aware of any shortage/irregular supply of drugs and/or supplies needed for care during delivery and newborn period in the last one year?

DOCTOR

	What were the reasons for this shortage and how these situations were managed?
6.2	How frequently the families/ parents asked to procure drugs from outside/ store?
6.3	How many equipment essential for management of delivery or newborn care are out of order at this moment?
6.4	What is the usual mechanism of repair and maintenance of these equipment? *(probe: who is responsible and what is the duration of repair*)
6.5	What are the supervisory mechanisms in place at present for maternal and newborn care services?
	6.5.1 Who supervises
	6.5.2 What is the frequency of supervisory visits
	6.5.3 Is any feedback/report provided usually after the supervision?
	6.5.4 What actions are taken after last supervisory visit?
6.6	Please let us know about the last supervisory visit to the facility related to maternal and newborn care services?
	6.6.1 Who came for last supervisory visit?

DOCTOR

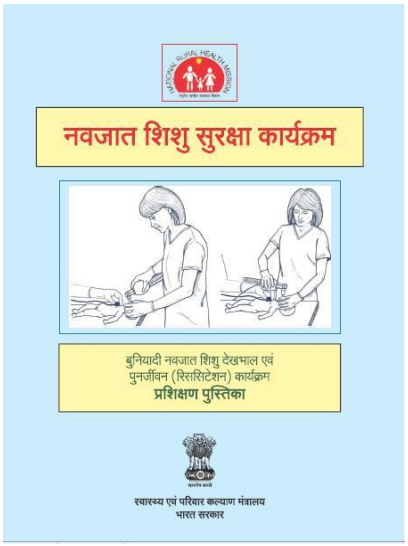
	6.6.2 How long ago the supervisory visit took place?
	6.6.3 What all components were observed?
	6.6.4 What feedback was given and what actions were taken?
7. Others	
7.1	How do you record stillbirth at your facility?
7.2	How do you record birth asphyxia and neonatal resuscitation procedures done at your facility?
7.3	How much in detail do you record / document the events in the discharge/ record slip?
7.4	In your view, what are the perceived barriers among families in utilizing public health services for their pregnant women newborns? How these barriers can be overcome?
7.5	What is your view about establishing facilities for self-learning and skill revision at hospitals?
7.6	What additional efforts are required for reducing neonatal mortality in your area?

DOCTOR

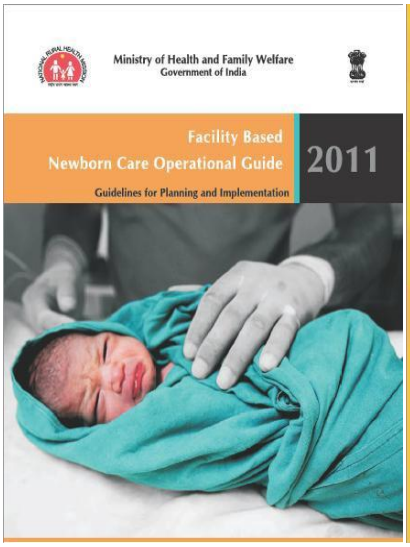
7.7	*Interviewer's Observation* 1. Attitude of the respondent a. Very co-operative ■ b. Co-operative ■ c. Non co-operative

Thank the respondent.

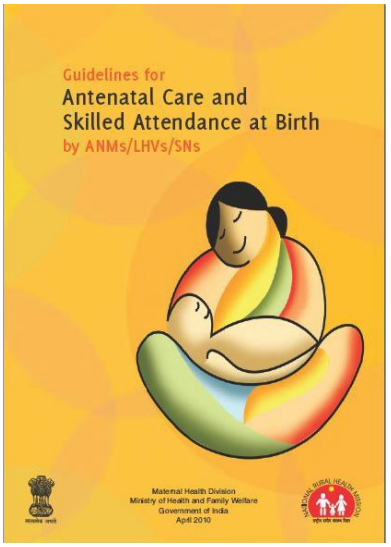
Name of Interviewer_____ Signature



NSSK



FBNC



SBA

UNIQUE ID:	

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

INTERVIEW OF THE CMO/ DISTRICT RCH OFFICER

Regional Coordinating Centre:

State	Uttar Pradesh

1. 1 District	

1.3 Date	D	D	-	M	M	-	Y	Y

1.2 Place	

1.4 Commencing Time	Hr		Min	
1.5 Concluding Time	Hr		Min	

Namaskar/ Salam Walekum. I am ……..from…….**.....** Medical College. In partnership with INCLEN and Save the Children, we are undertaking a study to document the services and practices related to newborn care in this district. I am here with my colleague(s) to document the available services for newborns at this health facility. Our team would like to ask some questions pertaining to health services for newborns. Your participation in the survey would contribute to improve health services in this and other facilities. You are an important stake holder in this survey and therefore we would appreciate if you could spare your valuable time to discuss child health. Your responses will be treated as confidential and you may ask us to stop the interview at any time.

1.6 Respondent Qualification				
2. General				
2.1	How long have you been working in this position?			
2.2	Total years of service			
3. Service Delivery				
3.1	In routine practice, which health staff performs the following services at the hospitals in the district?			
	Services	At PHCs	At CHCs	At DH
	Delivery without complication			
	Delivery with complication/ high risk delivery			
	Caesarean section			
	Newborn care at birth			
	Sick newborn care			
	Breastfeeding support			
3.2	What are the challenges faced by your staff while delivering essential newborn care services?			
	Essential Newborn Care (Components)	Challenges faced while delivering essential new born care		
	Care at delivery			
	Care in the ward			
	Care of sick newborns			
	How do you manage these challenges?			
3.3	What are the challenges faced by your staff while delivery of pregnant women with complication?			
	Components of delivery services	Challenges faced		
	Delivery without complication			
	Delivery with complication			
	Caesarean section			
	Referred cases with complication			

<table>
<tr><td colspan="6">4. Manpower</td></tr>
<tr><td rowspan="3">4.1</td><td colspan="5">How many positions (Doctors, Nurses, ANMs) at facility level are lying vacant in your district?</td></tr>
<tr><td></td><td>Doctors</td><td>Nurses</td><td>ANMs</td></tr>
<tr><td>Vacant Positions</td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">4.2</td><td colspan="5">What manpower related difficulties do you have to ensure delivering the maternal and newborn services from the facilities in the district?</td></tr>
<tr><td colspan="5">Manpower related difficulties</td></tr>
<tr><td colspan="3">Maternal services</td><td colspan="2">Newborn Services</td></tr>
<tr><td colspan="3"></td><td colspan="2"></td></tr>
<tr><td>4.3</td><td colspan="5">How are these health staffs given training on the mother and newborn care in the district?</td></tr>
<tr><td>4.4</td><td colspan="5">How frequently the refresher training of the ANMs/LHVs/ Doctors on SBA/essential Newborn Care is organized?</td></tr>
<tr><td>4.5</td><td colspan="5">What challenges do you have related to skill among the doctors, nurses and assisting staffs in delivery room, postnatal ward and newborn care units?

In your opinion, how these can be handled?</td></tr>
<tr><td>4.6</td><td colspan="5">What is your opinion about the skill lab at your facility at Gonda? How has it changed the training and skill building of the staff?</td></tr>
</table>

4.7	How the training related to care during delivery and newborn period can be further improved?
4.8	How frequently is the skill lab used by staff at your facility at Gonda and other district staff? Who uses the skill lab most and who is benefited?
5. Referral services	
5.1	How is the referral mechanism in the district for newborns and pregnant women in the district?
5.2	What facilitation is done for referral of the sick newborns and mothers to the referral facilities?
5.3	What difficulties are faced while transporting the sick newborns and mothers to the referral facilities and how are they handled?

6. Logistics	
6.1	How do you ensure regular supply of the drugs/supplies/consumables for care of pregnant women and newborn babies? What were the reasons and actions taken?
6.2	Which of the essential medications/supplies were out of stock in last one year?
6.3	What all medications are prescribed to parents family members of patients to purchase from outside?
6.4	Are you aware of equipment essential for management of delivery or newborn care are out of order at this moment?
6.5	What is the usual mechanism of repair and maintenance of this equipment?

7. Programs and Funds	
7.1	Do you have any specific budgetary allocation for the newborn care (ward)/ labor room maintenance?
7.2	Do you face financial constraints related to MCH care and how do you handle the situation?
7.3	What finance related challenges do you encounter related to the MCH program(s)? How do you manage these challenges?
7.4	What are the challenges in implementing the home based care in your area?
8. Others	
8.1	In your view, what are the perceived barriers among families in utilizing public health services for their pregnant women newborns?

	How these barriers can be overcome?
8.4	What additional efforts are required for reducing neonatal mortality in your area?

Thanks for your participation

Name of interviewer_____ Signature of the interviewer

UNIQUE ID:	

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

Interview of the District Program Manager

Regional Coordinating Centre: [redacted]

1. State [redacted]	Uttar Pradesh

1.1 District	

1.2 Date	D	D	-	M	M	-	Y	Y

1.3 Place	

1.4 Commencing Time	Hr		Min	
1.5 Concluding Time	Hr		Min	

Namaskar/ Salam Walekum. I am ……..from……..... Medical College. In partnership with INCLEN and Save the Children, we are undertaking a study to document the services and practices related to newborn care in two districts of Uttar Pradesh. I am here with my colleague(s) to document the available services for newborns at the health facilities in these districts. Our team would like to ask some questions pertaining to health services for newborns. Your participation in the survey would contribute to improve health services in this and other facilities. You are an important stake holder in this survey and therefore we would appreciate if you could spare your valuable time to discuss child health. Your responses will be treated as confidential and you may ask us to stop the interview at any time.

[redacted]

1.6 Respondent Qualification		
2. General		
2.1	How long have you been working at this position?	
2.2	Total years of service	

3. Service Delivery

3.1 In routine practice, which health staff performs the following services at the hospitals in the state and these focus districts?

SERVICES	STAFF PERFORMING THE SERVICE
Delivery without complication	
Delivery with complication/ high risk delivery	
Caesarean section	
Newborn care at birth	
Sick newborn care	
Breastfeeding support	

3.2 What are the challenges faced by the health staffs for delivering the desired mother and newborn care services in the state and these focus districts?

Services	Challenges
Infrastructure	
Equipment	
Drugs and supplies	

	Support services	
	Other	
	How do you manage these challenges? [redacted]	

3.3	What challenges do the health staff face while delivering essential newborn care services? [redacted]	
	Services	Challenges
	Care at delivery	
	Care in the ward	
	Care of sick newborns	
	How do you manage these challenges? [redacted]	

3.4	What challenges do the health staffs face while delivery of pregnant women?	
	Services	Challenges
	Delivery without complication	
	Delivery with complication	
	Caesarean section	
	Referred cases with complication [redacted]	

3.5	Which guidelines are being followed in the State/District for providing care during delivery and newborn period?	
	Guideline Followed	
	Care during delivery	Care during newborn period
4. Manpower		
4.1	How many positions (doctors, nurses, ANMs) at facility level are lying vacant in your state and these focus districts?	
4.2	What manpower related difficulties do you have to ensure delivering the maternal and newborn services from the facilities in the state and these focus districts?	
	MANPOWER RELATED DIFFICULTIES	
	MATERNAL SERVICES [redacted]	NEWBORN SERVICES
4.3	How are these health staffs given training on the mother and newborn care in the state and these focus districts?	

4.4	What challenges do you have related to skill among the doctors, nurses and assisting staffs in delivery room, postnatal ward and newborn care units? In your opinion, how these can be handled?
4.5	How the training related to care during delivery and newborn period can be further improved?
5. Referral services	
5.1	How many referral facilities are there in the state / these focus districts for care of sick newborns and mothers with complication/ high risk mothers?
5.2	What facilitation is done for referral of the sick newborns and mothers to the referral facilities?

5.3	What difficulties are faced while transporting the sick newborns and mothers to the referral facilities? How the state and district administrations are addressing these problems?
6. Logistics	
6.1	During last one year which drugs and/or supplies needed for care during delivery and newborn period were in short /irregular supply in your state and these focus districts? What were the reasons and actions taken?
6.2	Are the families/ parents asked to procure drugs from outside/ store?

6.3	Are you aware of equipment essential for management of delivery or newborn care that are out of order at this moment?

6.4	What is the usual mechanism of repair and maintenance of this equipment? [redacted]
7. Programs and Funds	
7.1	What are the programs in place directed at pregnant women, newborns and their referral in the state and these focus districts?
7.2	Is there any financial incentive for the family for newborn care?
7.3	What challenges do you encounter related to these program(s)? How do you manage these challenges? [redacted]
8. Others	

8.1	In your view, what are the perceived barriers among families in utilizing public health services for their pregnant women newborns?

	How these barriers can be overcome?
8.2	What is your view about establishing facilities for self-learning and skill revision at facilities?
8.3	What is your opinion about the skill lab established at Gonda?
8.4	What additional efforts are required for reducing neonatal mortality in your area?

Thanks for your Precious time.

Name of Interviewer Signature

UNIQUE ID:	

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

INTERVIEW OF THE STATE RCH OFFICER

Regional Coordinating Centre:

1. State	Uttar Pradesh

1.1 District	
1.2 Place	

1.3 Date	D	D	-	M	M	-	Y	Y

1.4 Commencing Time	Hr		Min	
1.5 Concluding Time	Hr		Min	

Namaskar / Salam Walekum. I am ……..……..from…….....**....** ..... Medical College. In partnership with INCLEN and Save the Children, we are undertaking a study to document the services and practices related to newborn care in two districts of Uttar Pradesh. I am here with my colleague(s) to document the available services for newborns at the health facilities in these districts. Our team would like to ask some questions pertaining to health services for newborns. Your participation in the survey would contribute to improve health services in this and other facilities. You are an important stake holder in this survey and therefore we would appreciate if you could spare your valuable time to discuss child health. Your responses will be treated as confidential and you may ask us to stop the interview at any time.

1.6 Respondent Qualification				
2. General				
2.1	How long have you been working at this position?			
2.2	Total years of service			
3. Service Delivery				
3.1	What all specific services related to mother and newborn are being provided at the facilities in the state and these focus districts? (tick at services being provided at respective places)			
	Mother and newborn care services	At state	At focused districts	
			Aligarh	Gonda
3.2	In routine practice, which health staff performs the following services at the hospitals in the state and these focus districts?			
	Services provided at the hospital	**Staff performing the services**		
	Delivery without complication			
	Caesarean section			
	Delivery with complication/ high risk delivery			
	Newborn care at birth			
	Sick newborn care			
	Breastfeeding support			

3.3	What are the challenges faced by the health staffs for delivering the desired mother and newborn care services in the state and these focus districts and How do you manage these challenges?
3.4	What challenges do the health staffs face while delivering essential newborn care services and how do you manage these challenges?

3.5	What challenges do the health staffs face while delivery of pregnant women?	
4. Manpower		
4.1	How many positions (doctors, nurses, ANMs) at facility level are lying vacant in your state and these focus districts?	
		Vacant positions in state
	Doctors	
	Nurses	
	ANMs	
4.2	What manpower related difficulties do you face while ensuring delivery of the maternal and newborn services from the facilities in the state and these focus districts?	
4.3	How are the health staffs(ANM/LHV/Doctors) given training on the mother and newborn care in the state? 4.3.1 What all efforts/processes are being to retain skill/refresh skills of these health staff?	

4.4	What challenges do you have related to retention of skill among the doctors, nurses and assisting staffs in delivery room, postnatal ward and newborn care units? In your opinion, how these can be handled?
4.5	A skill lab has been established at Gonda District. What is the value addition of this facility for the skill development of the health staff?
4.6	How the training related to care during delivery and newborn period can be further improved?

5. Referral services	
5.1	What facilitation is done for referral of the sick newborns and mothers to the referral facilities?
5.2	What difficulties are faced while transporting the sick newborns and mothers to the referral facilities?
5.3	How the state and district administrations are addressing these problems?

6. Logistics	
6.1	Are you aware of the stances of short supply/stock out of the drugs/supplies for MCH care in last one year in the state/any district? What were the reasons and actions taken?
6.2	What efforts are being done/steps are being adopted to ensure adequate supply of drugs/supplies/consumables related to MCH care?
6.3	Are the families/ parents asked to procure drugs from outside/ store?
6.4	What is the usual mechanism of repair and maintenance of this equipment?
6.5	Are you aware of equipment essential for management of delivery or newborn care that are out of order at this moment?

7. Programs and Funds	
7.1	What are the programs in place directed at pregnant women, newborns and their referral in the state and these focus districts?
7.2	Is there any financial incentive for the family for newborn care?
7.3	What financial challenges do you encounter related to these program(s)? How do you manage these challenges?
8. Others	

8.1	In your view, what are the perceived barriers among families in utilizing public health services for their pregnant women newborns?

	How these barriers can be overcome?
8.4	What additional efforts are required for reducing neonatal mortality in your area?

Thank you for your precious time.

Name of Interviewer_____ Signature of Interviewer

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

HOUSEHOLD SURVEY

Partner Medical College:

1. State	**Uttar Pradesh**	**3.Block**	
2.District		**4.Village/Ward**	
5.Date : _ _ /_ _ /2014		**6.Cluster Number**	
7.Commencing Time	_ _ : _ _	**9.Household number (from log sheet)**	
8.Concluding Time	_ _ : _ _		

Namaskar, I am _____from _____Institution/ Medical College. I am here with my colleagues to do a survey to document care received and practices as followed by households during pregnancy, delivery and post delivery period in your area/village. Our team would like to discuss with you about care received and common practices related to pregnancy, delivery and newborn care of your last delivered child. Your participation in the survey would contribute to improve health services and other facilities in this district. You are an important stakeholder in this study and therefore we would appreciate if you could spare some valuable time to discuss on these issues. It is expected to take about 15-20 min Your responses will be kept confidential. You may choose to stop your participation at any time.

Instructions for filling up the schedules

1. Please ensure that respondent is mother of the index child and the child is not adopted.

2. Check that the mother has delivered in last 6 month.

3. Do not prompt any answer.

4. The respondent information will be treated as confidential.

5. Please record the responses in appropriate boxes by writing correct code.

IDENTIFICATION	
10. Name of Child:	
11. Date of birth of the child	☐☐☐☐☐☐ (must be after 01/02/2014 and before 30/07/2014) (01/02/2014 30/07/2014
12. Sex of the child : **Boy :-1 , Girl :-2**	☐
13. What is the age of Index child? (should be less than 6 months on the date of interview)	**Months** ☐ **Days** ☐☐

Section1: RESPONDENT'S BACKGROUND (			
No.	**Questions**	**Coding categories**	**Skip to**
101	**Type of family –** Nuclear ……01 Joint ..02	☐☐	
102	**Religion** Hindu .....01 Muslim .....02 Christian .....03 Buddhist .....04 Sikh ..... 05 Jain ..... 06 Others (specify) 07	☐☐	
103	**Do you belong to (Read the following)** Schedule caste .....01 Schedule tribe .....02 Other backward class .....03 General .....04 Don't know 99	☐☐	
104	**What is the age of mother of index child? (completed years)**	☐☐ **Years**	
105	**What is the educational qualification of mother and father**		
	105.1 Mother's Qualification		
	105.2 Father's Qualification		

106	**What is the primary occupation of mother and father?** Professional ..... 01 Clerical ..... 02 Sales ..... 03 Agric- self-employed (Agriculture/fish breeding /poultry farming/ animal rearing) ..... 04 Household & domestic ..... 05 Services ..... 06 Skilled & manual worker ..... 07 Unskilled ..... 08 Student ..... 09 Housewife ..... 10 Don't know 99	**106.1 Mother** ☐☐ **106.2 Father** ☐☐	
107	**Does your house hold have following basic amenities** Yes …. 01, No …..00, Don't know ….. 99		
	107.1 T.V.	☐☐	
	107.2 Radio	☐☐	
	107.3 Mobile Phone	☐☐	
	107.4 Four wheeler (Car, Jeep etc.)	☐☐	
	107.5 Two wheeler (Motorcycle, moped, scooter etc.)	☐☐	
108	**Does this household hold have a Below Poverty Line (BPL) card?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	
109	**Do you know the ASHA/AWW of your area?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	

SECTION 2:- Reproductive History Of Mother

No.	Question	Coding	Skip
201	**In all, how many times did you (mother) get pregnant including the pregnancy related to the index child?** **(whether or not a pregnancy completed and child was born or not)**	Number ☐☐	
202	**In all, how many children were ever born to you? (including all those who were born dead or died any time after birth)**	**202.1 Male** ☐ **202.2 Female** ☐ **202.3 Total** ☐	

203	**In all, how many living children do you have?**	**203.1 Male** ☐ **203.2 Female** ☐ **203.3 Total** ☐	
204	**In all how many pregnancies did not result in a live birth? (Miscarriage/Abortion/Stillbirth)**	Number ☐☐	

Section 3:- Antenatal care

Now I shall ask your some information about your last pregnancy

No.	Question	Coding	Skip
301	**How many months pregnant were you when you came to know about the pregnancy** Month ☐ Don't know 99 ☐☐		
302	**Did you receive antenatal care during the last pregnancy?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	**If 0/9 skip to Q.309**
303	**How many times did you receive antenatal check-ups during this pregnancy?** Don't know ….. 99	☐☐	
304	**How many months pregnant were you when you first received antenatal care checkup during for this pregnancy?** Don't know .. 99	☐☐	
305	**Where did you receive antenatal care checkup for this pregnancy?**	Yes .01, No .00, Don't know ….. 99	
	Government		
	305.1 Hospital	☐☐	
	305.2 UHC/UHP/UFWC	☐☐	
	305.3 CHC/RUR. Hospital	☐☐	
	305.4 PHC	☐☐	
	305.5 Sub-centre	☐☐	
	305.6 Anganwadi Centre	☐☐	
	305.7 AYUSH Hospital/Clinic	☐☐	
	305.8 Other public sectors/Health facilities	☐☐	
	305.9 Medical College	☐☐	

	Private		
	305.10 Hospital/Maternity Home		
	305.11 AYUSH Hospital/clinic		
	305.12 Other Private sector health facility		
	Home		
	305.13 Home		
	305.14 Others (specify)		
306	**During any of these meeting in the last three month of pregnancy did you receive advice on the following at least once?**	Yes .....01 No .....00 Don't know 99	
	306.1. Breast feeding		
	306.2. Cleanliness at the time of deliveries		
	306.3. Keeping baby warm		
	306.4. Family planning for birth spacing/limiting /		
	306.5. Birth Preparedness		
	306.6. Nutrition for mother and child		
	306.7. Institutional deliveries		
	306.8. Prevention of mother to child transmission		
307	**As part of your antenatal care during last pregnancy, were any of the following done at least once?**	Yes .....01 No .....00 Don't know 99	
	307.1.Weight measured		
	307.2.Height measured		
	307.3.Blood pressure checked		
	307.4.Blood tested		

	307.5.Urine tested		
	307.6. Abdominal examination		
	307.7.Breast Examination done		
	307.8.Ultrasound done		
	307.9.Expected Delivery date told		
308	**During (any of) your antenatal care visit were you told about the following signs of pregnancy complication?**	Yes .....01 No .....00 Don't know 99	If no, skip to 313
	308.1.Veginal Bleeding		
	308.2.Convulsion		
	308.3 Abdominal Pain		
	308.4 High blood Pressure		
309	**During your last pregnancy did you prepare for the following aspects of pregnancy and delivery?**	Yes .....01 No .....00 Don't know 99	
	309.1.Transport for delivery		
	309.2.Materials for clean delivery		
	309.3.Financial preparations		
	309.4. Identification birth attendant		
	309.5. Identification blood donor		
310	**During your last pregnancy did you suffer from any of the following problems?** Yes …. 01 No …..00 Don't know ….. 99		**If no to all skip to 313**
	310.1. Swelling of hands/face		
	310.2. Visual disturbances		
	310.3.Paleness		
	310.4. Excessive fatigue/giddiness/weakness		
	310.5. Weak/no movement of fetus		
	310.6. Convulsions		
	310.7. Abnormal position of fetus		

	310.8. Excessive vomiting	☐☐	
	310.9. Malaria or high fever		
	310.10. Hypertension/ High B P.		
	310.11.Excessive bleeding	☐☐	
	310.12. Vaginal Discharge with itching or foul smelling	☐☐	
	310.13. Other	☐☐	
311	**If yes, did you seek treatment for any of these health problems?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	**If no skip to Q.313**
312	**If yes, where did you go for consultation or to seek treatment?** **Government** Hospital ..... 01 Dispensary ..... 02 UHC/UHP/UFWC ..... 03 CHC/Rural Hospital ..... 04 PHC ..... 05 Sub-Centre ..... 06 AYUSH Hospital/clinic ..... 07 Medical college …08 **Private** Hospital/clinic .....09 AYUSH Hospital/clinic .....10 Other (specify) .....11 Not Sure 99	☐☐	
313	**During this pregnancy, did you take any drug for intestinal worms?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	
314	**During the whole pregnancy for how many days did you take the Iron Folic Acid (IFA) tablets or syrup?** Don't know….99		
	314.1 Tablet/Capsule: Number of days taken	☐☐☐	
	314.2 Tablet/Capsule: Number of tablet/ Capsule		
315	**During the last pregnancy, how many times did you get a tetanus injection?** One …. 01, Two …02 No …..00, Don't know ….. 99	☐☐	
316	**For those women who said no for ANC visit, Why did you not go for antenatal check-up?** Not necessary .....01 Not customary .....02 Cost too much .....03 Too far/No transportation .....04 Poor quality service .....05 Family did not allow .....06 Lack of knowledge .....07 No time to go .....08 Other(specify) .....09 Don't know 99	☐☐	

Section 4:- Delivery Care And Immediate Newborn Care

(Now I shall ask you questions regarding the delivery and newborn care of the child)

No.	Question	Coding	Skip
401	**During delivery, did you experience by any health provider that you had any of the following problems?**	Yes .....01 No .....00 Don't know 99	**If not to all skip to 404**
	401.1.Premature Labor? (having regular contractions prior to 37 weeks)	☐☐	
	401.2.Excessive Bleeding?	☐☐	
	401.3.Prolonged Labor? (duration of labor more than 20 hours)	☐☐	
	401.4.Difficult Labor? (requiring surgical or instrument assistance for delivery)	☐☐	
	401.5.Breech Presentation? (baby with feet or buttock being delivered first)	☐☐	
	401.6 Convulsion	☐☐	
	401.7 High B.P	☐☐	
	401.8 High fever?	☐☐	
	401.9 Retained placenta	☐☐	
	401.10 Anaemia	☐☐	
	401.11 .Any other (specify) **……**	☐☐	
402	**If yes to any one of the above, were you referred (sent) to a higher centre/health facility for the / did you seek treatment of the complications?** Yes …. 01, No …..00, Don't know ….. 99, Not applicable ……..02,	☐☐	
403	**If no to above, what was the reason for not seeking care?** Care was available at the delivery point itself..... 01 Transport for referral was not available..... 02 The patient was not willing to go to anywhere ..... 03 Nothing was required ..... 04 The delivery attendant did not advise to go..... 05 Others (specify) ..... 06 Don't know 99	☐☐	

404	**Where did you deliver?** Hospital .....01 At home .....02 On the way .....03 Other(specify) .....04 Don't know 99	☐☐	
405	**Who assisted with the delivery of child?** **Skilled Personnel** / **Trained Personnel** Doctor .....01 / AWW .....06 Nurse .....02 / TBA .....07 ANM .....03 / Dai .....08 Other health personnel ...04 / Other (specify) .....09 Do not know .....99 ASHA Worker .....05 / None 00	☐☐	
406	**What was the type of delivery?** Normal .....01 Caesarean .....02 By instrument or assisted .....03 Do not know 99	☐☐	
407	**Was the child delivered in the last pregnancy born dead?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	
408	**How much did child weigh?** **Weight** **(weight in Kilograms with three decimals) check from the MCH card/discharge slip)**	☐☐ ☐☐☐ Don't know ..99 ☐☐	
409	**Immediately after the child was born, before the placenta was delivered, did you receive an injection to prevent you from bleeding too much?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	
410	**Was the placenta delivered smoothly or the birth attendant had to do some additional measures?** Delivered smoothly on own .....01 Delivered after traction/pull by birth attendant .....02 Delivered after surgery .....03 Don't know 99	☐☐	
411	**Immediately after delivery of placenta, did someone massage your uterus?** Yes …. 01, No …..00, Don't know ….. 99	☐☐	
412	**Was the child put on mother's bare chest/breast soon after delivery?** Yes .....01 No .....00 left alone .....02 Don't know 99	☐☐	

413	**Was the child wiped dry and wrapped in another dry and warm cloth after birth?** Dried and warpped …… 01, Dried only but not wrapped ….02 No ……..00, Don't know ….. 99		
414	**Did the child cry/breathe immediately after birth?** Yes …. 01, No …..00, Don't know ….. 99		**If yes go to 501**
415	**If the child did not cry breathe immediately after birth; What all was done by the service provider to revive the baby?**	Yes …. 01, No …..00, Don't know ….. 99	**Skip to 416 in case of home delivery, else to 501**
	415.1 Stimulated the baby by stroking the soles and by rubbing the back		
	415.2 Used ventilation with bag and mask		
	415.3 Intubation for ventilation		
	415.4 Oxygen applied		
	415.5 Medicines given		
SECTION 4 A- HOME DELIVERY (to be filled only in cases of home delivery)			
416	**Did the birth attendant wash hands before conducting delivery?** Yes …. 01, No …..00, Don't know ….. 99		
417	**Did the birth attendant wear gloves before conducting delivery?** Yes …. 01, No …..00, Don't know ….. 99		
418	**Was the delivery conducted at a clean surface?** Yes …. 01, No …..00, Don't know ….. 99		
419	**Which instrument was used to cut the cord?** New Razor Blade .....01 New Scissor .....02 Used Scissor .....03 Used blade/scissors .....04 Others (specify) .....05 Don't know 99		
420	**Was anything applied on the Umbilical cord either before or after it was cut?** Cow dung .....01 Other specify ..... 05 Any type of oil .....02 No thing ..... 00 Antiseptic .....03 Don't know ..... 99 Medicine 04		
421	**What was used to tie the cord?** Cord clip .....01 Ribbed band ....05 Thread .....02 Don't know **..... ..**99 Others .....03 Nothing ....00 Sutures 04		

422	**Why did you not deliver in a health facility?** Cost too much .....01 Facility not open .....02 Too far/no transportation .....03 Don't trust facility/poor quality services .....04 No female provider at the facility .....05 Husband/family did not allow .....06 Not necessary .....07 Not customary .....08 Delivered on the way .....09 Others (specify) .....10 Emergency .....11 Don't know 99		

SECTION :- 5 POST-NATAL CARE

Now I would like to ask you about the check up on you and your child's health after delivery

No.	Question	Coding	Skip
501	**Did anyone check on you and your child after delivery ?** Yes …. 01, No …..00, Don't know ….. 99	501.1 Mother 501.2 Child	**If no skip to 601**
502	**How many hours/days /weeks after the delivery did the first check-up take place of mother?**	Hours Days Weeks Don't Know….99	
503	**How many hours/days /weeks after the delivery did the first check-up take place of newborn?**	Hours Days Weeks Don't Know….99	

504	**Where did the first check-up of child take place?**		
	Government Hospital ..... 01 UHC/UHP/UFWC ..... 02 CHC/RUR. Hospital ..... 03 PHC ..... 04 Sub-centre ..... 05 Anganwadi Centre ..... 06 AYUSH Hospital/Clinic ..... 07 Other public sectors/Health facilities ..... 08 Medical College ..... 09 **Private** Hospital/Maternity Home ..... 10 AYUSH Hospital/clinic ..... 11 Other Private sector health facility ..... 12 **Home** Home ..... 13 Others (specify) 14	**504.1 Mother** ☐☐ **504.2 Child** ☐☐	
505	**Who checked your and child's health at that time?** Doctor .....01 Nurse .....02 ASHA .....05 Midwife/LHV .....03 Dai(TBA) .....06 ANM/Nurse .....04 Others .....07 Nobody .....00 Don't know 99	**505.1 Mother** ☐☐ **505.2 Child** ☐☐	
506	**Did any of the following happen during the postnatal check-up ?**	Yes …. 01, No …..00, Don't know …..99	
	506.1 Counseling on hygiene and cord care and cord checked	☐☐	
	506.2.Counsel you on danger signs for newborns		
	506.3.Assessed the temperature of the baby		
	506.4.Counselled you on breastfeeding and observe your baby breast feeding	☐☐	
	506.5.Weigh the baby		
507	**How many postnatal check-ups of child were done in the first 10 days after birth?**	☐☐	

SECTION:- 6 INFANT FEEDING PRACTICE			
No.	**Question**	**Coding**	**Skip**
601	**After how many hours/days after delivery did you bathe your child?** if Immediately ……write 00 for each day and hours	**Days** ☐☐ **Hours** ☐☐	
602	**How long after birth did you first put child to the breast ?** Immediately/within one hour of birth ..... 01 Between >1hr to 24 hrs .....02 After 1 day to 3 day .....03 After 3 day .....04 Never breastfed .....05 Don't know 99	☐☐	
603	**Did you give the baby the first liquid (colostrum) that came from your breasts?** Yes …. 01, No …..00, Don't know …..99	☐☐	
604	**Are you still breastfeeding the child exclusively?** Yes …. 01, No …..00, Don't know …..99	☐☐	
605	**Did you give to child your child anything other than breast milk during the last 24 hours?** Nothing .....00 Milk powder ..... 04 Water .....01 Animal milk ..... 05 Honey .....02 Any other liquid ..... 06 Tea .....03 Don't know 99	☐☐	

SECTION:-7 SICK NEWBORN CARE			
No.	**Question**	**Coding**	**Skip**
701	**Did your child fall severe sick during first month of life?** Yes …. 01, No …..00, Don't know …..99	☐☐	If no stop here
702	**If yes, what were the problems your child suffered from?** Yes …. 01, No …..00, Don't know ….. 99		
	702.1 Fever	☐☐	
	702.2 Poor sucking or feeding	☐☐	
	702.3 Difficult breathing	☐☐	
	702.4 Baby feels cold	☐☐	
	702.5 Baby too small or born too early	☐☐	
	702.6 Redness / discharge around cord	☐☐	
	702.7 Red swollen eye/discharge	☐☐	

	702.8 Yellow palms/soles/eyes			
	702.9 Lethargy			
	702.10 Unconsciousness			
	702.11 Child Died with 28 days of birth			
	702.12 Others(specify)			
703	**If yes, did you take your child for treatment when he/she was sick in the first month?** Yes …. 01, No …..00, Don't know ….. 99			
704	**If yes, from where did you seek care outside the home?**			
	Government Tertiary Hospital ... 01 District Hospital ..... 02 Block PHC/FRU/Sub-district hospital ..... 03 Sub centre ..... 04 **Private** Pvt. Hospital /Clinic/Nursing Home ..... 05 Pharmacy 06	**Other** Relative or friend ..... 07 Shop ..... 08 Traditional practitioner ..... 09 ASHA ..... 10 AWW ..... 11 ANM ..... 12 Other (specify) ..... 13 Don't Know 99		

Thank you for giving your precious time.

Name of Interviewer: **Signature**

UNIQUE ID:

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis for Preparing Intervention Package (Year 2014)

VILLAGE/WARD TOOL

Partner Medical College			
1.District		**2.Village/Ward**	

3.Date : _ _/_ _/2014	**4.Cluster Number**

5.Commencing Time	_ _ : _ _
6.Concluding Time	_ _ : _ _

7.Cluster Name

Namaskar, I am _____from _____Institution/ Medical College. I am here with my colleagues to do a survey to document care received and practices as followed by households during pregnancy, delivery and post delivery period in your area/village. Our team would like to discuss with you about the general practices of the people residing in the community and the facilities/services available in this village/ward. Your participation in the survey would contribute to improve health services and other facilities in this district. You are an important stakeholder in this study and therefore we would appreciate if you could spare some valuable time to discuss on these issues. It is expected to take about 15-20 min Your responses will be kept confidential. You may choose to stop your participation at any time.

Instructions for filling up the schedules

1. Please ensure that respondent is the village headman or some post holder at the village/ward level

2. Do not prompt any answer.

3. The respondent information will be treated as confidential.

4. Please record the responses in appropriate boxes by writing correct code.

8.	Name of respondent (stake holder)	
9.	Designation of respondent (stakeholder)	
10.	Total number of households in the village/ward	
11.	Name the three major occupation groups of women in the village/ward	1. 2. 3.
12.	Main source of drinking water in the village/ward	Piped water 1. Piped into dwelling 2. Piped to yard/plot 3. Public tap/standpipe 4. Tube well or bore well Dug well 5. Protected well 6. Un protected well 7. Protected spring 8. Unprotected spring 9. Rainwater 10. Tanker truck 11. Cart with small tank 12. Surface water (river/dam/ lake/pond/stream/canal/ irrigation channel) 13. Bottled water 14. Hand pump 15. Other (specify)
13.	Village electrification (i) Not electrified ……00 (ii) Electrified but supply of less than 6 hours ……..01 (iii) Electrified but supply of more than 6 hours ….02	
14.	Distance to the nearest town with good maternal and child health services (in kilometers)	Name Distance
15.	Distance to the district headquarters (in kilometers)	
16.	Distance to the nearest railway station (in kilometers)	
17.	Distance to the nearest bus stand (in kilometers)	

18.	Health facility available in the village (Yes-01, No-00)		
	1) ICDS (anganwadi)		
	2) Sub-centre		
	3) PHC		
	4) Block PHC		
	5) CHC/RH		
	6) District/govt. Hospital		
	7) Govt. Dispensary		
	8) Private clinic		
	9) Private hospital/nursing home		
	10) AYUSH health facility		
	11) Informal Practitioner		
19.	Health facilities: if not in the village, distance to nearest facility available	Distance to nearest health facility (in KM)	Whether accessible throughout the year (Yes-01, No-00)
	1) ICDS (anganwadi)		
	2) Sub-centre		
	3) PHC		
	4) Block PHC		
	5) CHC/RH		
	6) District/govt. Hospital		
	7) Govt. Dispensary		
	8) Private clinic		
	9) Private hospital/nursing home		
	10) AYUSH health facility		
20.	Availability of health provider in the village (staying and/or visiting)	(Yes-01, No-00)	If Yes, Number
	1) Integrated child development scheme / anganwadi worker		
	2) Village health guide (VHG)		
	3) Accredited social health activist (ASHA)		

	4) Trained birth attendant (TBA)		
	5) Auxiliary nurse midwife (ANM)		
	6) Doctor (MBBS)		
	7) Private doctor (MBBS)		
	8) Unani doctor / Ayurvedic doctor / Homeopathic doctor / SIDHA doctor		
	9) Registered medical practitioner - alternative medicines		
	10) Traditional healer		
	11) Untrained dai		
	12) Informal Practitioner (Quack)		
	13) Other (specify)		
21.	Availability of sonography /ultrasound facility in the village or within 5 kms (Yes-01, No-00, Don't Know-99)		
22.	Availability of Medical Store/Chemist in the village (Yes-01, No-00, Don't Know-99)		
23.	If no, distance to the nearest Medicine store (KM)		
24.	Whether the village was covered by any mobile health clinic (Yes-01, No-00, Don't Know-99)		
25.	If yes, number of visits of mobile health clinic in the last three months ?		
26.	Is there any health & sanitation committee in your village? (Yes-01, No-00, Don't Know-99) ?		
27.	Nearest Immunization/ANC clinic is Within Village - 01 Outside Village -02		

Name Of Interviewer_____ Signature

CS-28 USAID
Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia: Situational Analysis

2014

THE INCLEN TRUST INTERNATIONAL
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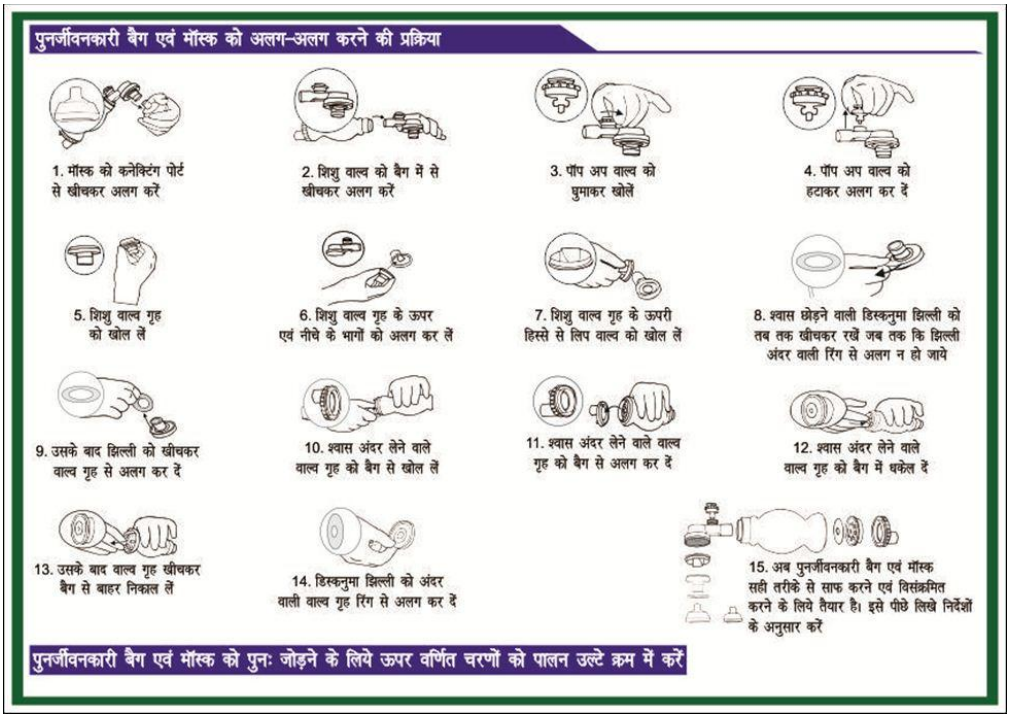
Annex 6: Papers, Presentations, News Coverage about Project, and Products

Annex 6A: Job Aids Developed



प्रसव कक्ष में प्रत्येक जन्म के पूर्व की जाने वाली तैयारियाँ

घड़ी

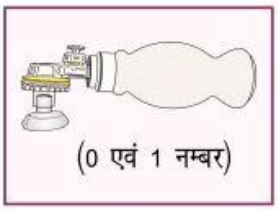
साफ प्रसव कक्ष, **25°C** से अधिक तापमान एवं कक्ष हवादार न हो

प्रसव कक्ष में पंखा न चल रहा हो

साफ तौलिया एवं टोपी

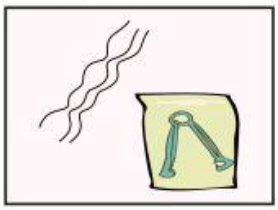
साफ रूई/गॉजपीस

म्युकस एक्सट्रैक्टर



चेक किया हुआ बैग एवं मॉस्क

स्टर्लाइज कैंची या नया ब्लेड

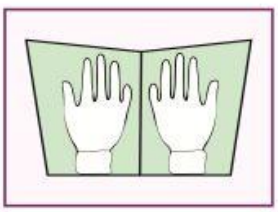


स्टर्लाइज/उबला धागा या कॉर्ड क्लैम्प

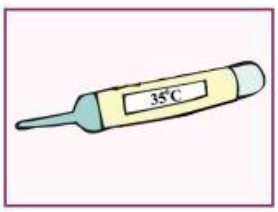
विटामिन-**K** इंजेक्शन

रेडिएंट वॉर्मर चालू करें

साफ पानी एवं साबुन से हाथ धोएं



साफ दस्ताने



तापमान नापने के लिए थर्मामीटर

वजन तौलने वाली मशीन

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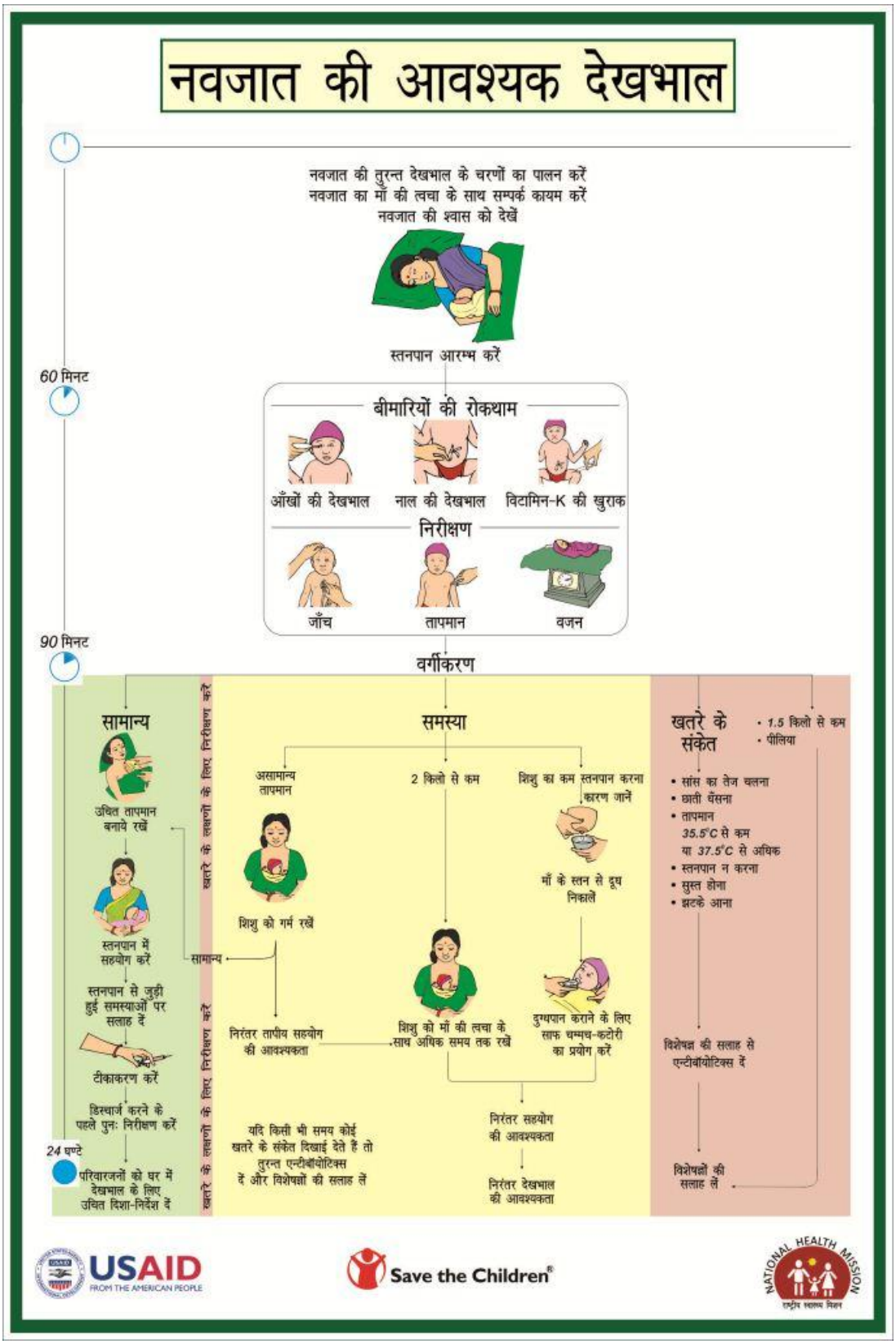
नवजात की आवश्यक देखभाल
नवजात की तुरन्त देखभाल के चरणों का पालन करें
नवजात का माँ की त्वचा के साथ सम्पर्क कायम करें
नवजात की श्वास को देखें
स्तनपान आरम्भ करें
60 मिनट
बीमारियों की रोकथाम
आँखों की देखभाल
नाल की देखभाल
विटामिन-K की खुराक
निरीक्षण
जाँच
तापमान
वजन
90 मिनट
वर्गीकरण
सामान्य
उचित तापमान बनाये रखें
स्तनपान में सहयोग करें
स्तनपान से जुड़ी हुई समस्याओं पर सलाह दें
टीकाकरण करें
डिस्चार्ज करने के पहले पुनः निरीक्षण करें
24 घण्टे
परिवारजनों को घर में देखभाल के लिए उचित दिशा-निर्देश दें
खतरे के लक्षणों के लिए निरीक्षण करें
समस्या
असामान्य तापमान
2 किलो से कम
शिशु का कम स्तनपान करना
कारण जानें
शिशु को गर्म रखें
माँ के स्तन से दूध निकालें
सामान्य
निरंतर तापीय सहयोग की आवश्यकता
शिशु को माँ की त्वचा के साथ अधिक समय तक रखें
दुग्धपान कराने के लिए साफ चम्मच-कटोरी का प्रयोग करें
यदि किसी भी समय कोई खतरे के संकेत दिखाई देते हैं तो तुरन्त एन्टीबॉयोटिक्स दें और विशेषज्ञों की सलाह लें
निरंतर सहयोग की आवश्यकता
निरंतर देखभाल की आवश्यकता
खतरे के संकेत
• 1.5 किलो से कम
• पीलिया
• सांस का तेज चलना
• छाती धँसना
• तापमान 35.5°C से कम या 37.5°C से अधिक
• स्तनपान न करना
• सुस्त होना
• झटके आना
विशेषज्ञ की सलाह से एन्टीबॉयोटिक्स दें
विशेषज्ञों की सलाह लें
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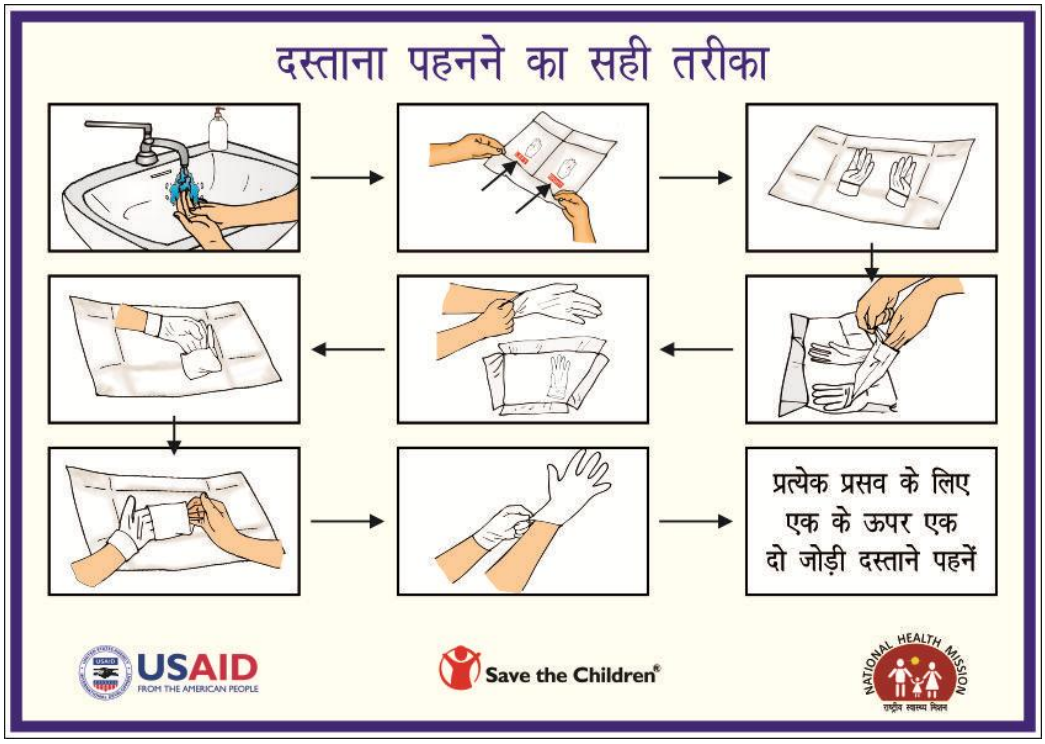
दस्ताना उतारने का सही तरीका
0.5% ब्लीचिंग घोल में 10 मिनट तक रखें
• ब्लीचिंग घोल से इस्तेमाल किये गये दस्तानों को 10 मिनट बाद निकालें।
• दस्तानों को अच्छे से साबुन व पानी से धोएं।
• अब धुले दस्तानों को 20 मिनट तक उबालें/ऑटोक्लेव करें या 20 मिनट तक 0.5% तक क्लोरीन घोल में भिगोये ताकि दस्ताने कीटाणुमुक्त हो सकें।


दस्ताना पहनने का सही तरीका
प्रत्येक प्रसव के लिए एक के ऊपर एक दो जोड़ी दस्ताने पहनें
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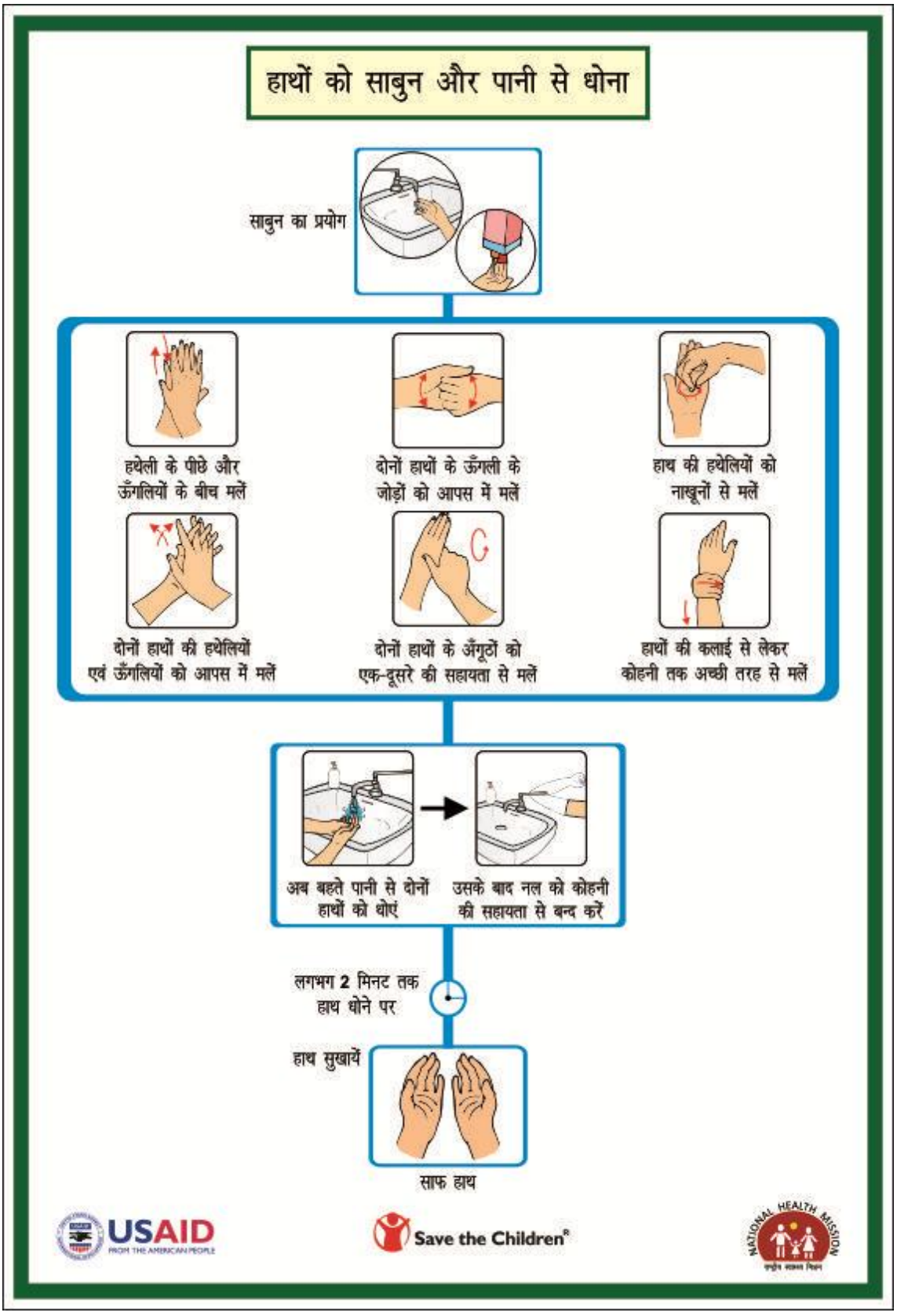
हाथों को साबुन और पानी से धोना
साबुन का प्रयोग
हथेली के पीछे और
ऊँगलियों के बीच मलें
दोनों हाथों के ऊँगली के
जोड़ों को आपस में मलें
हाथ की हथेलियों को
नाखूनों से मलें
दोनों हाथों की हथेलियों
एवं ऊँगलियों को आपस में मलें
दोनों हाथों के अँगूठों को
एक-दूसरे की सहायता से मलें
हाथों की कलाई से लेकर
कोहनी तक अच्छी तरह से मलें
अब बहते पानी से दोनों
हाथों को धोएं
उसके बाद नल को कोहनी
की सहायता से बन्द करें
लगभग 2 मिनट तक
हाथ धोने पर
हाथ सुखायें
साफ हाथ
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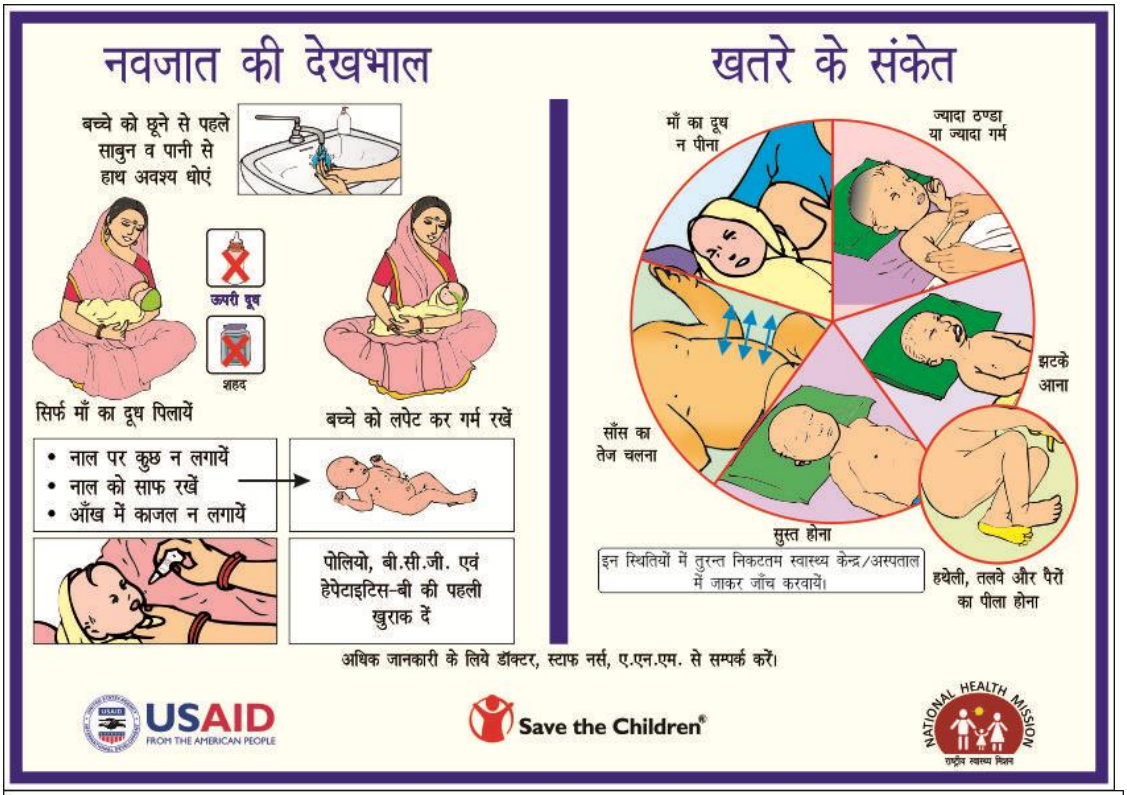
नवजात की देखभाल
बच्चे को छूने से पहले साबुन व पानी से हाथ अवश्य धोएं
ऊपरी दूध
शहद
सिर्फ माँ का दूध पिलायें
बच्चे को लपेट कर गर्म रखें
• नाल पर कुछ न लगायें
• नाल को साफ रखें
• आँख में काजल न लगायें
पोलियो, बी.सी.जी. एवं हेपेटाइटिस-बी की पहली खुराक दें
खतरे के संकेत
माँ का दूध न पीना
ज्यादा ठण्डा या ज्यादा गर्म
झटके आना
साँस का तेज चलना
सुस्त होना
हथेली, तलवे और पैरों का पीला होना
इन स्थितियों में तुरन्त निकटतम स्वास्थ्य केन्द्र/अस्पताल में जाकर जाँच करवायें।
अधिक जानकारी के लिये डॉक्टर, स्टाफ नर्स, ए.एन.एम. से सम्पर्क करें।
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जन्म के समय कम वज़न* के शिशु की देखभाल
*(1800 ग्राम से ज्यादा, 2500 ग्राम से कम)
गर्माहट
• माँ शिशु को अपनी छाती की त्वचा से चिपकाकर रखें।
• शिशु सिर्फ नैपकिन, टोपी और मोज़े पहने हो और उसे बाहर से माँ के आँचल से ढका होना चाहिए।
• के.एम.सी. स्थिति में माँ शिशु को लेकर बैठ या लेट सकती है।
• जितनी ज्यादा देर तक इस स्थिति में रखें उतना बेहतर होगा।
• शिशु को 7 दिन तक न नहलाए।
स्तनपान
• शिशु जब भी रोयें तो उसे स्तनपान करायें, रात व दिन दोनों समय।
• यदि शिशु स्तनपान करने में सक्षम न हो तो उसे किसी चम्मच इत्यादि से माँ का दूध निकालकर पिलायें।
• शिशु को भीड़-भाड़ व अन्य बच्चों से दूर रखें।
• नवजात शिशुओं को स्पर्श करने से पहले अपने हाथों को धो लें।
चेतावनी-संकेत
माँ को समझायें कि यदि नवजात शिशु :
• स्तनपान नहीं कर रहा है।
• झटके आ रहे हैं।
• बहुत सुस्त है।
• सांस लेने में दिक्कत
• बुखार या शरीर ठण्डा पड़ गया है।
• त्वचा पर छाले हैं।
• नाभि या आंखों से पीव निकल रही है।
ध्यान रहे ऐसी स्थिति में उसे तुरन्त ही स्वास्थ्य केन्द्र पर जाकर जाँच कराएं।
प्रथम महीने में नवजात शिशुओं की तीन बार जाँच डॉक्टर/स्टाफ नर्स/ए.एन.एम. द्वारा ज़रूर करायें।
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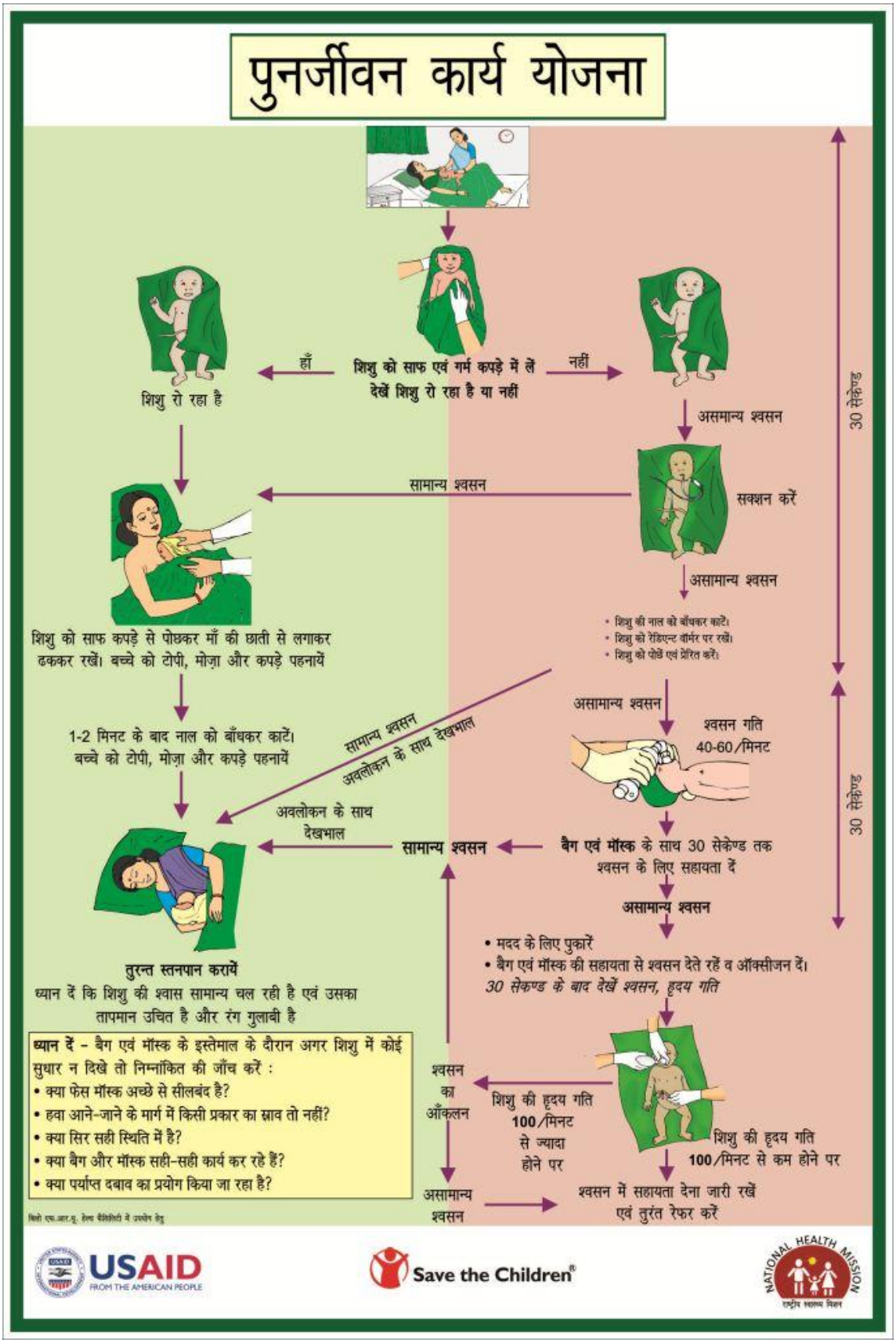
पुनर्जीवन कार्य योजना
शिशु को साफ एवं गर्म कपड़े में लें
देखें शिशु रो रहा है या नहीं
हाँ
नहीं
शिशु रो रहा है
असमान्य श्वसन
सक्शन करें
सामान्य श्वसन
असामान्य श्वसन
• शिशु की नाल को बाँधकर काटें।
• शिशु को रेडिएन्ट वॉर्मर पर रखें।
• शिशु को पीठें एवं प्रेरित करें।
शिशु को साफ कपड़े से पोछकर माँ की छाती से लगाकर ढककर रखें। बच्चे को टोपी, मोज़ा और कपड़े पहनायें
1-2 मिनट के बाद नाल को बाँधकर काटें।
बच्चे को टोपी, मोज़ा और कपड़े पहनायें
असामान्य श्वसन
श्वसन गति
40-60/मिनट
सामान्य श्वसन
अवलोकन के साथ देखभाल
अवलोकन के साथ
देखभाल
सामान्य श्वसन
बैग एवं मॉस्क के साथ 30 सेकेण्ड तक
श्वसन के लिए सहायता दें
असामान्य श्वसन
• मदद के लिए पुकारें
• बैग एवं मॉस्क की सहायता से श्वसन देते रहें व ऑक्सीजन दें।
30 सेकेण्ड के बाद देखें श्वसन, हृदय गति
तुरन्त स्तनपान करायें
ध्यान दें कि शिशु की श्वास सामान्य चल रही है एवं उसका तापमान उचित है और रंग गुलाबी है
ध्यान दें - बैग एवं मॉस्क के इस्तेमाल के दौरान अगर शिशु में कोई सुधार न दिखे तो निम्नांकित की जाँच करें :
• क्या फेस मॉस्क अच्छे से सीलबंद है?
• हवा आने-जाने के मार्ग में किसी प्रकार का स्राव तो नहीं?
• क्या सिर सही स्थिति में है?
• क्या बैग और मॉस्क सही-सही कार्य कर रहे हैं?
• क्या पर्याप्त दबाव का प्रयोग किया जा रहा है?
श्वसन का आँकलन
शिशु की हृदय गति 100/मिनट से ज्यादा होने पर
शिशु की हृदय गति 100/मिनट से कम होने पर
असामान्य श्वसन
श्वसन में सहायता देना जारी रखें एवं तुरंत रेफर करें
30 सेकेण्ड
30 सेकेण्ड
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Annex 6B: Skill Lab Trainings

Practicing skills in ENC&NR Demo Site at CHC Khair.

Pre-intervention-DWH, Gonda-200 W Bulb for providing warmth with Stainless steel tray for receiving newborn at Newborn Care Corner at DWH.

Post Intervention- DWH, Gonda-Radiant Warmer placed in labor room with NR action plan.

Facility In-charges practicing and learning NR. Training of Facility In-charge is important for facilitative supervision.

Bedside practice of SBA skills observed by facilitator in practice session.

ENCNR district training where gynecologists also learned how to measure newborns.

ENCNR district training-trainer used the develop job aids almost exclusively to conduct trainings. Job aids contain standardized, simple key message, with pictures in order to enhance understanding.

SBA learning to assemble Bag & Mask following directions developed in the job aid chart. Almost all SBAs accepted that they first learned how to dissemble, reassemble and clean the Bag & Mask.

Neonatal resuscitation Step-2: Service provider clearing secretions through Delles mucus extractor and keeping baby warm on Radiant Warmer in labor room.

Neonatal resuscitation Step-3: Service provider using Bag & Mask.

Annex 7: Other-Budget Notes

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NEGOTIATED INDIRECT COST RATE AGREEMENT

Date: December 11, 2013

ORGANIZATION
Save the Children Federation, Inc.
54 Wilton Road
Westport, CT 06880

The rate(s) approved in this Agreement are for use on grants, contracts and other agreements with the Federal Government to which OMB Circular A-122 applies, subject to the conditions in section II.A, below. The rate(s) was/were negotiated by the U.S. Agency for International Development in accordance with the authority contained in Attachment A, Section E.2.(a), of the Circular.

SECTION I: NEGOTIATED INDIRECT COST RATES

	EFFECTIVE PERIOD		INDIRECT COST RATES		
TYPE	FROM	THROUGH	FRINGE BENEFTS (a)	SUBAWARD ADMINISTRATION (b)	G&A (c)
Final	01-01-12	12-31-12	25.75%	4.81%	21.99%
Provisional	01-01-13	Until Amended	27.65%	5.01%	21.72%

Base of Application
(a) Total regular US and TCN salary costs
(b) Total direct subcontract/subaward costs to entities other than Save the Children International
(c) Total costs including Save the Children's/US's portion of Save the Children/International's expenses; but excluding cost of goods sold, capital equipment greater than $5,000, donated commodities and associated freight, internal transportation, storage and handling (ITSH) under Title II FFP program, interest, grants to other organizations (privately funded), foreign currency conversion, and subgrant/subcontract costs to entities other than SC/International

(Effective January 01, 2013, the base excludes directly charged security costs in excess of the first $25,000 per award - regardless of the period covered by the award)

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
www.usaid.gov

SECTION II: GENERAL

A. LIMITATIONS: Use of the rate(s) contained in this Agreement is subject to all statutory or administrative limitations and is applicable to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rate(s) agreed to herein is predicated upon the following conditions:

1. That no costs other than those incurred by the grantee or allocated to the grantee via an approved central service cost allocation plan were included in its indirect cost rate proposal and that such incurred costs are legal obligations of the grantee and allowable under the governing cost principles,

2. That the information provided by the grantee which was used as a basis for acceptance of the rate(s) to herein is not subsequently found to be materially inaccurate,

3. That the same costs that have been treated as indirect costs have not been claimed as direct costs, and

4. That similar types of costs have been accorded consistent treatment.

B. ACCOUNTING CHANGES: The grantee is required to provide written notification to the indirect cost negotiator prior to implementing any changes which could affect the applicability of the approved rate(s). Any changes in accounting practice to include changes in the method of charging a particular type of cost as direct or indirect and changes in the indirect cost allocation base(s) or allocation methodology require the prior approval of the Office of Overhead, Special Cost and Closeout (OCC). Failure to obtain such prior written approval may result in cost disallowance.

C. NOTIFICATION TO FEDERAL AGENCIES: A copy of this document is to be provided by this organization to other Federal funding sources as a means of notifying them of the Agreement contained herein.

D. PROVISIONAL-FINAL RATES: The grantee must submit a proposal to establish a final indirect cost rate(s) within nine months after its fiscal year end. Billings and charges to Federal awards must be adjusted if the final rate(s) varies from the provisional rate(s). If the final rate(s) is/are greater than the provisional rate(s) and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate(s) is/are less than the provisional rate(s), the organization will be required to pay back the difference to the funding agency.

E. SPECIAL REMARKS:

1. Indirect costs charged to Federal grants/contracts by means other than the rate(s) cited in the agreement should be adjusted to the applicable rate(s) cited herein which should be applied to the appropriate base to identify the proper amount of indirect costs allocable to the program.

2. Grants/contracts providing for ceilings as to the indirect cost rate(s) or amount(s), which are indicated in Section I above, will be subject to the ceilings stipulated in the grant, contract or other agreement. The ceiling rate(s) or the rate(s) cited in this Agreement, whichever is lower, will be used to determine the maximum allowable indirect cost on the grant or contract agreement.

3. The rate(s) hereby approved is/are subject to periodic review by the Government at any time their use is deemed improper or unreasonable. You are requested to advise the Government promptly of any circumstances, which could affect the applicability of the approved rate(s).

4. You are directed to promptly submit adjustment vouchers or final vouchers for all flexibly priced grants, contracts or other agreements. Audit adjustments should be clearly delineated so as to be readily identifiable for verification by this office. Care should be taken that amounts claimed do not exceed award limitations or indirect cost rate ceilings.

ACCEPTED: **Save the Children Federation, Inc.**

By: Richard K Trowbridge Jr.
Signature

Richard K Trowbridge, Jr.
Printed or Typed Name

CFO, Vice Prosident Finance
Title

December 20, 2013
Date

James N. Davis
Contracting Officer
Overhead, Special Cost and Closeout Branch
Cost, Audit and Support Division
Office of Acquisition and Assistance
U.S. Agency for International Development

Save the Children Federation, Inc.

No-cost Extension Request

October 28, 2014

Save the Children (SC) submits a revised budget in the amount of $1,750,000 matched by $584,084 in SC funds from non-US Government sources. With this budget revision, SC requests approval from USAID/CSHGP for a revised budget that reflects proposed budget changes and based on SC's latest NICRA (see attached copy) and a no-cost extension through March 31, 2016.

Save the Children's main reason for requesting a no-cost extension is due to considerable time required to get appropriate approvals for the start-up of the project. Approvals from government were received on May 2014 to implement project activities at district level.

Personnel - $123,834
SC Headquarters technical assistance and levels of effort remain the same. .

Fringe Benefits - $28,231
Fringe benefits are calculated in accordance with SC's human resources policies. Fringe benefits are calculated at 27.65% of base annual salary.

Travel – $19,038
Round trip travel is budgeted based on economy class fares and the average current airfare price and utilize an American carrier when available. Per diem rates are based on Save the Children's internal travel per diem policy for both international and domestic travel.

The budget assumes round trip airfare between the US and India for the HQ technical backstop and to cover costs for the final evaluator. SC will seek USAID's concurrence for the final evaluation lead.

Equipment - $0
The budget assumes no expenses for equipment.

Supplies - $0
The budget assumes no expenses for supplies.

Contractual - $17,916
- Final evaluation. A final evaluation, focusing on results, lessons learned, and sustainability is conducted during the no-cost extension period. An external international consultant will be hired upon approval from USAID CSHGP.

H. Other Direct Costs - $1,450,168

Sub grants.

- SC India. SC awarded a sub-grant agreement to SC India in the amount of $1,323,766 for in-country management. Total amount of sub-grant remains unchanged.
- PATH. SC awarded a sub-grant agreement to PATH in the amount of $126,402 in line with the approved Strategic Workplan budget. Total sub-grant amount remains the same.

Indirect Charges

Save the Children's current indirect cost rate of 21.72% is applied to all direct cost with the exception of equipment greater than $5,000 in value and 5.01% on all sub-grants. Please refer SC's NICRA, which is attached.

Cost Share

SC expects to provide 25% of total program costs as cost share. The primary source of cost share is from non-USG sources. Save the Children shows in the budget $584,089 as cost share.

Standard Form 424A

The Standard Form 424A is inserted in previous pages.

CS-28 budget re-alignment and no-Cost Extension

Standard Form 424 A

Budget Information - Non-Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assist-ance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Field (direct)	NA	NA	NA	$1,450,168	$515,447	$1,965,615
2. Headquarters (direct)	NA	NA	NA	$189,019	$68,642	$257,661
3. NA	NA	NA	NA	NA	NA	$0
4. NA	NA	NA	NA	NA	NA	$0
5. Totals	NA	NA	NA	$1,639,187	$584,089	$2,223,276

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	USAID PROGRAM		RECIPIENT FUNDS		Total (5)
	(1) Federal	(2) Non-Federal	(3)	(4)	
a. Personnel (1)	$123,834	$54,913	NA	NA	$178,747
b. Fringe Benefits (1)	$28,231	$13,728	NA	NA	$41,959
c. Travel (1)	$19,038	$0	NA	NA	$19,038
d. Equipment (3)	$0	$0	NA	NA	$0
e. Supplies (3)	$0	$0	NA	NA	$0
f. Contractual (3)	$17,916	$0	NA	NA	$17,916
g. Construction N/A	$0	$0	NA	NA	$0
h. Other (1), (2) (see notes)	$1,450,168	$515,447	NA	NA	$1,965,615
i. Total Direct Charges (Sum of 6a-6h)	$1,639,187	$584,089	NA	NA	$2,223,275
j. Indirect Charges (4)	$110,813	$0	NA	NA	$110,813
k. Subcontractor Costs	$0	$0	NA	NA	$0
l. TOTALS (Sum of 6i and 6j)	$1,750,000	$584,089			$2,334,089
7. Program Income					

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8. Field	NA	NA	NA	$0
9. Headquarters	NA	NA	NA	$0
10. NA	NA	NA	NA	
11. NA	NA	NA	NA	
12. TOTAL (Sum of Lines 8-11)	$0			$0

SECTION D - FORECASTED CASH NEEDS (Award if fully obligated)

13. Federal	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
14. Non-Federal					
15. TOTAL (Sum of Lines 13 and 14)					

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR THE LIFE OF THE PROJECT (For the NCE only)

(a) Grant Program	Future Funding Periods			
	(b) First	(c) Second	(d) Third	(e) Fourth
Field	NA	NA		
Headquarters	NA	NA		
20. TOTAL (Sum of Lines 16-19)	$0	$0	$0	$0

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:	22. Indirect Charges:	$110,814
23. Remarks: ICR at 21.72%		

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Save the Children Federation, Inc.

Saving Newborn Lives in Uttar Pradesh through Improved Management of Birth Asphyxia

Under USAID Cooperative Agreement No.: AID-OAA-A-12-00091

Term: 10/01/2009 - 09/30/2014

Budget Re-alignment and No-Cost Extension Request through March 2016

Line Items	A Original Negotiated Budget	B Obligated Amount to Date Amendment No.2 (Budget per SW)	C Total Expenditures (thru September 30, 2104)	D Outstanding Commitments (October 1, 2014 - September 30, 2015)	E Total Expenditures (thru September 30, 2105)	F = B- E Balance Unexpended	G NCE Oct 2015 - March 2016	H Funding Request/Adjustment	I New Budget
Personnel	$120,680	$122,884	$65,047	$40,787	$105,834	$17,050	$18,000	$950	$123,834
Fringe Benefits	$30,170	$30,721	$11,976	$11,278	$23,254	$7,467	$4,977	-$2,490	$28,231
Travel	$81,108	$37,381	$3,359	$3,915	$7,274	$30,107	$11,764	-$18,344	$19,038
Equipment	$1,226	$0	$0	$0	$0	$0	$0	$0	$0
Supplies	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contractual	$263,811	$17,916	$0	$0	$0	$17,916	$17,916	$0	$17,916
Other Direct Costs	$1,103,524	$1,451,272	$252,690	$869,895	$1,122,585	$328,687	$327,583	-$1,104	$1,450,168
								$0	$0
Total Direct Cost	$1,600,519	$1,660,174	$333,072	$925,875	$1,258,947	$401,227	$380,240	-$20,987	$1,639,187
ICR	$149,481	$89,826	$28,307	$54,658	$82,965	$6,861	$27,849	$20,988	$110,814
Total Cost	$1,750,000	$1,750,000	$361,379	$980,533	$1,341,912	$408,088	$408,088	$0	$1,750,000

SC India Budget (in USD)							
SN	Heads	Obligated Amount to Date (budget per SW)	Projected & Actual Expenditures (thru Septebmer 30, 2014)	Total & Projected Expenditures (thru September 30, 2054)	NCE Oct 2015 - March 2016 (6 months)	Funding Request/Adjustment	New Budget
1	Direct Labour	$388,639	$90,376	$178,157	$102,939	-$17,167	$371,472
2	Travel & Per Diem	$130,366	$27,128	$90,497	$45,489	$32,747	$163,113
3	Equipment (under $5000 per iter	$20,559	$5,116	$7,304	$0	-$8,139	$12,420
4	Other Direct Cost	$42,477	$9,836	$25,458	$13,217	$6,034	$48,511
5	Program Cost	$659,452	$59,927	$379,307	$86,742	-$133,476	$525,976
6	Subagreements	$82,273	$35,085	$87,993	$79,196	$120,001	$202,274
	Total	**$1,323,766**	**$227,468**	**$768,716**	**$327,583**	**$0**	**$1,323,766**

Pipeline for Project Term

Subgrantee Name: PATH

Subgrant Number: 84010503b

BUDGET LINE ITEM	Expenditures through April 2014	Expenditures for May-July 2014	Projection for Aug-Sept 2014	Projection for Oct 2014-March 2016	Total
Personnel	5,826.12	4,396.65	1,280.00	34,125.02	45,627.79
Consultants	342.03	7,150.00	0.00	14,461.00	21,953.03
Travel	4,654.53	2,042.27	0.00	15,088.20	21,785.00
Other Project Costs	943.79	614.90	200.00	7,096.50	8,855.19
Total Direct Costs	11,766.47	14,203.82	1,480.00	70,770.72	98,221.01
Indirect Cost	3,399.64	4,119.11	429.20	20,233.04	28,180.99
Total	**15,166.11**	**18,322.93**	**1,909.20**	**91,003.76**	**126,402.00**
Labor Days					
M Quintanar-Solares, Program Officer	8 Days	7.14 Days	2 Days	23.36 Days	40.5 Days
E Saxon, Product Development Engineer	0 Days	.38 Day	0 Days	16.62 Days	17 Days
P Bansil, Data Manager	0 Days	0 Days	0 Days	15 Days	15 Days
J Zemanek, Program Assistant	3.25 Days	2.81 Days	.5 Days	14.94 Days	21.5 Days
C Markham, Administrator	1.36 Days	0 Days	0 Days	2.89 Day	4.25 Days
I Narayanan, Neonatologist	.5 Day	10 Days	0 Days	20 Days	30.5 Days
Trips					
E Saxon, Seattle, WA - India	No trips	No trips	No trips	1 Economy class trip	1 Economy class trip
I Narayanan, Washington, DC - India	1 Business class trip	No trips	No trips	1 Business class trip	2 Business class trips