

REPORT ON RAPID ASSESSMENT

OF KNOWLEDGE & CAPACITIES TOWARDS RMNCH+A
INTERVENTIONS ACROSS LIFE STAGES
AMONG (FRONT LINE WORKERS) – PART I

FEBRUARY 2017



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List of Abbreviations

ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwife
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BCC	Behaviour Change Communication
BCG	Bacillus Calmette Guerin
BP	Blood Pressure
CHC	Community Health Centre
CMHO	Chief Medical & Health Officer
CPR	Contraceptive Prevalence Rate
DoPH&FW	Department of Public Health & Family Welfare
DPM	District Programme Manager
DPT	Diphtheria, Pertussis, Tetanus
EEBF	Early and Exclusive Breast Feeding
FGD	Focus Group Discussion
FHR	Fetal Heart Rate
FLW	Front Line Workers
FRU	First Referral Unit
GoI	Government of India
HBNC	Home Based Neonatal Care
HPD	High Priority Districts
HSRP	Health Sector Reform Programme
ID	Institutional Delivery
IDI	In-depth Interview
IEC	Information Education Communication
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
IYCF	Infant and Young Child Feeding
JSSK	<i>Janani Shishu Suraksha Karyakram</i>
KAP	Knowledge Attitude Practice
KMC	Kangaroo Mother Care
LBW	Low Birth Weight

MCP	Mother & Child Protection Card
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MUAC	Mid Upper Arm Circumference
NFHS	National Family Health Survey
NGO	Non-Government Organisation
NHM	National Health Mission
NMR	Neonatal Mortality Rate
NRHM	National Rural Health Mission
OBC	Other Backward Class
OPV	Oral Polio Vaccine
ORS	Oral Rehydration Solution
PHC	Primary Health Centre
PNC	Post Natal Care
PPH	Post-Partum Haemorrhage
PW	Pregnant Women
RCH	Reproductive and Child Health
RI	Routine Immunization
RMNCH+A	Reproductive Maternal Neonatal Child Health + Adolescent
SBCC	Social and Behaviour Change Communication
SC	Scheduled Caste
SHC	Sub Health Centre
SHRC	State Health Resource Centre
SN	Staff Nurse
SO	Structured Observation
SPSS	Statistical Package for Social Science
SSK	Swasthya Suvidha Kendra
ST	Scheduled Tribe
TFR	Total Fertility Rate
TT	Tetanus Toxoid
UP	Urban Pockets
VHSND	Village Health, Sanitation & Nutrition Day
XISA	Xavier Institute of Social Action

Acknowledgements

Front line health workers (FLWs) are the key functionaries in the public health delivery system. These functionaries are the first and sometime only the link between community and the health system in the remote villages. Large number of people in underserved areas primarily depend either on the FLWs like Mitans (a community health volunteer) or unqualified private practitioners due to their presence at the community level. Thus, it is essential to update knowledge of FLWs regularly in order to prevent morbidity and mortality among mother and children. In conjunction with the knowledge, attitude of these functionaries are also important to provide equitable and quality services in the underserved areas. If given adequate knowledge and skills to these functionaries, they will be able to save lives of many women and children in the state.

We are highly thankful to UNICEF, Chhattisgarh for providing us the opportunity to work on the Rapid Assessment of Front Line Workers. Their regular guidance and support has been a source of inspiration for the timely completion of the project. We would like to express our appreciation and gratefulness towards Communication for Development Specialist (Ms. Soniya Menon) and Consultant (Mr. Sudhakar Sinha) for their kind co-operation and support at all stages of the project. We also extend our sincere thanks to the Senior Programme Coordinator (Mr. Sameer Garg) and Programme Coordinator (Mr. Prabodh Nanda), SHRC, Chhattisgarh for their valuable inputs during the rapid assessment.

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Executive Summary

Frontline Health Workers (FLWs) are the key functionaries of public health delivery system. Often these are the first point of contact for communities residing in the rural areas as they deliver a range of activities to promote health and prevent illness, deaths and disability especially among women and children. The developing world has experienced notable reduction in maternal, child and infant mortality in recent decades. Millions of people in impoverished countries are alive today because of crucial role played by frontline health workers. Front line health workers support mothers during all stages of pregnancies especially for delivery and followed up by successive home visits for care, vaccinations and for adopting healthy behaviours like breastfeeding, hand washing, birth spacing, and sleeping under a mosquito net. Keeping in view the maternal and child health indicators in the state of Chhattisgarh in general and especially of High Priority Districts (HPDs), a rapid assessment of knowledge and capacities towards RMNCH+A interventions across life stage among FLWs was conducted. This study will contribute in the design and development of evidence based communication interventions.

The assessment was conducted to **assess gaps in the Knowledge, Attitude Practices and Skills (KAPS) of FLWs to deliver effective messages among users to generate demand for health services in general and particularly related to maternal and child health services in 5 high priority districts (HPDs) and 3 urban pockets (UP) of Chhattisgarh.** Both quantitative and qualitative techniques of research were used to cover 654 FLWs (Staff Nurse, ANMs and Mitanins) under KAPS survey from both urban and rural areas. Out of 654, 75 FLWs were observed for their practices and skills. In addition, 66 Focus Group Discussions (FGDs) were conducted with ANMs and Mitanins in both rural and urban areas. Data was collected using pre tested schedule from 5 HPDs (Bijapur, Bilaspur, Dantewada, Jashpur and Sarguja) and 3 urban pockets (Raipur, Bilaspur and Durg). The major findings of the assessment are presented below in two sections. Section I and section II briefly explain the findings of mitanins and nursing staff respectively in terms of knowledge, attitude, practices and skills.

Section I: Mitanins

Overall KAPS status of mitanins was found to be good as she they had adequate knowledge about the core components of antenatal care and new born includes period of pregnancy registration (immediate 62% and first trimester 35%), number of 4 or more ANC check-ups (93%), need of Iron Folic Acid (IFA) tablets (100%), correct doses of IFA tablets (98%), TT vaccinations (95%), benefits of colostrum (98%), and initiation of breastfeeding within 1 hour of delivery (98%). Mitanins were aware that pregnant women can prevent anaemia by consuming IFA tablets (urban 92%; rural 96%) and green leafy vegetables (urban 59%; rural 87%).

They were also aware that IFA tablets should be consumed after meal to prevent side effects of IFA tablets (urban 88% and rural 92%) and they advise mothers on the same. High proportions of mitanins advise pregnant women to consume nutritious food during ANC period (urban 94%; rural 93%) whereas fewer percentage of mitanins advise target group to go for regular check-up (urban 31%; rural 69%), and collect and consume ready to eat food from AWC (urban 25% ; rural 67%). Lesser percent of mitanins had knowledge about the weak or no foetus movement (urban 14%; rural 58%), fever or malaria (urban 14%; rural 58%) and jaundice (urban 18%; rural 42%) as signs of complications during pregnancy. It was found that most of the mitanins advise

for institutional delivery during first trimester in urban areas (80%) while in rural (87%) areas they advise during the third trimester.

Knowledge about complications during delivery was found higher in mitanins serving in rural areas than in urban areas -excessive bleeding (urban 73%; rural 92%), prolonged labour (urban 17%; rural 67%), breach presentation (urban 10%; rural 54%) and high blood pressure (urban 62%; rural 75%). Similarly, mitanins were aware of the danger signs among post -partum women that requires referral includes excessive bleeding (urban 82%; rural 93%), smelly discharge (urban 17%; rural 55%) and convulsions (urban 26%; rural 66%).

Eighty nine percent mitanins reported that they conduct more than 6 visits within 42 days of delivery of a woman to recognize danger signs among mothers and new born and advise about care. It is noted that mitanins serving in rural areas were more aware of the danger signs among new born in comparison to urban areas – baby not breastfeeding (urban 64%; rural 88%), feeling drowsy (urban 57%; rural 73%), stopped crying (urban 48%; rural 73%) , fast breathing (urban 40%; rural 61%) and chest in-drawing (urban 27% ; rural 69%).

Mitanins inform mothers on new born care i.e. breastfeeding (urban 73%; rural 93%), keeping newborn warm (urban 86%; rural 92%), cleanliness (urban 54%; rural 78%) and immunization (urban 22%; rural 76%). Significantly high percentage of mitanins had correct knowledge of purpose of kangaroo mother care (urban 96%; rural 97%), benefits of colostrum (urban 100%; rural 98%), age at starting complementary feeding (urban 99%; rural 99%) and recognizing malnutrition (urban 93%; rural 96%). Less than 50% mitanins advise mothers to continue breastfeeding even child is sick (urban 28%; rural 53%).

All mitanins believe that child should be vaccinated. In comparison to urban, lesser percentage of mitanins serving in rural areas have knowledge about the correct age of child should get measles (urban 90%; rural 73%) and vitamin A dose (urban 87%; rural 60%). Rural mitanins have information that measles (urban 9%; rural 22%) and vitamin A doses (urban 7%; rural 33%) can be given between 9-12 months of age of the child.

Mitanins were aware that mothers can prevent their children from diarrhoea by taking precautions like using safe water (urban 49%; rural 87%), covering food (urban 42%; rural 78%), maintain cleanliness (urban 80%; rural 87%) and washing hands with soap and water (urban 53%; rural 82%). Mitans were aware of danger signs when child with diarrhoea i.e. diarrhoea with vomiting (66%), dehydration, (63%) and child not able to take feed (65%) should be referred. Lower percentage of urban mitanins were aware of the symptoms of pneumonia i.e. child not able to take a feed (urban 23%; rural 65%), cough is dark yellow or blood (urban 17% ; rural 58%) and fever with cold and cough (urban 54% ; rural 79%) in comparison to rural mitanins.

Majority of mitanins adopted interpersonal communication methods (urban 86%; rural 94%) to impart information to target group using pictorial materials (urban 66%; rural 75%).

Data on practices reveals that significant proportion of mitanins advise for regular ante natal check-up (100%), diet (97%), taking rest (97%), institutional delivery (97%), danger signs (87%) and post natal care (73%) during ANC. Mothers of new born were advised for breastfeeding (100%) hand washing (92%), keeping baby warm (96%), immunization (92%) and danger signs

(80%). Mothers having children 6 to 24 months were advised for continued breastfeeding (100%), complementary feeding (97%), prevention from disease like diarrhoea and pneumonia (79%) and treatment (58%) from diarrhoea and pneumonia, immunization (88%) and hand washing (88%). Variations observed in responses of mitanins serving in urban and rural areas. Majority of mitanins demonstrated correct steps on method of hand washing, wrapping new born and providing Kangaroo Mother Care.

Section II: Nursing Staff (ANM and Staff Nurse)

Practically, all nursing staff were aware of the period of pregnancy registration (immediate after conception 69%; first trimester 31%). According to 56% nursing staff, all pregnancies are getting registered in first trimester in their areas (urban 42%; rural 58%). Majority (96%) agreed that they are conducting 4 ANC check-ups (urban 83% rural 93%). They conduct ANC services like height measurement (urban 100%; rural 78%), weight measurement (urban 83% ; rural 68%) , checking high blood pressure (urban 83%;rural 72%), blood test (urban 83%; rural 68%), urine test (urban 83%; rural 68%) and breast examination (urban 50%; rural 37%) at least once for every pregnant women in their areas. All Nursing staff reported providing IFA tablets to pregnant women. Lower percentage of staff reported giving advice that “*IFA tablet should not be consumed with tea, coffee and calcium tablet*” in both urban (25%) and rural (63%) areas. Knowledge about correct dose of calcium tablet to be consumed by pregnant women was found less among nursing staff (urban 8%; rural 18%) and it has been distributed also by limited staff (urban 58%; rural 73%). But, they reported that they advise that calcium tablet should not be taken in empty stomach (urban 33%; rural 72%) and should not be taken with IFA tablets (urban 33%; rural 75%).

High proportion of rural based ANM/SNs (90%) compared to 42% urban nursing staff reported, that they are distributing Albendazole tablet to pregnant women. They are also advising (93%) pregnant women about the side effects women may face after consumption of Albendazole tablet. In comparison to rural (68%), significantly lower proportion of ANM/SNs serving in urban (33%) areas reported that they are able to identify pregnant women who are at risk of hypothyroidism. It was recorded that pregnant women were mainly informed about three complications i.e. vaginal bleeding (urban 100%; rural 98%), convulsions (urban 50%; rural 87%) and prolonged labour (urban 50%; rural 72%). Majority of ANMs of rural areas were aware of the symptoms for which a pregnant woman should be referred to FRU and 24 hour PHC in comparison to urban areas. Similarly, they lack complete knowledge on types of complications in terms of obstructed labour (urban 42%; rural 62%) and breach presentation (urban 42%; rural 72%) during delivery.

Slightly higher percentage of nursing staff of urban (58%) areas reported that they maintain Partograph of every women delivering at their health facility than rural (50%) areas. Lower proportions (28%) of nursing staff are using Oxytocin to prevent PPH (urban 25%; rural 28%) at the health facilities. After delivery, lesser proportion of ANM/SNs of urban areas reported that they advise for consumption of warm fluids (urban 25%; rural 68%), take adequate rest (urban 67%; rural 85%) and take adequate sleep (urban 42%; rural 75%) than rural areas.

Correct dose of IFA (urban 75%; rural 87%) and calcium (urban 12%; rural 67%) tablets which should be consumed by a mother was reported by lower proportion of urban nursing staff than

rural staff. High proportion of nursing staff reported that they enquire about the danger signs while taking history of the new born from mother in order to refer to FRU. The danger signs of the newborn reported by them were - fever (urban 67%; rural 78%), not sucking well (urban 67%; rural 87%), difficulty in breathing (urban 75%; rural 80%), skin infections (urban 33%; rural 82%) and convulsions (urban 42%; rural 52%).

The nursing staff reported that they advise on breastfeeding and its benefits. Significant proportions of ANM/SNs (97%) were aware of the purpose of Kangaroo Mother Care (KMC). Lower proportion of ANM/SNs (urban 17%; rural 53%) were aware that by adding chlorine to drinking water, a mother can prevent diarrhoea among children at home than other methods i. e washing hands with soap and water (urban 100% ; rural 83%). They advise to give ORS solution (urban 92%; rural 100%) and zinc tablet (urban 83%; rural 85%) in case of child is suffering from diarrhoea. ANM/SNs of urban area were not aware that blue colour of the child is a sign of pneumonia. At the same time, higher proportion of nursing staff were aware with the danger signs of pneumonia i.e. difficulty in breathing (urban 83%; rural 94%).

Practically, all nursing staff were aware that hand washing with soap and water prevent the patients (mother/children) from infections during service delivery (urban 100% ; rural 98%) and they advise hand washing before touching the baby (urban 100%; rural 95%), before breastfeeding (urban 83%; rural 87%) and after cleaning baby excreta (urban 42% ; rural 83%).

The nursing staff are mainly using interpersonal communication for giving messages to the target groups, followed by use of pictorial materials (urban 25% ; rural 75%) and print media like posters/banners (urban 92% ; rural 63%).

Data on practices of ANM/SNs observed during the data collection, reveals that during ANC they advise for regular consumption of IFA tablets (100%), consumption of 2 calcium tablets daily (87%), not to consume calcium and IFA tablets together (67%), importance of TT injections (92%), birth preparedness (82%), danger signs during ANC (high fever with or without abdominal pain 85%), rest for at least an hour in the afternoon (90%), initiation of breastfeeding (immediately after normal delivery 87%), exclusive breastfeeding (82%), consumption of Albendazole tablets (38%) and ready to eat food (80%). During PNC, ANM/SNs enquire about the health problems (Heavy bleeding 86%) from mothers and give messages about the importance of rest (proper sleep at night is essential 78%), hygiene practices (use of clean cloth 100%), regular consumption of IFA (100%) and calcium tablets (78%), early initiation of breast feeding (43%), benefits of colostrum feeding (89%), benefits of skin to skin contacts (promote lactation 62%), danger signs in new born (fever or cold to touch 89%) and ensure all vaccines as per schedule (95%). Mother of children age 6-24 months were advised for starting complementary feeding (42%) at the age of six months, adverse effect of immunization (high grade fever 69%), prevention of diarrhoea by washing hands with soap and water (89%) and signs of pneumonia (difficulty in breathing – 89%). Variations were observed in responses of ANM/SNs serving in urban and rural areas.

High proportion of ANM/SNs demonstrated correct steps of proper positioning required during breastfeeding, four components of attachments required during breastfeeding and steps of wrapping new born to keep them warm.

Chapter 1: Overview on Maternal and Child Health

1.1 Introduction

“**Ensuring healthy lives and promote wellbeing for all at all ages of life**” –is a goal set by the United Nations for sustainable development in late 2015. The goal addresses all major health priorities, including **reproductive, maternal and child health**; communicable, non-communicable and environmental diseases; universal health coverage; and access for all, to safe, effective, quality and affordable medicines and vaccines¹. The goal and targets established by the United Nations provided directions to partner countries to give shape their policies and programmes on the basis of the achievements of Millennium Development Goal (MDG). Globally, reduction is noted in terms of maternal mortality ratio (MMR) declined by 37 per cent) and under five mortality rate (declined by 44 per cent) between 2000-2015. The neonatal mortality rate (NMR) declined from 31 deaths per 1,000 live births in 2000 to 19 deaths per 1,000 live births in 2015. Over that period progress in the rate of child survival among children age 1 to 59 months outpaced advances in reducing neo natal mortality; as a result neonatal deaths now represent a larger share (45 per cent) of all under – five deaths.

Global Sustainable Development Goals for Maternal and Child Health

- ♣ *By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.*
- ♣ *By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.*

The reduction in maternal (212 deaths per 100,000 live births in 2007 to 178 deaths in 2012) and child deaths is recorded in India as well. It was possible by implementation of several initiatives /schemes including *Janani Shishu Surksha Karyakram (JSSK)*, which encompasses free maternal and child services to women and children. In addition, improvements in infrastructure and governance systems contributed in the achievement of national targets. The child health programme under the National Health Mission (NHM) integrates interventions that improve child survival and addresses factors contributing to infant and under 5 mortality. Since,

India’s commitment under 12th five year plan (2012-2017)

- ♣ **Reducing the IMR to 25 per 1,000 live births**
- ♣ **Reducing the MMR to 100 per 100,000 live births**
- ♣ **Reducing the Total Fertility Rate (TFR) to 2.1**

neonatal deaths are the biggest contributor to child deaths, which is approximately 57% of the under five deaths, improving child survival hinges on improving newborn health. It is now well recognized that child survival cannot be addressed in isolation as it is intricately linked to the health of the mother, which is further determined by her health and development as an adolescent. Therefore, the concept of Continuum of

¹ Sustainable development knowledge platform, <https://sustainabledevelopment.un.org/sdg3>

Care, which emphasizes care during critical life stages in order to improve child survival, is being followed under the national programme. Another dimension of this approach is to ensure that essential services are made available at home, through community outreach and through health facilities at various levels (primary, first referral units and tertiary health care facilities). The newborn and child health are key pillars of the Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) strategic approach being implemented at the national and state level since 2013.

In accordance to the national strategies, the state of Chhattisgarh is committed to “health for all” through the population policy in order to provide quality health care services, especially to people living in remote and difficult areas². Despite significant progress in maternal and child health indicators during a decade (2005-06 to 2015-16), many mothers (MMR 230/100,000 live births³) and children (IMR 43⁴) are still dying in the state of Chhattisgarh – mostly from preventable causes. These deaths can be prevented by intensifying knowledge of service providers and users along with improving quality of maternal and child health services at all levels of health facilities. Feasible interventions like access to emergency obstetric care, availability of skilled professionals, ensuring supplies and logistics, and conducive environment at health facilities (supportive behaviour towards users). Prevention and timely treatment of post-partum haemorrhage, ensuring healthy practices among primary and secondary stakeholders such as regular and timely consumption of medicines, care during pregnancy, early initiation of breastfeeding, sanitation and hygiene, also contributes significantly in reducing maternal and child morbidity and mortality. Table 1: below highlights the progress made by the state of Chhattisgarh over the last decade.

Table No. 1.1 : Status of Key Indicators: Chhattisgarh at a Glance

Indicators	NFHS 4 (2015-16)	NFHS 3 (2005-06)
Mothers who had antenatal check up in the first trimester (%)	70.8	46.0
Mothers who had at least 4 antenatal care visits (%)	59.1	28.3
Mothers who had full antenatal care (%)	21.7	5.6
Mothers who received post natal care from a doctor/nurse/other health professional within 2 days of delivery (%)	63.6	20.9
Institutional births (%)	70.2	14.3
Institutional birth in public health facility (%)	55.9	6.9
Home delivery by skilled health personnel (%)	8.4	27.3
Children age 12-23 months fully immunized (%)	76.4	48.7
Prevalence of diarrhea in the last two weeks of survey (%)	9.1	5.2
Children under age 3 years breastfed within one hour of birth (%)	47.1	24.6
Children under 5 years who are underweight(%)	37.7	47.1

² Integrated health and population policy, Chhattisgarh, 2006, http://health.cg.gov.in/policy/cg_policy_version_5.pdf

³ Special Bulletin on Maternal Mortality in India 2010-12, Sample Registration System, Office of Registrar General, India

⁴ SRS Bulletin (2016), Volume 50 (1), July, Registrar General India.

National Family Health Survey (NFHS)-4 data indicates 24.8 per cent points increase in early ANC registration, while the increase in pregnant women who had full ante natal care is marked 16.1 per cent points. The per cent of institutional deliveries showed a marked increase (from 14.3 to 70.2%) during the decade. Similarly improvements are seen in other important indicators i.e. fully immunized children age 12 -23 months and children under age 3 years breastfed within an hour. Children under 5 who were underweight reduced from 47.1 to 37.7 percent.

Ensuring good quality maternal and child health services has been a key challenge across the state due to factors like geographical area, social norms, socio cultural variations, illiteracy, limited accessibility of health services and information by the community in remote areas. In addition, inadequate and updated knowledge about the key messages on quality Ante Natal Care (ANC), Institutional Delivery (ID), Routine Immunization (RI), Quality Post Natal Care (PNC), Home Based Neonatal Care (HBNC) services, Early and Exclusive Breastfeeding (EEBF) has been observed amongst the front line workers (FLWs) - comprising of Auxiliary Nurse Midwife (ANM), Staff Nurse and Mitanins (a community health volunteer). These FLWs are the first and often the only point of contact of the health care system by people in the rural areas as they deliver a range of lifesaving interventions to prevent illness, complications, deaths, and disability among vulnerable groups. As a result, the state government decided to focus their efforts on the most vulnerable population and disadvantaged groups by identifying the High Priority Districts (HPD).

UNICEF as a key development partner in the state moved a step forward to support Department of Public Health and Family Welfare (DoPH&FW) for effective implementation of RMNCH+A approach in the state. RMNCH+A strategy emphasis on the Social and Behavioural Change Communication (SBCC) for strengthening continuum of care from community to facility through improved community mobilization and behaviour change approaches⁵. Thus, Social and Behavioural Change Communication approach is considered by UNICEF as an important initiative along with other interventions in relations to health, nutrition and water & sanitation. Therefore, SBCC strategy was developed by the state with the support of UNICEF to bridge the communication gaps in order to generate demand for services and ensure quality maternal and child health services. The snapshot of SBCC strategy is presented below for greater understanding.

1.2 Social and Behaviour Change Communication Strategy:

The SBCC strategy is essential in addressing important health issues. It provides the guiding design for SBCC campaigns and interventions. A good SBCC strategy also ensures that activities and products work together to achieve the programme goal and objective.

UNICEF, Chhattisgarh SBCC strategy advocates for overarching endeavours that support demand for services and reducing high burdens of maternal, newborn, and child deaths by promoting advanced health practices in community.

⁵ USAID (2014); India's Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) strategy- A case of extraordinary government leadership.

Based on the objectives, SBCC strategy focuses on three dimensions, which include:

- ♣ Knowledge and skills development of health care providers and bring in the belief that effective inter personal communication can trigger the change and reduce the burden of neonatal mortality in long run ;
- ♣ Generate demand among community for quality services including counselling; and
- ♣ Develop evidences over potential channel of communication, transfer of improved practices and change in attitude among service providers.



The strategy strives to bring desired changes into society and creates enabling environment for sustainability of changed behaviours among different stakeholders. The list of stakeholders and key behaviour to be addressed are mentioned below:

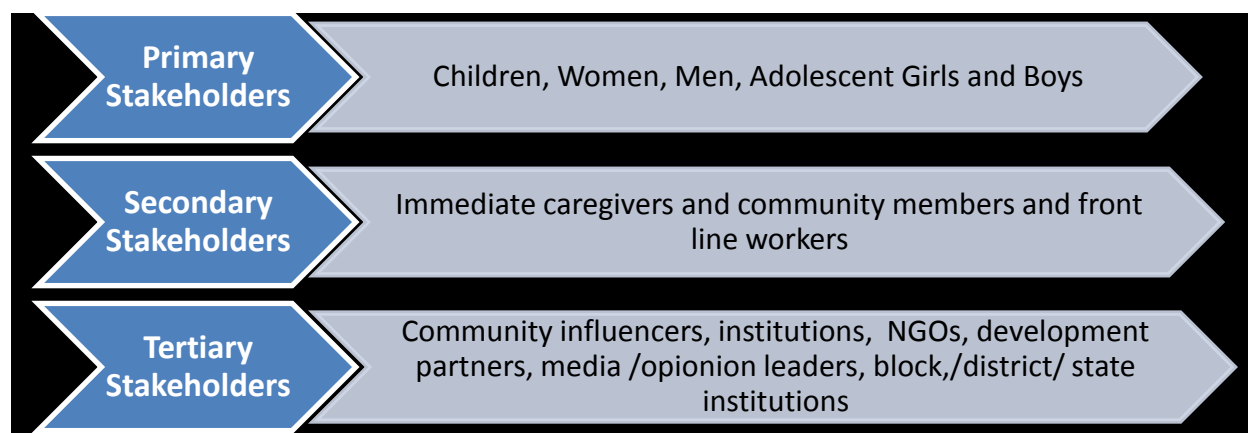


Table No. 1.2 Key behaviours to be addressed using SBCC strategy

Maternal Health	Newborn Health
<ul style="list-style-type: none"> • Complete ANCs (Early registration, 4 ANCs, + IFA tablets + 2 TTs) • Recognition of danger signs during pregnancy and to seek care timely. • Delivery at a health facility or assisted by a skilled birth attendant • Stay for 48 hours post delivery • Post Natal Care within first 24 hours of delivery and subsequent home visits on 3rd, 7th and 42nd day. 	<ul style="list-style-type: none"> • Promotion of Infant and young child feeding practices (IYCF) • Initiate early breast feeding (including colostrum feeding) within one hour of birth • Exclusive breast feeding and no pre-lacteals are including water or honey etc. • Under HBNC - Thermal care (KMC) of new born, avoiding bath in first three days and Cord care. • Recognition of Danger signs in newborn and seeking timely care.

Taking into consideration the SBCC strategy, a rapid assessment of FLWs (Front Line Workers) was designed to understand the gaps in the Knowledge, Attitude, Practices and Skills. The assessment aims to understand the existing capacity of the FLWs, specifically in terms of knowledge, delivering SBCC messages and implementing activities primarily through community engagement on RMNCH+A related behaviours. The findings of the assessment are expected to contribute in development of evidence based communication interventions.

1.3 Chapterisation plan:

The report consists of six chapters in total, excluding executive summary which is presented at the beginning of the report to present essence of the findings of rapid assessment. The present chapter (i.e. chapter 1) introduces the subject by giving an "Overview on status of maternal and child health indicators' in general and particularly in the state. Chapter 2 narrates the "Methodology" used to undertake the rapid assessment. Chapter 3 explains the Knowledge, Attitude, Practices and Skills (KAPS) of Mitanins. Chapter 4 elucidates the Knowledge, Attitude, Practices and Skills (KAPS) of nursing staff comprising of ANM and Staff Nurse. Chapter 5 describes the conclusion and discussion of the findings drawn from the assessment and finally chapter 6 highlights the recommendations.

Chapter 2: Methodology

Department of Health and Family Welfare (DoPHFW), Chhattisgarh envisaged a rapid assessment with the support of UNICEF to understand the Knowledge, Attitude, Practices and Skills (KAPS) of Front Line Workers. The assessment included Nursing Staff (Staff Nurse and ANM) and Mitanins (community health volunteer) as the front line workers. These FLWs are directly responsible to provide health education and services to the target groups in relation to maternal and child health. The assessment was conducted using both quantitative and qualitative research techniques for primary data collection and describes below the detailed methodology including objectives, key respondents covered, geographical area, sample size, sampling procedure, instruments used and analysis undertaken.

2.1 Overall Objective of the Rapid Assessment

The overall objective of the rapid assessment was to **assess gaps in the knowledge, attitude practices and skills (KAPS) of FLWs to deliver effective messages among users to generate demand for health services in general and particularly related to maternal and child health services in 5 high priority districts (HPDs) and 3 urban pockets (UP) of Chhattisgarh.**

The assessment was expected to highlight the challenges being faced by the FLWs in order to communicate effectively and generate demand among community (rural and urban population) for utilization of health services.

This assessment will serve as a baseline to measure change in the knowledge, attitude, practices and skills (KAPS) of FLWs after certain period of interventions on RMNCH+ A behaviour in the state. The assessment addresses the following objectives, specifically:

- ♣ Determine extent of existing knowledge, attitude, practices and skills (KAPS) of FLWs on key RMNCH+A behaviour in order to deliver messages effectively in the community and generate demand for maternal and child health services;
- ♣ Ascertaining challenges being faced by the FLWs while delivering messages related to specific components of RMNCH+A and demand generation; and
- ♣ Recommend best possible and feasible strategies to improve KAP of FLWs, especially in the underserved areas.

2.2 Methodology:

The rapid assessment was conducted using both quantitative and qualitative techniques of research. Quantitative technique helped to quantify KAPS of FLWs on maternal and child health indicators, while qualitative techniques supported in exploring challenges being faced by them. The details of the methodology used for this rapid assessment is described below:

2.2.1 Key Respondents:

The assessment covered “**Primary** and **Secondary**” respondents. The primary respondents were covered to determine knowledge, attitude, practices and skills related to RMNCH+ A behaviour. The secondary respondents were contacted to understand the opinions of

programme managers and initiatives being taken by them to improve the capacity of FLWs. The details of primary and secondary respondents are mentioned below:

The **Primary respondents** included:

- Mitanins (means a female friend- Mitanins are community health volunteers, who belongs to the same village and communicate key messages in the local dialect);
- Auxiliary Nurse Midwife (ANM) serving at Sub Health Centre in rural areas and *Swasthya Suvidha Kendra* in urban pockets ; and
- Staff Nurses serving at urban primary health centres;

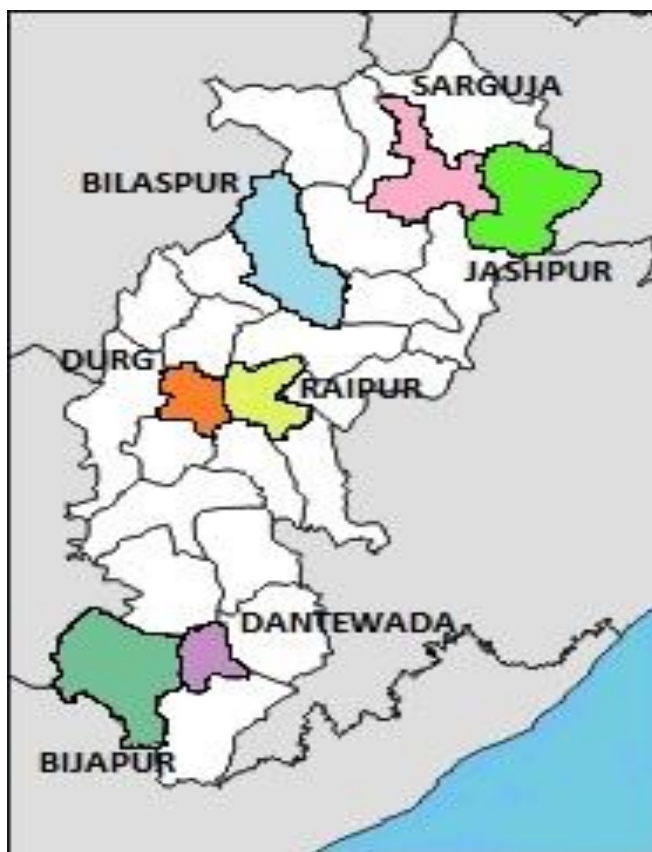
The **Secondary respondents** included:

- RMNCH+A Counsellors;
- District Programme Managers ; and
- Representative of State Health Resource Centre

2.2.2 Geographical Coverage:

The rapid assessment was designed and conducted in high priority districts (HPDs) of Chhattisgarh. The HPDs are decided by the Government of India (GoI) using uniform and clearly defined criteria. Relative ranking of districts have been done within a state (based on a composite index) and bottom 25% of the districts were selected as High Priority Districts (HPDs) for the state. The six indicators i.e. Maternal Mortality Ratio (MMR), per cent of Safe Deliveries, Infant Mortality Rate (IMR), per cent of children 12-23 months Fully Immunized, Total Fertility Rate (TFR) and Contraceptive Prevalence Rate (CPR) –modern method, used to decide the HPDs⁶

The districts selected for assessment were classified in rural and urban districts. Five districts i.e. Dantewada, Bijapur, Bilaspur, Sarguja and Jashpur were covered under the rural area and 3 pockets i.e. Raipur, Durg and Bilaspur were covered in urban area.



Pic 1: Sample districts of rapid assessment

⁶ GOI (2013): Guidance note for implementation of RMNCH+A interventions in High Priority Districts.

The status of health indicators of sampled districts and state is presented below (Table 2.1):

Table 2.1: Status of Health Indicators of Sampled Districts

SN	Indicators	Districts and State							
		Dantewada	Bijapur	Bilaspur	Durg	Jashpur	Raipur	Sarguja	Chhattisgarh
1	Crude Birth Rate	23.9	NA	25.6	20.3	22.6	25.2	26.2	23.2
2	Crude Death Rate	8.5	NA	7.0	6.2	9.1	6.8	8.6	7.3
3	Infant Mortality Rate	44	NA	38	35	56	45	50	46
4	Neo Natal Mortality Rate	29	NA	27	24	36	36	29	32
5	Post Neo Natal Mortality Rate	15	NA	12	11	21	9	22	14

*Annual Health Survey, Chhattisgarh 2012-2013; NA Not Available

2.2.3 Sample Size:

A total of 654 FLWs were covered under KAPS survey from rural and urban areas. Seventy five (75) FLWs participated in structured observations (SOs) that were part of the KAPS survey. In addition, 66 FGDs were conducted in total -33 with ANMs and 33 with Mitanni's. Representation of caste - SC, ST, OBC and experience were considered while planning FGDs. Overall respondents were covered from 180 villages (for KAP +FGD) from 5 HPDs and 36 wards of 3 urban pockets. The details of respondents covered under the rapid assessment for quantitative and qualitative analysis in both rural and urban pockets are presented below. Table 2.2 and 2.3 presents the sample size covered in rural districts and urban pockets for quantitative and qualitative analysis.

Table 2.2: Sample covered in Rural Districts

Districts	KAP of ANM	KAP of Mitanin	Structure Observation of ANM	Structured Observation of Mitanin	FGD of ANM	FGD of Mitanin	Total
Dantewada	8	60	4	4	4	4	84
Bijapur	8	60	4	4	4	4	84
Bilaspur	14	105	7	7	7	7	147
Sarguja	14	105	7	7	7	7	147
Jashpur	16	120	8	8	8	8	168
Total	60	450	30	30	30	30	630

Table 2.3: Sample covered in Urban Pockets

Districts	KAP of ANM	KAP of Mitanin	KAP of Staff Nurse	Structure Observation of ANM	Structured Observation of Mitanin	SO of Staff Nurse	FGD of ANM	FGD of Mitanin	Total
Raipur	2	54	2	2	2	1	1	1	65
Durg	2	48	2	2	2	1	1	1	59
Bilaspur	2	30	2	2	2	1	1	1	41
Total	6	132	6	6	6	3	3	3	165

A total of 622 FLWs participated in the FGDs. Of which, majority belongs to the scheduled tribe (301) category, followed by the Other Backward Class (219), General (57) and Scheduled Caste (45) population.

In addition, Chief Medical and Health Officer /District Programme Managers and RMNCH+A counsellors posted at district headquarter were contacted for in depth interviews. In total, 2 CMHOs, 4 DPMs and 3 RMNCH+A counsellors were interviewed. Besides, Senior Programme Coordinator was interviewed for detail understanding about the mitanins programme and related challenges.

2.2.4 Sampling Procedure:

Sampling is a process or technique of choosing a subgroup from a population to participate in the study. The assessment used the following sampling procedure to cover the primary sampling unit:

- i) **Selection of districts:** At the first stage districts and blocks/wards were finalized by the client. The same was mentioned in the ToR to undertake the assessment. The following districts were finalized to cover under the assessment for rural and urban areas :
 - **Rural Districts** – Dantewada, Bijapur, Bilaspur, Sarguja, and Jashpur
 - **Urban Pockets** - Raipur, Durg, and Bilaspur
- ♣ **Selection of Rural – villages and wards in the urban areas** -In rural areas (districts), 5 villages from each block of the identified district was selected. Villages were categorized in three groups based on distance from block headquarter i.e. – 0-10 km, 11-20 km and 21 to above, using Census 2011, data. One village was randomly selected from the category of 0-10 km, 2 villages were selected from 11-20 km and 2 villages were selected from 21 km and above. Villages belonging to 11-20 km, and 21km and above were then put into 2 groups first group consisted of villages having 3-7 Mitanins and second 8 or more Mitanins. One village was selected from each group. Care was taken that there was complete coverage of the block.

In urban areas, the required number of wards from each urban pocket i.e. Raipur (14), Durg (12) and Bilaspur (10), was selected on random basis using list provided by the State Health Resource Centre (SHRC) as per availability of Mitanins.

- ii) **Selection of Respondents:** Respondents were selected to administer tools related to KAPS and structured observation along with focus group discussions. The following procedures were used for choosing respondents, that are presented below :

♣ **Selection of respondents for KAP Survey:**

In rural areas, mitanins were selected from the identified villages on random basis as per requirement of KAP survey. ANM serving in the identified villages were contacted for KAP survey. Care was taken to ensure that villages should not get selected from the same gram panchayat. In urban areas, KAP survey was conducted with FLWs positioned at (*Swasthya Suvidha Kendra-SSK*) from the selected ward. In addition 2 staff nurses were selected from the existing Urban Primary Health Centres.

- ♣ **Selection of respondents for SO:** One ANM and one mitanin were selected for structured observation in rural districts. These 2 FLWs were selected randomly from the respondents of the KAP survey. The SOs largely focused on the skills and practices of FLWs. The service delivery of mitanins and ANMs were observed while she was interacting with Pregnant Women, Mother of newborn (0-28 days) and Mothers of children 0-24 months.

In urban pockets, 5 SOs were conducted in each urban pocket (2 with ANM + 2 With Mitanins and +1 with Staff Nurse). These FLWs were selected randomly from the respondents of the KAP survey.

- ♣ **Selection of respondents for FGD:** A total of 66 FGDs were conducted in both urban and rural areas. Out of which 33 with ANMs (30 in Rural and 3 in Urban) and 33 (30 in Rural and 3 in Urban) with Mitanins. FLWs were selected for FGDs who have not been a part of the KAP survey. FGD considered the representation of caste i.e. SC, ST and OBC and conducted at the health facilities for ANMs. FGDs with mitanins were conducted in the villages and urban pockets. The expected participants were informed in advance about the date and venue of FGD with the support of block level functionaries and mitanins trainers. All FGDs were documented.

- ♣ **Selection of respondents for IDIs:** Government officials designated as CMHO/DPM, RMNCH+A counsellor, SHRC Trainer and Joint/Deputy Director of RMNCH+A were contacted for interview. In total, 2 CMHOs, 4 DPMs, 3 RMNCH+A Counsellor and a senior programme coordinator at SHRC, were interviewed.

2.2.5 Rapid Assessment Instruments:

Knowledge, attitude, practices and skills of FLWs were studied using three type of tools i.e. structured questionnaire, structured observation and focus group discussions guide. These tools consisted of identified thematic issues including ANC, Institutional delivery and 48 hours of institutional stay, monitoring of vitals of the pregnant woman during delivery, PNC, routine immunization, diarrhoea, phenomena & identification of danger sings in newborns, hand

washing with soap & water and use of toilets, as per latest maternal and child health guidelines of GOI. The instruments i.e. structured questionnaire and structured observation consisted of two sections.

2.2.5.1 KAP Survey instrument:

Section I : General information included – i) Details of location includes Name of District, Name of Block, Type of health facility –Sub Health Centre (SHC), Primary Health Centre (PHC), Community Health Centre (CHC) and village, ii) Details of Respondents -Name, age, religion, cast, educational status, and length of experience.

Section II: Knowledge, attitude, practices and skills with regards to thematic issues such as Ante Natal Care, Natal Care, Post Natal Care, New Born Care- identification of danger signs in new born, breastfeeding, Kangaroo Mother Care (KMC), routine immunization, malnutrition, diarrhoea, pneumonia, hand washing, availability and use of toilet, and communication.

2.2.5.2 Structured Observation Instrument:

The structured observation tool administered by observing counselling services of FLWs to the target group's i.e. pregnant woman, mothers having newborns (28 days) and children 6-24 months. These FLWs (ANM/SNs) were contacted at the health facilities and field whereas mitanins were approached at the areas defined for the services including *Anganwadi* Centre. The FLWs were asked to demonstrate the steps of listed topics i.e hand washing, wrapping new born, Kangaroo Mother Care, 4 components of proper positioning and attachments required during breastfeeding, to understand their skills as per checklist.

Section I: General Information –Details of locations and respondents include name of district, name of block/ward, name of respondents, age, religion, cast, educational status, and length of experience.

Section II: Practices with regards to thematic issues such as ANC, Natal Care, PNC, New Born Care and use of communication materials. The instrument also included selected themes to demonstrate their skills.

2.2.5.3 FGD Guide:

The FGD captured information in relation to thematic issues with focus on communication messages being provided by them, reasons for not utilizing of offered services, challenges faced by them while providing services, suggestions for improvement in services and support required to deliver messages effectively.

The above developed tools were initially developed in English. The same was then translated into Hindi and further tested in the rural and urban areas of Bilaspur by administering tools to understand reactions of respondents –acceptability of question asked, understanding of question, sequence of question, willingness of the respondent to co-operate ; and identifying errors. The tools were modified and submitted to the client for approval.

2.2.6 Recruitment and Training of Field Team:

The field team consisting of Survey coordinator, supervisors and investigators, were selected locally (in respective districts) on the basis of listed criteria – qualification (graduate and post

graduate), experience of conducting survey, belongs to the same districts, familiar with geographical area and knowledge of local dialects. These field team members were interviewed telephonically by project coordinator and references were also considered before selection of the field team.



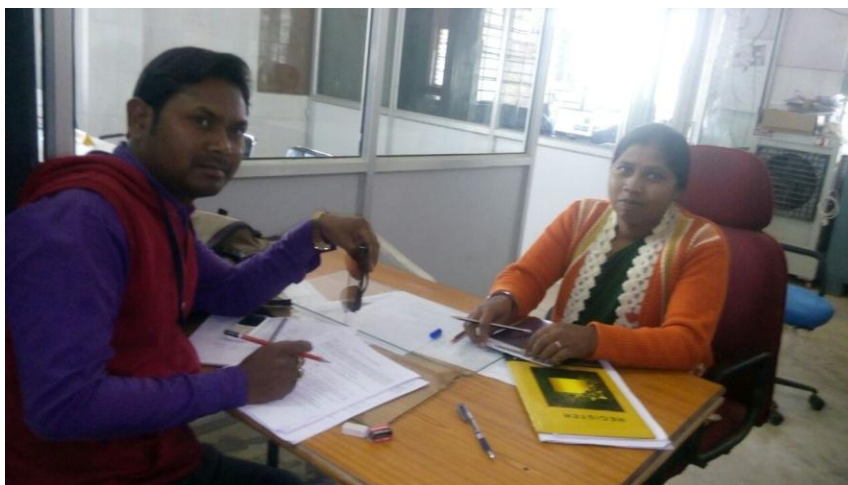
Pic 2: Mock Exercise during training of field team

Selected team members were invited to participate in a three days training programme. The training was conducted during 8 to 10 December, 2016 at Xavier Institute for Social Action (XISA), Raipur. A total of 25 team members participated in the training. The participants were explained about – RMNCH+A strategy, about the project -**Rapid assessment of Knowledge and Capacities towards RMNCH+A Interventions Across Life Stage Among FLWs in 5 HPD and Urban Pocket**. Specifically, they were explained about the objectives and methodology, tips for conducting interview and FGD. It was followed by detailed explanation of each question of the tools i.e. structured questionnaire, structured observation and FGD guideline of FLWs. Mock exercises and field exposure were conducted for the participants to make them familiar with the tools. At the end of the training, a data collection plan was developed.

The training was facilitated by the core team members of IPE Global, UNICEF Consultant and SHRC representative.

2.2.7 Data Management:

Training of field team was followed by the development of plan for data collection. Accordingly, quantitative and qualitative (FGD) data were collected from FLWs by the trained team members (Supervisors and investigators) from December 13, 2016 to January 10, 2017 in the sampled districts. Supervisors were made responsible to –developed plan for each day of data collection with each team member, supervise interviews conducted by investigators, solve problems, support in availability of mitanins and ANMs for interview, review



Pic 3: IDI with ANM, Village Chatakpur, Block Duldula, District Jashpur

of filled tools in the evening and conduct FGD. On the other hand, investigators were responsible for conducting interview with Mitansins, ANMs and Staff Nurse as per plan.

Data collection was supervised by the supervisors of respective districts. Survey coordinator and project coordinator also supervised the process and ensured the quality of data. In-depth interviews with district and state officials were conducted by the survey coordinator and project coordinator. Collected data was reviewed in terms of number of interviews undertaken with FLWs and completeness of the filled questionnaire.

A data entry package was developed in excel and used for data entry of each tool. Entered data was reviewed to avoid errors and checked with the filled tools. The clean sheet was used for data analysis using statistical software i.e. SPSS and Atlas ti.

Based on approved tools, tables were prepared and analysis was done accordingly.

2.2.8 Ethical Consideration:

Ethics are extremely important to set the boundaries of people involved in the process and maintaining the integrity of the work. Ethical standard prevents falsification of information and therefore promote the pursuit of knowledge and truth which is the primary goal of any study.

The study team of the rapid assessment considered ethics as an important issue and hence, ensured the written consent of each individual who participated in the process. The participants were informed about the followings:

- ♣ Purpose of the assessment, expected duration of discussion and procedure;
- ♣ Participants were given scope to decline to participate and withdraw from their participation even after starting the interview;
- ♣ Informed about the confidentiality of the information;
- ♣ Prospective use and benefit of the collected information was also shared with the participants;

Chapter 3 - Results: Knowledge, Attitude, Practices and Skills of Mitanins

The *Mitanin* (a community health volunteer) is an initiative of Chhattisgarh government, which was conceptualized in 2001 as part of Health Sector Reform Programme (HSRP). The programme aimed at strengthening demand side interventions by improving people's knowledge. Mitanins are responsible for promoting good practices and providing preventive health care services at the door steps. She is a vital link person between the community and health delivery system to increase utilization of available services. As a link person, they counsel target groups i.e. pregnant women and mothers having new-borns and children, and their families to avail maternal and child health services at the right time according to the protocol.

This chapter describes the profile of socio demographic characteristics of *Mitanins*, and depicts their knowledge, attitude, practices and skills on select maternal and child health indicators with focus on new born health.

3.1 Socio-demographic characteristics

Basic socio-demographic characteristics i.e. age, marital status, educational qualification, religion, caste, length of experience of mitanins was collected to understand their profile.

3.1.1 Age:

Age is a key basic demographic characteristic which play an important role in cognitive abilities. The decline of mental abilities from early adulthood is a universal phenomenon (Park et.al, 1999)⁷. Overall data shows, around one fourth (25%) of mitanins belong to the age group 31-35 years, followed by the age group 41 years and above (24%). The mean age of mitanins was 35.9 years, which was slightly higher in urban areas (36.7 years) as compared to rural areas (35.7 years). Slightly less than one third (32%) of mitanins belonged to 41 years and above age category in Dantewada and Bilaspur districts. Bijapur district has the highest (23%) proportion of young (less than 25 years) mitanins in comparison to other sampled districts {Table 3.1.1}.

3.1.2 Marital Status:

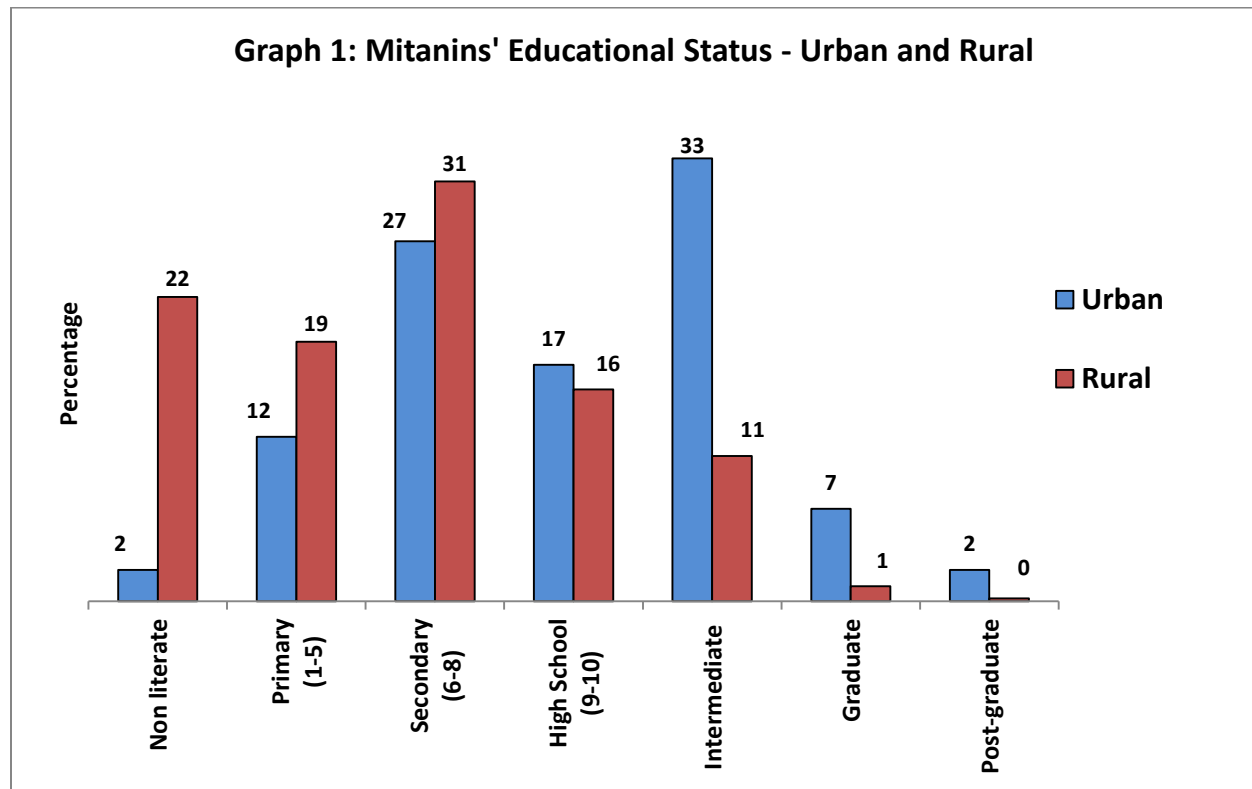
Around 93% of mitanins interviewed were currently married. Dantewada district had 78% currently married mitanins while Sarguja district reported 99%. There were no significant variations in the proportion of mitanins currently married {Table 3.1.1} in other districts.

3.1.3 Educational status:

The distribution of mitanins by completed number of years of education reveals that around 30% mitanins had completed secondary education, followed by non – literate (18%) and primary education (17%) category. The per cent of mitanins that are graduate (2.4%) and postgraduate

⁷ Park, D.C; R. E. Nisbett, and T. Hedden 1999: Culture, Cognition, and Aging Journal of Gerontology , No. 54 B, pp. 75-84.

(0.7) were very limited. The proportion of non-literates was higher in rural (22%) than in urban (2%) areas. Literacy levels in urban areas were significantly higher than the rural areas. Over two-fifths (42%) of urban mitanins as compared to only 12% of rural mitanins have completed at least intermediate level of education. District wise comparison indicates that Dantewada (73%) had very high percentage of mitanins that were non-literates. The low literacy level in certain areas is a matter of concern and may affect the quality of various services including health education and counselling {Table 3.1.1}.



3.1.4 Religion:

In keeping with the religious mix of the population, majority of mitanins are Hindu (90%), followed by Christians (7%) and Muslims (3%). District wise comparison indicates that Jashpur district had around 30% mitanins that were Christians, while in other districts over 90% of respondents were Hindus { Table 3.1.1}.

3.1.5 Caste:

Overall forty per cent of mitanins belong to the Scheduled Tribe (ST), 35% Other Backward Caste (OBC), 17% Schedule Caste (SC) and 8% General category. Urban rural comparison indicates that more than half (51%) of mitanins in rural areas belonged to ST group and 28% belonged to OBC group while three-fifth (59%) of urban mitanins belonged to OBC and 20% were SC. District wise comparison indicates that Dantewada (87%) and Jashpur (60%) had much higher proportion of mitanins belonging to ST group {Table 3.1.1}.

3.1.6 Length of Service:

Successful service delivery depends to some extent on the experience of service provider. Data indicates overall average work experience of mitanins was 7.8 years. Mitanins working in urban areas (3.7 years) had much lower work experience than mitanins working in rural areas (8.9 years). This is justified as mitanins were appointed to urban areas only after 2012. Around 44% mitanins of rural areas were serving communities for over 11 years in their respective areas {Table 3.1.2}.

3.1.7 Average number of Households being served

The average number of households serving by mitanins is 66, which was noted higher in urban (130) than in rural (47) areas. In Bijapur rural, all mitanins reported that they were serving less than 50 households, followed by Dantewada (78%) and Sarguja (73%) districts. Among urban pockets, around 69% of mitanins in Durg district covered 126 and above households followed by Raipur (44%) and Bilaspur (37%) {Table 3.1.3}.

3.2 Training:

Seventy per cent mitanins reported receiving training during the last year on various issues such as family planning, breast feeding, child care, behaviour change, hygiene, hand-washing, home visits, and immunisation. Higher percentage of mitanins (83%) serving in rural areas received training in comparison to urban mitanins (26%). As high as 98% of mitanins serving in Bijapur rural reported receiving training followed by other rural sampled districts i.e. Bilaspur (91%), Dantewada (83%), Jashpur (80%) and Sarguja (69%). When enquired about receiving training on counselling during last 3 years, all mitanins serving in urban areas confirmed receiving training, whereas in rural areas, 87% of mitanins confirmed receiving training. Around 37% mitanins in Bijapur and 25% in Dantewada reported that they had not received counselling training {Table 3.1.4} in last 3 years.

3.3 Knowledge, Attitude and Practices

Pregnancy and child birth are normal events in the life of a woman. Evidence shows, most pregnancies result in normal birth. But, about 15% of pregnancies may develop complications at any time and cannot be predicted. Some of these may be life threatening for the mother and/or her baby. The Government of India (GoI) has a commitment under its National Rural Health Mission (NRHM)/Reproductive and Child Health (RCH)-II programme to ensure universal coverage of all births with skilled attendance, both at the institutional and at the community level to provide access to emergency obstetric and neonatal care services for women and new born, and thereby restricting the number of maternal and new born deaths in the country. Based on this reference knowledge, attitude, and practices of mitanins was assessed.

3.3.1 Antenatal Care

Antenatal care is a type of preventive health care with a goal of providing regular check-ups that allow trained professionals to treat and prevent potential health problems throughout the pregnancy period. Therefore, **early registration of pregnancy** is being promoted and recognized as an essential step to detect complications for its timely management. Mitanins

were enquired about the need of pregnancy registration. All mitanins were aware of the need of early registration of pregnancy. According to less than two third (62%) of mitanins, pregnancy should be immediately registered after confirmation and during first trimester (35%). Higher percentages of mitanins serving in urban (77%) areas were aware of immediate registration of pregnancy than mitanins serving in rural (58%) areas. District wise comparison indicates that all districts excepting Sarguja (91%) had over 95% of mitanins aware of ANC registration within the first trimester{Table 3.1.5}.

All mitanins of urban and 91% of rural area, had knowledge that a **pregnant woman should receive at least 4 or more ante natal check-ups** (ANC) during entire pregnancy period. All sampled districts excepting Bijapur (70%) and Dantewada (77%) had over 95% awareness of the need for at least 4 ANC {Table 3.1.6}.

Iron deficiency anaemia is common among pregnant women who enhance the risk of maternal mortality as well as chances of delivering babies with low birth weight. GOI recommended one tablet (100 mg elemental iron and 0.5 mg folic acid) daily for six months from second trimester of pregnancy to be consumed by a pregnant woman during ante natal period. Mitanins knowledge of correct dose of IFA tablet was only 13% while the need of consuming IFA tablets by a pregnant woman was universal (100%) {Table 3.1.9}. They were also aware that a pregnant woman can prevent anaemia by consuming IFA tablets (95%), green leafy vegetables (80%) and other nutritious food (12%) like non-veg, fruits, etc. No signification variations noted between mitanins serving in urban (92%) and rural (96%) areas in respect to their knowledge about prevention of anaemia by consuming IFA tablets. Among the three urban pockets, mitanins serving in Durg had lowest awareness about two steps i.e. consuming IFA tables (83%) and green leafy vegetables (40%) which prevents anaemia in pregnant women {Table 3.1.7}.

Most of the women are going for ANC checkups, consuming IFA tablets and receiving TT injection. Few women are left out due to distance of SHC, heavy workload at home and elders do not allow them.

Mitanin, Bilaspur

All mitanins believed that IFA tablets are beneficial for the pregnant women. According to them, a pregnant woman should consume at least 180 IFA tablets (13%) during ANC. The knowledge about the correct dose was slightly higher in mitanins of urban (17%) than rural (NIL) areas. Mitanins were not aware of the revised guideline regarding IFA dosage {Table 3.1.9}.

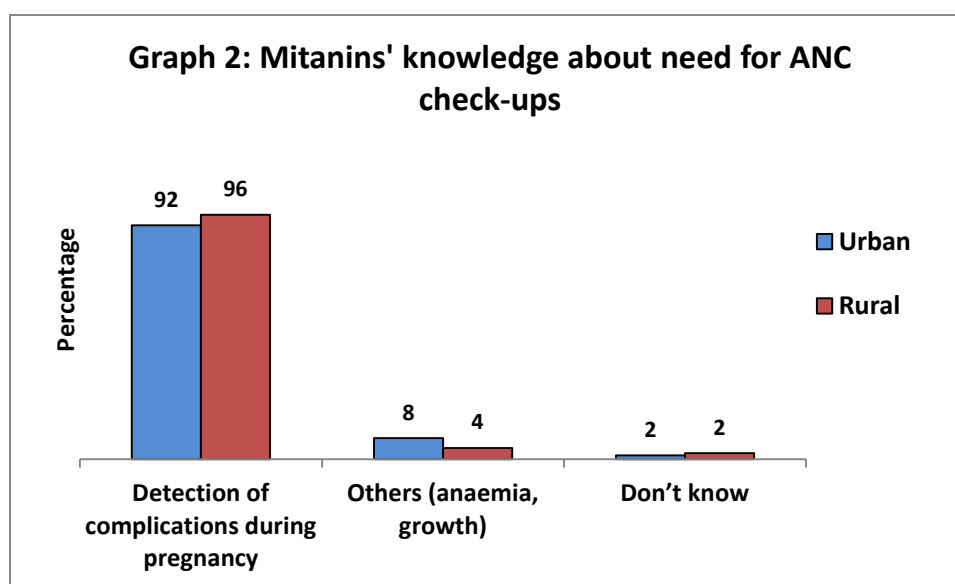
Significantly high proportion of mitanins (91%) reported that they advise pregnant women to consume IFA tablets after consuming food/meal to prevent side effects like nausea. Knowledge of preventing side effects was marginally higher in rural (92%) than urban (88%) areas. Among rural districts, mitanins (75%) serving in Danetwada has less knowledge about the side effects in comparison to mitanins of other sampled districts of rural areas {Table 3.1.10}. *Few Mitanins also advise pregnant women to consume sour food like lemon or pickle to prevent side effects of IFA tablets in both urban and rural areas.*

Almost all mitanins (99%) had knowledge that a pregnant woman should take **Tetanus Toxoid (TT) injections** during ANC to prevent tetanus {Table 3.1.11}. They were also aware of the

correct dose (96%) of TT injections, that is higher in urban (100%) than rural (94%) areas. Except mitanins of Dantewada (87%) district, knowledge about correct dose of TT injections was almost universal {Table 3.1.12}.

Ante natal examinations such as urine test (85%), haemoglobin (84%) and high blood pressure (81%) were considered essential during pregnancy by mitanins. Need for other check-ups like abdominal examination (79%), weight (75%) and height (52%) measurement was considered essential by lower percentage of mitanins. Mitanins in rural areas had higher knowledge for essential check-ups during ANC except for urine examination. District wise comparison indicates that mitanins serving in Durg and Dantewada had lower knowledge levels of essential ANC check-ups in comparison to other sampled districts {Table 3.1.13}.

Mitanins were aware of the **purpose of ante natal check-ups** i.e. early detection of complications during pregnancy (95%) in both urban (92%) and rural areas (96%) {Table 3.1.15}. During ANC, mitanins reported that they advise pregnant women for consumption of nutritious food (93%), take rest at least an hour in the afternoon (84%) and avoid carrying heavy weight (74%). They advised pregnant women to consume nutritious food in both urban (94%) and rural (93%) areas than other issues. During ANC, lower proportion of



mitanins advised pregnant women for regular check-ups (31%) and institutional delivery (29%) in urban areas. District wise variations exist for mitanins' knowledge of each type of ANC advice provided. However, mitanins in Durg area had lowest knowledge levels on essential examinations in comparison to other sampled districts {Table 3.1.14}.

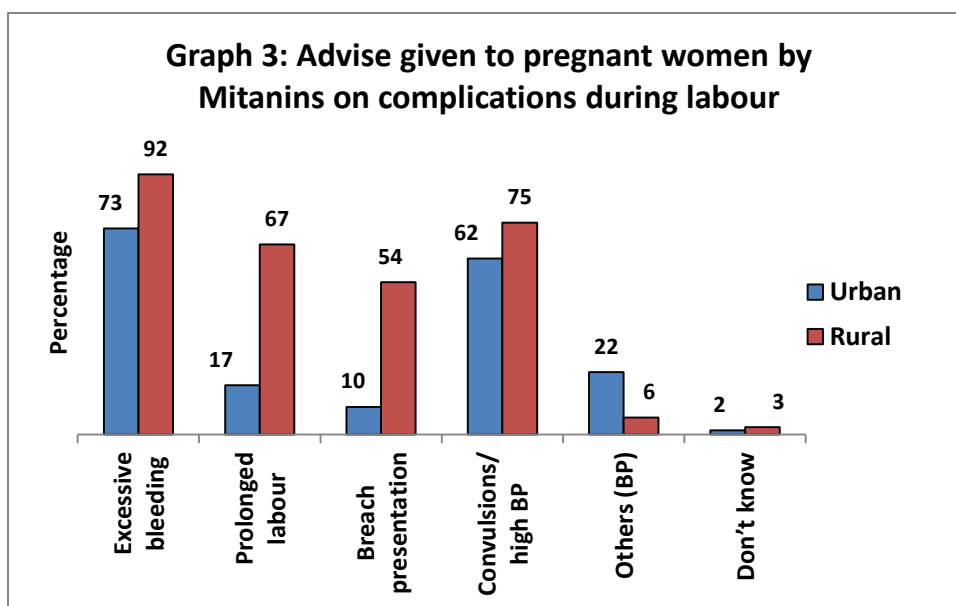
Mitanins were aware of several **complications** during pregnancy i.e. swelling in hands, face and feet (88%), severe anaemia (75%), convulsions (67%), high blood pressure (61%), excessive bleeding (58%), weak or no foetus movement (48%), fever or malaria (48%), and jaundice (37%). Mitnins of rural areas had higher level of knowledge about various complications during pregnancy than urban areas, except for severe anaemia. District wise variations for knowledge of pregnancy complications exist, however there are no clear trends {Table 3.1.16}.

As high as 99% of mitanins confirmed that they should advise pregnant woman for **institutional delivery**. Seventy two per cent mitanins reported that they advised mothers during the third trimester of pregnancy for institutional delivery. Clear differences were recorded in the practice of mitanins serving in urban and rural areas. In urban areas, 80% mitanins advised pregnant women for institutional deliveries during first trimester, while in rural areas, 87% mitanins advised during the 3rd trimester {Table 3.1.18}. While promoting institutional delivery, they advise for certain arrangements i.e. identification of transport (83%), money (80%), support person (70%), and deciding health facility (64%). Less than 30% mitanins advised pregnant women to keep clean cloths while going for institutional delivery. Majority of mitanins of rural areas advice on various components: i.e health facility, transport, support person and money, preparation for institutional delivery than in urban areas. Lower percentage of mitanins in Durg advised for various components of preparation for institutional delivery than other districts {Table 3.1.19}.

Sixty per cent mitanins were aware that a woman needs to **stay in health facility** at least for 48 hours in case of normal delivery. Urban (78%) mitanins reported considerably higher per cent than rural (55%) mitanins in this regard {Table 3.1.20}. Mitanins were aware of the preparations required for home delivery which includes availability of clean cloth, new blade and thread along with soap for hand washing (95%). Clean room (85%), appropriate room ventilation (76%), three cotton clothes for new born (63%) and others such as boiled water (18%) was reported by comparatively lower percentage of mitanins. Knowledge of home delivery preparations was much higher among mitanins located in rural areas. Mitanins in Durg (urban) district recorded the lowest knowledge levels {Table 3.1.21}.

3.3.2 Natal Care

Mitanins were aware of the signs of complications that a woman may face during labour. Higher



percentage of mitanins reported about the complications i.e. excessive bleeding (urban 73%; rural 92%) in comparison to other complications i.e. convulsions (urban 62%; rural 75%), prolonged labour (urban 17%; rural 67%) and breach presentation (urban 10%; rural 54%)

{Table 3.1.22}. Respondents reported (99%) that lactating mothers should get solid food to be

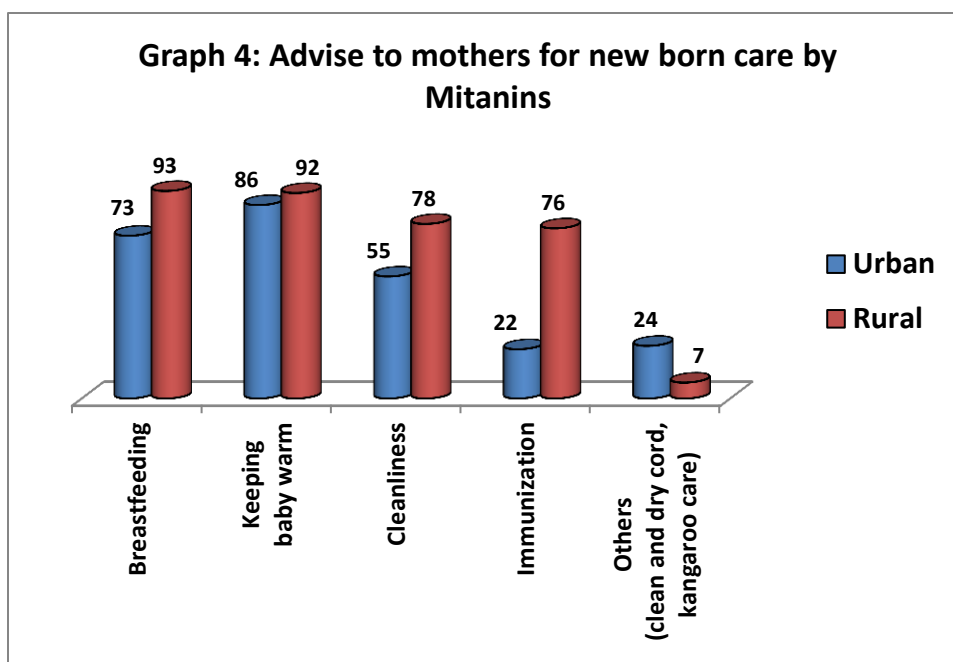
consumed within 12 hours of delivery {Table 3.1.23}. Mothers who delivered the baby require follow up by mitanins to identify complications at an early stage through home visit. In total 89% mitanins (urban 100%; rural 86%) confirmed that they conduct more than 6 home visits to the new born within 42 days of delivery {Table 3.1.24}.

Ninety percent mitanins were aware that women in post –partum period should be referred in case of excessive bleeding after delivery. Other complications that require referral included convulsions (57%) and smelly discharge (46%){Table 3.1.25}.

3.3.3 New born Care

During home visit, mitanins observe the new born for danger signs including whether child is breastfeeding or not (83%), feeling drowsy (69%), stopped crying (67%) and pus or pustules (64%). Mitanins serving in urban area reported that they look for other danger signs for diseases like - jaundice, pneumonia, and large size of stomach. Higher percentage of mitanins of rural areas reported about various danger signs in comparison to mitanins of urban areas {Table 3.1.26}.

During their visit mitanins inform mothers about the care of new born. Messages include keeping baby warm



(90%), breastfeeding (88%), cleanliness (73%) and immunization (64%). Almost all mitanins (99%) counsel mother to contact them in case new born has any health problem {Table 3.1.27}.

Mitanins believe that new born should be wrapped properly after birth (100%) to keep the baby warm {Table 3.1.29}. Around 91% mitanins have knowledge that mother should not put something on the cord of the new born whereas remaining (9%) reported that mother should put something on the cord to dry early {Table 3.1.30}.Mitanins generally advise to put *Joda Oil* (oil prepared locally by mixing seeds of *toda* fruits, mustard oil and sesame oil) on the cord of the newborn in Dantewada district. Large number of mitanins (98%) advise mother to wash hands before touching the new born {Table 3.1.31}. Almost all mitanins were aware of the kangaroo mother care (urban 99% and rural 97%) and its purpose – “to keep baby warm” in both rural (97%) and urban (96%) areas {Table 3.1.32 and Table 3.1.33}. In comparison to KMC, slightly less percentage of mitanins have knowledge about four components of attachments during

breast feeding i.e. Upper part of areola should be more visible than lower part (79%), baby's mouth to be wide open (78%), lower lip should be turned outward (74%) and baby's chin should touch the breast (74%) {Table 3.1.34}.

Almost all Mitanins (99%) have knowledge about the benefits of colostrum i.e. "save new born from illness" except few Mitanins of Dantewada (15%) and Bilaspur (2%) districts {Table 3.1.36}. Ninety eight per cent mitanins have knowledge that a mother should initiate breastfeeding within one hour of delivery. The knowledge on initiation of breastfeeding within an hour was higher in urban (100%) than in rural (98%) areas. In rural areas, few mitanins also reported that a mother should initiate breastfeeding within 6 and 24 hours of delivery {Table 3.1.37}. They were also aware of the benefits of early breastfeeding i.e. prevent baby from illness (93%), and baby gets energy (63%) {Table 3.1.38}. More than 99% mitanins were aware of the correct age of starting complementary feeding (completion of 6 months) {Table 3.1.41}. Around 96% of respondents had correct knowledge of identification of malnourished children (grading after weighing children according to the age) {Table 3.1.42}. They give advice mother to prevent malnourishment among children by giving green leafy vegetables and fruits (76%), feeding children at least 6 times a day (72%), continuing breastfeeding (69%), give oil in food (61%) and start complementary feeding after completion of six months of age (59%) {Table 3.1.44}.



Pic 4: FGD with Mitanins, District Jashpur

Mitanins had knowledge of BCG (96%) and measles (92%) vaccines, which was higher than other vaccines. Mitanins had knowledge of other vaccines i.e. OPV (79%), Pentavalent (77%), Polio 0-doses (66%), and Hepatitis B at birth (55%) as well. Mitanins in urban areas had higher knowledge of Pentavalent, measles and Vitamin A vaccines, while rural mitanins had higher knowledge of Polio 0-dose, Hepatitis B, and OPV. Knowledge of vaccines varied among mitanins in urban and rural areas {Table 3.1.46}.

Higher percentage of mitanins has knowledge about the correct age of child to receive measles (77%) vaccine in comparison to vitamin A (66%). These vaccinations can also be administered between 9-12 months of age, reported by 19% mitanins for measles and 27% for vitamin A. Knowledge of correct age for both measles and Vitamin A was inadequate in Dantewada which is a matter of concern {Table 3.1.47 and Table 3.1.48}.

Mitanins have knowledge that mothers can prevent diarrhoea among children by taking precautions like cleanliness (85%), using safe water (78%), washing hands with soap and water

(76%) and covering food (69%) {Table 3.1.49}. In case child was suffering with diarrhoea, mother should provide ORS (96%) to the child. Knowledge of home based ORS was found only in 40% Mitanins. Knowledge of steps taken during diarrhoea was significantly higher among rural mitanins. Mitanins in Durg had considerably lower knowledge of diarrhoea management. {Table 3.1.51}.

Around 60% mitanins have knowledge about the danger signs of diarrhoea i.e. loss of water (63%), diarrhoea with vomiting (66%) and child not able to consume food (65%) and child should be referred. Few Mitanins (13%) have knowledge that child should be referred in case of persistent diarrhoea with blood. In rural areas, mitanins have twice the knowledge of danger signs of diarrhoea than urban areas. Respondents in Bijapur and Jashpur districts have much higher knowledge levels in this regard {Table 3.1.53}.

Mitanins reported about the symptoms of pneumonia i.e. chest in-drawing (83%), difficulty in breathing (81%), fever with cold and cough (74%), not able to drink or take a feed (55%) and cough is dark in colour with blood (48%). Mitanins located in rural areas have significantly higher knowledge of symptoms of pneumonia than urban mitanins. Knowledge of respondents in Jashpur district was significantly higher than other districts {Table 3.1.54}. Mitanins also reported knowledge about the medicine i.e. cotrimoxazole (83%) and Amoxicillin (19%) that should be given if child is suffering with pneumonia. Less than two-thirds (64%) mitanins in urban and 89% in rural areas had knowledge about treatment with cotrimoxazole, however in case of amoxicillin, urban (64%) mitanins had much higher knowledge than rural (6%) {Table 3.1.55}.

Mitanins recognizes children who need Albendazole tablet on the basis of the symptoms like itching in anus (77%), worms in stool (76%) and white spots on face (55%). The other symptoms informed by them are anaemia, bloated stomach and pain in stomach by 15% Mitanins. Knowledge of symptoms of worm infestation was significantly higher among rural mitanins {Table 3.1.56}. Knowledge of name of deworming medicine was almost universal across sampled districts excepting Dantewada (83%) {Table 3.1.57}.

Majority of mitanins advise mother to wash their hands on different occasions. The different occasions reported were - Washing hands before cooking (95%), washing hands after defecation (93%), washing hands before feeding (90%), and washing hands after cleaning child faeces (60%). Surprisingly knowledge of washing hands after cleaning child faeces was only 17% among urban mitanins. Mitanins recognizes children who need Albendazole tablet on the basis of the symptoms like itching in anus (77%), worms in stool (76%) and white spots on face (55%). The other symptoms informed by them are anaemia, bloated stomach and pain in stomach by 15% Mitanins. Knowledge of symptoms of worm infestation was significantly higher among rural mitanins {Table 3.1.58}.

3.4 Practices

3.4.1 General Observation on Communication:

The above findings are supported by the observation tool which confirmed that high percentage of mitanins advise pregnant woman on different components of care during pregnancy (including regular ante natal check-ups, diet, taking rest, danger signs, institutional delivery and post natal care), new born care (includes breastfeeding, hand washing, keeping baby warm, immunization and danger signs) and child care 6-24 months age includes breastfeeding, feeding, prevention from illness, treatment form diarrhoea, pneumonia, immunization and hand washing.

General observation data reveals that all mitanins were supportive in nature while discussing with the target groups. They encourage questions during the conversation (97%) and appreciate conversation for positive action (94%). Around 78% mitanins repeated the messages. No significant variations between urban and rural mitanins were observed except for repeating important messages, which was 67% among urban and 80% among rural mitanins {Table 3.2.1}.

3.4.2 Antenatal Care:

Mitanins advised for all major components of care including regular ANC check-ups (100%), diet (97%), rest (97%) institutional delivery (97%) and danger signs (87%). All mitanins advised for regular check-up in both urban and rural areas. All mitanins serving in urban areas advised pregnant women for diet, taking rest and institutional delivery whereas slight less percentage of rural mitanins advised for the same. Pregnant women were advised for danger signs by mitanins of urban (83%) and rural (87%) {Table 3.1.2}.

3.4.3 New born Care:

New born have many needs and may face health problems if care is not given. Mitanins works as a change agents in the community to ensure care to the new born. They advise mothers on various components of care. Data indicates that all mitanins serving in urban areas includes messages related to breastfeeding, need of keeping new-baby warm, immunisation, danger signs and hand-washing while counselling mothers. Even though, higher percentage of mitanins of rural areas also includes messages on breastfeeding, need of keeping new-born warm, immunisation and hand-washing but it was lower than the mitanins of urban areas. Messages on danger signs were provided by 77% of rural mitanins {Table 3.1.3}.

3.4.4 Child Care (6 to 24 months):

The children of this age required care to have better growth and development. This sub group of the children are more prone to dietary imbalances and inadequacies. It is of vital important to get appropriate nutrition and other care to prevent from diseases towards healthy life.

Mother having child 6 -24 months advised on breastfeeding (100%), feeding (97%), immunization (88%), hand washing (88%), and prevention from disease like diarrhoea and

pneumonia (79%) and diarrhoea treatment (58%). All mitanins advised mothers to continue breastfeeding, provide complementary feeding and immunisation in urban areas whereas slightly lower percentage of mitanins advised on the same issues in rural areas (complementary feeding 97%; immunisation 86%). In comparison to rural, mitanins serving in urban areas advised for hand-washing (urban 75%; rural 89%), diarrhoea prevention (urban 75%; rural 79%) and treatment from diseases (urban 50%; rural 59%) {Table 3.1.4}.

3.5 Skills on wrapping new born, providing kangaroo care and hand washing

Mitanins' skills were observed on techniques of wrapping new born, providing kangaroo mother care and hand washing.

3.5.1 Technique of Hand Washing:

Hand-washing is one of the best ways to protect new born/children and family from infections.

Therefore 6 steps of hand-washing were taught to mitanins as they deal with new borns and also provide counselling services to mothers. The six steps of hand washing involved – i) Rubbing palms of both hands with interlace fingers (100%); ii) Rubbing the back of both hands in same manner (100%); ii) Clean the nails and hand lines by touching of both hands-back of fingers to opposing palms with fingers interlaced (94%); iv) Rotational rubbing of right thumb clasped over the left palm and left palm over the right palm (97%); v) Clean the top of the nails of both hands (94%) and vi) Clean the wrist of both the hands (97%). No significant variations in mitanins demonstration of hand washing based on location were observed. Few mitanins missed 3rd step (Clean the nails and hand lines by touching of both hands-



Pic 6: Demonstration of Hand washing steps by Mitanin

back of fingers to opposing palms with fingers interlaced) and 5th step (Clean the top of the nails of both hands) steps in rural areas of Bilaspur and Dantewada districts {Table 3.3.1} .

3.5.2 Technique of wrapping new born:

High percentage of mitanins demonstrated correct steps of wrapping new born. Mitanins' responses according to the steps are as : i) Wash hands using 6 steps of hand washing (83%); ii) Take a clean cotton cloth to wrap the baby(100%); iii) Spread the sheet at clean place or on bed and fold one corner (100%); iv) Place the baby's head on the infolded corner so as to cover the head till the hairline on forehead (92%); v) Cover over one side of ear of the child and tuck clothe back side of the baby (86%); vi) Fold from the foot end and tuck beneath the shoulder (97%); vii) Cover over the right shoulder and tuck on back side of the baby (86%); and viii) After

completion of all steps of wrapping, check whether wrapping is done properly or not, If not then do it again (83%). In urban areas lower percentage of mitanins (33%) washed hands before starting the method of wrapping new-born {Table 3.3.2}.

3.5.3 Technique of Kangaroo Mother Care (KMC):

Kangaroo Mother Care is a method of care for preterm infants. The techniques involved in providing KMC⁸ are – i) Washing hands using 6 steps of hand washing (81%); ii) Taking clean cloth and asking mother to sit or lie down in a relax position (92%); iii) Taking off clothes from baby except cap, socks and nappy, place baby between the mother's breast in an upright position(94%); iv) Head should be turned to one side so that child can breathe properly (94%), v) Baby should be wrapped by the clean clothes (89%) and vi) After that mother and child should be wrapped by another blanket or sheet (86%). Some variations were observed among mitanins of urban and rural areas in respect to KMC skills. In urban area, lower percentage of mitanins washed hands before starting the procedure. Last step (After that mother and child should be wrapped by another blanket or sheet) was also performed by half (50%) of the mitanins in urban areas {Table 3.3.3}.

3.6 Communication:

Communication is simply an act of transferring information using various methods. Mitanins' capacity is built on interpersonal communication as she is responsible to provide counselling services to the target groups. Mitanins reported that they use interpersonal (92%) and pictorial methods (73%) of communication to counsel target groups. It is noted that majority of mitanins mentioned interpersonal communication in both urban (86%) and rural (94%) areas and followed by the pictorial materials (urban 66%; rural 75%) {Table 3.1.61}.

Around one-third of mitanins reported that they face problem while providing counselling services. The type of problems reported by them are - people do not listen to them (26%), lack of resource in the family (20%), misconception in people (18%), people have resistance to change and non-availability of services (16%), having incomplete knowledge on specific topics (12%). They undertake various activities to generate demand for services. Activities include information about government schemes (78%), building community awareness (70%), facilitating people to access services (67%) and counselling target groups (48%). In comparison to urban areas, high percentage of rural mitanins facing problems while counselling target groups {Table 3.1.62 and Table 3.1.63}.

Mitanins undertake several activities to generate demand in the community, includes information about government schemes (78%), facilitating people to access services (67%), building awareness (70%) and counselling target groups (48%). All these activities have been performed by greater proportion of mitanins in rural areas in comparison to urban areas {Table 3.1.64}.

⁸ Mitanins Training Module 15 : Mitanin ke Navjat Dekhbhal ka pustak, Chapter 2, page no 6.

3.7 Record Keeping:

Except few, almost all (98%) reported that they keep records of pregnant women and new born {Table 3.1.60}

3.8 Availability and use of toilet facility:

Around 78% mitanins have toilet facility in their home and around 4% are currently not using available toilet whereas 96% of mitanins in urban and 72% mitanins in rural areas reported toilet availability. Mitanni in Bijapur (40%) and Dantewada (38%) reported the lowest toilet availability. Mitanins in all districts except Sarguja (81%) reported universal usage of available toilets {Table 3.1.59}.

We spread messages about the use of toilet in the community. We advise them that the use of toilet will prevent them from infection..... Mitanin of Katekalyan, Dantewada.

In urban areas, people go to the community toilet, if they do not have one at their home ...Raipur Community toilet should be built in the villages also.....Mitanin of Bilaspur

3.9 Perception

3.9.1 Perception about age of marriage of girls in their catchment area:

Less than half the interviewed mitanins (45%) were of the opinion that girls are getting married by 18 years in rural areas. This figure is significantly lower in urban (24%) than rural (51%) areas. Overall the average age of marriage is 19.1 years reported by mitanins in urban (19.6 years) and rural (19 years) areas {Table 3.1.65}.

3.9.2 Perception about age of first delivery of women in their catchment area:

Mitanins reported that around 43% women become mother at the age below 20 years. The average age of first delivery of women was 21.1 years in urban which is marginally higher than rural (21.0) {Table 3.1.66}

3.9.3 Perception about place of delivery by women in their catchment area:

According to mitanins, most of the deliveries are being conducted at the health facility (95%) as compared to home (5%). Significant proportion of mitanins in Bijapur (23%) and Dantewada (17%) were of the opinion that majority of deliveries in their areas were taking place at home {Table 3.1.67}.

3.9.4 Perception about children immunisation as per schedule in their districts:

Except few mitanins in Bilaspur and Dantewada districts, all perceive that children are getting immunized (99%) as per schedule in their areas {Table 3.1.68} .

3.10 Challenges

Challenges were reported by mitanins at two different levels i.e. community and service delivery while delivering services. The main challenges reported by them included poor economic conditions of people, prevalent misconceptions related to pregnancy and new born (*nazar lagna*), illiteracy or lack of information among people, non-availability of doctors /staff at primary health centres, improper behaviour of staff, inadequate clinical - testing facility at village level, poor road and transportation facilities, hilly and forest areas, poor network affects the timely accessibility of 102 vehicle to go for institutional delivery.

Social recognition, new learning, availability of drugs and incentives are the big motivators for mitanins to serve voluntary in their areas. Availability of drugs will strengthen her role in the community.....Sameer Garg , Senior Programme Coordinator, SHRC

Chapter 4: Results- Knowledge, Attitude and Practice of Nursing Staff

Nursing (ANM/SNs) professionals are the backbone of the government health delivery system in order to ensure quality maternal and child health services in general and particularly to the marginalized groups living in remote areas. These workers are less expensive to train and maintain, thus allowing a broader distribution across the population on lower cost in comparison to physicians. Evidence shows that nurses if properly trained can provide quality care on par with physicians, for many services. Overall, nurses can provide continuity of care that is so important from pregnancy to child birth and the immediate post -partum period⁹. Thus, it is essential to update knowledge and skills of nursing staff on regular intervals.

This chapter explains the socio demographic characteristics of ANM/SNs. Also present an overview on the knowledge, attitude, practices and skills of nursing staff on selected indicators of maternal and child health with focus on new born health.

4.1 Socio demographic characteristics

4.1.1 Age

The mean age of rural nursing staff was 36.8 years, which is higher than the nursing staff working in urban areas (33.2 years). More than one-fourth of respondents belonged to 41 years and above age group and 26% to 26-30 age group. Bijapur (37%) and Durg (25%) districts had the youngest respondents {Table 4.1.4}

4.1.2 Marital status

More than three –fourth of nursing staff are currently married. Districts of Bilaspur (urban), Bijapur and Dantewada had significant proportion of nursing staff that were currently unmarried {Table 4.1.4}.

4.1.3 Education

Around 92% of respondents were ANM while 8% of them were staff nurse. Slightly less than three-fourth had completed intermediate level education, 18% were graduates and 8% post graduates. Urban areas had greater proportion of graduates and post graduates as compared to rural areas {Table 4.1.4}.

4.1.4 Religion

Around two-third (65%) of nursing staff interviewed were Hindus and 35% were Christian. All nursing staff serving in urban areas covered was Hindu, while 42% of rural staff was Christians. District of Jashpur had 81% Christian respondents {Table 4.1.4}.

⁹ Wold JL, Mc Quide P, Golden C, Maslin A, Salmon M. Caring that counts: the evidence base for the effectiveness of nursing and midwifery interventions. Available from: <http://www.nursing.emory.edu/lccin/pdf/CaringThatCounts.pdf>. Accessed: June 3, 2008.

4.1.5 Caste

Overall 38% of respondents belonged to ST, 22% general caste, 21% SC and 19% OBC. Urban areas had 58% OBC nursing staff while rural areas had 45% ST respondents. There were no ST nursing staffs in urban areas while Jashpur district had 75% ST respondents {Table 4.1.4}.

4.1.6 Length of Service

Overall ANM/SNs had 10.6 years work experience. Rural nursing staff had 11.2 years work experience while urban areas the figure was 7.7 years {Table 4.1.2}.

4.2 Population covered and basic amenities at health facilities

4.2.1 Population covered

ANM/SNs reported that they are serving population 6000 and above in urban areas. In rural areas, around 42% served between 2001-4000 and 22% between 4001-6000 {Table 4.1.4}.

In urban areas, the furthest ward served by them was an average distance of 3.4 km, while in rural areas this was 10.7 km. The average distance of furthest villages was highest in Bijapur (17.2 km) and Dantewada (19.5 km) districts {Table 4.1.5}.

4.2.2 Transportation

Option of various means of transportation available with ANM was enquired. The main means of transportation reported by ANM were private vehicle (86%), bus (42%) and auto (36%). Around 65% ANM use private vehicle to reach furthest village, while 24% walked {Table 4.1.7}.

4.2.3 Accessibility of health facilities

According to ANM/SNs, health facilities i.e. primary health centres (87%), community health centres (83%) and district hospitals (70%) are easily accessible to the community {Table 4.1.6}.

4.2.4 Availability of toilet and water facility at health facility

Around 86% of ANM/SNs reported the availability of toilet at their health centre. Among those having toilet facility, 89% have water facility also. The main source of drinking water reported by them are - Bore well/ hand pump /tube well (62%) and piped (33%) {Table 4.1.9}.

4.2.5 Availability of means of communication at health facility

Only 37% health centres are equipped with communication facility and among those with available communication facility, 56% respondents reported of not functional. The fact is that only 10% of rural centres had functional communication facility which is a matter of concern {Table 4.1.10}.

4.2.6 Availability of display board at health facility

Every citizen has a right to get information about available services and the type of procedure that will be performed on him/her. Therefore, a system of display board /wall writing in health centres is adopted to inform people about the available services under different schemes to improve informed decision making while choosing for services. However, only 72% had display

board/wall on inner wall and 60% on outer wall to inform people about available services for its utilization {Table 4.1.11}.

4.2 Training Status

Thirty three per cent nursing staff reported that they have received training on Behavioural Change Communication or Counselling in last year. Rural nursing staff (37%) reported higher SBCC training than urban (17%). As high as 96% reported that they were able to use learned skills {Table 4.1.8}

4.3 Knowledge, Attitude and Practices

4.3.1 Ante Natal Care

All ANM/SNs were aware that ANC should be registered. Out of these, 69% have knowledge that a woman should register pregnancy immediately as she comes to know about the conception {Table 4.1.13}. Nursing staff reported that they are able to register all pregnant women during first trimester of pregnancy (56%), was higher in rural (58%) than urban areas (42%) {Table 4.1.14}. As high as 93% of nursing staff were of the opinion that delay in pregnancy registration by a woman may lead to serious consequence {Table 4.1.15}.

ANM/SNs (89%) were aware that a pregnant woman should have at least 4 check-ups (including registration) during ante natal period {Table 4.1.16}. When enquired further their knowledge about the essential components of ANC check- up, high proportion of staff reported about physical examination (93%), confirmation of pregnancy (89%), abdominal palpation (79%) and laboratory investigations (72%) are essential {Table 4.1.19}.

Ninety five per cent ANM/SNs confirmed that they conduct 4 antenatal check-ups visits to a pregnant woman as per schedule that included first visit within 12 weeks of pregnancy, second visit between 14 to 26 weeks, third visit between 28 to 34 weeks and fourth visit between 36 weeks up to delivery{Table 4.1.17}. They (96%) believed that a pregnant woman should be examined at least 4 times by skilled health professionals (ANM/Nurse/Doctor).

Nursing staff were aware of the important laboratory investigations i.e. haemoglobin (100%), urine for sugar (90%) and proteins (74%), that should be conducted during ANC period {Table 4.1.20}. They conduct

investigations like confirmation of pregnancy (93%), haemoglobin (89%) and urine for protein (62%) and sugar (61%) in their health centres {Table 4.1.21}. According to them, services like blood pressure (96%), weight (94%), haemoglobin (92%), and abdominal check-up (79%) are essential for every pregnant woman in

Pic 6: FGD with ANMs, District Jashpur



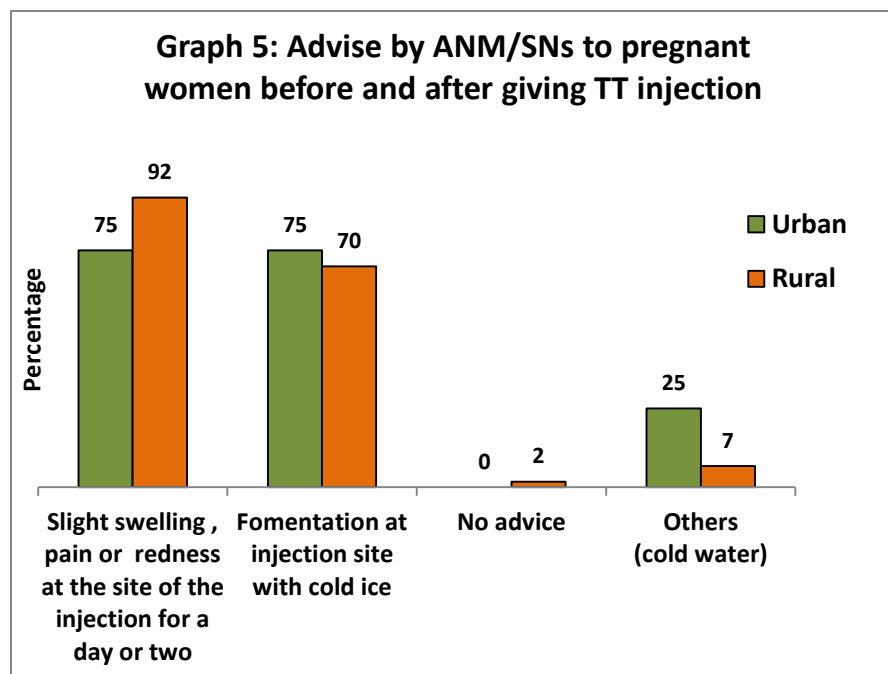
each visit of health facilities {Table 4.1.22}. They confirmed that each pregnant woman were examined for height (82%) and high blood pressure (74%), blood test (71%) weight (71%), in their health facilities while other essential tests (urine, abdominal check- up, pulse, swelling and breast examination) were reported by slightly less number of ANM/SNs. Per cent of ANC services (weight, height, high blood pressure, abdominal, breast examination) provided was reported by higher proportion of urban nursing staff as compared to rural{Table 4.1.23}.

Giving **iron and folic acid** supplements to pregnant and lactating women is a policy to prevent them from anaemia. GOI recommended one tablet (100 mg elemental iron and 0.5 mg folic acid) daily for six months from second trimester of pregnancy to be consumed by a pregnant woman during ante natal period. This regimen is to be continued for six months during post-partum. They confirmed that pregnant women are provided with IFA tablets as per protocol even they come late for check up {Table 4.1.24} with counselling includes –IFA should be consumed regularly (88%), preferably at night after meal (86%), preferably in the morning an empty stomach (75%), and not to take IFA tablet with coffee/tea and calcium tablets (57%){Table 4.1.25}. This nursing staffs (92%) believes that large number of pregnant women consuming IFA tablets given to them {Table 4.1.26}.

Considering the poor dietary **calcium** intake among pregnant and lactating women in India, calcium supplements are included in the list of drugs for free distribution to prevent hypertensive

disorders. Therefore, knowledge of ANM/SNs was enquired about the recommended doses of calcium supplements to the pregnant women. Data shows that only 17% ANM/SNs were aware with the recommended dose of calcium {Table 4.1.27} and around 71% ANM/SNs are providing calcium tablets to the pregnant women {Table 4.1.28}. ANM/SNs advice pregnant women that calcium and iron tablet should not be taken together (68%) and empty stomach (65%). The number of doses and frequency are also explained by them to the women {Table 4.1.29}.

Two doses of **TT injections** are recommended to every pregnant woman. According to the guideline, “if a pregnant woman avail first TT injection after 38 weeks of pregnancy then she should get second injection post-delivery”. Sixty per cent ANM/SNs were aware with this protocol {Table 4.1.30}. They confirmed that they have arrangements for providing TT injections to the pregnant women in their health facilities as well as during village health, nutrition and sanitation days (VHSNDs) {Table 4.1.31}.They advise pregnant women that slight swelling, pain



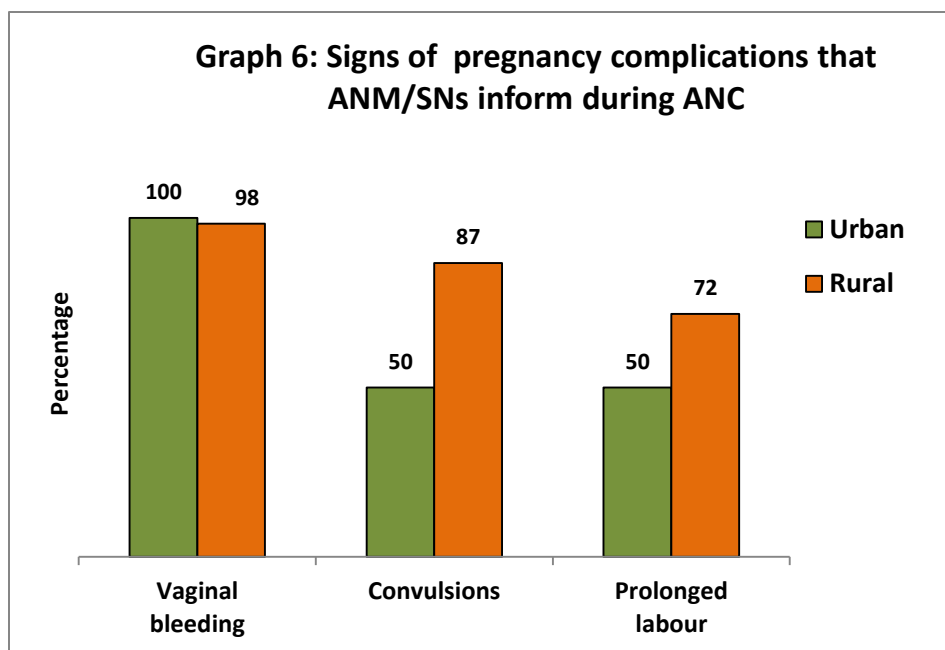
and redness may appear at the site of injections for a day or two (89%). In this condition, pregnant women should do fomentation at the site of injection with cold ice (71%) {Table 4.1.32}.

As per policy, pregnant women should be provided with **Albendazole tablet** (82%) in the second trimester of pregnancy (64%) by the ANM/SNs {Table 4.1.33 and Table 4.1. 34 }. They advise about the side effects which may appear after consuming Albendazole tablet. ANM/SNs advice pregnant women about side effects of tablet include nausea (81%) and vomiting (72%) {Table 4.1.36}. They believe that it is essential for pregnant women to consume 400 mg Albendazole tablet during her pregnancy period {Table 4.1.37}.

Untreated **Hypothyroidism** in pregnancy is associated with adverse maternal effects .It results in pre- term birth, intrauterine growth restriction, intrauterine foetal demise, respiratory distress and increased perinatal mortality. Therefore, it is essential to recognize problem at an early stage. Sixty two per cent ANM/SNs confirmed that they are able to identify pregnant women who are at risk of hypothyroidism {Table 4.1.38} and they advise for check-up (61%), regular consumption of tablet (42%) and follow up (29%) {Table 4.1.38}. ANM/SNs inform pregnant women about **danger signs** i.e. vaginal bleeding (99%), convulsions (81% and prolonged labour (68%)) that PW may experience {Table 4.1.40}. They are aware that if a PW shows symptoms like vaginal bleeding (72%), generalized swelling in the body (67%) fever (65%) and difficulty in breathing (61%) during first or second visit, then it should be managed immediately {Table 4.1.42}. They know that the conditions i.e. induced hypertension, preeclampsia, previous still birth, spontaneous abortion (74%), prolonged and obstructed labour (76%), PW should be referred to the 24 hour PHC{Table 4.1.43}. ANM/SNs was aware that abdominal check- up consisting of determination of foetal lie and presentation (92%) of PW should be done in each visit {Table 4.1. 44}.

Pregnant women are advised ANM/SNs issues including

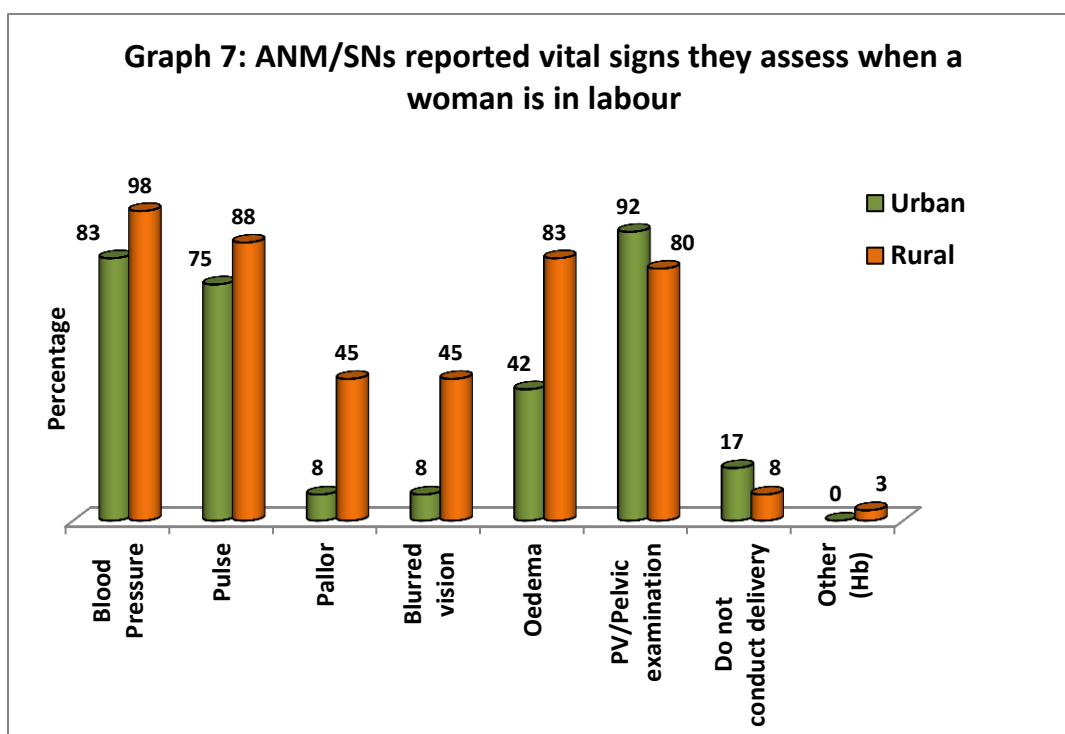
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consumption of nutritious food (96%), consumption of IFA tablet (83%) and administration of TT

injection during pregnancy {Table 4.1. 46}. According to them, if danger signs i.e. vaginal bleeding (90%), severe anaemia (82%) and continuous abdominal pain, are identified in PW then they should referred to FRU {Table 4.1. 47}. They advise PW for birth preparation with focus on institutional delivery with associated arrangements like identification of support person (83%) and transportation (81%) {Table 4.1. 49}.

4.3.2 Natal Care ANM/SNs were aware that, a woman may face problems of excessive bleeding (90%), anaemia (78%), and premature labour (69%) during delivery {Table 4.1. 50}. PW should be examined for vital signs including blood pressure (96%), pulse (86%) and pelvic examination (82%) {Table 4.1. 51}. During labour, the presence of danger signs like vaginal bleeding (87%), difficulty in breathing (75%) high fever (74%), PW are referred to FRU {Table 4.1. 52}. They were aware that women should be examined for foetal lie and presentation (83%), shape of uterus (83%), surface of the abdomen (83%) while conducting abdominal check- up of a woman in labour {Table 4.1. 53}. Only 22% of ANM/SNs have knowledge of the name of injection (Dexamethasone) which should be given to a woman as pre referral dose before refer, once they confirm the diagnosis of true pre-term labour between 24-34 weeks of pregnancy{Table 4.1.54}. Only 28% ANM/SNs confirmed that they give this injection {Table 4.1.55}.



ANM/SNs confirmed that they monitor Foetal Heart Rate (FHR) (83%), pulse (75%), and contractions (71%) in every 30 minutes of a woman, who is in labour {Table 4.1.56}. Around 51% respondents prepare partograph for all delivering women while 26% reported that they prepare for some women {Table 4.1. 57}. According to them, they start preparing Partograph at the time of active labour starts (96%) and believe that Partograph is essential to prepare of

every women (95%) who is in labour {Table 4.1. 59 and Table 4.1. 61} . Only 31% ANM/SNs give Oxytocin injection to prevent PPH in a woman and 48% were aware of Oxytocin IV Methergine injection {Table 4.1. 62 and Table 4.1.63}. Fifty four per cent ANM/SNs agreed that Uterotonics should be used in all deliveries as part of the active management of third stage of labour {Table 4.1.64}.

Women who belong to manjhi caste not coming forward for institutional deliveryANM of Mainpat in Sarguja

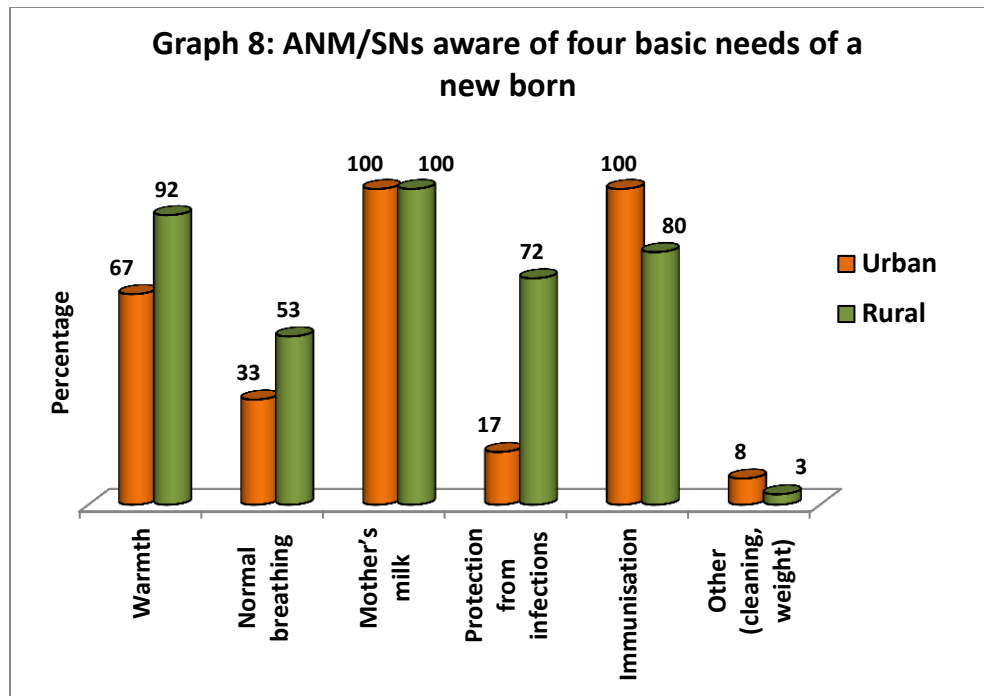
Women having institutional deliveries receive advice for early breastfeeding (97%), adequate food (93%), and maintain hygiene (85%) {Table 4.1.66}

4.3.3 Post Natal Care

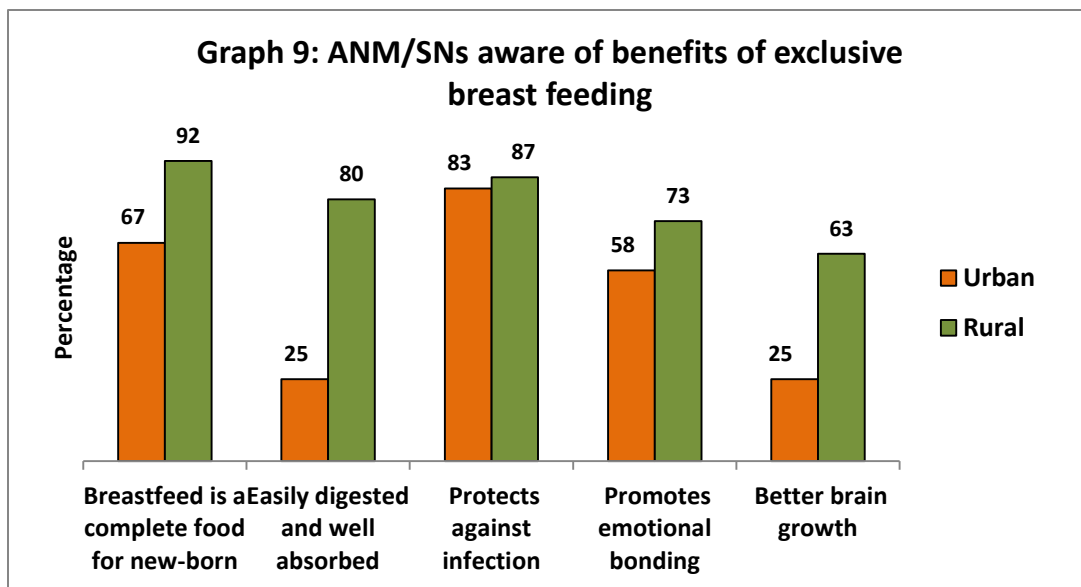
ANM/SNs check danger signs i.e. excessive bleeding (99%) and blood pressure (94%) in a woman after delivery {Table 4.1. 67}. They advise for breastfeeding (96%), post-partum care and hygiene (90%), immunization (83%) and nutrition (81%) {Table 4.1.68}. Around 53% ANM/SNs were aware that a woman should consume at least 180 IFA tablets in the post-partum period. IFA knowledge was higher in rural (53%) than in urban (50%) areas {Table 4.1. 69}. Comparatively, less number (58%) of ANM/SNs were aware with the correct dose of calcium tablet should be consumed by a woman in post –partum period. ANM/SNs were required to be updated with the correct dose of consumption of IFA tablet during pregnancy and post natal period {Table 4.1. 70}.

4.3.4 New Born Care

New born baby needs to be examined immediately after birth for recognizing the danger signs. ANM/SNs have knowledge that new born baby should be examined and referred to FRU if not sucking milk (83%), umbilical cord red and swollen or pus discharge form the cord (82%) and facing difficulty in breathing (79%) {Table 4.1.71}.They advise lactating women about breastfeeding which includes baby should be frequent breastfed (92%), breastfeeding should be immediately after birth (89%), and breastfed from both breast alternatively (89%) {Table 4.1. 73}.They also inform mothers about the benefits of breastfeeding {Table 4.1. 74}. Along with breastfeeding, they advise mother that baby should get bath after 7 days of birth (39%) {Table 4.1. 75}. ANM/SNs (75%) give Vitamin K injection to the baby in order to prevent from haemorrhage {Table 4.1. 76}. ANM/SNs were aware that if baby is breathing well then they should provide warmth to the baby (69%) and observe condition of temperature (69%), breathing (54%), and initiate breastfeeding (82%) {Table 4.1. 77}. If baby is not breathing well then they should give suction to the mouth and nose (65%) and provide warmth (58%) {Table 4.1. 78}. Ninety per cent ANM/SNs were aware of the normal heart rate of new born and 4 basic needs i.e. mother’s milk (100%), warmth (87%), immunization (83%), protection from infection (62%) and normal breathing (50%), of new born {Table 4.1. 79 and Table 4.1. 80}. They mentioned that they keep baby warm by keeping baby close to the mother (89%), and wrap baby with clean dry cloths (85%) after birth {Table 4.1. 81}.



ANM/SNs were aware that new-born should be assessed on two important parameters i.e. breathing (82%) and warmth (73%) in every 15 minutes of the birth {Table 4.1. 82}. They



provide KMC to the stable low birth weight babies (97%) {Table 4.1. 44} . They were aware of the benefits of KMC i.e. better bonding between baby and mother (78%), increase breastfeeding rates and temperature maintenance by reducing risk of hypothermia (65%), of KMC to mother and baby {Table 4.1. 87}.

They believe that if baby is not exclusively breastfed then their physical growth will be slow {Table 4.1.91}. They promote exclusive breastfeeding by advising women including messages like put baby to feed at breast as soon as possible after birth (94%), and colostrum feeding provide nutrition and also prevent infection (90%) in baby {Table 4.1.93}. They believe that messages given by them are followed by the mother (90%) {Table 4.1.94}. Weakness (93%) and inability to suck effectively (90%) by the new-born, were the main reasons of preterm LBW babies are not able to breast fed {Table 4.1.97}. They have knowledge that a low birth weight baby who are unable to take breastfeeding directly, should be fed by Orogastric tube {Table 4.1.98}. All ANM/SNs were aware that complementary feeding should be initiated by mother after completion of 6 months of age of the baby {Table 4.1.95}.

ANM/SNs (93%) were aware of the reasons i.e. prevent peri-natal transmission of Hepatitis B, for giving Hepatitis B vaccine within 24 hours of birth {Table 4.1.99}. Eighty three per cent of ANM/SNs were aware of the correct prophylactic dose (9 doses) of vitamin A that should be given to the child upto 5 years to prevent from night blindness {Table 4.1.100}. Around 89% of respondents were aware that Vitamin A and Polio doses can be given together with DPT booster dose {Table 4.1.101}. Forty nine per cent ANM/SNs discard reconstitution of BCG and measles after 2 hours {Table 4.1.102}. Ninety seven per cent ANM/SNs use injection safety box/plastic bag for disposing syringes {Table 4.1.103}. ANM/SNs prepare micro-plan keeping issues in mind like estimation of beneficiaries (93%), venue (74%), and requirement of vaccination (76%) {Table 4.1.105}. Ninety three per cent ANM/SNs informed that they were aware with the adverse effect of immunization i.e. vaccine reaction {Table 4.1.106}. Large number of ANM (97%) confirmed that they organize VHSNDs in their area and organized more than 7 VHSNDs during the last three months {Table 4.1.107 and Table 4.1.108}. Ninety six percent of respondents reported that VHSNDs is an effective platform to ensure maternal and child health services at village level {Table 4.1.110}. The main services provided by them during VHSNDs include weighing of malnourished children (85%), providing ANC (83%) and immunization services (82%) {Table 4.1.109}.

Malnutrition is a concern for the policy makers in the state. In this regards, they give messages about exclusive breastfeeding (96%), complementary feeding (91%), access to *anganwadi* service (83%) in order to prevent malnutrition among children {Table 4.1.111}. Malnourished children are being referred to Nutrition Resource Centre (81%) and district hospital (19%) after screening {Table 4.1.113}

Diarrhoea is one of the major causes of mortality among under 5 children which can be prevented. ANM/SNs were aware that a mother can prevent diarrhoea among children by washing hands after defecation (90%), washing hands with soap and water (86%) and maintain cleanliness at home (81%) {Table 4.1.114}. They advise mother to give ORS (99%) in case child is suffering from diarrhoea {Table 4.1.115}. They were aware that mother should contact ANM or skilled personnel if child is having diarrhoea from last two days (93%) {Table 4.1.117}. ANM/SNs aware with the correct dose of zinc tablets to be given to child age between 2 to 6 months (72%) and child age above 6 months (78%) {Table 4.1.118}

ANM/SNs recognize children suffering with **pneumonia** on the basis of the symptoms i.e. increased breathing (96%), chest in-drawing (85%), fever (71%) {Table 4.1.119}. They were aware of the danger signs i.e. difficulty in breathing (92%), child not able to take feed (74%) and

running nose (71%) {Table 4.1.120}. Less than two-third (63%) per cent of ANM/SNs were of the opinion that a mother should consult skilled personnel if child is showing danger signs of pneumonia for the treatment instead of giving home remedies{Table 4.1. 121}.

4.3.5 Hand washing:

Steps of hand washing were enquired from ANM/SNs and higher proportion of staff (92%) confirmed the third step i.e. washing hands with soap and plain water instead of other two steps i.e. rolling of sleeves above elbow (75%) and Remove wrist watch, bangles & rings (86%) {Table 4.1.122}. They

We advise and demonstrate them for hand washing but people do not follow in few cases as they do not have sufficient water especially in summer season.....ANMs, Geedam block, Dantewada district

(99%) were of the opinion that a child can be prevented from infection after washing hands with soap and water {Table 4.1. 123}. They advise women to wash hands after defecation (97%), before touching the baby (96%), and before cooking (90%). Knowledge of hand washing was substantially high among nursing staff however was not universal {Table 4.1. 124}.

4.4 Observation on Practices and skills of ANM/SNs

4.4.1 General observation on communication

In general, ANM/SNs greet women respectfully before they start their conversation (97%) with them and also encourage women/mother to ask questions (95%) during their conversation. But they need improvement in terms of responding to the question asked by women (87%) and listening carefully (87%). Urban (78%) ANM/SNs had shown lower response on two indicators (listening carefully and responding to the question) than ANM/SNs of rural (90%) areas {Table 4.2.1}.

4.4.2 Ante natal care

History taking of each pregnant woman is essential by nursing staff to recognize the risk at an early stage. While taking history of pregnant women during ANC, 44% of ANM/SNs enquired about the nausea, increased frequency of urine (33%), heartburn (17%) and constipation (17%) currently face by pregnant women. Higher proportion of nursing staff of urban areas asked about the symptoms mentioned above in comparison to the rural areas.

Similarly, few ANM/SNs took history of previous pregnancy and enquired about abortion (18%), complication at any stage of last pregnancy (18%), gestational age of baby at birth (13%), delivery –forceps/or caesarean (10%), etc. {Table 4.2.3}. About current pregnancy, most of the ANM/SNs asked about illness like high blood pressure (100%), while they should also enquire about the convulsion (72%), breathless on exertion (67%) and palpitation (61%) {Table 4.2.4}.

ANM/SNs was enquiring about medication taking during pregnancy was 87% and enquiring about any allergy was 56%. In comparison to urban, higher proportion of AN.SNs enquired about the medication and allergies {Table 4.2.5}

ANM/SNs are expected to explain to pregnant women about the types of examination/test she is going to conduct. According to data, ANM/SNs explained mainly about the oedema (74%),

anaemia (67%) and weight (69%). Higher proportion of ANM/SNs in urban area explained to pregnant women about various steps of physical examination in comparison to rural Nursing staff {Table 4.2.6}.

Pregnant women were observed being advised by ANM/SNs during ANC on –consume nutritious food (97%) {Table 4.2.18}, regular consumption of IFA tablets (100%) {Table 4.2.7}, consumption of 2 calcium tablets daily (87%) {Table 4.2.8}, not taking calcium and IFA together (67%) {Table 4.2.9}, importance of TT injection (92%) {Table 4.2.10}, birth preparedness and complication readiness (82%) {Table 4.2.11}, institutional delivery (95%) {Table 4.2.12}, identification of nearest health facility to approach in emergency (90%) {Table 4.2.15}, arrangement for transportation and phone number (87%) {Table 4.2.16}, arrangement for blood donor (41%) {Table 4.2.17} and rest for at least an hour in the afternoon (44%) {Table 4.2.19}, initiation of breastfeeding after delivery (87%), child should be breastfed exclusively for six months (82%) {Table 4.2.21}, consume Albendazole tablet for deworming (38%) {Table 4.2.22} and utilize benefits of government schemes-ready to eat food (79%).{Table 4.2.23}

They also informed about the danger signs –on which they are expected to approach FRU /or 24 hour PHC. The danger signs informed by them to approach FRU are –any bleeding P/V during pregnancy (89%), continues abdominal pain (87%), convulsion and loss of consciousness (54%), heavy vaginal bleeding - more than 500 ml (49%) {Table 4.2.13}. Women should approach 24 hours PHC in the condition of high fever with or without abdominal pain (85%), feels too weak to get out of bed (69%), fast and difficult breathing (69%), decreased or absent foetal movement (67%), excessive vomiting (68%) and decreased urinary output (54%) {Table 4.2.14}.

4.4.3 Care of mother after delivery and new born

ANM/SNs are expected to ask mothers about the health problems they may face after delivery. It was noted that 86% ANM/SNs asked about the heavy bleeding. Other problems like pain in lower part of abdomen (76%), white discharge (51%), burning during micturition (49%), and foul smell from vagina are enquired by less percentage of ANM/SNs {Table 4.2.25}. Mothers were counselled about the rest and its benefits during post natal period. Messages included by them were - Rest at least an hour in the afternoon (84%) and proper sleep at night is essential (78%) {Table 4.2.26}.

Mothers were counselled by the ANM/SNs to maintain hygiene practices by using clean cloth (100%), clean pad (73%), clean bedding (53%), and cleaning of genital area (44%) {Table 4.2.27}. During PNC, mothers were advice on consumption of IFA tablets (100%) {Table 4.2.29}, diet high with proteins (94%) {Table 4.2.28}, regular consumption of calcium tablets (78%) {Table 4.2.30}, initiation of breastfeeding immediately after birth (43%) {Table 4.2.32}, benefits of colostrum feeding (89%) {Table 4.2.33}, exclusively breastfeeding (95%) {Table 4.2.34}, demand based breastfeeding (78%) {Table 4.2.35}, benefits of exclusive breastfeeding by six months (95%) {Table 4.2.37}, touch new born after washing hands with soap and water (49%) {Table 4.2.38}, keep the baby warm (84%) {Table 4.2.39}, keep the nappy area clean and dry (89%) {Table 4.2.40}, new born should be breastfed at least 8-10 times in 24 hours (86%) {Table 4.2.42}, continue breastfeeding even child is suffering with diarrhoea (84%) {Table 4.2.43}, new born should not be given other liquids for food immediate after birth (51%) {Table

4.2.44}, feed baby from both breasts alternatively (78%) {Table 4.2.45}, cord care-not to put anything on the cord (89%) {Table 4.2.47}, eye care of the new born(51%) {Table 4.2.48}. Other advises were given to mother on –should take PHC in case of appearance of danger signs in child and for vaccinations {Table 4.2.50}.

4.4.4 Child care (6-24 months)

ANM/SNs advised mothers of child between 6 to 24 months on various health and nutrition issues. It is observed that 42% ANM/SNs advised mothers to start complementary feeding after completion of age of six months of child. {Table 4.2.53} Other advises given were not to reduce quantity of food even if a child is sick to prevent malnutrition(81%) {Table 4.2.56}, go for regular weight measurement with the help of AWW (92%) {Table 4.2.57} and 5 important things to remember that could prevent illness {Table 4.2.58}. ANMs examined the child for signs of anaemia (78%) {Table 4.2.59} and signs of danger like able to drink or breastfeed (56%) {Table 4.2.60}. They were advised for immunization schedule (94%) {Table 4.2.61} and adverse effect following immunization i.e. high grade fever (69%) {Table 4.2.62}.

In case of **diarrhoea management** they advised mothers to give ORS using steps like pouring all the ORS powder into a container having capacity of 1 litre (69%), washing hands with soap and water (56%), measuring 1 litre of drinking water (boiled and cooled) and pouring it into a container (44%) and stirring well until the powder is mixed thoroughly (36%) {Table 4.2.65}. Similarly, 40% nursing staff advised mother to give zinc tablet for 14 days if child is suffering with diarrhoea {Table 4.2.26}. Around 89% ANM/SNs informed about the signs i.e. difficulty in breathing as a symptom of pneumonia in comparison to other symptoms like child feeling excessively drowsy (50%) {Table 4.2.67}.

4.5 Skills on hand washing, wrapping new-born and 4 components of proper positioning required during breastfeeding

4.5.1 Four components of proper positioning and attachments required during breastfeeding

They also demonstrated to mother the four components of proper positioning required during breastfeeding which includes - the whole body of baby must be supported (84%), the head and trunk to be in one line (73%), the body of new-born to be close to the mother's body (76%) and the nose of baby to be opposite to the nipple of mother (68%). They also demonstrated four components of attachment required during breastfeeding including steps i.e. baby's mouth should be wide open (78%), lower lip should be turned outward (76%), baby's chin should be touching the breast (70%), and lower lip should be turned outward (68%) {Table 4.3.1 and Table 4.3.2}

4.5.2 Hand washing

Around 53% ANM/SNs demonstrated 6 steps of hand washing to mother. In comparison to rural (52%), slightly higher proportion of urban (57%) ANM/SNs demonstrated hand washing techniques {Table 4.3.3}

4.5.3 Wrapping new born baby

ANM/SNs demonstrated the all steps of wrapping new born (73%). Slight variation was recorded between urban and rural areas {Table 4.3.4}

4.6 Communication:

Seventy six per cent ANM/SNs confirmed that they were using interpersonal communication techniques (76%) for advising target groups i.e. pregnant and lactating women{Table 4.1. 126}. They perceived that interpersonal communication (69%) has greater impact on people in their catchment area. About 78% ANM/SNs informed that they face problems while communicating with people {Table 4.1. 127}. Problems listed by them were -hurdles created by family member (62%), people do not listen (57%) and people have lot of misconception (55%) {Table 4.1. 129}. In order to generate demand, majority of ANM/SNs confirmed that they are building awareness (85%) and informing people about the government schemes (83%) {Table 4.1.130}. Differences in communications techniques adopted by them and those having impact were reported.

4.7 Availability and use of toilet facility

Majority of ANM/SNs (99%) have toilets at their home and all available toilets were being currently used by them {Table 4.1. 125}

4.8 Perception about age of girl's marriage and age of mothers at first delivery

4.8.1 Perception about age of girl's marriage in their area

Nursing staff perceive that on an average girl in their area are getting married at the age of 19.1. No difference was observed in rural (19.1) and urban (19.0) areas. Lowest age of girl's marriage was perceived by the nursing staff of rural Bilaspur (17.6 years). On the contrary, highest age (20.5 years) of girls marriage perceived by nursing staff of Jashpur rural {Table 4.1. 131}.

4.8.2 Perception about age of first delivery of women in their area

The average age of first delivery reported by nursing staff was 21 years. No difference is perceived by nursing staff of rural and urban areas in this regard {Table 4.1. 132}

4.9 Challenges:

In general, several challenges were reported by nursing staff while providing maternal and child health services includes i) Community believes in traditional practices, ii) poor economic conditions, iii) illiteracy, iv) inadequate knowledge about the care and government schemes among people, v) migration of families for income generation activities, vi) movement of women during ANC or after delivery from in-laws/husband house to mother place, vii) naxal prone areas, viii) communication (network and transportation), ix) scarcity of water at the SHC, x) heavy work load of staff, xi) unprincipled behaviour of hospital staff, xii) inadequate human resources, xiii) supplies and xiv) infrastructure. They shared that still women and elders do not allow pregnant women to go for early registration as they believe that that if they will disclose their conception and they may experience abortion. Even mothers do not come forward to get services for new born as they believe that "*bacche ko nazar lag jayegi*". Mothers do not get

food after delivery within the same day. In most of the cases women go to their parent's house either during ante natal period or after delivery, therefore they are not able to utilize services as per protocol.

On the other hand, health facilities lacking included few skilled professionals like medical officers and supplies – medicines, testing kits, delivery kits, equipment – baby warmer, weighing machine, oxygen cylinder and basic infrastructure – building, water supply and toilet facilities which limit utilization of available services.

They also reported that it is difficult to move and meet community members at their homes in naxal prone areas.

Chapter 5: Conclusions and Discussions

Ante Natal, Natal and Post natal care requires systematic supervision to monitor the health conditions of women at different stages of child birth to avoid maternal deaths. Most of the maternal and neonatal deaths are linked with three types of delays i.e. delay in recognizing the problem, delay in reaching health facilities and delay in receiving treatment. Therefore it is essential for frontline workers to be equipped with essential components of care to prevent maternal and neonatal morbidity and mortality. This chapter reports the conclusion of the findings of rapid assessment in two sections. Section I explains the KAPS of mitanins and section II includes the KAPS of nursing staff (ANMs/Staff Nurses).

Section I: Mitanins Knowledge, Attitude, Practices and Skills

The data on socio demographic profile indicates that the average age of mitanins working in rural and urban areas was around 36 years and over 92% of them are married. Majority of mitanins belong to Hindu religion in both urban (91%) and rural (89%) areas. Around 40% of mitanins belonged to scheduled tribe category, followed by the other backward class (35%). Proportion of Scheduled tribe mitanins was much higher in rural areas (51%) than in urban (4%) areas. The average length of experience of mitanins was much higher in rural (8.9 years) in comparison to urban (3.7 years) areas. Mitanins serving in urban (130) areas were serving more number of households in comparison to rural (47) areas.

Around 83% mitanins in rural and 26% in urban areas confirmed that they have received training during the last year. All mitanins serving in urban (100%) areas confirmed that they have received training on counselling, while 87% respondents in rural areas confirmed receiving counselling training during the last three years. Training and capacity building of mitanin is a regular and important activity of State Health Resource Centre (SHRC) who build capacity on various thematic issues of health including ANC, new born care, and counselling technique, after training needs assessment. Skills given to mitanins during training are supported by supportive supervision for its effective use.

Data indicates that high percentage of mitanins have knowledge about ante natal care including period of ANC registration, number of minimum ANC check-ups a pregnant woman should have during pregnancy, correct doses of TT injections a pregnant woman should receive during pregnancy. Gaps in the knowledge of mitanins of the minimum number of ANC check-ups a pregnant woman should have during pregnancy period were recorded in (Bijapur 30%; Dantewada 8%; Sarguja 5%; and Bilaspur 1%). Almost all mitanins were aware of the need of consuming IFA tablets in both rural and urban areas. They were aware that pregnant women can prevent anaemia by consuming IFA tablets (urban 92%; rural 96%) and green leafy vegetables (urban 59%; rural 87%) during pregnancy. Mitanins were aware of the side effects like nausea and constipations of consuming IFA tablets by a pregnant woman. Mitanins give advice to women to consume IFA tablets after taking food (urban 88%; rural 92%). Mitanins reported during discussion that *“some women complain about the nausea after consuming IFA tablets therefore we advise them to have tablets after meal.”*

Majority of mitanins have knowledge that weight (urban 53%; rural 82%), high blood pressure (urban 75%; rural 83%), abdominal examination (urban 58%; rural 85%), haemoglobin (urban 76%; rural 86%), and urine test (urban 91%; rural 83%) are essential ANC services to be provided to pregnant women. However, importance of height measurement was reported by only fewer mitanins in both urban (24%) and rural (61%) areas. High percentage of mitanins advise pregnant women to consume nutritious food (urban 94%; rural 93%), and take rest (urban 86%; rural 84%) in the afternoon. In few cases, their advice is not being considered as family members or in-laws says that *“who will do household chores if she will sleep in the afternoon”*

Except a few, majority of mitanins were aware of the purpose of conducting ante natal check-ups in both urban (92%) and rural (96%) areas and they had knowledge that a pregnant woman may face various complications i.e. swelling in face and feet, convulsions, excessive bleeding, weak or no foetus movement, severe anaemia, fever, high blood pressure, and jaundice, during the pregnancy. To prevent maternal anaemia, mitanins reported that they advise to consume nutritious food and IFA tablets but few women do not adhere to the advice due to their poor economic status, side effects and misconceptions i.e. *“baby will be stout (fat) after consuming IFA tablet”*

Almost all mitanins serving in urban (100%) and rural (99%) locations reported that they should advise pregnant women to go for institutional delivery during the family visit. In rural (87%) areas, most of the mitanins advice for institutional delivery during the third trimester of pregnancy, while in urban (79%) areas they reported first trimester. According to mitanins, *even though we promote institutional delivery but few people belonging to select community like Goriya in Durg urban, do not prefer institutional delivery as they do not want to stay for 2-3 days in the hospital due to lack of time.* It was also reported by mitanins of rural areas that, in some cases, *women are not able to reach health facility for institutional delivery either due to poor network of communication or transport (vehicle 102) not able to reach on time due to delay of information, bad road condition, forest and hilly areas.*

Along with the promotion of institutional delivery, mitanins advise pregnant women for birth preparation like deciding the health facility (urban 30%; rural 74%), identification of transport (urban 63%; rural 88%), support person (urban 37%; rural 80%), arrangement for money (urban 72%; rural 82%) and others includes clean cloths (urban 58%; rural 18%).

Around 55% mitanins in rural and 78% in urban areas were aware that women should stay at least 48 hours in the hospital. While one fourth (26%) of mitanins in rural areas mentioned about that women should stay as advised by the ANM/doctors. Mitanins have correct knowledge that if a pregnant woman is not able to go to institution for delivery then they should be prepared with clean cloth, thread and blade (urban 92%; rural 96%). Few women go for all ANC check-ups but prefer to have delivery at their home due to reasons like lack of time, non-availability of staff at the health facility and their rude behaviour, and family pressure.

Maximum numbers of mitanins were aware of the various complications that a woman may face during delivery and excessive bleeding was stated by 92% mitanins in rural and 73% in urban areas. In urban areas, only 10% mitanins were aware that breach presentation is a sign of

complications. Almost all mitanins were of the view that a woman should consume solid food within 12 hours of delivery. Although mitanins are aware that a woman should get food and liquids to be consumed after delivery and they are advising also on the same to women and their family members. However, practice of not providing food is continuing in some pockets of rural and urban which needs attention.

Most of the mitanins confirmed that they make more than 6 PNC visits during 42 days after delivery of a woman in both urban (100%) and rural (86%) areas. According to mitanins, in case of excessive bleeding, convulsions and smelly discharge lactating mothers should be referred to the health facility. Excessive bleeding as a danger signs was reported by most of the mitanins in rural (93%) and urban (82%) areas.

Mitanins were well aware of the danger signs like not breastfeeding (urban 64%; rural 88%), stopped crying (urban 48%; rural 73%), feeling drowsy (urban 57%; rural 73%), fever which they observe in new borns after the birth. Mitanins advise for breastfeeding (urban 73%; rural 93%), keeping baby warm (urban 86%; rural 92%), cleanliness (urban 54%; rural 78%) and keeping baby warm (urban 86%; rural 92%). Mitanins also advise mothers to contact them in case new born is having any health problem (urban 100%; rural 99%). Mitanins reported during discussion that they take baby and mother to health facility, if mother report any health problem like excessive bleeding or child is not breastfeeding.

Mitanins believe that new born should be wrapped properly after birth (urban 100%; rural 99%) and mothers should not put anything on the cord (urban 95%; rural 90%). Around 98% of mitanins reported that they advise mothers to touch new born after washing hands with soap and water. According to them, now most of the mothers wash their hands but few mothers do not wash their hands with soap either due to lack of knowledge about its importance and non-availability of soap at home (poor economic condition). Slightly higher percentage of mitanins were aware of the kangaroo care in urban (99%) than rural (97%) areas and also of the purpose of kangaroo mother care (urban 96%; rural 97%). Four components of attachment during breastfeeding were explained by more than 65% mitanins but level of knowledge about each step differed among urban mitanins.

Almost all mitanins (urban 100%; rural 98%) except few of rural Dantewada district (12%), believe that mother should give colostrum feeding to their baby as it prevent illness among new born (urban 100%; rural 98%). According to them breastfeeding should be initiated within first hour of delivery (urban 100%; rural 98%). They were also aware of the benefits of early breastfeeding i.e. prevent illness (urban 92%; rural 94%) and new born gets energy (urban 19%; rural 76%). Almost all mitanins believe that a mother should exclusively breast feed till 6 months and after that complementary feeding should be started (urban 99%; rural 99%). *According to mitanins “we advise women that if mother go out for work they should express mother’s milk in a bowl and family members feed to the baby”.*

Malnutrition among children is a problem which generally starts after completion of 6 months of age. Mitanins recognize malnourishment among children aged between 6 months to 2 years by grading them according to the weight for age (urban 93%; rural 96%). Slightly higher percentage of mitanins serving in urban (100%) area believe that malnourished children can be cured in

comparison to mitanins serving in rural (97%) areas. In rural areas, higher percentage of mitanins advise mothers for providing malnourished children with green leafy vegetables /fruits (urban 63% ; rural 80%) and frequency of feeding (six times) in a day (urban 52% ; rural 78%).

Vaccination of children is critical in preventing children from diseases. All mitanins believe that child should be vaccinated. When enquired about the name of the vaccines a child should get, maximum mitanins serving in rural areas named BCG vaccine (95%) while in urban areas, 100% mentioned measles vaccine. Hepatitis B at birth is recalled by less number of mitanins in both urban (34%) and rural (55%) areas. A higher percentage of urban mitanins reported correct age of measles and vitamin A vaccine as 9 months and between 9-12 months than mitanins operating in rural areas. Almost all mitanins confirmed during discussion that they promote child vaccination and advise mothers to immunise their child as per schedule.

When enquired about precautions a mother should take to prevent child from diarrhoea, 87% mitanins reported using safe water in rural areas and cleanliness (80%) in urban areas. In both urban (98%) and rural (99%) areas, mitanins advice mothers to use boiled water for drinking in case she feels that safe drinking water is not available. Higher percentage of mitanins of rural (99%) areas were aware that ORS should be given to the child if suffering with diarrhoea as compared to urban (86%) areas. All mitanins responded that breastfeeding should be continued even if child is suffering with diarrhoea. Mitanins serving in rural areas have higher knowledge than the mitanins of urban areas, that child should be referred to the health facility if they are observed with diarrhoea along with vomiting (urban 33%; rural 76%) and child not able to feed (urban 32% ; rural 74%).

Pneumonia is an infection of the lungs which can be caused by many different organisms. Mitanins knowledge was assessed about the symptoms, as she is the first contact person at the community, who can early identify the symptoms and timely refer for the treatment. Mitanins in rural areas have the knowledge of mainly three symptoms i.e. difficulty in breathing (86%), chest in drawing (83%) and fever with cold and cough (79%) while in urban areas 84% mitanins are aware of the symptom of chest in drawing. They also informed that cotrimoxazole tablets are given by them if child is suffering with pneumonia in both urban and rural areas.

Mitanins recognize symptoms of worm infestation among children on the basis seeing worms in stool (88%) in rural areas and white spots on face (71%) in urban areas. Mitanins of both urban (98%) and rural 96%) areas confirmed that they provide Albendazole tablet if child is suffering with worms.

Mitanins advice mothers for hand washing in both rural and urban areas. According to them, hands should be washed with soap and water at different occasion's i.e. before cooking (urban 95%; rural 95%), before feeding (90%; rural 91%), after defecation (urban 89%; rural 95%), and cleaning child faces (urban 17%; rural 73%). Mitanins informed that they promote and motivate mothers to wash their hands using 6 steps to be free from diseases. We demonstrate steps of hand washing to be performed at different occasions. Mitanins reported that in few areas, *“women wash hands with mud or plain water as they do not have soap even we counsel them regularly”*.

Around 72% mitanins in rural areas and 96% in urban areas have toilet at their home. Among mitanins having toilets, 94% mitanins in rural areas are using the available toilets. Mitanins confirmed during discussion that they advise people to use available toilet to “prevent infections and keep environment clean”. Some people having toilet but are not using it as they believe that “their septic tank would fill”.

Almost all mitanins reported that they are keeping records of mother and new born.

In regards to communication, mitanins are using interpersonal communication (urban 86%; rural 94%) and pictorial (urban 66%; rural 75%) methods in both urban and rural areas. Less than half (41%) mitanins in rural areas and few in urban (7%) areas reported that they face problem while communicating with the target groups. The communication problems reported by them in rural areas are- people do not listen to them (32%) and lack of resources/poverty (26%). During discussion mitanins reported that they need knowledge on post natal care, delivery, new born, family planning, adolescent health along with IEC materials to bring awareness in the community. According to them they undertake awareness activities (80%) to increase utilization of services in rural areas while mitanins of urban areas reported that they inform target group about the government schemes (76%). Mitanins informed that they should be equipped with technical knowledge (issues of delivery, new born), skills (like taking blood pressure), medicines (like ointment) and equipment (weighing machine) to increase demand of their services.

Observation on Practices and Skills

Mitanins practices and skills were observed on certain issues like their behaviour towards the target groups, messages being given on antenatal care, new born care and care of children 6 to 24 months.

Data reveals that all mitanins were supportive in nature while counselling women in both urban and rural areas. Less percentage of mitanins serving in rural areas performed defined necessary actions in comparison to urban areas of mitanins. These actions are - appreciation of women during conversation for positive action (urban 100%; rural 93%), asking question during the conversation (urban 100%; rural 97%), repeated important messages (urban 67%; rural 80%).

Significantly high percentage of mitanins advised pregnant women for regular ante natal check-up, diet, taking rest, danger signs, institutional delivery and post natal care. Similarly, mitanins advised mothers of new born on breastfeeding, hand-washing, keep new born warm, immunization and danger signs. Mitanins also providing advice to the mother having child between age of 6 to 24 months on issues like continued breastfeeding, complementary feeding, disease prevention, treatment for diseases like diarrhoea and pneumonia, immunization and hand-washing.

Skills of mitanins were observed on three issues i.e. wrapping baby, kangaroo care and hand washing. It was observed that mitanins serving in urban areas could demonstrate most of the steps of wrapping baby and six steps of hand washing in comparison to mitanins of rural areas.

In case of providing kangaroo care, mitanins of rural areas demonstrated better skills in comparison to urban areas.

Section II - Nursing Staff (ANM/SNs) Knowledge, Attitude, Practices and Skills

Socio demographic data indicates that the average age of ANM/SNs serving in rural (36.8 years) areas was more than urban (33.2 years) communities. Proportion of ANM/SNs currently married (urban 75%; rural 78%) recorded high in rural areas. In urban area, ANM/SNs covered under study are Hindus (100%). Forty five percent ANM/SNs belong to scheduled tribe category in rural areas while 53% belongs to the OBC group in urban areas. The average work experience of ANM/SNs was considerably higher in rural (11.2 years) than urban (7.7 years) areas. All urban ANM/SNs reported that they are serving more than 6000 population while 42% rural mitanins covered population between 2001-4000. On average ANM/SNs covered 10.7 km distance in rural areas which is higher than urban areas (mean 3.4). They perceived that Primary Health Centre (urban 100%; rural 85%), Community Health Centre (urban 100%; rural 80%) and District Hospital (urban 100%; rural 65%) are easily accessible by the community. ANMs mainly use private vehicle to reach farthest village/ward in both urban (100%) and rural (83%) districts. Around 42% ANMs walk to the wards to provide services in the urban areas, which is less in rural (26%) areas.

On the job training is important for staff to ensure services in the field. Overall, less number of nursing staff reported that they had received training on BCC/ counselling (urban 17%; rural 37%). Those who received training are able to utilize their skills in both rural (95%) and urban (100%) areas.

Toilets are available in most of the health facilities in both urban (75%) and rural (88%) areas with the provision of water (urban 100%; rural 87%) In rural areas, water in the toilet is a problem in few centres (ANM of Kota block, Bilaspur). Communication facilities are available with higher percentage of ANM/SNs working in urban (50%) than rural (35%) areas. Every person has a right to get information about the available services; therefore provision of display board is essential at each health facility. It was observed that all urban health facilities have display board /posters /wall writing in the inner and outer walls while considerably fewer rural facilities have display board on inner wall (68%) and outer wall (54%).

Higher percentage of ANM/SNs in rural (72%) areas than urban (58%) areas have knowledge that pregnant women should be registered (ANC) immediately as she come to know about the pregnancy. Around 58% of ANM/SNs serving in rural areas reported that all pregnant women are getting registered during the first trimester, which is higher than urban areas (42%). Around 95% in rural and 83% in urban areas, ANM/SNs believe that delayed in ANC registration may have serious consequences. Several respondents (urban 83%; rural 90%) had correct knowledge of number of minimum (4 ANC check-ups) required by a pregnant woman. It was shared by ANM/SNs that inadequate knowledge about the services and beliefs and misconceptions prevent women to avail services at an early stage. In some cases, elder's in the family do not allow women to disclose their conception. Other reasons reported by them were- heavy work load at home, going out for income generation activity and not available at home while they visit their village.

Majority of ANM/SNs were aware of the essential components (physical examination, abdominal palpitation, laboratory investigations) of ante natal check-ups and type of laboratory investigations (haemoglobin, urine, malaria) to be conducted as a part of ANC. At the same time, high percentage of ANM/SNs reported that they conduct essential investigations like pregnancy detection (urban 92%; rural 93%), haemoglobin (urban 92%; rural 88%) in their health facilities. Other essential investigations like urine for protein (urban 67%; rural 62%), sugar (urban 83%; rural 57%) reported by comparatively less percentage of ANM/SNs. According to them, high blood pressure (urban 100%; rural 95%), abdominal check-up (urban 100%; rural 75%), haemoglobin (urban 92%; rural 92%) and weight (urban 92%; rural 95%) are essential services undertaken during each visit to pregnant women.

All ANM/SNs reported giving IFA tablets to pregnant women. They also advise about IFA consumptions to pregnant women. It is noted that less percentage of ANM/SNs reported that they are advising that IFA tablets should not be consumed with tea/coffee/milk and calcium tablets (urban 25%; rural 63%) than other messages i.e. IFA should be consumed regularly, preferably in the morning and empty stomach and after consuming meal. Only 5 % ANM/SNs in rural and 25% in urban believe that pregnant women may not be consuming IFA tablets as per guideline. Women do not consume IFA tablets because either they believe that baby become heavy (fat) or due to its side effect. Therefore it is advised by them to consume IFA tablet after meal.

Very few ANM/SNs in urban (8%) and some (18%) in rural areas have correct knowledge about the correct dose of Calcium tablets to be consumed during ANC period. Calcium tablets were provided by them in both urban (58%) and rural (73%) areas. There is a need to update nursing staff about the correct dose of calcium tablets to be distributed to a pregnant woman. ANM/SNs confirmed that they provide advice pregnant women to consume IFA and calcium tablets regularly. Knowledge of giving TT is available with most of the ANM/SNs in both urban (83%) and rural areas (97%). Respondents advise pregnant women on TT related problems like swelling/redness may appear at the site of injections (urban 75%; rural 92%). Fomentation can be done with cold ice (urban 75%; rural 70%). ANMs reported during discussions that they advise women to receive TT injection and they receive also but it is noted by them that few women do not come for further examinations after getting TT vaccine (ANMs of Sarguja).

Albendazole tablet is being provided to pregnant women by greater number of ANM/SNs serving in rural (90%) areas than urban (42%) areas. Around 67% in rural and 50 % in urban, ANM/SNs were aware that Albendazole tablet should be consumed in second trimester of pregnancy. They reported that they provide Albendazole tablet but few do not consume due to its side effects like nausea.

In comparison to urban (33%), higher percentage of ANM/SNs serving in rural (68%) reported that they are able to identify pregnant women with a risk of hypothyroidism.

In regards to complications during pregnancy, most of the ANM/SNs informed about the vaginal bleeding as one of the complications among pregnant women (urban 100%; rural 98%). In this condition they should approach health facility. The nursing staff also expected to refer pregnant women to PHC on the basis of the obstetric history. Even though most of the ANM/SNs had

knowledge about the conditions on which they should refer but this needs to be updated. Determination of foetal lie and presentation is considered essential examination (urban 100%; rural 90%) in comparison to other examinations i.e. foetal heart rate (urban 92%; rural 87%), fundal height (urban 43%; rural 80%) and inspection of scars (urban 17%; rural 30%) by ANM/SNs while conducting abdominal check-up. Quite a high percentage of ANM/SNs were aware of the ANC complications i.e. high blood pressure (100%) and swelling in urban areas (92%). The same is noted slightly less in the ANM/SNs of rural areas (high blood pressure - 77%; Swelling 92%). According to them, if they identify pregnant women with danger signs they refer them to the appropriate health facility.

Majority of ANM/SNs had advised pregnant women to consume food rich in iron, protein and calcium in both urban (100%) and rural (95%) areas. Maximum number of ANM/SNs had knowledge about the conditions (high BP, excessive vomiting, and difficult breathing), for which a pregnant women should be referred to 24 hour PHC.

Data indicates that less percentage of ANM/SNs was providing information about the early identification of the signs of labour in both urban (25%) and rural (63%) areas though they were aware with the types of complications that a woman may face during delivery. Only 42% ANM/SNs serving in urban reported obstructed labour and breach presentation as complication. Most of the ANM/SNs reported that they conduct pelvic examination (urban 92%; rural 80%) and measure high blood pressure (urban 83%; rural 98%) when woman in a labour. Pallor (urban 8%; rural 45%) and blurred vision (urban 8%; rural 45%) are assessed by less number of ANM/SNs when a woman in labour.

Women in labour are being referred to an FRU in case of complications like vaginal bleeding (urban 100%; rural 85%), high fever (urban 42%; rural 80%). In urban areas, only 17% ANM/SNs reported that they refer women to FRU if she is suffering with severe headache or blurred vision. Majority of ANM/SNs reported that they should check surface of the abdomen (urban 83%; rural 83%), shape of uterus (urban 83%; rural 83%), contractions (urban 75%; rural 62%) and foetal status (urban 100%; rural 82%) while conducting abdominal examination when women in labour. Less percentage of ANM/SNs provide pre – referral injection dose (urban 17%; rural 30%) of an injection before referring woman once they confirm the diagnosis of true pre - term labour between 24-34 weeks of pregnancy. Some ANM/SNs reported that they monitor conditions of membrane (17%) of a woman in labour in every 30 minutes in urban areas while other conditions like FHR, contractions were reported by large number of ANM/SNs. Around fifty percent (urban 58%; rural 50%) ANM/SNs reported that they prepare Partograph of every woman who delivery in their health facility with specific purpose like observes progress of labour. They start plotting on the Partograph at the time of labour starts (urban 100%; rural 100%). They believe that it is important to maintain Partograph of every woman (urban 100%; rural 94%). Less percentage of ANM/SNs mentioned that they gave oxytocin injection to prevent women from PPH at health facility (urban 25%; rural 32%).

Around 60% ANM/SNs of rural areas believe that uterotonics should be used in all deliveries as part of the active management of third stage of labour which was higher than the ANM/SNs serving in urban areas (25%).In comparison to advises like early breastfeeding, consumption of

nutritious food, less percentage of ANM/SNs advise women to consume warm (urban 25%; rural 68%) fluids after delivery.

Post natal care is important for every woman to manage timely complications. Most of the ANM/SNs look for danger signs like excessive bleeding (urban 100%; rural 98%) and blood pressure (urban 100%; rural 93%), as immediate post- delivery care among women. These women should also be checked for other symptoms like epigastria pain, increased pain in the perineum, by ANM/SNs. ANM shared that they visit women on 1st, 3rd, 7th, 21st and 42nd days of delivery to identify danger signs Less percentage of the urban ANM/SNs advised on consumption of IFA supplementation (urban 42%; rural 80%), birth registration (urban 50%; rural 80%), and nutrition (urban 58%; rural 85%) in comparison to rural areas. Large proportions of urban (50%) and rural (47%) ANM/SNs were not aware of the correct dose of IFA tablets that should be consumed by women during post natal period. Few women come forward to receive PNC services but we advise them to consume IFA and calcium tablets during post natal period even though we face shortage of supplies, as reported by ANMs.

Correct knowledge about the correct dose of calcium tablets during post natal period was absent among ANM/SNs which is a matter of concern. About danger signs like fever (urban 67%; rural 78%), not sucking well (urban 67%; rural 87%), breathing (urban 75%; rural 80%) was enquired by less percentage of ANM/SNs from mother of new born in urban than rural areas.

Almost all nursing staff gives advice on breastfeeding. It was however noted that advice like mother should breastfeed in relax manner (25%) and pre lacteal feed should not be given to baby (25%) was reported by less ANM/SNs in urban areas than rural. Initiation of breastfeeding within an hour/or immediate was mentioned by all ANM/SNs.

Around 42% in urban and 38% in rural areas, ANM/SNs advise mothers to bathe their baby after 7 days of birth. ANM/SNs reported (urban 83%; rural 73%), that they give Vitamin K injection to prevent new born from haemorrhagic disease. ANM/SNs were aware of routine care if new born is breathing well and they also have knowledge about the four basic needs of new born i.e. mother's milk, warmth, normal breathing and immunization. All urban and 82% rural, ANM/SNs have knowledge that baby should be kept warm by wrapping in dry cloth. They were also aware with two critical parameters i.e. breathing (urban 58%; rural 87%) and warmth (urban 50%; rural 78%), of new-borns that should be monitored every 15 minutes of birth.

Almost all ANM/SNs were aware of the purpose of kangaroo mother care. Benefits like reduce risk of hypothermia (urban 58%; rural 67%), increase breastfeeding (urban 25%; rural 85%), less infection (urban 25%; rural 57%) and bonding between mother and new born (urban 42%; rural 85%) were mentioned by ANM/SNs.

All ANM/SNs were aware of the age (six months) till which infants should be exclusively breastfed. They were also aware of the benefits of exclusive breastfeeding. ANM/SNs serving in rural areas are more aware of the benefits in comparison to urban ANM/SNs. All of them are aware of the time, a mother should start complementary feeding.

All ANM/SNs in urban and 92% in rural area are aware of the reasons of giving hepatitis B vaccine within 24 hours of birth of new born. Majority of ANM/SNs were aware of the correct age of giving vitamin A and measles vaccine. Majority of them were aware of the vaccine reaction (urban 75%; rural 97%) as adverse effects of vaccination.

In case the child is suffering from diarrhoea, majority of ANM/SNs advising mothers to give ORS solution (urban 92%; rural 100%) and zinc tablets (urban 83%; rural 85%). Some of respondents were not aware of recommended zinc dose giving to the children age 2-6 months (urban 33%; rural 27%) and above 6 months (urban 17%; rural 23%). Majority of ANM/SNs were aware of two symptoms of pneumonia i.e. increased breathing (urban 83%; rural 98%) and chest in drawing (urban 92%; rural 83%).

Almost all ANM/SNs were aware that hand washing with soap and water prevents infection during service delivery. They are aware of the six steps of hand washing however most of them mentioned about using plain water with soap (urban 83%; rural 93%). All most all ANM/SNs having toilets at their home and available toilets are being currently being used by them.

Mainly two methods i.e. interpersonal communication (76%) and use of print media (68%) were being used by ANM/SNs to communicate with target groups. According to them, interpersonal communication (with individual and group) making more impact in the community. Higher percentage of rural (80%) ANM/SNs are facing communication problems as compared to urban (67%) areas. ANM/SNs provided information about the government scheme (urban 92%; rural 82%) and facilitating them to avail services (urban 92%; rural 68%) to create demand in the community.

Observation on Practices and Skills

Observation data reveals that nursing staff greet women respectfully before starting their conversation. This was observed higher in urban (100%) areas than rural (97%) areas. Similarly they encourage questions during their conversation (urban 100%; rural 93%). Data indicates that slightly higher percentage of nursing staff of rural areas were listening carefully to the needs of women and responding to the questions, in comparison to the nursing staff of urban areas...

Pregnant women were asked by nursing staff about the symptoms indicating discomfort to the women while taking history. Various discomfort like nausea, heartburn, constipation and frequency of urine were discussed by nursing staff. In both urban and rural areas, more number of nursing staff enquired about nausea (urban 89%; rural 30%) and increased frequency of urine (urban 56%; rural 27%) in comparison to the other symptoms. Few nursing staff also took history of previous pregnancies from the women in both urban and rural areas. They also asked about the previous abortion (urban 56%; rural 7%), complications at any stage of pregnancy (urban 56%; rural 7%), delivery (urban 33%; rural 3%), gestational age of the baby at birth (urban 33%; rural 7%), injection received within 72 hours of birth (urban 11%; rural 3%), and surgery of reproductive tract uterine (urban 22%; rural 3%). Higher percentage of nursing staff asked about high blood pressure as a current systemic illness while taking history in comparison to other problems like diabetes, breathless on exertion, palpitation, chronic cough, and convulsions.

Around 96% rural staff asked about the medications women are currently taking which was higher than the urban areas. In both urban and rural areas, nursing staff informed women that they will be checked for anaemia (urban 89%; rural 60%), weight (urban 89%; rural 63%) and Oedema (urban 100%; rural 67%). All nursing staff advised pregnant women to consume IFA tablets. Around 90% nursing staff of rural areas advises pregnant women to consume 2 calcium tablets daily which are higher than the nursing staff of urban areas (78%). Slightly higher percentage of nursing staff of urban (78%) areas advises pregnant women that they should not consume calcium and IFA tablets together than rural areas (63%). Counselling about importance of TT injections was done by slightly less number of nursing staff in rural (90%) than urban (100%) areas.

In both urban (67%) and rural (87%) areas, nursing staff counselled pregnant women about birth preparedness and institutional delivery (urban 100%; rural 93%). They mainly inform pregnant women about the danger signs i.e. severe abdominal pain (urban 100%; rural 83%) and bleeding (urban 89%; rural 90%), in this condition they should approach to the first referral unit. Danger signs like convulsions (urban 33%; rural 60%) and severe headache (urban 33%; rural 53%) were explained by less percentage of nursing staff in both urban and rural areas. Comparatively, higher percentage of nursing staff explained about the danger signs i.e. fever with or without abdominal pain (urban 78%; rural 87%) in which pregnant women should go to the 24 hour PHC, than the other danger signs. Advice for initiation of breastfeeding was given by nursing staff just after the normal delivery (urban 89%; rural 87%) and women are advised for exclusive breastfeeding till 6 months (urban 89%; rural 80%). Fifty percent mothers in rural areas were counselled by nursing staff about the consumption of Albendazole tablet. Higher percentage of women was counselled to get benefit of supplementary nutrition from anganwadi centre in rural (87%) areas than urban (56%) areas. Around 50% of nursing staff used IEC materials i.e. MCP card mainly while discussing with pregnant women in both urban (56%) and rural (57%) areas.

ANM/SNs enquired about various health problems from the mother who had recently delivered. High percentage of ANM/SNs asked about the vaginal bleeding in rural areas (90%) while in urban (86%) areas, they ask about the abdominal pain. Mothers were also counselled by nursing staff during PNC period. Advice given by ANM/SNs on various issues includes rest at least an hour in the afternoon (urban 100%; rural 80%), proper sleep at night (urban 100%; rural 73%) and should return to normal household slowly (urban 71%; rural 53%). They advised mothers to maintain hygiene practices by using of clean clothes (urban 100%; rural 90%). Mothers were counselled to have proper diet (urban 67%; rural 97%) and drink every time she breastfeeds (urban 57%; rural 77%). ANM/SNs counselled mothers to consume calcium tablets during post natal period which was higher in urban (100%) than rural (73%) areas.

Breastfeeding is promoted by all ANM/SNs. Messages provided by them in regards to initiation of breastfeeding immediately after birth (urban 100%; rural 30%), benefits of colostrum feeding (urban 100%; rural 87%), new born should be exclusively breastfed (urban 100%; rural 93%), demand based breastfeeding of new born (urban 57%; rural 83%), benefits of exclusive breastfeeding for six months (urban 100%; rural 93%), keep baby warm (urban 100%; rural 80%), breastfed day and night at least 8-10 times in day (urban 100%; rural 83%), continue

breastfeeding even if child is suffering from diarrhoea (urban 100%; rural 80%), baby should be breastfed from both breast alternatively (urban 86%; rural 77%). Along with breastfeeding mothers were advised to ensure all vaccination on scheduled day and time (urban 86%; rural 97%).

Only 37% ANM/SNs used IEC materials while counselling mothers during post natal care in rural areas.

Mothers having children between 6 to 24 months were advised on starting complementary feeding (urban 100%; rural 28%), age appropriate complementary feeding (urban 14%; rural 52%), not to reduce quantity of food even child is sick (urban 100%; rural 76%), undertake weight measurement periodically (urban 100%; rural 90%), method of preventing illness by hand washing (urban 100%; rural 90%) and full immunization of the child (urban 100%; rural 90%).

ANM look for danger signs and anaemia (urban 100%; rural 72%) during their visit. Mothers were advised for timely vaccination (urban 100%; rural 93%) and also suggested to approach hospitals in case of adverse effects of immunization such as high grade fever (urban 100%; rural 62%) and abscess (urban 100%; rural 59%). Less percentage of ANM used MUAC tape to check malnutrition status (urban 43%; rural 34%).

Mothers are advised by ANM/SNs to prevent diarrhoea by washing hands at different occasions i.e. after defecation (urban 100%; rural 86%); after contact with child faeces (urban 86%; rural 76%), before touching and preparing food (urban 100%; rural 83%) and before feeding children (urban 100%; rural 86%).

Skills of ANM/SNs were observed on four components of proper positioning required during breastfeeding, four components of attachment required during breastfeeding, wrapping method of new born and six steps of hand washing. High proportion of nursing staff could demonstrate correctly all steps of four components of proper positioning, attachment of breastfeeding and steps of wrapping the baby. Slightly higher percentage of ANM/SNs could demonstrate correctly 6 steps of hand washing in urban (57%) than rural (52%) areas.

Chapter 6: Recommendations

This chapter offers suggestions to improve knowledge, attitude, practices and skills of FLWs on the basis of the data gathered during the rapid assessment on different thematic issues of care of women and children includes complete ante natal care, monitoring of vitals of the pregnant women during delivery, routine immunization, post natal care, identification of danger signs in new born, hand washing with soap & water and use of toilets.

Section I: Recommendations for Mitanin

Recommendation 1:

Mitanin's knowledge needs to be refreshed and updated on various components of antenatal, natal and post natal care of women together with the care of new born in both urban and rural areas. The information needs are varied in the rural and urban areas. Broadly, the following messages need to be emphasized to improve mitanin's knowledge under different categories of care:

- ♣ **Ante natal care:** use of green leafy vegetables to prevent anaemia among pregnant women; side effects of IFA tablets can be prevented by taking tablets after meal; height, weight, abdominal, blood and urine are essential examinations during ANC; swelling, convulsions, excessive bleeding, weak or no foetus movement, severe anaemia, fever, high blood pressures are signs of complications during ANC period,
- ♣ **Natal care:** knowledge about length of stay required in the health facility in case of normal delivery; excessive bleeding, prolonged labour, breach presentation, convulsions/high BP are signs of complications during labour,
- ♣ **Post natal care:** danger signs i.e. excessive bleeding, smelly discharge, and convulsions that may be faced by mothers after delivery,
- ♣ **New born care:** danger signs (not breastfeeding, feeling drowsy, fever, fast breathing, chest in-drawing); not applying anything on the cord; 4 components of attachment during breastfeeding, benefits of early breastfeeding –baby gets energy,
- ♣ **Child care:** steps to be taken when child has diarrhoea (continue breastfeeding and normal food), use of zinc tablet, stages of diarrhoea when child should be referred, symptoms of pneumonia, symptoms of worms infestation.

Recommendation 2:

Even though mitanin is promoting various issues related to maternal and child health care but they also need to give emphasis on following messages while counselling pregnant women and mothers having children: ANC care – go for regular check-up, collect and consume ready to eat food; preparation for institutional delivery – place, transportation arrangement, support person and money; Malnutrition - continue breastfeeding, start complementary feeding after the age of six months, feed child minimum six times a day, continue breastfeeding even child is sick, give green leafy vegetables and oil in food; hand washing – wash hands after cleaning child faeces.

Recommendation 3:

Based on observation, it is also recommended that mitanins should explain about danger signs to the pregnant women and mother of new born during their home visit to avoid serious complications.

Recommendation 4:

Around 9% mitanins reported that they have not received training on counselling technique. These mitanins mainly belongs to the rural areas, whereas they are responsible to counsel target groups and their family. Therefore, it is recommended to provide training on the counselling technique or refresh their knowledge of those who have received training earlier to make more impact. Around 33% mitanins (urban 7%; rural 41%) reported that they are facing problems while communicating with the target groups. Largely the problems reported by them are – people do not listen or adhere to their advice, lack of resources and poverty in their areas, and prevalent misconceptions among people.

Recommendation 5:

Mitanins expressed that they need training on technical issues i.e. new born care, adolescent health, delivery, post natal care, together with skill building (BP measurement, counselling), medicine, equipment (weighing machine) and IEC materials to increase demand in the community for services.

Recommendation 6:

Mitanins should be updated with the knowledge on the followings to support messages have been provided by ANMs through training. They can be provided materials like posters, video cassettes, and updated through use of modern technologies like WhatsApp:

- ♣ correct dose of IFA and calcium tablets to be consumed by pregnant and lactating women
- ♣ importance of consuming calcium tablets
- ♣ correct dose of Albendazole tablet to be consumed by a pregnant woman and its period
- ♣ symptoms of hypothyroidism in a pregnant women

Recommendation 7:

According to the data, around 22% mitanins don't have toilet facility at their home. These mitanins are mainly from rural areas (28%) than urban (4%) areas. Keeping in view the current scenario, these mitanins should be promoted to have toilet at their home and its use. At the same time they should be given the knowledge that by using the toilet a woman can prevent vaginal infections especially during pregnancy which may lead to the serious consequence.

Section II: Recommendations for Nursing Staff (ANMs/SNs)

Recommendation 1:

Gaps recorded in the knowledge of nursing staff in terms of ante natal, natal and post natal care along with new born care. These gaps are highlighted below which needs to be reinigorated to increase quality services by using appropriate techniques

- ♣ **Ante natal care:** ANC registration should be done as soon as woman comes to know about conception; essential examinations required during ANC (breast examination), correct dose of IFA and calcium tablets, period of pregnancy, when a pregnant women should consume Albendazole tablets, side effects of Albendazole tablets, symptoms of hypothyroidism in pregnant women, conditions based on obstetric history of previous pregnancy, a pregnant women should be referred to 24 hour PHC, essential abdominal examinations (fundal height and inspection of scars) required to monitor the progress of pregnancy, complications (visual disturbance) a pregnant woman may face, signs during pregnancy when pregnant women should be referred to FRU (severe headache with blurred vision and high fever with smelly vaginal discharge), signs during pregnancy, when a woman should be referred to 24 hour PHC (reduced urinary output and breathlessness at rest)
- ♣ **Natal care:** Complications (obstructed labour, breach presentation) during labour, women complains (severe headache, difficulty in breathing, severe abdominal pain, fever) during labour that require referral, pre referral dose of an injection before referral to a woman once they confirm the diagnosis of pre-term labour between 24-34 weeks of pregnancy, needs to monitor events every 30 minutes if women is in labour (membranes intake and colour of amniotic fluid), reasons of maintain Partograph, management of PPH, use of uterotonics at part of the active management of third stage of labour, management of fourth stage of labour (Examination of perineum and lower vagina and vulva for tears)
- ♣ **Post natal care:** Minimum number of IFA and calcium tablet should be consumed by a woman
- ♣ **New born care:** Time for first bath to be given to the baby, routine care to new born not breathing well or breathing well, basic needs of new born care (protection form infections), basic requirements to maintain asepsis in the area of new born care (elbow and foot operated taps, avoid overcrowding, plenty of disposals and adherence to good housekeeping), benefits of Kangaroo Mother Care (increase breastfeeding rates and less infection), benefits of exclusive breastfeeding (Easily digested and well absorbed, better brain growth), stages of diarrhoea (loss of water) when a mother should contact ANM, symptoms of acute respiratory infections (vomiting and inability to drink)

Recommendation 2:

In order to prevent problems among women and children and improve utilization of available services by people for maternal and child health, nursing staff are expected to counsel target groups while providing services. It is recommended that nursing staff should emphasis on the following messages to improve the quality of their services:

- ♣ **Ante natal care:** Not to take IFA tablet with coffee/tea and calcium tablets, advise on calcium tablets (One tablet should be taken with morning /or afternoon meal, Calcium tablets should not be taken with empty stomach, IFA tablets (One tablet of 400 microgram Folic Acid during first trimester, and one tablet Iron Folic acid tablet from 2nd trimester) Calcium and IFA tablets should not be taken together), pregnant women who are at risk of hypothyroidism, pregnancy complications (convulsions and prolonged labour), use of insecticide treated bed nets, signs of labour, preparation for normal and emergency birth,
- ♣ **Natal care:** Consume warm fluids and adequate sleep are essential to women who had deliver at the health facility
- ♣ **Post – natal care:** Use of IFA supplementation (1 tablet IFA tablet for 6 months) use of contraception, nutrition, minimum number of IFA tablets should be consumed by women, minimum number of calcium tablets should be consumed by women,
- ♣ **New born care:** Women should breastfed baby in a relaxed manner, Pre lacteal feed should not be given to new born, breastfeed on demand of the baby, keep baby close to mother, allow baby to feed at one breast until baby leaves the nipple on his/her own. Then feed baby on the other breast if he/she continues to be hungry, important messages (prevent form infections, prompt treatment for illness, give timely deworming tablets, give IFA tablets) to prevent child from malnutrition.

Recommendation 3:

Data on observation indicates that even though high proportion of ANM/SNs advises their target groups as per the needs on various thematic areas but gaps still observed in rural and urban areas on several issues. Thus, efforts should be made to minimize the gaps in the highlighted areas – they should inform about the essential ANC check-ups they are going to perform, consumption of 2 calcium tablets daily starting from 14 weeks of pregnancy up to six months of post- partum period, calcium and IFA supplementation should not be taken together, birth prepared ness and complications readiness during ANC, possible danger signs that needs referral to FRU and 24 hour PHC, consumption of Albendazole tablet during pregnancy, use of ready to eat food from AWC, importance of rest and its benefit during PNC, benefits of colostrum feeding, initiation of early breastfeeding, benefits of skin to skin contact, 5 things about complementary feeding.

Recommendation 4:

Around 67% nursing staff reported that they have not received training on BCC or counselling technique. It is recommended that nursing staff should get clarity on the concept of social and behaviour change communication – what is it and its importance. These staff should receive training on counselling technique as they are responsible to provide messages to the target groups to promote good health practices. Consequently women/family will be informed about healthy practices and it will prevent delays in getting care which will lead towards the improvement of maternal and child health indicators.

Recommendation 5:

Knowledge of nursing staff should be updated as per national and state guidelines on maternal and child health care. The platform of monthly meetings should be used to refresh their knowledge on specific issues.

Recommendation 6:

A monitoring team should be formed either at block/district level to monitor practices of nursing staff in relation to specific themes of maternal and child health care at particular interval. They should be provided feedback to improve practices as per needs.