INTERNSHIP TRAINING

At

National Health Mission, M.P

Title of the study: "Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, Madhya Pradesh"

Jatin Bhatt

Under the Guidance of

Dr. B.S. Singh

Post Graduate Diploma in Hospital and Health Management

2015-17

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A Report

By

Jatin Bhatt

Post Graduate Diploma in Hospital and Health Management

2015-17

International Institute of Health Management Research, New Delhi

CERTIFICATE FROM DISSERTATION ADVISORY COMMITTEE

This is to certify that **Mr. Jatin Bhatt,** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He is submitting this dissertation titled "**Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, Madhya Pradesh"** at "**National Health Mission**" in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health and Hospital Management.** This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Dr. B.S. Singh
Associate Professor
IIHMR, New Delhi

Mr. J. Vishwakarma
District Program Manager
NRHM, Anuppur, M.P.

District Programme Manager
District Health Society
District Anuppur (M.P.)

कार्यालय, मुख्य चिकित्सा एवंस्वास्थ्य अधिकारी

(जिला स्वास्थ्य समिति एन.एच.एम.,जिला–अनूपपुर (म.प्र.)

माईक्रोबायलौजी प्रथम तल 07659-222801E-Mail - dpmuanu-mp@nic.in

क्र./आर.सी.एच./एन.एच.एम./2017 अनूपपुर, दिनांक /04/2017

(Completion of Dissertation from National Health Mission, Madhya Pradesh)

The certificate is awarded to
Mr. Jatin Bhatt

Has successfully completed his project on

Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, Madhya Pradesh

From February to April, 2017

He comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning. We wish him, all the best for future endeavours.

District Program Manager
Anuppur, Madhya Pradesh

District Programme Manager
District Health Society
District - Anuppur (M.P.)

Chief Medical & Health Officer
Anuppur, Madhya Pradesh

CM&HO & Secretary
Distt. Health Society Anuppur

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Jatin Bhatt** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at **National Health Mission, M.P** from **13Feb to 15 May.**

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical. The Internship is in fulfillment of the course requirements. I wish him all success in all his future endeavors.

Dr. A.K. Agarwal
Dean, Academics and Student Affairs
IIHMR, New Delhi

Dr. Dr B.S. Singh
Associate Professor
IIHMR, New Delhi

Certificate from Dissertation Advisory Committee

This is to certify that **Jatin Bhatt,** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He/ She is submitting this dissertation titled "**Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, M.P"** at "IIHMR, New DELHI " in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health and Hospital Management.**

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Dr. A.K. Agarwal
Dean, Academics and Student Affairs
IIHMR, New Delhi

Dr. Dr B.S. Singh
Associate Professor
IIHMR, New Delhi

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **"Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, M.P"** and submitted by **Jatin Bhatt** Enrollment No. **-PG/15/019** under the supervision of **Dr. B.S. Singh** for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from **13 Feb to 15 May** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature

FEEDBACK FORM

Name of the Student: Jatin Bhatt

Summer Training Institution: National Health Mission, M.P.

Area of Summer Training: RBSK

Attendance: 100%

Objectives met: Yes

Deliverables: Yes

Strengths: Hard working, Punctual, Keen learner

Suggestions for Improvement: More Co-ordination with Stake holders.

Signature of the Officer-in-Charge (Training)

District Programme Manager
District Health Society
District - Anuppur (M.P.)

Date: 08/05/2017
Place: NRHM Office, Anuppur, M.P.

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Certificate of Approval

The following dissertation titled "**Knowledge and Awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur district, Madhya Pradesh.**" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name	Signature
Dr. S.K. Patel	
Dr. B.S. Singh	
Dr. Dharam	

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Acknowledgement

Every successful story is a result of an effective team work, a team which comprises of a good coach and good team players. Likewise this project report is no exception. This has been a meticulous effort of a group of people along with me. I want to take this opportunity to thank each and every one who has been a part of this report.

To start with, I take immense pleasure to thank **Dr. Sanjiv Kumar** (*Director-International Institute of Health Management Research-Delhi*) and **Dr. A.K. Aggarwal** (*Dean, International Institute of Health Management Research-Delhi*) for placing me in such an esteemed organization (NHM, M.P) to perform my dissertation and start my career with; and my mentor, **Dr. B.S. Singh (Associate Professor)** for his timely advice and encouragement for the successful conduction of my project.

I am highly indebted to **Dr. R.P Shrivastav** (*CMHO, NRHM, Anuppur, M.P*) and **Dr. Mohan Singh Shyam** (*RBSK Nodal Officer, NRHM, Anuppur, M.P*) for providing me with this opportunity to be a part of NRHM Anuppur, M.P.

I then take this opportunity to thank the Front line workers, i.e. ANMs of Anuppur district, for being a constant source of support and guidance during the data collection in their village.

Lastly, I thank all the employees of NRHM Anuppur for being highly co-operative and for helping me in collecting the data for this report.

Abbreviations

NHM	**National Health Mission**
AWC	**Anganwadi Centre**
AWW	**Anganwadi Worker**
AWH	**Anganwadi Helper**
NRHM	**National Rural Health Mission**
ASHA	**Accredited Social Health Activist**
DEIC	**District Early Intervention Centre**
WHO	**World Health Organization**
RBSK	**Rastriya Bal Swasthya Karyakaram**
HBNC	**Home Based New Born Care**
MHT	**Mobile Health Team**
LMICs	**Low and Middle Income Countries**
PHC	**Primary Health Centre**
CHC	**Community Health Centre**
SHC	**Sub Health Centre**
DH	**District Hospital**
FRU	**First Referral Unit**
MoHFW	**Ministry of Health and Family Welfare**
MoWCD	**Ministry of Women and Child Development**
IEC	**Information Education Communication**
ANMs	**Auxiliary Nurse Midwives**

Organisational Profile

❖ National Health Mission (NHM)

The **National Rural Health Mission** (NRHM), now under **National Health Mission** is an initiative undertaken by the government of India to address the health needs of under-served rural areas. The Union Cabinet vide its decision dated 1st May 2013 has approved the launch of National Urban Health Mission (NUHM) as a Sub-mission of an over-arching National Health Mission (NHM), with National Rural Health Mission (NRHM) being the other Sub-mission of National Health Mission.

The main programmatic components include Health system strengthening in rural and urban areas, Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A) and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable & quality healthcare services that are accountable and responsive to people's needs.

NRHM seeks to provide quality healthcare to the rural population, especially the vulnerable groups. Under the NRHM, the Empowered Action Group (EAG) States as well as North Eastern States, Jammu & Kashmir and Himachal Pradesh have been given special focus. The thrust of the mission is on establishing a fully functional, community owned, decentralized health delivery system with inter-sectoral convergence at all levels, to ensure simultaneous action on a wide range of determinants of health such as water, sanitation, education, nutrition, social and gender equality.

Vision of the NHM

"Attainment of Universal Access to Equitable, Affordable and Quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health".

Core Values

- ✓ Safeguard the health of the poor, vulnerable and disadvantaged, and move towards a right based approach to health through entitlements and service guarantees.

- ✓ Strengthen public health systems as a basis for universal access and social protection against the rising costs of health care.
- ✓ Build environment of trust between people and providers of health services.
- ✓ Empower community to become active participants in the process of attainment of highest possible levels of health.
- ✓ Institutionalize transparency and accountability in all processes and mechanisms.
- ✓ Improve efficiency to optimize use of available resources.

Goals of NHM

1. Reduce MMR to 1/1000 live births.

2. Reduce IMR to 25/1000 live births.

3. Reduce TFR to 2.1.

4. Prevention and reduction of anaemia in women aged 15–49 years.

5. Prevent and reduce mortality & morbidity from communicable, non- communicable; injuries and emerging diseases.

6. Reduce household out-of-pocket expenditure on total health care expenditure.

7. Reduce annual incidence and mortality from Tuberculosis by half.

8. Reduce prevalence of Leprosy to <1/10000 population and incidence to zero in all districts.

9. Annual Malaria Incidence to be <1/1000.

10. Less than 1 per cent microfilaria prevalence in all districts.

11. Kala-azar Elimination by 2015, <1 case per 10000 population in all blocks.

Please see below map for the states covered under NRHM:

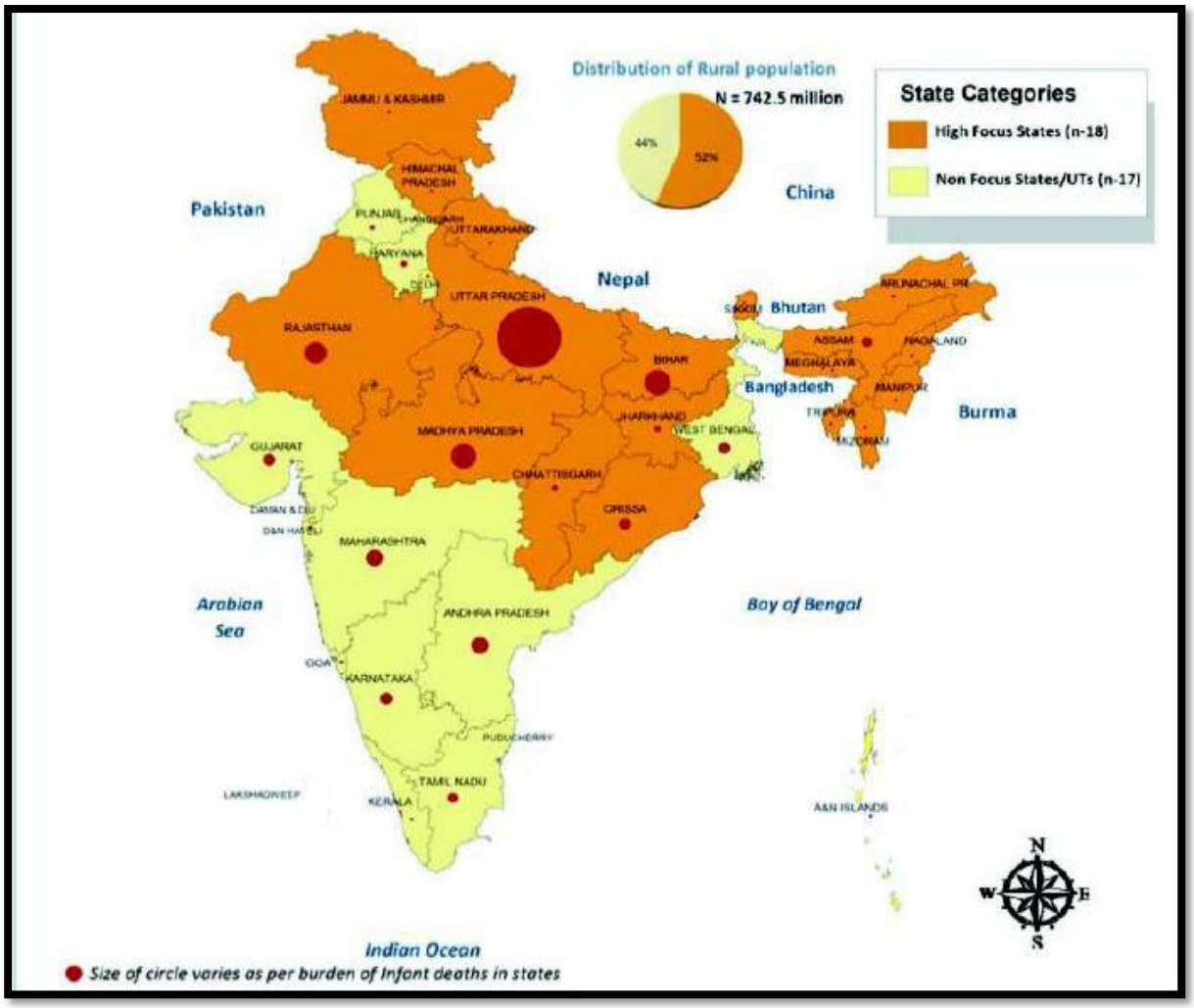

Fig 1. Under the NRHM, 18 states (8 EAG, 8 North East, Jammu & Kashmir and Himachal Pradesh) have been given special focus

National Health Programmes

➢ Janani Suraksha Yojana (JSY)

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NHM). It is being implemented with the objective of reducing maternal and infant mortality by promoting institutional delivery among pregnant women. The scheme is under implementation in all states and Union Territories (UTs), with a special focus on Low Performing States (LPS).

Janani Suraksha Yojana was launched in April 2005 by modifying the National Maternity Benefit Scheme (NMBS). The NMBS came into effect in August 1995 as one of the components of the National Social Assistance Programme (NSAP). When JSY was launched the financial assistance of Rs. 500/- , which was available uniformly throughout the country to BPL pregnant women under NMBS, was replaced by graded scale of assistance based on the categorization of States as well as whether beneficiary was from rural/urban area. States were classified into Low Performing States and High Performing States on the basis of institutional delivery rate i.e. states having institutional delivery 25% or less were termed as Low Performing States (LPS) and those which have institutional delivery rate more than 25% were classified as High Performing States (HPS).

➢ RMNCH+A Strategy

The **RMNCH+A** strategy approaches include:

- ✓ Health systems strengthening (HSS) focusing on infrastructure, human resources, supply chain management, and referral transport measures.
- ✓ Prioritization of high-impact interventions for various lifecycle stages.
- ✓ Increasing effectiveness of investments by prioritizing geographical areas based on evidence.
- ✓ Integrated monitoring and accountability through good governance, use of available data sets, community involvement, and steps to address grievance.
- ✓ Broad-based collaboration and partnerships with ministries, departments, development partners, civil society, and other stakeholders.

➢ Janani Shishu Suraksha Karyakaram (JSSK)

Government of India has launched the **Janani Shishu Suraksha Karyakaram (JSSK)** on 1st June, 2011. The scheme is to benefit pregnant women who access Government health facilities for their delivery. Moreover it will motivate those who still choose to deliver at their homes to opt for institutional deliveries. All the States and UTs have initiated implementation of the scheme. In view of the difficulty being faced by the pregnant women and parents of sick new- born along-with high out of pocket expenses incurred by them on delivery and treatment of sick- new-born, Ministry of Health and Family Welfare (MoHFW) has taken a major initiative to evolve a consensus on the part of all States to provide completely free and cashless services to pregnant women including normal deliveries and caesarean operations and sick new born (up to 30 days after birth) in Government health institutions in both rural and urban areas.

➢ Mission Indradhanush

Mission Indradhanush was launched by the Ministry of Health and Family Welfare, Government of India on December 25, 2014. Between 2009-2013 immunizations coverage has increased from 61% to 65%, indicating only 1% increase in coverage every year. To accelerate the process of immunization by covering 5% and more children every year, Indradhanush mission has been adopted to achieve target of full coverage by 2020.

The Mission Indradhanush aims to cover all those children by 2020 who are either unvaccinated, or are partially vaccinated against vaccine preventable diseases. India's Universal Immunisation Programme (UIP) provides free vaccines against 11 life threatening diseases, to 26 million children annually. The Universal Immunization Programme provides life-saving vaccines to all children across the country free of cost to protect them against Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia and Meningitis due to Haemophilus Influenza type b (Hib), Measles, Rubella, Japanese Encephalitis (JE) and Rotavirus diarrhoea. (Rubella, JE and Rotavirus vaccine in selected states and districts).

➢ Revised National Tuberculosis Control Programme

The **Revised National TB Control Programme (RNTCP)**, based on the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, was launched in 1997 expanded across the country in a phased manner with support from World Bank and other development partners. The year 2012 witnessed innumerable activities happening towards the same. Notification of TB; case based web based recording and reporting system (NIKSHAY); Standards of TB care in India; Composite indicator for monitoring programme performance; Rapid scale up of the programmatic management of drug resistant TB services are few of the worthwhile mention in this regard. The goal of TB control Programme is to decrease mortality and morbidity due to TB and cut transmission of infection until TB ceases to be a major public health problem in India.

➢ National AIDS Control Programme

The **National AIDS Control Programme (NACP)**, launched in 1992, is being implemented as a comprehensive programme for prevention and control of HIV/ AIDS in India. Over time, the focus has shifted from raising awareness to behaviour change, from a national response to a more decentralized response and to increasing involvement of NGOs and networks of People living with HIV (PLHIV).

The NACP I started in 1992 was implemented with an objective of slowing down the spread of HIV infections so as to reduce morbidity, mortality and impact of AIDS in the country.

In November 1999, the second National AIDS Control Project (NACP II) was launched to reduce the spread of HIV infection in India, and (ii) to increase India's capacity to respond to HIV/AIDS on a long-term basis.

NACP III was launched in July 2007 with the goal of Halting and Reversing the Epidemic over its five-year period.

NACP IV, launched in 2012, aims to accelerate the process of reversal and further strengthen the epidemic response in India through a cautious and well defined integration process over the next five years.

➢ National Vector Borne Disease Control Programme

The **National Vector Borne Disease Control Programme (NVBDCP)** is an umbrella programme for prevention and control of vector borne diseases viz. Malaria, Japanese Encephalitis (JE), Dengue, Chikungunya, Kalaazar and Lymphatic Filariasis.

The States are responsible for implementation of programme, whereas the Directorate of NVBDCP, Delhi provides technical assistance, policies and assistance to the States in the form of cash & commodity, as per approved pattern.

List of Vector Borne Diseases Control Programme Legislations:

1. National Anti - Malaria programme
2. Kala - Azar Control Programme
3. National Filaria Control Programme
4. Japenese Encephilitis Control Programme
5. Dengue and Dengue Hemorrhagic fever.

➢ Pulse Polio Programme

The **Pulse Polio** Initiative was started with an objective of achieving hundred per cent coverage under Oral Polio Vaccine. It aimed to immunize children through improved social mobilization, plan mop-up operations in areas where poliovirus has almost disappeared and maintain high level of morale among the public.

With the global initiative of eradication of polio in 1988 following World Health Assembly resolution in 1988, Pulse Polio Immunization programme was launched in India in 1995. Children in the age group of 0-5 years administered polio drops during National and Sub-national immunization rounds (in high risk areas) every year. Around 17.4 crore children of less than five years across the country are given polio drops as part of the drive of Government of India to sustain polio eradication from the country.

The last polio case in the country was reported from Howrah district of West Bengal with date of onset 13th January 2011. Thereafter no polio case has been reported in the country. WHO on 24th February 2012 removed India from the list of countries with active endemic wild polio virus transmission.

➢ Rashtriya Kishore Swasthya Karyakram

The **Rashtriya Kishore Swasthya Karyakram** was launched on 7th January, 2014. The key principle of this programme is adolescent participation and leadership, Equity and inclusion, Gender Equity and strategic partnerships with other sectors and stakeholders. The programme envisions enabling all adolescents in India to realize their full potential by making informed and responsible decisions related to their health and well-being and by accessing the services and support they need to do so.

To guide the implementation of this programme, MOHFW in collaboration with UNFPA has developed a National Adolescent Health Strategy. It realigns the existing clinic-based curative approach to focus on a more holistic model based on a continuum of care for adolescent health and developmental needs.

Rashtriya Bal Swasthya Karyakram (RBSK)

The Ministry of Health & Family Welfare, Government of India, under the National Health Mission launched the Rashtriya Bal Swasthya Karyakram (RBSK), an innovative and ambitious initiative, which envisages Child Health Screening and Early Intervention Services, a systemic approach of early identification and link to care, support and treatment. This programme subsumes the existing school health programme.

Child Health Screening and Early Intervention Services basically refer to early detection and management of a set of 30 health conditions prevalent in children less than 18 years of age. These conditions are broadly Defects at birth, Diseases in children, Deficiency conditions and Developmental delays including Disabilities - 4D's.

The RBSK programme corresponds to the Reproductive, Maternal, New-born, Child Health and Adolescent Health strategy (RMNCH+A), Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific, and Child Survival and Development – A Call to Action summit held in Mahabalipuram, Tamil Nadu in 2013. It aims at providing continuum of care from birth to throughout childhood period. It is a step towards 'Health for All' or 'Universal Health Care' wherein children would get free assured services under NHM. The task is gigantic but quite possible, through the systematic approach that RBSK

envisages. Implemented in right earnest, it would yield rich dividends in protecting and promoting the health of our children.

❖ State Profile

Madhya Pradesh is the 2nd largest state in the republic of India, with nearly 6% of the country's population & stands at 25th position in the level of literacy. The density of population is 196, with 22.27% of tribal population. The state is characterized by geographical, social and cultural variations. The state is among the high focus states of the country, because of poor Human development index, literacy, infrastructure facilities, availability of health manpower, and health outcomes. The majority of tribal communities continue to be vulnerable even today in comparison to the general population and this is reflected in the socio-economic realities and problems of these groups such as land alienation, indebtedness, deprivation of forest rights, which is further compounded by low literacy and high school drop-out rates and of extreme poverty.

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Health Infrastructure of Madhya Pradesh

Institute	Position as on 31/1/2015
District Hospital **Total number of beds**	51 13700
Civil Hospital **Total number of beds**	66 4467
Community Health Centre **Total number of beds**	334 10020
Primary Health Centre **Total number of beds**	1171 7026
Sub Health Centre **Total number of beds**	9192 400 (approx.)
Civil dispensary(Urban) **Urban Family welfare centre**	92 96
T.B. Hospitals **(Bhopal, Indore , Gwalior, Chaterpur, Ujjain, Sagor, Ratlam, Chindwada)**	08
Chest centre (Indore)	01

Poly clinic	06
Trauma Centre(Shivpuri, Ujjain, Shahdol, Ratlam, Guna, Seoni, Narsinghpur, Sagore)	08
Gram Arogya Kendra	50,000

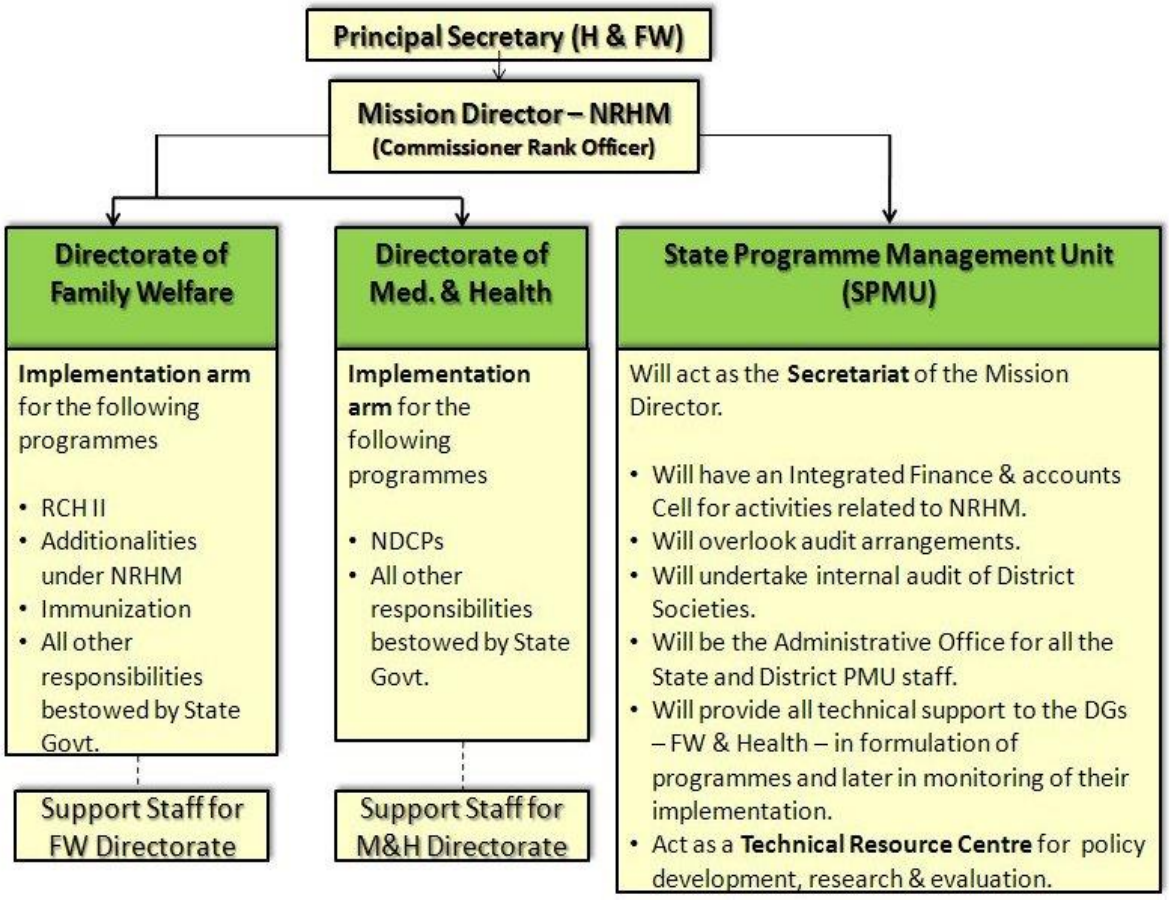


Fig 2. Organogram: State Programme Management Unit

PROJECT REPORT

Title of the study: "Knowledge and awareness level assessment of ANM at delivery point regarding RBSK and identification of congenital birth defect of Anuppur District, Madhya Pradesh"

❖ INTRODUCTION

According to March of Dimes (2006), out of every 100 babies born in this country, annually, 6 to 7 have a birth defect. This would translate to around 17 lakh birth defects, annually, in the country and accounts for 9.6% of all the new-born deaths. Various nutritional deficiencies affecting the pre-school children range from 4 per cent to 70 per cent. Developmental delays are common in early childhood affecting at least 10 per cent of the children. These delays, if not intervened timely, may lead to permanent disabilities including cognitive, hearing or vision impairment. Also, there are a group of diseases common in children viz. dental caries, rheumatic heart disease, reactive airways diseases etc. Early detection and management of diseases including, deficiencies bring added value in preventing these conditions, to progress to their more severe and debilitating form and thereby reducing hospitalization and improving implementation of Right to Education.

The Ministry of Health & Family Welfare, Government of India, under the National Health Mission launched the Rashtriya Bal Swasthya Karyakram (RBSK), an innovative and ambitious initiative, which envisages Child Health Screening and Early Intervention Services, a systemic approach of early identification and link to care, support and treatment. This programme subsumes the existing school health programme.

Child Health Screening and Early Intervention Services basically refer to early detection and management of a set of 30 health conditions prevalent in children less than 18 years of age. These conditions are broadly Defects at birth, Diseases in children, Deficiency conditions and Developmental delays including Disabilities - 4D’s.

Extending preventive and promotive health as an approach for selected health conditions along with provision of free curative management, will help the marginalized and underprivileged population by reducing their out of pocket expenditure thereby influencing public health expenditure. This, in the long run, will improve the quality of our National human resource pool.

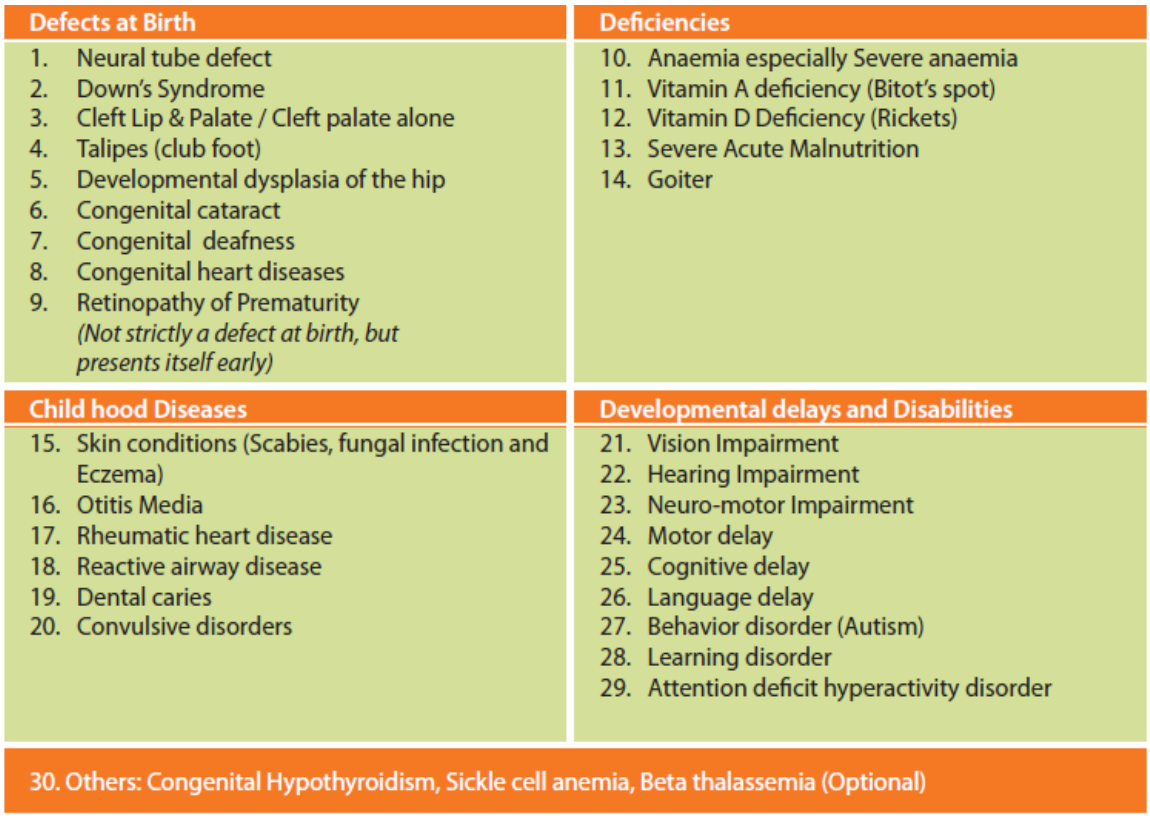


Fig 3. Selected health conditions for Child Health Screening and Early Intervention Services under RBSK

Target age group

RBSK aims to cover children from birth to 6 years of age and children from 6-18 year enrolled in classes 1st to 12th in Government and Government aided Schools. It is expected that these services will reach about 27 crore children in a phased manner. Children have been grouped into three broad categories, as different set of tools will be used for each category. Also different sets of health conditions have been accordingly prioritized.

Categories	Age Group	Service providers
Children born at delivery points in public health facilities	Birth to 48 hours	Doctors, ANMs and staff Nurses
Children born at home or those discharged from Public health facilities	From 48 hours to 6 weeks during HBNC	ASHA workers
Preschool children in rural areas and urban slum	6 weeks to 6 years	Mobile health team
School children enrolled in class 1st and 12th in Government and Government aided schools	6 years to 18 years	Mobile health team

Fig 4. Target group for Child Health Screening and Early Intervention Service under RBSK

Operational approach of RBSK

Different mechanisms have been developed to reach the target groups of children for health screening-

1. For new born:

- ✓ Facility based screening at public health facilities, by existing health manpower including
- ✓ ANMs, Staff Nurses and Medical Officers at designated delivery points.
- ✓ Community based screening at home after 48 hours of birth and till 6 weeks of age during home visitation by ASHAs, as a part of HBNC package.

2. For children 6 weeks to 6 years:

- ✓ Anganwadi Centre based screening at least twice a year by the dedicated Mobile Health Teams under RBSK.

3. For children 6 years to 18 years:

✓ Government and Government aided school based screening at least once a year by dedicated Mobile Health Teams.

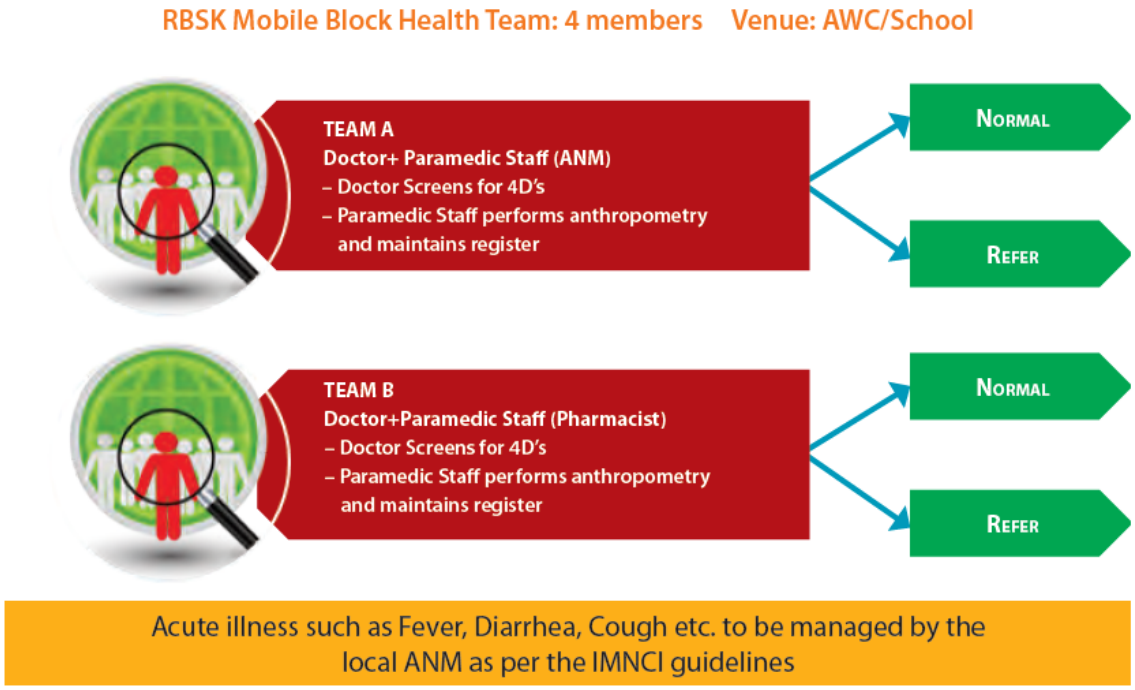


Fig 5. Programmatic operational approach of Mobile Health Team (MHT)

Mobile Health Team

The RBSK mobile health team consisting of four members will reach out to every child to facilitate primary screening from 6 weeks to 6 years at AWC and also reach out to children in the age group of 6 to 18 years in schools. The team comprises of:

S No	MEMBER	NUMBER
1	Medical Officers (Ayush) - 1 Male And 1 Female With A Bachelors Degree From An Approved Institution	2
2	ANM/Staff Nurse	1
3	Pharmacist With Proficiency In Computer For Data Management	1

Fig 6. Composition Mobile Health Team

❖ Anuppur District Profile

Anuppur District situated in the north eastern part of Madhya Pradesh. This District came into existence on 15th August 2003 by re-organising Shahdol District. Anuppur District has total area of 3701 sq. km, extends 80 km from east to west and 70 km from north to south. District anuppur is surrounded by Koria District (C.G.) in east, Shahdol & Umaria District in west, Shahdol District in North and Dindori (M.P.) Bilaspur (C.G.) in the south.

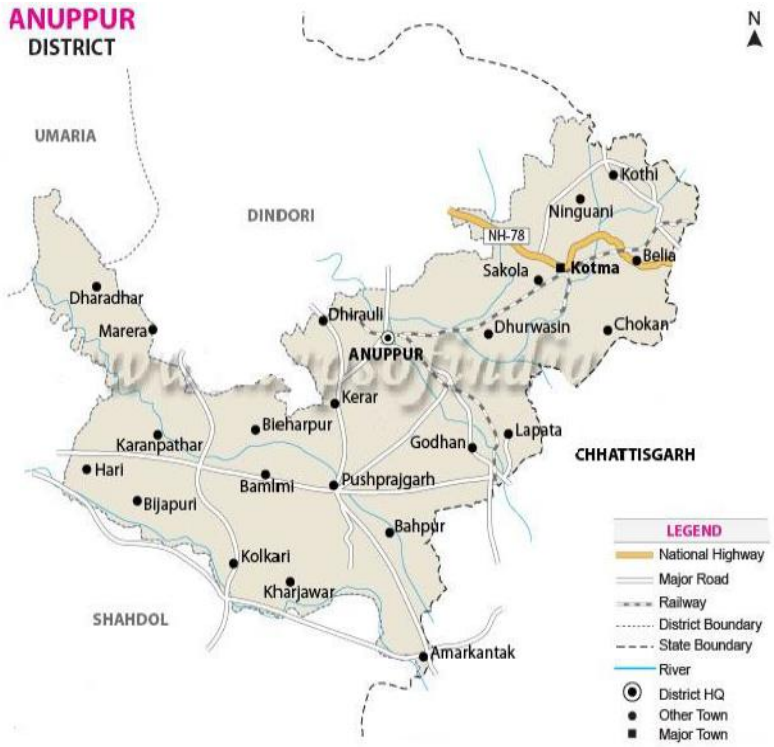


Fig 7. Anuppur District map showing different blocks of Anuppur

Public Health

Besides one District Hospital, there are 7 Community Health Centres, 17 Primary Health Centres, 12 Ayurvedic Dispensaries and 174 Sub-Health Centres working in the District. Out of these there are 41 delivery points in Anuppur district.

❖ PROBLEM STATEMENT

The leading causes of infant morbidity and mortality in poorer countries are malnutrition and infections, whereas in developed countries they are cancer, accidents and congenital malformations. Congenital anomalies account for 8–15% of perinatal deaths and 13–16% of neonatal deaths in India.

Patients with multiple congenital anomalies present a relatively infrequent but tremendously difficult challenge to the paediatrician. The proportion of perinatal deaths due to congenital malformations is increasing as a result of reduction of mortality due to other causes owing to the improvement in perinatal and neonatal care. In the coming decades, this is going to be a leading cause of morbidity and mortality in centres providing good neonatal care.

Congenital anomalies are a global health problem. Every year an estimated 7.9 million children are born with a serious birth defect, 3.3 million children (under five years) die from birth defects, and 3.2 million who survive may develop a disability later in the life. The wide range of causes of birth defects means that a portfolio of prevention approaches is needed. The prevention of these disorders is available in 60% of cases. This needs however epidemiological information.

In the low and middle income countries (LMIC), the burden of birth defects is much higher than in high-income countries. This is due to sharp differences in maternal health and other significant risk factors, including poverty, a high percentage of older mothers (in some countries), a greater frequency of consanguineous marriages etc. In LMIC, birth defects cause a tremendous drain on national resources, and urgent focus in these countries should therefore be on prevention.

In Madhya Pradesh RBSK program is running successfully with total surgery done in the year 2016 to 2017 is 16969. As Anuppur is being listed in the high priority district of Madhya Pradesh, performance in terms of screening of 0-18 years of children is comparatively low. Every year ANM are trained for screening of visual birth defect at delivery point, so that neonate could be treated as early as possible without delaying the process of referring. The RBSK services aim to cover all children of 0-6 years of age group in rural areas and urban slums, in addition to older children up to 18 years of age enrolled in classes 1st to 12th in Government and Government aided schools. It is expected that these services will reach and

benefit about 27 crore children in a phased manner in India.1 Child Health Screening and Early Intervention Services under NRHM envisage to cover 30 identified health conditions for early detection and free treatment and management.

❖ RATIONALE

A recent study shows that congenital anomalies contribute to 9% of perinatal deaths as compared to 8% a decade ago. About 2% new-born infants have major anomalies. The incidence is as high as 5% if one includes anomalies detected later in childhood such as abnormalities of heart, kidney, lungs and spine.

Congenital anomalies account for 8% to 15% of perinatal deaths and 13% to 16% of neonatal deaths in India. According to WHO Congenital anomalies are defined as structural or functional anomalies, including metabolic disorders which are present at the time of birth.2 Around 40%- 60% of congenital anomalies are of unknown aetiology. 20-25% of anomalies cause is multifactorial. 10-13% is because of environment and 12-25 % is attributed to genetic causes. Among the risk factors are advanced maternal and paternal age, consanguinity, teratogenic agents and nutritional deficiencies. Low socioeconomic status and poor antenatal care prevents early diagnosis of the malformations.

It is very important that these congenital birth defects are detected at early stage or after delivery and the neonate is being referred to appropriate hospital for treatment. In order to do that our ANM shall be trained enough to identify the congenital birth defect at delivery point and there by refer those neonates to appropriate hospital. And they can counsel neonate's parents about the treatment and make them aware about the program which will help those to avail services provided under RBSK program. Awareness of RBSK program shall be increased in order to make ANM aware about the services given under this program.

❖ REVIEW OF LITERATURE

1. A research article on "Prevalence of Congenital Anomalies in Neonates and Associated Risk Factors in a Tertiary Care Hospital in Eastern India" by Shatanik Sarkar, Chaitali

Patra, Malay Kumar Dasgupta, Kaustav Nayek, and Prasanta Ray Karmakar. Congenital anomalies are a major cause of stillbirths and neonatal mortality. The pattern and prevalence of congenital anomalies may vary over time or with geographical location. The aim of this study is to determine the proportion and types of congenital anomalies in live newborns and to study maternal and perinatal risk factors. This cross-sectional descriptive study was carried out in the neonatal care unit of R. G. Kar Medical College and Hospital during the period of September 2011 to August 2012. All the live born babies born in this hospital during this period were included. During the study period, 12,896 babies were born, of which 286 had congenital malformations, making the prevalence 2.22%. Most of the women (55.7%) belonged to the age group between 21 and 30 years. Congenital anomalies were seen more commonly (3.3%) in the multiparas in comparison with primiparas (1.8%). The predominant system involved was Musculo-skeletal system (33.2%) followed by gastro-intestinal (GI) system (15%). Talipes (17.1%) was the most common one in musculoskeletal group and likewise cleft lip and cleft palate in GI system. Congenital anomalies were more likely to be associated with low birth weight, prematurity, multiparity, consanguinity and cesarean delivery. Public awareness about preventable risk factors is to be created and early prenatal diagnosis and management of common anomalies is strongly recommended.

2. A research article “Prevalence of Congenital Anomalies: A Community-Based Study in the Northwest of Iran” by Hossein Mashhadi Abdolahi, Mohammad Hassan Kargar Maher, Farzaneh Afsharnia, and Saeed Dastgiri. Congenital anomalies are responsible for a remarkable proportion of mortality and morbidity in newborns. The aim of this study was to document the epidemiological features of congenital anomalies in rural areas, northwest of Iran. Method. The study population included live births born between 2004 and 2012 in rural areas of Tabriz district. All health records of the children under 8 years were assessed retrospectively. Of 22500 live births, 254 cases were identified with a primary diagnosis of congenital anomalies giving a prevalence rate of 112.89 per 10 000 births (95% CI: 99.08 to 126.69). Anomalies of the nervous system were the most common defects, accounting for 24% of birth defects followed by the heart diseases anomalies. The highest prevalence rate for birth defects was observed in the south-western region with 386 per 10 000 births (95% CI: 215 to 556) compared to the similar

rate in the north-western region with 15 per 10 000 births (95% CI: −14 to 45). Conclusion. The considerable geographic disparities in the prevalence of congenital anomalies in the region might be attributed to the highly polluted industrial zone in the area (including air and water pollution, etc.). This needs further etiological investigations in the region.

3. An article on “Congenital Anomalies in Low- and Middle-Income Countries: The Unborn Child of Global Surgery” published by Nicole A. Sitkin, Doruk Ozgediz, Peter Donkor, and Diana L. Farmer. Surgically correctable congenital anomalies cause a substantial burden of global morbidity and mortality. These anomalies disproportionately affect children in low- and middle-income countries (LMICs) due to sociocultural, economic, and structural factors that limit the accessibility and quality of pediatric surgery. While data from LMICs are sparse, available evidence suggests that the true human and financial cost of congenital anomalies is grossly underestimated and that pediatric surgery is a cost-effective intervention with the potential to avert significant premature mortality and lifelong disability.

4. A research article on “The burden of congenital anomalies amenable to surgeries in low-income and middle-income countries: a modeled analysis” published in The Lancet by Hideki Higashi, Jan J Barendregt, Theo Vos. An estimated 6% of global infant deaths are attributable to congenital anomalies, of which 92% occur in low-income and middle-income countries (LMICs). Some of the conditions can be treated by specialized surgical procedures that have been frequently provided through established vertical programmes. This study aims to quantify the burden of congenital anomalies in LMICs that could be averted should the surgical programmes be scaled up to 100% coverage. Of the estimated 21·4 million DALYs of the three conditions in LMICs, 12·7 million DALYs (59%) are avertable with full surgical coverage. NTDs have the largest potential, with 76% of burden avertable by surgery followed by Cleft (62%) and CHAs (52%). Sub-Saharan Africa has the largest proportion of surgically avertable burden for Cleft (72%), north Africa and the Middle East for CHAs (75%), and Asia south for NTDs (80%). Sub-Saharan Africa and south Asia have considerably lower proportions of surgically avertable burden of CHAs (7% and 33%, respectively). This may be due to the high

proportion of fatal cases coded as stillbirths and hence not captured in the burden of congenital anomalies. Therefore, the true avertable burden may be larger for CHAs.

5. A research article on "A Study of Congenital Anomalies in Newborn" by Dr. Akruti Parmar, Dr. S.P.Rathod, Dr. S. V. Patel, Dr. S.M.Patel. Total 4210 babies were studied in the neonatal period immediately after birth, which shows overall 0.88% incidence of congenital malformations. Incidence was significantly higher (6.1%) in mothers aged > 30 years as compared to younger age group. Religious pattern of mother and consanguinity of marriage had no much effect on the incidence. The incidence was marginally higher in primiparous patients (47.2%). Only in 12% of cases some etiological factors could be found, of which maternal fever in first trimester was the most common. 10 cases with CNS malformations had hydroamnious. The anomaly was detected antenatally in 49%cases with the help of USG. The ration of still birth to live birth was 4.19:1 suggesting that many of the anomalies are incompatible with life. There was no overall difference in the sex of the babies. However most of anencephalic babies were female. Preterm babies had four times more incidence of congenital malformations as compared to term babies. This represents phenomenon of nature's selection. Associated hydroamnios also accounts for preterm labour similarly congenital malformations were more commonly found in low birth weight baby. Out of all system involved in congenital mal formation, CNS was the commonest and accounted for 1/3rd of the cases.

❖ OBJECTIVES

The objectives of the study were to:

1. Assess the knowledge and awareness of ANM (Auxiliary Nurse Midwife) about RBSK program and their important features.
2. To determine the level of knowledge of ANM regarding approach used for confirming a child with birth defect at delivery point.

❖ METHODOLOGY

- ❖ Study Design: - Descriptive Cross-sectional study
- ❖ Study Period: - 1st April to 10th May
- ❖ Study area & group: The study was carried out in Anuppur district of Madhya Pradesh.
- ❖ Tools and techniques: The data was collected with the help of mixed questionnaire specifically designed to evaluate ANMs at delivery points.
- ❖ Data Collection: All 25 delivery points were visited with questionnaire presented to ANM.
- ❖ Sampling Method: There are 41 delivery points in Anuppur district. Out of which there are 7 CHCs, 15 PHCs, 18 SHCs and One DH. Convenient sampling was used in which all 7 CHCs, 50% of PHCs and SHCs of different geographic region were taken and one district hospital was used in order to conduct this study.
- ❖ Plan of data analysis: The collected data was compiled and analysed using various functions in Microsoft Office Excel software and SPSS. Bar Graph and Pie Charts were used to represent the findings of this study, as and when required.

❖ FINDINGS

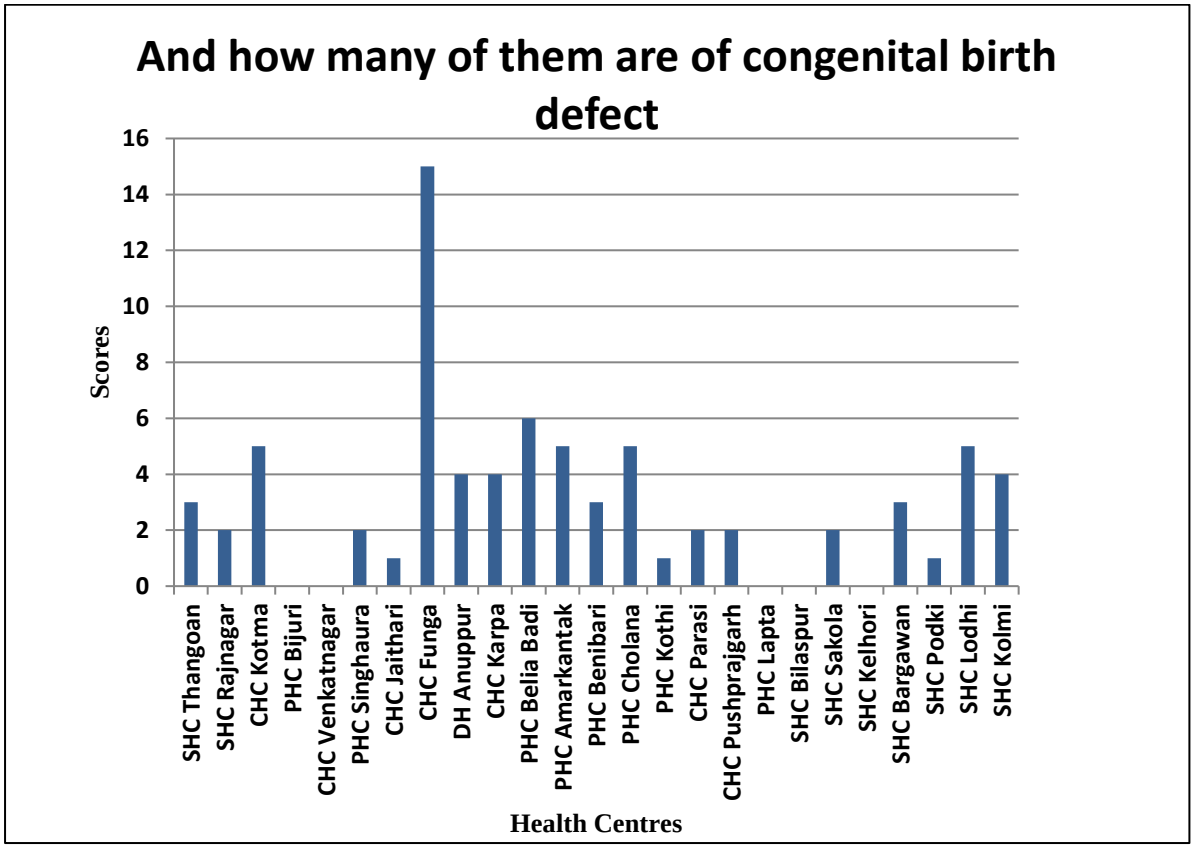
Answers of Q No.1 to Q No.4 are first scored as shown in the following table and then according to the scoring done the analysis on these questions were carried out.

Q1	**Don't Know**	**Full form of RBSK at least**	**About Screening**	**Screening and Treatment**	**Screening, referral and treatment**	**Know Detailed Information about 4D**
Score	0	1	2	3	4	5
Q2	**Don't Know**	**Know only about line listing**	**line listing and referral**	**line listing of what and refer to which health centre**	**Basic components or institution where screening is done**	**Know everything about it**
Score	0	1	2	3	4	5

Q3	Don't Know	Only for identification	Identification and treatment	Identification and treatment of what	Identification and treatment on right time	Know everything about why it is being running
Score	0	1	2	3	4	5
Q4	**Don't Know**	**Know only one disease or defect**	**know 2 disease or defect**	**know 3 disease or defect**	**know 4 disease or defect**	**Know all congenital defects listed in RBSK guideline**
Score	0	1	2	3	4	5

Q1- What do you know about RBSK?

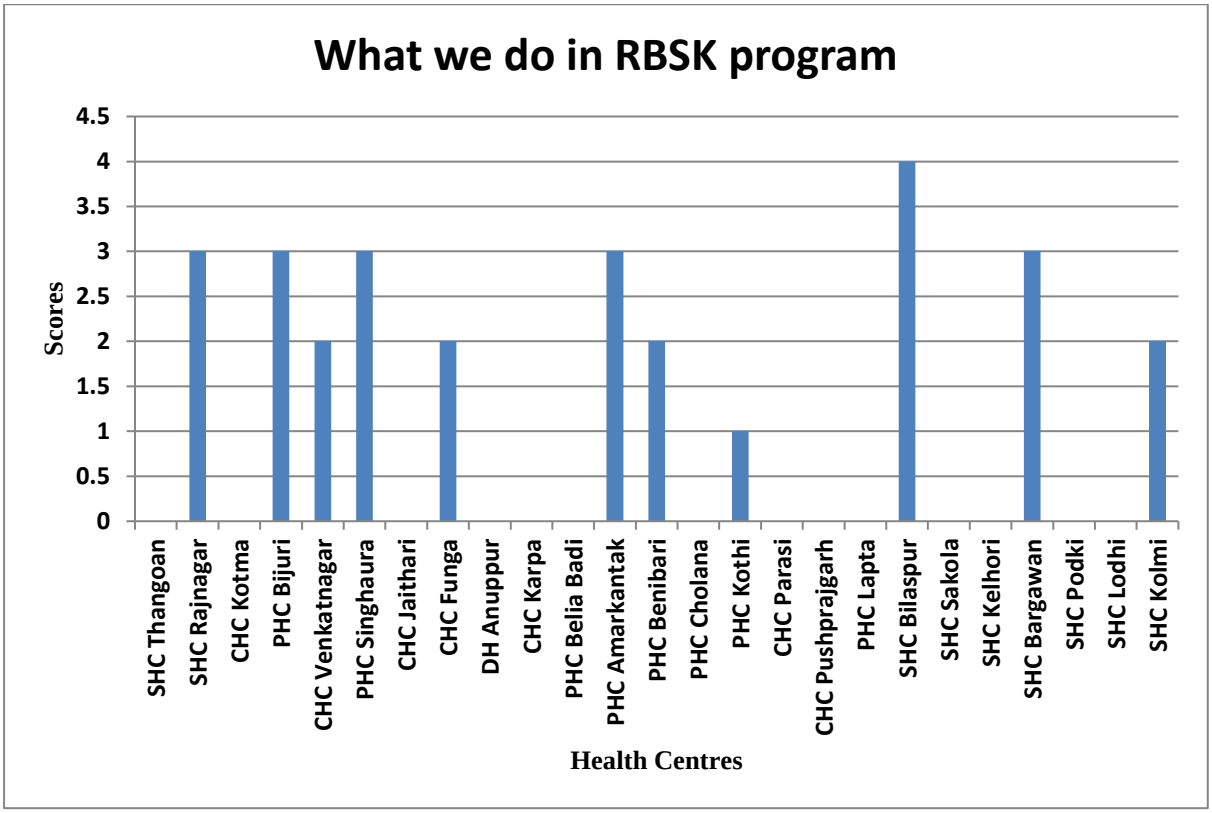
The analysis of answer for this question is shown in following graph with the names of health centres on horizontal axis and scores for their answers on vertical axis.



As per the analysis shown above about 28% (7) know RBSK program as in which screening of children is being done, 8% (2) of them know both about screening and treatment of child which is done under this program, 8% (2) know only full form of RBSK i.e., Rashtriya Bal Swasthya Karyakaram, they don't know more about this program and 56% (14) of them don't know anything about RBSK.

Q2- What we do in RBSK program?

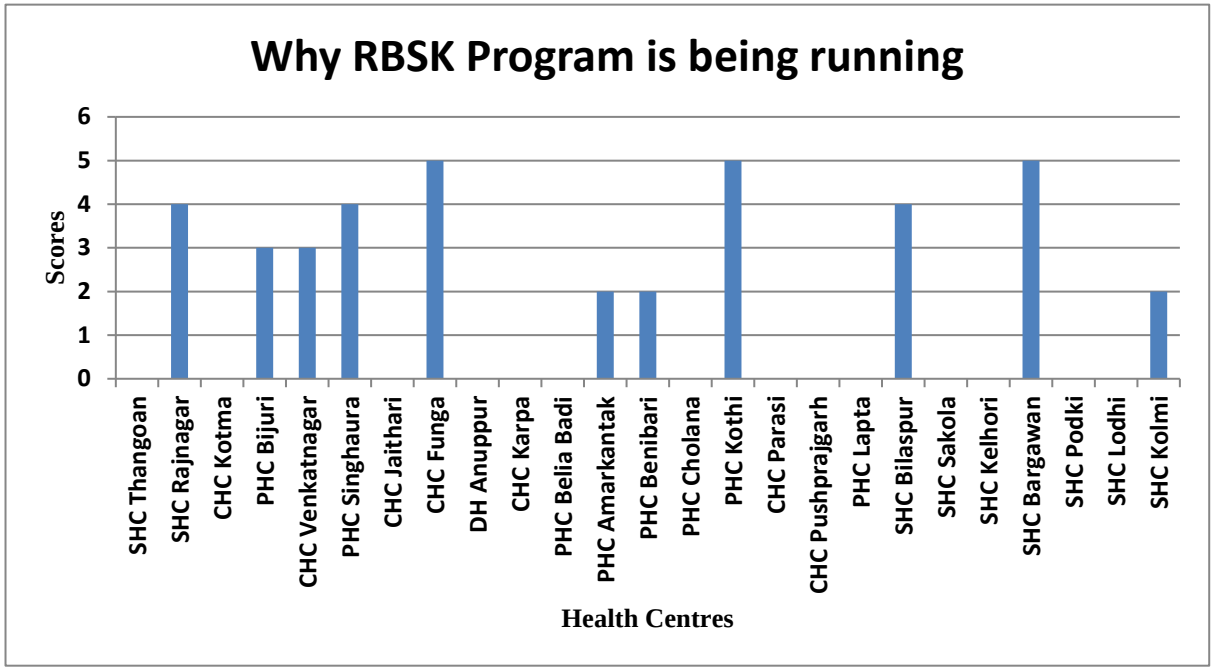
The analysis of answer for this question is shown in following graph with the names of health centres on horizontal axis and scores for their answers on vertical axis.



As per the analysis shown above about 20% (5) know that, in RBSK line listing of congenital abnormalities is being done which are then referred to hospital for their treatment. About 16% (4) know that in this program line listing and referral is done but they don't know exactly about which disease or abnormality this program runs for. Only 4% (1) know about this program like where this entire program is being executed and 4% (1) know that this program is for line listing of neonate. About 56% (14) don't know the answer of this question which depicts that very less number of ANM know about the RBSK program.

Q3- Why RBSK program is being running?

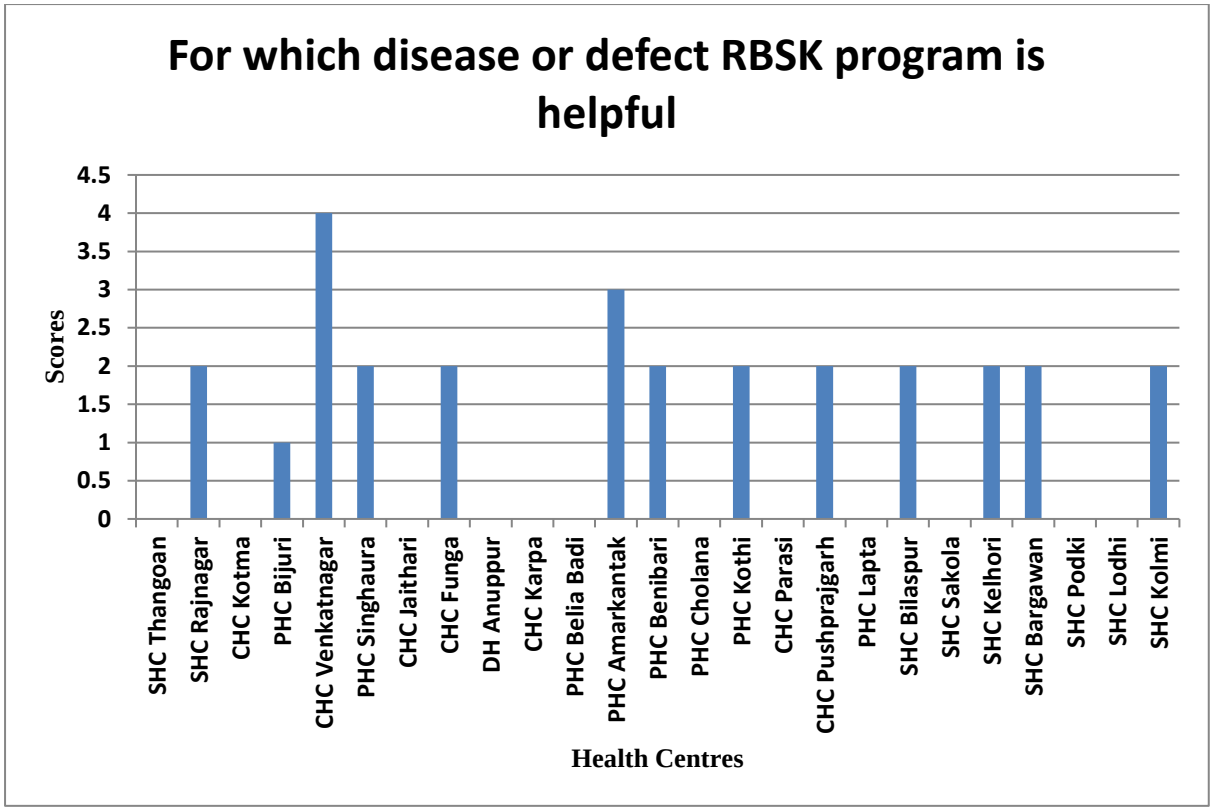
The analysis of answer for this question is shown in following graph with the names of health centres on horizontal axis and scores for their answers on vertical axis.



About 12% (3) wrote that this program is being running for identification and treatment purpose, about 8% (2) know that this program is running for identification and treatment of neonate suffering from congenital birth defect, about 12% (3) know that time is also a critical factor apart from treatment because if screening is done as early as possible then treatment of neonate could also be done with very less delay in time. About 12% (3) know most of the things about why it's being running and 56% (14) of ANMs don't know anything about this program and why it's being running.

Q4- For which disease or defect RBSK program is helpful?

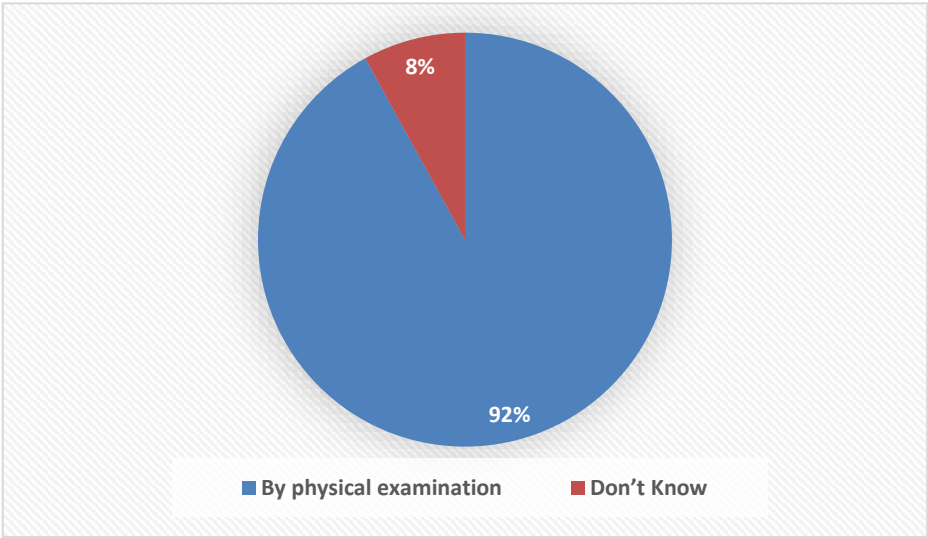
The analysis of answer for this question is shown in following graph with the names of health centres on horizontal axis and scores for their answers on vertical axis.



As per the analysis shown above 40% (10) ANMs know 2 defects for which RBSK program is helpful, 4% (1) know 3 congenital birth defects, 4% (1) know 4 congenital birth defect and 4% (1) know only 1 congenital birth defect. About 48% (12) don't know any disease or defect for which this program is running.

Q5- How do you identify defect in child right after birth?

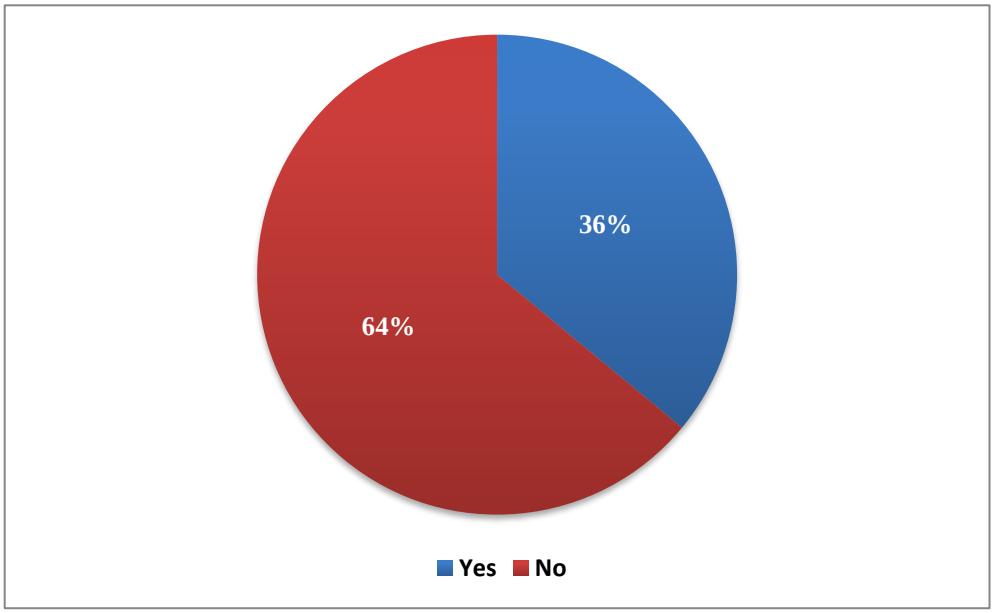
The analysis of answer for this question is shown in following pie chart:



As per the pie chart shown above about 92% (23) ANMs identify congenital birth defect in neonate by physical examination right after the baby is delivered and 8% (2) of them don't know about the approach for identification of congenital birth defect in neonate.

Q6- Have you got RBSK training before?

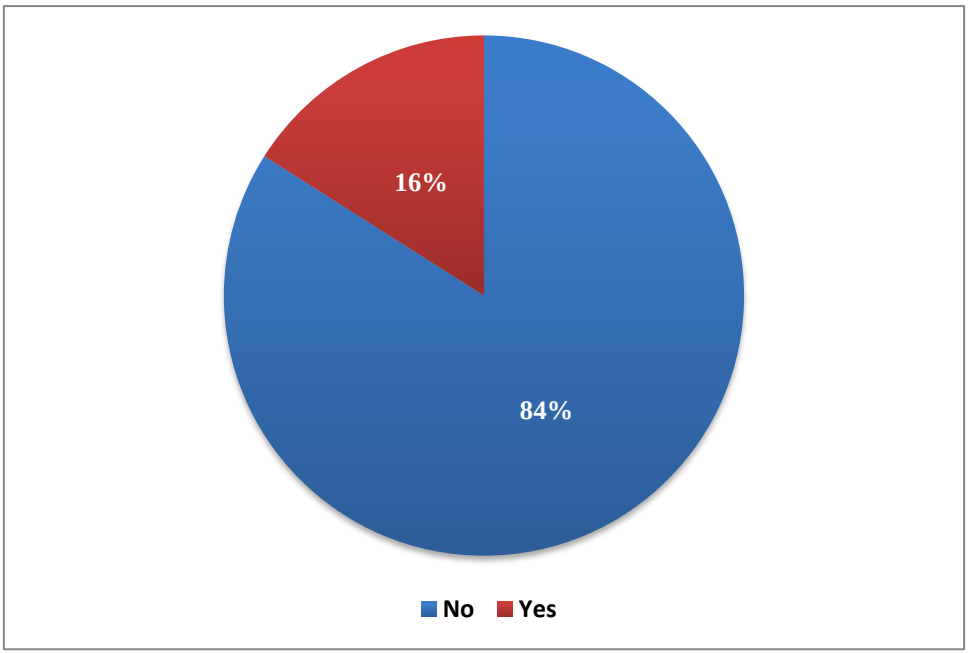
The analysis of answer for this question is shown in following pie chart:



As per the analysis shown above 64% (16) of ANMs wrote that they don't get any RBSK training before and 36% (9) said yes they got RBSK training before.

Q7- If yes, do you have any photographs use to identify birth defect?

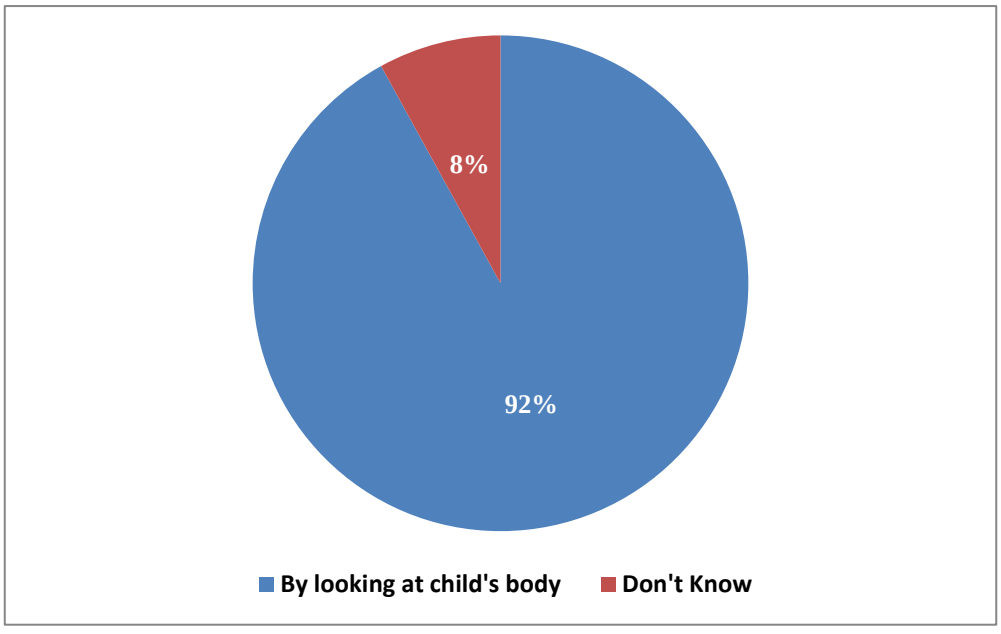
The analysis of answer for this question is shown in following pie chart:



As per the analysis shown 84% (21) of ANMs said no that they don't have any photographs in order to identify birth defect in neonate and 16% (4) said yes they have photographs of birth defect with them.

Q8- How do we identify birth defect in child?

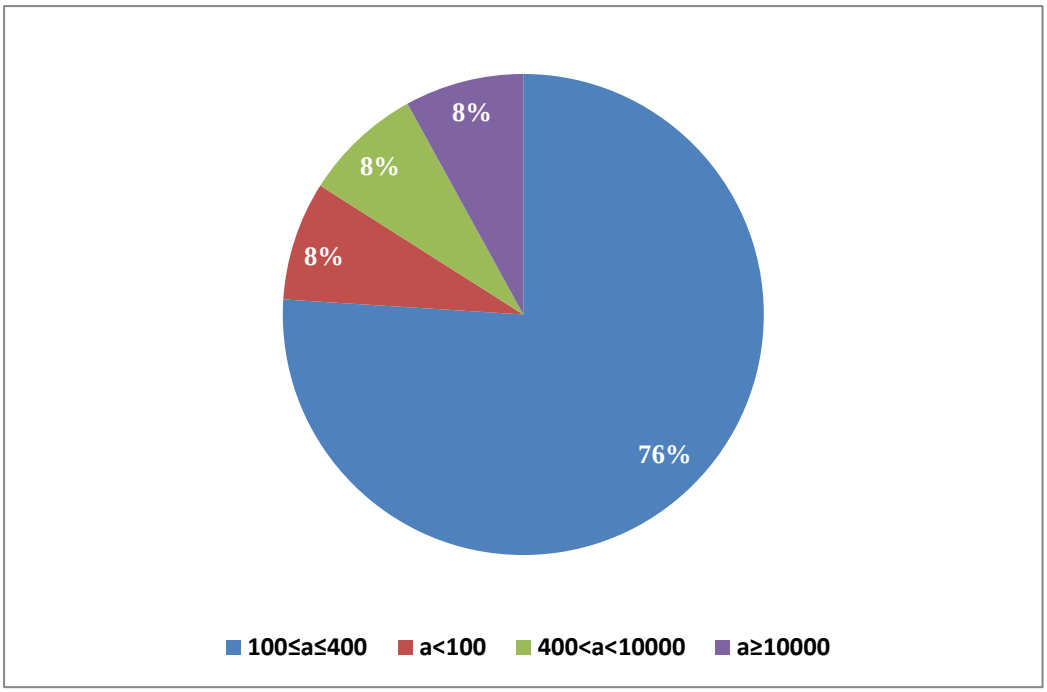
The analysis of answer for this question is shown in following pie chart:



As per the chart shown above about 92% (23) of ANMs wrote that by looking at child's body they identify the birth defect and 8% (2) said that they don't know the approach for this.

Q9- How many deliveries is being delivered by you?

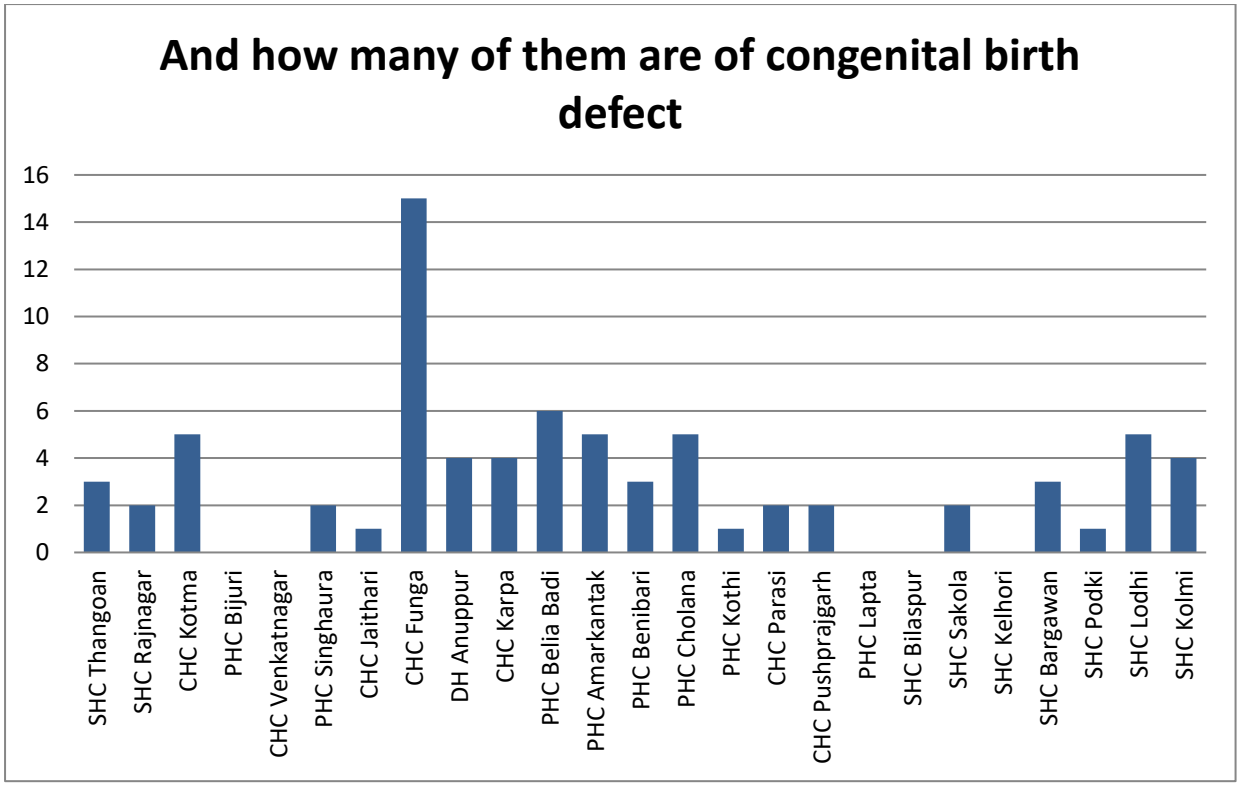
The analysis of answer for this question is shown in following pie chart:



As per the analysis shown above about 76% (19) of ANMs said, they have delivered 100 to 400 deliveries. 8% (2) have delivered less than 100 deliveries, 8% (2) have delivered in between 400 to 10000 and 8% (2) have delivered more than and equal to 10000.

Q10- And how many of them are of congenital birth defect?

The analysis of answer for this question is shown in following graph with the names of health centres on horizontal axis and number of congenital defects identified by ANM in their carrier on vertical axis.



❖ **Association between training for RBSK and knowledge level of ANM**

Category	Training for RBSK v/s Knowledge Level of ANM Cross tabulation		Total
	Group		
	Less Score (<50%)	More Score (>50%)	
Not Trained	14	2	16
Trained	3	6	9
Total	17	8	25

To show the association between training of ANMs under RBSK and their knowledge level regarding the same, we calculated the cumulative score of each ANM of different health centres for the question no. 1,2,3,4 and 5. By using SPSS software we took out the cross tabulation result shown above. In which we found that training of ANMs highly influence

their knowledge and awareness regarding RBSK (Rashtriya Bal Swasthya Karyakaram) as not trained ANMs got cumulative score less than 50% in more number as compare to the other group.

Association between both the factors was confirmed by using chi-square test as shown below:

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**7.767**	**1**	**.005**

Symmetric Measure	Value	Approx. Sig.
Phi	**.557**	**.005**

High value of phi shows strong association between training of ANMs and their knowledge and awareness level regarding RBSK programme.

❖ RESULT AND INTERPRETATION

- ✓ When we met ANM we found that many of them about 56% don't know about RBSK program. 28% know that this program is for screening of child and about 8% know that this program is for both screening and treatment of child. But no ANM know that this program is for screening and treatment of child with 4D in 0-18 years of age group.
- ✓ About 40% of ANM know two birth defects i.e., cleft lip and palate and clubbed foot for which this program is helpful. Many of them (48%) don't know any disease or defect for which this program is helpful.
- ✓ According to the data collected 92% of ANM identify the congenital abnormality in neonate by physical examination and rest 8% don't know the approach for identification of congenital anomalies.

- ✓ When question about training was asked that whether you got training previously under RBSK 64% said no that they didn't get any training under this program and many of them (84%) don't have any photographs for identification of birth defect in neonate.
- ✓ Strong association is found between training of ANMs and their knowledge awareness level for RBSK program. The average cumulative score found was 5.6 which is below 50% (10.5) of maximum score.
- ✓ About 76% of ANM has delivered deliveries in between 100 to 400 in their carrier and 5 ANM has said that they didn't get any neonate with congenital birth defect.

❖ RECOMMENDATION

- ✓ As per this study a huge gap was found in the awareness level of ANM about RBSK program regarding 4D (Disease, Defect, Deficiency and Disability). Every year an intensive training shall be given to all ANMs and Mobile Health Team so that doctors of MHT shall be able to introduce and communicate with all ANMs of delivery point which will help them to know that which person of their locality or block is responsible for this particular program.
- ✓ More IEC shall be used in all the delivery points so that parents of neonate is able to know more about this RBSK program which would be helpful for their neonate to get free of cost and appropriate treatment in best possible hospital.
- ✓ A separate register of RBSK shall be given to all ANM's of delivery point in which they can record the data of all neonates with congenital birth defect.
- ✓ Monthly visits of MHTs at delivery point shall be planned out so that monitoring and communication between ANMs and MHTs shall be done. Which in turn help ANM become more concern and aware about RBSK program.

❖ CONCLUSION

This study attempts to provide a snapshot of assessment of awareness and knowledge level gap regarding RBSK program. Although many of ANMs which we interviewed know basic techniques for identification of congenital birth defect and few of them know about RBSK program but more emphasis shall be given in refining the knowledge and awareness level of ANMs about RBSK program so that they are able to communicate the same with parents of neonate too.

Training of ANMs will help them to know more about defects and diseases covered under RBSK program. In fact ANM were interested to have the RBSK training because they encounter many cases of congenital birth defect in their locality and it would be beneficial for them to have knowledge of the same. As ANM is the first point of contact right after birth so if we identify the child with birth defect as early as possible then it would be beneficial for them to get the right treatment at right time.

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Annexure

1. नाम :– .....

2. पता/ब्लाक का नाम :–.....

3. उम्र. :– .....

4. धर्म :– .....

5. आपकी उच्चतम शिक्षा ?

(1) 10 वी, (2) 12 वी, (3) कालेज, (4) कोई अन्य .....

6. आरबीएसके के बारे में आप क्या जानते है ?

7. आरबीएसके के अंतर्गत क्या करते है ?

8. आरबीएसके कार्यक्रम को क्यो चलाया जा रहा है ?

9. किन बीमारियो के लिये किया जाता है ?

10. जन्म के तुरंन्त बाद बच्चे में विकृति कैसे पहचानते है ?

11. क्या आपको आरबीएसके की पूर्व मे प्रशिक्षण हुई है ?

12. अगर हुई है तो आपके पास जन्मजात विकृति के फोटो उपलब्ध है ?

13. जन्मजात विकृतियो को कैसे पहचाना जाता है ?

14. आपने अभी तक कितने प्रसव करवाये है ?

15. उसमें से कितने शिशु जन्मजात विकृति से ग्रसित पाये गये है ?