Internship Training

At

CARE INDIA

By

DR. SIDDHARTH SHANDILYA

PGDHHM

2013-2015

IIHMR DELHI

International Institute of Health Management Research

Internship Training

At

CARE INDIA, Bihar

Title

Project – To study the burden of weak newborn and various socio demographic

factors associated with newborn care in five blocks of muzzafarpur district ,

Bihar"factors associated with newborn care in five blocks of muzzafarpur district ,

Bihar"

By

Name – Dr. Siddharth Shandilya

Under the guidance of

B.S Singh

Post Graduate Diploma in Hospital and Health Management

Year – 2013-2015

International Institute of Health Management Research

New Delhi

FEEDBACK FORM

Name of the Student: DR.SIDDHARTH SHANDILYA

Dissertation Organisation: CARE INDIA,BIHAR.

Area of Dissertation: PUBLIC HEALTH.

Attendance: 100%

Objectives achieved: SUCCESFULLY COMPLETED PROJECT ON THE BURDEN OF WEAK NEW-BORN AND SOCIO-DMOGRAPHIC FACTORS.

Deliverables: SUCCESFULLY CONTRIBUTED TO THE ORGANISATION IN ACHIEVING MAIN GOALS.

Strengths: GOOD ANALYTICAL AND COMMUNICATION SKILLS.

Suggestions for Improvement: KEEP THE GOOD WORK GOING.

Deepika Joshi

Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

Date: 14-May 2015
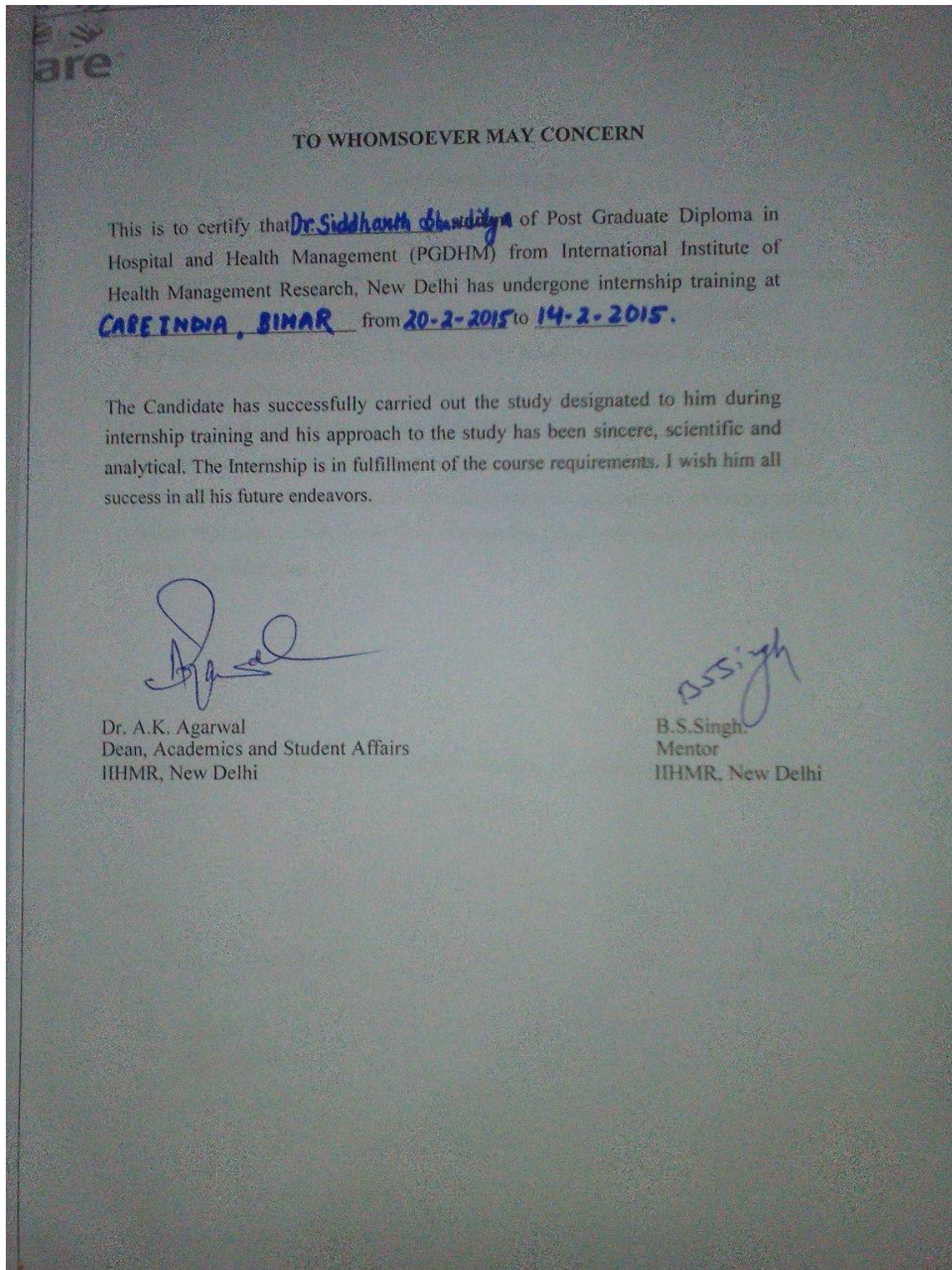Place: MUZZAFARPUR, BIHAR.

Dissertation Writing

Certificate of Approval

The following dissertation titled 'To study the burden of weak newborn and various socio demographic factors associated with newborn care in five blocks of muzzafarpur district , Bihar" at **CARE India** 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.

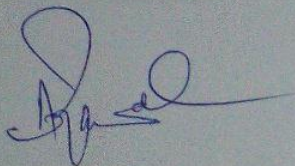Name   Signature

TO WHOMSOEVER MAY CONCERN

This is to certify that Dr. Siddhanth Chandilya of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at CARE INDIA, BIHAR from 20-2-2015 to 14-2-2015.

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
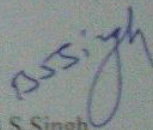IIHMR, New Delhi

B.S.Singh.
Mentor
IIHMR, New Delhi

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IIHMR, New Delhi

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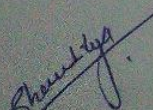# INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled To study the burden of weak newborn and various socio demographic factors associated with newborn care and submitted by (Name) Dr. Siddharth Shandilya Enrollment No. PG/13/082 under the supervision of Mr. B.S Singh

for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from AUG 2013 to JUN 2015

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

6

7

The certificate is awarded to

Name -Dr.Siddharth Shandilya

In recognition of having successfully completed her
Internship in the department of

Title - To study the burden of weak newborn and various socio demographic factors
associated with newborn care in five blocks of muzzafarpur district , Bihar

and has successfully completed his Project on

Date-14MAY2015

Organisation -CARE INDIA,BIHAR.

He comes across as a committed, sincere & diligent person who has a
strong drive & zeal for learning

We wish him/her all the best for future endeavors

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14/05/15

**District Manager
Muzaffarpur**

14/05/2015

**Regional MLE Specialist
Muzaffarpur Region**

CARE *INDIA*

History:

CARE is a major international humanitarian agency delivering broad-spectrum emergency relief and long-term international development projects. Founded in 1945, CARE is nonsectarian, impartial, and non-governmental. It is one of the largest and oldest humanitarian aid organizations focused on fighting global poverty.[1]

CARE's programmes in the developing world address a broad range of topics including emergency response, food security, water and sanitation, economic development, climate change, agriculture, education, and health. Within each of these areas, CARE focuses particularly on empowering and meeting the needs of women and girls and on promoting gender equality.[2]

CARE International is a confederation of thirteen CARE National Members and one Affiliate Member, each of which is registered as an autonomous non-profit non-governmental organization in the country.

CARE has been working in India for over 60 years, focusing on ending poverty and social injustice but became member in Nov. 2013. We do this through well-planned and comprehensive programmes in health, education, livelihoods and disaster preparedness and response. Our overall goal is the empowerment of women and girls from poor and marginalised communities leading to improvement in their lives and livelihoods. We are part of the CARE International Confederation working in 84 countries operating 927 projects (2013) for a world where all people live in dignity and security, Out of which 256 projects are in ASIA region.

In India CARE focuses on the empowerment of women and girls because they are disproportionately affected by poverty and discrimination; and suffer abuse and violations in the realisation of their rights, entitlements and access and control over resources. Also experience shows that, when equipped with the proper resources, women have the power to help whole families and entire communities overcome poverty, marginalisation and social injustice.

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CARE India Mission

We facilitate the empowerment of women and girls from poor and marginalised communities in the fight to overcome poverty, exclusion and social injustice. We nurture leadership internally and among partners to achieve this mission.Its commitment and work for the welfare of people, it has placed amongst the leading NGOs.

Key Areas of Work

CARE Programmes in the field of:

- Education

- Health

- Livlihood

- Disaster Response

Education:

- ✓ Girls' Education Programme
- ✓ Udaan
- ✓ Kasturba Gandhi Balika Vidyalayas (KGBV)
- ✓ Girls' Leadership Initiative
- ✓ Join My Village
- ✓ Realisation of Citizenship through Good Governance
- ✓ ECD

Health:

- ✓ SAKSHAM
- ✓ AXSHYA
- ✓ Family Health Initiative
- ✓ SWASTH
- ✓ EMPHASIS
- ✓ Urban Health Initiative
- ✓ IMPACT
- ✓ CHCMI
- ✓ SEHAT

Livelihood:

- ✓ Kutch Livelihood Education Advancement Project K-LEAP
- ✓ Pathways
- ✓ Cashew Value Chain
- ✓ LIFE
- ✓ Banking on Change
- ✓ Insure Lives and Livelihoods

Disaster Response:

Programmatic Strategies

Bihar Technical Support Program

Objective: "to improve the health and nutritional status of people in Bihar, particularly the poorest and excluded', and thereby accelerate the state's progress towards the Millennium Development Goals (MDGs). Its purpose is "increased use of quality, essential health, nutrition, water and sanitation services especially by poorest people and excluded groups'

Start date: February 2013

Goal & objectives of the Project:

Under 12th Five Year Plan, by 2017, India is committed to bring down the IMR to 25 per 1000 live births and MMR to 100, fertility rate to 2.1, and raise child sex ratio in age group 0-6 years to 950.

Strategies of the Project:

1) Health System Strengthening:

a) Planning & Coordination:

• Conduct a rapid assessment of the current status in the HPDs, resource mapping, bottlenecks in service delivery mechanism and identify ways to address them with support from development partners consortium.

Provide technical inputs in developing plans for the High Priority Districts (HPDs)

with specific objectives to achieve goals in the area of Reproductive, Maternal,

Newborn, Child and Adolescent health

• Provide technical inputs in development of the NRHM PIP for the HPDs on the

basis of findings of rapid assessments

• **Coordinate with the District Health Officials in the development of the District Health Action Plans of the HPDs**

• **Coordinate with the existing development partners in the state working on the RMNCH+A activities and provide a platform for sharing their findings with the state health teams**

• **Participate in the steering and working group committee meetings and facilitate development of periodic reports and documents on the progress of the RMNCH+A interventions.**

b) Capacity building of human resources:

• **As per the situational analysis, coordinate and develop a training plan for service providers of the HPDs**

• **Facilitate in trainings and reorientation of service providers for RMCNH+A activities by coordinating with SIHFW, RFPTC, Medical Colleges and other training institutions.**

2) Monitoring and Supportive Supervision:

• **Develop a regular status report of RMNCH+A interventions in the HPDS**

• **Coordinate with NRHM state and district teams to prepare Score cards for the HPDS**

• **Coordinate data analysis and help in improving quality of data entered into HMIS, MCTS or any other existing system**

• **Conduct field visits to the health institutions to provide supportive supervision and on the job training for the RMNCH+A activities**

• **Concurrent monitoring of facilities/outreach activities in the HPD**

3) Inter-sectoral Convergence and Partnerships:

• **Interact and coordinate with departments of WCD & Education for harmonizing efforts focused on RMCNH+A activities**

• **Coordinate with other Development Partners/NGOs/CSOs/Professional Bodies [IAP, IMA, FOGSI] and medical colleges in harnessing their inputs in implementation of the RMNCH+A framework**

• **Facilitate engagement of private health providers in service delivery under RMCNH+A intervention**

4) Reports:

• **Preparation of monthly, quarterly and annual reports for sharing with the Govt. donor agency and partner agencies**

5) To carry out any other program related activities as and when required

Geographic Area:

2013: 8 Districts:

2014: scale up to 38 districts of Bihar

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Acknowledgement

"A Great achievement solution dawns with an idea, grows with our effort and attains fulfillment with our will power". In our effort towards the realization of my project work, I have drawn on the guidance of many people for which I'm glad to acknowledge.

I got the opportunity to pursue my Dissertation from CARE India, Bihar. It was an opportunity to work with one of the best international NGO.

I take this opportunity to express our profound gratitude and deep regards and very much indebted to Afaq Shah (Director- VL) for giving me the opportunity to work in the project and for his valuable guidance.

I acknowledge the support rendered by my mentor **Sumit Kumar** , PM- Muzaffarpur Region for providing an opportunity to carry out the project work and utilizing the facilities available. Without his valuable guidance and consistent support, this project would not have got underway. I am also grateful to Rahul **Sinha, regional Monitoring Learning and Evaluation Specialist** for his consistent support during the analysis of the data.

I am extremely grateful to my mentor Mr B.S SINGH, Prof. at IIHMR, New Delhi for their co-operation, help and wholehearted encouragement. His assistance enabled me, to overcome many obstacles during the work of my project study.

Finally, it would be incomplete if I would not mention our gratitude towards the respondents (Community members) who helped us with their valuable time. I'm also thankful to all those who have directly or indirectly encouraged me to complete this project.

Abbreviations and Acronyms

AMTSL	Active Management of Third Stage of Labour
CSSD	Central Sterile Supply department
ANC	Ante Natal Care
CTT	ConventionalTubectomy
ANM	Auxiliary NurseMidwife
DDK	Disposable Delivery Kit
ART	Anti-RetroviralTherapy
DEO	Data Entry Operator
ASHA	Accredited Social Health Activist
DH	District Hospital
DLHS	District Level Health survey
AWC	Anganwadi Centre
BEmOC	Basic Emergency Obstetric Care
DP	Delivery Point
EDD	Expected Date of delivery
BMO	Block Medical Officer
BMW	Biomedical Waste
EDL	Essential Drug List
BP	Blood Pressure
ELA	Expected level of achievement
BPL	Below Poverty Line
EmOC	Emergency Obstetric care
BSU	Blood Storage Unit
CBR	crude Birth Rate
CEmOC	Comprehensive Emergency Obstetric
ENBC	Essential Newborn Care
EVA	Electric Vacuum Aspiration
CFL	Compact Fluorescent lamp
FIGO	Federation of Gynaecology and Management of obsterics
CH	Child Health
CHC	Community Health centre

CMO	Chief Medical Officer
CRM	Common Review Mission
CS	Civil SurgeoN

Executive Summary:-

Over the period, health indicators, especially life expectancy at birth, maternal and child mortality rate have shown remarkable improvement, though there are variations in health outcomes across States. According to the SRS, Registrar General of India, Maternal Mortality Ratio (MMR) in India declined from 254 per one lakh live births during the period 2004-06 to 212 per one lakh live births for the period 2007-09. As per the latest Sample Registration System (SRS) figures, Infant Mortality Rate (IMR) at national level is 44 per 1000 live births in 2011 with 48 in rural and 29 in the urban areas. Goa and Manipur has the lowest IMR (11 /1000 live births) followed by Kerala with 12. Madhya Pradesh has the highest IMR at 59 per 1000 live births. Total Fertility Rate (TFR) declined from 2.9 in 2005 to 2.5 in 2010.

National Rural Health Mission (NRHM), launched in 2005, has been able to make a substantial improvement in public healthcare delivery system. Better infrastructure, availability of man power, drugs and equipments and other factors have led to improvement in health care delivery and increase in OPD and IPD services. The Accredited Social Health Activist (ASHA) has been active in all states as an essential link between the community and the public health system. Under the NRHM, over 1.4 lakh health human resources have been added to the health system across the country (up to September 2012) which include 9513 allopathic doctors/specialists, 11,478 AYUSH doctors, 66,407 auxiliary nurse midwives (ANMs), 32,275 staff nurses, and 11,030 paramedics including AYUSH paramedics. Accredited social health activists (ASHAs) are engaged in each village / large habitation in the ratio of one per 1000 population. Till September 2012, 8.84 lakh ASHAs have been selected in the entire country out of which 8.09 lakh have been given orientation training. Further 7.96 lakh ASHAs have been provided with drug kits. Further, as part of infrastructure strengthening under NRHM, so far 10,473 Sub-Centres, 714 PHCs, 245 CHCs have been newly constructed. Also, renovation/ upgradation of 10,326 Sub-Centres, 2963 PHCs 1,221 CHCs has been completed. A total of 8,199 Primary Health Centres (PHCs), accounting for nearly 34 per cent of total PHCs, have been made functional for 24X7 services across the country

Further, nearly 2,024 vehicles are operational as Mobile Medical Units (MMU) in 459 districts in the country under the NRHM. Under Reproductive and Child Health Programme (RCH), 401 Sick New born care units, 1542 New Born Stabilisation Unit (NBSU) and 11508 New Born Care Corners(NBCC) have been established throughout the country (Decemberr, 2012). The scheme of delivery of contraceptives at home by ASHAs started on a pilot basis in 233 districts of 17 states during 2011 has now been extended to all the districts of all the states of the country. The number of beneficiaries under Janani Suraksha Yojana (JSY) has increased from 7.38 lakhs in 2005-06 to more than 1.09 Crores in 2011-12.The total number of JSY beneficiaries during 2012-13 (upto September, 2012) was 50.43 lakhs. The number of institutional deliveries has increased from 1.08 crores during 2005-06 to 1.75 crores during 2011-12. The number of institutional deliveries during 2012-13 (upto September, 2012) was 80.39 lakhs. A new initiative, Janani Shishu Suraksha Karyakram (JSSK) was launched in 2011, which entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery including Caesarean section. The initiative stipulates free drugs, diagnostics, blood and diet, besides free transport from home to institution, between facilities in case of a referral and drop back home. Similar entitlements have been put in place for all sick new-borns accessing public health institutions for treatment till 30 days after birth. The implementation under JSSK is being strengthened in States. Immunisation in India is an important component of Reproductive and

Child Health Programme. Various activities such as National Immunization Days and Sub National Immunization Days (SNID) continued to be observed in States.

Thrust areas during 12th plan and 2013-14

During the 12th plan period, public health care services are sought to be further expanded to cover the urban areas. National Urban Health Mission (NUHM) will be launched as a sub-mission of an overarching National Health Mission, with NRHM being the other submission. Apart from continuing activities, recent initiatives such as Janani Shishu Suraksha Karyakram (JSSK), Name based Mother EXECUTIVE SUMMARY iv and Child Tracking System (MCTS), delivery of contraceptives to doorsteps, Menstrual Hygiene Scheme, would be carried forward in the Twelfth plan. The coverage under the JSSK is being expanded to include no expense care for antenatal and post natal complications and all infants. The recently launched Weekly Iron and Folic Acid Supplementation (WIFS) Programme under the National Iron Plus Initiative for school going adolescent girls and boys and for out of school adolescent girls envisages administration of supervised weekly IFA Supplementation and biannual deworming tablets to approximately 13 crore rural and urban adolescents through the platform of Govt. /Govt. aided and municipal schools and Anganwadi Kendras to combat the intergenerational cycle of anaemia. Further, a strategic approach to RMNCH+A will be launched.

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1 Introduction

1.1 BACKGROUND

Bihar with a population of 82.9 million is the second most populous state in India, next only to Uttar Pradesh. Despite efforts in the last few decades to stabilize population growth, the state's population continues to grow at a much faster rate (28.43%) than the national population (21.34%). The state is densely populated with 880 persons per square kilometer as against the country average of 324. The sex ratio of the state at 919 is also less favorable than the national average of 933.The state has 38 districts divided into 9 administrative divisions. In addition, the state has 101sub-divisions, 534 community development blocks, 9 urban agglomerations, 130 towns and 37,741 villages. Background and current status data suggest that Bihar is one of the poor performing states in terms of RCH I outcomes. This is reflected in the four key indicators namely MMR, IMR, NMR and TFR. RCH I remained a virtual nonstarter in the state for a variety of reasons leading to poor availability, accessibility and utilization of RCH services. Of the four key health indicators, the state's performance is below normal for three indicators namely, MMR, NMR and TFR. Only the reported IMR in the state is better than national average.

MMR

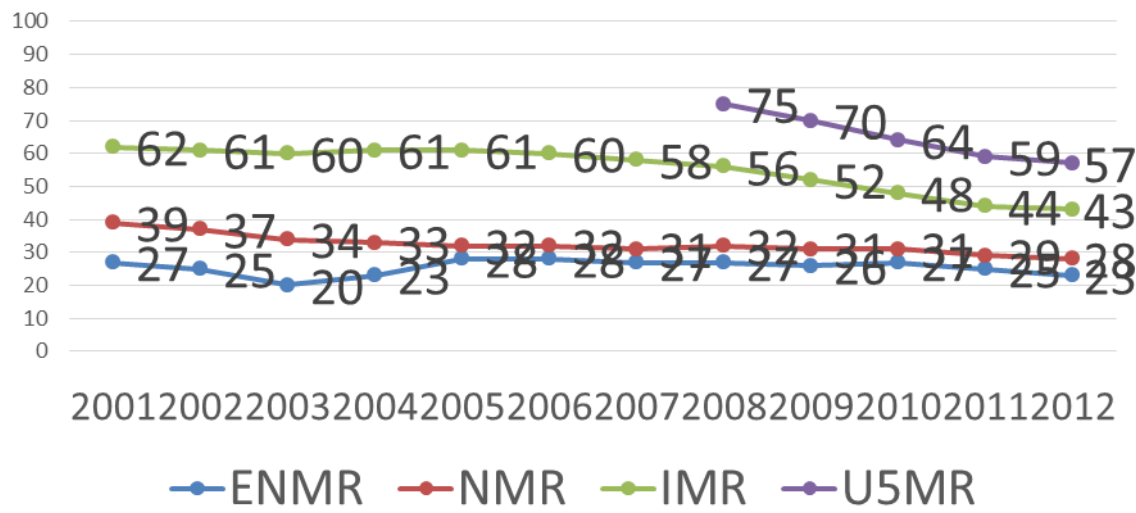| Source	Year	India	Bihar
SRS	2004-06	254	312
SRS	2007-09	212	261
SRS	2010-12	178	219
AHS	2011-12	---	294

Maternal mortality magnitude of the problem in bihar-
1. About 31,71,910 pregnancies per year

2. 28,83,555 deliveries per year
3. 32,533 are likely to develop complications
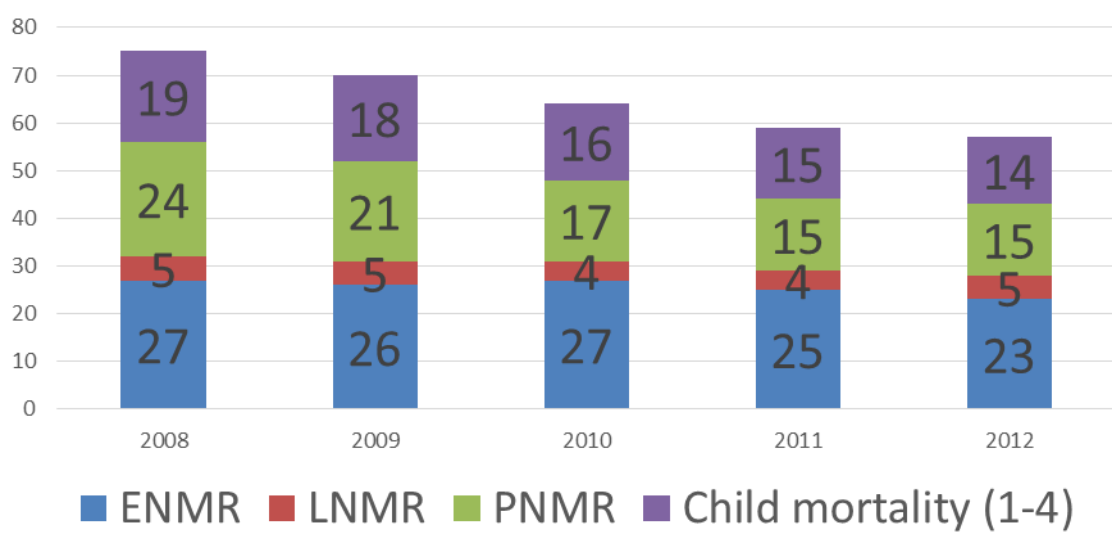
4. 2,88,355 – C. Section requirement

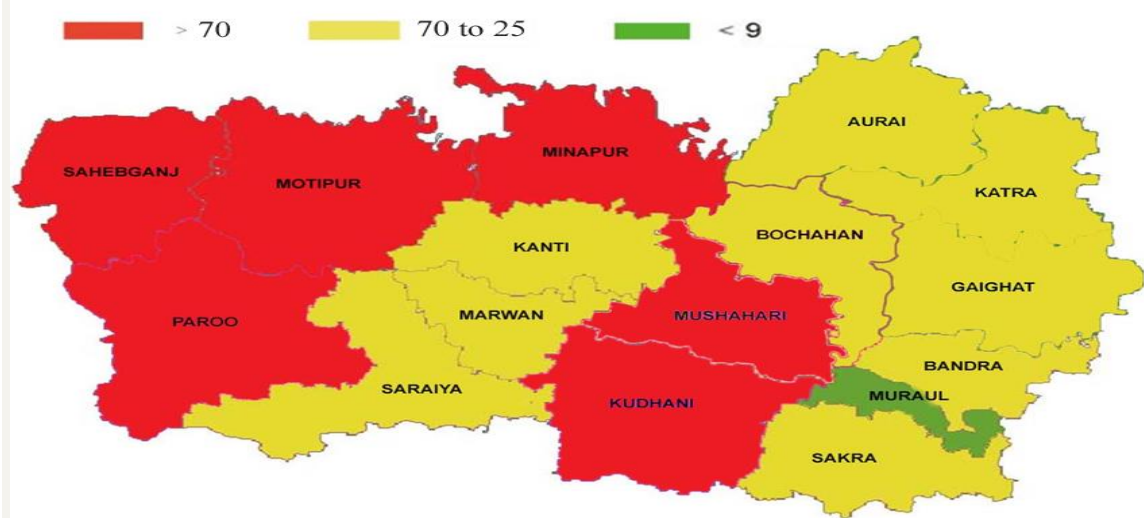5. Estimated 8478 maternal deaths per year (approximately 1 maternal death per hour)

CHILD MORTALITY TRENDS IN BIHAR

TRENDS IN BIHAR

Muzaffarpur has 16 blocks with a population of around 5 million.

1.2 LITERATURE REVIEW

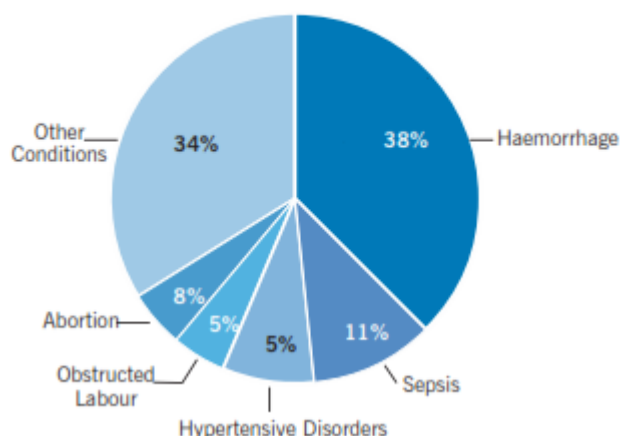Various literature were reviewed, some of them are mentioned:

1. *Maternal and Newborn Health Toolkit*

"Women are not dying because of a disease we cannot treat. They are dying because societies have yet to make the decision that their lives are worth saving." **Mamoud Fathalla, President of the International Federation of Gynecology and Obstetrics (FIGO), World Congress, Copenhagen 1997**

Maternal mortality is a sensitive indicator. It helps to understand the health care system of a country and also indicates the prevailing socio-economic scenario. India contributes to 20% of global maternal deaths. Around 56,000 women die every year in the country due to pregnancy or pregnancy related causes. Over the last decade, there has been a decline in maternal mortality ratio (MMR) from 301 (SRS 2001-2003) to 212 (SRS 2007-09). Despite the appreciable decline, the current MMR continues to be unacceptably high. Moreover, within the country, there is a wide interstate and intrastate variation in MMR with an MMR of 390 in Assam and 81 in Kerala. Even within the states, MMR varies widely from one division/region to another, for example Agra and Faizabad divisions in Uttar Pradesh have MMR of 167 and 437 , respectively. Causes of maternal deaths may be direct or indirect. The focus till now has largely been on addressing the direct causes of maternal deaths. However, indirect causes also need to be addressed to further reduce MMR and achieve the Millennium Development Goal(MDGs). The indirect causes also include the socio-economic determinants of health which are referred to as the three known delays:

1) delay in making a decision on the need for medical care;
2) delay in reaching the appropriate facility in time; and
3) delay in initiating the correct treatment at the health facility.
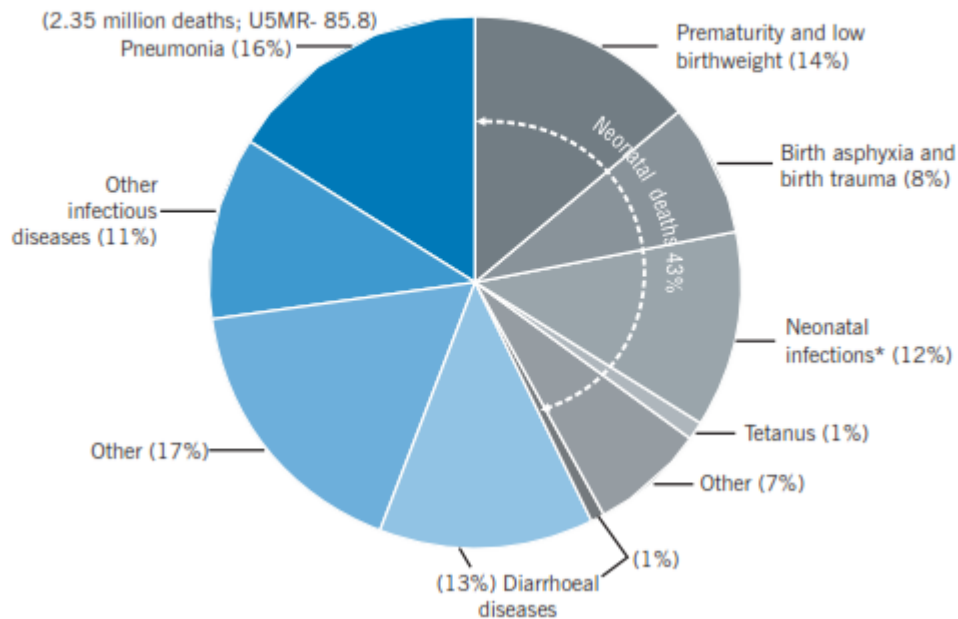
Figure 1: Causes of maternal deaths in India[3]

The Janani Suraksha Yojana (JSY) initiative under the aegis of the National Rural Health Mission (NRHM) resulted in a phenomenal increase in the rate of institutional deliveries in India from 47% as reported in the District Level Health Survey (DLHS-3, 2007-08) to 73% in the Coverage Evaluation Survey (CES 2009). Yet, about 17% births continue to take place at home and, even those women who come into the fold of institutional delivery are many a time deprived of quality services. The 12th Five Year Plan aims to bring all women during pregnancy and childbirth into the institutional fold so that delivery care services of good quality can be provided to them at the time of delivery at zero expense as envisioned under the Janani Shishu Suraksha Karyakram (JSSK) programme. The programme entitles all pregnant women to absolutely free institutional delivery including C -section with a provision for free drugs, diagnostics, diet, blood and transport from home to facility, between facilities and drop back home. Similarly, IMR has fallen from 80 in Year 1990 to 42 in 2012. As per SRS, NMR has fallen from 53 in Year 1990 to 31 in 2011. In absolute numbers, death among babies in 0-28 days of life decreased from 13.2 lakhs in 1990 to 8.2 lakhs in 2011 whereas number of live births has increased from 256 lakhs in 1990 to 264 lakhs in 2010. As per the Registrar General of India, Sample Registration System 2011, the under-five mortality rate is 55 per 1000 live births which translates into 14.5 lakh deaths of children below 5 years of age.

1] About 43% of under-five deaths take place within the first 7 days of birth.
2] About 56% of under-five deaths take place within first one month of birth.
3] Approximately 80% of under-five child mortality takes place within one year of birth. (IMR)

Neonatal mortality in India contributes towards 56% of all deaths in childhood (up to age 5 years) and 70% of infant deaths (below one year of age).

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Figure 2: Causes of under-5 deaths in India[4]

- Under NRHM, there are a number of focused interventions for improving care of both the mother and the newborn, which include focus on improving access to skilled birth attendance and emergency obstetric care for all women in rural areas. On the demand side, JSY has led in overcoming many traditional barriers to institutional deliveries. This has led to an unprecedented surge in the proportion of institutional deliveries even in the low performing states. Capacity building trainings in Skilled Birth Attendance (SBA), Emergency Obstetric Care (EmOC), Life Saving Anesthesia Skills (LSAS), Use of Intra-uterine Contraceptive Devices (Cu-IUCD and PPIUCD), Navjat Shishu Suraksha Karyakram (NSSK), Home-based Newborn Care (HBNC), Integrated Management of Neonatal and Childhood Illness (IMNCI) along with establishment of First Referral Units (FRUs) and 24x7 Primary Health Centres (PHCs), Special Newborn Care Units (SNCUs), and New Born Care Corners (NBCCs) have enhanced access to critical, newborn and child health services in health institutions. However, many of the health facilities designated for provision of BEmOC and CEmOC services are still not in a position to provide optimal quality of care.

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2   Research Methodology

2.1 OBJECTIVES OF THE STUDY

.

To study the burden of weak newborn and various socio demograpfhic factors associated with newborn care

Specifically this study aims to:

- To assess the level of knowledge of the community regarding neonatal death
- To understand the attitude of the community towards the health status of mother and infant.
- To understand health seeking behaviour of the community regarding continuum of care.
- To assess the factors (socio-economic, behavior etc.)

2.2 STUDY AREA

The study was carried out in 5 blocks of Muzaffarpur district in Bihar.These blocks are selected on the basis of their accessibility to reach the health facility for appropriate care and vice-versa.

Fowllowing are the five blocks selected-

Muraul- Rural but accesible

Bochaha- Better accesible

Sahebganj- Hard to reach

Paro- Hard to reach

Mushehri- Urban

For each of the blocks selected on above mentioned criteria, weak new borns data was collected based on the new born weights mentioned in Labor room register : considering only the neonates weighing less than 2500 gms. This will act as study's sample size

Those neonates who are weighing less than 2500 gms are comes under

WEAK NEWBORNS, so the project is about weak new born tracking and their fowllow up.

2.3 STUDY DESIGN

The study combined various quantitative research methods using descriptive cross sectional survey across 5 blocks of Muzaffarpur district.

2.4 SAMPLING PLAN

Data from labour room register recorded for last three months from the above mentioned five block phc's
Total live births in last 3 months = 1847
Total no. of weak newborns weighing <=2500 gms=274.
The records of these 274 WNB served as our selection frame.

Sampling-**The sample choosen from above selection frame was based on the proportion of weak newborns from the above mentioned five blocks which are as fowllows-**

BLOCK	Muraul	Bochaha	sahebganj	musheheri	paro	Total
Weak newborn	10	188	21	25	30	274
50%of sample#	5	94	11	13	15	138

#with the available resources and time frame only 50% of cases could be followed up,these 50% cases i.e 138 were divided among each block on the basis of proportion of weak new borns.
Further the sample choosen for each individual block was based on simple random sampling.
SAMPLE SIZE- 138

2.5 TOOLS FOR DATA COLLECTION

Quantitative data collection was administered by a semi-structured interview schedule. **This method was chosen because it is useful to correlate the research questions with the objective**

2.6 PRE TESTING

Before finalizing the questionnaire, pre-testing of a draft questionnaire was done in MURAUL block, Muzaffarpur..

2.7 DATA COLLECTION

Quantitative data was collected using a structured questionnaire by a door to door survey. Each interview took an average of 30 mintues**.** . In addition to gathering background social and demographic information, the interviews provided insight into the following:-

- Household characteristics
- Economic characteristics of the household
- Knowledge level of the respondents regarding mother and child health.
- Preventive measures taken by the respondents.
- Attitude of the respondents regarding ANC check ups.
- Treatment seeking pattern of the respondents related to reproductive child health.

2.8 DATA ANALYSIS

The data was entered into Excel spreadsheets and was analyzed using . Descriptive statistics such as, simple percentages and indices of central tendency such as mean and median were employed.

2.9 ETHICAL CONSIDERATION

Informed consent for conducting interviews was obtained from all the participants of the study. Respondents were explained that the information collected from them will be used for research purposes only and that the confidentiality of data would be strictly maintained.

2.10 LIMITATION OF THE STUDY

Although this research was carefully prepared, I am still aware of its limitations and shortcomings.

- Firstly, the time span for the study (3 months) is not enough to observe and analyze all the findings properly.
- Secondly, Due to lack of time and resources, could not use qualitative research methodology.
- Third shortcoming is small sample size due to lack of time and resources.
- Differences in definitions of key indicators, sampling frames, and survey instruments in different data sources limit comparability between studies and interpretation.

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SOCIODEMOGRAPHIC FACTORS

	Categories	Missing values	Unweighted frequency	Unweighted (%
	Hindu		116	8
Religion	Muslim	0	2I	1
	Christian		0	

	Jain		0	
	Buddhist		1	
	Others		0	
Caste	Scheduled Caste	0	35	25
	Scheduled Tribe		3	2
	Other Backward classes		82	59
	Others		18	12
Respondent's education	Illiterate	0	84	60
	Literate up to class VIII		29	20
	Literate more than class VIII		25	18
Husband's education	Illiterate	13	53	42
	Literate up to class VIII		31	24
	Literate more than class VIII		41	32
		0		

4   Knowledge regarding neonatal health

During interviews it was found that the family members have very little or have   no knowledge about neonatal health specially regarding-

1. 3or more antenatal checkups
2. Importance of full anccheckups
3. Institutional deliveries
4. Early initiation of breast feeding within one hour
5. Exclusive breast feeding upto 6months
6. Complementary feeding 6-9 months
7. Full immunization.

5   Prevention and Treatment Seeking Behavior

1.Very reluctant behavior regarding anc checkups.

2.Family members didn't know about the care procedure of weak newborn for the first week, which is very important.

3.No behavior change regarding cord care.

4.No complimentary feeding would be given to newborn but it was seen village people feeding their neonate with honey as they believe it would help him /her to grow well.

5.Beneficiaries are not willing for further referral treatment leading to 'LAMA'

6.Old practices are still used for the delivery of the baby inspite of having SBA training of the ANM'S.

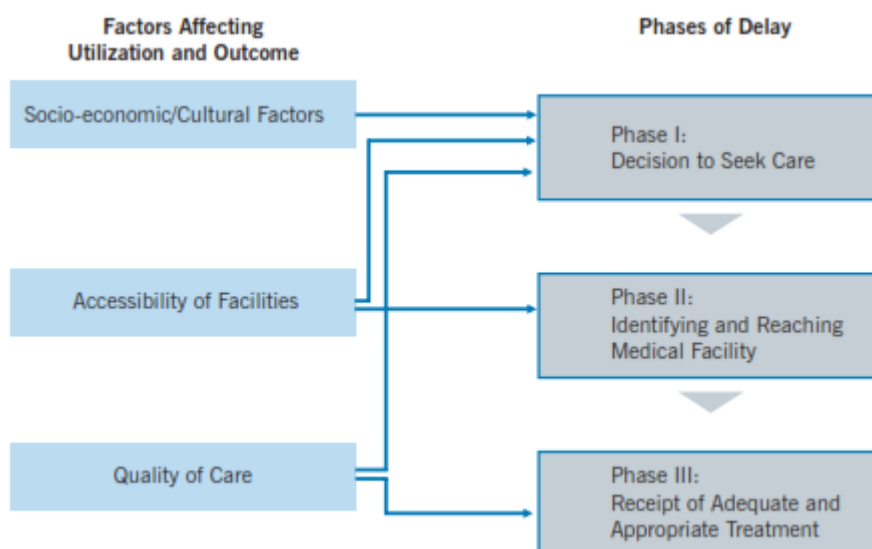# **6**Underlying factors (delays) which can lead neonatal death

underlying factors or indirect causes or 'delays' in accessing healthcare during pregnancy, childbirth or thereafter are well recognized as contributing factors to many of the maternal and neonatal deaths, which may be in:

1) Recognising danger signs and deciding to seek appropriate medical help for an obstetric emergency
2) Reaching an appropriate obstetric facility
3) Receiving adequate quality of care once a woman reaches the facility

The 'three delays' model is a useful tool to identify the points at which delays can occur in the management of obstetric complications and to design programmes to address these delays.
The first two 'delays' relate directly to the issue of access to care, encompassing factors in the family and the community, including transportation.

Factors Affecting Utilization and Outcome	Phases of Delay
Socio-economic/Cultural Factors	Phase I: Decision to Seek Care
Accessibility of Facilities	Phase II: Identifying and Reaching Medical Facility
Quality of Care	Phase III: Receipt of Adequate and Appropriate Treatment

The third delay   relates to factors in the health facility, including quality of care. Unless the three delays are addressed, mortality and morbidity cannot be reduced. In practice, it is crucial to address the third delay first, as it would be useless to facilitate access to a health facility if quality health care services are not available at the health facility. Socio-economic status of women and families, community awareness, birth preparedness, complication readiness, and good referral linkages are linked to the first and second delays. The third delay can be addressed only through the availability of good quality basic and emergency obstetric and neonatal services. Health managers and planners must assess provision of obstetric services in their respective areas. Once the situation has been analyzed, the next step is to strengthen these facilities. This planning can be as follows:

- As a first step, strengthening of large facilities which are already conducting deliveries should be taken up.

- As a second step, identifying and strengthening sufficient number of facilities to ensure optimal geographical coverage.

7 Discussion

1.2 Neonatal, perinatal and child mortality rates in BIHAR

The box below provides the most recent estimates (2012) of the child and neonatal mortality rates in the country. With the current NMR of 29 per 1,000
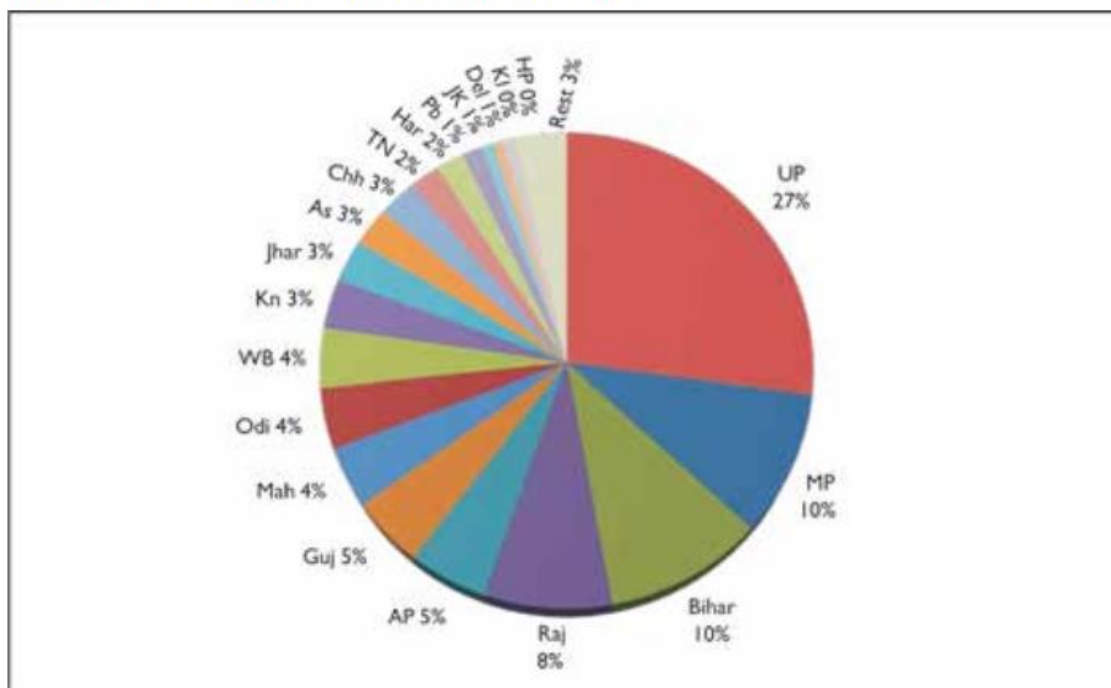
Current Child and Neonatal Mortality Rates (2012)	
Under-five child mortality rate (U5MR)	52
Infant mortality rate (IMR)	42
Neonatal mortality rate (NMR)	29
Early neonatal mortality rate (ENMR)	23
Late neonatal mortality rate (LNMR)	6

Note: Rates expressed per 1000 live births

Source: SRS Statistical Report, 2012 [2]

Burden of neonatal deaths in different states
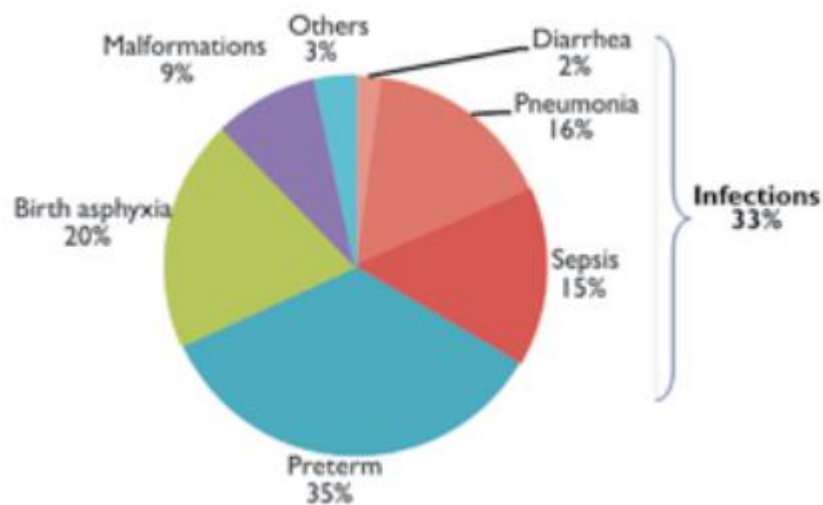
Burden of neonatal deaths in Indian states

*Source srs 2012

Causes of neonatal mortality

A systematic analysis of global, regional, and national causes of child mortality in 2012 identified prematurity and infections to be the major causes of neonatal deaths in India. The review,
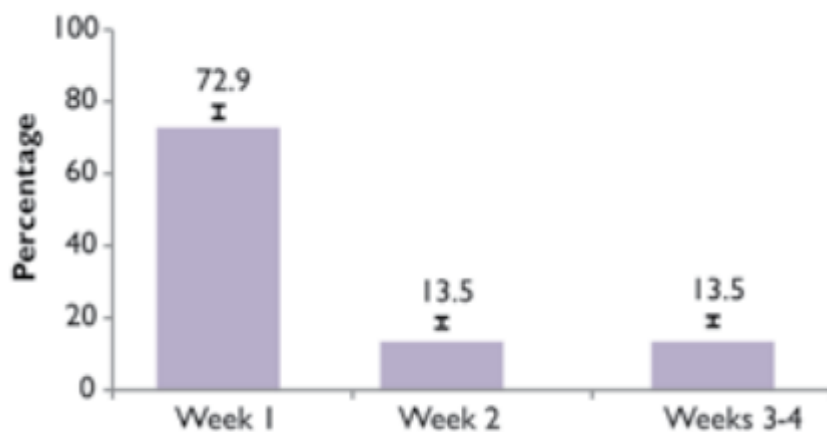
which included data from the Million Death Study from India , found perinatal asphyxia and malformations to be the other two significant causes of neonatal mortality (Figure 1.12). These findings are similar to the overall global pattern.

Timing of neonatal death

A pooled analysis of the data from three studies on the timing of neonatal deaths indicates that about three-fourths of all neonatal deaths occur in the first week of life. The first 24 hours account for more than one-third (36.9 percent) of the deaths that occur in the entire neonatal period.

#source liu 2012.

7 Recommendations

The recommendations can be organized into two sets. The first of these are concerned with the health system as a whole, which needs to be revamped and the second set is about community based interventions.

Interventions at the Health System level:-

Improve the quality of care in health facilities during birth and in the immediate postnatal period

Community level interventions:-

1.Implement and/or scale-up appropriate strategies to accelerate the decline in neonatal and early neonatal mortality rates:
2.Facilitate postnatal home visits/contacts with the mother-infant dyads in the second/ third
3.week of life in settings with high infection related deaths.
4.Address socioeconomic, gender, and rural-urban and other demographic differentials in NMR.
5.Identify causes of stillbirths; implement optimal strategies to reduce stillbirth and perinatal mortality rates.

Annerexres

Some on field pictures

tracked on field and refered for further treatment

Findings after treatment during follow up.

visinting the new building and deciding establishing labour room

Informed consent : I would like to thank you for taking the time to meet me. My name is Dr Siddharth Shandilya. I would like to talk to you about your knowledge on neonatal health. There are no direct benefits for you a part of this research, However your contribution will help to control no. of neonatal deaths and the department of health to to design and develop appropriate information resources to help communities effectively recognize signs and symptoms of weak neoborn and take appropriate action when suspecting any danger signs. The interview should take about 10 minutes. The responses will be kept confidential. This means that the interview responses will be shared only with the research team and we will ensure that any information that we include in our report does not identify you as the respondent. Remember, you don't have to talk about anything that you don't want to and you can end the interview at any time.

Do you have any questions about what I just explained?

Are you willing to participate in the interview?

Block	
Sub center	
Panchayat/Village	
Date of Interview	
Duration of interview (in minutes)	

REFERENCES

References

1. UNICEF, WHO, The World Bank, and United Nations. Levels & Trends in Child Mortality. Report 2013 - Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation. New York: 2013

2. Registrar General of India. Sample Registration System (SRS) statistical report 2012. New Delhi: 2013.

3. World Health Organization. WHO data; [cited 2014 Aug 20]) Available from http://data.un.org/Explorer.aspx?d=WHO

4. Registrar General of India. Census 2011. Provisional population totals of 2011; [cited 2014 Apr 14]. Available from http://www.censusindia.gov.in/2011-prov-results/PPT_2.html)

5. Registrar General of India. Sample Registration System (SRS) statistical report 2011. New Delhi: 2012.

6. Indian Institute of Population Studies. National Family Health Survey (NFHS-3) 2005-06. Mumbai: 2007.

7. Government of India: Planning Commission. Per capita net state domestic product at current prices [cited 2014 Apr 14]. Available from: http://planningcommission.gov.in/data/datatable/index.php?data=datatab]

8. Liu L, Johnson HL, Cousens S et al. Global, regional, and national causes of child mortality: an updated systematic analysis for 2010 with time trends since 2000. Lancet 2012;379:2151-61.

9. Bassani DG, Kumar R, Awasthi S et al. Causes of neonatal and child mortality in India: a nationally representative mortality survey. Lancet 2010;376:1853-60.

10. Baqui AH, Darmstadt GL, Williams EK et al. Rates, timing and causes of neonatal deaths in rural India: implications for neonatal health programmes. Bull World Health Organ 2006;84:706-13.

11. Bang AT, Reddy HM, Baitule SB et al. The incidence of morbidities in a cohort of neonates in rural Gadchiroli, India: seasonal and temporal variation and a hypothesis about prevention. J Perinatol 2005;25 Suppl 1:S18-28.

12. Srivastava NM, Awasthi S, Agarwal GG. Care-seeking behavior and out-of-pocket expenditure for sick newborns among urban poor in Lucknow, northern India: a prospective follow-up study. BMC Health Serv Res 2009;9:61.

13. Lee ACC, Katz J, Blencowe H et al. National and regional estimates of term and preterm babies born small for gestational age in 138 low-income and middle-income countries in 2010. Lancet Glob Health 2013; 1: e26–36.

14. National Neonatal Perinatal Database. Report for the year 2002–03. http://www.newbornwhocc.org/pdf/nnpd_report_2002-03.PDF (accessed June 15, 2014).

15. Bang AT, Bang RA, Baitule S et al. Burden of morbidities and the unmet need for health care in rural neonates--a prospective observational study in Gadchiroli, India. Indian Pediatr. 2001;38:952-65.

16. Paul VK, Sachdev HS, Mavalankar D et al. Reproductive health, and child health and nutrition in India: meeting the challenge. Lancet 2011;377:332-49

17. Chaudhari S, Bhalerao MR, Chitale A, Pandit AN, Nene U. Pune low birth weight study--a six year follow up. Indian Pediatr. 1999;36:669-76.

18. Daga SR, Daga AS, Dighole RV et al. Rural neonatal care: Dahanu experience. Indian Pediatr. 1992 Feb;29(2):189-93.

19. United Nations Children's Fund. Coverage Evaluation Survey 2009. New Delhi: 2009.

20. Cousens S, Blencowe H, Stanton C et al. National, regional, and worldwide estimates of stillbirth rates in 2009 with trends since 1995: a systematic analysis. Lancet 2011 Apr 16;377(9774):1319-30.

21. WHO. Trends in Maternal Mortality: 1990 to 2013: Estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division. Geneva: 2014

22. Registrar General of India. Special bulletin on maternal mortality in India 2010-12. New Delhi: 2013.