Summer Training at

SIHFW
Haryana, India
(April 3-June 2, 2014)

To Assess Full Immunization Coverage of Children Age Group 12-23 Months and Establish Reasons for Drop-Out BCG to Measles in Urban Slums of Faridabad District of Haryana

By
Rohit Sharma

Under the guidance of
Dr. Santosh Kumar

MBA- Hospital & Health Management (MBA-HM)
2013-2015

The IIHMR University, Jaipur
2014

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CERTIFICATE

This is to certify that Dr. Rohit Sharma has completed the summer training at **State Institute of Health and Family Welfare (SIHFW), Haryana** from 1.04.2014 to 31.05.2014 and has conducted the following projects under my personal guidance and supervision. All the data related to the study is the first hand data collected by him.

Projects:

1. A study to assess full Immunization Coverage of Children Age group 12-23 months and establish reasons for Drop-out BCG to Measles in Urban Slums of Faridabad district of Haryana.
2. A report on evaluation of PHC, Kot (according to the IPHS guidelines).
3. A report on evaluation of Sub-centre, Ramgarh (according to the IPHS guidelines).
4. An observation-based report on District hospital, Panchkula.

His approach to the project has been sincere, scientific and analytical. This work is partial fulfillment to the course requirements, recommended for the Post Graduate Diploma in Hospital and Health with specialization in Health Management.

I wish him all the success in future endeavors.

Col. (Dr.) Ashok Kaushik
Dean (Academic & Students Affairs)
IIHMR, Jaipur

Dr. Santosh Kumar
Associate professor
IIHMR, Jaipur

STATE INSTITUTE OF HEALTH & FAMILY WELFARE,
HARYANA

TO WHOM IT MAY CONCERN

This is to certify that **Dr. Rohit Sharma**, PGDHM (Health) student from IIHMR Jaipur, did his summer training under State Institute of Health & Family Welfare, Haryana on the topic ***"A study to assess full immunization coverage of children age group 12-23 months and establish reasons for drop-out of BCG to measles in urban slums of District Faridabad, Haryana"*** from **1st April 2014** to **31st May 2014.**

His approach has been sincere, scientific and analytical towards the study. I wish him good luck in all future endeavours.

Principal

Dated: 31-5-2014

SIHFW, Haryana

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Acknowledgement

At the beginning of the report I would like to express my special gratitude and appreciation Dr. Rakesh Gupta, Mission Director (NHM) Haryana for providing me opportunity to pursue my summer internship from State Institute of Health and Family Welfare (SIHFW), Haryana.

I would also like to acknowledge with much appreciation the crucial role of Dr. Usha Gupta, Principal (SIHFW) during the internship period for her time – to time guidance, monitoring and words of encouragement. This acknowledgement note would be not be complete without special thanks to Dr. Puneet Gupta (Consultant –Training, SIHFW Haryana) who despite of other pre-occupations and busy schedule was there to guide me throughout the period and whose stimulating suggestions and encouragement helped me complete my training.

I would like to thank Dr. Arpita Kapur (Faculty Admin & Child Health Training, SIHFW Haryana), Dr. Kamna Goel (Faculty Matenal Health Training, SIHFW Haryana) all the consultants in various departments and other staff members at SIHFW, Panchkula for being so helpful all the time and making this summer training project an unforgettable experience.

I would also like to extend my gratitude towards Dr. Anup Kumar, Dy. Civil Surgeon (Capacity Building & Training Faridabad, Haryana) and Dr. Ram Bhagat (DIO, Faridabad, Haryana) and all Medical Officers in the seven URCH centers which I have visited for their coordination and support throughout the field work.

I express my gratitude and respectful regards to my mentor Prof. Santosh Kumar, Institute of Health Management Research, Jaipur, for his able guidance and useful suggestions, which helped me in completing the project-work.

I would also like to thank my institution and faculty members without whom this project would have been a distant reality. My colleagues, Dr. Vidhi Tomar, Dr. Sakshi Sharma and Dr. Neha Sharma also hold a special mention here for supporting me throughout the summer internship training and making it a great learning experience.

Finally, and most importantly, I would like to thank God for allowing me to complete my project, my beloved parents for their blessings for the successful completion of this training.

Dr. Rohit Sharma
PGDHM-18
IIHMR, Jaipur

Preface

Summer internship is an integral part of the PGDHM currriculum.As a part of the course, students of the first year are required to undergo summer training at an organization to get in depth exposure of various departments in the organization to get a better understanding of the health care delivery system.

The major objectives of the summer training programs are as follows:

1) To better understand the existing health delivery system including public and private sectors.
2) To observe the implementation of various National Health Programmes at National/State/District levels.
3) To understand various functions of health systems by interactions with key stakeholders, policy makers, programme managers,academicians and researchers
4) To work on the project/task assigned by summer training organizations.

During my training period, I had an overview of various programmes undertaken in State Institute of Health and Family welfare including the current status of the programmes. I also carried out a cross-sectional Study on-

—To assess full Immunization Coverage of Children Age group 12-23 months and establish reasons for Drop-out BCG to Measles in Urban Slums of Faridabad district of Haryana"

I also had the opportunity to visit and assess services and infrastructure at District Hospital-Panchkula, Primary health centre-Kot and Sub-centre-Ramgarh In distict Pacnchkula Haryana.

Abbreviations

ANC	antenatal care
DEFF	design effect
DTP	diphtheria–tetanus–pertussis (vaccine)
HC	health centre
HepB	hepatitis B (vaccine)
Hib	Haemophilus influenzae type b (vaccine)
MMR	measles-mumps-rubella vaccine
MR	measles-rubella vaccine
NGO	non-governmental organization
NIDs	national immunization days
OPV	oral polio vaccine
OUT	outreach
PPS	probability proportional to size (sampling)
SIA	supplementary immunization activity/activities
ADS	Auto Disable Syringe
AEFI	Adverse Event Following Immunization
AFP	Acute Flaccid Paralysis
AIDS	Acquired Immune-Deficiency Syndrome
ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AVD	Alternate Vaccine Delivery
AWC	Anganwadi Center
AWW	Anganwadi Worker
BCG	Bacillus of Calmette and Guérin
BMO	Block Medical Officer
CBO	Community Based Organization
CHC	Community Health Center
CMO	Chief Medical Officer
CS	Civil Surgeon
DF	Deep Freezer
DH	District Hospital
DIO	District Immunization Officer
DPT	Diphtheria Pertussis and Tetanus
EPI	Expanded Program on Immunization
GoI	Government of India
HW	Health Worker
HepB	Hepatitis B
ICDS	Integrated Child Development Scheme
ID	Intra-Dermal
IEC	Information Education and Communication
ILR	Ice-Lined Refrigerator
IM	Intra-Muscular

IU	International Unit
JE	Japanese Encephalitis
MO	Medical Officer
MoHFW	Ministry of Health and Family Welfare
NFHS	National Family Health Survey
NGO	Non-Governmental Organization
NIS	National Immunization Schedule
NRHM	National Rural Health Mission
OPV	Oral Polio Vaccine
PHC	Primary Health Center
RI	Routine Immunization
RIMS	Routine Immunization Monitoring System
RIT	Regional Investigation Team
RNTCP	Revised National Tuberculosis Control Program
SC	Sub-Center
SHG	Self Help Group
SIO	State Immunization Officer
TB	Tuberculosis
TBA	Trained Birth Attendant
TSS	Toxic Shock Syndrome
TT	Tetanus Toxoid
UHC	Urban Health Center
UIP	Universal Immunization Program
VPD	Vaccine Preventable Disease
VAD	Vitamin A Deficiency
VVM	Vaccine Vial Monitor

ABOUT SIHFW

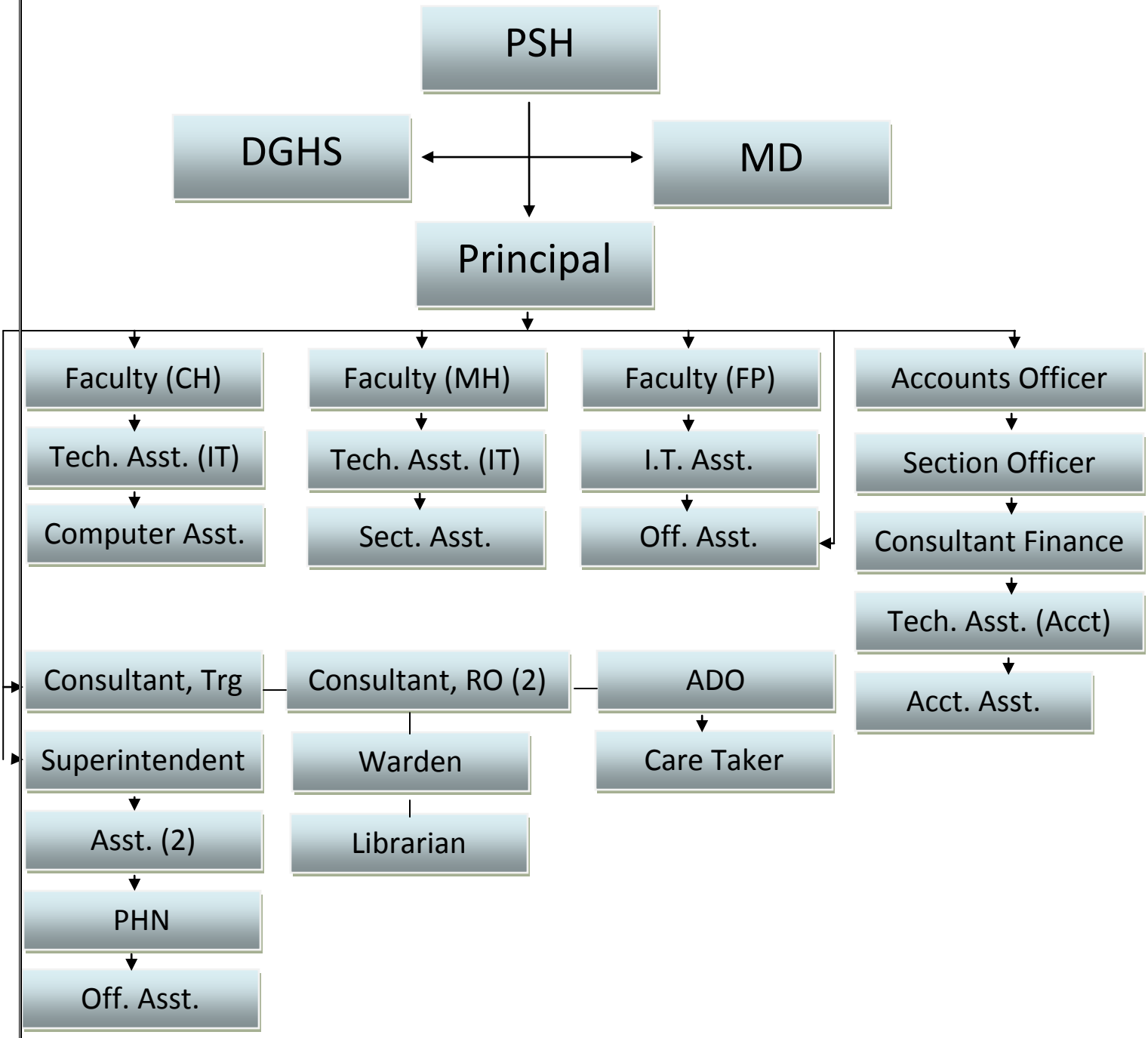
SIHFW, Haryana was established in 1992 and is the apex training institute of Department of Health & Family Welfare, Haryana. Since its inception, SIHFW has been envisaged as state level institution for improving the effectiveness of health care delivery system by imparting knowledge and skill based trainings to the medical and Para-medical health personnel at different levels.

- Apex Training Institute - The institute provides umbrella support to the following training institutions in the state:

Training Institute	Number	Location
Medical College	2(Govt) + 2 (Pvt)	Rohtak, Hisar, Ambala & Sonipat
State Level Public health training institutes	1	Gurgaon (HIPA)
Regional Institute of Health and Family Welfare	1	Rohtak
DTCs	21	One in each district headquarter
Nursing Training Centre (GNMTC)	3 (Govt) + 38 (Pvt)	Bhiwani, Hisar, Karnal.
MHPW(F)Training Centre (ANMTC)	8 (Govt) + 35 (Pvt)	Ambala, Rohtak, Narnaul, Faridabad, Gurgaon, Sirsa, Bhiwani, Mewat.
MPWTC	**2**	Sonepat, Rohtak

The Institute has active collaboration with various other institutes of national repute like PGI Chandigarh, All India Institute of Medical Sciences (AIIMS), Jawaharlal Nehru University (JNU), Haryana Institute of Public Administration (HIPA), Accounts Training Institute (ATI), Public Health Foundation of India (PHFI), IIHMR, Jaipur for sourcing faculties and sharing experiences etc. NIHFW and NHSRC have always been a source of inspiration for all the training, monitoring and evaluation activities and are guiding force in execution at all levels.

ORGANOGRAM OF THE INSTITUTE:



VISION OF SIHFW:

"THE VISION OF THE INSTITUTE IS TO DEVELOP, UPDATE AND REFRESH THE KNOWLEDGE AND SKILLS OF THE HEALTH CARE PERSONNEL IN THE STATE BY PROVIDING QUALITY TRAININGS AT STATE LEVEL AND ENSURING STANDARDIZED TRAININGS AT DISTRICT LEVEL FOLLOWING THE TRAINING NEEDS ASSESSMENT WITH CONTINUAL IMPROVEMENT"

SIHFW as a Society

To effectively monitor and systematically manage the training and infrastructure activities of the Institute, an effective accounting system – to process all aspects of the institute's financial performance and facilitate appropriate strategic decisions about the future has been developed and the Society was formally registered with the Registrar of Societies, Panchkula on November 11, 2010 in the name "Swasthya Prashikshan Kendra, Panchkula".

The Society functions and operates under the privileged guidance of the honorable Principal Secretary, Govt. of Haryana, Health, Medical Education & Ayurveda, who is the Chairman of its Governing Body. The Mission Director, NRHM is the Chairman of the Executive Committee. During this year, one Governing Body meetings and one Executive Committee meetings have been held in the FY 2012-13.

SIHFW as Collaborating Training Institute (CTI)

Collaborating Training Institutes (CTIs) were identified out of various State training institutes by NIHFW to achieve the goal of Comprehensive Training Plan (CTP). SIHFW, Haryana was recognized as CTI in year 2005 and is also supporting UT Chandigarh and State of J&K in implementing their CTPs apart from Haryana. SIHFW Haryana provides trainings to the health personnel on the basis of nominations received and also share pool of master trainers so as to impart trainings in their respective States. Under CTI scheme, NIHFW provides financial assistance to help the States in achieving CTP targets. Human resource is recruited as per the ToRs devised by NIHFW. SIHFW Haryana has recently recruited 1-Consultant Finance, 3 Consultant ROs and 4-Technical Assistants under CTI scheme. SIHFW received funds amounting ` 2,862,820 from NIHFW during the FY 2012-13 and has spent ` 2,618,429 till March, 2013.

Curing Clubfoot Pilot Project

SIHFW has taken the initiative to run a project on pilot basis at GH, Sector-6, Panchkula for which infrastructure and human resource will be generated.

In this context, a seminar was organized by SIHFW in which Orthopaedic Surgeons from Haryana and UT Chandigarh and Dy. Civil Surgeon (IBSY & School Health Programme) of State Haryana were sensitized about Clubfoot. The Seminar was conducted under the chairmanship of Dr. N.K. Arora, Director General Health Services, Haryana. Dr. P.N. Gupta from GMCH-32, Chandigarh and Dr. Nirmal Raj from PGIMER, Chandigarh were the trainer/faculty for the seminar. The seminar was attended by 29 Orthopaedic Surgeons, 14 Dy. Civil Surgeons and 2 Consultants from NRHM & SIHFW. PGIMER, Chandigarh were the trainer/faculty for the seminar. The seminar was attended by 29 Orthopaedic Surgeons, 14 Dy. Civil Surgeons and 2 Consultants from NRHM & SIHFW.

Assessment of ANMTC/GNMTC of the State

The biggest challenge for the provision of health care services is the acute shortage of health personnel and disproportionate skill mix of the existing staff. Adequate knowledge and skills of ANMs and Staff Nurses working in the public as well as private sector facilities is one of the major bottlenecks in delivering quality RMNCH services particularly at primary and secondary level health facilities. In this regard, SIHFW take the responsibility to reform the pre-service education and midwifery in Haryana and conduct a baseline assessment/supportive supervision visit on 28th Feb 2013 at all Government and certain selected private ANMTC/GNMTC (25 and 22 respectively) to assess the basic knowledge and skills of final year students of ANM and GNM courses and the basic infrastructure and school management as per the performance standards provided by GoI.

After a thorough analysis of the data compiled, a detailed analysis of the same was done and various gaps were identified with respect to infrastructure, training material and knowledge/skills of students and the same were discussed in the meeting on 26th March, 2013 with the stakeholders under the chairmanship of Dr. Rakesh Gupta, Mission Director, NRHM. All the Principal Tutors (Govt +Pvt.) ANMTC/GNMTC of Haryana (approx.130) were called for the meeting. DGMER, DGHS-II, Country Head JHPIEGO were also present.

Training given by SIHFW:

Maternal Health Trainings:

Under Maternal Health Programme, following trainings are being imparted by SIHFW, Panchkula at State as well as at district level: -

Sr. No.	Name of Training	Duration of the training	Category of trainees	Participants per batch
1.	Skilled Birth Attendant	21 days	Staff Nurse ANMs	4/PB
2.	Emergency Obstetric Care	16 weeks	Medical Officers	8 P/B
3.	Life Saving Anesthesia Skil	18 weeks	Medical Officers	4 P/B
4.	Basic Emergency Obstetric Care + PPIUD	10 days	Medical Officers	5 P/B
5.	Medical Termination of Pregnancy	12 days	Medical Officers	3 P/B
6.	RTI/STI	2 days	Medical Officers, Lab Technicians Staff Nurses	30 P/B

Child Health Trainings:

Following trainings are being imparted under Child Health Programme: -

Sr. No.	Name of Training	Duration of the training	Category of trainees	Participants per batch
1.	F-IMNCI	11 days	Medical Officers	16 P/B
2.	F-IMNCI	5 days	Medical Officers trained in IMNCI	16 P/B
3.	NSSK	2 days	Medical Officers Staff Nurses & ANMs	32 P/B
4.	IMNCI	8 days	ANMs	25 P/B
5.	HBPNC Supervisory Training	2 days	Medical Officers, DPM, ANM, BEE	30 P/B
6.	HBPNC Software Training	1 days	Information Assistants	20 P/B
7.	HBPNC BTF	2 days	Medical Officers Staff Nurses, LHVs	25 P/B
8.	Yashoda Supervisory Training	4 days	Yashoda, Yashoda Supervisor, SNCU Counselor	5-14 P/B

Family Planning Trainings

Following trainings are being imparted under Family Planning Programme: -

Sr. No.	Name of Training	Duration of the training	Category of trainees	Participants per batch
1.	Laparoscopic Sterilization	12 days	Medical Officers OTA, OTN	3 P/B
2.	Non Scalpel Vasectomy	5 days	Medical Officers	4 P/B
3.	Alternative Training Methodology in IUCD	6 days	Medical Officer Staff Nurses & ANMs	10 P/B
4.	Post Partum IUD	10 days	Medical Officers	5 P/B

MONITORING & EVALUATION

Monitoring & Evaluation is an important part of any program as it helps in calculating the outcome of the program as per the desired objective, but it is very important that the action taken for it should be evaluated in such a manner that all the pitfalls coming in the way of the success of that program should be cleared. Monitoring & Evaluation determines the relevance and fulfillment of objectives, as well as efficiency, effectiveness, impact and sustainability. They are as important as the other tools of the training. In continuation of the policy of the SIHFW keeping quality on top priority, institute has developed the different methods which are followed during the training and after the training to evaluate the entire schedule of training period, like session evaluation forms to assess the effectiveness of the training sessions, Pre & Post evaluation forms to assess the knowledge of the participants on first & last day of the training. While conducting evaluation test for sessions, the identity of the participants is concealed and is represented by a code.

Monitoring by Consultants & Faculty, SIHFW:

With availability of human resource, it became possible to carry out regular monitoring of the trainings at district level. The institute with its well qualified Faculty members and Consultants ensure a thorough check of all the trainings as per the guidelines issued by GOI. M&E visits are done on regular basis by the committee comprising consultants & faculty up-to the peripheral parts of Haryana, for on the spot monitoring check to ensure the quality & effectiveness of training programs.

E-course and distance learning course contact centre:

Haryana is one of the 8 states selected for the pilot course of the Professional Development Course (e-PDC) launched by NIHFW with the support of EU funded Institutional and Technical Strengthening (ITS)project. This course is meant for medical officers having an experience of more than 10 years to develop in them a sense of public health system, managerial skills and health communication.

Another course is E-learning Course for Program Managers in Program Management and Support Unit (PMSU) to strengthen public healthcare delivery system.

Apart from the above mentioned e-courses, SIHFW, Haryana also serves as a contact centre for 2 distance learning programs:

- Health And Family Welfare
- Hospital Administration

Introduction:

Immunization is a highly cost effective way of improving child survival in developing countries. In India, immunization services are offered free in public health facilities, but the immunization rate remains low. Immunization has been a focus of health care for several decades. Despite evidence of overall success in achieving high immunization rates in most parts of the developing world, the recent resurgence in examining inequities within countries or states in health services has pointed to gaps in access to immunization due to poverty, gender or other socio-economic characteristics.

Vaccines provide active immunity to the body by stimulating the immune system which produces antibodies against disease-producing organisms. Vaccines can be divided into two types, live attenuated and killed formulations. The live attenuated vaccines are derived from disease-causing viruses or bacteria that have been weakened under laboratory conditions. They replicate in a vaccinated individual, but because they are weak, they cause either no disease or only a mild form of the disease. Examples are BCG, Measles and the Oral Polio Vaccine. Inactivated or killed vaccines, on the other hand, are produced by viruses or bacteria and then inactivated with heat or chemicals. They cannot grow in a vaccinated individual and so cannot cause the disease. They are less effective than live vaccines, requiring multiple doses for full protection as well as booster doses to maintain immunity. Examples are whole-cell (pertussis); fractional protein based (diphtheria toxoid and tetanus toxoid) and recombinant (hepatitis B) vaccines. These vaccines vary in efficacy, according to the age at which the vaccine is administered and the number of doses given. For example, the measles vaccine is 85% effective at the age of 9 months and three doses of DPT provide over 95% protection against diphtheria, 80% against pertussis and 100% against tetanus.

In May 1974, the WHO officially launched a global immunization progaramme, known as expanded programme on immunization, known as expanded programme on immunization(EPI) less than five per cent of the world's children were immunized during their first year of life against six killer diseases — polio, diphtheria, tuberculosis, pertussis (whooping cough), measles and tetanus. Today, 83 percent of the world's children under one year of age have received these life-saving vaccinations. Increasing numbers of countries, including low-income countries, are adding new and under-used vaccines, like Hepatitis B, Haemophilus influenzae type b (Hib) and yellow fever vaccine to their routine infant immunization schedules.However, one-fifth of the world‘s children – about 22.4 million infants – are not immunized against these killer diseases. More than 70 percent of these children live in ten countries. An estimated 1.5 million children died in 2011 from vaccine-preventable diseases. The deadlines for eliminating maternal and neonatal tetanus and certification of global polio eradication by 2010 have not been met.

Our country‘s National Population Policy 2000 emphasizes on ―achievement of universal immunization of children against all vaccines preventable diseases" and has recognized it as one of the National Socio-Demographic Goals for 2010 along with ―prevention and control of

communicable disease." This is also re-emphasized in the mission document of the National Rural Health Mission (NRHM).
Efforts made by Government of India in striving towards its goals are further strengthened by various international and national agencies joining hands in this initiative. UNICEF an international organization is supporting Government of India's efforts and is primarily focusing on child care and immunization in this respect.
Various socio-cultural factors often make it difficult for vaccinators to access children. Some children are excluded from immunization because they come from minority groups or live in deeply impoverished remote areas, where health services may operate poorly. Some communities have religious or traditional beliefs that make them suspicious of immunization.
Haryana is dominantly an agricultural Sate and comprises of 21 districts. Immunization programme is on the priority list of the Govt. of Haryana, as a result of which there has been a sustained improvement in the evaluated coverage report.

- Immunization sessions are held on every Wednesday along with outreach session on every Thursday and fixed day fixed sites (PHCs/ CHCs/ Hospitals) sessions are also been conducted to cover all eligible children.
- Hepatitis 'B" immunization programme has already been implemented in districts Panchkula & Ambala. Similarly, JE immunization programme has already being implemented in district Ambala, Kaithal, Karnal, Kurukshetra, Panipat, and Yamuna Nagar. The state is doing efforts to reduce the drop-outs in order to achieve 100% immunization coverage. The IMR had declined from 73 (NFHS-I) to 42 (NFHS-III)

Faridabad have largest no. of slum population, almost 70-75% population is slum. Due to high industrialization and near to Delhi it attracts great amount of labour population to city. The study aims to estimate Full immunization coverage of BCG, 3 doses of OPV, DPT& Hep B, and measles among children in age group 12-23 months in Faridabad distt. Of Haryana. Also establish drop- out rate and reasons for drop-out BCG to Measles in urban slums.

Routine Immunization Programme

Routine Immunization is one of the most cost effective public health interventions and was first introduced in India in 1978. Yet, despite the concerted efforts of the government and other health agencies, a large proportion of vulnerable infants and children in India remain unimmunized.
India has the highest number (approximately 10 million) of such children in the world.
The National Family Health Survey (2005-06) reports that only 43.5% of children in India received all of their primary vaccines by 12 months of age. There is a wide variation among states, and states with poorer immunization coverage have higher child mortality rates.
Immunization Programme is one of the key interventions for protection of children from life threatening conditions, which are preventable. It is one of the largest immunization programme in the world and a major public health intervention in the country.
Immunization Programme in India was introduced in 1978 as Expanded Programme of Immunization (EPI)
The programme gained momentum in 1985 and was expanded as Universal Immunization Programme (UIP) to be implemented in phased manner to cover all districts in the country by 1989-90.

UIP become a part of Child Survival and Safe Motherhood Programme in 1992 Since, 1997, immunization activities have been an important component of National Reproductive and Child Health Programme and is currently one of the key areas under National Rural Health Mission (NHM) since 2005

Under the Universal Immunization Programme, Government of India is providing vaccination to prevent seven vaccine preventable diseases i.e.

- Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B

The vaccination schedule under the UIP is:

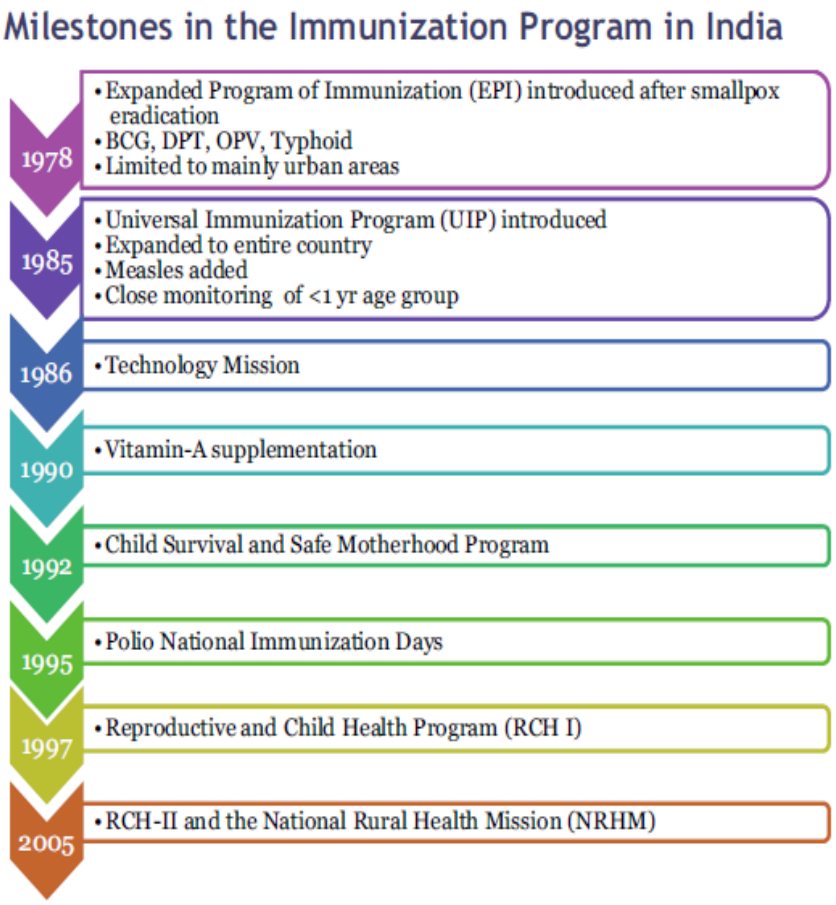
- BCG (Bacillus Calmette Guerin) 1 dose at Birth (upto 1 year if not given earlier)
- DPT (Diphtheria, Pertussis and Tetanus Toxoid) 5 doses; Three primary doses at 6,10,14 weeks and two booster doses at 16-24 months & 5 Years of age
- OPV (Oral Polio Vaccine) 5 doses; 0 dose at birth, three primary doses at 6,10 and 14 weeks and one booster dose at 16-24 months of age
- Hepatitis B vaccine 4 doses; 0 dose within 24 hours of birth and three doses at 6, 10 and 14 weeks of age.
- Measles 2 doses; first dose at 9-12 months and second dose at 16-24months of age
- TT (Tetanus Toxoid) 2 doses at 10 years and 16 years of age
- TT – for pregnant woman two doses or one dose if previously vaccinated within 3 Year

In addition, Japanese Encephalitis (JE vaccine) vaccine was introduced in 112 endemic districts in campaign mode in phased manner from 2006-10 and has now been incorporated under the Routine Immunization Programme

~26 million new born are targeted for vaccination each year through ~9 million immunization session held annually

There are ~25,000 cold chain points in the country to store vaccine under required temperature

Routine Immunization is one of the most cost effective public health interventions and was first introduced in India in 1978.



Pentavalent vaccine in Haryana

Vaccination is one of the main strategies for averting both morbidity and mortality. As per the District Level Health Survey – III (DLHS-III), full immunization coverage of the State is 59.06%. . After the successful launch in Tamil Nadu and Kerala in 2011, the pentavalent vaccine was launched out in Haryana.

By introducing Pentavalent in Haryana, State is reinforcing the commitment to decrease the morbidity and mortality caused by Vaccine Preventable Diseases. The Pentavalent contains vaccine to prevent against 5 diseases which are Diphtheria, Pertusus, Tetanus, Hepatitis B and Haemophilus influenza type B (Hib).

The introduction of Haemophilus influenza type B (Hib) vaccine in Universal Immunization Programme (UIP) in Haryana would prevent the morbidity and mortality associated with Hib Pneumonia disease and will reduce the Infant Mortality Rate (IMR) in Haryana. Total three doses are given at the age of 1½, 2½ and 3½ months. Haryana will be the first state in North India and overall 3rd state after Kerala and Tamil Nadu to introduce Pentavalent vaccine in Routine Immunization. The Pentavalent launch was done by Hon'ble Chief Minister on 21.12.2012 at 10.30 am at Haryana Niwas, Chandigarh.

Immunization schedule:

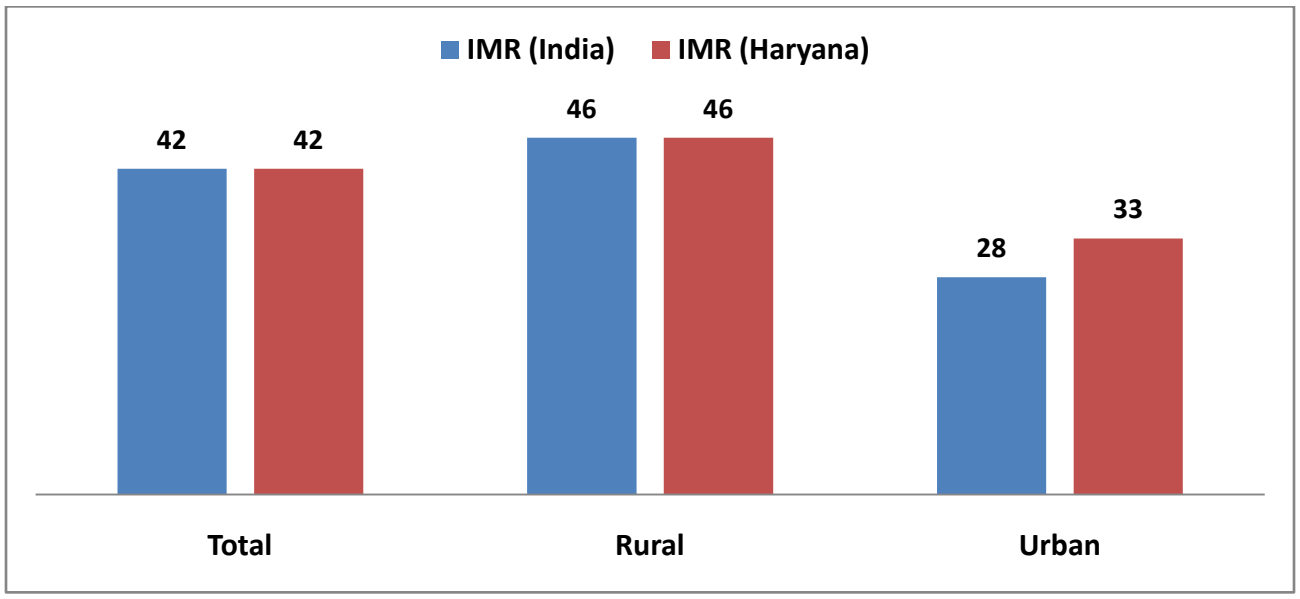
Age	Before Introduction of Pentavalent Vaccine	After introduction of Pentavalent Vaccine
At birth	BCG, OPV-0, Hep B- Birth Dose	BCG, OPV-0, Hep B- Birth Dose
6 weeks	OPV-1, DPT-1, Hep B 1st Dose	OPV-1, Pentavalent-1
10 weeks	OPV -2, DPT-2, Hep B 2nd Dose	OPV 2, Pentavalent-2
14weeks	OPV -3, DPT-3, Hep B 3rd Dose	OPV 3, Pentavalent-3
16-24 months	DPT-Booster, OPV-Booster	DPT Booster, OPV-Booster
5 year	DPT Bosster2	DPT Booster2
10 year	TT	TT
16 year	TT	TT

Situational analysis of Haryana:

***Table 1*: Comparison of Infant mortality rates (IMR) of Haryana with India:** (source SRS Bulletin September 2013)

	IMR (India)	IMR (Haryana)
Total	42	42
Rural	46	46
Urban	28	33

***Graph 1:* Comparison of Infant mortality rates (IMR) of Haryana with India:** (source SRS Bulletin September 2013)



- In rural Haryana Infant mortality rate (IMR) is same as to Infant mortality rate rural India where as IMR of urban Haryana is higher than urban India.

Table 2: **Key Indicators for Haryana from NFHS-3:** (source NFHS-3 REPORT Haryana)

Column1	NFHS-3 (2005-06) Total	Urban	Rural
Children 12-23 months fully immunized (BCG, measles, and 3 doses each of polio/DPT) (%)	65.3	82.2	60.3
Children 12-23 months who have received BCG (%)	84.9	88.9	83.7
Children 12-23 months who have received 3 doses of polio vaccine (%)	82.8	88.9	81.0
Children 12-23 months who have received 3 doses of DPT vaccine (%)	74.2	84.4	71.2
Children 12-23 months who have received measles vaccine (%)	75.5	84.4	72.8

Graph 2: **Key Indicators for Haryana from NFHS-3:** (source NFHS-3 REPORT Haryana)

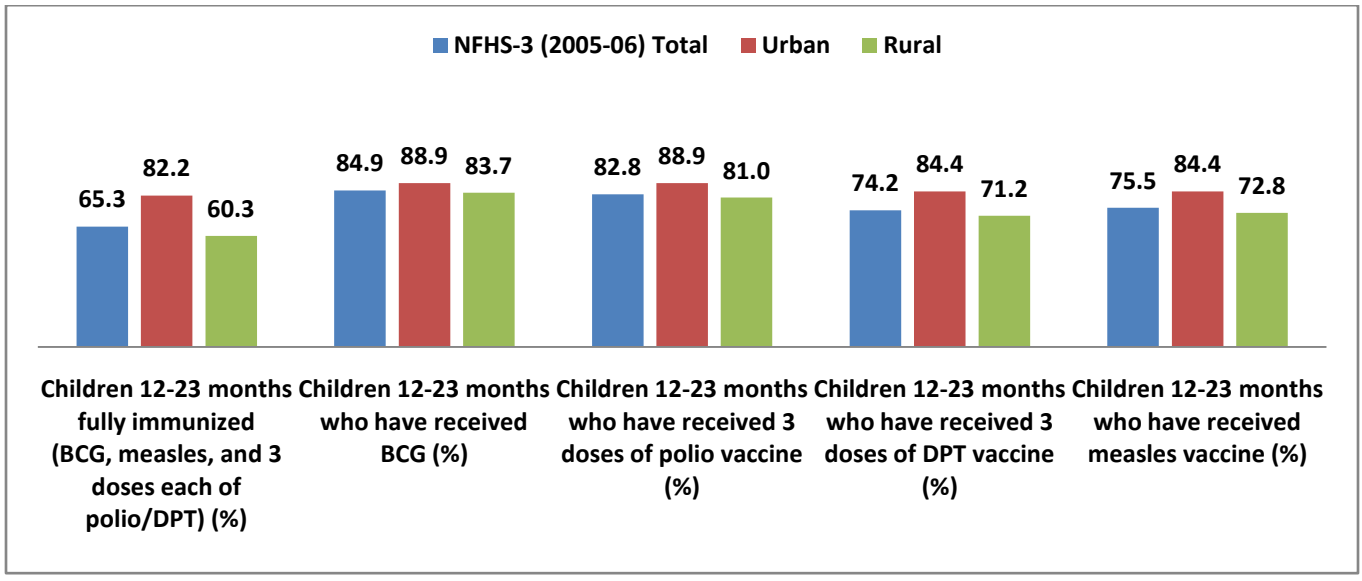
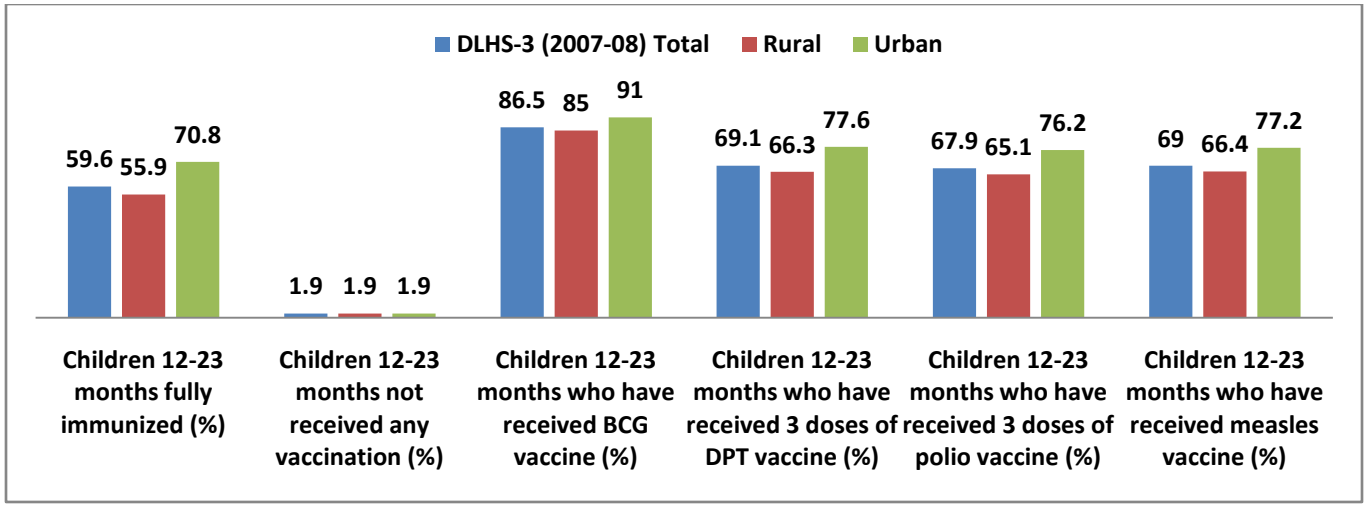


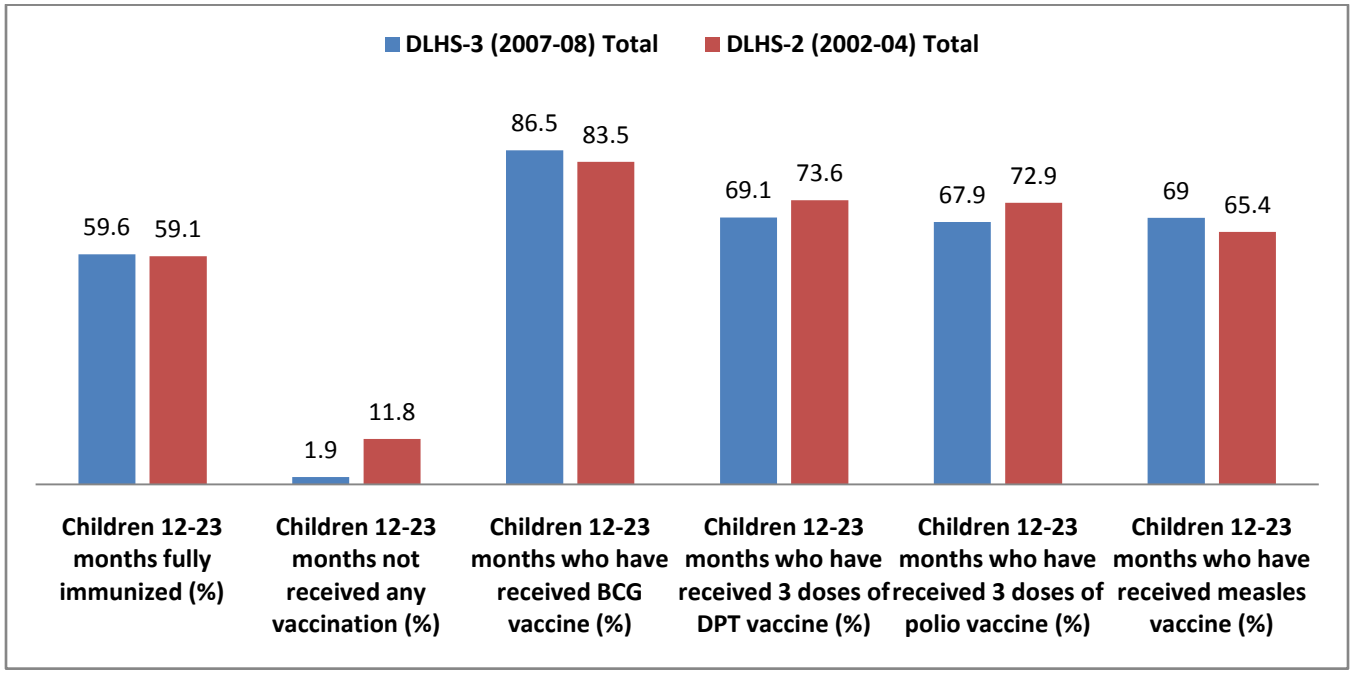
***Table 3:*Key Indicators for Haryana from DLHS-3:** (source DLHS-3 REPORT Haryana)

Column1	DLHS-3 (2007-08) Total	Rural	Urban	DLHS-2 (2002-04) Total	Rural	Urban
Children 12-23 months fully immunized (%)	59.6	55.9	70.8	59.1	56.7	66.3
Children 12-23 months not received any vaccination (%)	1.9	1.9	1.9	11.8	12.4	10.3
Children 12-23 months who have received BCG vaccine (%)	86.5	85	91	83.5	82.5	86.1
Children 12-23 months who have received 3 doses of DPT vaccine (%)	69.1	66.3	77.6	73.6	71.6	78.6
Children 12-23 months who have received 3 doses of polio vaccine (%)	67.9	65.1	76.2	72.9	70.8	77.9
Children 12-23 months who have received measles vaccine (%)	69	66.4	77.2	65.4	63.5	70

Graph 3a: **Comparison of different vaccines coverage acc. to DLHS-3**

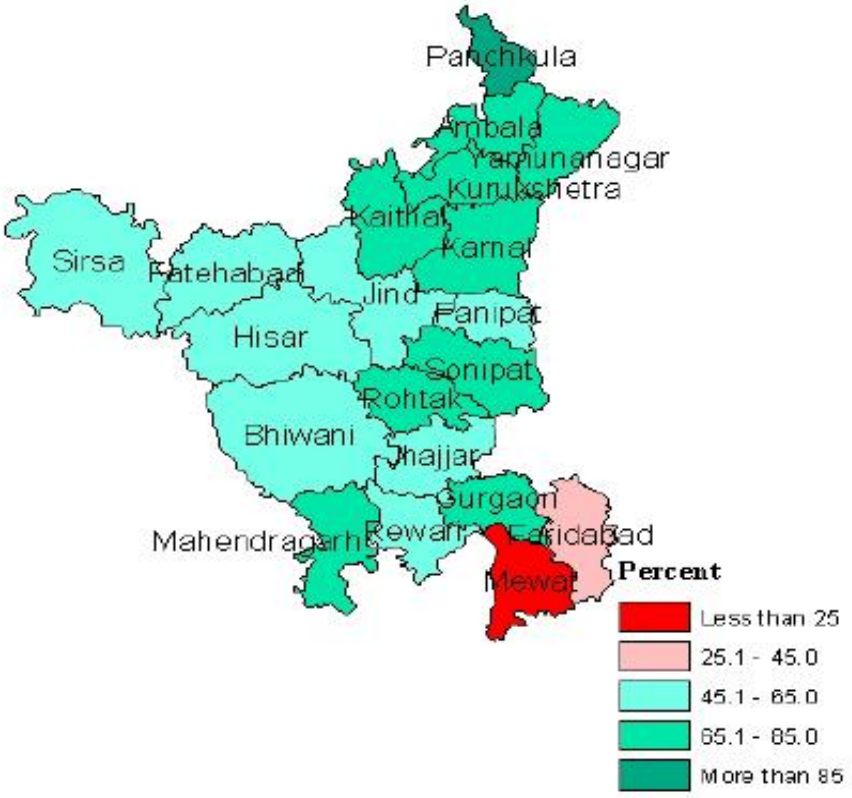


Graph 3b: Comparison immunization coverage in DLHS-3 & DLHS-2



Full immunization children (12-23 months): (source DLHS-3 REPORT Haryana)

(Map of Haryana state showing Full immunization coverage)



Review of Literature:

In the last 50 years, India's population grew two and one-half times, but urban India grew nearly five times. [1] Most of this growth is due to migration, leading to mushrooming of slums. With the rapid growth of big cities, an impending threat of outbreak of vaccine-preventable diseases always exists due to the high population density, continuous influx of a new pool of infective agents with the immigrating population and poor coverage of primary immunization in the urban slums.[2]

Haryana being an agricultural state have majority of the population in rural area but now due to migration and urbanization there is increase in urban population .As for as immunization in urban area is concerned that really need some evidence based intervention to cover hundred percent immunization.[3]

In view of this, it is necessary to understand the dynamics of utilization of immunization services by the community. Hence the present study was undertaken to find out the various reasons responsible for the suboptimal coverage of immunization in the urban slums of completely immunized.[4]

Coverage of immunization among the urban slum area is good but still it has pockets of non-immunization.[5] The various reasons main reasons for dropout or un-immunization of children were ignorance in about 64% and lack of information regarding time, place and schedule (21%)[6]

Despite all the efforts taken by the Government of India and international agencies, the proportion of unimmunized and partially immunized children remain quite high and we lag far behind the National socio-demographic goal of 85% coverage of all the vaccines. *(National Population policy 2000, Ministry of Health & Family Welfare, New Delhi. Government of India. 2000.)* There is an urgent need to increase the coverage of UIP (Universal Immunization Programme) vaccines. This necessitates the information on the existing knowledge, attitude and practices of the society with respect to the different aspects of immunization. This study therefore provides us an important insight into the existing level of awareness among the people and the areas that need attention.

Haryana being an agricultural state have majority of the population in rural area but now due to migration and urbanization there is increase in urban population .As for as immunization in urban area is concerned that really need some evidence based intervention to cover hundred percent immunization.[3]

The United Nations defines slums as ―communities characterized by insecure residential status, poor structural quality of housing, overcrowding, and inadequate access to safe water, sanitation, and other infrastructure" (UN---HABITAT, 2003). The majority of urban growth has occurred in developing countries that are already struggling to meet the basic needs of their populations, there are enough physicians, drugs and facilities to meet the demand of the large number of patients. Because slums are often centers of high mobility and migration, a continuous influx of new pools of infectious agents— combined with high population density— puts slum dwellers at high risk of contracting communicable diseases (Agarwal, Sangar & Ghei, 2005).

Community health infra structure has been shown to be important correlate of health outcomes in other developing countries. In the India context, two studies have examined the role of health infrastructure (Ashlesha Datar, Amab Mukherji and Neeraj Sood). They examined the role of rural health infrastructure and village health personnel in expanding immunization coverage for VPDs. Our approach differed from prior work in this area in that we included detailed measures of village health infrastructure and personnel that accounted for the wide variations in health care

capabilities across facilities and personnel. Our measures also allowed us to examine the role of proximity of health infrastructure for immunization coverage.
In a study done by Bhanwar Singh, Vashisht BM, Meely Panda and Pardeep Khanna in Rohtak (STUDY TO FIND OUT THE COVERAGE EVALUATION AND DROP-OUT RATES OF DIFFERENT VACCINES IN AN URBAN AREA OF ROHTAK CITY IN HARYANA). A total of 213 children of age group 12-23 months and 210 women who had given birth to a child in the last one year period preceding the interview for the present study were studied. BCG coverage (93.9%) in this study was found to be less than DPT1 (96.2%), this might be due to improper recall by the mothers as only 96 (45.1%) of mothers had immunization cards. Low coverage of measles vaccine (84.4%) compared to other vaccines reflects that special campaign needs to be organized for measles. Drop-outs which was 9% for BCG to Measles and 3.4% for DPT1to DPT3, though it was less as compared to CES-2009 where it was 15 % & 13 % respectively.

Objectives of the study:

General Objectives:

- To assess the Immunization coverage of children age group 12-23 months in Urban slums of Faridabad district of Haryana.

Specific Objectives:

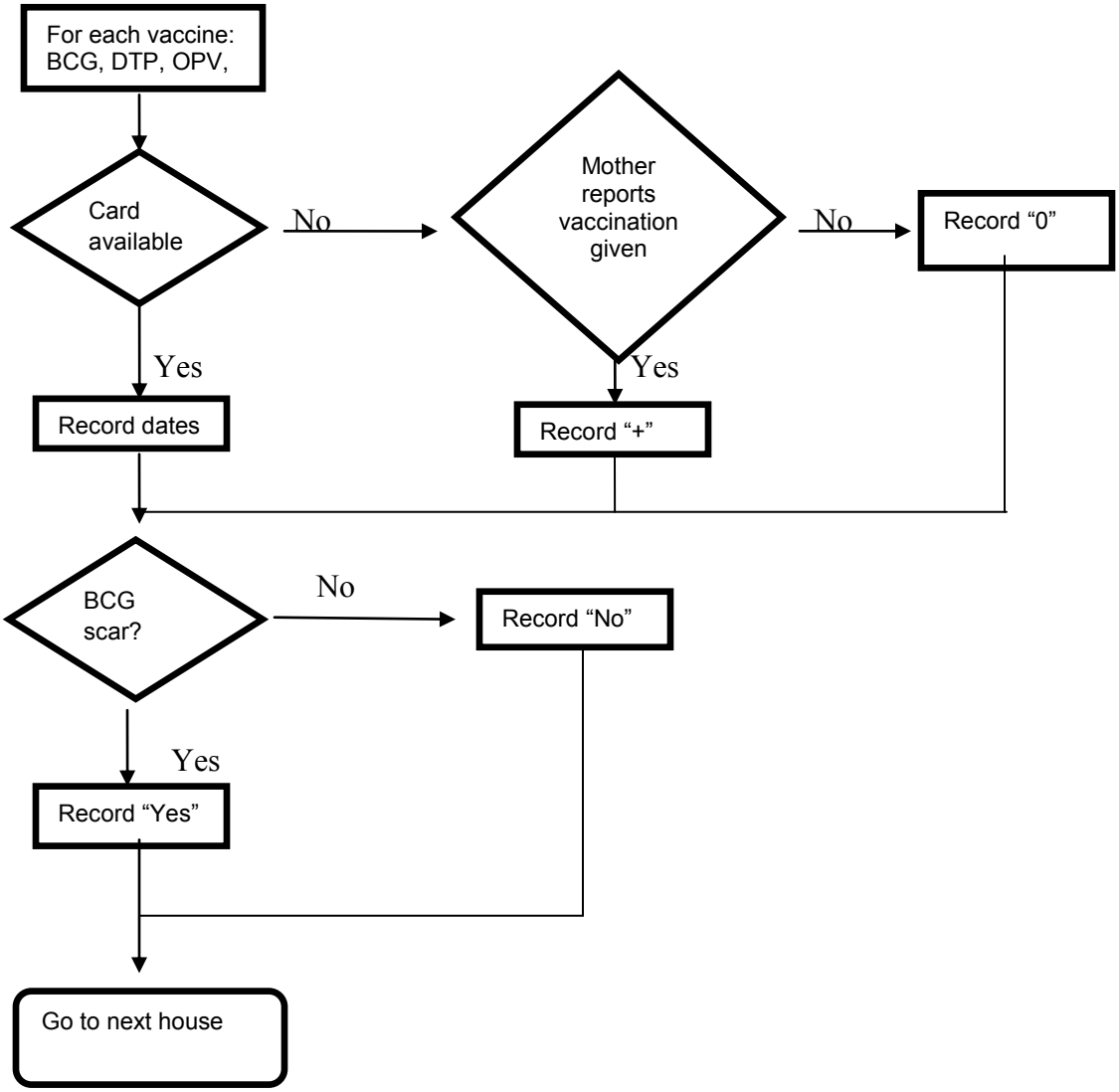
- To determine the Drop-out rates of immunization in urban slums of Faridabad district of Haryana.
- To establish reasons for Drop- out BCG to Measles in Urban slums of Faridabad district of Haryana.

Methodology:

This study was conducted to assess Full immunization coverage of childen age group 12-23 months in Faridabad district of Haryana.

- **Study area :** 30 clusters of the urban slums of the Faridabad.
- **Study design:**Cross-sectional study.
- **Study period:** 1st April 2014 to 31st May 2014
- **Study population:** 7children per urban slum cluster of age group 12-23 months whose mother or other caretaker is available at home.
- **Inclusion Criteria:** A child of 12-23 months of age group.
- **Sampling frame:** Mother of the 12-23 months children.
- **Sampling Size:** 210 children of 12-23 months age group.
- **Study tool:** A pre-designed, pre-tested semi structured questionnaire
- **Sampling frame:** Mothers of the 12-23 months children.
- **Data collection Techniques:** Questionnaire schedule for Mothers of children age group 12-23 months

Data collection model:



- **Sampling technique:** WHO 30 cluster sampling, a two stage sampling technique is used.
- **Data Analysis:** MS Excel 2007.

Operational Definitions:

- **Immunization coverage:** Proportion of individuals in the target population who are vaccinated.

- **Fully immunized child: (**Full immunization (i.e. received one dose of BCG, three doses of DPT, and OPV each and one dose of Measles before one year of age) gives a child the best chance for a healthy life.) Usually, this is a child who has received doses of the ~~–s~~tandard six" antigens – BCG, diphtheria–tetanus–pertussis (DTP) (3 doses), polio (3 doses), and measles vaccines. In countries at risk for yellow fever, this should be included. New vaccines (Hepatitis B and Haemophilus influenzae type b [Hib] are not usually included in this definition; in some countries, BCG is excluded from this definition.

- **Partially Immunized child:** A child who has received one or more vaccination but not all the vaccination according to UIP schedule

- **Non-Immunized child:** A child of age group 12-23 months who has not received any vaccination till date.

- **Drop-out:** Children who received one or more vaccination but do not return for subsequent immunization.

- **AEFI:** An Adverse Event Following Immunization (AEFI) is a medical incident that takes place after an immunization, causes concern, and is believed to be caused by immunization. An AEFI may occur because of program error or sensitivity to vaccine or it may occur coincidentally. Whatever the cause, AEFIs must be taken seriously and the management must be rapid and professional.

- **Urban Area:** Census of India 2001 defines urban area as:
  (a) All areas with a municipality, corporation, cantonment board or notified area committee etc.
  (b) A place satisfying the following three criteria simultaneously: a minimum population of 5000; at least 75% of male working population engaged in non agricultural pursuits and a density of population of at least 400 per sq. km (1000 per sq. mile)
- **Slums:**
  Definition of slum by UN Habitat: Households as a group of individuals living under the same roof in an urban area.
  A slum is an area that combines to various extents the following characteristics-
  • Inadequate access to safe water
  • Inadequate access to sanitation and other infrastructure
  • Poor structural quality of housing
  • Overcrowding
  • Insecure residential status

Data collection Technique:

The method was adapted from WHO 30 cluster sampling, a two stage sampling technique involving a random selection of clusters based on probability proportional to size (PPS) and then a random selection of households in the selected clusters. Using a table of cumulative population and attributed numbers, clusters were selected based on population proportional to size. The sampling interval was determined by dividing the total population by 30. The sampling unit was a cluster. In each cluster selected, children were selected from household to reach the required sample size of 210 children.

Brief description of the 30 by 7 cluster sample used to assess immunization coverage:

The 30 by 7 cluster sample was developed by WHO in 1978. The goal of this sampling design was to estimate immunization coverage to within ±10 percentage points of the true proportion, with 95% confidence. The 30 by 7 cluster survey is a two-stage cluster sample. Before the sampling begins, the population needs to be divided into a complete set of non-overlapping subpopulations, usually defined by geographic or political boundaries. These subpopulations are called clusters. In the first stage, 30 of these clusters are sampled with probability proportionate to the size (PPS) of the population in the cluster. Sampling with probability proportionate to size allows the larger clusters to have a greater chance of being selected. The clusters are sampled with replacement, such that each cluster can be included in the sample more than once. In the second stage of sampling, seven subjects are selected within each cluster. Although the sampling unit is the individual subject, the sampling is conducted on the household level. The subjects are chosen by selecting a household and every eligible subject in the household is included in the sample. With traditional PPS cluster sampling, each of the seven subjects would be randomly selected. With the 30 by 7 method, however, only the first household is randomly selected (by a variety of different methods), and all eligible subjects in that household are sampled. After the first household is visited, the surveyor moves to the ~~"n~~ext" household, which is defined as the one whose front door is closest to the one just visited. This process continues until all seven eligible subjects are found. Not all of the first seven households visited will necessarily have an eligible subject; therefore more than seven households may have to be visited. Also less than seven households may need to be selected if there is more than one eligible subject per household. The information from each cluster is then combined to obtain an overall estimate of immunization coverage

First stage:

At the first stage, a list of slum areas with their population was taken from all the 17 urban RCH centres of Faridabad district.

Steps for cluster selection:

- Cumulative population all the slum areas to be evaluated was calculated.
- Sampling interval was selected calculated by dividing the total population (755023) to be surveyed by total number of clusters (30). The sampling interval for colony under 17 Urban RCH Centers of Faridabad district, for 30 clusters was 25167.
- **Sampling interval= Total population to be surveyed/ no. of clusters**

- A random number was selected which was less than or equal to the sampling interval (25167). [Number must have same number of digit as the sampling interval.]

- Area which have equal or exceeding the random number was selected as 1st cluster. Then this (random number + 25167) helps to select next clusters and so on all the clusters were selected.

  Cluster 2 population ≥ random number + 25167,
  Cluster (3, 4…..) population ≥ Sampling interval (25167) + running total.

- If a single Urban RCH center contain more than one cluster, the clusters did not overlap and were individually identifiable

Second stage:
In this 7 children were selected from each selected cluster.

Description of selection:

- In the selected cluster we reached the center of the cluster, a pen was rotated on a clipboard.

- The tip of pen was followed for selection of the street.

- Left and right had chosen by tossing a coin.

- 1st house was randomly selected by counting the total houses in the street, if the all houses were in the single digit them last number of the currency note selected or if in two digits then last two numbers of currency note were selected.

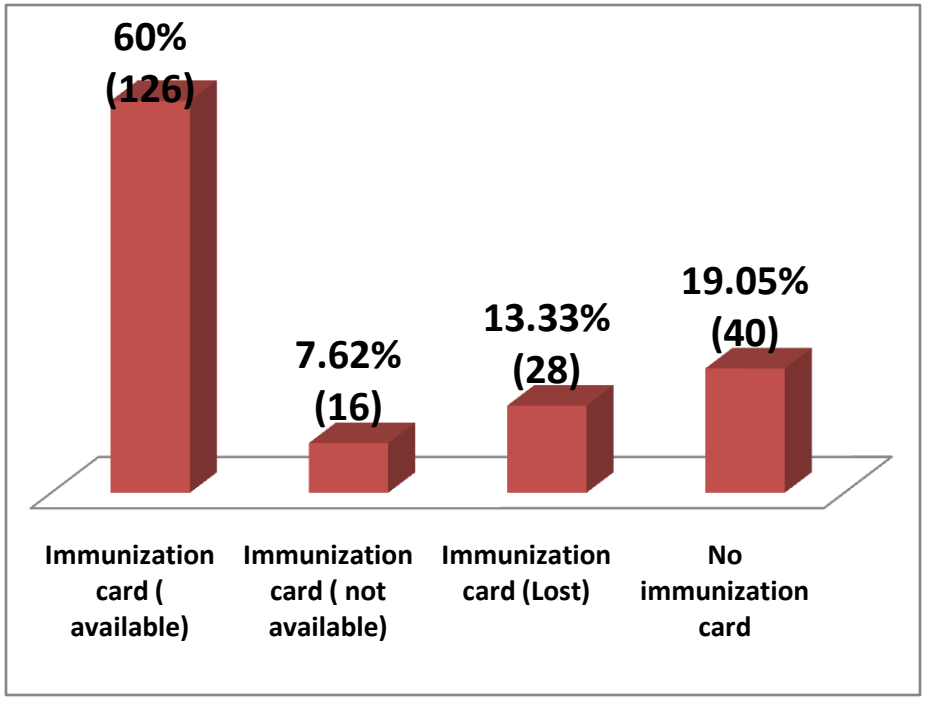
- After the first household is visited, the surveyor moves to the ~~"n~~ext" household, which is defined as the one whose front door is closest to the one just visited.

Results

In the present study, out of the 210 children covered of the age group 12 - 23 months.

***Table 4*: Availability of immunization cards.**

Immunization card (available)	60% (126)
Immunization card (not available)	7.62% (16)
Immunization card (Lost)	13.33% (28)
No immunization card	19.05% (40)



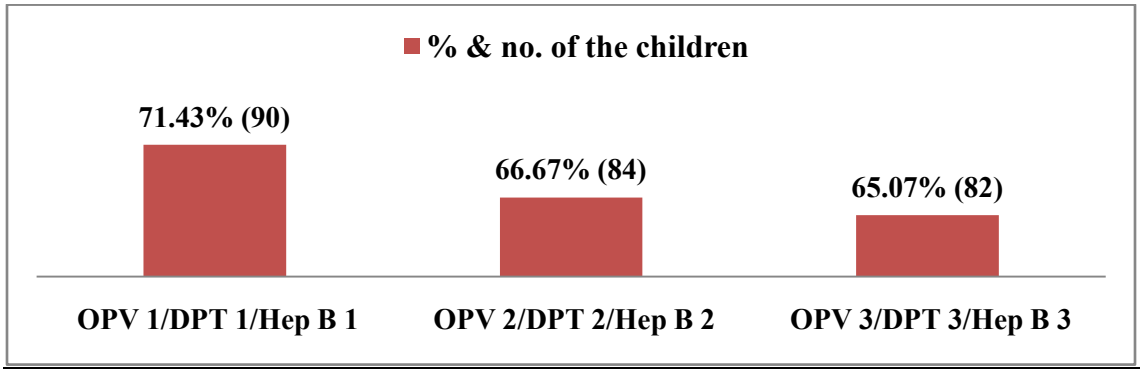
***Graph 4:* Availability of immunization cards.**

- Out of these 126 children who have their immunization card, it was found that in some cases OPV/DPT/Hep B vaccine was administered and in some cases Pentavalent vaccine was administered.

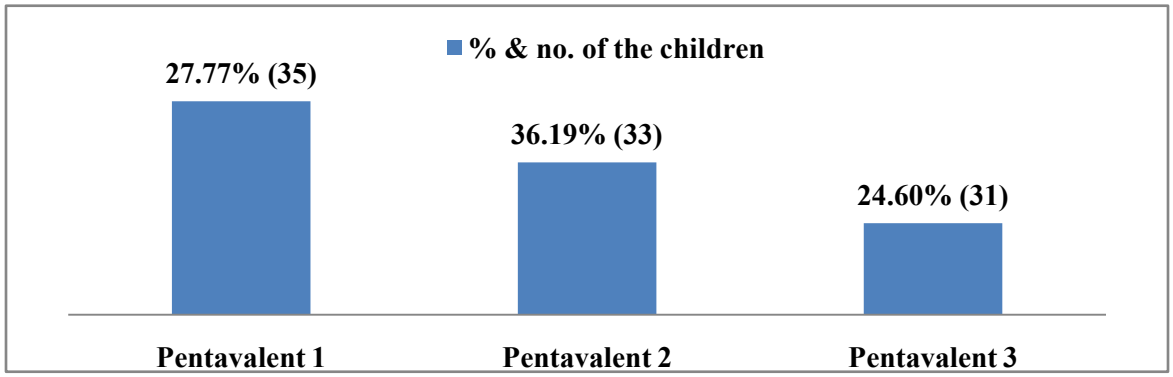
***Table 5:* Distribution of Pentavalent vaccine and normal (**OPV/DPT/Hep B vaccine)

Vaccine	**% & no. of the children**	**Vaccine**	**% & no. of the children**	**% children with none of the OPV/DPT/Hep B or Pentavalent**
OPV 1/DPT 1/Hep B 1	71.43% (90)	**Pentavalent 1**	27.77% (35)	0.8% (1)
OPV 2/DPT 2/Hep B 2	66.67% (84)	**Pentavalent 2**	26.19% (33)	7.14% (9)
OPV 3/DPT 3/Hep B 3	65.07% (82)	**Pentavalent 3**	24.60% (31)	10.31% (13)

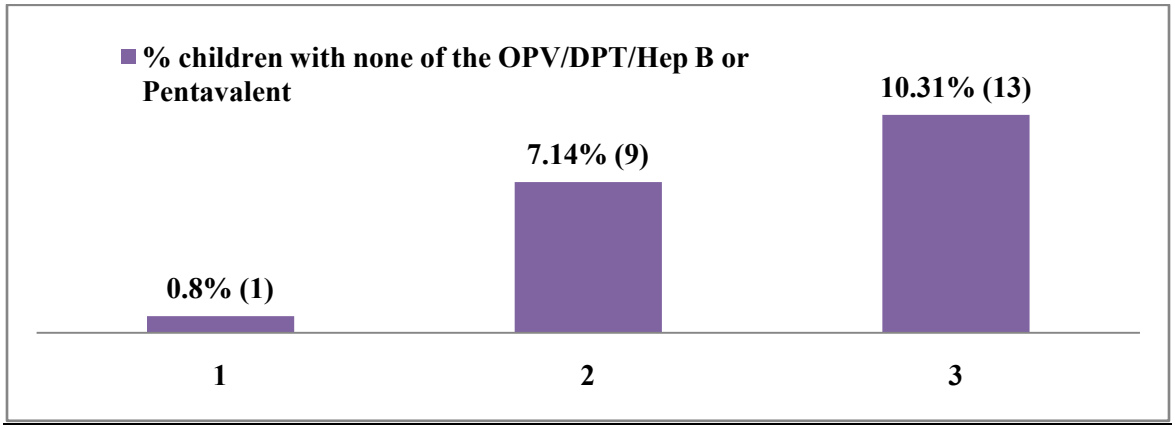
Graph 5a: **Coverage comparison of normal (OPV/DPT/Hep B vaccine) among children who have their immunization cards**



Graph 5b: **Coverage comparison of Pentavalent vaccine among children who have their immunization cards**



Graph 5c: **Coverage comparison of none of the two above mentioned among children who have their immunization cards**



- **Percentage of immunization among 12-23 months children in Faridabad district of Haryana (n=210)**

Graph 6: **Immunization status**

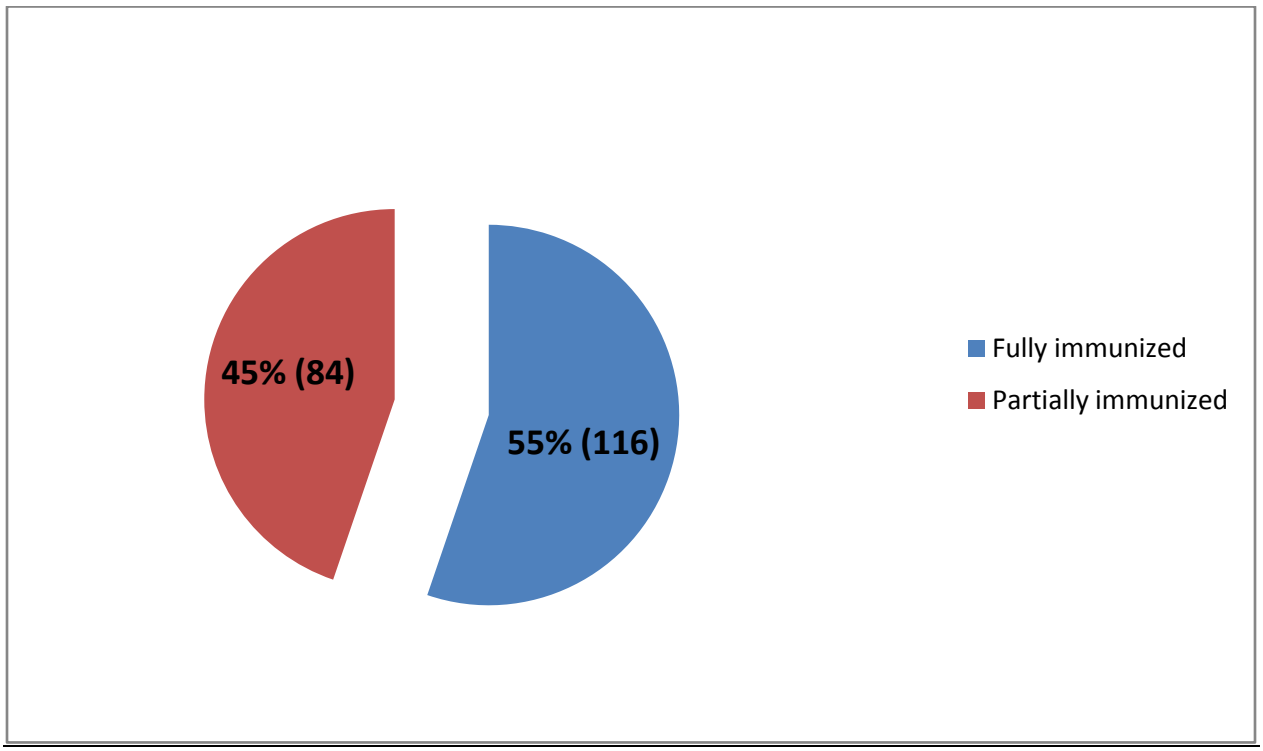


***Table 6*: Immunization status**

Fully Immunized	116
Partially Immunized	4

- Out of 210 children 55% (n=116) were Fully Immunized
- Out of 210 children 45% (n=84) were Partially Immunized

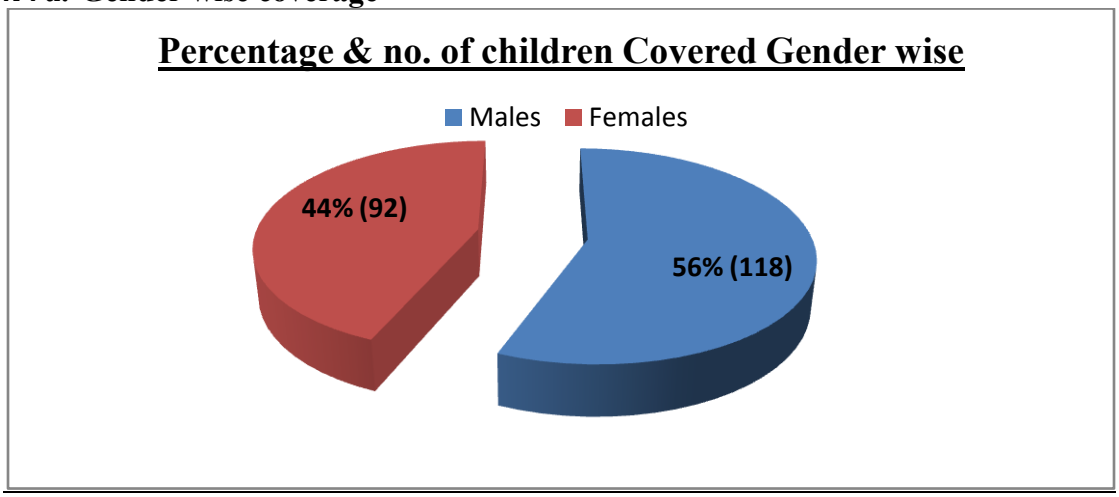
** There was not found any un- immunized child because every child received OPV 99.5% (n=209) almost.*

- **Out of total sample size of 12-23 months children Gender wise Percentage (n = 210)**

Table7: **Gender wise coverage & immunization status**

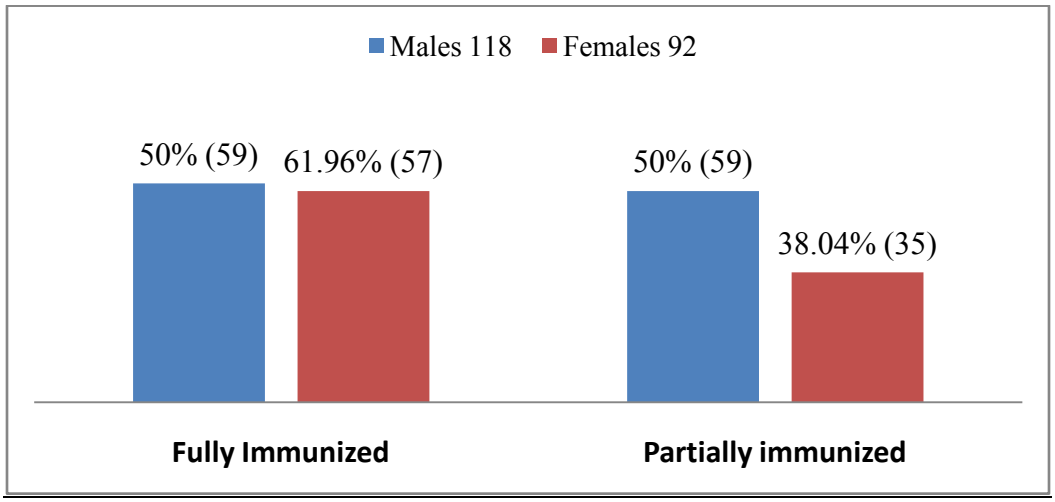
		Fully Immunized	Partially immunized
Males	118	59	57
Females	92	57	35

Graph 7a: **Gender wise coverage**



- **Gender wise Percentage of immunization status among 12-23 months children in Faridabad district of Haryana (n=210)**

Graph 7b: **Gender wise Immunization status**



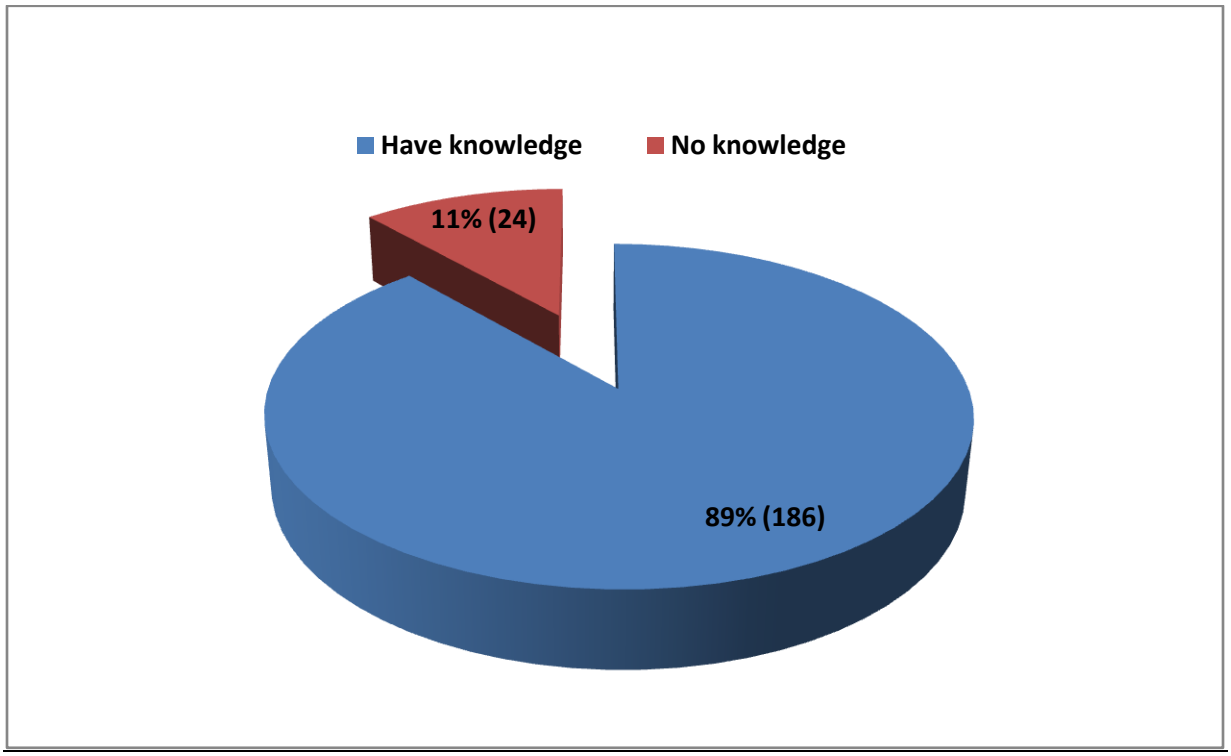
- Out of 118 male children 50% (n=59) were Fully Immunized and 50% (n=59) were partially immunized.
- Out of 92 female children 61.96% (n=57) were fully immunized and 38.04% (n=35) were Partially Immunized.

- **Percentage of Mother's of 12-23 months children who have knowledge about immunization in Faridabad district of Haryana (n=210)**

Table 8: **Immunization knowledge among mothers of children & immunization status**

		Fully Immunized	Partially immunized
Have knowledge	186	116	70
No knowledge	24	0	24

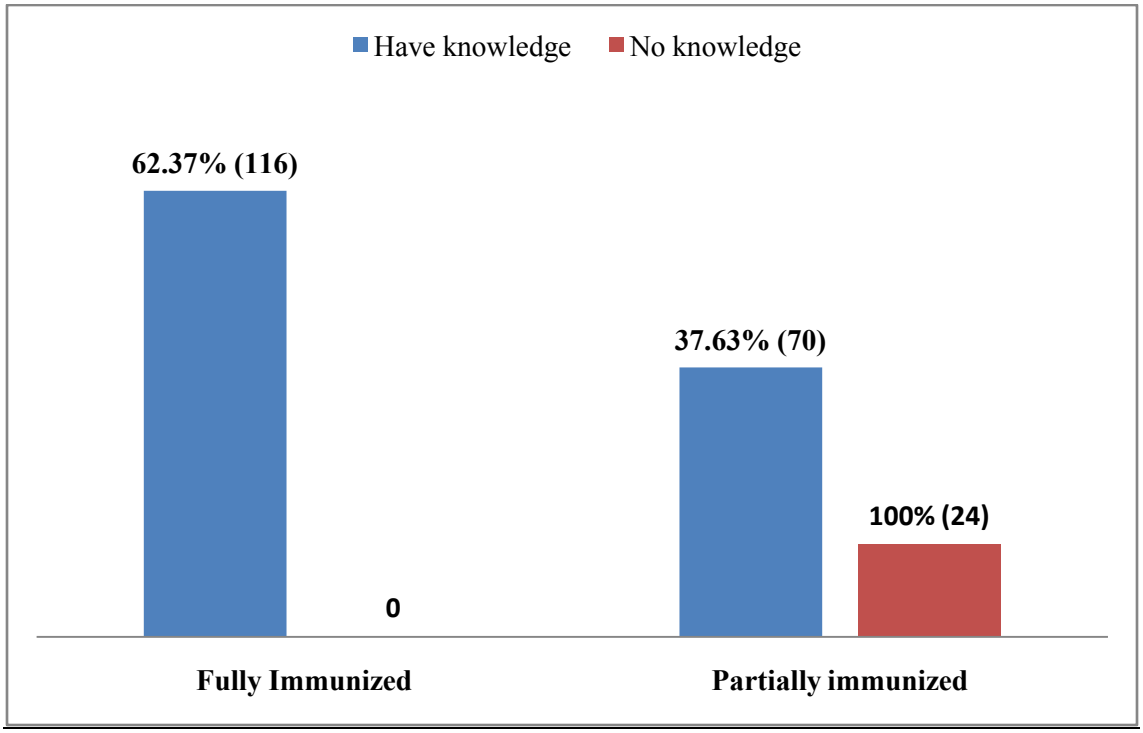
Graph 8a: **Mother's have Knowledge about immunization**



- Out of 210 mothers 89% (n=186) have knowledge about immunization.
- Out of 210 mothers 11% (n=24) do not have knowledge about immunization.

- **Association of knowledge with immunization**

Graph 8b: **Immunization status on the basis of knowledge about immunization**

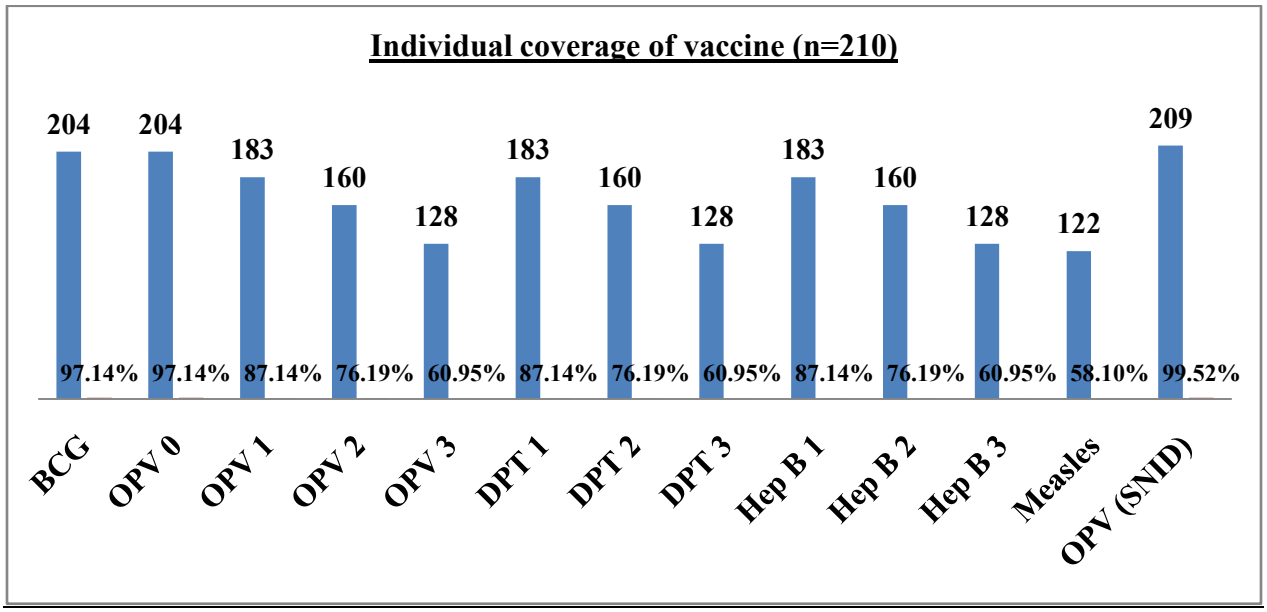


- Out of 186 mothers who have knowledge about immunization 62.37% (n=116) were fully immunized and 37.63% (n=70) were partially immunized.
- Out of 11 mothers who have not any knowledge about immunization were 100% (n=24) were partially immunized.

- *Table 9:* **Individual coverage of vaccines (n=210) among children of age group 12-23 months of Faridabad**

Vaccine	Coverage (numbers)	Coverage (%age)
BCG	204	97.14%
OPV 0	204	97.14%
OPV 1	183	87.14%
OPV 2	160	76.19%
OPV 3	128	60.95%
DPT 1	183	87.14%
DPT 2	160	76.19%
DPT 3	128	60.95%
Hep B 1	183	87.14%
Hep B 2	160	76.19%
Hep B 3	128	60.95%
Measles	122	58.10%
OPV (SNID)	209	99.52%

Graph 9: **Individual coverage of vaccine (n=210)**



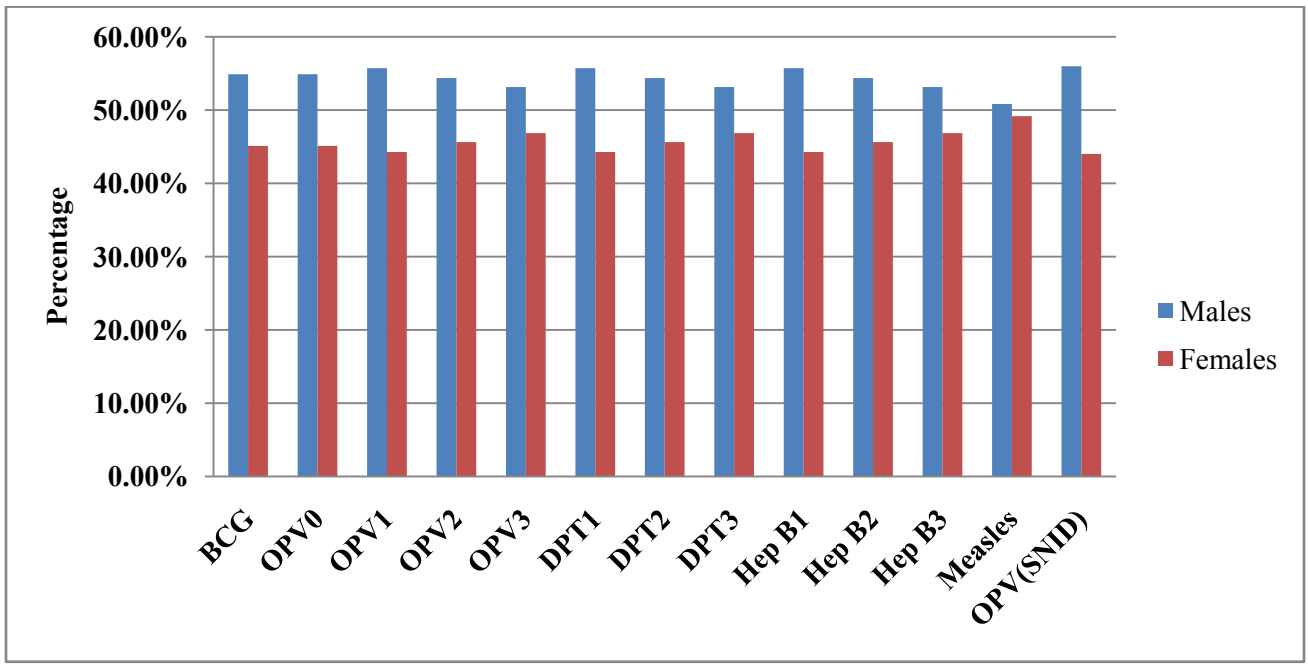
- It was found that Out of total 210 children of age group 12-23 months of Faridabad highest coverage of OPV (NID&SNID) 99.52% (209) and for BCG & OPV was 97.14% (204), the lowest coverage 58.09% (122) was observed for measles vaccine immunization.

- **Table 10:**

- ***Table 10:*****Gender wise individual coverage of vaccines (n=210) among children of age group 12-23 months of Faridabad**

	BCG	OPV0	OPV1	OPV2	OPV3	DPT1	DPT2	DPT3	Hep B1	Hep B2	Hep B3	Measles	OPV (SNID)
Males	54.90%	54.90%	55.74%	54.38%	53.13%	55.74%	54.38%	53.13%	55.74%	54.38%	53.13%	50.82%	55.98%
Females	45.10%	45.10%	44.26%	45.63%	46.88%	44.26%	45.63%	46.88%	44.26%	45.63%	46.88%	49.18%	44.02%

Graph 10: Individual vaccine coverage Gender wise

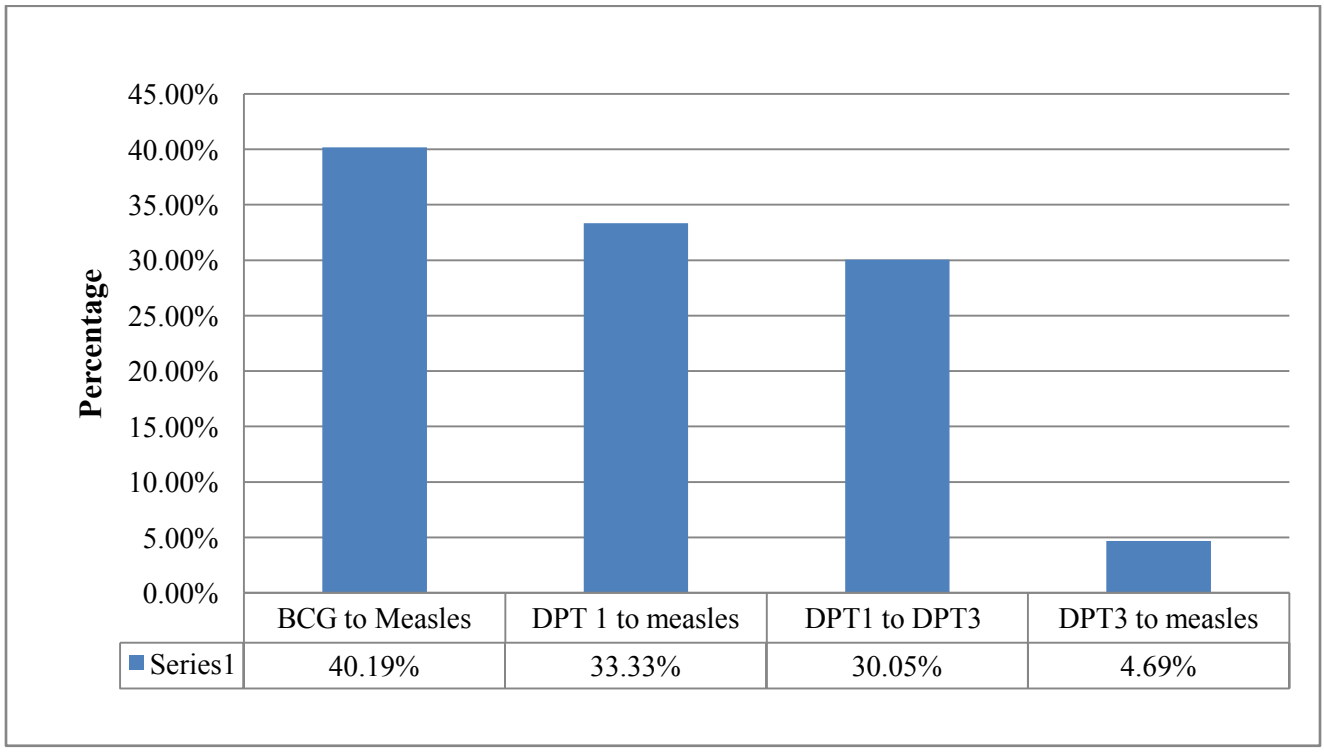


- It was found that Female have low coverage of all the vaccines than Males.

- ***Table 11:*** **Drop-out rate among 12-23 months children in Faridabad district of Haryana (n=210**

Vaccine	Drop-out rate
BCG to Measles	40.19%
DPT 1 to MEASLES	33.33%
DPT 2 to DPT 3	30.05%
DPT 3 to Measles	4.69%

- ***Graph 11:*** **Drop-out rate of vaccines**

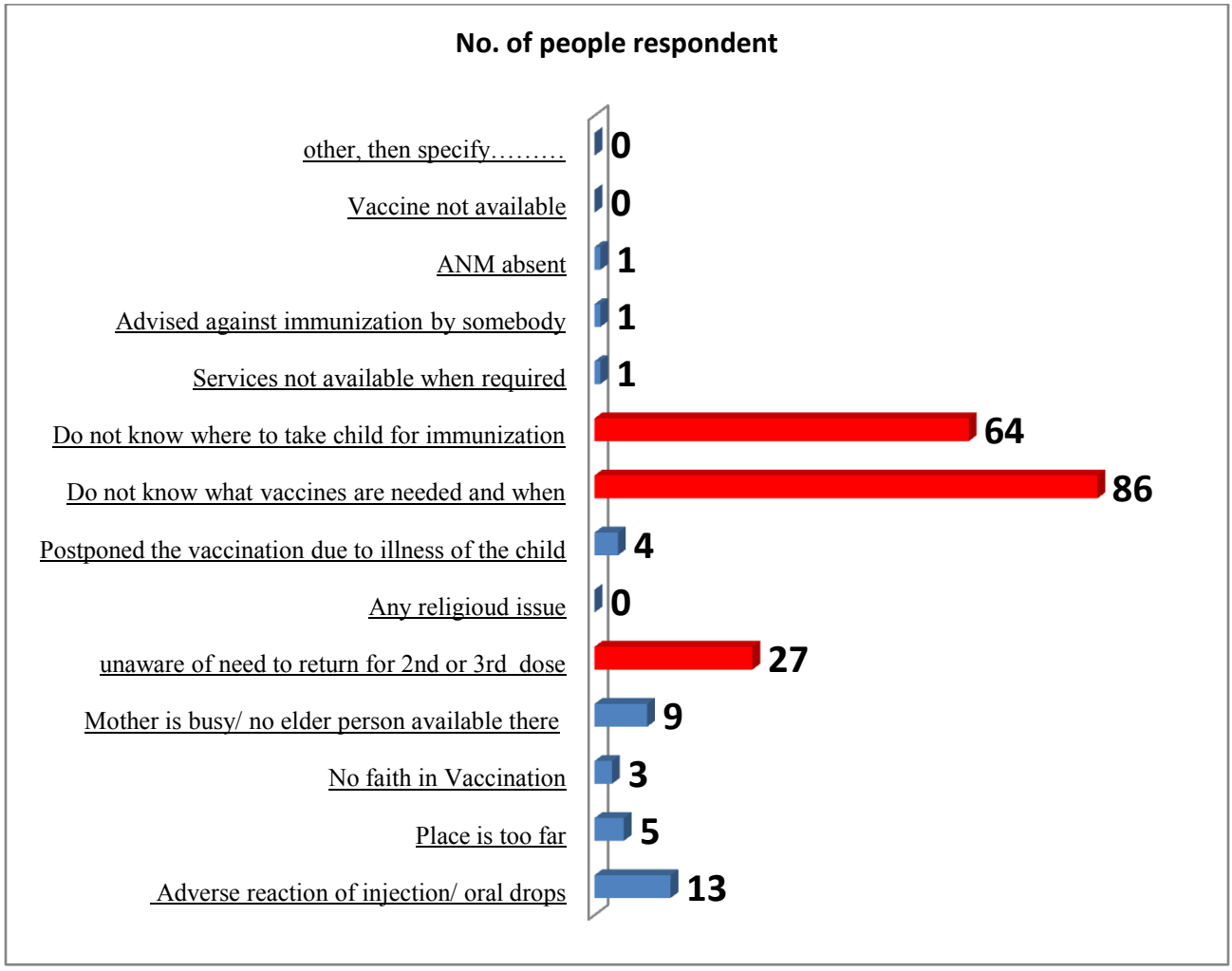


- Out of 210 children 45% were partially immunized highest drop-out rate for BCG to Measles(40.19%) and lowest for DPT3 to Measles (4.69%).

- ***Table12*: Percentage and number of people responded for reasons for drop-out BCG to Measles among children of age group 12-23 months of Faridabad Distict**

Reasons for Partial immunization	No. of people respondent (out of total 94 partially immunized)	%age of people responded
Adverse reaction of injection/ oral drops	13	13.83%
Place is too far	5	5.32%
No faith in Vaccination	3	3.19%
Mother is busy/ no elder person available there	9	9.57%
unaware of need to return for 2nd or 3rd dose	27	28.72%
Any religious issue	0	0.00%
Postponed the vaccination due to illness of the child	4	4.26%
Do not know what vaccines are needed and when	86	91.49%
Do not know where to take child for immunization	64	68.09%
Services not available when required	1	1.06%
Advised against immunization by somebody	1	1.06%
ANM absent	1	1.06%
Vaccine not available	0	0.00%
other, then specify……	0	0.00%

- ***Graph 12:*** **Reasons for Partial immunization**



Discussion:

In the present study, immunization cards were available with 60% (n=126) of the mothers' of children aged between 12 and 23 months. Coverage was better in case of children who had their immunization cards available 84.9% (n=107). This shows that mothers probably were well motivated and have understood the importance of maintaining such records with them for follow-up. Similar results were shown in the studies conducted by Kulkarni and Chavan(2007-08) Study to assess the immunization coverage by lot quality technique in urban slums of Mumbai (87.78%).
In this study was conducted to assess full immunization coverage among children of age group of 12-23 months of urban slums of Faridabad District of Haryana and to find out various reasons for drop-out BCG to Measles using 30 by 7 cluster sampling technique. This technique found to be very useful by public health professional to assess immunization coverage.

In this study fully immunized children were 55% and partially immunized children were 45%. Out of these total (n=210) 56.19% (118) were Males and 43.8% (92) were females. There was not found any un- immunized child because every child received OPV 99.5% (n=209) almost. Out of these total male population (n==118) 50% (n=59) were partially immunized, out if total female population (n=92) 38.04% were partially immunized, although there was population of female population is lower in sample but still percentage of partially immunized female children were less than the male children in study sample. All the above mentioned rate are better than the similar study conducted M.M. Angadi, Arun Pulikkottil Jose, Rekha Udgiri, K.A. Masali, Vijaya Sorganvi in urban slums of Bijapur city of Karnataka in which Fully immunized were (34.84%), Partially immunized were (62.58%)
Knowledge regarding immunization was found to be important factor and strongly associated with immunization status, 89% (186) mothers have knowledge and 11% (24) percent do not have any knowledge. Out of these who have knowledge regarding immunization (n=186), 62.37% were fully immunized and 37.63% were partially immunized. Out total (n=24) who do not have knowledge about immunization 100% (n=24) were partially immunized.

Individual coverage of vaccines among urban slum of Faridabad found to be for highest for OPV(SNID) 99.52% & BCG, OPV0 is 97.14% and lowest for Measles 58.10% where as for OPV1/DPT1/Hep B1 87.14% , for OPV2/DPT2/Hep B2 76.19% and for OPV3/DPT3/Hep B3 60.95%. Highest drop-out rate for BCG to Measles 40.19% amd lowest for DPT3 to Measles 4.69%, where as for DPT1 to Measles 33.33% and for DPT1 to DPT3 is 30.05%, all the above mentioned drop-out rates was much higher than the study conducted by Bhanwar Singh, Vashisht BM, Meely Panda and Pardeep Khanna in urban area of Rohtak city of Haryana(2013) found BCG to Measles was 9.0%, DPT 1 to DPT 3 was3.4%, DPT 1 to Measles DPT 1 to Measles DPT 1 to Measles was 7.2%.

There were lot of reasons for drop-out BCG to Measles among children of age group of 12-23 months but the main reason for partial immunization were *Do not know what vaccines are needed* and when(86 out of 94 partially immunized respondent had chosen this), *Do not know where to take child for immunization*(64 out of 94), with many citing a combination of both Do not know what vaccines are needed and when & Do not know where to take child for immunization.

- Areas where maximum partially immunized children were found are:
    - Bhola Boundary Jhuggis
    - Nangla Part-1 Jhuggis
    - Rajeev colony Jhuggis
    - Sec-55, near Hanuman Temple Jhuggis
    - Jeevan nagar Jhuggis
    - Bihari colony Jhuggis
    - Kohri mohalla Jhuggis
    - Kalyanpuri Jhuggis
- *In Most of the Slum areas there was not any reminder given or regular check-up for the children but in areas under Sehatpur RCH & Shiv Durga vihar RCH center where people have good immunization knowledge where Aanganwadi workers/HW regularly came to their houses to give a reminder about immunization.*

Limitation of study:

- Due to insufficient time available (approx 60 days) & lack of proper manpower, resources this study was carried out in fat way. All the results in detail to be found are not there although data are available more results are yet to be found.
- In this study main focus is immunization aspect only, not much results on on other aspects found.

Conclusion:

Present study was planned to know the coverage and factors affecting the child care services.

It was evident from the study the lack of proper knowledge and awareness is the still the main hurdle for success of primary immunization in urban slum.

Measles have lowest coverage in urban slums of Faridabad so special campaign for study on measles coverage and vaccinet should be started. Enhance coverage by organizing more sub-national immunization days (SNIDs).

An unfortunate fact was that though a vast majority of the population recognized the importance of immunization, a superficial knowledge of the schedule and failure of the authorities in inculcating enough motivation in the target population for completing the schedule, has led to a large proportion of the children being partially immunized.

Regular health education sessions and motivation through an encouraging and persuasive interpersonal approach, regular reminders and removal of misconceptions prevailing among people and improving the quality of the services at the health facility will solve the problems of partial immunization.

Summary:

The present study was to know the coverage and the factors affecting the child immunization by using the WHO cluster sampling technique. It was seen that in the urban slums of Faridabad. More than the half of the children were fully immunized children and drop-out rate is high. The reason for partial immunization Do not know what vaccines are needed and when & Do not know where to take child for immunization. Low awareness about immunization was found.

Observations during study:

- Workload is high on health workers and has to be cover double the area allotted, leading to low coverage.
- HW visits the house of all slum areas but do not give any knowledge regarding immunization to them.
- Home vaccination for OPV was there but not for other vaccines, all of them got their child immunized at facility.
- HW (ANM/AWW) was the main source of information to the people who have the knowledge about immunization.
- As Pentavalent vaccines has launched in year 2012 but there was a erratic supply of vaccine after that so there was a mix use of both of the vaccine.
- Health worker visits slum areas but still they were mostly less satisfied with their work.

Recommendations:

- Motivation and education regarding immunization, and health workers should regularly visit the slum areas and keep his/her records updated, so that all children should be track down.
- To plan a strategy which deal with drop-outs for BCG to Measles.
- To give regular training about immunization so that AEFI cases could be prevented.
- IEC/BCC activities for the community about the need of full and complete immunization.
- To plan outreach camps for measles as Measles has lowest coverage in urban slums of Faridabad.
- A male MPHFW (male health worker) should be included in the service delivery team of URCH center which will lower the workload on ANM/AWW.

Scope of the study:

- This study can be carried all the slum areas of the Haryana by Child health department. And other research organization.
- Applied frame work can be utilized for the assessment of various health indicators in whole of the Haryana

References:

1. Dutta SS. A mess of our own making. Times of India, http://timesofindia.indiatimes.com/articleshow/1193470.cms.

2. Lodha R, Dash N, Kapil A, Kabra SK. Diphtheria in urban slums in North India. Lancet 2000;355:204.
   Loening WE, Coovadia HM. Age specific occurrence rates of measles in urban, peri-urban and rural environment: Implications for time of vaccination. Lancet 1983;2:324-6.

3. PROGRAMME IMPLEMENTATION PLAN FOR STRENGTHENING OF IMMUNIZATION 2011-12 STATE OF HARYANA.

4. Chandra R, Srivastava VK, Nirupam S. Impact of urban basic services on immunization coverage in a slum area of Northern India. Asia Pac J Public Health 1992-1993;6:153-5.

5. Sanket V. Kulkarni, Mansi K. Chavan**,** A study to assess the immunization coveragein an urban slum of Mumbai by lot quality technique.

6. Darshan K. Mahyavanshi, Shashwat S. Nagar, Mitali G. Patel, S. S. Nagar, Shyamal K. Purani, Girija P. Kartha.2013 A study on Evaluation of immunization coverage among children aged 12-23 months in Surendranagar city. http://www.scopemed.org/?mno=36148

7. SINGH BHANWAR, VASHISHT BRIJ MOHAN, PANDA MEELY, BHATT BHUMIKA, A study on CONSTRAINTS TO IMMUNIZATION IN AN URBAN SLUM OF HARYANA. http://zenithresearch.org.in/images/stories/pdf/2013/DEC/ZIJMR/20_ZIJMR_VOL3_ISSUE12_DECEMBER2013.pdf

8. Angadi M.M., Jose Arun Pulikkottil, Udgiri Rekha, Masali K.A., Sorganvi Vijaya, 2007-08, A Study of Knowledge, Attitude and Practices on Immunization of Children in Urban Slums of Bijapur City, Karnataka.

9. Banerjee Joya, 2010, A thesis on study Child Health and Immunization Status in an Unregistered Mumbai Slum.

10. Hoshaw Stacy -Woodard, Ph.D, DEPARTMENT OF VACCINES AND BIOLOGICALS, World Health Organization Geneva, 2001, Description and comparison of the methods of cluster sampling and lot quality assurance sampling to assess immunization coverage.

11. Coverage Evaluation Survey, UNICEF,2009, All India Report

12. Singh Bhanwar , Vashisht BM, Panda Meely and Khanna Pardeep, 2013, Research Article, STUDY TO FIND OUT THE COVERAGE EVALUATION AND DROP-OUT RATES OF DIFFERENT VACCINES IN AN URBAN AREA OF ROHTAK CITY IN HARYANA.

Annexure:

Areas Visited: - 7 Urban RCH Centers & 30 Urban slum areas under these URCH centers.

1) **URCH Center Dabua**
   I. Nehru colony
   II. Near sabzi mandi
   III. Nawada
   IV. Paali road

2) **URCH Center Sanjay colony**
   I. Near Apna Ghar society
   II. Bhola Boundary
   III. Saheed Nagar
   IV. Near Fish Market

3) **URCH Center Nangla Enclave**
   I. Kapra colony
   II. Air force station road
   III. Dabua Block - c
   IV. Udiya colony
   V. Nangla Part-1

4) **URCH Center Pratapgarh**
   I. Near Hanuman Mandir Sector-55 jhuggis
   II. Rajeev Colony Jhuggis
   III. Jeevan nagar-1
   IV. Jeevan Nagar-2
   V. Bihari colony

5) **URCH Center SGM Nagar 21-D**
   I. Kalyanpuri Jhuggis
   II. Adarsh colony
   III. SGM nagar Block-c
   IV. Rajasthan Jhuggis
   V. Kohri Mohalla Jhuggis

6) **URCH Center Sehatpur**
   I. Krishna colony
   II. Shyam colony

III. Ramesh colony
IV. Surya colony
V. Saraswati colony

7) URCH Center Shiv Durga vihar

I. Lakkarpur F-3
II. Lakkarpur F- 4

CONFIDENTIAL

(For research purpose only)

Questionnaire Schedule for Mother's of beneficiaries

A study to assess full Immunization Coverage of Children Age group 12-23 months and establish reasons for Drop-out BCG to Measles in Urban Slums of Faridabad district of Haryana

Questionnaire identification no.: _____
State name: _____ **District name:** _____

Block name: _____ **Slum Area name:** _____

Phone no. of the household: _____

Name of the respondent: _____
No. of the children of age group age goup12-23 months: _____

Informed Consent

Namaste! My name is Dr. Rohit Sharma and I am from State Institute of Health and Family welfare Haryana, Panchkula conducting a survey to asses Full Immunization Coverage of Children Age group 12-23 months and establish reasons for Drop-out BCG to Measles in Urban Slums. We would greatly appreciate the participation of your household in this survey.

I would like to ask you some questions about health services and awareness about immunization and some about the immunization of the children in the age group 12-23 months. The survey usually takes 20-30 minutes to complete. Information you provide will be kept strictly confidential and used only for research. This questionnaire is for immunization of children. We learn that there is a child in the age group 12-23 months in this household.

Participation in survey is voluntary, if you choose to participate, you may withdraw at anytime. However we hope that you will take part in survey since your participation is important.

May I begin the interview now?

- Respondent agrees to be interviewed…….1.Q.no1.
- Respondent does not agree to be interviewed……2.End.

Interviewer's Name: …… **Date: …….**

Signature. ……

Q.No.	Question	Response	Code	Skip To/Remarks
	Questions related to the basic information of the beneficiaries asked from mother's			
1	What is the name age of the child?			
	Name			
	Age (in months)			
2	What is the gender of the Child?		Male=1, Female=2	
3	What is your religion?			
a)	Hindu		1	
b)	Muslim		2	
c)	Sikh		3	
d)	Christian		4	
e)	Jain		5	
f)	Others (then specify)…….		99	
4	What is your caste?			
a)	Scheduled caste		1	
b)	Scheduled tribe		2	
c)	OBC		3	
d)	General		4	
e)	Don't know		95	
5	What is the highest level of education you have received?			
a)	Illiterate		1	
b)	Literate but no schooling		2	
c)	Till 5th class		3	
d)	Till 10th class		4	
e)	More than 10th class		5	
f)	Don't know		95	

Q.No.	Question	Response	Code	Skip To/Remarks
6	What is the main occupation of the Head of the family?			
a)	Agriculture		1	
b)	Animal Husbandry		2	
c)	Manual labour		3	
d)	Self employed		4	
e)	Business		5	
f)	Unemployed		6	
g)	Don't Know		95	
h)	Other (then specify….)		99	

Questions related to the awareness level among the mothers of the beneficiaries regarding immunization card

7	Do you know about immunization?		(Yes=1, No=2)	If No then Q. no. 9
8	If yes in above question then from where do you got to know about immunization?			
	(√) Tick the appropriate one)			
a)	Newspaper		1	
b)	TV		2	
c)	Friends or relatives		3	
d)	Health worker		4	
e)	Other, then specify……..		99	
9	Do you have any Child record card/Immunization card where immunization schedule mentioned?		(Yes=1, No=2)	If No then Q. no. 15
10	If Yes then who issues this card?			
	(√) Tick the appropriate one)			
a)	Govt. Health worker			
b)	Private Hospital / Clinic Doctor			

Q.No.	Question	Response	Code	Skip To/Remarks
11	**Observation in the card**: Is the child immunized as per the age?		(Yes=1, No=2)	
12	If No, then what is the status of the child?			
a)	Partially immunized			
b)	Non immunized			
13	According to the information given in the card:			
			(Yes=1, No=2)	
A.	At birth: BCG and OPV zero dose			
B.	At 1 and Half Month: OPV1,DPT1 and Hep B1/Pentavalent1			
C.	At 2 and Half month: OPV2, DPT2 and Hep B2/Pentavalent2			
D.	At 3 and Half month: OPV3, DPT3 and Hep B3/ Pentavalent3			
E.	At 9-12 months: Measles			
14	Has any received vaccination not mentioned in the card?		Yes=1, No=2, Don't know=3	

Q.No.	Question	Response	Code	Skip To/Remarks
15	**Physical verification/** If No in Q. no. 9, then ask			
A	Is there is any scar in upper left arm?		Yes=1, No=2, Don't know=95	
B	Is there was any injection given to the infant in (Antero-lateral side of mid thigh) thigh region?		Yes=1, No=2, Don't know=95	
C	If yes then, Also ask how many times and at what age?			
D	Is there was any Oral drops given to the child?		Yes=1, No=2, Don't know=95	
E	If yes then, Also ask how many times and at what age?			
F	Is there was any injection given to the infant in upper right arm?		Yes=1, No=2, Don't know=95	
G	If yes then, Also ask how many times and at what age?			

Q.No.	Question	Response	Code	Skip To/Remarks

Question Related to the Reasons of Drop out and obstacles faced by them to getting their child immunized and to find what procedure HW are using for follow up drop outs

16	What kind of obstacles faced by you in getting your child immunized?			
	(√ **)**Tick the appropriate one)			
a)	Adverse reaction of injection/ oral drops		1	
b)	Place is too far		2	
c)	No faith in Vaccination		3	
d)	Mother is busy/ no elder person available there		4	
e)	unaware of need to return for 2nd or 3rd dose		5	
f)	Any religious issue		6	
g)	Postponed the vaccination due to illness of the child		7	
h)	Do not know what vaccines are needed and when		8	
i)	Do not know where to take child for immunization		9	
j)	Services not available when required		10	
k)	Advised against immunization by somebody		11	
l)	ANM absent		12	
m)	Vaccine not available		13	
n)	Other, then specify……		99	
17	Do you agree that your child should be immunized at regular interval?		(Yes=1, No=2)	If No then, to Q.no.20

Q.No.	Question	Response	Code	Skip To/Remarks
18	If yes then what are the reasons?			
	(√) Tick the appropriate one)			
	child will be prevented from infectious disease		1	
	child will not communicate disease to the others		2	
	lowers the risk of getting disease in later life		3	
	Can't say		4	
	Don't know		95	
19	Do you know is there any free health check up or vaccination camp organized by Govt. in nearby areas?		Yes=1, No=2, Don't know=95	
20	Is any Health worker visited your house?		(Yes=1, No=2)	
21	If yes did she give any Vaccine to the child and information about immunization?		(Yes=1, No=2)	
22	How often does HW visit your house?			
a)	once in a 15 days		1	
b)	once in a 1 month		2	
c)	once in a 6 months		3	
d)	Never		4	
e)	Don't know		95	
23	Does she fill up the immunization card every time?		(Yes=1, No=2)	
24	How effectively you are able to understand the immunization information being given to you by HW?			
a)	Bad		1	
b)	Less satisfactory		2	
c)	Satisfactory		3	
d)	Good		4	
e)	Excellent		5	
25	Do you think more Health workers should be appointed for your area?		Yes=1, No=2, Don't know=95	

Photos clicked during study:

1. **Picture showing BCG mark on a left arm of child**

2. **Picture showing Physical verification of vaccine.**

3. **Bhola boundary slum area.**

4. **Nangla part-1 slum area**

5. **Jeevan nagar -1 Jhuggis slum area.**

6. **Picture showing children playing in un- hygienic place of Jeevan nagar slum area.**

7. **Picture showing children in Kohri Mohalla slum area.**

REPORT ON VISIT TO DISTRICT HOSPITAL,SECTOR-6, PANCHKULA

Departments observed:

I. OPERATION THEATER(OT) :

- Operation theatre area is divided into zones - preoperative, post operative area and 6 OTs (separate for each department), separate scrub area, CSSD, Dirty area.
- OT and surgical ward was on same floor for the convenience for shifting of patients.
- Though nursing station were in pre & post operative room, but was not being utilised, as nursing staff also had to do the records, hence seated in the common nursing station.
- Most of the patients were operated under MMIY scheme.
- OT had emergency power back-up.
- Records were well maintained.

II. SURGICAL WARD

- In surgical wards, pre-operative and post operative patients were admitted separately.
- Comatose and extubated patient were not isolated from general patients.
- Patients were unaware of bedside calling system.

III. ORTHOPEDIC WARD

- This ward was on the sane floor as of surgical ward for the ease of shifting of the patients.

IV. PSYCHIATRY AND DRUG REHABILITATION WARD

- This ward had common corridor with surgical and orthopedics wards.
- Bell system, though installed, was not in the knowledge of the patients, so as to avoid unnecessary calls by the patients, as reported by a posted nursing student.

V. GYNAECOLOGY AND OBSTETRIC DEPARTMENT

- Gynecology and obstetrics OPD, IPD and Labor room were on the same floor.
- Labour room and MTP centre were adjacent to each other.
- Privacy was maintained in the labour room.
- Staff nurses conducted the normal deliveries.

VI. PAEDIATRICS WARD:

- Paediatrics ward had common corridor with chest department.
- It also had rooms for DEIC, NRC.
- There was a play room.

VII. CHEST WARD:

- TB and other chest-ailment(asthma etc.) were observed sharing the same room.

SCHEMES:

1. **Mukhyamantri muft ilaaj yojna(MMIY)** is implemented from January 1, 2014 in Haryana.

The following services are provided completely free to all the patients coming to the health institutions of the State under the MMIY:

- Surgery package program(For Haryana Residents Only)
- Basic Laboratory Investigations, along with free X-Ray, ECG and USG (wherever available in the Government Health Institutions).
- Indoor Services.
- Drug supply.
- Referral transport/ambulance services.
- Dental treatment

2. **RBSK/District Early Intervention Centre (DEIC):**

- Rashtriya Bal Swasthya Karyakram (RBSK) is a new initiative aiming at early identification and early intervention for children from birth to 18 years to cover 4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability. The 0-6 years age group is specifically managed at District Early Intervention Center (DEIC) level while for 6-18 years age group, management of conditions is done through existing public health facilities. DEIC acts as referral linkages for both the age groups.
- An Early Intervention Centre is established at the District Hospital under RBSK. The purpose of Early Intervention Centre is to provide referral support to children detected with health conditions during health screening.
- A team consisting of Paediatrician, Medical officer, Staff Nurses, Paramedics will be engaged to provide services and a manager who carries out mapping of tertiary care facilities in Government institutions for ensuring adequate referral support. Children and students presumptively diagnosed to have a disease/ deficiency/disability/ defect and who require confirmatory tests or further examination are referred to the designated tertiary level public sector health facilities through the DEIC.

- The DEIC promptly responds to and manage all issues related to developmental delays, hearing defects, vision impairment, neuro-motor disorders, speech and language delay, autism and cognitive impairment. Beside this, the team at DEICs is involved in newborn screening at the District level. This Centre has the basic facilities to conduct tests for hearing, vision, neurological tests and behavioural assessment.

3. **Nutrition Rehabilitation Centre (NRC)**

Severe Acute Malnutrition is an important contributing factor for most deaths amongst children suffering from common childhood illness, such as diarrhoea and pneumonia. Deaths amongst SAM children are preventable, provided timely and appropriate actions are taken.

Nutritional Rehabilitation Centre (NRCs) has been set up in GH for inpatient management of severely malnourished children, with counselling of mothers for proper feeding and once they are on the road to recovery, they are sent back home with regular follow up.

Positives:

- OT was well-maintained.
- Microbial limit monitoring is being done in the OT on a regular basis so as to minimize the probability of cross-infection/ hospital- acquired infections. Staff nurse accompanying us for orientation honestly reported us about a recent *Psuedomonas* contamination which was followed by carbolization.
- A wing was allotted for DEIC, which was focussed on rehabilitation of physical and psychological disabilities in children till 15 years of age.
- Another wing was allotted to NRC to provide service to malnourished children.
- Installation of the bell system for calling nurses in all wards was a good initiative.

Negatives:

- There was no arrangement for sitting in waiting area; patients and their attendants were seen sitting on the floor.
- Nurses were performing normal vaginal deliveries, without the presence of doctors.
- Sterilization and disinfection was not being maintained; nurse was observed receiving a phone call with gloved hands while handling a case in 2nd stage of labour.
- Cotton/gauze pieces fallen on the floor were re-used during the procedure.

- SNUC was there, but staff was not trained about its appropriate usage.
- Pediatrics and chest wards had common corridor, which could be a potential source of cross-infection especially for children.
- Lack of privacy was observed in O & G OPD.

Report on visit to Primary Health Center, Kot

- Name of the District: Panchkula
- Name of Tehsil/Taluka/Block: Panchkula/Raipur Rani
- Name of the PHC : PHC KOT
- No. of Sub-centers under the PHC:5
- District of CHC from PHC: Panchkula
- District of DH from PHC: Panchkula
- 24*7 service delivery: No
- Population Covered: 34136

SERVICE DELIVERY:

Number of Beds: 6
Average Daily OPD: 150 (proportion of Female patients reporting daily were more as compared to males)

Services Available:

OPD
Emergency Services (24 hours)
Referral Services
In-Patient Services

Specific services:

- Primary management of wounds
- Primary management of fracture (first aid)
- Primary management of cases of Poisoning
- Primary management of burns
- Abscess drainage
- *No Cataract surgeries are performed.*

MCH Care including Family Plannning:

Services availability:

- ANC
- Intra Natal care
- Post-natal care
- Immunization
- Family planning
- Management of RTI/STI

No newborn care was provided, MTP services were yet not available, but a MO was undergoing training pertaining to MTP.

Specific Services:

- Organization of Antenatal clinics on regular basis.
- On call doctors available for 24 hrs. Delivery services and 24*7 nursing staff available
- Tubectomy and vasectomy
- Internal examination for gynaec patients
- Treatment for gynecological disorders
- BCG and measles vaccine
- Treatment of children with pneumonia
- Management of children with diarrhea
- No management of Low birth babies.

Other functions and services:

- School health programme conducted by dentist
- Prevention and control of locally endemic disease
- Control of epidemics
- Collection of vital statistics
- Ayush services
- No nutrition services were available
- No behavior change communication services
- National AIDS control programme was not functional

Human resources

S.no.	Personnel	Recommended	Current Availability	Identified gaps
1	Medical officer	2	2-MO 1-AMO	2nd medical officer was not performing the physical examination of patients
2	Pharmacist	1	1-allopath 1-AYUSH	AYUSH pharmacist sitting idle
3	Nurse-midwife(staff nurse)	3	4	One nurse was suffering from osteoarthritis, so she was managing the OPD register and was not allotted any duty of nurse; 2 on leave
4	Health worker	1	1	
5	Health educator	1	0	
6	Health assistant	2	1	
7	Clerks	2	1	
8	Lab Technician	1	1	
9	Driver	Optional	1	

Essential Laboratory services:

- Blood grouping
- Bleeding time
- Clotting time
- Rapid test for pregnancy
- VDRL test
- Lab technician was not wearing gloves

Infrastructure:

Location:

- Distance of PHC is 25 km from farthest village in coverage area
- Distance of PHC from District hospital is 17 km

Building:

- Government designated building is available for PHC
- Cleanliness is fair
- Prominent display boards regarding services are available

Operation Theatre:

- Laparoscopic sterilization surgeries are carried out.

Labor room:

- Normal deliveries were conducted.
- No caesarean section was performed.

Water supply:

- Piped water supply was available

Sewerage:

- Soak pit

Waste Disposal:

- Sharp pit was available

Electricity:

- Electric lines were available in all parts of PHC

Communication Facilities:

- Telephone,E-mail,Fax services were available

Vehicles:

- Ambulance services were available
- Residential facility for Mo was available

User charges:

- Free of cost services were available

Quality Control

- Citizen‘s charter was available outside the facility

Other findings:

Negatives:

- There was foul-smelling litter at the entrance of the hospital.

- There were flies all over.
- There was dung/ faeces in the hospital premises.
- There was a private pharmacy within the hospital premises.

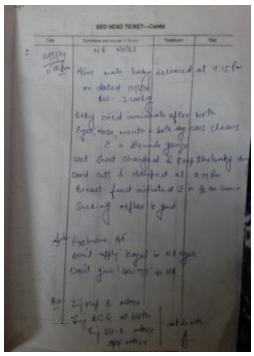
- Dental wing had no technician/assistant.
- Dental Lab was not available.
- MO was observed not doing physical examination of a single patient.
- Hot air oven was available, but not in use.
- LHV was on a long leave, so pharmacist was handling the cold chain unit.
- In spite of AYUSH pharmacist being available, a staff nurse was managing the pharmacy in the absence of the pharmacist.
- Ambulance tough present, had punctured tyre.

Positives-

- Citizen charter was displayed in Hindi at a readable height.

Figure 14

- There was provision of utilizing natural light.
- Bed head ticket notes were well drafted and maintained.
- Records were well maintained.



Report on visit to sub-center, Ramgarh

- Name of the sub center: Ramgarh
- No. of villages under the SC: 12
- Distance of SC from PHC: 8 Km
- Distance of SC from nearest CHC: 20 Km
- 24*7 service delivery
- Population covered: 10637

SERVICES

MCH Care Available:

a) ANC
b) INC
c) PNC
d) Newborn
e) Immunization
f) Family Planning And Contraception
g) JSY
h) JSSK
i) Treatment Of Common Illness

MCH Care Not Available:

a) Adolescent Health
b) School Health Education

Availability of specific services

a) Doctor visits the sub center once or twice a month, but the days of visit are not fixed.
b) LHV visits the sub-center at least once a week.
c) The ante-natal care (inj. TT/IFA tablets, weight and BP checkup) is provided by the manpower in the sub center.
d) The facility for referral of complicated cases of pregnancy/delivery is available at the sub center for 24 hours.
e) The ANM/any trained person does not accompany the woman in labor to the referred care facility at the time of referral.
f) Immunization services are provided as per government schedule provided by the sub center.
g) ORS for the prevention of diarrhea and dehydration is available in the sub center.
h) The treatment of minor illness like fever, cold, cough, worm disinfestations etc. is available in the sub center.
i) The facility for taking peripheral blood smear in case of fever for detection is available in the sub center.
j) Contraception services like insertion of Copper-T, distributing oral contraceptive pills or condoms are provided by the sub center.
k) The Ramgarh sub center is also a DOT center.

Other functions and services

a) Disease surveillance
b) Control of local endemic disease
c) Promotion of sanitation
d) Field visit and home care
e) National health programs including HIV/ADS control programs

Monitoring and supervision activities

a) Training of ASHA is not done at the sub center(done at PHC).
b) For monitoring the quality of water in the village, sample is collected and taken to PHC, Kot.
c) An eye is kept over unusual health events.
d) Services are provided in coordination with AWWs, ASHAs, Village Health and Sanitation Committee and PRIs.

e) Records and registers are properly maintained.
f) The scheme of ASHA is implemented in the sub center.

Human resources

Sub-Center Ramgarh			
STAFF	ESSENTIAL	DESIRABLE	AVAILABLE
ANM/Health Worker(Female)	2		3(2 ANM + 1 LHV)
Health Worker(Male)	1		-
Staff Nurse(or ANM, if Staff Nurse is not available)		1**	-
Safai-Karamchari*	1(Full-time)		1

*To be outsourced.
**If number of deliveries at the sub-center is 20 or more in a month.

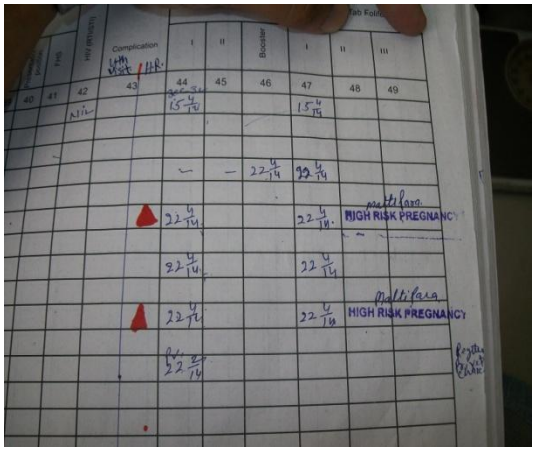
Physical structure

a) Berwala is the farthest village in the coverage area of sub center Ramgarh(15 km).
b) There is a designated government building available for the sub center.
c) The cleanliness was good.
d) Labor room is available with a separate clinic room and n examination room.
e) Water supply is through tube well.
f) Electricity supply is present with a back-up facility of an inverter.
g) Health care providers have government SIM card for communication. The sub center, otherwise, does not have telephone/fax/e-mail facility.
h) Residential facility is available for the staff

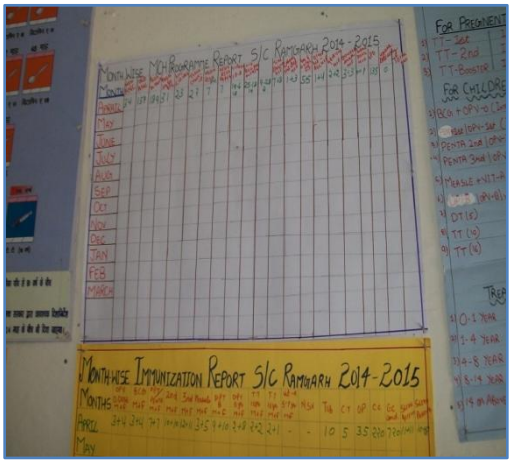
Positives:

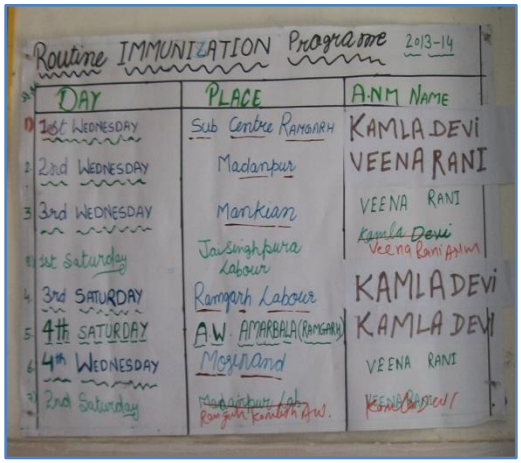
a) Location of the sub center is accessible.
b) Citizen charter is displayed outside the clinic room; written in Hindi.

c) Center is well maintained in terms of cleanliness, equipment, medicines, IEC material and records.



d) Staff seemed motivated. There were hand-made charts for various activities.





e) There are separate rooms for clinic, examination, delivery and sterilization.

Negatives:

a) There was litter and garbage on the linking road to the sub center as well as just outside the sub center.

b) Shadow-less lamp of the labor room was out of order.

c) Toilet was not attached to the labor room and nearest door to the washroom was blocked due to wrong placement of patient bed, which could be a cause of inconvenience to the patient.

d) Use of gloves or spirit swab was not observed during Hb-estimation.
e) Ambulance was not available.
f) Pit for placenta disposal had temporary lid.