# A study to assess the Quality Services of Immunization provided to children below five years of age at Lal Bahadur Shastri Hospital, Khichripur, Near Kalyanvas Colony, Mayur Vihar, Delhi

**A Dissertation submitted in Partial Fulfilment of the Requirements for the Award of Post-Graduate Diploma in Health & Hospital Management**

**By**

**Col Jaswinder Singh Hari, SM**

**PG/16/015**


**International Institute of Health Management Research**

**New Delhi – 110075**

**April, 2018**

NATIONAL RURAL HEALTH MISSION
राष्ट्रीय ग्रामीण स्वास्थ्य मिशन

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सत्यमेव जयते

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***TO WHOMSOEVER IT MAY CONCERN***

This is to certify that **Col Jaswinder Singh Hari** successfully completed his Internship under the aegis of National Institute of Health and Family Welfare, New Delhi, in the Immunization Clinic adjoining OPD, Lal Bahadur Shastri Hospital, Khichripur, Delhi and has successfully completed his Project "**To Assess the Quality Services of Immunization provided to Children below Five Years at Lal Bahadur Shastri Hospital, Khichripur, Delhi**".

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

I wish him all the best for future endeavours

01-05-2018

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## Certificate of Approval

The following Dissertation titled "**A study to assess the Quality of Immunization Services provided to children below five years of age at Lal Bahadur Shastri Hospital, Khichripur, Near Kalyanvas Colony, Mayur Vihar, Delhi**" is hereby approved as a certified study in management carried out and presented in a manner satisfactory 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.

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This is to certify that **Col Jaswinder Singh Hari,** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He is submitting this dissertation titled "**To Assess the Quality Services of Immunization provided to Children below Five Years at Lal Bahadur Shastri Hospital, Khichripur, Delhi**" under the aegis of "**National Institute of Health and Family Welfare, New Delhi**" in partial fulfillment of the requirements for the award of the **Post Graduate Diploma in Health and Hospital Management.**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

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| **Dissertation Organisation** | : | **Lal Bahadur Shastri Hospital, Khichripur, Delhi under the Aegis of National Institute of Health and Family Welfare, New Delhi** |
| **Area of Dissertation** | : | **To Assess the Quality Services of Immunization provided to Children below Five Years at Lal Bahadur Shastri Hospital, Khichripur, Delhi** |
| **Attendance** | : | **Adequate** |
| **Objectives achieved** | : | **Yes** |
| **Deliverables** | : | **Adequately Contributed** |
| **Strengths** | : | **Intelligent, hardworking, dedicated with an Analytical mind.** |
| **Suggestions for Improvement** | : | **Nil** |
| **Suggestions for Institute (course curriculum, industry interaction, placement, alumni)** | : | **Nil** |

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## CERTIFICATE ON PLAGIARISM CHECK

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| Title of the Dissertation/Summer Assignment | TO ASSESS THE QUALITY OF IMMUNIZATION SERVICES PROVIDED TO CHILDREN BELOW FIVE YEARS OF AGE AT LAL BAHADUR SHASTRI HOSPITAL, MAYUR VIHAR, DELHI | | |
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## Statement of Dissertation Preparation

1. Dissertation title: A study to assess the Quality Services of immunization provided to children below five years of age at Lal Bahadur Shastri Hospital, Khichripur, Near Kalyanvas Colony, Mayur Vihar, Delhi.

2. Degree for which the Dissertation is submitted: Post Graduate Diploma in Health Management (PGDHM) at International Institute of Health Management Research (IIHMR), Delhi.

3. Dissertation guide was referred to for preparing the dissertation.

4. Specifications regarding dissertation format have been closely followed.

5. The contents of the dissertation have been organized based on the guidelines.

6. The dissertation has been prepared without resorting to plagiarism.

7. All sources used have been cited appropriately.

8. The dissertation has not been submitted elsewhere for a degree.

(Signature of the student)
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## ACKNOWLEDGEMENT

The completion of this study cannot be regarded as complete without acknowledging the guidance and support of all those who spared their valuable time and energy to make this possible.

I take this opportunity to express my sincere gratitude to Dr Navneet Kumar Dhamija, Deputy Commissioner (Training), Ministry of Health & Family Welfare (MoHFW), Government of India, New Delhi, Dr JB Babbar, Consultant Medical RCH II/NHM, The National Institute of Health & Family Welfare (NIHFW), New Delhi, Dr Amita Saxena, Medical Superintendent (MCH) & HoD (Obs & Gynae), Medical & Paramedical staff of Lal Bahadur Shastri Hospital, Khichripur, Near Kalyanvas Colony, Mayur Vihar, New Delhi for giving me this opportunity, their able guidance, valuable suggestions and inspiration.

I would also like to thank Dr Sanjiv Kumar, Director IIHMR, New Delhi, my mentor for his valuable guidance, suggestions and unstinted support. I also convey my sincere thanks to all the faculty members and staff of International Institute of Health Management Research (IIHMR), New Delhi for their support.

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# ABSTRACT


## Assess the quality of Immunization Services provided to children below five years of age

Immunization saves 2-3 million lives each year. Wherever children are not immunized, their lives and their communities are at risk. New approaches are required to be tailored to vaccinate every child in every community – no matter how remote or challenging. Unavailability of vaccines, poor awareness and difficulties in reaching the immunization sites show that there is a gap between the health care provider and the beneficiaries. There are also, issues of vaccine storage, cold-chain management and administration which contribute to success or failure of immunization. Given this background, it was decided to conduct a study to assess the quality services of immunization provided to children below five years of age at Lal Bahadur Shastri Hospital, Khichripur, Mayur Vihar, Delhi. The scope of the study included; awareness level of mothers regarding immunization, procedure to implement National Immunization Schedule 2018 Programme by the hospital, Cold-Chain management, percentage of children covered in East District of Delhi and Gap Analysis. Study Design was Cross-sectional; 210 randomly selected infants/children with their Mothers or Care-givers visiting for immunization were studied. Data Collection Tools and Techniques used were checking of Hospital Records, Immunization Cards, in-depth interviews with health-care providers (probed missed opportunities, health information delivery system or barriers to provide immunization) and interviews with mothers (probed their knowledge, attitude and barriers for not vaccinating their children). Through this study, we could understand the current immunization scenario and identify some of the reasons which prevent the people from providing full immunization to their children. We found that the level of full immunization is about 50% which is quite low. These findings may be useful for further planning and implementation of health services suited for welfare of the community.

# ABBREVIATIONS

| | |
|---|---|
| **PGDHM** | Post Graduate Diploma in Health Management |
| **MoHFW** | Ministry of Health & Family Welfare |
| **LBSH** | Lal Bahadur Shastri Hospital |
| **NIHFW** | National Institute of Health & Family Welfare |
| **NIS** | National Immunization Schedule |
| **OPD** | Out-Patient Department |
| **SOP** | Standard Operating Procedure |
| **NABH** | National Accreditation Board for Hospitals & Healthcare Providers |
| **NHS** | National Health Service |
| **LMIC** | Low & Middle-Income Countries |
| **UNICEF** | United Nations International Children's Emergency Fund |
| **EPI** | Expanded Program on Immunization |
| **UIP** | Universal Immunization Program |
| **RCH** | Reproductive Child Health |
| **MMR** | Measles, Mumps & Rubella |
| **HMIS** | Health Management Information Systems |
| **ASHA** | Accredited Social Health Activist |
| **PHC** | Primary Health Centre |
| **NCT** | National Capital Territory |
| **DOT** | Direct Observed Treatment |
| **IPD** | In-Patient Department |
| **SWOT** | Strengths, Weaknesses, Opportunities & Threats |
| **MDG** | Millennium Development Goal |
| **WHO** | World Health Organization |
| **BCG** | Bacillus Calmette-Guérin vaccine |
| **OPV** | Oral Polio Vaccine |
| **DPT** | Diphtheria, Pertussis & Tetanus |
| **IPV** | Inactivated Polio Vaccine |
| **IMR** | Infant Mortality Rate |
| **IEC** | Information Education Communication |
| **NGO** | Non-Governmental Organization |
| **ANC** | Ante Natal Check-up |
| **RIMS** | Routine Immunization Monitoring System |
| **CHW** | Community Health Worker |

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# PART – I

## DESCRIPTION OF SELECTED ORGANIZATION

Lal Bahadur shastri hospital (LBS Hospital) is a Secondary Level multi-speciality hospital with 100 sanctioned beds (functional 188 beds) run by the Government of NCT Delhi. The Hospital provides Investigative, Preventive, Disability and Curative services. It is situated at Khichripur, Near Kalyanvas Colony, Mayur Vihar in trans Yamuna area of East Delhi. It is a General Hospital that caters to the common population of East District of Delhi. It was commissioned in December 1991 with OPD services only. Indoor services commenced from 11 October 1996 and the hospital became fully functional from 22 June 1999. All the health services are provided free of cost. Hospital campus is spread over 10.11 acres of land and has a floor area of 18,110 Sq. Metres.

There is central computerized registration counter for OPD during hospital timings. Average waiting time for registration is 10 minutes. Emergency & Casualty services are available 24 hours. OPD Registration timings are 8:30 A.M. to 12:00 Noon on weekdays and 8:30 a.m. to 11:30 a.m. on Saturdays. Medicines are available at pharmacy counter free of cost. Indoor patient facilities are available in this hospital. Blood bank facilities and laboratory services are also available 24 hours. Immunization and pharmacy facilities are available during the working hours. This hospital has following departments such as: - Medicine, Surgery, Obstetrics and Gynaecology, Ortho, Paediatrics, Eye, ENT, Skin, Dental, Radiology, Anaesthesia, Pathology, Microbiology, Casualty, Blood Bank, Medical Board, DOT Centre, Mortuary, Establishment and Accounts.

The Hospital caters to whole of East District of Delhi with population of more than 15 Lakh, other trans Yamuna in Delhi, adjoining areas of Noida, Ghaziabad, Khora and other areas of Uttar Pradesh. All the health services are provided free of cost.

# PART – II

## INTRODUCTION

Immunization saves 2-3 million lives each year. By protecting children against serious diseases, vaccines play a central role in ending preventable child deaths. Immunization Programs are one of the most well-recognized and successful public health programs across the world. The immunization Programs have achieved significant successes in a number of countries; however, the coverage with available vaccines remain sub-optimal in many low and middle-income countries (LMICs). Immunization programmes also help identify those children that have been left behind by the health system and can bring other life-saving care to these mothers and children.

Vaccines now protect more children than ever before, but nearly one in five infants misses out on the basic vaccines they need to stay alive and healthy. Low immunization levels among poor and marginalized children compromise gains made in all other areas of maternal and child health. Globally, over 1.5 million children die each year from diseases that can be prevented by vaccination.

Wherever children are not immunized, their lives and their communities are at risk. New approaches are required to be tailored to vaccinate every child in every community – no matter how remote or challenging.

UNICEF and partners are harnessing solar power, mobile technology and telemetrics to make sure that vaccines reach all children without losing their effectiveness from exposure to extreme heat or cold weather conditions.

With global efforts, the price for a number of essential childhood vaccines has reached all-time lows. This has facilitated the introduction of new vaccines to children living in the poorest countries.

Working with private and public partners, innovations in health care sector steers investment towards new vaccines, diagnostic and health technologies.

India adopted Expanded Program on Immunization (EPI) in 1978 and then in 1985 renamed it as Universal Immunization Program (UIP). As a part of the National Health Policy, the National Immunization Program has been implemented on a priority basis. The Expanded Program on Immunization (EPI) was initiated by the Government of India with the objective of reducing morbidity, mortality and disabilities from 7 diseases namely, Tuberculosis, Tetanus, Diphtheria, Hep-B, Pertussis, Measles and Polio, by providing free vaccination services easily available to all eligible children. Immunization against Poliomyelitis was introduced in 1978-80, and Tetanus Toxoid in 1980-81. Immunization against Tuberculosis (BCG Vaccine) was brought under the EPI in 1981-82 while the vaccination against measles

was introduced in 1985-86 under the Universal Immunization Program.

The objective of the Universal Immunization Program has been to cover at least 85% of all the infants against the 7 vaccine-preventable disease. This scheme has been introduced in every district of the country and the target was set to achieve 100 percent immunization coverage. Alongside, pulse polio immunization campaign began in December 1995 as part of a major national effort to eliminate Poliomyelitis.

Inspite of being the smallest state in the country with an area of 1483 sq.km Delhi stands tall with a population of 1, 67, 53,235 (Census2011). Population density of Delhi is almost 11,300 per sq.km as compared to All India population density of 340 only and is the highest in the country. The population due to its dynamic nature as a result of opportunities of better Job opportunities and health services availability in Delhi, imposes an additional important role for addressing the related needs of the target beneficiaries through its various services so that survival rates and quality of life of the most vulnerable improves over time. Hence there is a need to propagate immunization as a way of life among the eligible population. In this context, the role of the Directorate of Family Welfare is vital.

Directorate of Family Welfare under its RCH Program Unit is engaged in delivery of immunization services through more than 600 health delivery points. The immunization program aims to protect the children against more than 12 diseases namely tuberculosis, polio myelitis, Hepatitis-B, Diphtheria, Pertussis, Tetanus, Hib related diseases (meningitis, pneumonia and septicaemia), measles, mumps, rubella and typhoid. Certain vaccines are unique to the State Immunization Schedule and their details are as under: -

State Introduced MMR vaccine in its EPI schedule in Nov 1999 & is the first state to have done so. Since then more than 3 million infants/young children have been immunized with MMR vaccine.

State Introduced Hepatitis B in its schedule in August 2001 & have so far been able to protect about 2.75 million infants against the dreaded hepatitis B disease & its late complications.

Delhi State is the only state in the country to have also included Typhoid vaccine in its immunization schedule since November 2004 & so far more than 2.0 million young children have been immunized and this has also helped to reduce the prevalence of multi drug resistant cases of typhoid fever among children in the State.

Introduction of Hib (Pentavalent Vaccine) as a part of Immunization activity has been launched in the State in March, 2013. It will help to immunize the children against five diseases namely Diphtheria, Pertussis, Hep. B, Hib related diseases and Tetanus through a single shot.

The percentage of fully immunized children is 73.2 % as per Coverage Evaluation Survey of

UNICEF and this percentage as per HMIS data for the year 2012-13 is about more than 80%. But the State is still striving to achieve the goal of Universal Immunization. Ministry of Health & Family Welfare (MoHFW), Government of India has implemented various intensification strategies including its flagship program, 'Mission Indradhanush' launched in December, 2014. Mission Indradhanush aimed to fully immunize more than 90% of new-borns by 2020 through innovative and planned approaches to reach all children. The State of Delhi has taken various initiatives to achieve this objective. The State observes four Special Immunization Weeks in April, June, July and August every year since 2014 to focus on high risk areas which have been identified through house to house activity under taken under pulse polio program. Community health workers like ASHAs at PHC/Mohalla Clinics are also involved in improvement of immunization coverage by providing incentive for full immunization and provision of booster dose to the children. It has helped the State to improve the immunization coverage where it needs the most.

# REVIEW OF LITERATURE

**Mathew JL**, Indian Pediatrician 2012 July: A systematic review was conducted to identify and explore factors which are associated with inequities in routine vaccination of children in India. There is considerable inequity in vaccination coverage in different states. Girls fare uniformly worse than boys and higher birth order infants have lower vaccination coverage. Urban infants have higher coverage than rural infants and those living in urban slums. The vaccination rates are lower among infants with mothers having no or low literacy. Access to Health Services is associated with better vaccination coverage of infants.

**Lahariya Chandrakant**, Journal of Family Medicine and Primary Care, 2015. "Health System Approach for improving immunization program performance": The article analyses initiatives under Universal Immunization Program (UIP) in India from the health system approach. It concludes that immunization programs could be one of the entry points for strengthening health systems in the countries.

**A Wallace, V Dietz and KL Cairns,** Tropical Medicine and International Health Volume 14 No. 1 PP11- 19,2009, January. Global Immunization Divisions, Centres for Disease Control and Prevention, Atlanta, Georgia, USA: The objective was to assess benefits, challenges and characteristics of integrating child and maternal health services with immunization programs. Two key characteristics of success were compatibility between interventions and presence of a strong immunization service prior to integration. Overburdened staff, unequal resource allocation and logistical difficulties were mentioned as risks of integration.

**Patel AR, Nowalk MP,** University of Pittsburgh, School of Medicine, USA, Vaccine, 2010, January 8. "Expanding immunization coverage in rural India" – A review of

evidence for the role of community health workers;; Poor routine immunization coverage in India has led to a large burden of Vaccine-Preventable diseases borne children under five years of age. Despite efforts to strengthen infrastructure and service delivery in the last decade, immunization coverage rates have reached a plateau. To meet the needs of India's growing population and address the short comings of health services for rural populations, the country is now turning towards a new national Community Health Worker (CHW) plan. It is clear that CHWs make diverse contributions towards strengthening immunization programs. Incorporation of evidence-based strategies for CHW selection, retention and training is critical for success of India's immunization program. There is also a growing need to develop efficient mechanisms for monitoring children's vaccination status to generate actionable feedback and identify cost-effective strategies.

# RATIONALE OF STUDY

Universal immunization of children against the vaccine preventable diseases is crucial to the reduction of infant and child mortality. Unavailability of vaccines, poor awareness and difficulties in reaching the immunization sites show that there is a gap between the health care provider and the beneficiaries.

There are also, issues of vaccine storage, cold-chain management and administration which contribute to success or failure of immunization. Given this background, it was decided to conduct a study to assess the quality services of immunization provided to children below five years of age.

# OBJECTIVES

**General Objective:** To get acquainted with immunization management at Lal Bahadur Shastri Hospital, Khichripur, Delhi.

**Specific Objective:**

(a) To assess the quality services of immunization provided to children below five years of age at Lal Bahadur Shastri Hospital, Khichripur, Delhi.

(b) Suggestions/Recommendations to improve the quality services of immunization provided.

# METHODOLOGY

**Study Design:** Cross-sectional study

**Study Area:** Lal Bahadur Shastri Hospital, Khichripur, Delhi

**Study Duration:** 01 February – 30 April 2018

**Study Population:** Randomly selected infants/children with their Mothers or Care-givers visiting Lal Bahadur Shastri Hospital, Delhi for immunization from East District of Delhi.

**Sample Size:** Sample size of 210 children

**Data Collection Tools & Techniques:** Checking of Hospital Records, Immunization Cards, National Immunization Schedule 2018, in-depth interviews with health-care providers (probed missed opportunities, health information delivery system and any difficulty or barriers to provide immunization and interviews with mothers or care-givers (probed their knowledge, attitude towards immunization and barriers for not vaccinating their children).

**Study Approach:** Hospital SOPs, Immunization Clinic Records, Documents, interviews, Data and Analysis.

# Human Resource & Work Load at Lal Bahadur Shastri Hospital

| **A. Average Daily No. Of Staff Handling The Patients** | |
|---|---|
| No. of Doctors | 156 |
| No. of Nurses | 103 |
| No. of Para Medicos | 55 |
| No. of Auxiliary Staff | 150 |
| No. of Administrative Staff | 39 |
| **B. Average Daily Work Load Handled By Hospital** | |
| OPD Attendance | 4200 |
| No. of X-Rays | 344 |
| No. of Lab Tests | 2773 |
| No. of Operations ( Minor & Major) | 140 |
| Casualty Attendance | 847 |
| Bed occupancy | 175% |

C. General Statistics

| Services | Year | No. of Patients |
|---|---|---|
| OPD Attendance | | |
| | 2013-2014 | 693127 |
| | 2014-2015 | 723431 |
| | 2015-2016 | 793297 |
| | 2016-2017 | 825132 |
| | 2017-2018 | 874111 |
| IPD Attendance | 2013-2014 | 20796 |
| | 2014-2015 | 25705 |
| | 2015-2016 | 28372 |
| | 2016-2017 | 34641 |
| | 2017-2018 | 37436 |
| Operations (Major & Minor) | 2013-2014 | 49634 |
| | 2014-2015 | 49793 |
| | 2015-2016 | 50142 |
| | 2016-2017 | 50894 |
| | 2017-2018 | 51109 |
| X – Rays | 2013-2014 | 94186 |
| | 2014-2015 | 93895 |
| | 2015-2016 | 102528 |
| | 2016-2017 | 102631 |
| | 2017-2018 | 103278 |

| | Year | No. of Patients |
|---|---|---|
| Ultra Sound | 2013-2014 | 9807 |
| | 2014-2015 | 12076 |
| | 2015-2016 | 15273 |
| | 2016-2017 | 17597 |
| | 2017-2018 | 18458 |
| Laboratory Tests | 2013-2014 | 701246 |
| | 2014-2015 | 648980 |
| | 2015-2016 | 826533 |
| | 2016-2017 | 859486 |
| | 2017-2018 | 866612 |

# SITUATIONAL ANALYSIS

Immunization reports of 2015-16, 2016-17 and 2017-18 of Lal Bahadur Shastri Hospital, Delhi for situational analysis:

## 2015-16

| **M10** | **CHILD IMMUNIZATION** | **TOTAL** |
|---|---|---|
| **10.1** | **Number of Infants 0 to 11 months old who received the following:** | |
| 10.1.01 | BCG | 30391 |
| 10.1.02 | DPT 1 | 34942 |
| 10.1.03 | DPT 2 | 34555 |
| 10.1.04 | DPT 3 | 33398 |
| 10.1.05 | OPV 0 (Birth Dose) | 22888 |
| 10.1.06 | OPV 1 | 33227 |
| 10.1.07 | OPV 2 | 32806 |
| 10.1.08 | OPV 3 | 31771 |
| 10.1.09 | Hepatitis-B1 | 30174 |
| 10.1.10 | Hepatitis- B 2 | 29358 |
| 10.1.11 | Hepatitis- B 3 | 28156 |
| 10.1.12 | Measles | 32622 |
| **10.1.13** | **Total number of children aged between 9 and 11 months who have been fully immunized (BCG+DPT123+OPV 123+Measles)** | |
| 10.1.13. | Male | 16670 |
| 10.1.13 | Female | 15660 |
| 10.1. | Total {(a) to (b)} | 32330 |
| **10.2** | **Number of children more than 16 months who received the following:** | |
| 10.2.1 | DPT Booster | 27460 |
| 10.2.2 | OPV Booster | 26568 |
| 10.2.3 | Measles, Mumps, Rubella (MMR) Vaccine | 1 |
| **10.3** | **Immunization Status** | |

| | | |
|---|---|---|
| **10.3.1** | **Total number of children aged between 12 and 23 months who have been fully immunized (BCG+DPT123+OPV 123+Measles) during the month:** | |
| 10. 3.1.a | Male | 5236 |
| 10.3.1.b | Female | 4847 |
| 10.3.1.c | Total {(a) to (b)} | 10083 |
| 10.3.2 | Children more than 5 years given DT5 | 13417 |
| 10.3.3 | Children more than 10 years given TT10 | 29456 |
| 10.3.4 | Children more than 16 years given TT16 | 31306 |
| **10.3.5** | **Adverse Event Following Immunization (AEFI):** | |
| 10.3.5.3 | Abscess | 28 |
| 10.3.5.b | Death | 0 |
| 10.3.5.c | Others | 202 |
| **10.4** | **Number of Immunization sessions during the month:** | |
| 10.4.1 | Planned | 19000 |
| 10.4.2 | Held | 18412 |
| 10.4.3 | Sessions where ASHAs were present | 9120 |
| **M11** | **Number of Vitamin A doses:** | |
| 11.1 | Administered between 9 months and 5 years: | |
| 11.1.1 | Dose-1 | 34414 |
| 11.1.2 | Dose-5 | 42060 |
| 11.1.3 | Dose-9 | 32111 |
| **M12** | **Number of cases of Childhood Diseases reported during the month 0-5 years:** | |
| 12.1 | Diphtheria | 0 |
| 12.2 | Pertussis | 0 |
| 12.3 | Tetanus Neonatorum | 6 |
| 12.4 | Tetanus others | 0 |
| 12.5 | Polio | 0 |
| 12.6 | Measles | 78 |
| 12.7 | Diarrhea and dehydration | 3162 |
| 12.8 | Malaria | 380 |
| 12.9 | Number admitted with Respiratory Infections | 703 |

**2016-17**

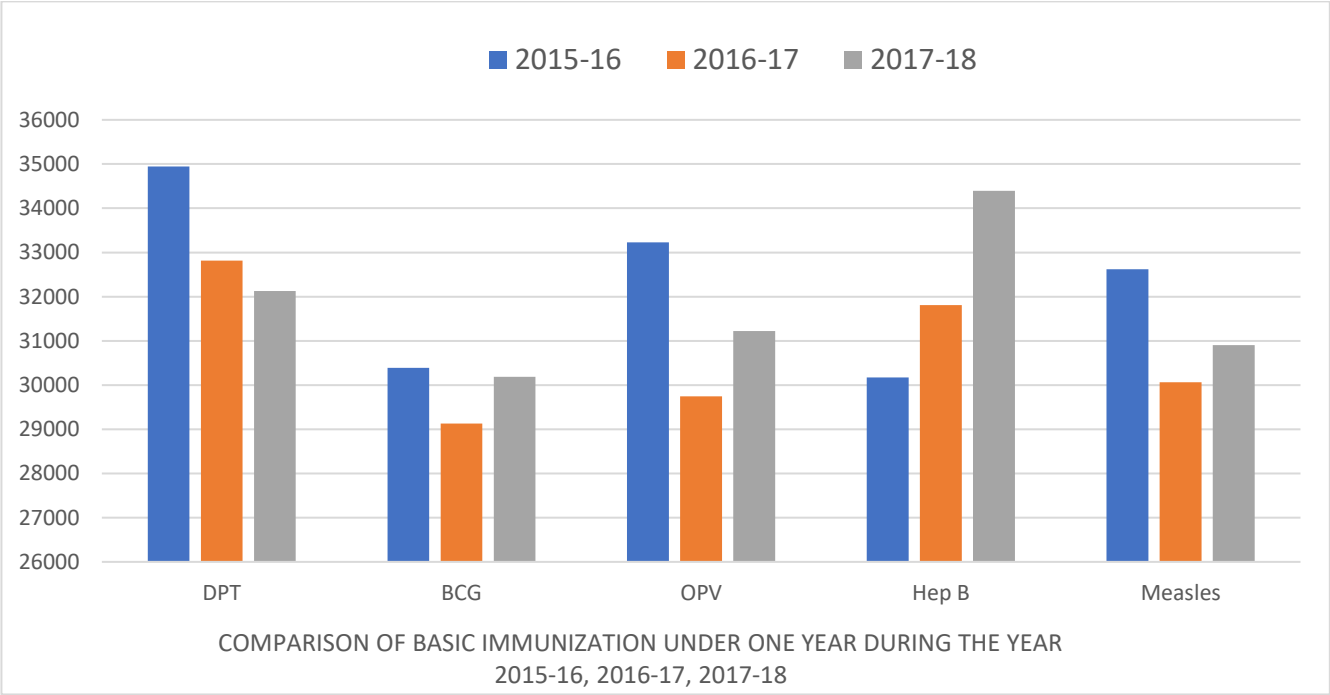
| M10 | CHILD IMMUNIZATION | TOTAL |
|---|---|---|
| **10.1** | **Number of Infants 0 to 11 months old who received the following:** | |
| 10.1.01 | BCG | 29130 |
| 10.1.02 | DPT1 | 32813 |
| 10.1.03 | DPT2 | 32204 |
| 10.1.04 | DPT3 | 31686 |
| 10.1.05 | OPV0 (Birth Dose) | 20284 |
| 10.1.06 | OPV1 | 29742 |
| 10.1.07 | OPV2 | 29211 |
| 10.1.08 | OPV3 | 28776 |
| 10.1.09 | Hepatitis-Bl | 31809 |
| 10.1.10 | Hepatitis-B2 | 30754 |
| 10.1.11 | Hepatitis-B3 | 30450 |
| 10.1.12 | Measles | 30063 |
| **10.1.13** | **Total number of children aged between 9 and 11 months who have been fully immunized (BCG+DPT123+OPV 123+Measles) during the month:** | |
| 10.1.13. a | Male | 15576 |
| 10.1.13. b | Female | 14302 |
| 10.1.13. c | Total {(a) to (b)} | 29878 |
| **10.2** | **Number of children more than 16 months who received the following:** | |
| 10.2.1 | DPT Booster | 24747 |
| 10.2.2 | OPV Booster | 23067 |
| 10.2.3 | Measles, Mumps, Rubella (MMR) Vaccine | 26 |
| **10.3** | **Immunization Status** | |
| **10.3.1** | **Total number of children aged between 12 and 23 months who have been fully immunized (BCG+DPT123+OPV 123+Measles) during the month:** | |
| 10. 3.1. a | Male | 1700 |
| 10.3.1.b | Female | 1519 |
| 10.3.l.c | Total {(a) to (b)} | 3219 |
| 10.3.2 | Children more than 5 years given DT5 | 10713 |

| | | |
|---|---|---|
| 10.3.3 | Children more than 10 years given TT10 | 25488 |
| 10.3.4 | Children more than 16 years given TT16 | 29217 |
| **10.3.5** | **Adverse Event Following Immunization** | |
| 10.3.5.a | Abscess | 142 |
| 10.3. 5. b | Death | 0 |
| 10.3.5.c | Others | 383 |
| **10.4** | **Number of Immunization sessions during the month:** | |
| 10.4.1 | Planned | 18029 |
| 10.4.2 | Held | 17719 |
| 10.4.3 | Sessions where ASHAs were present | 9602 |
| **M11** | **Number of Vitamin A doses** | |
| 11.1 | Administered between 9 months and 5 years | |
| 11.1.1 | Dose-1 | 31866 |
| 11.1.2 | Dose-5 | 32517 |
| 11.1.3 | Dose-9 | 26675 |
| **M12** | **Number of cases of Childhood Diseases reported during the month 0-5 years:** | |
| 12.1 | Diphtheria | 0 |
| 12.2 | Pertussis | 16 |
| 12.3 | Tetanus Neonatorum | 3 |
| 12.4 | Tetanus others | 84 |
| 12.5 | Polio | 0 |
| 12.6 | Measles | 85 |
| 12.7 | Diarrhea and dehydration | 3745 |
| 12.8 | Malaria | 372 |
| 12.9 | Number admitted with Respiratory Infections | 496 |

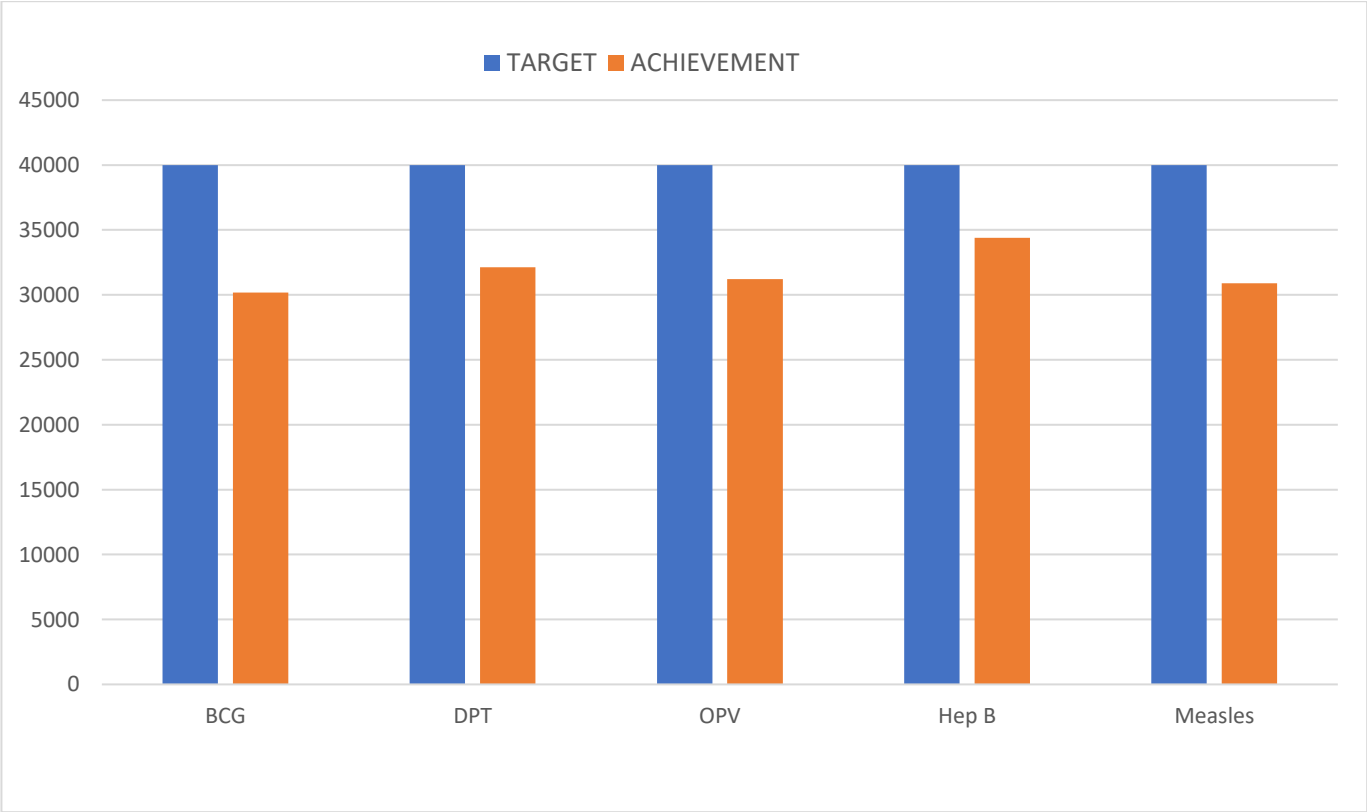
**2017-18**

| M10 | CHILD IMMUNIZATION | TOTAL |
|---|---|---|
| **10.1** | **Number of Infants 0 to 11 months old who received the following:** | |
| 10.1.01 | BCG | 30187 |
| 10.1.02 | DPT1 | 32124 |
| 10.1.03 | DPT2 | 32071 |
| 10.1.04 | DPT3 | 31905 |
| 10.1.05 | OPV0 (Birth Dose) | 23087 |
| 10.1.06 | OPV1 | 31220 |
| 10.1.07 | OPV2 | 31259 |
| 10.1.08 | OPV3 | 30982 |
| 10.1.09 | Hepatitis-Bl | 34395 |
| 10.1.10 | Hepatitis-B2 | 33206 |
| 10.1.11 | Hepatitis-B3 | 33794 |
| 10.1.12 | Measles | 30906 |
| **10.1.13** | **Total number of children aged between 9 and 11 months who have been fully immunized (BCG+DPT123+OP V123+Measles) during the month:** | |
| 10.1.13. a | Male | 15301 |
| 10.1.13. b | Female | 14033 |
| 10.1.13.C | Total {(a) to (b)} | 29334 |
| **10.2** | **Number of children more than 16 months who received the following:** | |
| 10.2.1 | DPT Booster | 25585 |
| 10.2.2 | OPV Booster | 24834 |
| 10.2.3 | Measles, Mumps, Rubella (MMR) Vaccine | 61 |
| **10.3** | **Immunization Status** | |

| | | |
|---|---|---|
| **10.3.1** | **Total number of children aged between 12 and 23 months who have been fully immunized (BCG+DPT123+OP V123+Measles) during the month** | |
| 10.3.l.a | Male | 2268 |
| 10.3.l.b | Female | 2083 |
| 10.3.l.c | Total {(a) to (b)} | 4351 |
| 10.3.2 | Children more than 5 years given DT5 | 9781 |
| 10.3.3 | Children more than 10 years given TT10 | 22655 |
| 10.3.4 | Children more than 16 years given TT16 | 25924 |
| **10.3.5** | **Adverse Event Following Immunization (AEFI)** | |
| 10.3.5.3 | Abscess | 39 |
| 10.3.5. b | Death | 0 |
| 10.3.5.C | Others | 425 |
| **10.4** | **Number of Immunization sessions during the month** | |
| 10.4.1 | Planned | 18627 |
| 10.4.2 | Held | 18329 |
| 10.4.3 | Sessions where ASHAs were present | 11225 |
| **M11** | **Number of Vitamin A doses** | |
| 11.1 | Administered between 9 months and 5 years: | |
| 11.1.1 | Dose-1 | 32140 |
| 11.1.2 | Dose-5 | 31257 |
| 11.1.3 | Dose-9 | 28021 |
| **M12** | **Number of cases of Childhood Diseases reported during the month 0-5 years:** | |
| 12.1 | Diphtheria | 0 |
| 12.2 | Pertussis | 0 |
| 12.3 | Tetanus Neonatorum | 0 |
| 12.4 | Tetanus others | 0 |
| 12.5 | Polio | 1 |
| 12.6 | Measles | 128 |
| 12.7 | Diarrhea and Dehydration | 3186 |
| 12.8 | Malaria | 449 |
| 12.9 | Number admitted | 1451 |




COMPARISON OF BASIC IMMUNIZATION UNDER ONE YEAR DURING THE YEAR 2015-16, 2016-17, 2017-18




COMPARISON OF TARGET WITH ACHIEVEMENT OF BASIC IMMUNIZATION DURING THE YEAR 2017-18

# INFERENTIAL STATISTICS: HUMAN RESOURCE, WORKLOAD AND SITUATIONAL ANALYSIS OF IMMUNIZATION DATA OF PRECEDING THREE YEARS

It is evident that Human Resource at the Hospital in terms of doctors, nurses, paramedics, auxiliary & administrative staff is inadequate and overburdened with heavy average daily workload and annual statistics of patients. Overburdened staff, unequal resource allocation and logistical difficulties is likely to lead to poor standard of documentation, maintenance of records, non-availability of effective monitoring mechanism for children's vaccination, no actionable feedback, thus, lead to poor quality of immunization.

## SWOT ANALYSIS OF LAL BAHADUR SHASTRI HOSPITAL, DELHI

STRENGTHS

- High budget allocation to health
- Independent and strong public health cadre
- Centrally managed human resource positioning
- Accessible Health Services
- Free and affordable healthcare
- Structured program implementation
- Positive and sharp impact on health indicators
- Ever Improving infrastructure of health system

WEAKNESS

- Inadequate manpower in certain areas like laboratory and paramedical technicians
- Non-existent health insurance system for the poor
- Deficiency in quality of monitoring
- Lack of concurrent supervision
- Lack of independent dedicated in-service training cadre

OPPORTUNITIES

- Improved transportation and road connectivity
- Rising literacy rates
- Strong educational system and social awareness
- Technology boom

THREATS

- Increasing incidence of non-communicable diseases
- Corporate and Private health care
- Various system of health care not complementing each other
- Lower pay packages and incentives for Health care workers

# HEALTH CARE PROGRAM - IMMUNIZATION

## DATA COLLECTED AT LAL BAHADUR HOSPITAL, DELHI

### VISIT REPORT AND COLLECTION OF DATA

A total of 210 children in the age group 12-23 months were covered during the visits to the hospital.

The Millennium Development Goal (MDG) 4 was to reduce child mortality by two third between 1990 and 2015. Immunization plays a key part in this goal. Immunizations have saved the lives of millions of children in the three decades since the launch of the Expanded Program on Immunization (EPI) in 1974. Worldwide there are still 27 million children overlooked by routine immunization and as a result, vaccine-preventable diseases cause more than 2 million deaths every year.

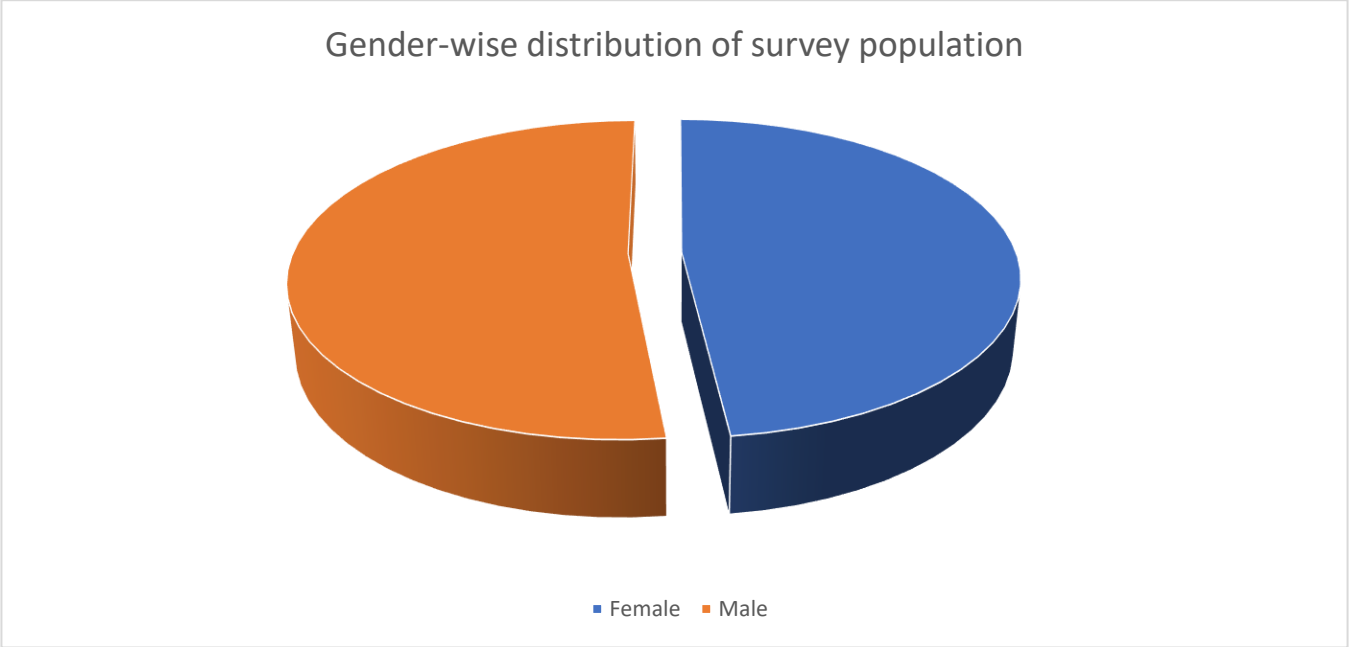
A World Fit for Children goal is to ensure full immunization of children less than one year of age at 90 percent nationally, with at least 80 percent coverage in every district or equivalent administrative unit.

According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against diphtheria, pertussis, and tetanus, three doses of polio vaccine, and a measles vaccination by the age of 12 months. In 1978, Government of India launched Expanded Program on Immunization with the aim to provide seven vaccines to all the children. Universal Immunization Program against six preventable diseases, namely, diphtheria, pertussis, childhood tuberculosis, poliomyelitis, measles and neonatal tetanus was introduced in the country in a phased manner in 1985, which covered the whole of India by 1990. Significant progress was made under the Program in the initial period when more than 90 % coverage for all the six antigens was achieved. We want to achieve 80 % coverage by 2018 and want to achieve and sustain 100% coverage by 2020.

To find out the vaccine coverage of children in the survey area, information about all the study children between 12-23 months of age was obtained. Mothers were asked to provide vaccination cards under this age group. If cards were not available, mothers were questioned and asked to recall about the immunization status of the child. The percentage of children aged12-23 months who received each of the vaccination is shown in following table. The denominator for the table is comprised of 210 children aged 12-23 months (only children who are old enough to be fully vaccinated were interviewed). The numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report.

**Distribution of children (12-23 months) by sex:**

| | Frequency | Percent |
|---|---|---|
| MALE | 109 | 51.9 |
| FEMALE | 101 | 48.1 |
| Total | 210 | 100.0 |



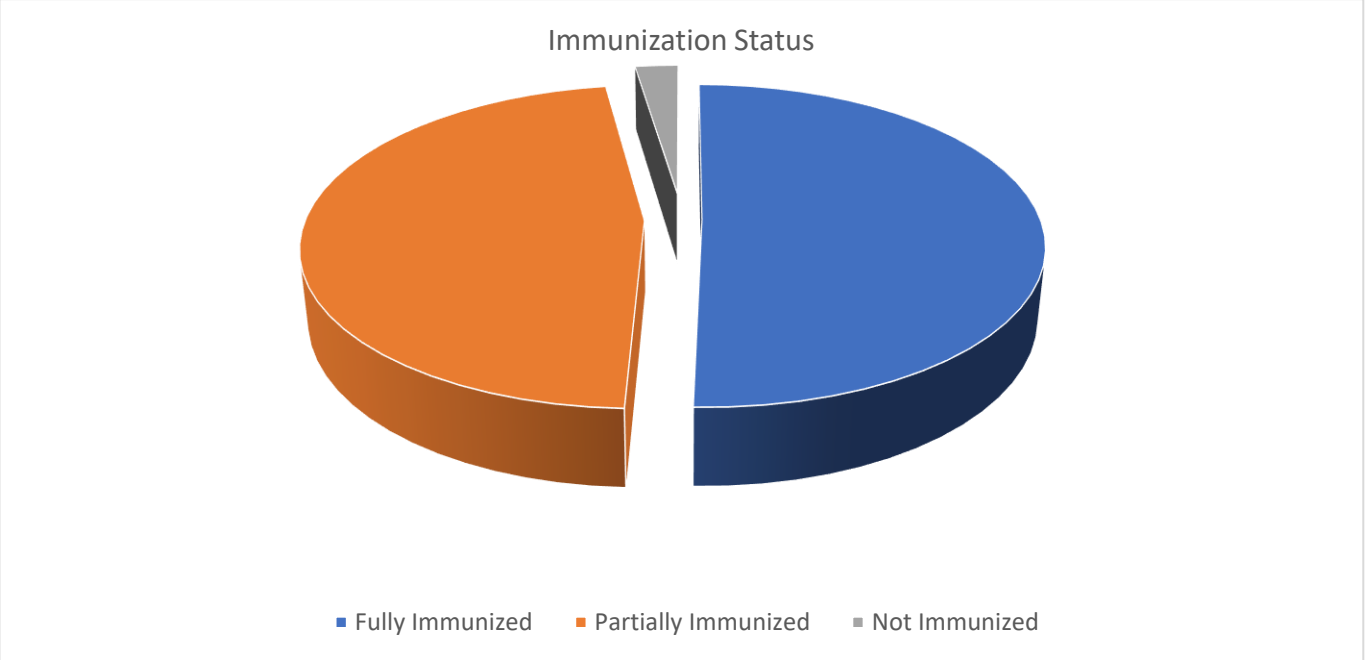

The study done was primarily at Lal Bahadur Shastri Hospital, Delhi. It clearly constitutes of 52% boys, 109 in number and 48% girls, 101 in number between the age group of 12-23 months.

**Immunization:**

The immunization of children against seven serious but preventable diseases namely, tuberculosis, diphtheria, pertussis, tetanus, Hep-B, poliomyelitis and measles is the main component of the child survival program. Children who received BCG, three doses of DPT and polio (excluding polio 0) and measles are considered to be fully vaccinated. The pie charts below reveal the immunization status at the Lal Bahadur Shastri Hospital, Delhi.

Immunization Status:

| | Frequency | Percentage |
|---|---|---|
| Not Immunized | 5 | 2.4 |
| Partially Immunized | 99 | 47.1 |
| Fully Immunized | 106 | 50.5 |
| Total | 210 | 100.0 |

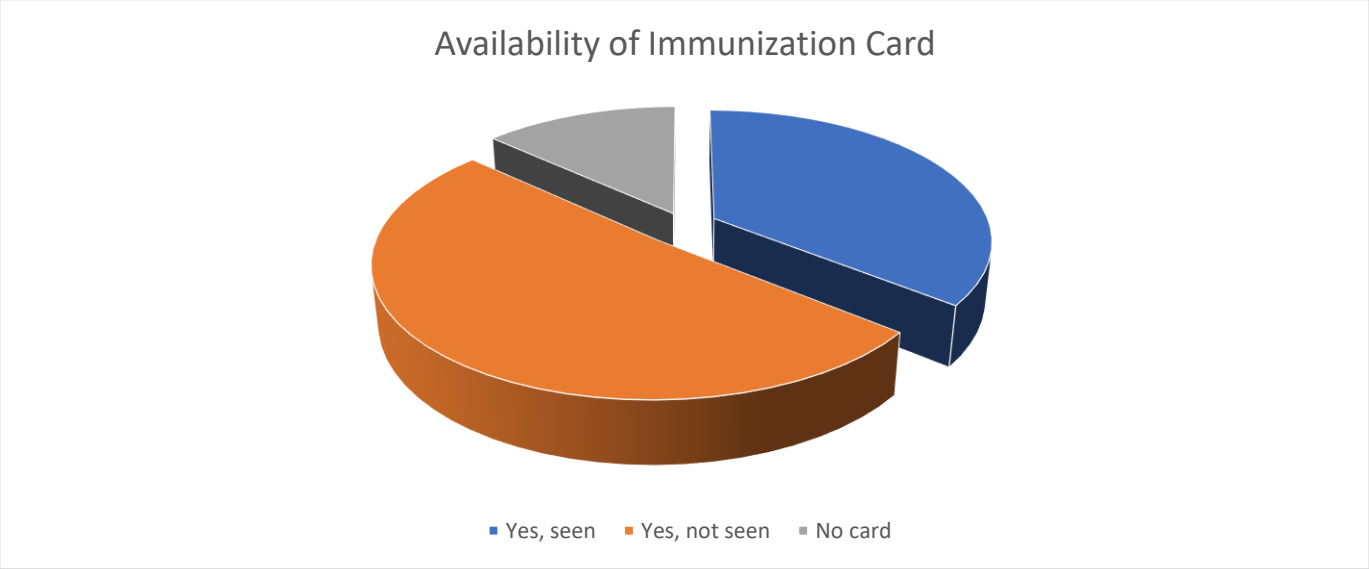



The survey revealed that at Lal Bahadur Shastri Hospital, Delhi only about 50% of the children aged 12-23 months are fully immunized while the percentage of partially immunized children is approximately 47%. The percentage of non-immunized children stands 2.4%. This means that about 50% of the children failed to get their timely dose of vaccinations.

**Availability of Immunization Card:**

Availability of the card, whether from government facility or private facility gives the correct figures of immunization status if documentation is done meticulously. This also reduces the likelihood of recall bias in any study. The graph below reveals how many mothers did have the immunization cards.

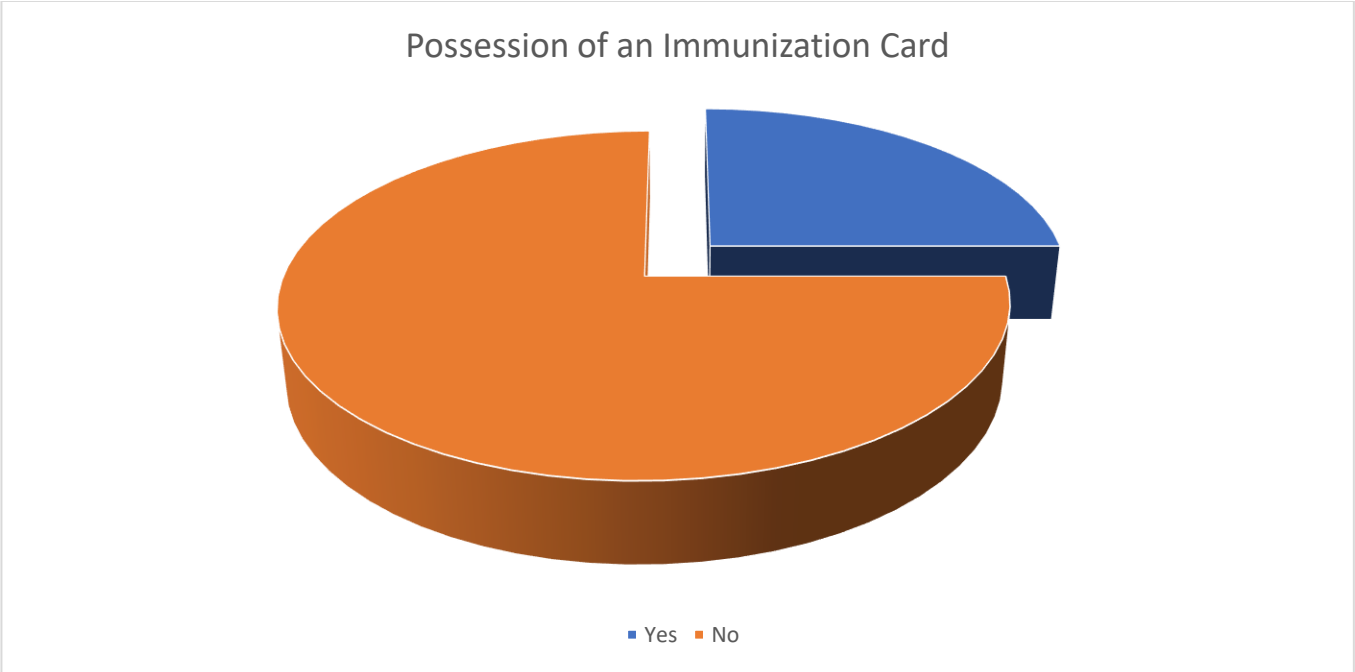
| | Frequency | Percentage |
|---|---|---|
| Yes, seen | 75 | 35.7 |
| Yes, not seen | 107 | 51.0 |
| No card | 28 | 13.3 |
| Total | 210 | 100 |




During the survey, the immunization card was available with only 35.7% of the mothers while the remaining 64.3% could not produce the card during the interview.

**Possession of an Immunization Card:**

| | Frequency | Percentage |
|---|---|---|
| Yes | 7 | 25.0 |
| No | 21 | 75.0 |
| Total | 28 | 100 |

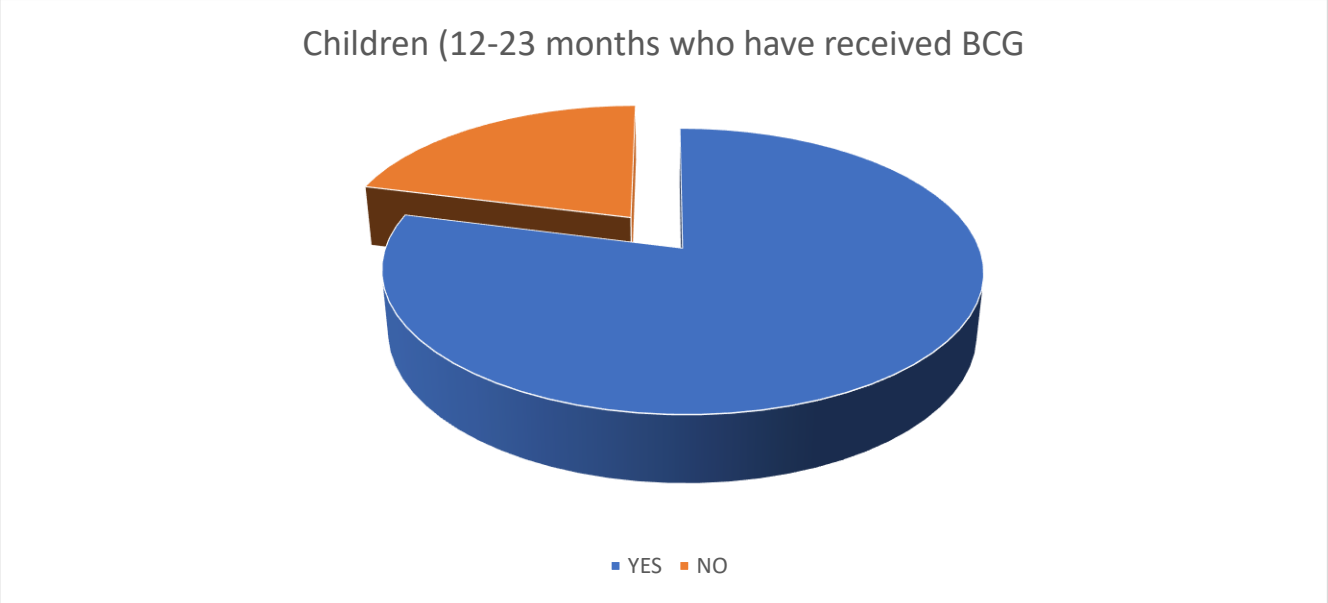



Out of the 28 mothers who said that they don't have a card, 21 mothers told during the interview that they never had a card for the children (75% of them) while 7 mothers (25%) told that they did have an immunization card for the child earlier but cannot retrieve it.

**Children (12-23 months) who have received BCG:**

Tuberculosis (TB) continues to be a major public health problem around the world and, according to WHO estimates, the incidence continues to increase. Some of the reasons for the increasing incidence are: inadequate access to healthcare, migration, deterioration of TB control program, low compliance with TB treatment, and multidrug-resistant strains. *Bacillus Calmette-Guerin* vaccine (BCG) is an alternative preventive measure for the disease that can be achieved in newborns in a single visit. The graph below reveals the percentage of children who are protected against tuberculosis at Lal Bahadur Shastri Hospital, Delhi.

| | Frequency | Percentage |
|---|---|---|
| Yes | 166 | 79.0 |
| No | 44 | 21.0 |
| Total | 210 | 100 |

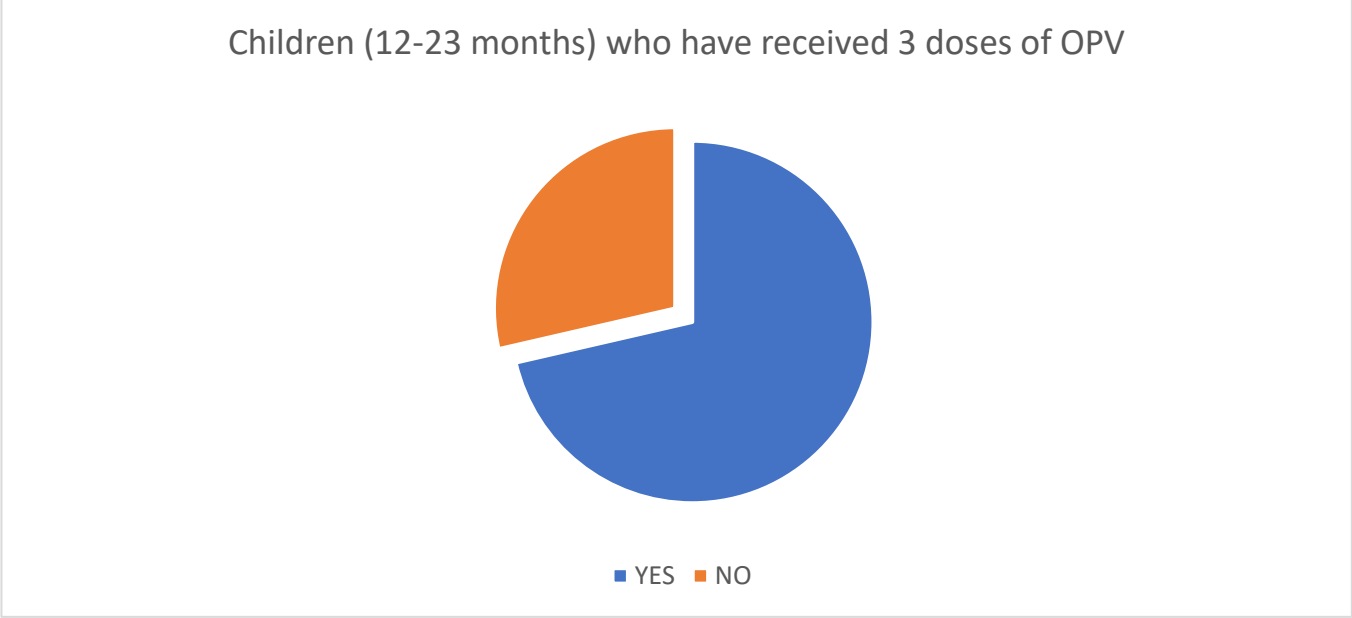



Out of all the 210 children surveyed, 79% children did receive BCG dose of vaccination while 21% children are still deprived of the dosage and not protected against Tuberculosis.

**Children (12-23 months) who have received 3 doses of OPV:**

A cornerstone of the polio eradication strategy is the need to ensure high levels of routine immunization coverage with three doses of OPV among children under one year of age -not just at national level, but at regional and district levels as well. While routine immunization alone cannot eliminate or eradicate the disease, good routine OPV coverage reduces the incidence of polio and makes eradication feasible. If uniformly high immunization cover age is not maintained, pockets of non-immunized children build up, favoring continued spread and outbreaks of polio virus. The graph below shows the status of OPV coverage at Lal Bahadur Shastri Hospital, Delhi.

| | Frequency | Percentage |
|---|---|---|
| Yes | 150 | 71.4 |
| No | 60 | 28.6 |
| Total | 210 | 100 |

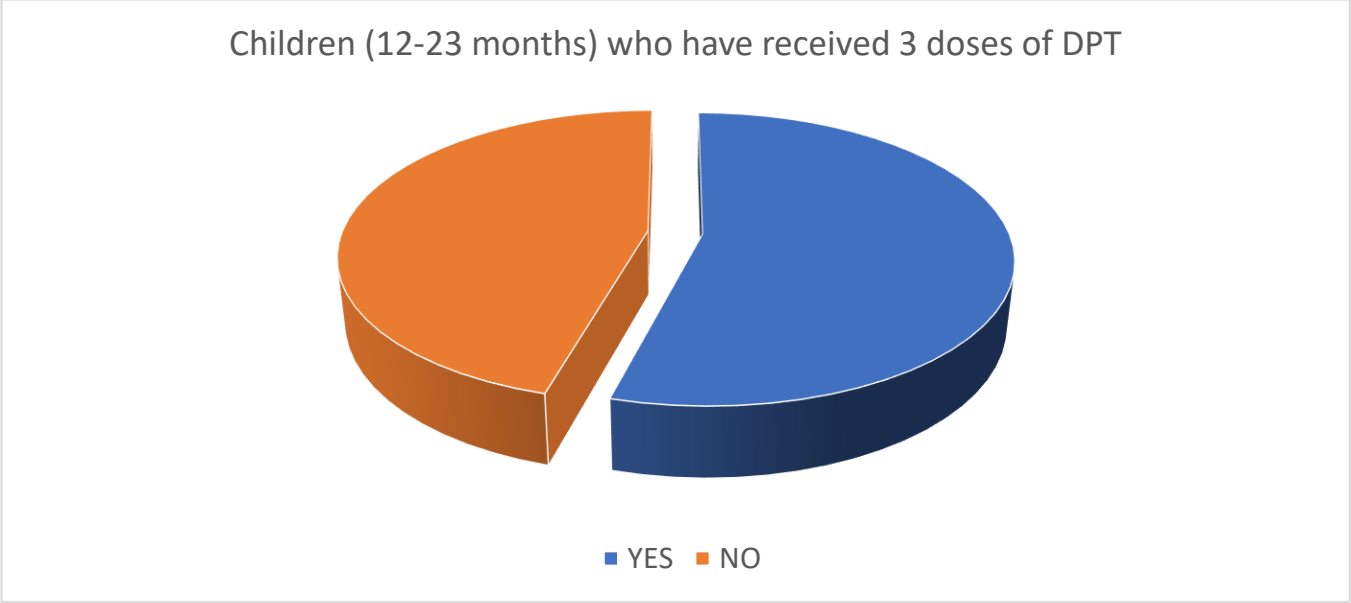



Over 71% of the children surveyed have received all the three doses of OPV while more than 28% of them have not had complete dosage of OPV.

**Children (12-23 months) who have received 3 doses of DPT:**

Diphtheria and pertussis are bacterial infections and like other respiratory infections, transmission is increased in overcrowded and poor socioeconomic conditions. Immunization against diphtheria, pertussis and tetanus is the best preventive measure. The vaccine is given in three doses in childhood as part of the trivalent DPT vaccine in national immunization programmes. Booster doses are necessary at one and a half years of life to augment waning immunity. The following graph shows us how many children are secure against these three dreadful diseases at Lal Bahadur Shastri Hospital, Delhi.

| | Frequency | Percentage |
|---|---|---|
| Yes | 114 | 54.3 |
| No | 96 | 45.7 |
| Total | 210 | 100 |

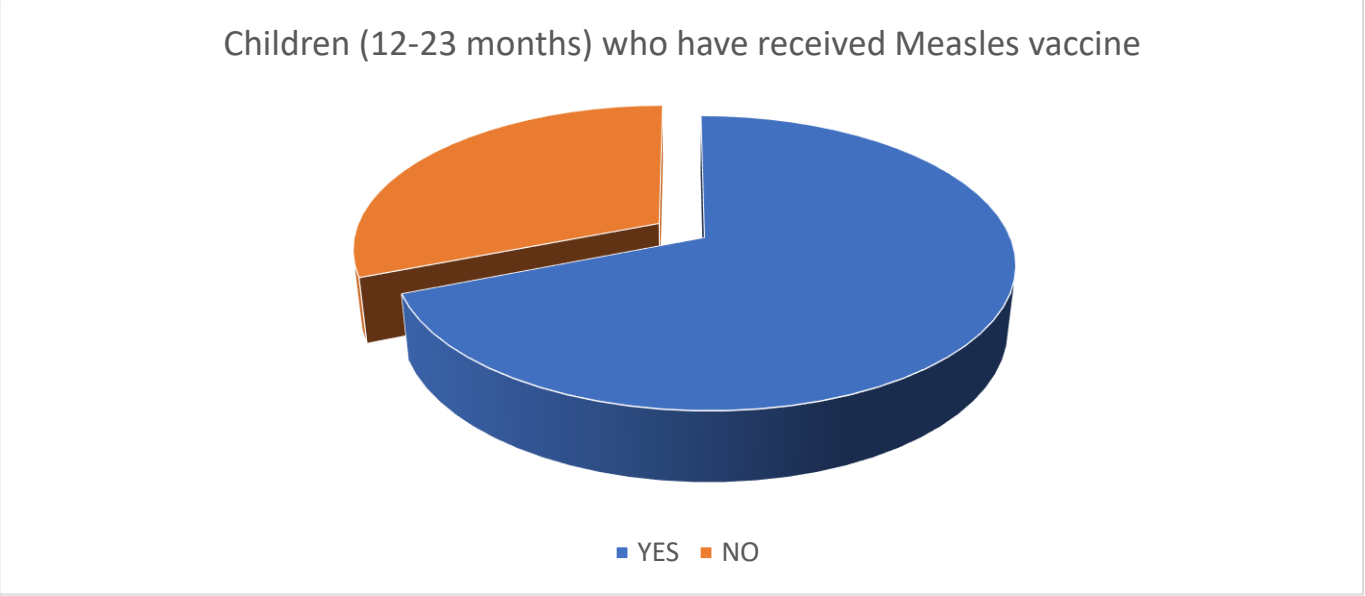



The above graph shows us that only a small percentage of children did receive all the three doses of DPT vaccine i.e. only 54.3% while 45.7% of the children did not receive complete protection against the 3 dreadful diseases (Diphtheria, pertussis and Tetanus).

**Children (12-23 months) who have received Measles vaccine:**

Measles is a highly contagious viral infection, mainly transmitted by droplets or direct contact with nasal or throat secretions of infected persons. Man is the only reservoir. In large unimmunized populations, measles epidemics occur every 2-3 years. Among highly susceptible populations in crowded settings, the opportunity for explosive point source outbreaks is high. The majority of infants are susceptible to measles by the age of 6-9 months. Therefore, it is extremely important to provide them immunization against the disease. The graph below shows the status of measles vaccine coverage at Lal Bahadur Shastri Hospital, Delhi.

| | Frequency | Percentage |
|---|---|---|
| Yes | 145 | 69.0 |
| No | 65 | 31.0 |
| Total | 210 | 100 |

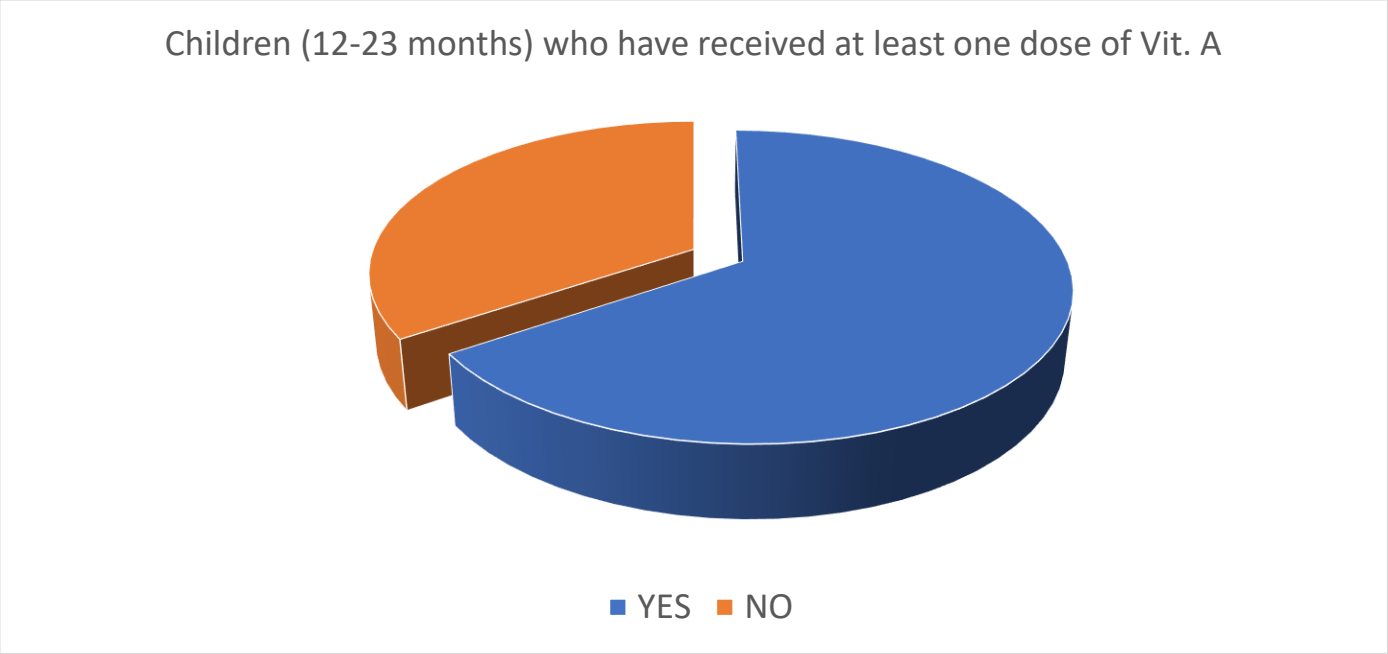



Though the percentage of children receiving all the three doses of DPT was quite less, the percentage improves when it came to Measles vaccine. It is encouraging to note that 69% of the children got vaccinated for measles while 31% are yet to receive the vaccine.

**Children (12-23 months) who have received at least one dose of Vit. A:**

Vitamin A deficiency is one of the most common nutritional deficiency disorders in the world, affecting more than 250 million children worldwide (Bolem et. al., 1997). The child survival program also includes administration of five doses of Vitamin A for prevention of night blindness. The graph shows the percentage of children in the age group 12-35 months who received at least one dose of Vitamin A.

| | Frequency | Percentage |
|---|---|---|
| Yes | 138 | 65.7 |
| No | 72 | 34.3 |
| Total | 210 | 100 |




It may be attributed to the Bi-annual rounds of Vitamin A in M.P that 66% of the children have received their vitamin A dosage (though still not included in routine immunization schedule) but still 34.3% haven't received the vaccination.

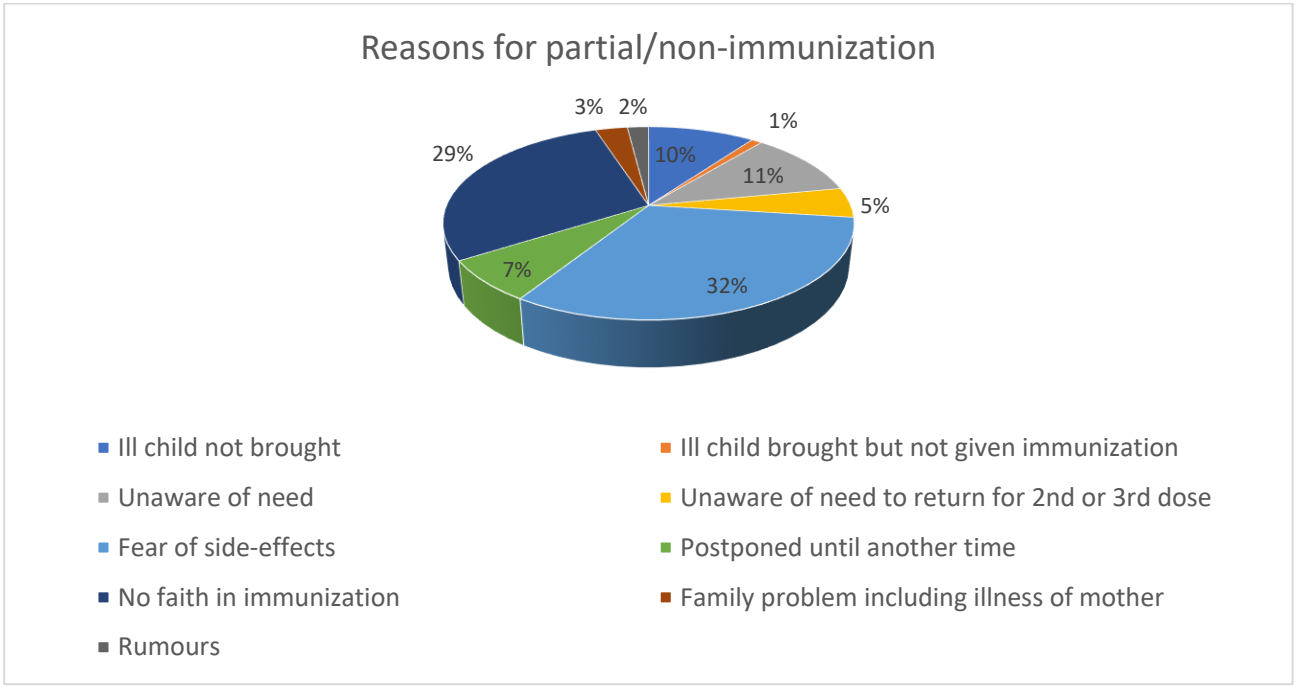
# PROBLEM ANALYSIS & FINDINGS

1. The sample size was of 210 children between the age group of 12-23 months which constitutes 52% boys and 48% girls.

2. The study revealed that only about 50% of the children were fully immunized. While approximately 48% of the children were partially immunized and 2% of the children were non-immunized. This shows that about 50% of the children failed to get their timely dose of vaccinations. The deduction drawn is that there is no mechanism for monitoring children's vaccination status to generate actionable feedback and cost-effective strategies.

3. During the study, the immunization card was available with approximately 36% of the mothers, while 64% could not produce the card during the interview. This reflects poor awareness among mothers and no effective monitoring mechanism can be put in place unless there is a synchronisation of records at the hospital and regular updation of immunization cards.

4. Reasons for not completing immunization:



5. By means of this study, we found that approximately 50% of the children interviewed were either partially immunized or non- immunized. Therefore, it was extremely important to understand the reasons for this failure so as to draft interventions accordingly. When asked, the above reasons were cited by the mothers. Two major reasons found for the failure were “Fear of Side-Effects” (32%) as well as “No faith in Immunization” (29%). Over 11% told that they were unaware of the needs of immunization and 10% said that the child was not brought for vaccination as they were ill.

**KNOWLEDGE REGARDING PROPER DOSE, ROUTE AND SITE FOR VACCINATIONS AMONG THE HOSPITAL STAFF AT IMMUNIZATION CLINIC**

| **For infants** | | |
|---|---|---|
| **Vaccine (Dose, Route & Site)** | **Question** | **Answer (%)** |
| **BCG** (0.1ml/0.05ml until 1 month age), intra-dermal, left-upper arm) | Knowledge regarding dose<br>(a) 0.1 ml<br>(b) 0.05 ml<br>(c) 0.01 ml<br>(d) 0.05 ml & 0.1 ml both | <br>40<br>20<br>6<br>34 |
| | Knowledge regarding route<br>(a) Intra-dermal<br>(b) Subcutaneous<br>(c) No answer | 92<br>7<br>1 |
| **OPV** 0, 1, 2 & 3 (at birth, 6, 10 & 14 Weeks), 2 drops, oral, oral | Knowledge regarding dose<br>(a) 2 drops<br>(b) 1 drop | <br>98<br>2 |
| **Pentavalent** 1,2 & 3(6, 10 & 14 Weeks), 0.5 ml, intra-muscular, Antero-lateral side of mid-thigh | Knowledge regarding dose<br>(a) 0.5 ml<br>(b) 0.1 ml | <br>99<br>1 |
| **Measles/MR 1** (9-12 months), 0.5 ml, subcutaneous, right upper-arm | Knowledge regarding route<br>(a) Intra-muscular<br>(b) Intra-dermal<br>(c) Subcutaneous<br>(d) No answer | <br>10<br>6<br>80<br>4 |
| **For children** | | |
| **DPT** Booster 1(16-24 months), 0.5 ml, intra-muscular, Antero-lateral side of mid-thigh | Knowledge regarding route<br>(a) Intra-muscular<br>(b) No answer | <br>92<br>8 |
| | Knowledge regarding site<br>(a) Antero-lateral side of mid-thigh<br>(b) No answer | <br>99<br>1 |

## Observations:

Eight members of the hospital staff to include nurses, paramedics and auxiliary staff at immunization clinic were interviewed through this structured questionnaire. Knowledge regarding BCG dosage is that 40% respondents said 0.1ml to be the correct dosage which is 10 times the dosage given to a child >12 months of age. Over-dosage to the new born infants can cause serious threat to their lives. Apart from this, majority of the respondents had good knowledge regarding dosage, route and site of vaccines.

# AWARENESS REGARDING IMMUNIZATION, PRACTICES AND COLD-CHAIN MANAGEMENT AMONG THE HOSPITAL STAFF AT IMMUNIZATION CLINIC

| S.No. | Question | Answer (%) |
|---|---|---|
| 1. | A fully immunized infant/child is one who has received the following: BCG, Polio, Pentavalent, Rotavirus, Measles, JE and Vitamin A before the first birthday. | YES 60 NO 40 |
| 2. | If a child comes with mild fever and diarrhea, should you give vaccination? | YES 22 NO 78 |
| 3. | Drop out children are those who have never received any immunization. | YES 85 NO 15 |
| 4. | Whether DPT and Hep B are given on different sites | YES 100 NO 0 |
| 5. | Whether Vit A is always given with Measles vaccination | YES 100 NO 0 |
| 6. | Batch no. & expiry date of vaccine recorded | YES 100 NO 0 |
| 7. | Whether normal saline used for cleaning the skin before BCG and Measles vaccine | YES 65 NO 35 |
| 8. | Disposal of AD Syringes after use<br>(a) Burn it in open air<br>(b) Cut needle with cutter and collect syringe in red bag and send for disinfection and disposal<br>(c) Dispose in general waste | <br>5<br>95<br><br>0 |
| 9. | Whether ice pack applied on Vaccination site after vaccination | YES 99 NO 1 |
| 10. | Whether mother advised regarding adverse effects of vaccination | YES 100 NO - |
| 11. | Whether advised mother regarding next date of immunization | YES 100 NO - |
| 12. | Knowledge of respondents regarding, frozen T-Series Vaccines<br>(a) Discard and repost<br>(b) Keep them in cold chain<br>(c) Warm them and use them as quickly as possible | <br>48<br>0<br>52 |
| 13. | Knowledge of the respondents regarding reconstituted BCG and Measles vaccine<br>(a) 1 hour<br>(b) 2 hour<br>(c) 3 hour<br>(d) 4 hour | <br>0<br>0<br>30<br>70 |

| | | | |
|---|---|---|---|
| 14. | Vaccine stock is rotated so that those with earlier expiry dates are used first | YES 100 | NO - |
| 15. | Process for vaccine stored outside +2° C to +8° C temperature range | YES 100 | NO - |

## Observations:

Eight members of the hospital staff to include nurses, paramedics and auxiliary staff at immunization clinic were interviewed through this structured questionnaire. It was noticed that 40% of the respondents were not aware about who is a fully immunized child. Approximately 22% of the respondents feel that a child with mild fever and diarrhea should be given vaccine which is not advisable. It was also found that 52% of the staff responsible for immunization feel that frozen T-Series vaccines should be warmed and used quickly. These results show that hospital staff lacks complete knowledge and needs to be trained on immunization. However, their knowledge and practice on the other aspects of immunization is adequate.

# MANAGERIAL PROBLEMS

## 1. Problems of Health Care Program:

Lessons learnt in this project during visits to Lal Bahadur Shastri Hospital, Delhi

1. I got to learn the human resource management skills. That included importance of reward system, verbal appreciations and incentive schemes.
2. I had an opportunity to learn skills of event management which included logistics management, time management and scheduling.
3. I learnt how important is the proper documentation of the work done and progress made in implementation of the schemes. This helps us find the gap areas and make targeted interventions.
4. This period also taught me the importance of regular monitoring and supportive supervision. This ensures meticulous timely reporting of work progress and motivates the staff to work efficiently and effectively.
5. I learnt how important the training programs are for the Health Care workers. Regular training programs keeps the grass root level workers updated on the current program developments and this in turn would lead to a responsive society.

Difficulties faced

1. First of all, the major problem faced during the study was the language barrier. Patients in the hospital seldom understood English. Moreover, all the official letters and orders were written in English.
2. I faced initial resistance from the staff and it took time for them to adjust with the way I wanted to work. (They did not want to come for review meetings and did not want to do monthly reporting).
3. I faced difficulty in bringing together the staff as a team. They initially preferred working individually and independent of each other. It was very difficult to make them understand that the work of each one of them is interdependent.

4. Because the work of each of the staff is overlapping and interdependent, they never had clarity of their roles and responsibilities and thus they used to delegate the work to each other. This adversely affected the quality of work and we could not meet the time deadlines. I faced trouble in assigning work.

# SUGGESTED CHANGES & RECOMMENDATIONS TO SOLVE THE PROBLEMS

The study was conducted in Lal Bahadur Shastri Hospital, Delhi to cover the population of East Delhi District. This study has put forward various aspects of routine immunization program.

Via this we could understand the current immunization scenario much closely and critically in East Delhi District. This also helped us in identifying some of the reasons which prevent the people from providing full immunization to their children and thus in turn pose as a hindrance in achieving our targets of reduced IMR.

I believe that the following methods may prove useful in overcoming the above mentioned barriers and help in achieving a disease- free childhood for all the children:

**Recommendation 1: Monitoring and Supervision**

Regular and meticulous monitoring and supportive supervision is required at the grass root level. This should include:

- Authoritative officers should visit the peripheral facilities more frequently
- Periodic checking of records should be ensured.
- Regular training of the field staff on importance of immunization and vaccine delivery is also important. Moreover, the staff should be trained on proper reporting formats.

**Recommendation 2: Information Education Communication (IEC)**

As we saw that two major reasons found for partial/non-immunization were “Fear of Side Effects” (32%) as well as “No faith in Immunization” (29%) and over 11% told that they were unaware of the needs of immunization. This seems to evoke the need for planned BCC activities which should be implemented at the grass root level so as to enhance the demand & utilization of services. Banners in local language should be displayed at prominent sites.

Other field specific activities like Bhawai shows, nukkad nataks, role plays, flash cards, and inter-personal communication activities to be focused on.

**Recommendation 3: Active role of NGOs**

Micro-planning to cover the entire population should be done thoroughly with the active NGOs and they should be encouraged to accelerate activities on motivating people to bring their children for immunization.

**Recommendation 4: HMIS**

The Health Management Information System should be improved so that reported coverage gives true picture of the scenario. For this the reporting staff should also be trained on dexterous reporting.

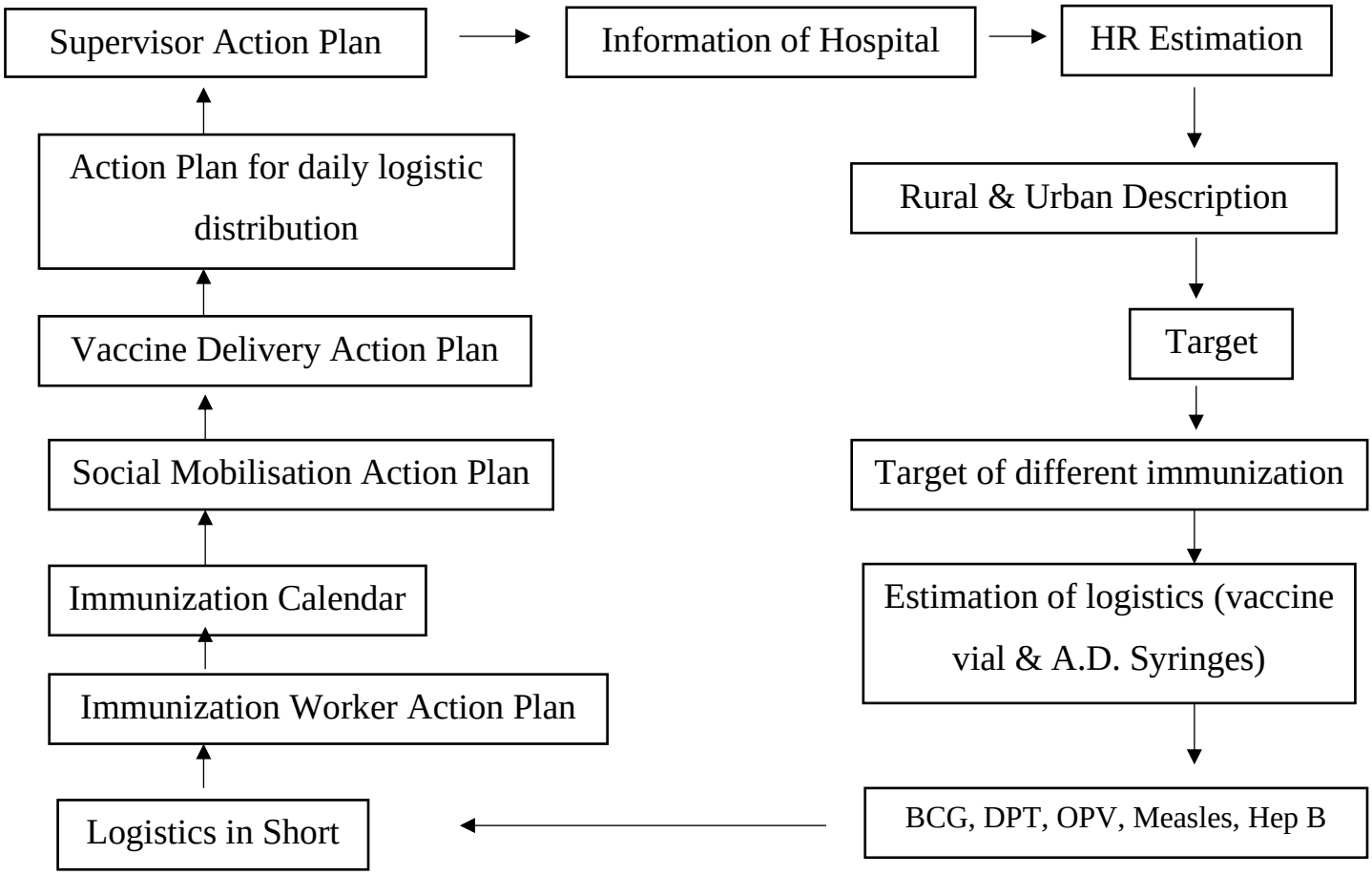
**Recommendation 5: Adequate Workforce**

Sanctioned but vacant positions of the grass root level health workers should be filled accordingly so that shortage of manpower doesn't pose as a cause for inefficient working and outcomes.

**Recommendation 6: Follow up**

Follow up from birth of an infant till fully vaccinated is required in terms of maintaining proper records, monitoring and call up telephonically/intimation by SMS service/E-mail to achieve overall aim of complete vaccination.

# Action Plan for Complete Immunization for Children Under Five Years of Age at Lal Bahadur Shastri Hospital, Delhi




After analysis of the data during visits to Lal Bahadur Shastri Hospital, Delhi we saw the different scenario in Immunization program. For the 100% coverage of immunization we need perfect action plan for each and every thing involved in the immunization program.

# Immunization Session Number and Beneficiaries Estimation (Yearly & Monthly)

| Annual Beneficiary | | Monthly Beneficiary | |
|---|---|---|---|
| **ANC** | **0-1 Year Child** | **ANC** | **0-1 Year Child** |
| 6137 | 5570 | 615 | 562 |
| 355 | 322 | 30 | 27 |

# Estimated Number of Beneficiaries for Immunization (Estimation of Dose of Vaccine)

| Prioritization | Different Vaccines Beneficiaries Numbers Estimation | | | | |
|---|---|---|---|---|---|
| | Child under 1 year of age | | | | |
| | **BCG** | **OPV5 Dose** | **BPT4 Dose** | **Hep B3 Dose** | **Measles 1 Dose** |
| | 562 | 2810 | 2248 | 1686 | 562 |
| Moderate | 27 | 135 | 108 | 81 | 27 |

# Estimation Of Vaccines Vial And Syringes

| Vaccine Vial | | | | Diluents | | A.D. Syringe | | Mixed Syringe | Immunization Card |
|---|---|---|---|---|---|---|---|---|---|
| BCG | OPV | DPT | Measles | | | | | | |
| 10 Dose Vial | 20 Dose Vial | 10 Dose Vial | 5 Dose Vial | Normal Saline | Distill Water | O.lml | 0.5ml | | |
| 236 | 294 | 437 | 284 | 236 | 284 | 792 | 6335 | 520 | 846 |
| 4 . | 9 | 15 | 8 | 4 | 8 | 30 | 304 | 12 | 33 |

# Short Description of Logistic Requirement

**State**: Delhi **District**: East Delhi **Immunization Session Required**: 145

| Estimated Beneficiaries | Annual | Monthly |
|---|---|---|
| 0-1 Year Child | 5570 | 562 |

| Estimated Requirement of Logistic | Monthly (According to beneficiaries) | Monthly (According to Health Worker& | Actual Monthly Requirement (25% added buffer stock) |
|---|---|---|---|
| Vaccine Requirement | | | |
| BCG 10 Dose | 236 | 178 | 237 |
| DPT 10 Dose | 437 | 510 | 679 |
| OPV 20 Dose | 294 | 308 | 410 |
| Measles 5 Dose | 284 | 286 | 381 |
| Diluents Requirements (In Ampoules) | | | |
| Normal Saline | 236 | 178 | 237 |
| Distill Water | 284 | 286 | 381 |
| Syringe Requirement | | | |
| 0.lml A.D Syringe | 792 | 954 | 1269 |
| 0.5ml A.D Syringe | 6335 | 8967 | 11927 |
| Mix Syringe | 520 | 464 | 618 |
| Immunization Card Requirement | 6137 | With Wastage | 6751 |
| Hep B | | | |
| 10 Dose Vial | 328 | 372 | 495 |
| 0.5ml A.D Syringe | 1977 | 2684 | 3570 |

**Note:** We prepared the action plan in different formats for different actions and have given one example for each. By this way we have prepared a plan for the entire year to evaluate the program.

# CONCLUSION

On completion of this study, we found that the level of full immunization at Lal Bahadur Shastri Hospital, Delhi is about 50% which is quite low and we still have a long way to go in order to achieve the MDG 4 i.e. reduction in IMR (less than 30/1000 live births before the year 2020). It was also revealed from the study that there is lack of information existing on the subject of immunization among the population. As it is evident, many people cited reasons like "unaware for need of immunization" and "fear of side effects" for failure in providing full immunization. So, to combat this, there is need to do more focused and proper IEC activities to improve the demand and utilization of services. It also shows that dropout rate from BCG to Measles is around 12.6% and from DPT 1 to DPT 3 is 12.3% which is on a higher side. Therefore, there must be regular follow up of the cases and strengthen monitoring through RIMS.

Apart from the above, the study reveals the existence of an immense discrepancy between the data that is regularly reported from the grass root level and the actual picture prevailing. This proves really harmful for the scrupulous program planning.

It is true that there is a gap between the desirable and actual situation. These findings may be used for further planning and implementation of health services in the way that they prove to be best for the welfare of the community.

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# APPENDIX A

## National Immunization Schedule for Infants, Children and Pregnant Women: 2018

**National Immunization Schedule (NIS) for Infants, Children and Pregnant Women**

| Vaccine | When to give | Dose | Route | Site |
|---|---|---|---|---|
| **For Pregnant Women** | | | | |
| **TT-1** | Early in pregnancy | 0.5 ml | Intra-muscular | Upper Arm |
| **TT-2** | 4 weeks after TT-1* | 0.5 ml | Intra-muscular | Upper Arm |
| **TT- Booster** | If received 2 TT doses in a pregnancy within the last 3 yrs* | 0.5 ml | Intra-muscular | Upper Arm |
| **For Infants** | | | | |
| **BCG** | At birth or as early as possible till one year of age | 0.1ml (0.05ml until 1 month age) | Intra-dermal | Left Upper Arm |
| **Hepatitis B - Birth dose** | At birth or as early as possible within 24 hours | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| **OPV-0** | At birth or as early as possible within the first 15 days | 2 drops | Oral | Oral |
| **OPV 1, 2 & 3** | At 6 weeks, 10 weeks & 14 weeks (OPV can be given till 5 years of age) | 2 drops | Oral | Oral |
| **Pentavalent 1, 2 & 3** | At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age) | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| **Rotavirus#** | At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age) | 5 drops | Oral | Oral |
| **IPV** | Two fractional dose at 6 and 14 weeks of age | 0.1 ml | Intra dermal two fractional dose | Intra-dermal: Right upper arm |
| **Measles /MR 1st Dose$** | 9 completed months-12 months. (can be given till 5 years of age) | 0.5 ml | Sub-cutaneous | Right upper Arm |
| **JE - 1**** | 9 completed months-12 months. | 0.5 ml | Sub-cutaneous | Left upper Arm |
| **Vitamin A (1st dose)** | At 9 completed months with measles-Rubella | 1 ml ( 1 lakh IU) | Oral | Oral |
| **For Children** | | | | |
| **DPT booster-1** | 16-24 months | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| **Measles/ MR 2nd dose $** | 16-24 months | 0.5 ml | Sub-cutaneous | Right upper Arm |
| **OPV Booster** | 16-24 months | 2 drops | Oral | Oral |
| **JE-2** | 16-24 months | 0.5 ml | Sub-cutaneous | Left Upper Arm |
| **Vitamin A*** (2nd to 9th dose)** | 16-18 months. Then one dose every 6 months up to the age of 5 years. | 2 ml (2 lakh IU) | Oral | Oral |
| **DPT Booster-2** | 5-6 years | 0.5 ml. | Intra-muscular | Upper Arm |
| **TT** | 10 years & 16 years | 0.5 ml | Intra-muscular | Upper Arm |

- *Give TT-2 or Booster doses before 36 weeks of pregnancy. However, give these even if more than 36 weeks have passed. Give TT to a woman in labour, if she has not previously received TT.
- **JE Vaccine is introduced in select endemic districts after the campaign.
- *** The 2nd to 9th doses of Vitamin A can be administered to children 1-5 years old during biannual rounds, in collaboration with ICDS.
- #Phased introduction, at present in Andhra Pradesh, Haryana, Himachal Pradesh and Orissa from 2016 & expanded in Madhya Pradesh, Assam, Rajasthan, and Tripura in February 2017 and planned in Tamil Nadu & Uttar Pradesh in 2017.
- $ Phased introduction, at present in five states namely Karnataka, Tamil Nadu, Goa, Lakshadweep and Puducherry. (As of Feb' 2017)

# APPENDIX B


दिल्ली सरकार
लाल बहादुर शास्त्री अस्पताल
खिचड़ीपुर, दिल्ली - 110091
GOVT. OF NCT OF DELHI
LAL BAHADUR SHASTRI HOSPITAL
KHICHRIPUR, DELHI - 110091
H
H


इस अस्पताल में सारी दवाईयां और टेस्ट फ्री है
कोई दवा न मिले तो 1031 पर फोन करें। हम आपको वो दवा दिलवाएंगे।
इस अस्पताल में यदि कोई टेस्ट नहीं हो पा रहा तो डॉक्टर से एक फार्म भरवा लें। उसे दिखाने से प्राइवेट अस्पताल में फ्री टेस्ट हो जाएगा।
ऑपरेशन
यदि ऑपरेशन की तारीख 30 दिन के अंदर न मिले तो डॉक्टर से एक फार्म भरवा लें। उसे दिखाने पर प्राइवेट अस्पताल में फ्री ऑपरेशन होगा।
कोई भी समस्या हो तो 1031 पर फोन करें
-अरविंद केजरीवाल
मुख्यमंत्री, दिल्ली


BEWARE OF PICK POCKETS
जेब कतरों से सावधान
आप कैमरा की निगरानी में हैं
You Are Under CCTV Surveillance
यह अस्पताल आपको है
सुथरा रखने में हमारी मदद करें।
इधर उधर कूड़ा फेकना और थूकना
मना है। कृप्या कूड़ा कूड़ेदान में ही
डालें।
पूर्वी दिल्ली नगर निगम
O.P.D.
Adolescent Clinic
Antenatal clinic 26,27,28
Anti rabies clinic 60
Anti retro viral theraphy clinic 34
Cancer clinic/Breast clinic 43,44
Child guidance clinic 29,30
Diabetic clinic/hypertension clinic 20,21
Disability clinic 17,19
DOTS/ Tuberculosis clinic 98
Immunization clinic 39
Infertility clinic 26,27,28
Leprosy clinic 22
Rectal clinic
Senior citizen clinic 35,36, 20,21
Speech therapy clinic 43,44
Skin therapy clinic 22
Well baby clinic 29,30
Tuesday, Friday(2:00 pm-4:00 pm)
Monday-saturday (8:30am-12:00pm)
Monday-saturday (8:30am-12:00pm)
Tuesday, Friday (2:00-3:00pm)
Tuesday (2:00-3:00pm)
Monday, Wednesday (2:00-3:00pm)
Thursday (2:0-3:00pm)
Monday-Saturday (8:30 am-12:00pm)
Monday-Saturday (8:30 am-12:00pm)
Thursday (2:00-3:00pm)
Tuesday (2:00-3:00 pm)
Tuesday, Friday (2:00-3:00pm)
Sunday (10:00 am-11:30 am)
Tuesday (2:00-3:00pm)


प्रतिरक्षण कक्ष
IMMUNIZATION ROOM
कमरा न॰ ३३
ROOM NO -33
टीकाकरण कक्ष


SHASTRI HOSPITAL
UR, DELHI - 110091
EGREGATION RULE 2016
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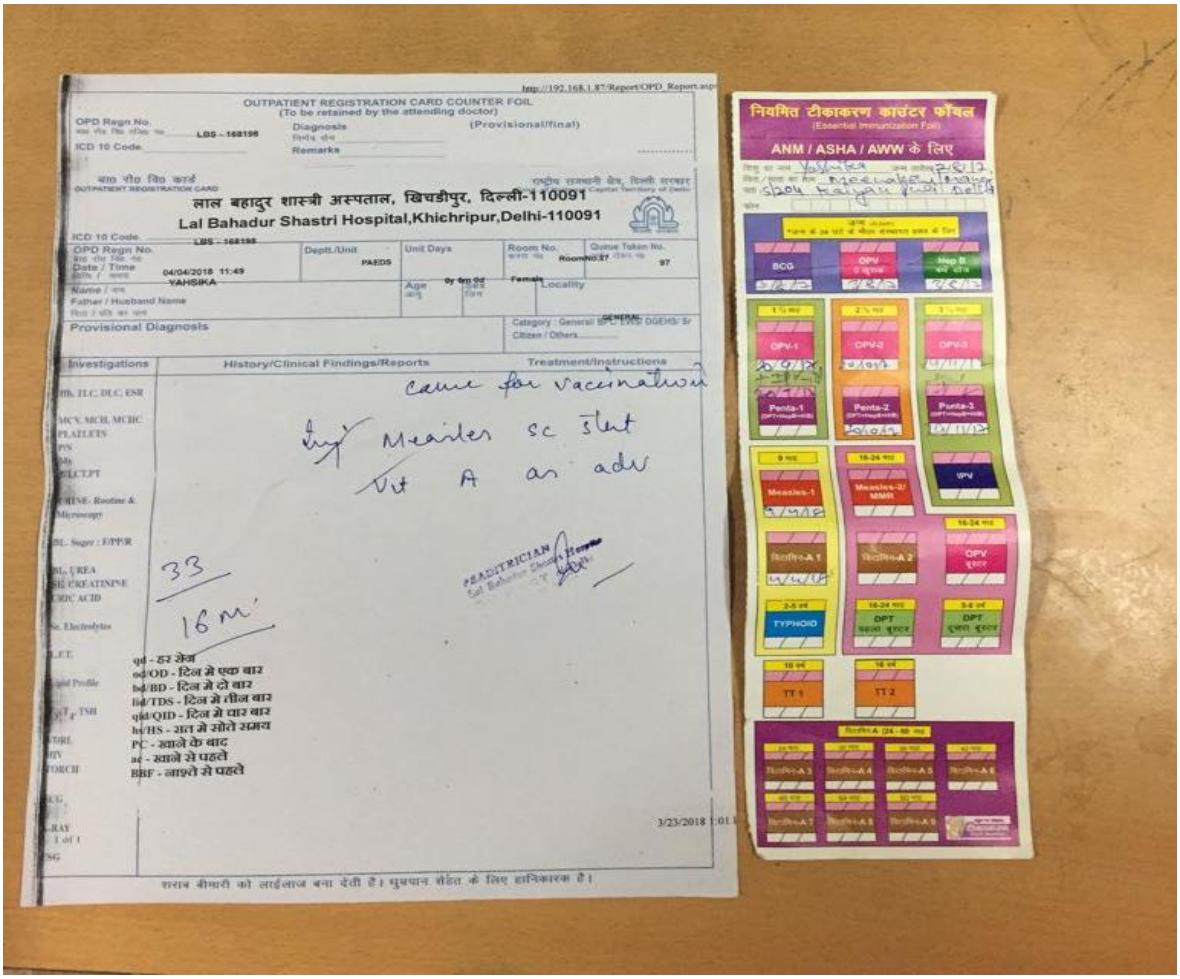
RED BAG
BLACK BAG


OUTPATIENT REGISTRATION CARD COUNTER FOIL
(To be retained by the attending doctor)
OPD Regn No.
LBS - 168196
Diagnosis
(Provisional/final)
ICD 10 Code
Remarks
लाल बहादुर शास्त्री अस्पताल, खिचडीपुर, दिल्ली-110091
Lal Bahadur Shastri Hospital,Khichripur,Delhi-110091
ICD 10 Code
LBS - 168196
OPD Regn No.
Date / Time
04/04/2018 11:49
YAHSIKA
Deptt./Unit
PAEDS
Unit Days
Room No.
Room No.27
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97
Age
Female
Locality
Name
Father / Husband Name
Provisional Diagnosis
GENERAL
Investigations
History/Clinical Findings/Reports
Treatment/Instructions
came for vaccination
Inj Measles sc stat
Vit A as adv
33
16 M'
qd - हर रोज
od/OD - दिन मे एक बार
bd/BD - दिन मे दो बार
tid/TDS - दिन मे तीन बार
qid/QID - दिन मे चार बार
hs/HS - रात मे सोते समय
PC - खाने के बाद
ac - खाने से पहले
BBF - नाश्ते से पहले
3/23/2018
खराब बीमारी को लाईलाज बना देती है। धूम्रपान सेहत के लिए हानिकारक है।
नियमित टीकाकरण कार्यक्रम
(Essential Immunization For)
ANM / ASHA / AWW के लिए
BCG
OPV
Hep B
OPV-1
OPV-2
OPV-3
Penta-1
Penta-2
Penta-3
IPV
Measles-1
Measles-2/ MMR
OPV
TYPHOID
DPT
DPT
TT 1
TT 2


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YELLOW BAG