# GAPS IN DELIVERY OF PRIMARY HEALTH CARE SERVICES IN A SOUTHERN STATE OF INDIA

A Dissertation submitted in partial fulfillment of the requirement for the award of

Post-Graduate Diploma in Health and Hospital Management

by

Richa Pathak

IIHMR DELHI

International Institute of Health Management Research

New Delhi-110075

May,2012

**Certificate of Internship Completion**

Date: 3rd May, 2012

**TO WHOM IT MAY CONCERN**

This is to certify that Ms. Richa Pathak has successfully completed her 2 months internship in our organization from December 27, 2011 to February 26, 2012. During this intern she has worked on "Karnataka health System development and reform Project" under the guidance of me and my team at Icra management consulting Services limited, Noida ...

We wish him/her good luck for his/her future assignments

(Signature) Dr. Devina Bajpayee (Name)

Manager Designation

Healthcare Consulting

ICRA Management Consulting Servic

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**April 20th ,2012**

## TO WHOM IT MAY CONCERN

his is to certify that Ms. Richa Pathak has successfully completed her one month internship in our ganization from March 3, 2012 to April 3, 2012. During this period she has worked as an intern assisting us the programme for street children under the guidance of me and my team at Feet for Future.

Ve wish him/her good luck for her future assignments

Dr.Pradeep Bijalwan

eet for Future

resident

208 samachr appartments Mayur Vihar, New Delhi 110091, Ph: 011-2274408/011-20402736
Registration under Society Registration Act, 1860. Regd. No s/62123

## Certificate of Approval

The following dissertation titled " Gaps in delivery of primary health care services in a southern state of India." 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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| Name | Signature |
| --- | --- |
| Dr Dharmesh Lal. | |
| Dr. Preetha G.S | |
| | |

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Last, but not least, I would like to thank all my family members for their love and constant support.

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- Brand valuation/management
- Enterprise-wide risk management
- M&A (partner search, valuation, due diligence, hand-holding while negotiations, and transactionary assistance)

## PROJECT OVERVIEW

World Bank funded project to conduct a health facility survey of public and private healthcare facilities in a state. The objective of this Project is to understand the current health care facility scenario in terms of availability and functionality of staff, infrastructure, equipments, logistics and drugs and medical supplies covering different levels of public and private Health care facilities, through a structured suitably designed questionnaire and observation tool. The survey tools capture the 'Availability' – 'Functionality' concept and are based on the IPHS standards. The output of the survey will be used to,generate a report which will help to identify gaps in the availability and functionality of the health infrastructure ,Identify opportunities to access services in the private sector for the benefit of the poor and create network of facilities under the partnership initiatives of the project to improve service delivery capacity and upgrade technical skills in the public health facilities.

**Role played-**Associate Analyst

- Compilation of the collected data
- Designing Data Analysis sheet on excel
- Analysis of the DAS
- Interpretation of the result
- Assistance in report generation

**Dissertation period- 27th December to 26th February**

## *List of Abbreviations*

| Abbreviation | Full Form |
|---|---|
| AYUSH | Ayurveda, Yoga, Unani, Siddha, Homeopathy |
| ANM | Auxiliary Nurse midwife |
| ARS | Arogya Raksha Samiti |
| ANC | Antenatal Care |
| ARI | Acute respiratory infection |
| BMW | Bio medical waste |
| BCG | Bacillus Calmette Guerin |
| DOTS | Directly Observed Treatment, Short Course |
| DT | Diphtheria Tetanus |
| ECG | Electro Cardio Gram |
| HMIS | Hospital Management Information System |
| HIV | Human Immunodeficiency Virus |
| ICU | Intensive Care Unit |
| IMR | Infant Mortality Rate |
| IPD | In Patient Department |
| IDSP | Integrated Disease Surveillance Program |
| IPHS | Indian Public Health Standard |
| IUCD | Intrauterine contraceptive device |
| IUD | Intrauterine Device |
| ILR | Ice Line Refrigerator |
| IFA | Iron Folic Acid |
| JSY | Janani Suraksha Yojana |
| LHV | Lady Health Visitor |

| | |
|---|---|
| MMR | Maternal Mortality Rate |
| MPW | Multi Purpose Worker |
| MTP | Medical Termination of Pregnancy |
| MO | Medical Officer |
| NRHM | National Rural Health Mission |
| OPD | Out Patient Department |
| ORS | Oral Rehydration Solution |
| OPV | Oral Polio Vaccine |
| PHC | Primary Health Centre |
| SC | Sub centre |
| SBA | Skilled Birth Attendant |
| USG | Ultra Sonogram |
| VHND | Village Health Nutrition Day |

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## Executive Summary

### *Facility-wise Summary of survey Findings*

**Sub Centre**

The survey covered 1176 Subcentres in 30 districts of the state. A sub centre is the most peripheral and first contact point between the primary health care system and the community.

As per the population norm, one sub-centre is established for every 5000 population in plain areas and for 3000 population in tribal/ hilly areas. 16 districts of the state conform to IPHS norms by having one sub centre per 3000 – 5000 population while 13 districts have one for more than 5000 population. The Subcentres were found to have satisfactory access to nearest PHC with Subcentres in 27 out of 30 districts located within 30 minutes of a PHC.

***Manpower & Training***

- The average availability of ANMs was 99.6%
- The average availability of multipurpose worker was 54.27%.
- Availability Voluntary Worker ranged widely from 0 to 51%.
- System of regular training of human resource was present in 82.50% SCs.

***Physical infrastructure and Basic utilities***

- 63% SCs function from designated buildings.
- Overall 74% of subcentres had a pucca road leading to them.
- 52.5 % SCs had regular electricity supply. The power back up facility was present in 4.6% of the SCs.
- Overall availability of Ambulance was high in all the districts.
- 24x7 water supply was present in 38.5% of surveyed SCs.

***Equipments***

- The average availability of equipments was found to be above 75% with most of the equipments functional on the day of the survey
- In maternal health equipments the percentage availability of normal delivery kit and IUD kit was 40 %and 61 % with functionality of 87% and 90.4% respectively in the SCs surveyed.
- Availability of sterilizer was 21%.

***Drugs***

- The availability of Vitamin A solution, ORS and contraceptives was found satisfactory.
- The availability of Kit A, Kit B, Ayush kit, IFA tablets and antibiotics was poor.
- More than 50% SCs had stock outs of IFA tablets and 48% SCs of antibiotic Amoxycillin in the previous quarter.

***Services***

- Out of the total no. of SCs surveyed, 82% SCs did not have new born care corner facility and 74% SCs did not conduct any deliveries during last month.

***HMIS***

- 80% of the SCs surveyed submit online data.

***Quality***

- More than 80% of surveyed SCs had signage in local language, quarterly monitoring from PHC and planned VHND program.
- The overall availability of needle destroyer was good with 74% of SCs using needle destroyer.
- Only 26% of the SCs surveyed had a deep burial pit and 35% had coloured bins for Bio Medical Waste segregation.

## Primary Health Centre

PHCs are the cornerstone of rural health services- a first port of call to a qualified doctor of the public sector in rural areas for the sick and those who directly report or referred from Subcentres for curative, preventive and promotive health care. It acts as a referral unit for 6 subcentres and refers out cases to Community Health Centre

The survey covered 923 PHCs of which 560 were 24x7 PHCs. Every PHC served an average of five Sub Centers. The average time taken to reach the nearest CHC from a PHC is 33 minutes.

***Manpower and Training***

- There was at least one Doctor available in 98.6%
- Lady Doctors were available in only 22% and AYUSH doctor in 30% of all PHCs surveyed.
- 72% of surveyed PHCs had at least one staff nurse with 95% functionality. On an average 3 staff nurses were available in 24X7 PHCs.
- 79% of PHCs had a Lab Technician available and in most cases there were fully functional (91%). 93% of all PHCs surveyed had a pharmacist.
- A System of regular training of manpower was present in 98% of all PHCs with more than 60% of the PHCs had staff nurses trained in IMNCI and IUD insertion. However only 20% of the doctors were trained in Emergency obstetric care.

***Physical infrastructure and Basic utilities***

- 94% PHCs were found to function from government buildings.

- Around 90% PHCs had all weather connectivity with pucca floor and adequate seating place.
- 88% of PHCs surveyed reported availability of 24x7 running water. 74% of PHCs surveyed had regular electricity supply. Power backup was available in 72% of PHCs.
- Communication facilities were available in more than 90% of PHCs surveyed.
- 64% of PHCs surveyed had an OT and 90% of PHCs a Labor Room.

***Equipments***

- The percentage availability of Deep freezer, ILR, Cold Box and Vaccine Carrier was more than 90% in the PHC surveyed.
- However, only 49% PHCs surveyed had a Radiant Warmer, 13% a Phototherapy unit, 66% a Steam Sterilizer and 26% a Fumigation Machine available.

***Drugs***

- In more than 90% PHCs ATT, Chloroquine, Vitamin A, ORS, antipyretics, I/V fluids, and emergency drugs were available.
- Only 23% PHCs had IFA (small), 36% PHCs had IFA (large) and only 26% of PHCs had AYUSH medicine available.
- More than 50% of PHCs surveyed had stock outs of IFA tablets in last one month.

***Services***

- 24x7 Doctors were available in 57% of PHCs surveyed.
- Provision of ANC services, provision of Inj. Oxytocin & antibiotics for essential obstetric care, Management of diarrhea & ARI/Pneumonia was available in more than 90% of PHCs surveyed.
- Provision of IFA tablets for ANC, facility of Hb estimation & Malaria test and facility for 24x7 deliveries was available in 80% - 90% of PHCs surveyed.
- Essential Newborn care was available in 60% - 80% of PHCs surveyed.
- Facility for Blood sugar testing and Sputum test for TB were available in less than 60% of PHCs surveyed.

***HMIS***

- 84% PHCs surveyed submit data online.

***JSY performance and status on Arogya Raksha Samiti***

- Under JSY scheme 96% of PHCs reported proper receipt of funds and 80% received funds in advance. However only 52% of PHCs provide the payment at the time of discharge.
- ARS was functional in 99% PHCs.

***Quality***

- Coloured bins for BMW segregations and needle destroyer were used in 90% of PHCs surveyed and all PHCs used deep burial pit for disposal of Biomedical Waste.

- More than 80% of surveyed PHCs had regular visit by DHO & Program officers and display citizen charter with service list.

# Chapter-1 Introduction

The **Primary Health Centre** (PHC) is the basic structural and functional unit of the public health services in developing countries. PHCs were established to provide accessible, affordable and available primary health care to people, in accordance with the Alma Ata Declaration of 1978 by the member nations of the World Health Organization WHO. .The public healthcare service delivery in the state follows the national pattern and consists of integrated, tiered, step up referral system with a network of sub-centers, primary health centers, community health centers, taluka hospitals, district hospitals, and medical college hospitals. Private sector includes individual run clinics/poly clinics, nursing homes, general hospitals, and single and multi-specialty hospitals. In order to provide Quality Care in these Sub-centers, Indian Public Health Standards (IPHS) are being prescribed to provide basic primary health care services to the community and achieve and maintain an acceptable standard of quality of care. These standards would help monitor and improve functioning of the sub-centre. Setting standards is a dynamic process. Currently the IPHS for Sub-centers has been prepared keeping in view the resources available with respect to functional requirement for Sub-centers with minimum standards, such as building, manpower, instruments and equipments, drugs and other facilities etc. The overall objective of IPHS is to provide health care that is quality oriented and sensitive to the needs of the community. Under the constitution of India, public health is the responsibility of the states. At the GOI level, the healthcare role is limited to co-ordination and direction because the actual implementation takes place at the state level. The central government, however, initiates and fully or partially finances the national programmes.

Pursuing its goal of improving the healthcare infrastructure and delivery system, GOI revised National Health Policy in 2002. It was followed by a massive National Rural Health Mission launched by the Prime Minister in 2005. The basic approach of NRHM, in line with the NHP 2002, is to provide accessible, accountable, affordable, effective and reliable health care, especially to poor and vulnerable sections in the community.

NRHM seeks to establish functional health facilities in the public domain through revitalization of the existing infrastructure and improving the service delivery by putting in place enabling systems at all levels. For this, a task Group under Director General of Health Services was constituted to recommend a less resource intensive standard suited to the requirements of the system. Based on its recommendation Indian Public Health Standards (IPHS) were framed. Initially standards were developed only for Community Health Centres (CHCs) but subsequently

norms for all levels of public health facilities were developed. Today quality of public health infrastructure and service delivery is being gauged against these norms.

The starting point of this project is doing a situational analysis of the existing health system to find out the existing gaps in the availability and functionality of the given resources. For all these to happen, facility survey has been considered as a key component in the whole planning process.

The project is about primary healthcare services in all districts on sample basis to understand the implementation of IPHS normative standards

The types of medical care facilities with the nature of service they provide is discussed in the following table:

| **Nature of medical service** | **Major activities** | **Public healthcare infrastructure** | **Private healthcare infrastructure** |
|---|---|---|---|
| Primary care | • Provide Preventive, Promotive and Basic curative services<br>• Referral services | Rural<br>• Sub centres<br>• Primary Healthcare centres<br>Urban<br>• Health posts<br>• Dispensaries<br>• Urban health and family welfare centres<br>• Sub centres<br>• Primary Health care centres | Rural<br>• Physicians in individual practices<br>Urban<br>• General physicians<br>• Specialists<br>• Specialists clinics / poly clinics<br>• Outpatient facilities of nursing homes and medium and large trust and private hospitals |
| Secondary care | • Medical care provided by specialists<br>• Suggest a cure | • Community health centres<br>• Sub district / taulak | Rural<br>• Nursing homes<br>Urban |

| | | | |
|---|---|---|---|
| | or refer the patient to a tertiary care centre | hospitals | • Nursing homes<br>• Medium hospitals |
| Tertiary care | • Sophisticated care provided by super specialists | • Teaching hospitals | Rural<br>• None<br><br>Urban<br>• Large trust / Investor owned / individual owned private hospitals |

### A) IPHS Standards for Sub Centers

Currently a Sub-centre is staffed by one Female Health Worker commonly known as Auxiliary Nurse Midwife (ANM) and one Male Health Worker commonly known as Multi Purpose Worker (Male). One Health Assistant (Female) commonly known as Lady Health Visitor (LHV).

**Minimum Requirement (Assured Services) to be provided in a Subcentre**

1. Maternal Health:

(i) Antenatal care:

• Early registration of all pregnancies, ideally within first trimester (before 12$^{th}$ week Pregnancy). However even if a woman comes late in her pregnancy for registration, she should be registered and care given to her according to gestational age.

• Minimum three antenatal check-ups

• Associated services like general examination such as height, weight, B.P., anemia, abdominal examination, breast examination, Folic Acid Supplementation in first trimester, Iron & Folic Acid Supplementation from 12 weeks, injection tetanus toxoid, treatment of anemia etc. (as per the Guidelines for Antenatal care and Skilled Attendance at Birth by ANMs and LHVs).

(ii) Intra-natal care:

• Promotion of institutional deliveries

• Skilled attendance at home deliveries when called for

• Appropriate and prompt referral

(iii) Postnatal care:

• A minimum of 2 postpartum home visits, first within 48 hours of delivery, 2nd within 7 to 10 days.

2. Child health-Full immunization coverage ,Promotion of exclusive breast feeding

3. Family Planning and Contraception-education,counseling ,Provision of contraceptives,IUD insertions

4. Counselling and appropriate referral for safe abortion practices

5.Adolscent health care

6. Assistance to school health services

7. Control of local endemic diseases like Malaria,kala azar etc..

8. Disease surveillance

9. Water quality monitoring

10. Promotion of sanitation including use of toilets and appropriate garbage disposal

11. Record of Vital events

12. Curative services

13. Training and monitoring

A) **IPHS Standards for Primary Health Centers**

**Minimum Requirement (Assured Services) to be provided in a Primary health centre**

1.Medical care-OPD of 6 hours, 24 hrs. Emergency services,referral and IPD Services

2.Maternal and child health including family planning-ANC,INC,PNC,Provision of JSY

3.New born –new born care and resusciatation,early breastfeeding

4.Child health-immunization coverage,growth monitoring,management of malnutranition

5.Medical termination of Pregnancy

6.Management of RTI/STI

7.Nutrition services

8. Assistance to school health services

9. Control of local endemic diseases like Malaria,kala azar etc..

10. Disease surveillance

11. Water quality monitoring and promotion of safe drinking water

12. Adolscent health

13. Record of Vital events

14. Curative services

15. Training and monitoring

16. Running National programmes etc…

## 1.2 Rationale of the study

The project provides an insight of a developing southern state in India and shows the gap in availability and functionality of various resources of primary health care pillars.Beside this aim of this report is to provide decision makers very clear priority areas for making policies for resource deployment and strengthening of the healthcare status in the state.

## 1.3 Scope of the Project

The scope of the project is to bring out the gaps in service delivery in primary healthcare in the state . The survey tools were to be developed using the 'Availability' – 'Functionality' concept and had to be based on the IPHS standards. The output of the survey would be used to

1. Identify gaps in the availability and functionality of the health infrastructure and address them, thereby improving the access and quality of services in existing public facilities.
2. To identify areas that need strengthening

## 1.4 Objective of the project

General objective:

To Study the primary health care services in the state and find out the gaps associated with delivery of these services

The Specific objectives of the facility survey are to assess:

i. Percent of Primary healthcare infrastructure as per the IPHS norms;
ii. To identify the gaps of available and functional manpower at various levels of public healthcare facilities as per IPHS norms;
iii. Percentage availability and functionality of equipments as per IPHS norms
iv. Percentage availability of drugs and consumables at various levels of public healthcare facilities as per IPHS norms.

## 1.5 REVIEW OF LITERATURE

Improvement in the health and nutritional status of the population has been one of the major thrust areas for the social development programmes of the country. This was to be achieved through improving the access to and utilization of Health,Family Welfare and Nutrition services with special focus on under served and under privileged segments of the population. Over the last five decades, India has built up a vast health infrastructure and manpower at primary, secondary and tertiary care in government, voluntary and private sectors. These institutions are manned by professionals and paraprofessionals trained in the medical colleges in modern medicine and ISM&H and paraprofessional training institutions. The population has become aware of the benefits of health related technologies for prevention, early diagnosis and effective treatment for a wide variety of illnesses and accessed available services.

1)Rural health statistics –Rural healthcare system in India,2012

The statistics showed the overall shortfall of HW(F)/ANMs was 3.8% and HW(M) was 64.7%of total requirement as per the norm of one HW(F) and one HW (M) per Sub Centre and PHC in the country. 62.7% of Sub Centres, 86.7% of PHCs and 95.3% of CHCs are located in the Government buildings 62.7% of Sub Centres and 86.7% of PHCs are located in the Government buildings as on March 2011.3.2 % Subcentres are running without ANMs and 49.1% without multipurpose healthworker.

2) D. Varatharajan *et al* (2004) studied the performance of PHCs under decentralized government *Panchayats* in Kerala allocated a lower proportion of resources to health than that allocated by the state government prior to decentralization; while *panchayat* resources grew at an annual rate of 30.7%, health resources grew at 7.9%. PHCs were funded to the extent of 0.7–2.7% of the total cost. An additional 2% in PHC resources was associated with improved patient

load (63.5%), cost-effectiveness (50.8%), medicine supply (49.4%), information (32.8%) and patient satisfaction (12.7%).

3) Pal,Tiwari *et al* studied functioning of the Sub Health Centers (SHCs) in Madhya Pradesh and found 12.5% SHCs' performance of antenatal services was good while 87.5% of the SHCs (35 out of 40) were placed either in the category of satisfactory (42.5%) or poor (45%). All SHCs included in the study performed poorly mainly because of the absence of the HW(F)s at the time of delivery, small fraction of the deliveries being institutional and overdependence on family members or trained birth attendants for conducting the deliveries. Only 35% of the SHCs studied had regular water supply, space for examination of female patient and a store room for storing drugs and other materials whereas 45% of the SHCs had toilet facility and electric supply.

4)Evaluation study done by Planning commission on PHCs under SSNP found that Not even a single sample PHC under SSNP is found to be equipped with the requisite combination of complementary facilities including the post of a lady doctor. Consequently, non-utilisation of PHCs for facilitating the institutional deliveries of pregnant mothers due to mis-match between man-power and complementary facilities on the one hand and creation of thin infrastructure on the other has resulted in wasteful expenditure of scarce resources.Besides the existing limitations in the health services delivery system, a large majority of the beneficiaries expressed their preferences for Primary Health Centres for seeking treatment over the other alternative sources of health care facilities.The findings tend to suggest the PHCs assisted under SSNP have not made any contributions towards realisation of the intended objective of facilitating the institutional deliveries due to inability of the concerned authorities to create the requisite essential complementary infrastructural facilities.

5) Kilaru *et al* (2012) studied quality of obstetric care in rural south India and results of two studies done at an interval of ten years and found that 30% of women delivered at other than their planned place of delivery for reasons excluding direct referrals from healthcare services. This level remained similar (33%) in the second study indicating little change in birth preparedness and emergency planning. proportion of deliveries happening at healthcare institutions increased from 35% to over 80%. Skilled birth attendance by Auxiliary Nurse Midwife (ANM) in case of deliveries happening at home reduced from 34%

to 17% in spite of the lower incidence of home births.The number and appropriate timings of antenatal care visits improved including the content of care package (blood pressure examination, iron and folic acids supplements) across the two time periods.
However there were gaps in certain aspects of antenatal care such as urine test, advise from healthcare services regarding risk signs in pregnancy and timings for postpartum visit.

## 1.6 Methodology:

**A) Study Area:** All districts of a developing southern state of India

**B) Study Design and Tool**

The study instruments were developed based on the "Proforma for IPHS facility survey" for primary healthcare categories.

**a) Study design :**

It is a descriptive study

**b)Study tool :**

Questionnaire were used as survey tool .Each tool had different sections to capture manpower, infrastructure, Essential medical services, equipments, drugs & consumables, logistics & cold chain management, HMIS, JSY performance, quality parameters, performance indicators and surveyor's observations. These questionnaires and observation points were structured in a way to make them computer friendly for ease of data entry and analysis. 2 survey tools were used for survey as detailed below:

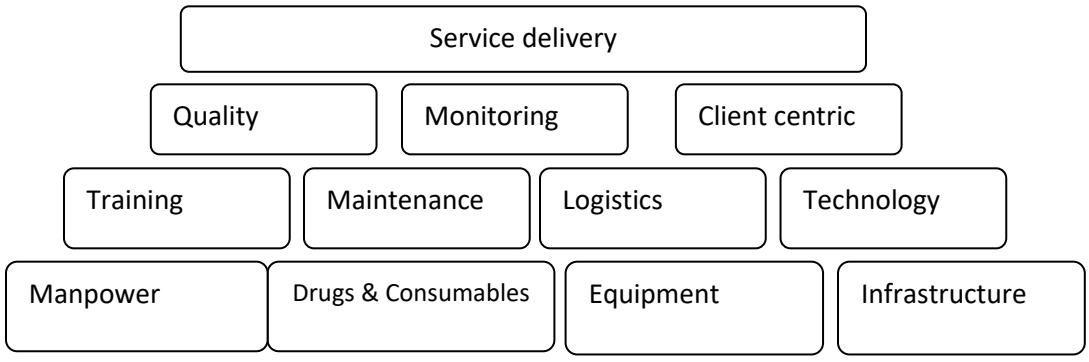
1. Survey instrument for Sub Center
2. Survey instrument for PHC

**C) Sample size:**

1176 Sub Centres and 923 Primary health Centres

**D) Project planning and Study design**

***Development of Survey instrument:*** One set of survey instruments were developed for public facilities: one each for Sub-centre & PHC. Tools for public sector facilities were based on IPHS Proformas. The tools were designed to capture all factors involved in delivery of healthcare service such as manpower, equipment, infrastructure etc.



## E) Study Technique:

***a) Data entry & Analysis:*** Data Analysis Sheet (DAS) were designed by customizing MS-Excel sheet to survey tools. DAS had in built data validation features to avoid mistakes during data entry. Appropriate measures were taken to ensure the privacy and safety of survey data. Data analysis was done on MS-Excel software.

***b) Data presentation:*** This report is divided into chapters dedicated to a particular type/ level of facility. . This contains detailed data of each health facility in a district and inters district comparative tables arranged in such a manner that enables KHSDRP to create a district-level action plan

***c) Data Validation and Analysis.***

For data entry, customized Data Analysis Sheet (DAS) based on MS-Excel software, having few basic formulas integrated in it were developed. It had all the features of data validation to prevent any wrong data entry under various columns and rows. For final analysis, survey data from DAS were extracted to final data analysis tables where various parameters under different sections of survey tools were reorganized into definite heads as decided by the state government.

Final analysis was done using MS-Excel software. Data analysis was done based on the initial outcomes desired pertaining to availability, functionality, key performance indicator and organizational needs.

## F) Report Structure

The State Health Facility Survey 2011 generated extensive data on various aspects of healthcare services for all categories and levels of healthcare institutions. Presenting this enormous amount of information in one report is itself a challenge.

The information provided is under different heads specified in terms of reference and the data presented here is in percentage, if not specified otherwise, to make it easily comprehensible.

Under each head, the overall performance / status of the state for a health facility is captured followed by graphical presentation of key findings.

# RESULTS AND FINDINGS

# Chapter -2 SUBCENTRE

## 2.1 Introduction

Sub centre is the most peripheral and first contact point between the primary health care system and the community. As per the population norms, one Sub-centre is established for every 5000 population in plain areas and for every 3000 population in hilly/tribal/desert areas. However, as the population density in the country is not uniform, it shall also depend upon the case load of the facility and distance of the village/habitations which comprise the sub-centres. A Sub-centre provides interface with the community at the grass-root level, providing all the primary health care services.

The basic purpose of the Sub-center is largely to provide preventive, promotive and referral services but it also provides a basic level of curative care.

Objectives of the Indian Public Health Standards for Sub-centers are,

a) To specify the minimum assured (essential) services that Sub centre is expected to provide and the desirable services which the states should aspire to provide through this facility.
b) To maintain an acceptable quality of care for these services
c) To facilitate monitoring and supervision of these facilities.

State Health facility survey 2011 is structured on IPHS standards and aims at finding the availability and functionality of minimum assured essential services at state's Sub-centres along with the quality of those services. ***As on March, 2011, there are 148124 Sub Centres functioning in the country.***

## 2.2 Population coverage*:*

16 districts of state surveyed conform to IPHS norms by having one sub centre per 3000 – 5000 population while 13 districts have one for more than 5000 population. District Kodagu has one SC for population less than 3000.

### *Time required reaching from sub centre to nearest PHC:*

The Sub-centres were found to have satisfactory access to nearest PHC; sub centres in 27 out of 30 districts located within 30 minutes of a PHC.

## 2.3 Manpower:

***Availability:*** Average availability of Health Worker (F) in the state is 99.6% with 3 districts having 100% availability . Overall vacancy for this cadre in the state is 1.43% which is indicative of state's intense focus on RCH programme implementation.

However the percentage availability of Health Worker (M) is 54.27%, varying from 0% to 85%. Total 14 districts have less than 60% average availability resulting in 46% vacant positions at state level. Lesser number of HW(M) at SC level hampers the effective implementation of national Programmes, preventive, promotive and basic curative services at grass root level.

The average availability Voluntary Worker ranged from 0 to 51%.

***Functionality:*** The functionality (presence of the manpower at the health facility on the day of the survey) for HW (F)/ANM was found out to be 86.24%.

Functionality of HW (M) varied from 0% to 100% and the average functionality was calculated to be overall 81% functionality. The functionality of SC manpower needs to be viewed keeping in mind the nature of their work, where field visits are a key requirement.

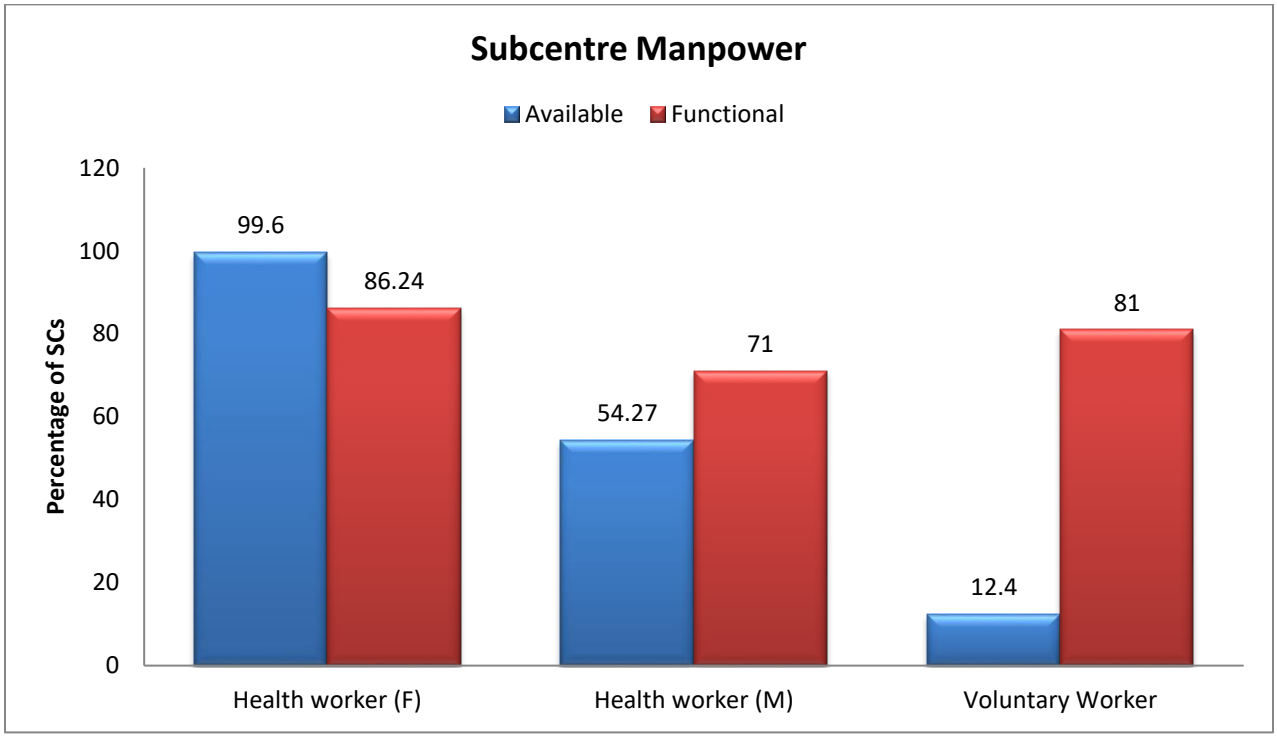



**Figure** 2.0: Percentage of SCs with available and functional Manpower

### *Training:*

System of regular training of human resource is present in 82.50% SCs.The training is provided is in  Percentage of SCs with manpower training in diverse essential skills is shown in following graph

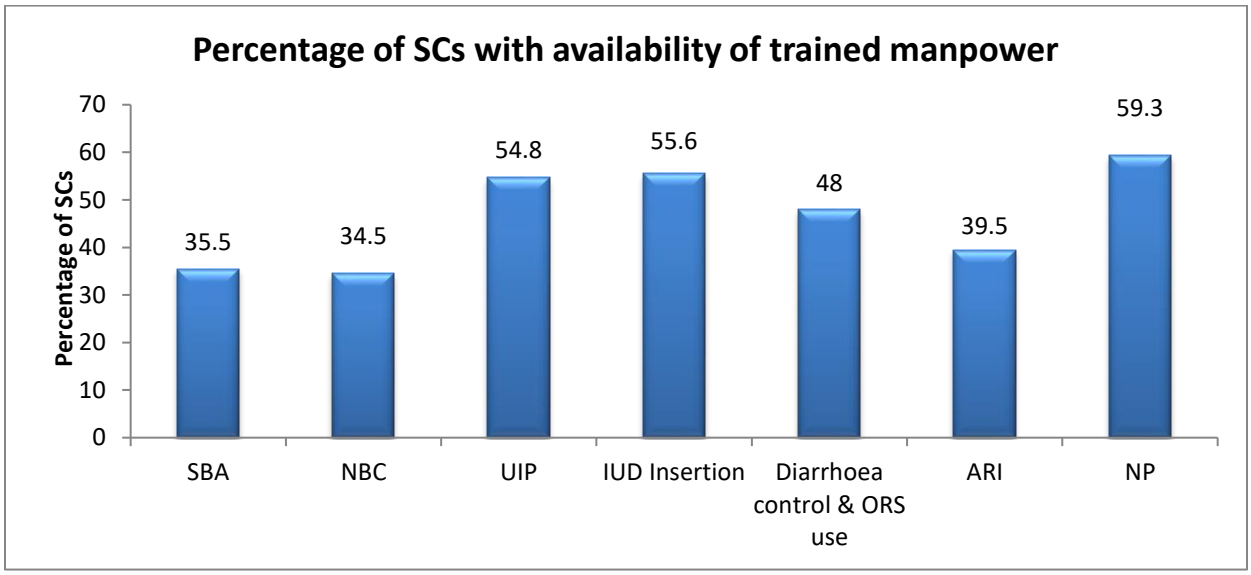



Figure 2.2: Percentage of SCs with availability of training for manpower

The survey sample revealed training in SBA and New born care services has been provided to health workers in 35% of the sub-centres in the state and training in Universal Immunization Programme and National Programmes has been provided to health workers in 55% and 59% of SCs  .This shows the gap in training provided to health professionals at the  health centers.

## 2.4 Infrastructure:

In the sample surveyed 63.40% of the SCs were found to function from designated buildings, 56.47% from governments buildings, 5% from other government buildings, 18.93% from rented premises and 2.53%  from premises  donated by PRI / NGOs.

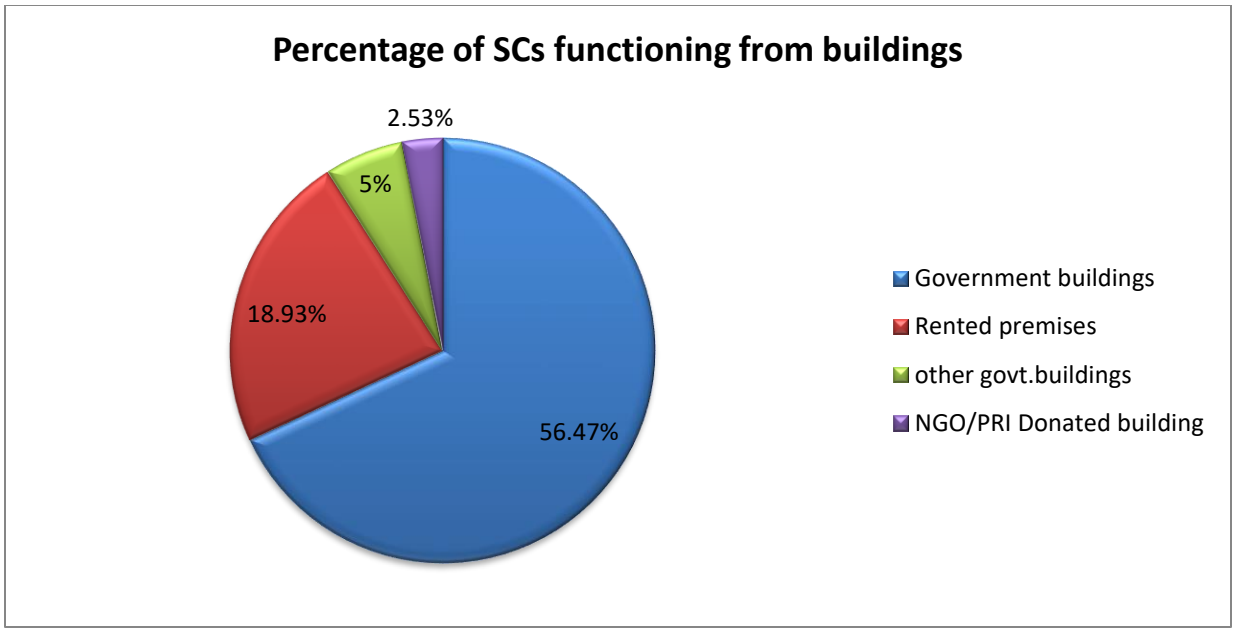



Figure 2.3: Percentage of SCs functioning from buildings

***Physical infrastructure:*** Survey data revealed that overall 73.5% of sub-centres have a pucca road leading to them, The average availability of drainage system varied from 0 to 92%. The overall cleanliness of the toilets and the premises of the sub-centres were rated as clean .“Presence of Seepage in walls” and “Presence of garbage dump / cattle shed / stagnant water pools” are two other important physical infrastructure parameters which must be absent for an ideal sub centre, 11 districts in first parameter and 19 districts in second parameter are in best performing categories.

***Basic Utilities:*** Communication system (Landline/ mobile) was available in an average of 43.2% of SCs surveyed.

Overall availability of Ambulance service was high in all the districts. The availability was 100% in the SCs of districts of 10 districts.

Status of basic utilities has been depicted in the following graph

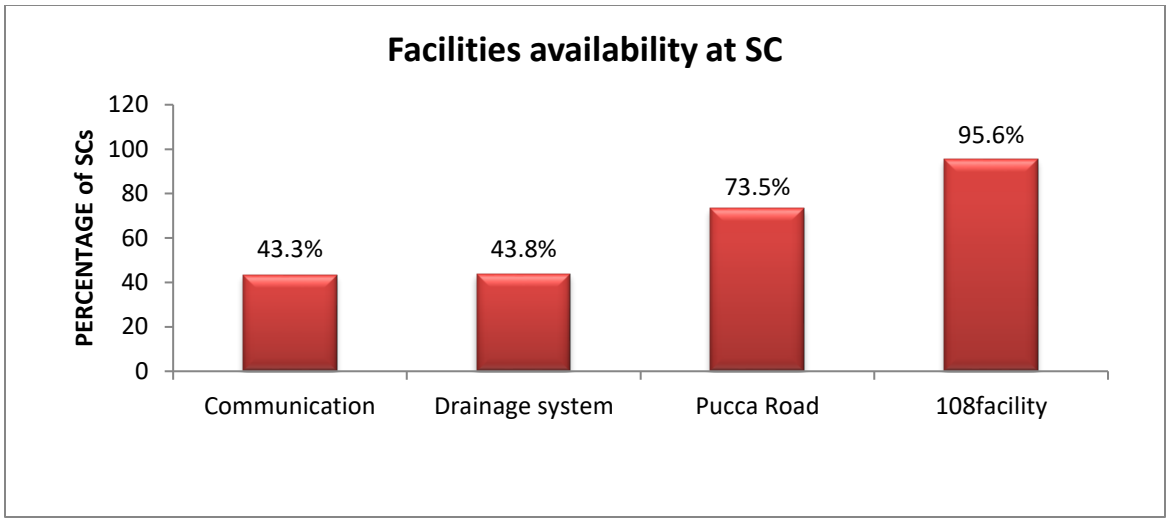



Figure 2.4: Availability of basic facilities at SCs

24x7 water supply was present in 38.5% of surveyed SCs.

Electricity supply was present at an average of 52.5% of surveyed SCs, and power back up facility was available only in 4.6%.

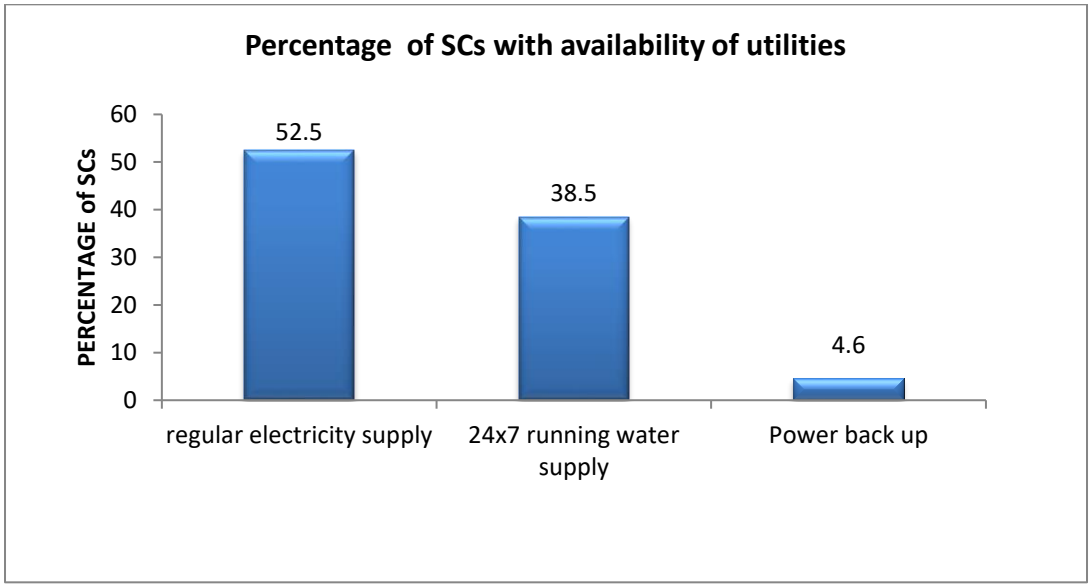



Figure 2.5: Percentage of SCs with availability of utilities

## 2.5 Equipments:

The availability and functionality of key equipments was captured at all SCs surveyed. All basic equipments were available in 75% of the Sub-centres surveyed. The B.P. apparatus was available in 89.4% of SCs, with a functionality of 91.4 %.The following graphs show the availability and functionality of the basic equipments at SCs.

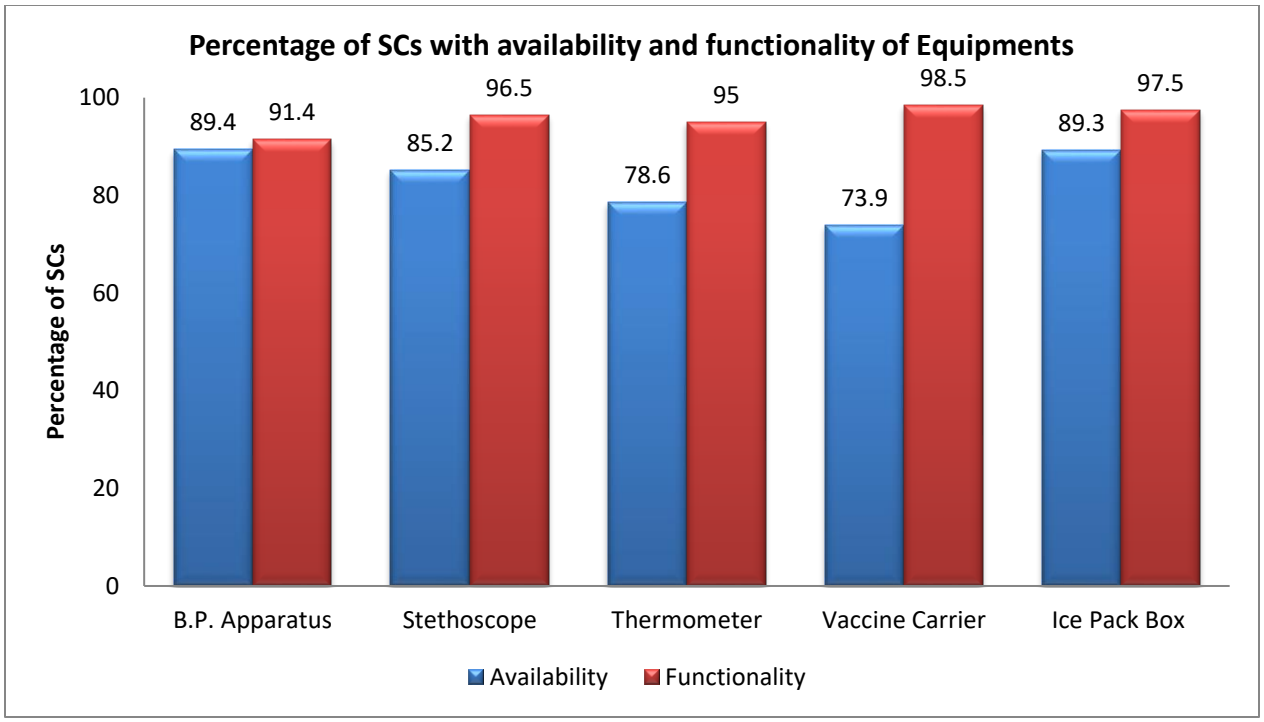



Figure 2.6: Percentage of SCs with availability and functionality of equipments

The availability and functionality of equipments for maternal health is shown below in the following graph,

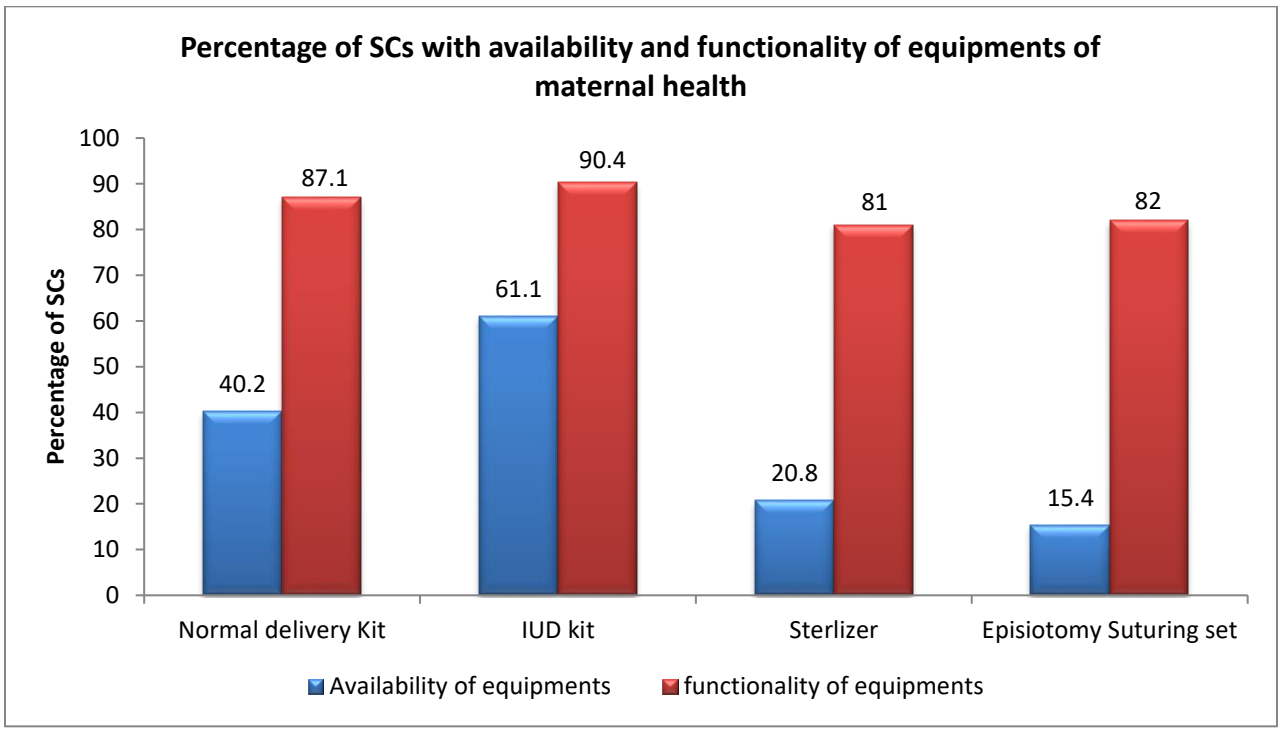


Figure 2.7: Percentage of SCs with availability and functionality of equipments of maternal health

Sterilizer was available in 20.8% of the SCs surveyed and was functional in only 81% of these SCs. Episiotomy kit was available in only 15.4% of the SCs surveyed. It was observed that the percentage availability of normal delivery kit and IUD kit was 40.2 %and 61.1 % with functionality of 87.1% and 90.4% respectively. Availability of mucus aspiration set was 27% out of which 91% sets were functional

## 2.6 Drugs and consumables:

The availability and functionality of key drugs, kits and consumables was captured from all SCs. The availability of drugs was constrained and varied between districts. The availability of Kit A, Kit B, Ayush kit, IFA tablets and antibiotics was poor.

The findings are shown in the following graph.

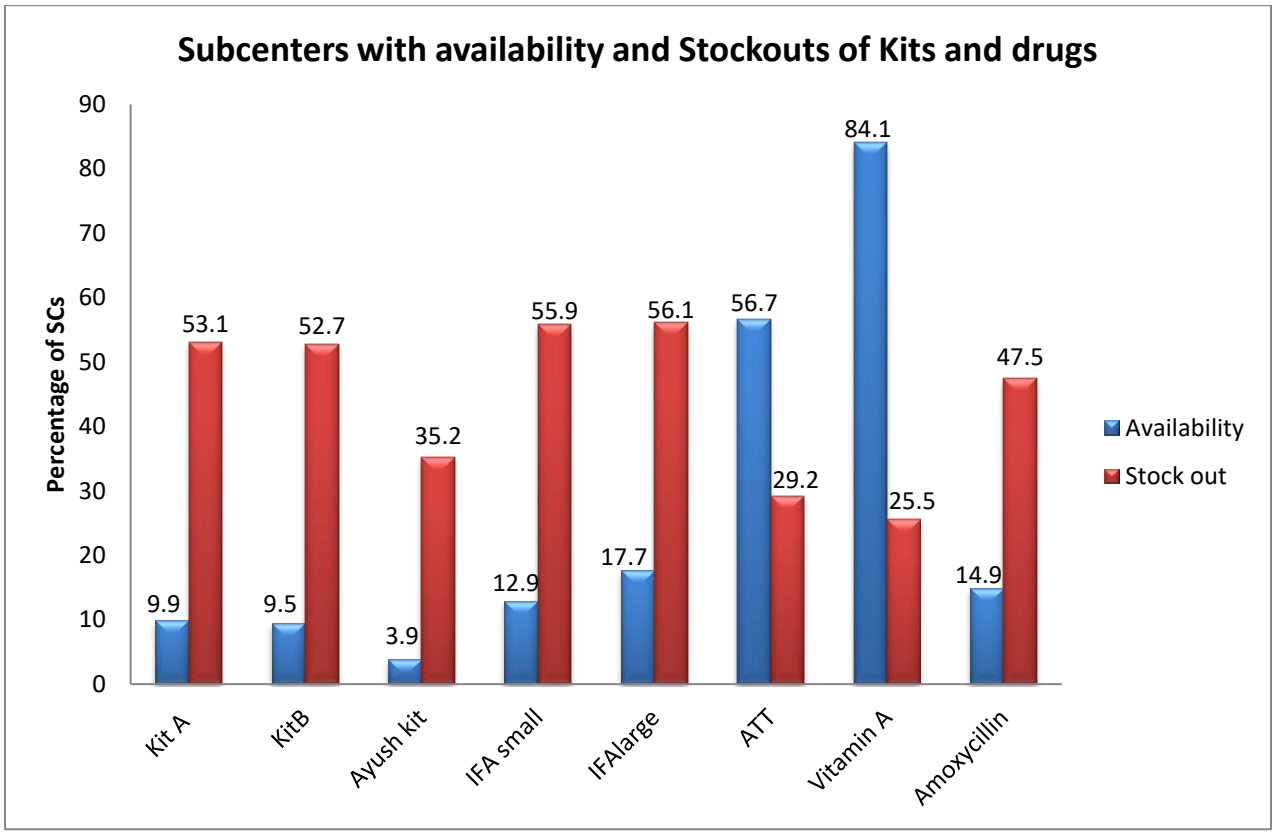



Figure 2.8: SCs with availability and stock outs of kits & drugs

On an average 47.5% of SCs had stock out of antibiotic Amoxicillin in previous month. Expired vitamin A solution was found in SCs of 7 districts surveyed . Expired Amoxicillin was found in SCs of 4 districts.

## 2.7 Availability of Essential Medical Services:

The availability of essential medical services was captured in all SCs surveyed. Out of the SCs surveyed 82% SCs did not have new born care corner facility and 74% SCs did not conduct any deliveries during last month. The availability of these two components is a must for providing RCH services.

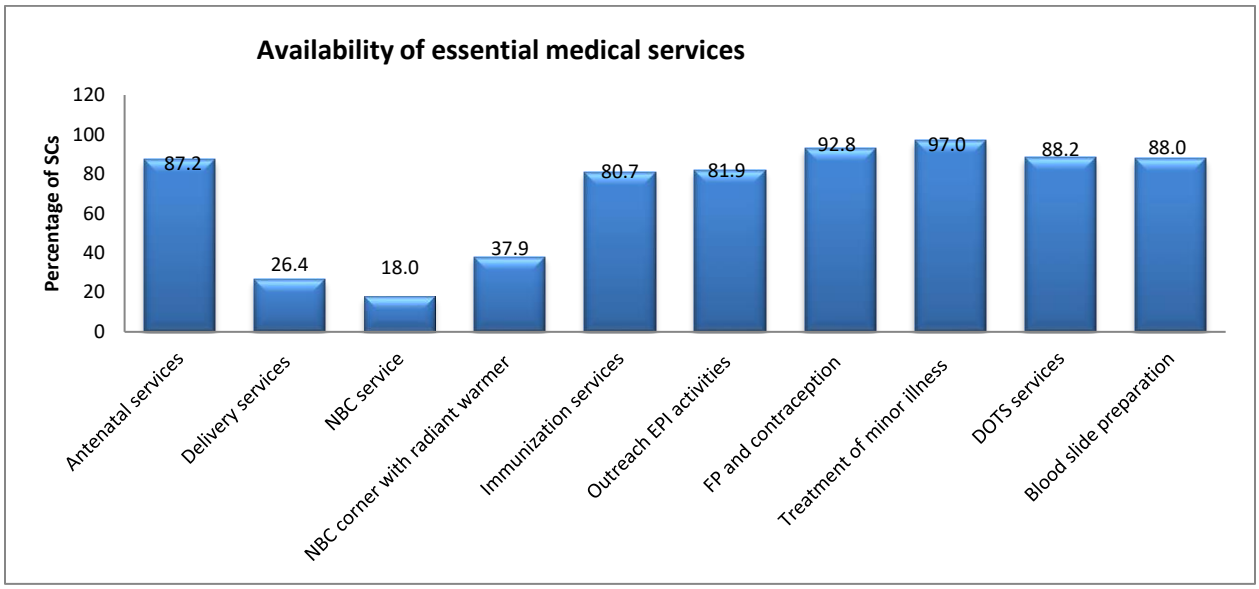



Figure 2.9: Percentage of SCs with availability of essential medical services

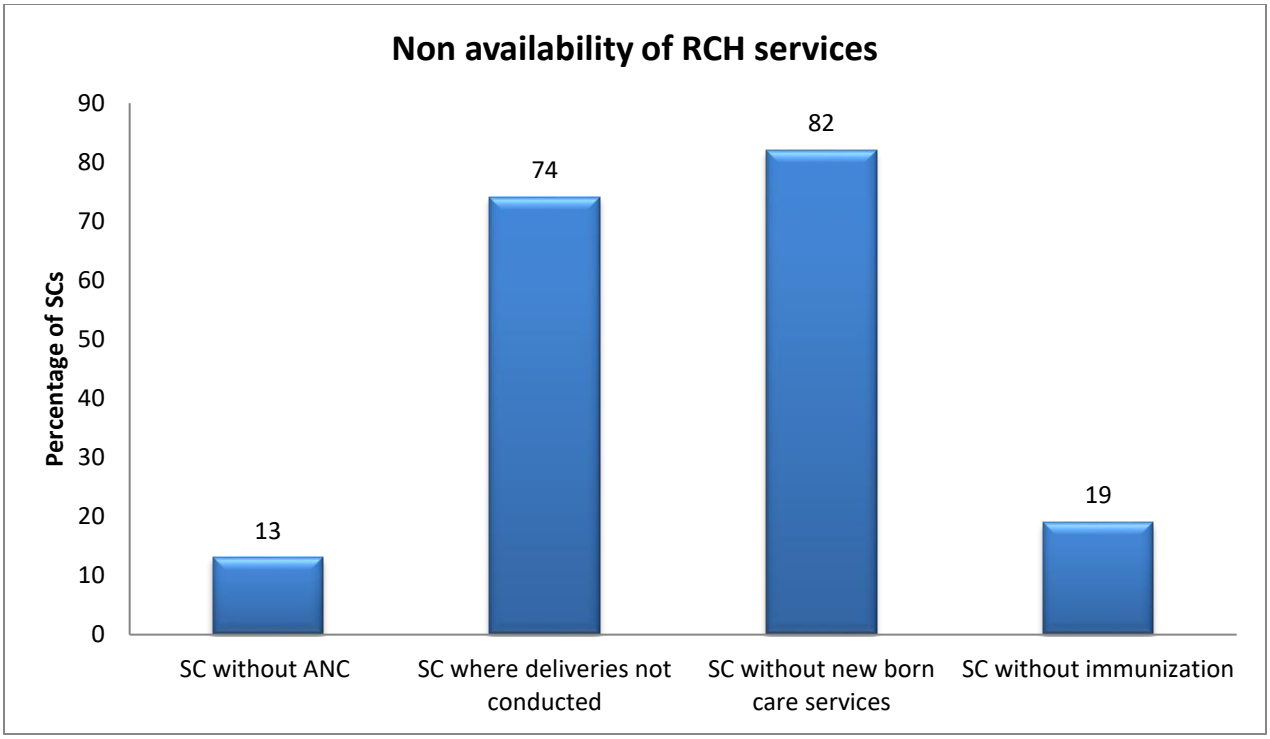



Figure 2.10: Percentage of SCs with non availability of RCH services

### *Functionality of essential medical services:*

Proper functionality of any medical service depends on the collective existence of all the factors discussed above. Although it is very difficult to quantify functionality of services in percentage, but it is common knowledge that for an acceptable functionality, every medical service should have more conducive factors and less of bottle necks for the effective provision of healthcare. Based on this IMaCS's comment on essential service's functionality at SC are following:

***MCH Services:*** The maternal health care services were gauged for delivery of full antenatal care, conduct of normal deliveries,referral of complicated cases during ante natal period, new born care and post natal counselling, SBA for all deliveries and JSY beneficiaries.

| Strengths | Weaknesses |
|---|---|
| Availability of BP apparatus, Stethoscope and Weighing machines for adults is >85% | Inadequate trained staff in SBA (35.47%) and Newborn care (34.57%) |
| | Poor availability of delivery services (26%) |
| | Poor availability of Mucous aspiration set, weighing machines for babies, normal delivery kit, sterilizer and episiotomy suturing set |
| | Poor availability and frequent stock outs of Kit A, Kit B, IFA (small & large) |

| | |
|---|---|
| | tablets and reagent strips. |
| | Presence of expired IFA tablets |

Table 2.1: Functionality of MCH services at SCs

***Child Health Services:*** The delivery of Child Health services was gauged against the ability of the facility to deliver Immunisation , therapy for ARI and diarrhoea.The infrastructure strengths (>=85% availability) and weaknesses (<85% availability) captured are being tabulated below for providing child health services is as below,

| Strengths | Weaknesses |
|---|---|
| Availability of ice pack box is 89.27% | Inadequate trained staff in UIP, control of diarrheal diseases & Oral rehydration therapy and management of ARI |
| Online submission of immunization data under HMIS services | Moderate availability of immunization services (80.67%) and immunization services as outreach EPI (81.87%) |
| | Moderate availability of vaccine carrier, needle destroyer, disposable syringes and immunization cards. |

Table 2.2: Functionality of Child Health Services at SCs

***Family Planning and Contraceptives:*** The infrastructure strengths (>=85% availability) and weaknesses (<85% availability) captured are being tabulated below for providing family planning services is as below,

| Strengths | Weaknesses |
|---|---|
| Availability of family planning and contraceptive services is 92.80% | Inadequate trained staff in IUD insertion |
| Online submission of Family planning data under HMIS services | Moderate availability of IUD kit |
| | Moderate availability of Oral pills, condoms and copper T. |
| | Frequent stock out of above mentioned consumables |
| | Presence of expired above mentioned drugs and consumables |

Table 2.3: Functionality of FP and Contraceptive Services at SCs

***Curative Services:*** The infrastructure strengths (>=85% availability) and weaknesses (<85% availability) captured are being tabulated below for providing curative services is as below,

| Strengths | Weaknesses |
|---|---|
| Availability of services for treatment of minor illness is 97% | Inadequate trained staff in control of “Diarrheal diseases & oral rehydration |

| | |
|---|---|
| | therapy" and "ARI" |
| | Very poor availability of Amoxycillin (15%) |
| | Frequent stock out of Amoxycillin |
| | Presence of expired Amoxycillin in SCs |

Table 2.4: Functionality of Curative Services at SCs

***Ayush Services:*** Mainstreaming of ayush servies at SC level is minimal. Only 4% of SCs have an Ayush kit available, and 35% of these had a stock out in last one quarter.

## 2.8 HMIS:

This section details the data management practices and data transfer from SCs to higher levels, 79.87% of the SCs surveyed submit online data. In the four categories of monthly reports submission the percentage for "Notifiable disease report" recorded lowest at 58.2%.

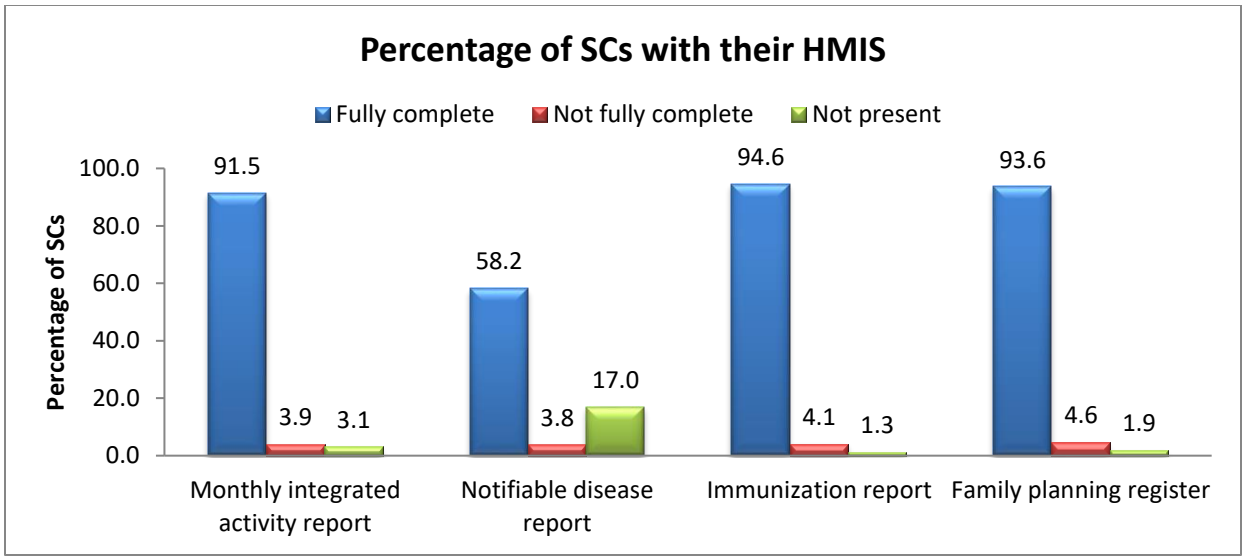



Figure 2.11: Percentage of SCs with their HMIS

## 2.9 Quality control:

Quality of SC services is judged against the parameters specified by IPHS standard, the graph below illustrates the "Q" quotient of state's SCs.

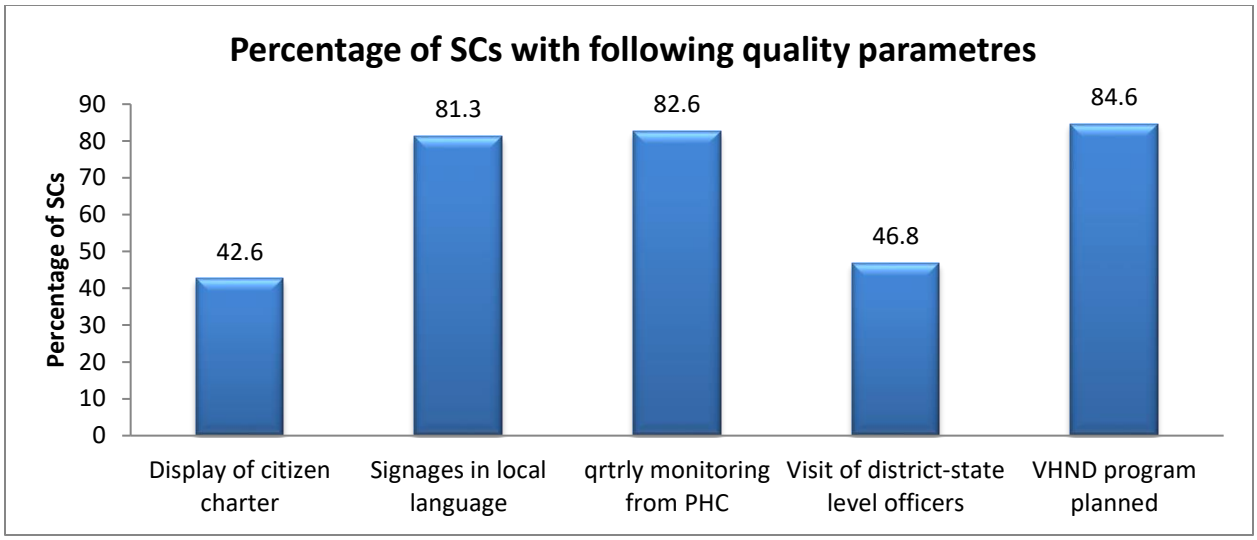



Figure 2.12: Percentage of SCs in quality parameters

BMW management was found out to be most neglected aspect, only 26% of the SCs surveyed had a deep burial pit and 35% had coloured bins for BMW segregation. However less than 25% SCs surveyed in 19 districts had deep burial pits.The overall availability of needle destroyer was good with 74% of SCs using needle destroyer .

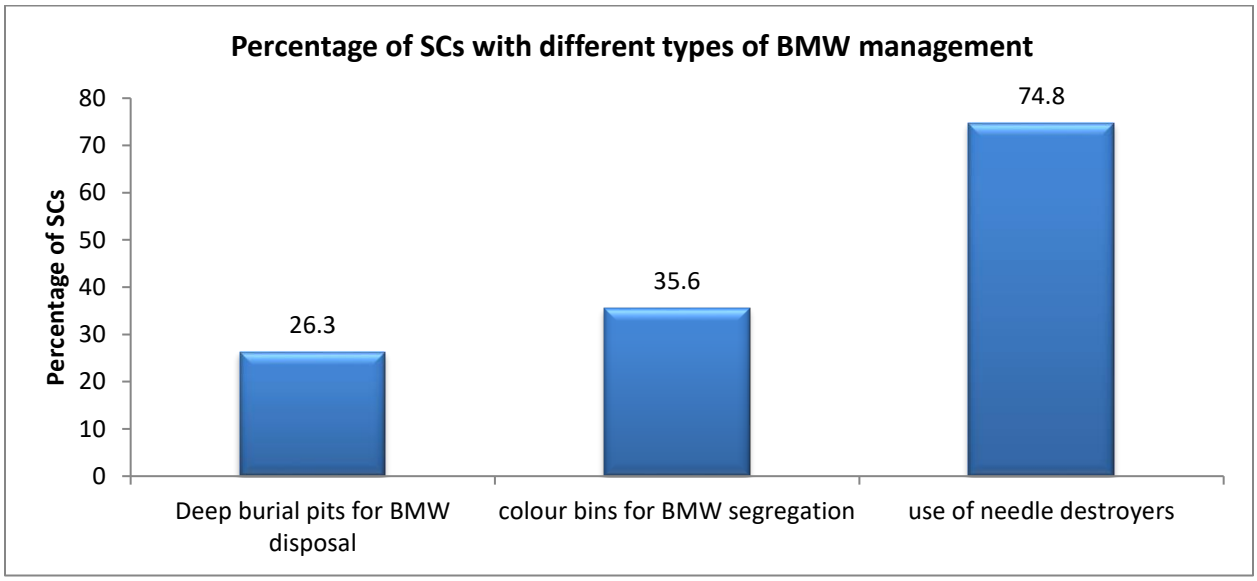



Figure 2.13: Percentage of SCs with different types of BMW management

## 2.10 Utilization indices:

The average public utilization of SCs in the previous month is portrayed in the following graph,

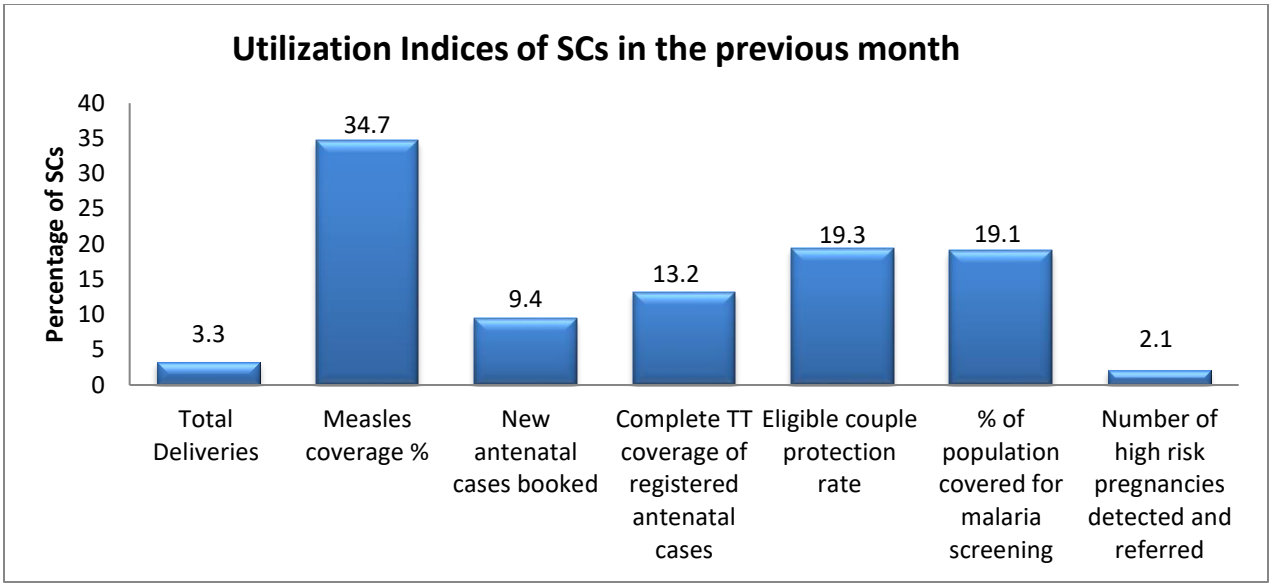



Figure 2.14: Average Utilization indices of Sub-centres in the previous month

An average of 3 and more deliveries was conducted during last month in SCs. There were no deliveries carried out in the last month in SCs surveyed in the 10 districts.

The coverage for measles immunization ranged from 1% to 100 and the average number of new ANC cases booked in the previous month was 9.4

# Chapter-3 Primary Health Centre

## 3.1 Introduction

PHCs are the cornerstone of rural health services- a first port of call to a qualified doctor of the public sector in rural areas for the sick and those who directly report or referred from Sub-centres for curative, preventive and promotive health care. It acts as a referral unit for 6 Sub-Centers and refers out cases to Community Health Centre (CHCs-30 bedded hospital) and higher order public hospitals at sub-district and district hospitals. It has 4-6 indoor beds for patients.

A typical Primary Health Centre covers a population of 20,000 in hilly, tribal, or difficult areas and 30,000 populations in plain areas. However, as the population density in the country is not uniform, the number of PHCs would depend upon the case load.

As per IPHS norms, PHCs should become a 24 hour operational facility with nursing services. Select PHCs, especially in large block where the CHC/FRU is over one hour of journey time away, may be upgraded to provide 24 hour emergency hospital care.

Essential Services as envisaged in the PHC should be available, which includes primary preventive, promotive, curative, rehabilitative and emergency care in addition to all the national health programmes.

Objectives of Indian Public Health Standards (IPHS) for Primary Health Centres are:

a) To provide comprehensive primary health care to the community through the Primary Health Centres.
b) To achieve and maintain an acceptable standard of quality of care.
c) To make the services more responsive and sensitive to the needs of the community.

The state surveyed has total 2138 PHCs out of which 987 are designated 24X7 PHCs.[1]

[1] Total number as on November 30, 2011. Data collected from RCH office.

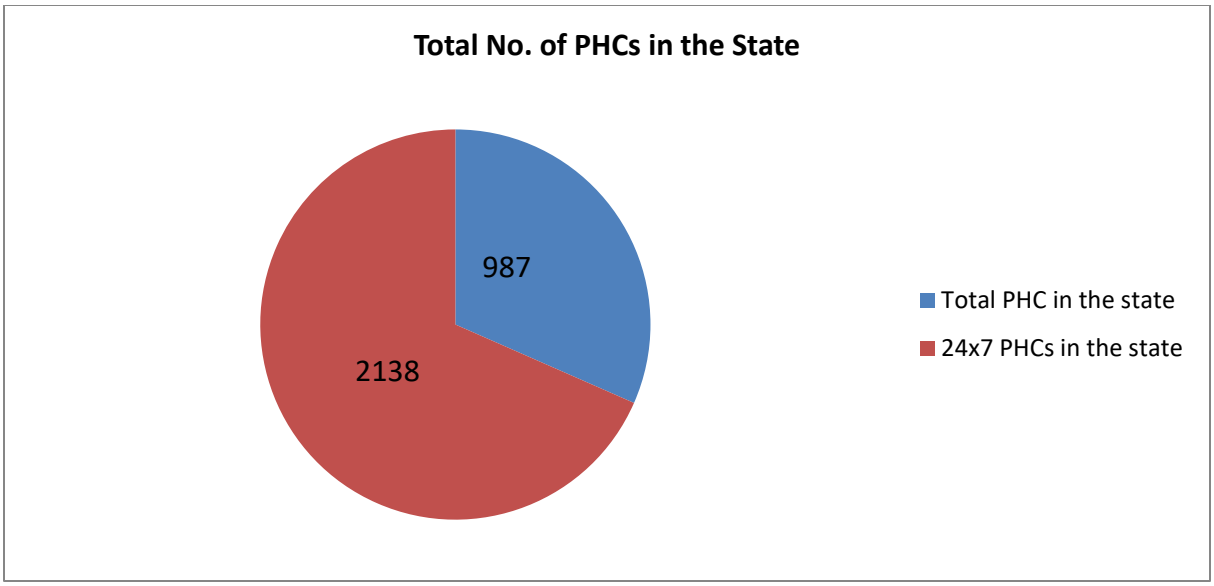



**Figure 3.1 Total No. Of PHCs in the State**

Total PHC sample covered under the survey is 923 out of existing 2138 PHCs.Of the total 987 PHCs which operate 24x7 across the state, 560 PHCs were surveyed.

In the survey 560 24X7 PHCs were covered which is 60.67% of surveyed PHCs.

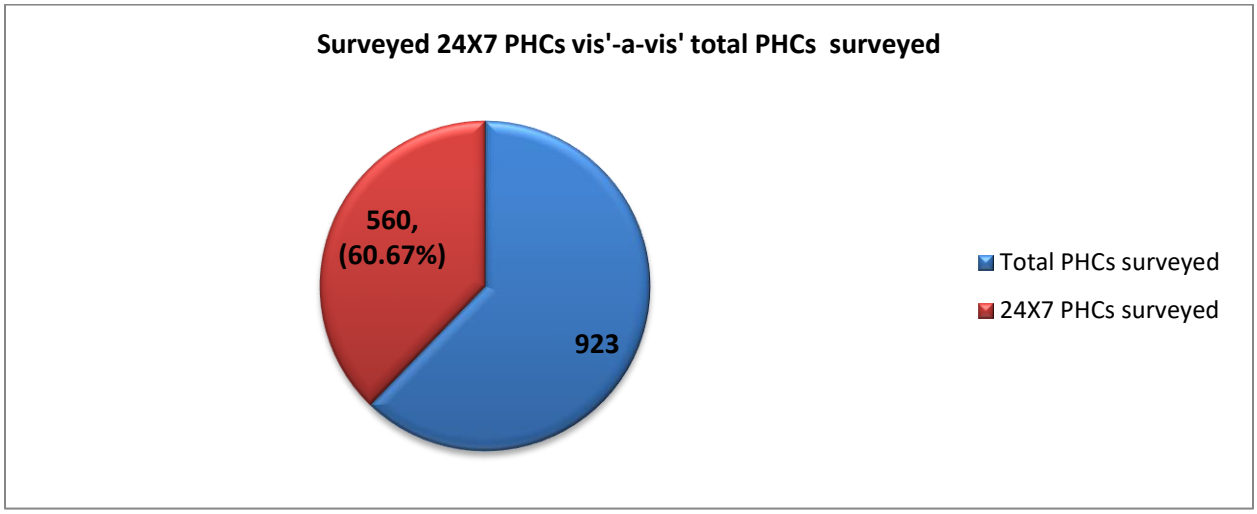



**Figure 3.1: Surveyed 24X7 PHCs vis'-a-vis' total PHCs surveyed**

Findings of State Health facility survey 2011" about state's Primary Health centers have been presented under following heads.

### 3.2 Population coverage:

The average population served by surveyed PHCs in Karnataka is 20,047. 27 districts were found to have one Primary Health centre per 30,000 populations while in 3 districts, Bagalkot, Bellary and Dharwad one PHC was available for 30,000 – 50,000 population. Every PHC served an average of five Sub Centres.

### *Time required reaching from PHC to nearest CHC:*

The average time taken to reach the nearest CHC from a PHC is 33 minutes. Only in one district the time taken to reach the nearest CHC is more than 1 hour.

### 3.3 Manpower & training:

**There was at least one Doctor available in 98.6% of the PHCs surveyed.**

62% of PHCs surveyed had a Medical Officer In-charge (MOIC) available.

On an average 70% of PHCs surveyed had a MO available..

**Two doctors were available in 31% of surveyed PHCs.**

**Lady Doctors were available in only 22% of PHCs surveyed**. **30% of all PHCs surveyed had an AYUSH Doctor**.

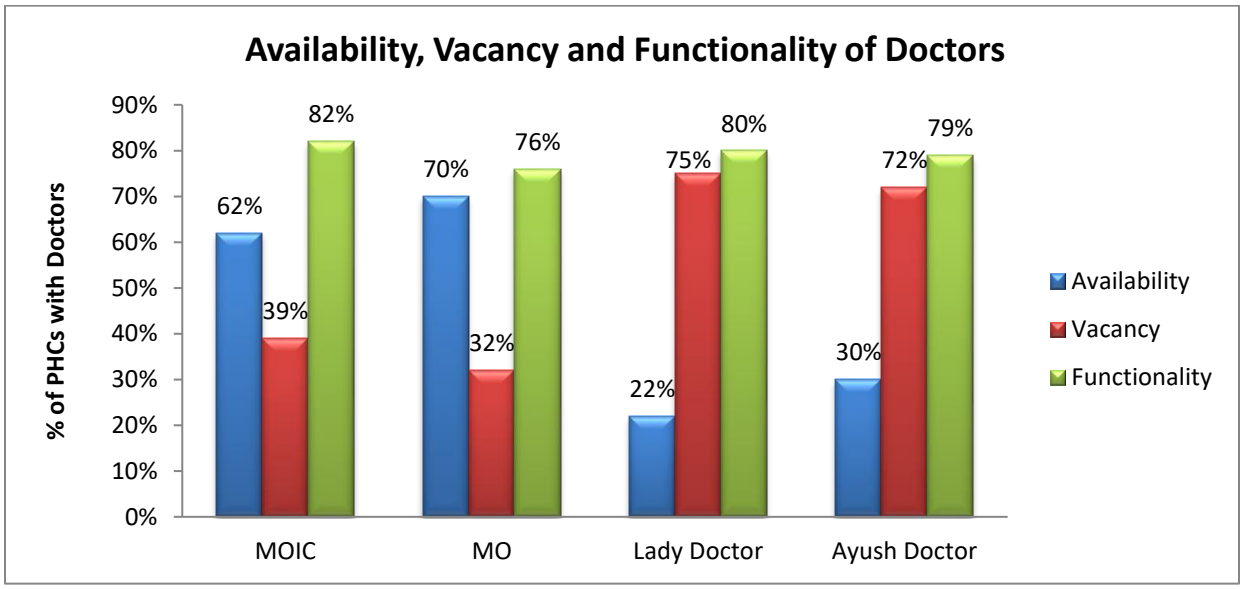



**Figure 3.2: Availability of Doctors at PHC**

In allied health professional manpower category, **71.6% of surveyed PHCs have at least one staff nurse with 95% functionality. On an average 3 staff nurses are available in 24X7 PHCs. 79% of PHCs**

**had a Lab Technician available and in most cases there were fully functional (91%)**. On an average 18% PHCs had an Ophthalmic Assistant; by and large most (85%) were functional.

**At least one Group-D staff was available in 92% of PHCs.** Data entry operator was available in only 5% of PHCs. **Percentage availability of at least one clerical staff is 63%, of junior health assistant (M) is 84% and of junior health assistant (F) is 95%. Survey revealed that on an average two junior health assistant (M) and two health assistant (F) are available per surveyed PHC.**

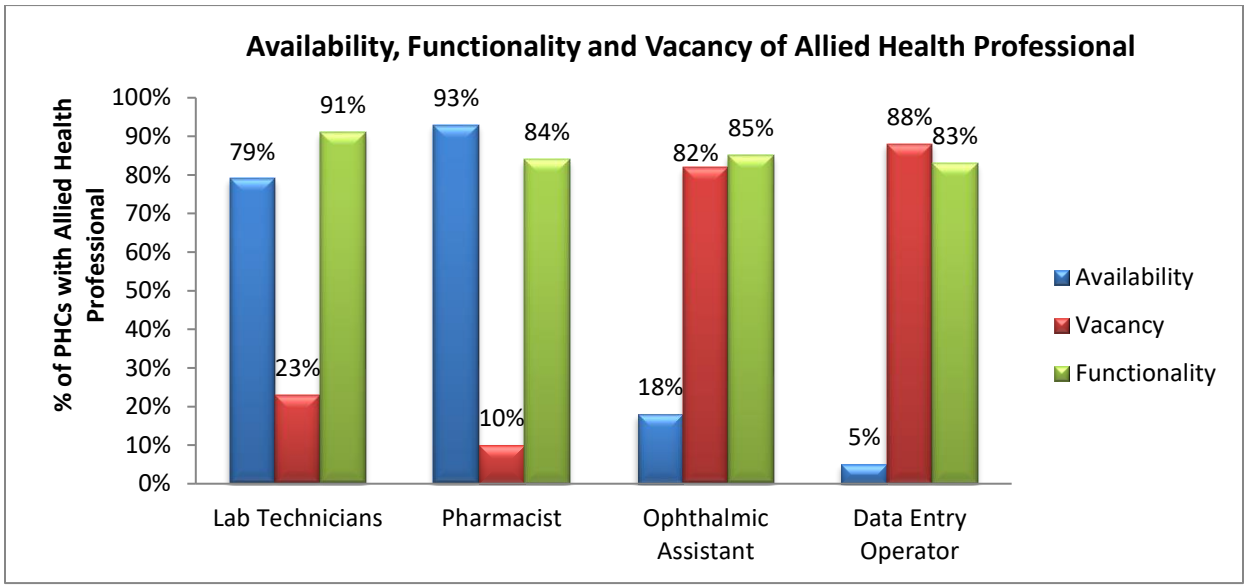



**Figure 3.3: Availability of allied health professionals at PHC**

***Training:*** A System of regular training of manpower is present in 98% of surveyed PHCs, but the coverage of Staff nurses and Doctors has a wide scope for improvement. The details of training for manpower available at PHCs are provided below. More than 60% of the PHCs had staff nurses trained in IMNCI and IUD insertion, but only 45-55% training coverage was found for newborn care, RCHII and TB (DOTS).

Only 20% of the doctors are trained in Tubectomy, MTP and Emergency obstetric care in the surveyed PHCs, and around 50% of the doctors are trained in IMNCI and TB (DOTS).

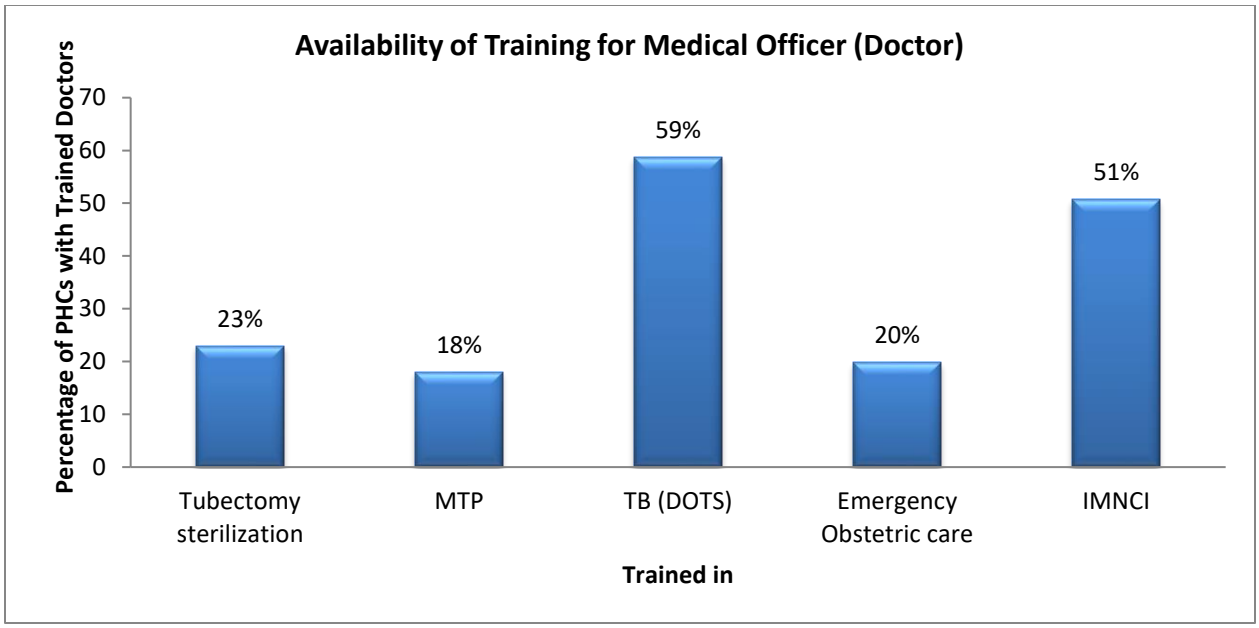



**Figure 3.4: Training of doctors at PHC**

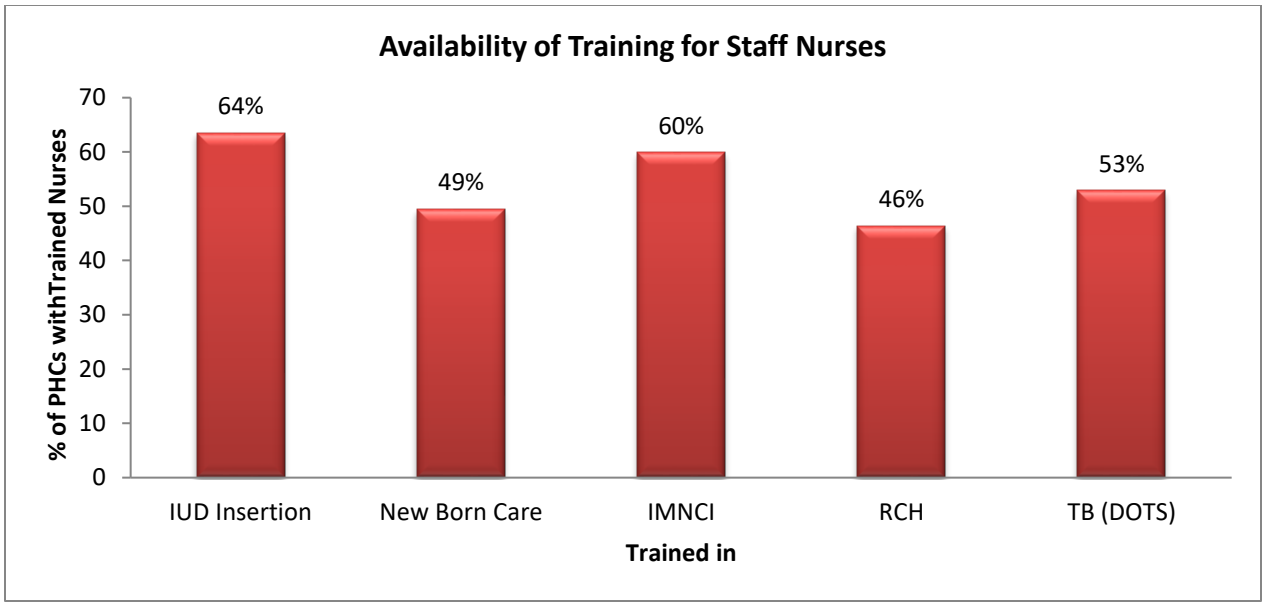



**Figure 3.5: Training of Staff Nurses at PHC**

The detailed distribution of availability of training at PHCs is give below district wise

## 3.3 Infrastructure:

94% PHCs function from government buildings and around 3% from donated buildings. Perimeter wall for the security and demarcation of the building is present only in 54% PHCs.

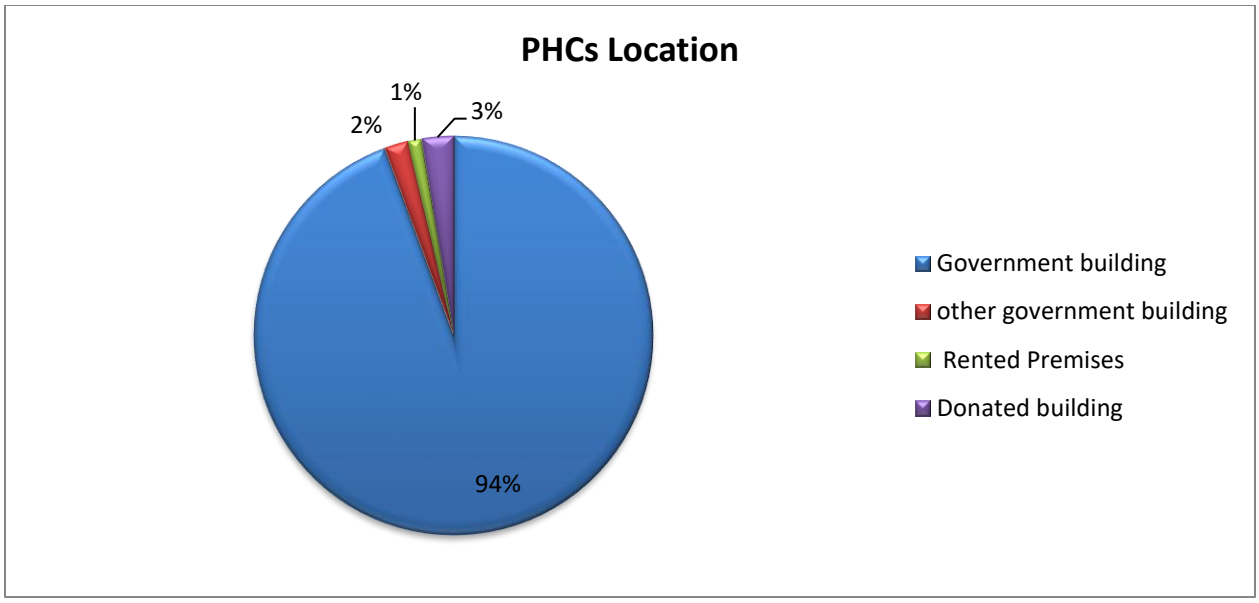



**Figure 3.6: Location of PHC Buildings**

***Physical infrastructure:*** Around 90% PHCs have all weather connectivity with pucca floor, and adequate seating place. Solar energy is utilized in 49% of PHCs with Bijapur and 70% utilisation in Gulbarga and 91% utilisation in Koppal.

Only 63% of PHCs had separate toilets for males and females and only around 78% had proper drainage systems and toilets attached with labour room. Rainwater harvesting mechanism was observed in only 9% of the PHCS. A detailed district wise distribution of availability of physical infrastructure is given below,

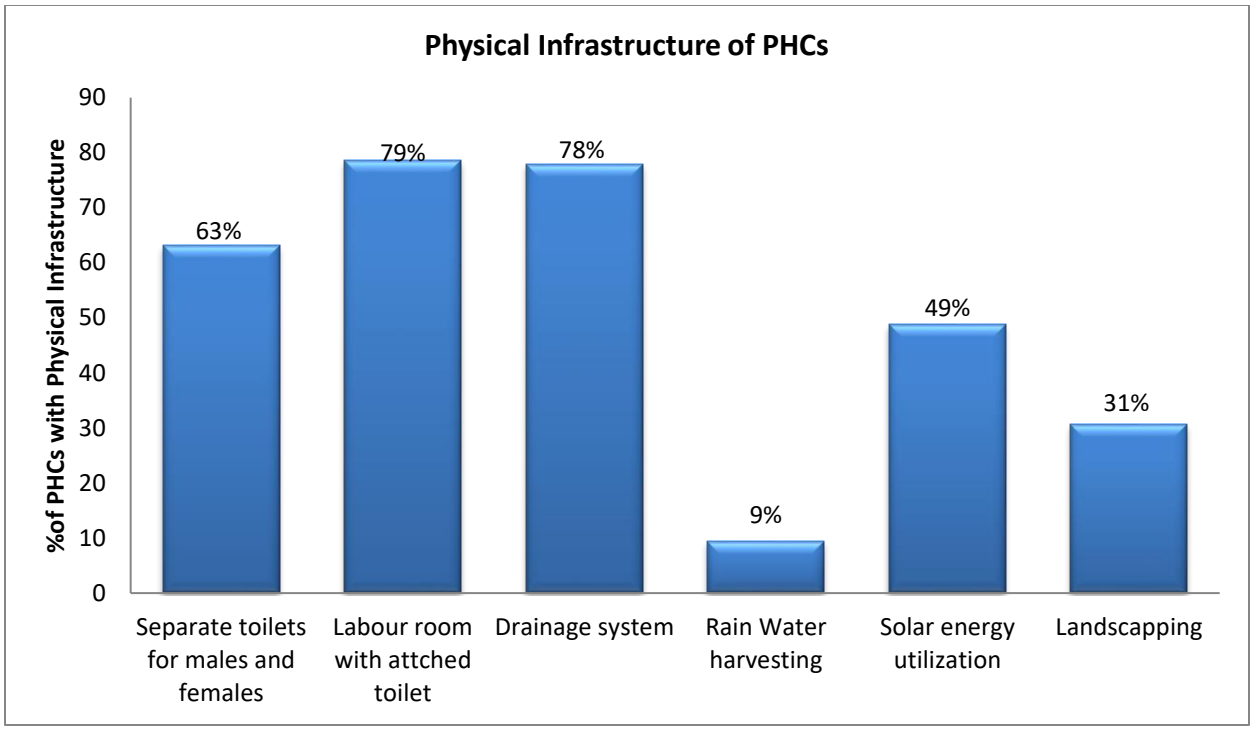



**Figure 3.7: Physical infrastructure at PHC**

All PHC surveyed had clean premises and toilets.

***Basic Utilities:***

**88% of PHCs surveyed reported availability of 24x7 running water**.

**74% of all PHCs surveyed had regular electricity supply**. **Power backup was available in 72% of PHCs**,

Separate public utilities for male and females is available in only 64% of the PHCs surveyed. Residential quarters for staff (Doctor/HWM/HWF/SN) is available in around 50% of the PHCs surveyed. A four wheeler for programme implementation was found to be available in only 17% of the PHCs surveyed.

Communication facilities (Landline /Mobile) were available in more than 90% of PHCs surveyed.

Internet facility is available in 53% of PHCs

### *Essential Medical Infrastructure:*

On an average six beds are sanctioned per PHC, and an average of five beds per PHC was found functional. In **64% of PHCs surveyed an OT was available**. This correlates with the percentage of 24x7 PHCs (61%). **90% of PHCs surveyed had a Labour Room**. While Labour room and outpatient room was available in 90%+ PHCs, only 64% reported availability of OT and 85% reported availability of injection/dressing room.

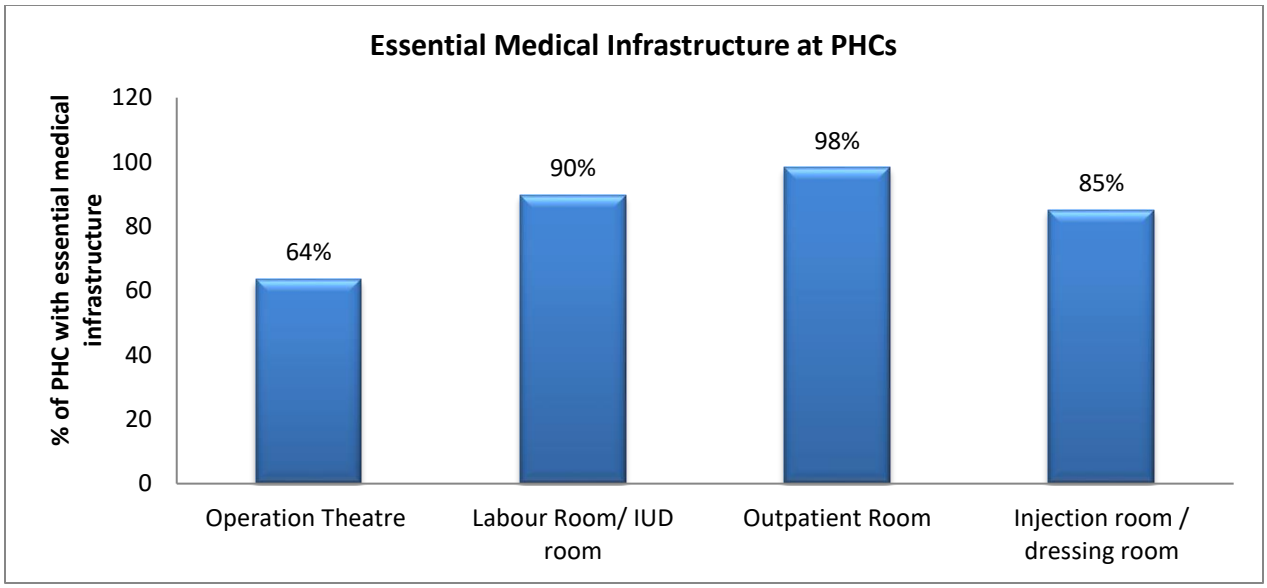



**Figure 3.8: Essential Medical Infrastructure at PHCs**

**3.4 Equipments:** More than 90% of PHCs surveyed had a Deep freezer (94%), ILR (96%), Cold Box (90%) and Vaccine Carrier (99%) available. However, only 49% PHCs surveyed had a Radiant Warmer, 13% a Phototherapy unit, 66% a Steam Sterilizer and 26% a Fumigation Machine available.

Functionality of above stated basic equipments were more than 85% as shown in the following graph:

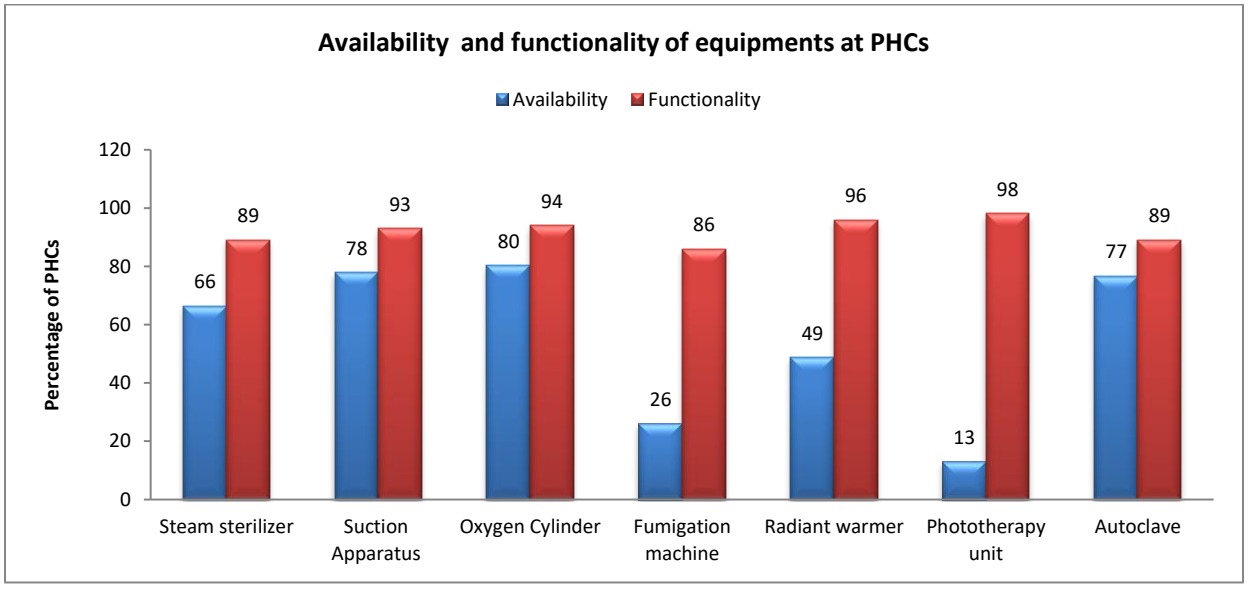



**Figure 3.9: Availability and functionality of few basic equipments at PHCs**

## 3.5 Drugs and consumables:

Availability, stock out and incidence of expired medicine of drugs and consumables was checked during the survey. Frequent stock outs and presence of expired drugs are the key findings that indicate poor supply chain, lack of inventory management and poor record keeping . Percentage availability of

contraceptives is moderate to good (75% for oral pills to 93% copper-T). All vaccines are available in more than 90% of PHCs, however, only 35% of PHCs had DT available. Similarly, in more than 90% PHCs ATT, Chloroquine, Vitamin A, ORS, antipyretics, I/V fluids, and emergency drugs were available. Only 23% PHCs had IFA (small) and 36% PHCs had IFA (large) and only 26% of PHCs had AYUSH medicine available.

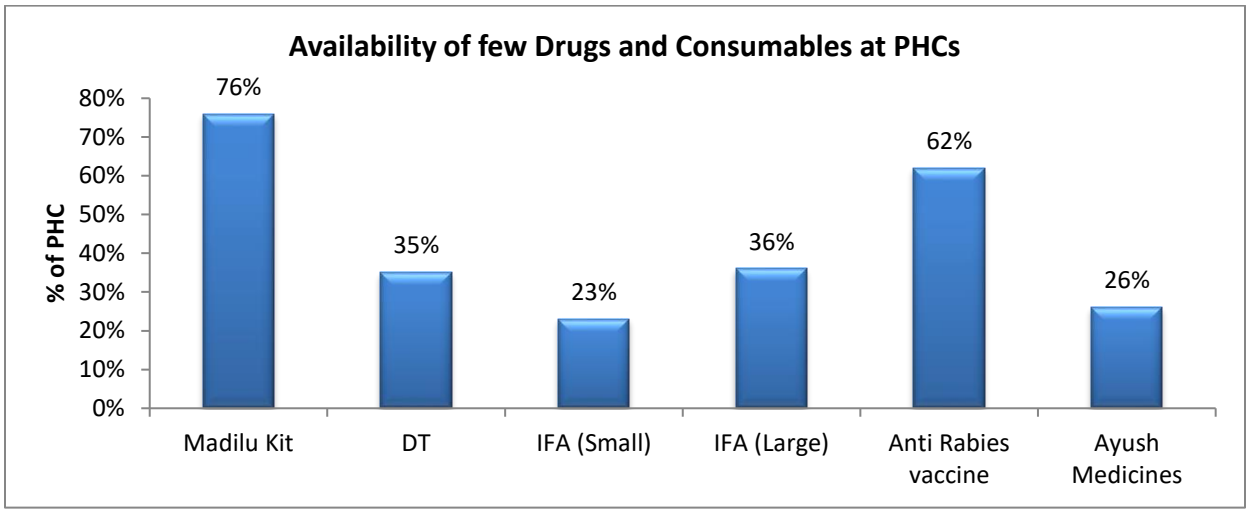



**Figure 3.10: Availability of few drugs and consumables at PHCs**

**Stock outs in the last one month**

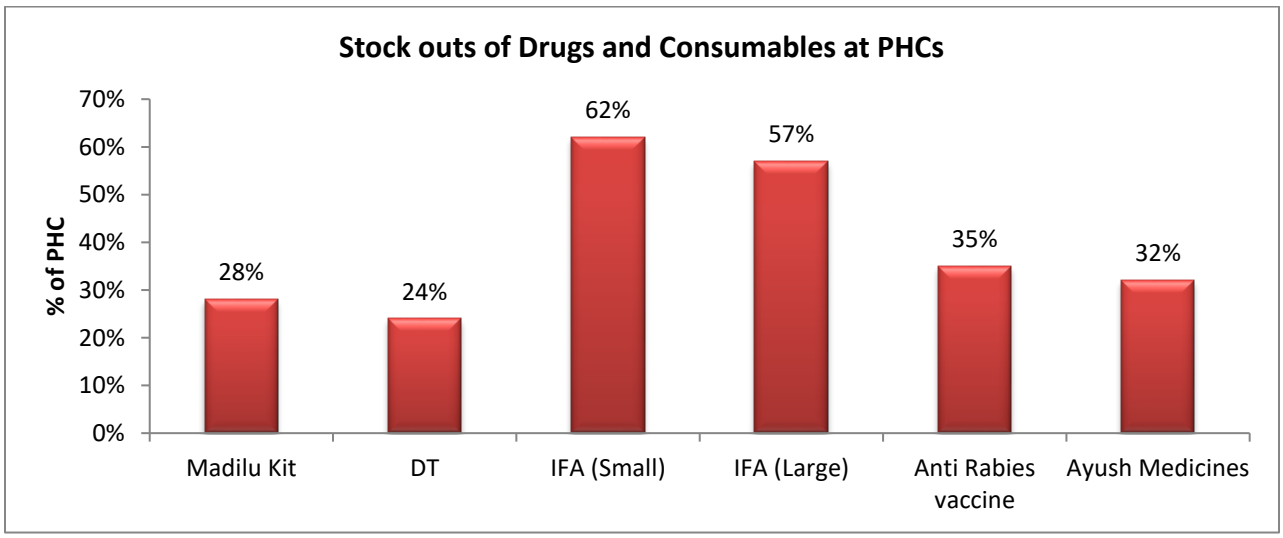



**Figure 3.11: Stock outs of few Drugs and Consumables at PHCs**

## 3.6 Availability of essential medical services:

Survey revealed that **61% of the PHCs surveyed are providing 24x7 services**.

**24x7 Doctors were available in 57% of PHCs surveyed**. Only 13% of PHCs surveyed in Uttar Kannada, 27% in Hassan, 20% in Chitradurga & 23% in Bangalore Rural had 24x7 Doctor available.

Though 83% of PHCs surveyed had delivery services only 28% of PHCs had facilities for assisted (vacuum/forceps) delivery. 76% of PHCs surveyed had provision to provide newborn care services.

Only 42% of PHCs had services for carrying out sputum for AFB[2].

Briefly the availability of essential services is,

i. Provision of Inj T.T & ANC services to pregnant ladies, provision of Inj. Oxytocin & antibiotics for essential obstetric care, Management of diarrhea & ARI/Pneumonia – **90%+ availability**
ii. Provision of IFA tablets to pregnant ladies, facility of Hb estimation & Malaria test and facility for 24x7 deliveries - **80% - 90% availability**
iii. Essential Newborn care, Management of PPH, facility for Haematological tests and routine stool/urine examination - **60% - 80% availability**
iv. 24x7 availability of doctors, facility for Blood sugar and Sputum test for TB - **<60% availability**

### *Functionality of essential medical services:*

Proper functionality of any medical service depends on the collective existence of all the factors discussed above. Based on the above written fact observations of essential services infrastructure is,

***Maternal Healthcare Services:*** The maternal health care services were gauged for delivery of full antenatal care, institutional deliveries, SBA for all deliveries and JSY beneficiaries. The infrastructure strengths of the PHCs (>=85% availability) and weakness of PHCS (<85% availability) in delivering maternal healthcare services is tabulated below,

| Strengths | Weaknesses |
|---|---|
| Availability of labour rooms (89.5%) | Inadequate trained staff in EOC & RCH |
| Availability of ANC services (97.9%) | Residential facilities for staff ~ 50% |
| Facility for Hb estimation (89%) | Availability of OT (64%) |
| Provision of Inj TT (99.4%) | Facilities for conducting deliveries (81%) |
| Provision of IFA tablets (85.4%) | Facility for assisted delivery (28%) |
| Provision of Inj Oxytocin & I/V antibiotics (>90%) | Facilities for PPH management (67%) |
| Availability of labour room with McIntosh sheet (92%) | Availability of suction apparatus (78%) |
| Availability of adequate light in labour rooms (85%) | Availability of Oxygen cylinder (80%) |
| Availability & functionality of BP apparatus and WMs | Poor availability of madilu kit and Kit I |
| No maternal mortality | Poor availability and more stock outs of IFA tablets |
| | Only 18% registration under JSY |
| | Only 52% payment on discharge under JSY |

**Table 3.1 Functionality of Maternal & Child Health Services at PHCs**

The average number of deliveries in PHCs is 14 every month. 10 PHCs reported more than 20 deliveries per month. No maternal death was reported by PHCs in any district except for two districts, which had one maternal death each in the past month

***Child Health Services:*** The delivery of child health services were gauged for delivery of new born care, full immunization, children with diarrhoea receiving ORS and implementation of IMNCI. The infrastructure strengths of the PHCS (>=85% availability) and weakness of PHCS (<85% availability) in delivering child healthcare services is tabulated below:

| Strengths | Weaknesses |
|---|---|
| Availability & functionality of weighing machine for babies | Poor availability of radiant warmer, phototherapy units |
| Good availability of all vaccines (Except DT) for immunization (>=90%) | Poor availability of DT (35%) and presence of expired DT vials |
| Good availability & functionality of cold chain equipments | Inadequate trained staff in IMNCI & NBC |
| Good availability of Vitamin A and ORS | >15% stock outs of Vitamin A & ORS in one quarter |
| Good online reporting of immunization data under HMIS | Poor availability of essential NBC services |
| No infant death | |

**Table 0.2: Functionality of Child Health Services at PHCs**

The average number of infant deaths in the PHC is 0.37 per month. Mandya district reported four infant deaths in the past month; seven districts including Bellary, Chikkaballapura, Chitradurga, Dharwad, Kodagu, Raichur, and Ramnagara reported one infant death each in the past month, all other districts did not report any infant deaths in the past month.

***Provision of Family planning and contraceptive Services:*** The infrastructure strengths of the PHCS (>=85% availability) and weakness of PHCS (<85% availability) in delivering family planning and contraceptive services is tabulated below

| Strengths | Weaknesses |
|---|---|
| Availability of labour / IUD room (90%) | Poor availability and functionality of autoclave, steam sterilizer and MTP instruments |
| Good online reporting of Family Planning data under HMIS | Poor availability of Kit G, Tubectomy kit, Oral pills and Condoms |
| | >25% stock outs of all above in one quarter |
| | Presence of expired Oral pills |
| | Inadequate trained staff in Tubectomy sterilization, MTP (<25%) & IUD insertion (64%) |

**Table 0.3: Functionality of Family Planning and Contraceptive Services at PHCs**

***Emergency Services:*** The average availability of essential infrastructure and capabilities required for emergency services are listed for PHCs. It is found that only I/V fluids and emergency drugs clocked 85%+ availability for emergency care, the shortcomings prevalent are inadequacy of training in

emergency care, limited availability of OT, availability of antibiotics and presence of expired drugs among others

| Strengths | Weaknesses |
|---|---|
| Availability of I/V fluids > 90% | Only 61% 24x7 PHCs |
| Availability of emergency drugs > 90% | Only 57% 24x7 doctor availability |
| | Inadequate trained staff in EOC |
| | Availability of OT only 63.60% |
| | Out of 6.4 sanctioned beds only 4.63 are operational |
| | Availability of facilities for managing PPH is only 67% |
| | Poor availability of Inj. Gentamycin /ampicillin, ASV and ARV vials |
| | Frequent stock outs of above mentioned drugs, I/V fluids and emergency drugs |
| | Presence of expired Inj Gentamycin /ampicillin vials and I/V fluids |

**Table 0.4: Functionality of Emergency Services at PHCs**

***Basic Lab Services:*** The infrastructure strength of laboratories (>=85% availability) and weakness are (<85% availability) is listed below,

| Strengths | Weaknesses |
|---|---|
| Facility of malaria test 85% | Microscope availability only 83.57% |
| | Poor facilities for Hematological tests, sputum examination (42%), blood sugar (55%) and routine stool/urine examination (74%) |

**Table 0.5: Functionality of Basic Lab Services at PHCs**

***Surgical Services:*** The infrastructure strength for delivery of surgical services in PHC (>=85% availability) and weaknesses are (<85% availability) tabulated as below,

| Strengths | Weaknesses |
|---|---|
| Availability and functionality of Needle Destroyers > 95% | OT availability 64% |
| | Poor availability and functionality of autoclave (A=77%, F=89%), steam sterilizer (A=66%, F=89%) and fumigation machines (A=26%, F=80%)* |

**Table 0.6: Functionality of Surgical Services at PHCs**

*A = Availability, F = Functionality

***Ayush Services:*** Ayush doctors are available in only 29.6% of PHCs in the sample surveyed, availability of Ayush medicines is only 26.4% and a stock out of 30% is observed.

| Strengths | Weaknesses |
|---|---|
| | Availability of Ayush doctors is 29.6% |
| | Availability of Ayush medicines is 26.4% |

| | |
|---|---|
| | with >30% stock outs in one quarter |

Table 0.7: Functionality of Ayush Services at PHCs

### 3.7 Logistics and cold chain management:

90+% of PHCS have operating refrigerators, deep freezer with ILR and are maintaining temperature control but only 20% of them have generator backup power facility.

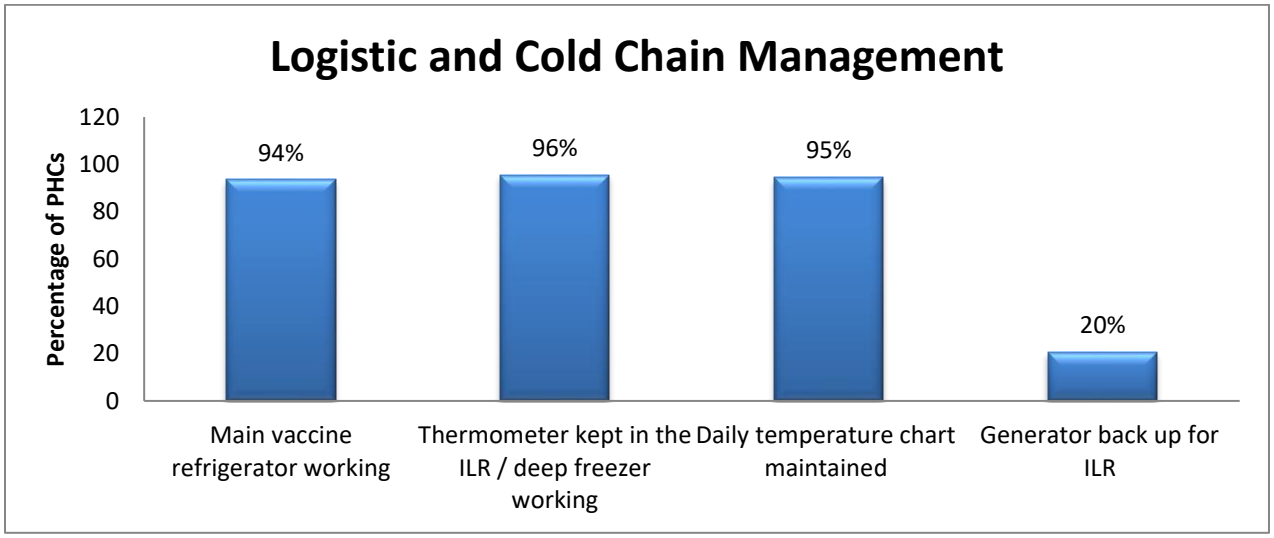



Figure 3.12: Logistics and Cold Chain Management at PHCs

### 3.8 HMIS:

This section describes data management and data reporting from PHCs to higher levels. 83.63% PHCs of the state submit data online. Among the four categories of monthly reporting the "Notifiable disease report" scores lowest with only 61% reporting from surveyed PHCs, for the other three categories there is scope for improvement.

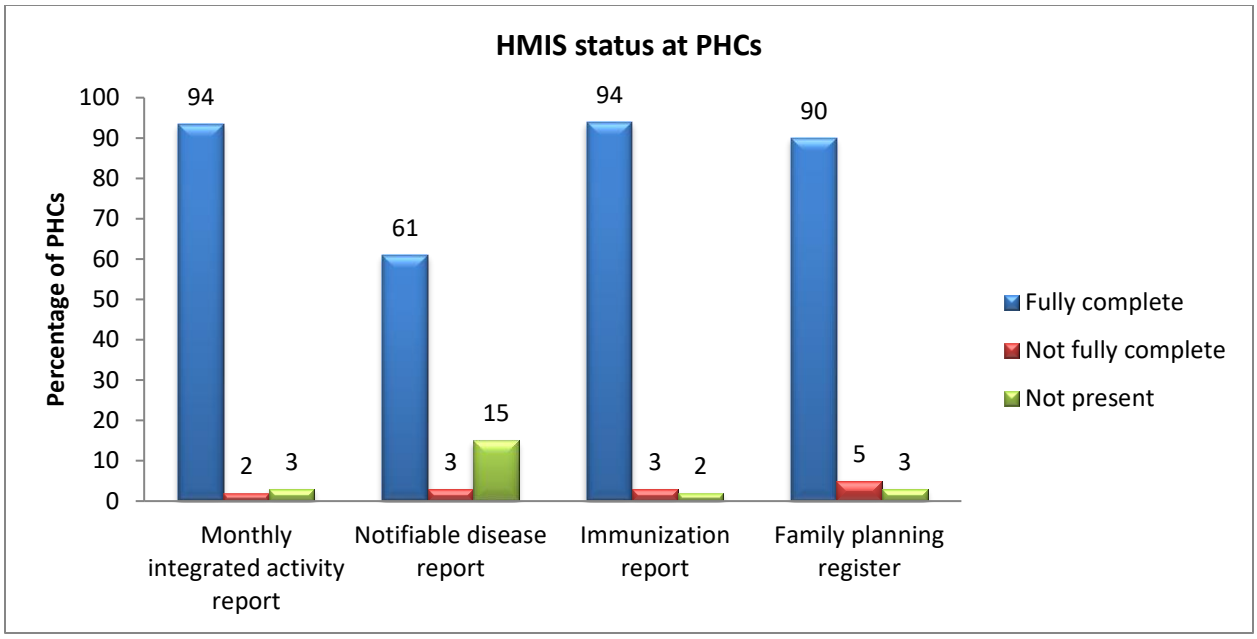



**Figure 3.13: HMIS status at PHCs**

## 3.9 JSY performance:

JSY programme was launched under NRHM to promote institutional deliveries and decrease MMR & IMR by providing financial aid during and after pregnancy for healthy food intake. 96% of PHCs reported proper receipt of funds and 80% received funds in advance; it is observed that only 52% of PHCs provide the payment at the time of discharge.

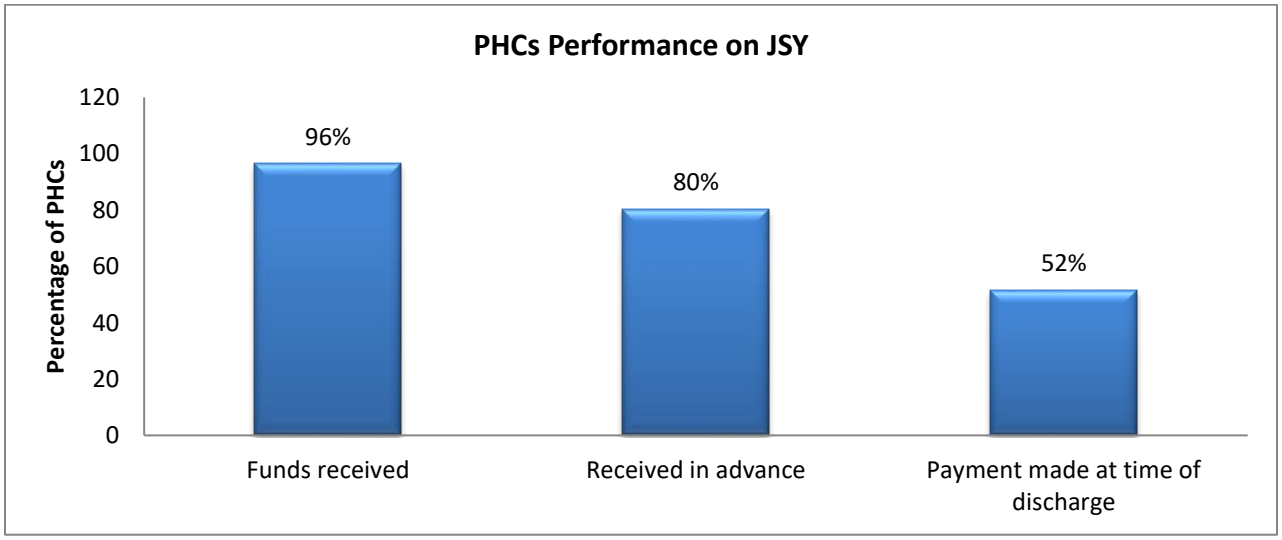



**Figure 3.14: JSY performance of PHCs**

### *Arogya Raksha Samiti:*

ARS is functional in 98.97% of surveyed PHCs, the funds are utilized mainly for drugs purchase, equipment maintenance and infrastructure maintenance in most cases. The detailed distribution of utilization of ARS funds is as below,

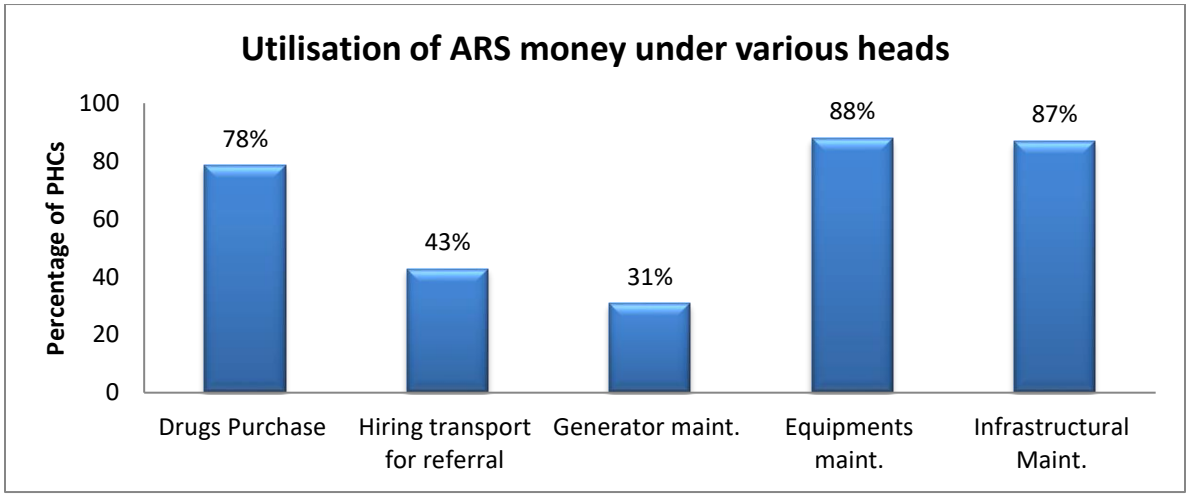



**Figure 3.15: Utilization of ARS money under various heads**

## 3.10 Quality control:

Quality management of PHCs is assessed through availability of citizen charter and signage in local language, availability of patient complaint boxes, BMW management practices adherence, fumigation of IT, and quality visits by Program Officers. Utilization rates of coloured bins for BMW segregations and needle destroyer is above 90% of districts surveyed and all PHCs use deep burial pit for disposal of Biomedical Waste. Patient complaint box was available in only 37% of PHCs and only 6% reported regular follow up and action on complaints received through complaint register/box. Other quality parameters are shown below,

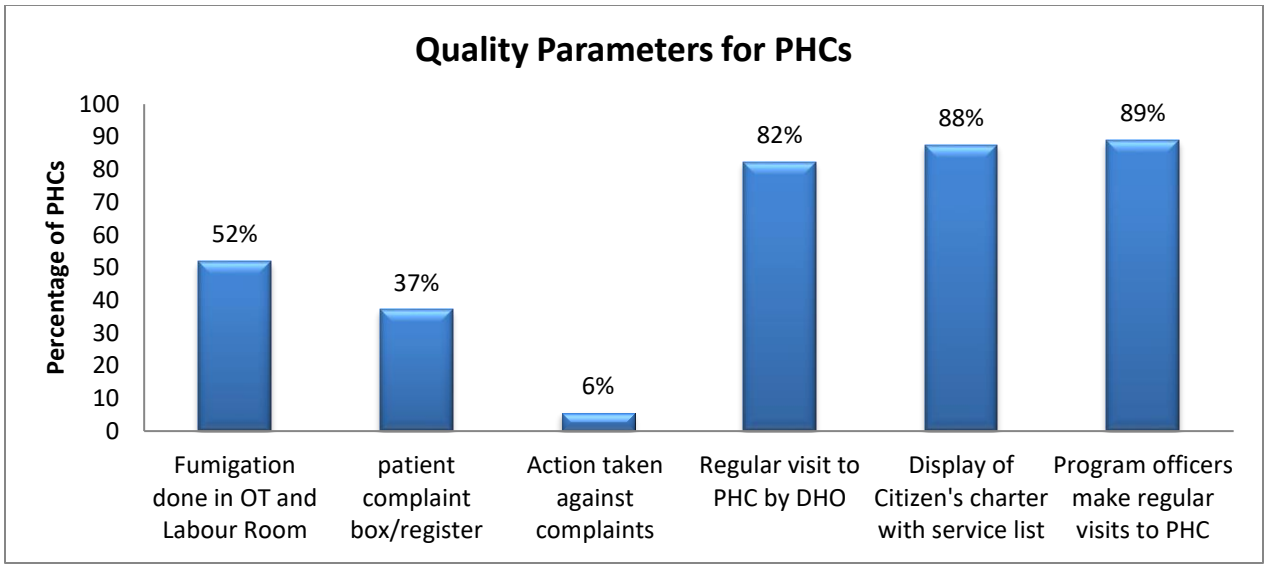



**Figure 3.16: Quality Parameters for PHCs**

Key parameters of Bio Medical Waste management at surveyed PHCs is shown below,

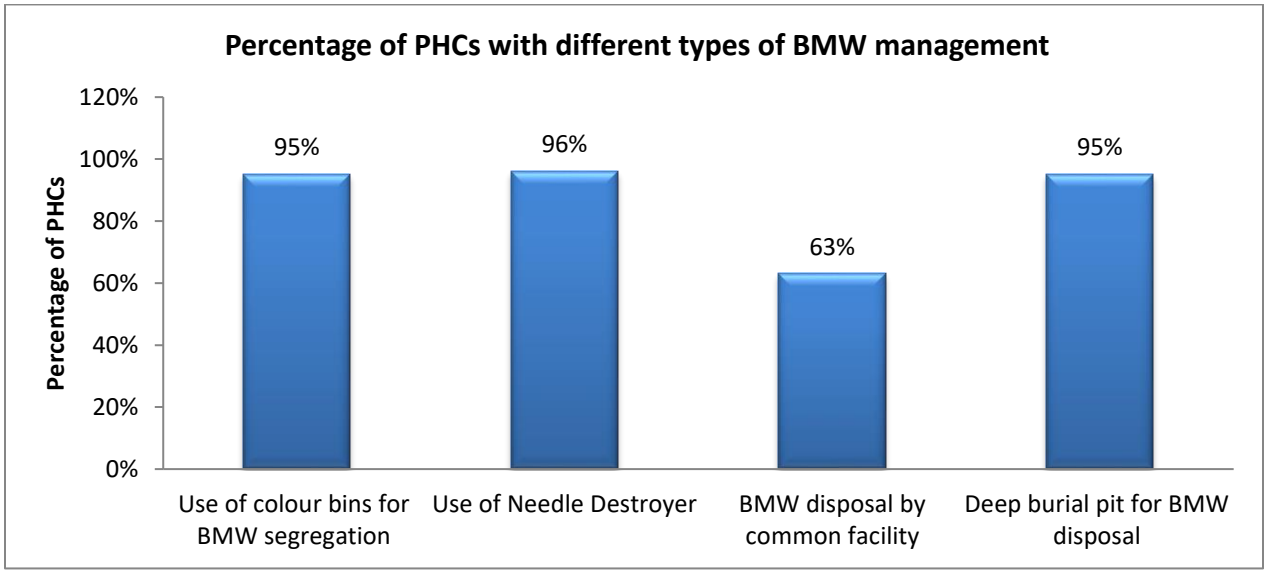



**Figure 3.17: Percentage of PHCs with different types of BMW management**

## 3.11 Utilization indices:

An average of 14 deliveries are conducted every month in a PHC. PHCs surveyed in 19 districts reported an average of 10 or more deliveries in a month.

.

It is found that seven districts serve an average of 1000+ OPD patients in a month and two districts serve less than an average of 500 patients in a month, the average number of outpatients per month was 806.

***Averages of 30 in-patients are treated in a month in the surveyed PHCs.*** Only five districts served >50 inpatients a month on an average and 14 districts have served <25 inpatients per month, of which 6 districts have served <10 average patients a month.

***An average of four cataract camps were conducted by each PHC in the past year.***

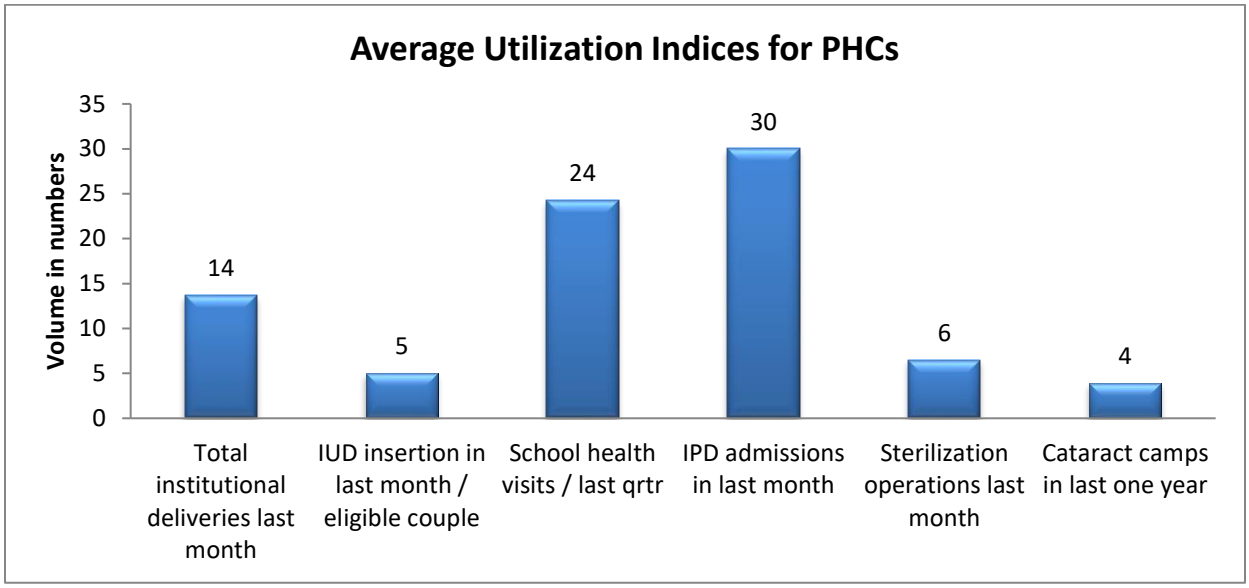



**Figure 3.18: Average Utilization indices for PHC**

# Chapter-4 DISCUSSION

The study is carried out in one of the fast developing states of southern India.According to Rural health statistics 2012 there is an overall shortage of ANMs in PHCs in India was 3.8% whereas that of MPWs of 64.7%.Below are the parameters discussed with the strength and weaknesses .

EVALUATION OF SUB CENTRES SURVEYED

| Strengths | Weaknesses |
|---|---|
| Availability of BP apparatus, Stethoscope and Weighing machines for adults is >85% | Inadequate trained staff in SBA (35.47%) and Newborn care (34.57%) |
| Online submission of immunization data under HMIS services | Poor availability of delivery services (26%) |
| Availability of family planning and contraceptive services is 92.80% | Poor availability of Mucous aspiration set, weighing machines for babies, normal delivery kit, sterilizer and episiotomy suturing set |
| | Poor availability and frequent stock outs of Kit A, Kit B, IFA (small & large) tablets and reagent strips. |
| | Presence of expired IFA tablets |
| | Inadequate trained staff in UIP, control of diarrheal diseases & Oral rehydration therapy and management of ARI |

EVALUATION OF PRIMARY HEALTH CENTRES SURVEYED

| Strengths | Weaknesses |
|---|---|
| Availability of labour rooms (89.5%) | Inadequate trained staff in EOC & RCH |
| Availability of ANC services (97.9%) | Residential facilities for staff ~ 50% |
| Facility for Hb estimation (89%),TT(99.4%) IFA tablets (85.4%), labour room with McIntosh sheet (92%), Availability & functionality of BP apparatus and WMs | Availability of OT (64%) |
| Good availability of all vaccines (Except DT) for immunization (>=90%) | Facilities for conducting deliveries (81%) |
| Good availability & functionality of cold chain equipments | Facility for assisted delivery (28%) |

| | |
|---|---|
| Good availability of Vitamin A and ORS | Facilities for PPH management (67%) |
| Good online reporting of immunization data under HMIS | Availability of suction apparatus (78%) |
| Availability of emergency drugs > 90% | Availability of Oxygen cylinder (80%) |
| Availability and functionality of Needle Destroyers > 95% | Poor availability and more stock outs of IFA tablets |
| | Only 18% registration under JSY& only 52% payment made at the time of discharge |
| | Inadequate trained staff in IMNCI , NBC Tubectomy sterilization, MTP (<25%) & IUD insertion (64%) |

The Project brought out the clear cut areas that need strengthening and areas that have good indicators.

# Chapter-5 Conclusion

Primary health care plays a central role in health care systems worldwide. It can offer families cost-effective services close to home, eliminating costly trips to specialists and hospitals.
In developing countries, community health centers usually offer a broad range of services, including prenatal care, immunizations, treatment of childhood illnesses, treatment of malaria and other common infectious diseases, and other basic medical care.
All too often, however, the coverage and effectiveness of primary care services are limited by insufficient resources and staff, erratic drug supplies, and faulty equipment.
Governments increasingly recognize that adequate delivery of primary care services is fundamental to the effective functioning of health systems, to keeping families healthy, and to achieving national health goals.

The study is carried out in a developing state in southern India

Some of the factors responsible for the poor functional status of the primary health system are:

- Mismatch between personnel and infrastructure;
- Lack of Continuing Medical Education (CME) programmes for orientation and skill upgradation of the personnel;
- Lack of appropriate functional referral system;
- Absence of well established linkages between different components of the system.

# Chapter-6 Recommendations

The study brings out the fact that the SCs and PHCs have not been able to deliver the intended health care and medical services to the people in the rural areas due to lack of resources, manpower and infrastructure . The following suggestions are made for improving their performance.

1. To ensure the availability, adequacy and functionality of health infrastructural facilities including the medical and para-medical staff in PHCs, there is an urgent need to emphasise the systemic mechanism of supervision, monitoring and review of the functioning of primary health care institutions. This will not only help improve the quality of health delivery system, but also ensure optimum use of public resources.

2. A holistic approach to primary health care system needs to be adopted which should strive to integrate the allopathic system of medicine with Indian systems of medicine. The Indian systems of medicine has advantage over the western system of medicine on many counts. For instance, the allopathic treatment and medicines are becoming increasingly unaffordable and the study has clearly brought home the point that non-availability of medicines in PHCs is one of the main constraints being faced by the people in general and the poorest of the poor in particular

3.If the adequate number of lady doctors are not available for posting in the rural areas, the para-medical staff especially the Nurses should be provided training on obstetric/gynaecology so as to enable them to popularise and facilitate the institutional deliveries.

4. The existing PHCs should be made equipped with essential infrastructure and diagnostic facilities which will help increase the utilisation rate. Besides,

5.Strengthening sub-centre through an untied fund to enable local planning and action and more Multi Purpose Workers (MPWs).

6.There is need to improve round the clock presence of doctors and healthcare workers at primary health centresbecause many women had to seek other facilities as they found primary health centres closed.

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**Annexure I.**

**Manpower Recommended Under Indian Public Health Standards (IPHS)**

| **Sub Centre** | | | |
|---|---|---|---|
| **S.No.** | **Personnel** | **Existing** | **Recommended** |
| 1. | Health Worker (Female) | 1 | 2 |
| .2. | Health Worker (Male) | 1 | 1 (funded and appointed by State Government) |
| 3. | Voluntary worker to keep the Sub Centre clean and assisting ANM. She is paid by the ANM from her contingency fund @ Rs. 100 per month | 1 (optional) | 1 (optional) |
| **Primary Health Centres** | | | |
| **S.No.** | **Personnel** | **Existing pattern** | **Recommended** |
| 1. | Medical Officer | 1 | 3 (At least 1 female) |
| 2. | AYUSH practitioner | NIL | 1 (AYUSH or any ISM system prevalent locally) |
| 3. | Account Manager | NIL | 1 |
| 4. | Pharmacist | 1 | 2 |
| 5. | Nurse - Midwife (Staff Nurse) | 1 | 5 |
| 6. | Health Worker (Female) | 1 | 1 |
| 7. | Health Educator | 1 | 1 |
| 8. | Health Assistant male and female | 2 | 2 |
| 9. | Clerks | 2 | 2 |
| 10. | Laboratory Technician | 1 | 2 |
| 11. | Driver | 1 | Optional; vehicles may be out-sourced |
| 12. | Class IV | 4 | 4 |

**APPENDIX-2**

**SOME KEY DEFINITIONS**

**KIT A:-**

Contents IFA tablet (large & small),Vit. A solution, ORS packet, Cotrimaxazole tab. (Pediatric), Disposable delivery kit

**KIT B:-**

Tab. Methelergometrine Maleate (0.125mg), Tab.Paracetamol (500mg),Inj. Methelergometrine Maleate (0.2mg/ml., 1ml), Tab. Mebendazole (100mg) , Dicyclomine (10mg), Chloramphenicol eye Ointment (250mg),Ointment Providone Iodine (5%), Cetrimide Powder (125gm), Absorbent cotton, cotton bandage (4 cm width 4 meters length)

**Emergency Contraceptives:**

Emergency contraceptives are methods of preventing pregnancy after unprotected sexual intercourse. Emergency contraception can be used when a condom breaks, after a sexual assault, or any time unprotected sexual intercourse occurs**.**