IHMR BANGALORE Institute of Health Management Research, Bangalore

DRAFT REPORT

On

"AROGYA BANDHU" SCHEME FOR INVOLVING PRIVATE MEDICAL COLLEGES AND OTHER AGENCIES IN THE MANAGEMENT OF PHCS: AN EVALUATION STUDY"

By

IHMR-B

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PREFACE

Karnataka is a pioneer of innovative schemes in many spheres including health. One such innovative scheme is 'Arogya Bandhu' a Public – Private – Partnership (PPP) launched in July 2008. The Private Medical Colleges, Non Governmental Organisations (NGOs), Trusts and other charitable institutions and Philanthropic Organisations, etc., were provided an opportunity to join hands with the Government for providing better health care to the community. The Government of Karnataka (GoK) committed to provide quality health care services to the people, in the recent past has implemented various beneficiary oriented programmes in Health Department under National Rural Health Mission (NRHM). The PHCs under Arogya Bandhu scheme are also implementing these schemes.

This PPP model provides an opportunity for these organizations either to fully manage the PHCs with financial assistance by Govt. of Karnataka or to contribute to the improvement of the facilities or to improve service delivery without directly managing the PHCs. The main objective of this scheme was to improve the performance of the PHCs in terms of reducing IMR and MMR and increasing immunization coverage and institutional deliveries, to fill up the long duration vacant positions in the PHCs and to make healthcare services more accessible and available to the communities which are too far from the connecting highways.

This study was entrusted to IHMR-B by Government of Karnataka with an intention to evaluate the impact of Arogya bandhu scheme in terms of its benefits after its implementation, to evaluate physical and financial performance of PHCs under Arogya Bandhu Scheme across the state, to understand the involvement of PHC in community based approach for conducting regular surveys and maintenance of records as per the guidelines of state and central governments.

The present report on the evaluation brings out the impact of Arogya Bandhu scheme in terms of performance of PHCs after its implementation and, the community perception on the performance of these PHCs and the availability of the health services.

Project Director – Reproductive Child Health
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ACKNOWLEDGEMENT

'Arogya Bandhu' scheme for involving Private Medical Colleges and other Agencies in the Management of PHCs: An Evaluation Study" was entrusted to IHMR-B by Government of Karnataka, and IHMR-B is delighted for our participation in this study, which was conducted with an objective to evaluate the performance of PHCs under Arogya Bandhu Scheme across the State, and also to see the involvement of PHCs in community based approach for conducting regular surveys and maintenance of records as per the guidelines of state and central governments and highlight the opinion of the community about the medical services provided by the PHCs.

This six months long study was quite elaborate, involved collection of data from 52 PHCs and concerned officers from 26 Districts. This evaluation signifies dedication to work, the spirit of team work and coordination and achieves the goal of improving the healthcare services to the community in the state. This work was supported by Dr K. N. Murthy, Chairman, Karnataka Evaluation Authority and, Dr Bhanu murthy, Joint Director, Health and Planning, Government of Karnataka.

We would like to thank the team at Directorate of Health and family Welfare, GoK., for their support in conducting this study. We wish to thank Mr. Shankar K. S, the then Deputy Director, Demography, for his efforts to guide through the initiation of this work. We extend our sincere thanks to Ms. Vinutha Rani, the current Deputy Director, Demography, for her support in completion of the report.

We wish to extend our heartfelt thanks to all the Medical Officers and the staff of the PHCs, DHOs, DPMOs and all other officers of all the study districts for their cooperation in sending the secondary data for the analysis.

I would like to thank my whole team including Dr. Manoj Kumar Gupta, Dr Sreenath Reddy, Dr Reshmi R S, Dr. R. Veena, Dr. Srinath V, Dr. Yashodha, Dr Divya Desai, staff at IHMR-B, and field workers for their concerted efforts to make this evaluation successful.

We at IHMR Bangalore have done the best in evaluating this PPP model in the health sector in Karnataka and brought in this report with a purpose to serve the community better and make health care services available, accessible, acceptable and affordable to all.

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LIST OF ACRONYMS

ABER	: Annual Blood Examination Rate
ABS	: Arogya Bandhu Scheme
ANC	: Anti Natal Checkup
ANM	: Auxillary Nurse Midwife
ARS	: Arogya Raksha Samiti
AWC	: Angan Wadi Centre
AYUSH	: Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy
BMW	: Bio Medical Waste
BP	: Blood Pressure
DHO	: District Health Officer
DPMO	: District Programe Management Officer
DPT	: Deptheria Pertusis Tetanus
DPT	: diphtheria, pertussis, Tetanus
GoI	: Government of India
Govt.	: Government
HH	: House Holds
HIV	: Human immunodeficiency virus
HMIS	: Health Management Information system
IFA	: Iron Folic Acid
IMR	: Infant Mortality Rate
IUD	: Intra Uterine Devices
JHA	: Junior Health Assistant
JSY	: Janani Suraksha Yojana
LR	: Labor Room
LT	: Lab Technician
MMR	: Maternal Mortality Rate
MOIC	: Medical Officer In Charge
MTP	: Medical Termination of Pregnancy
NGO	: Non Governmental Organization
NRHM	: National Rural Health Mission
NSSK	: Navjaat Shishu Suraksha Karyakram
OCP	: Oral Contraceptive Pills
OPV	: Oral Polio Vaccine
OT	: Operation Theater
PHC	: Primary Health Centre
PNC	: Post Natal Checkup
PPH	: Post Partum Hemorrhage
PPP	: Public Private Partnership
RNTCP	: Revised National Tuberculosis Control Program
SC	: Sub Centre
SHA	: Senior Health Assistant
SN	: Staff Nurse
SPR	: Slide Positivity Rate
SWOT	: Strengths, Weaknesses, Opportunities and Threats
THO	: Taluk Health Officer
TT	: Tetanus Toxoid

EXECUTIVE SUMMARY

The Government of Karnataka is committed to provide quality health care services to the people. In the recent past Government has implemented various beneficiary oriented programmes in Health department under National Rural Health Mission (NRHM). Karnataka is a pioneer of innovative schemes in many spheres including health; one such scheme is "Arogya Bandhu", a scheme involving private medical colleges and other agencies in the management of PHCs under partnership agreement. Currently, a total of 56 Primary Health Centres in the State is being managed by various organizations under public private partnership.

This study aimed at evaluating the physical and financial performances of PHCs under Arogya Bandhu Scheme across the state, and also to see whether the scheme benefits the community at large. The study also aims at finding out the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the scheme by highlighting the opinion of the community about the health services provided by the PHCs. The study was conducted in 52 PHCs spread across 26 districts (one Arogya bandhu PHC and one government run PHC as counterfactual from each district) of the state of Karnataka. The tools used were, Checklist for Record analysis (MIS/ available records for the last one year 2012-13); Interview schedules for concerned staff at PHCs to evaluate operational efficiency and financial feasibility and interview schedules for evaluating beneficiaries (SWOT analysis).

It was noted that all the studied PHCs functioning under Arogya Bandhu scheme were fully managed by their respective management. Both the Arogya Bandhu and Government run PHCs are functioning in government buildings. As far as the functional status of beds is concerned, ABS PHCs were found to have a lead of mean difference of 0.458 in functional status as compared to Govt. run PHCs. Although the serving area of the ABS PHCs (21.8 + 13.7 km) was more compared to Govt PHCs (17.4 + 6.9 km), the population served was high among the Govt. PHCs (MD = 3773.68). There was shortage of manpower in both ABS and Govt. PHCs. However, the number of currently working staff exceeded in ABS PHCs when compared to Govt. PHCs. All the functioning Medical Officer In-Charges (MOIC) in Govt. PHCs were MBBS graduates where as 17.4% of MOICs in ABS PHCs were AYUSH, BAMS or BHMS graduates. The average salaries of the higher cadre staff members like Medical Officer In-charge (MOIC), Medical officer (MO), Senior health Assistants male and female, pharmacist, clerical

staff and Group D staff of Govt. PHCs were higher than their colleagues from ABS PHCs. The ABS PHCs had significantly ($p < 0.05$) better infrastructural facilities (injection / dressing rooms, residential facilities for staff nurse / ANM, separate public utilities for men and women, four wheeler for implementation of health programmes) as compared to the Govt. PHCs. The number of available and functional equipments showed inadequacy in both ABS and Govt. The availability of most of the drugs / vaccines / kits was more in ABS PHCs than govt. PHCs. Even though insignificant, round the clock availability of the doctor in PHC, availability of delivery services and conducting of deliveries 24X7 were better in ABS PHCs than govt. PHCs. Regarding deliveries being conducted in the PHCs, staff nurses played the key role before and after 4 pm both in ABS and Govt. PHCs. Although quality indicators like facilities for biomedical waste management (separate bins for segregation and disposal of waste), display of citizen charter and available services were equally available in both categories of PHCs yet patient complaint register / box was present with high significance ($p < 0.05$) in ABS PHCs than govt. PHCs and the action taken on those complaints was also comparatively high in ABS PHCs. Most of the PHCs responded that usual frequency of visit to PHC by DHOs had been once in 3 months and by programme officers had been every month. The funds allotted by Arogya Raksha samithi for the activities of the PHCs were utilized mainly for maintenance of the equipments (89.6%), for purchase of emergency and essential drugs (85.4%), for maintenance of generator or other power backup (41.7%) and for hiring transport to shift the critically ill patients to higher facilities (27.1%).

Strengths, Weaknesses, Opportunities and Threats (SWOT) of the scheme were assessed by highlighting the opinion of the community about the health services provided by the PHCs.

STRENGTHS:

The majority of ABS PHCs had been able to provide the services the respondents went for. As per the perception of the community, ABS PHCs were significantly ($p < 0.05$) more clean as compared to govt. run PHCs. Eye screening (55.5%) and cataract camps (68.7%) by ABS PHCs were being conducted significantly ($p < 0.05$) more as compared to their counterparts. Out of all respondents who were the members of their respective ARSs, majority (90.9%) of them accepted that the ARS meetings happened regularly. Availability of doctors on 24*7 basis at PHCs were significantly ($p < 0.05$) high in ABS PHCs (55.9%) as compared to Govt. run PHCs (44.1%). Among all the studied beneficiaries who were receiving health services from nearby ABS PHCs, 43.7% of them perceived improvements in the overall service delivery by the PHCs after implementation of Arogya Bandhu Scheme.

WEAKNESSES:

Availability of doctor in the PHCs, attention paid by them and beneficiaries' satisfaction level with the doctor's service were more in govt. run PHCs rather than ABS PHCs, but this relation was not statistically significant. People who had visited govt. run PHCs were significantly ($p < 0.05$) more satisfied with the time given as well as attention paid by the healthcare staff other than doctor at PHCs. Immunization programmes conducted by govt. run PHCs were found significantly ($p < 0.05$) high as compared to ABS PHCs. Correct knowledge about PHC management was significantly ($p < 0.05$) more in the community who was being served by govt. PHCs (98.8%) as compared to community who was being served by PHCs managed by any external agency (71.8%). Majority (87.3%) of the respondents residing in the serving area of ABS PHCs were not aware about the name 'Arogya bandhu' scheme. Irrespective of the PHC management, majority of the respondents (94.5%) were not aware of the Arogya Raksha samithi (ARS). As far as the 24*7 delivery services are concerned, govt. run PHCs were conducting deliveries (53.4%) significantly ($p < 0.05$) more as compared to ABS PHCs (46.6%). In ABS PHCs, majority of the deliveries before 4 P. M. were conducted by staff nurses (40.4%) while in govt. PHCs, doctors were also equally contributing in conducting deliveries (~37.0%). All the ANC (performing abdominal examination check the BP, weight, height, give TT injection and IFA tablets to pregnant women) were being provided more in Govt. PHCs than ABS PHCs.

OPPORTUNITIES:

As far as the frequency to PHC visits are concerned, majority (97.4%) of the respondents had visited PHCs in last 12 months. Besides that, as much as 92.9% of the respondents showed highest preference to seek health services from the near-by PHC. The system of pay for health services by the community was significantly ($p < 0.05$) more prevalent in govt. run PHCs rather than ABS PHCs.

THREATS:

Management of PHCs by external agencies could not have significant influence on the frequency of visits to the nearby PHCs by the community. As compared to ABS PHCs, the satisfaction level with the services was significantly ($p < 0.05$) high (51.9%) with the government run PHCs. Only 39 respondents preferred to seek health services at sub center. Out of this 35 preferred government run SCs and only 4 preferred ABS run SCs, this relation was statistically significant. Among the ABS PHCs, the community preference to visit a private healthcare sector was significantly higher than the beneficiaries of govt. PHCs. The qualitative findings also revealed that mainly outpatient services were available at ABS PHCs and mentioned that few of the medical colleges run ABS PHCs recommended the community to avail the services at their medical colleges and the community had to bear the expenses of such treatments, even at discounted cost. Only 22 (21.2%) respondents said that the disbursement of ARS funds happen in consultation with all members. As per the respondents, 24*7 functional status of PHCs was significantly ($p < 0.05$) high among govt. run PHCs. As per the community perception, the quality of services had significantly ($p < 0.01$) improved with time in govt. run PHCs rather than ABS PHCs. Among the studied ABS PHCs, 13.2% of beneficiaries perceived deterioration and 37.2% did not observed any changes in overall service deliveries by the PHCs after implementation of Arogya Bandhu Scheme. Most of the respondents of the outer one third of the coverage area indicated that they preferred going to the PHC other than their designated one as it was very far to travel.

By analyzing the secondary data it was found that, more than half of the ABS PHCs were found to be better performing (above 50th percentile) with respect to vaccination coverage, in registering pregnant women for ANC, distribution of IFA tablets, giving TT inhjections to ANC registered women, post partum check-up within 48 hours and 48 hours to 14 days of delivery, Family planning activities, Hb testing, conducting Widal test and malaria control program

(ABER and SPR). But Govt. run PHCs were better performing as compared to ABS PHCs in detecting maternal anaemia, ensuring institutional deliveries, Immunization dropout rate, Anaemia control program and diarrhea control program.

Although ABS PHCs showed improvement in infrastructure, manpower, drugs, equipments, data reporting (HMIS) etc., yet they were not able to meet the satisfaction level of the community in terms of quality of services available at PHCs as compared to Govt. run PHCs.

Community satisfaction is considered as the backbone and ultimate output of idea behind implementing any such kind of schemes and improvement in quality of services as well as service delivery were the main motto to start the Arogya Bandhu Scheme. It has been observed that, as compared to ABS PHCs, the community satisfaction level with the quality of services and service delivery was significantly high with the government run PHCs. This needs a lot of improvements in ABS PHCs through regular training and motivation of health care staff and periodic check in the functioning of PHCs through supervisory visits.

INTRODUCTION

One of the most important as well as fundamental requirements for achieving the Millennium Development Goals and the goals set under the Karnataka family health welfare society launched by the Government of India are access to health care and equitable distribution of health services. In present day situation, many areas in the country, predominantly tribal and hilly areas, even in well-developed states, lack basic health care infrastructure limiting access to health services. Many of the healthcare facilities, even today, apart from infrastructure issues suffer from lack of human resources and training, inadequate drugs and supplies. In majority of the cases, the staffs of the PHCs stay in head quarters, hence their services are restricted for limited hours at the PHCs. This in turn has affected the number of the beneficiaries utilizing the services of these facilities.

In view with all these situations, to overcome these difficulties, various initiatives have been taken with varied results. Up gradation of existing health facilities to next level, creation of new posts based on the needs of the community and filling of existing posts, providing training to the existing and new staff, providing funds under various heads for improvement of infrastructure and facilities, guidelines for the constitution of arogya raksha samithis with defined role are few to mention. NRHM has taken up many initiatives to improve the mother and child health and reduce maternal and infant deaths in Karnataka like JSY, NSSK, thayi bhagya, madilu, prasoothi araike, seemantha programme etc. Apart from these, various national and state health programmes, viz., RNTCP, Intergrated Disease Surveillance Programme, National Vector Borne Disease Control Programme, National Leprosy Eradication Programme, National Programme for Control of Blindness, Revised National Tuberculosis Control Programme, National Programme for Prevention and Control of Deafness, National Mental Health Programme, Immunisation programmes, etc. launched to provide wide range of healthcare services.

With all the above mentioned efforts by the government, there have been certain issues existing in the functioning of the PHCs and achieving the desired health outcomes of the community.

BASIS FOR GOVERNMENT INTERVENTION

The Government is committed to provide quality health care services to the people, in the recent past Government has implemented various beneficiary oriented programmes in Health department under National Rural Health Mission. Karnataka is a pioneer of innovative schemes in many spheres including health with the implementation of Prasuthi araike, madilu scheme, seemantha programme; Arogya Bandhu scheme etc.

"Arogya Bandhu" is a PPP model, launched in July 2008, is a scheme involving private medical colleges and other agencies in the management of PHCs under partnership agreement. Private Medical Colleges, Non Governmental Organizations (NGOs), Trusts and other charitable Institutions and Philanthropic Organizations, etc. were provided an opportunity to join hands with the Government for providing better health care to the community. This scheme has been launched by taking consideration of the National Health Policy 2002 which encourages participation of the [private sector in healthcare activities.

In this public private partnership, the infrastructure, facilities, instruments and equipments, drugs and supplies, staff on deputation if the agency requested for were provided by the government. The agency had to manage the PHCs and associated sub centers (SCs) fully by providing the staff at these facilities or partially by contributing for infrastructure, equipments, drugs and supplies, ambulance and transport facility, etc.

Government through this scheme envisaged to address the issues related to managing the PHCs, infrastructural improvements of the PHCs, appointment and availability of the doctor/s and staff in the PHC area, improve the health care services and their delivery free of cost, better implementation and penetration of the national and state health programmes in the serving area of PHC by motivation and mobilization of community to the healthcare facilities for the utilization of the services and, improve transport services to the mother to promote institutional delivery, to improve the immunization status and bring in reduction of MMR and IMR.

The agency would be entrusted one PHC per district initially for two years and then may be extended to five years after completion of first year with satisfactory report by an external agency.

PROGRESS REVIEW

The Arogyabandhu Scheme of the Dept of Health & Family Welfare, which covered a total of 56 Primary Health Centres in the State is being managed by various organizations under public private partnership and now the government has further extended to all urban and rural areas of the State, giving priority to the experienced and specialized institutions so that medical assistance can be provided to the people. Out of these 56 PHCs, 21 are managed by 11 medical colleges and 35 by 10 NGOs.

At this juncture, the government, committed to provide quality health services to the people, has realized to review the functioning of these PHCs with respect to the guidelines set by them and the community perception of the available services at the PHCs, and implementation of the health programmes. As a result this study is taken up to study the overall functioning of the PHCs and to get the feedback from the community of their utilization and satisfaction with the PHCs.

OBJECTIVES AND THE ISSUES FOR EVALUATION (2-3) OF THE STUDY

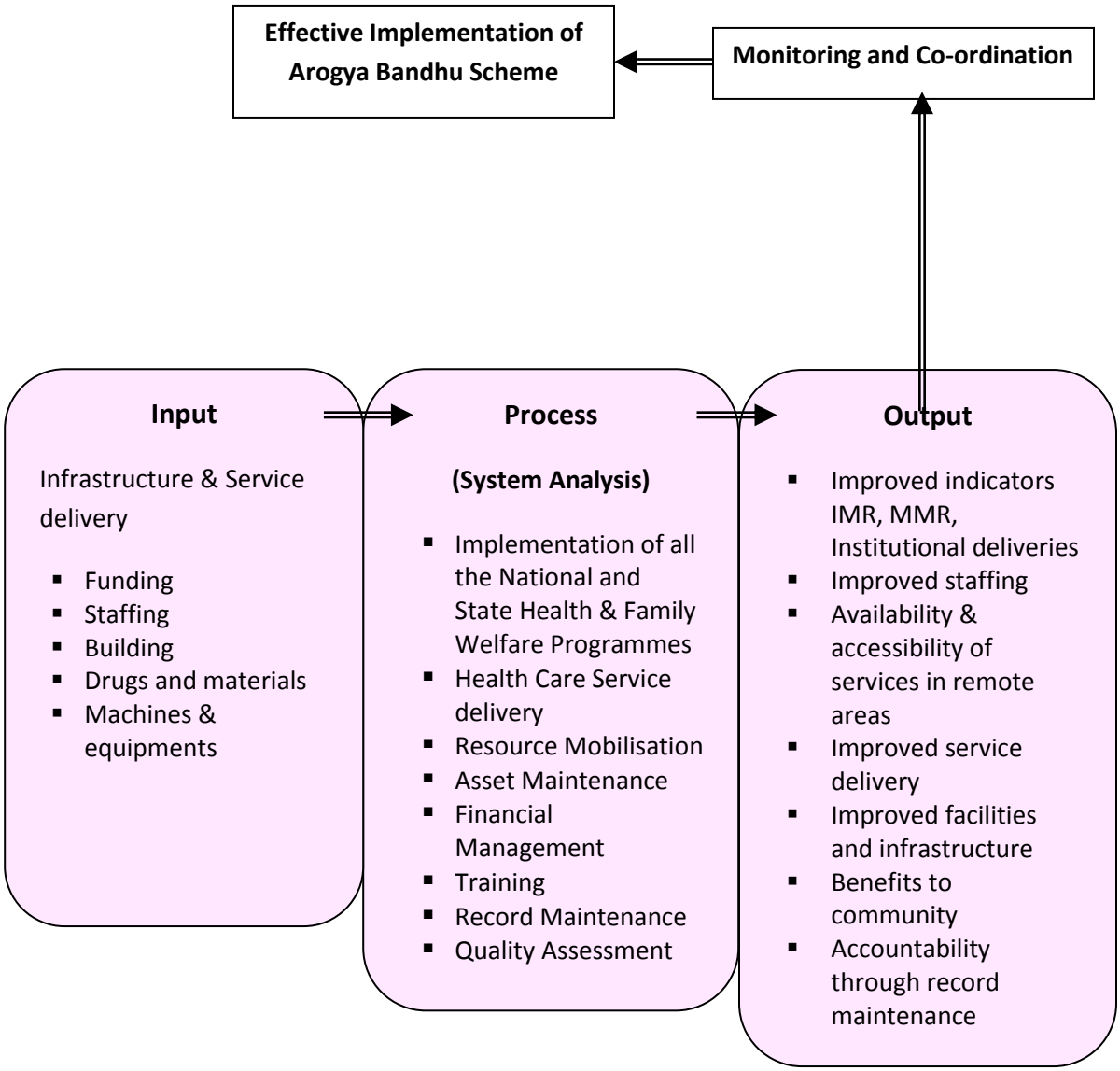
The specific objectives for the study were:

1. To review the existing documents of the scheme.
2. To study the procedure of implementation and process of the scheme in PHC.
3. To review the physical performance, financial and monitoring system of the scheme.
4. To review the degree of utilization of funds released to the facilities by Government.
5. To study whether the scheme benefits the community at large.
6. To carry out a SWOT analysis of the present scheme and suggest appropriate measures to improve and operation of the scheme.

EVALUATION DESIGN

THE EVALUATION MATRIX

Effective program evaluation is a systematic way to improve and account for public health actions by involving procedures that are useful, feasible, ethical, and accurate.



QUANTITATIVE ASSESSMENT:

The quantitative assessment for the evaluation of *Arogya Bandhu* Scheme broadly included, service record analysis, desk surveys and household survey in the area of PHCs. Available records and MIS data at PHCs were assessed to collect secondary data. All concerned staff at PHCs was interviewed. Interactions with beneficiaries by community survey along with SWOT analysis was carried out.

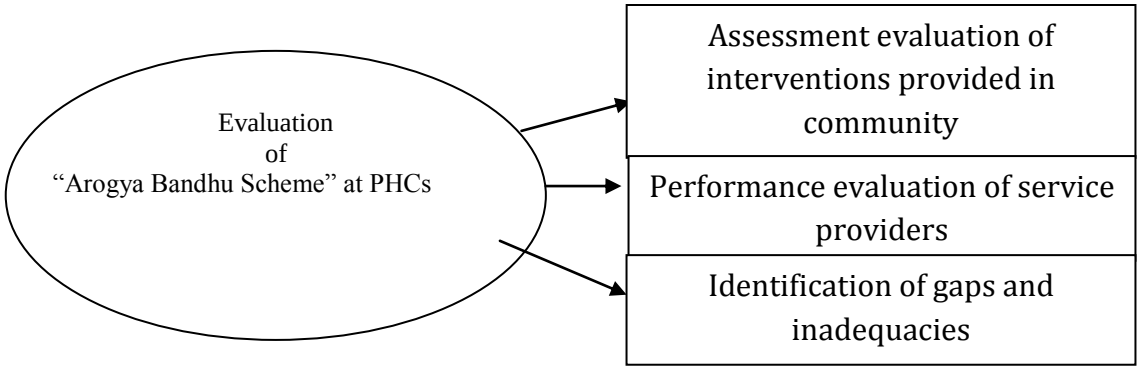
QUALITATIVE ASSESSMENT:

The qualitative tools for the assessment of performances of *Arogya Bandhu* Scheme were based on interviews with community people, stakeholders and providers in all PHCs covered under the scheme. All concerned staff at PHCs was interviewed. Interactions with beneficiaries by community survey were carried out. For collection of data by interviews, semi-structured interview schedules were used. SWOT analysis was carried out of the present scheme.

Evaluation Framework

The effectiveness and efficiency of implementation of "Arogya Bandhu Scheme" at PHCs required for evaluation of the performance of this initiative.

The evaluation of the scheme was carried out in three pronged approach:



With this background this study evaluated the physical and financial performance of PHCs under *Arogya Bandhu* scheme across the state, and also the involvement of PHC to study whether the scheme benefits the community at large. Besides that, the study highlights the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the scheme through the opinion of the community about the health services provided by the PHC.

SCOPE OF THE STUDY:

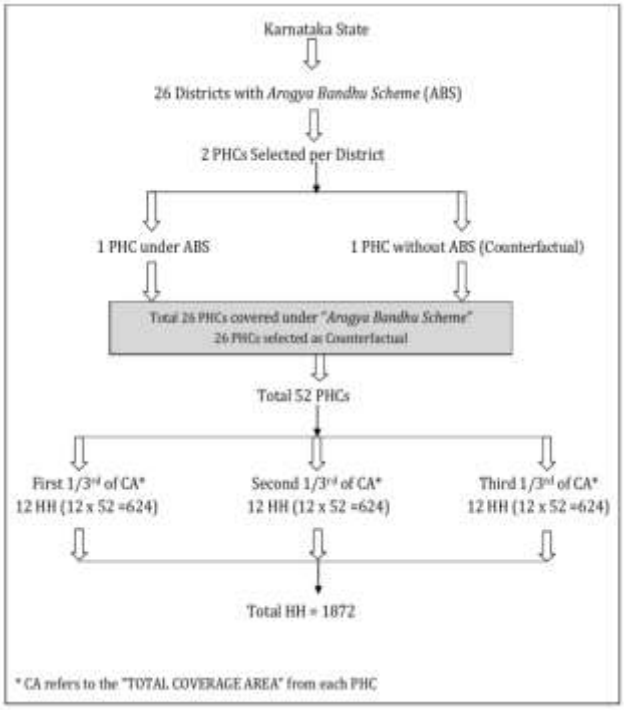
This study included:

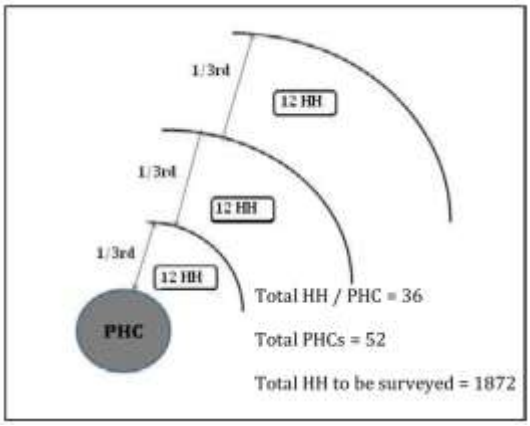
- Process and Implementation of the scheme
- Comparison of Physical and Financial progress in each facility since inception
- Implementation of NRHM programmes in these facilities
- Human resources employed in these institutions compared to GoI guidelines
- Quality of services provided to the community by the facilities
- Planning and monitoring of Health schemes by the facility
- Maintenance of records

EVALUATION METHODOLOGY

Sample and Sampling Design

According to the list of PHCs functioning under Arogya Bandhu Scheme, it was found that the facilities with *Arogya Bandhu* scheme were spread only in 26 districts of the state. Hence the study was conducted in 26 districts of Karnataka. From each district two PHCs were selected for the study, one PHC functioning under Arogya Bandhu scheme and the other PHC without Arogya Bandhu Scheme as counterfactual. Thus a total 52 PHCs (26 ABS PHCs and 26 Govt. run PHCs) spread across 26 districts were included in the study. The list of facilities studied is given in annexure. Serving area of the PHC was divided in to three parts (inner 1/3rd, middle 1/3rd and outer 1/3rd) according to the coverage area of the PHC (see diagram below). From each part, twelve households were interviewed selected by adopting simple random sampling. Thus a total sample size of 1872 households was fixed for the survey.


Karnataka State
26 Districts with Arogya Bandhu Scheme (ABS)
2 PHCs Selected per District
1 PHC under ABS
1 PHC without ABS (Counterfactual)
Total 26 PHCs covered under "Arogya Bandhu Scheme"
26 PHCs selected as Counterfactual
Total 52 PHCs
First 1/3rd of CA*
12 HH (12 x 52 =624)
Second 1/3rd of CA*
12 HH (12 x 52 =624)
Third 1/3rd of CA*
12 HH (12 x 52 =624)
Total HH = 1872
* CA refers to the "TOTAL COVERAGE AREA" from each PHC


1/3rd
12 HH
1/3rd
12 HH
1/3rd
12 HH
PHC
Total HH / PHC = 36
Total PHCs = 52
Total HH to be surveyed = 1872

ABS PHCs:

Non ABS PHCs

Data Collection Tools

The following data collection tools were used for the study:

a) Checklist for Record analysis (MIS/ available records for the last one year 2012-13)
b) Interview schedules for concerned staff at PHCs to evaluate operational efficiency and financial feasibility.
c) Interview schedules for evaluating beneficiaries (Community survey and SWOT analysis).

At the outset the PHC medical officers were contacted and explained about the purpose of the study. Along with the interviews of concerned PHC staff, records were analyzed with a checklist. Beside that DHOs and DPMOs of all the study districts were interviewed and secondary data was collected form concerned DHO offices.

Method of Data Analysis

Both primary and secondary data were analyzed using Microsoft Office 2007 and SPSS v.16 software. Appropriate tables/graphs were generated and statistical tests (x^2 and t test) were applied to draw inferences.

For secondary data analysis percentile scale has been used. PHCs which found in more that 50^{th} percentile category were considered as good performing, while PHCs which fall in $\leq 50^{th}$ percentile category in the group were considered as poor performing.

Work Schedule

The study was conducted for a period of 6 months from the date of assignment. The project was conducted in phased manner.

First phase: Designing and finalization of tools and schedules, training and collection of secondary data was done.

Second phase: Operational efficiency and financial feasibility of the "Arogya Bandhu Scheme" at PHCs was evaluated.

Third phase: Community survey along with SWOT analysis was conducted and interim report was submitted.

Fourth phase: Finalization of the interim report as per the feedbacks and submission of final report was done.

LIMITATIONS TO THE EVALUATION

The community survey and staff interview involved self-reported data which contained several potential sources of bias like selective memory (remembering of events or experiences that occurred in the past) and attribution bias (attributing positive events and outcomes to one's own agency but attributing negative outcomes to external forces).

OBSERVATIONS:

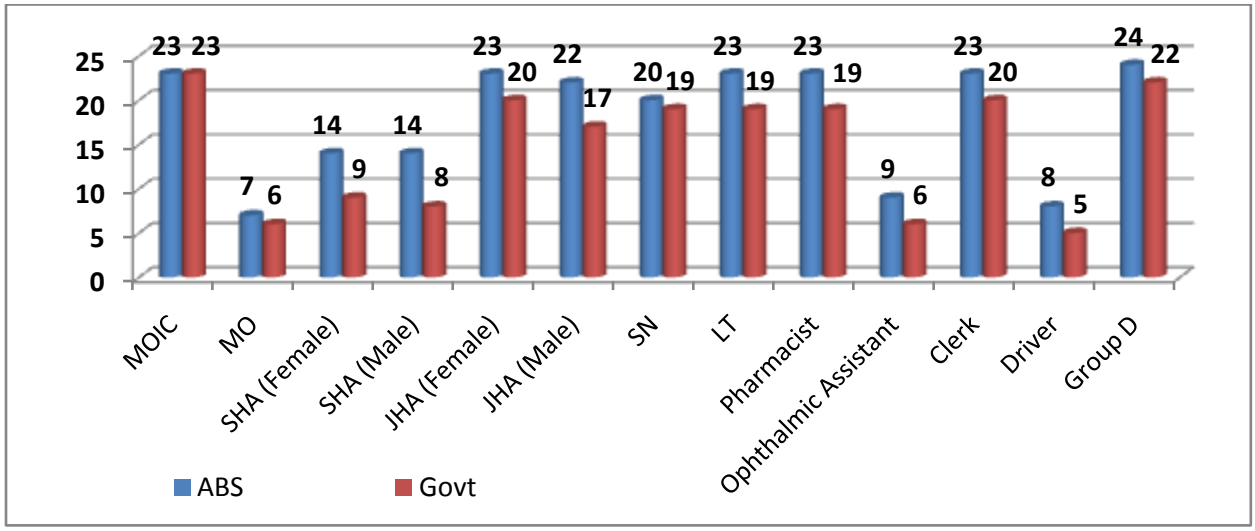
A. FINDINGS OF INTERVIEW WITH MEDICAL OFFICERS AND CONCERNED STAFF AT PHCS:

Table 1: Status of PHCs

Variables	N	Mean ± SD	Mean Difference	t Value	Sig.
Sanctioned beds					
ABS	24	7.04 ± 2.39	0.125	0.178	0.860
Govt.	24	6.92 ±2.48			
Functional Beds					
ABS	24	6.71 ±2.61	0.458	0.568	0.573
Govt.	22	6.25 ±2.97			
Population covered					
ABS	23	20300.00 ± 9971.722	3773.679	1.176	0.249
Govt.	21	24100.00 ± 11313.233			
Maximum Radial Coverage area in kms					
ABS	24	21.8333 ± 13.77669	4.37500	1.388	0.174
Govt.	24	17.4583 ± 6.97186			
Number of Sub Centers					
ABS	24	4.42 ± 1.412	0.542	1.004	0.322
Govt.	24	4.96 ± 2.236			
Time taken to reach next higher facility in minutes					
ABS	24	30.4167 ± 16.27993	3.75000	0.691	0.494
Govt.	24	26.6667 ± 21.04171			

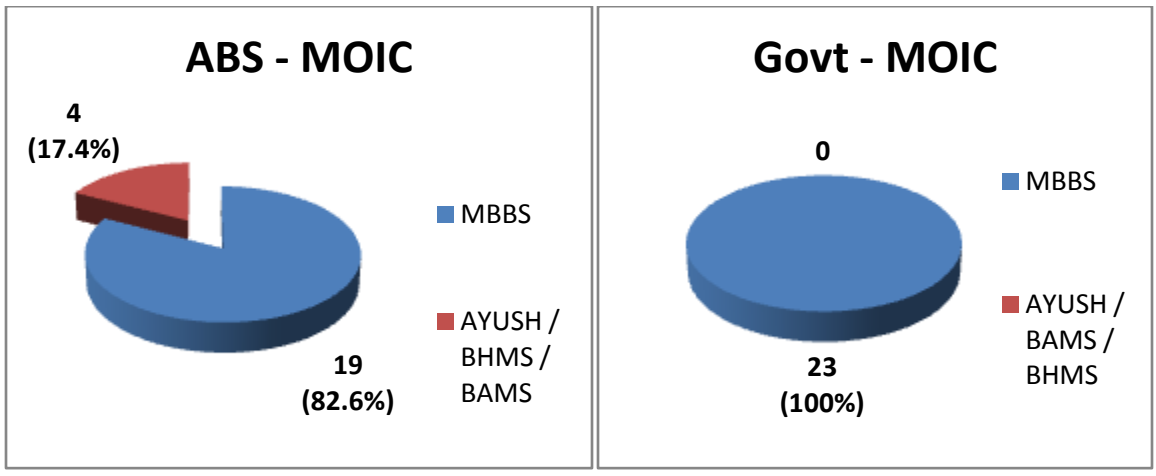
All the studied PHCs functioning under Arogya Bandhu scheme were fully managed by their respective management. Both the Arogya Bandhu and Government run PHCs are functioning in government buildings except for one (Biriyala B) functioning in NGO – Donated building. The number of sanctioned beds in both ABS and Govt. PHCs were almost same. As far as the functional status of beds is concerned, ABS PHCs were found to have a lead of mean difference of 0.458 in functional status as compared to Govt. run PHCs but this difference was not statistically significant. Although the serving area of the ABS PHCs (21.8 ± 13.7 km) was more compared to Govt PHCs (17.4 ± 6.9 km), the population served was high among the Govt. PHCs (MD = 3773.68). Each PHC comprised of 4 – 5 SCs irrespective of the management status. Time taken to reach next higher health care facility for referred patients was ~ half an hour, although it was more for ABS PHCs (30.4 ± 16.3 minutes) as compared to Govt. PJHCs (26.7 ± 21.1 minutes) yet, this difference was statistically not significant.

Graph 1: Availability of Manpower at PHCs



There was shortage of manpower in terms of Medical Officer in-charge, medical officer, Senior health assistants male and female, Junior health assistants male and female, staff nurses, lab technicians, pharmacists, ophthalmic assistant, clerk, drivers and group D employees in both ABS and Govt. PHCs. However, the number of currently working staff exceeded in ABS PHCs when compared to Govt. PHCs under all categories.

Graph 2: Educational background of MOIC in ABS and Govt. PHCs



All the functioning medical Officer in-charges (MOIC) in Govt. PHCs were MBBS graduates where as 17.4% of MOICs in ABS PHCs were AYUSH, BAMS or BHMS graduates.

Table 2: Monthly salary of various staff in the PHCs

Variables	N	Mean ± SD	Mean Difference	t Value	Sig.
M.O In-charge Salary					
ABS	21	33104.00 ±9744.04872	5370.66667	1.709	0.065
Govt.	12	38475.00 ± 6322.99196			
M.O Salary					
ABS	7	29714.00 ± 9393.51347	1952.38095	0. 334	0.750
Govt.	6	31667.00 ± 11724.61798			
SHA (Female) Salary					
ABS	14	16953.00 ± 4520.89742	8357.82540	3.736	**0.004**
Govt.	9	25311.00 ± 6226.64525			
SHA (Male) Salary					
ABS	14	14933.00 ± 2846.32112	4903.18254	2.942	**0.024**
Govt.	9	19836.00 ± 5174.44307			
JHA (Female) Salary					
ABS	17	20080.00 ± 27131.10030	905.35294	0.092	0.898
Govt.	8	19175.00 ± 6351.09664			
JHA (Male) Salary					
ABS	19	12991.00 ± 2819.28571	2923.19298	1.412	0.408
Govt.	6	10067.00 ± 7831.89384			
S.N. Salary					
ABS	18	14468.00 ± 5582.39270	245.44444	0.091	0.938
Govt.	9	14222.00 ± 8452.48156			
L.T. Salary					
ABS	20	14660.00 ± 3119.13504	902.72143	0.479	0.744
Govt.	7	13757.00 ± 6765.37900			
Pharmacist Salary					
ABS	19	15504.00 ± 2173.28708	6618.43275	4.072	**0.015**
Govt.	9	22122.00 ± 6466.02230			
Clerical (S.D.C/F.D.C) Salary					
ABS	19	14499.00 ± 2534.73326	6358.19549	3.486	0.053
Govt.	7	20857.00 ± 6986.38131			
Group D/ Class IV staff Salary					
ABS	17	8648.00 ± 2781.83438	6209.14286	4.601	**0.002**
Govt.	7	14857.00 ± 3532.16513			
Drivers Salary					
ABS	8	8382.5 ± 5813.83441	4631.00000	1.188	0.329
Govt.	4	3751.5 ± 7499.00000			
Ophthalmic Assistant Salary					
ABS	10	6825.7 ± 5951.82706	1824.10000	0.420	0.746
Govt.	5	5001.6 ± 11179.44546			

The average salaries of the higher cadre staff members like Medical Officer In-charge (MOIC), Medical officer (MO), Senior health Assistants male and female, pharmacist, clerical staff and Group D staff of Govt. PHCs were receiving higher than their colleagues from ABS PHCs, which was significantly ($p < 0.05$) high among male and female SHAs, pharmacists and group D staff. The mean salaries of junior health assistants (male and female), staff nurses, lab

technicians, drivers and ophthalmic assistants of ABS PHCs were higher than those of Govt. PHCs.

Table 3: Availability of Infrastructure at PHCs

Variables	ABS		Govt.		Total		X^2 / Fisher's Exact	p value
	No.	%	No.	%	No.	%		
24 hour running water supply	22	50.0	22	50.0	44	100.0	0.000	0.696
Communication facility (mobile / landline)	24	51.1	23	48.9	47	100.0	1.021	0.500
Power back-up	23	50.0	23	50.0	46	100.0	0.000	0.755
Separate public utilities for men and female	17	65.4	9	34.6	26	100.0	5.371	**0.020**
Residential facility for Doctor	18	50.0	18	50.0	36	100.0	0.000	0.630
Residential facility for Nurse / ANM	17	65.4	9	34.6	26	100.0	5.371	**0.020**
Residential facility for Health Assistant Female	18	56.2	14	43.8	32	100.0	1.500	0.221
Computer facility for HMIS	24	52.2	22	47.8	46	100.0	2.087	0.245
Operation Theatre	18	54.5	15	45.5	33	100.0	0.873	0.350
Outpatient room	24	51.1	23	48.9	47	100.0	1.021	0.500
Injection / Dressing room	23	56.1	18	43.9	41	100.0	4.181	**0.049**
Dispensing room	22	56.4	17	43.6	39	100.0	3.419	0.068
Store room	24	53.3	21	46.7	45	100.0	3.200	0.117
Phone, water and electricity bill <Rs 1500 per month	5	26.3	14	73.7	19	100.0	7.056	**0.008**
Internet facility	22	51.2	21	48.8	43	100.0	0.223	0.500
Residential facility for Health Assistant Male	6	60.0	4	40.0	10	100.0	0.505	0.477
Four Wheeler	12	80.0	3	20.0	15	100.0	7.855	**0.005**
Labour / IUD room	23	51.1	22	48.9	45	100.0	0.356	0.500
Ward	24	53.3	21	46.7	45	100.0	3.200	0.117

The ABS PHCs had better infrastructural facilities when compared with the Govt. PHCs. The ABS PHCs scored significantly ($p < 0.05$) higher than govt. run PHCs in terms of injection / dressing rooms, residential facilities for staff nurse / ANM, separate public utilities for men and women, four wheeler for implementation of health programmes. Per month phone, water and electricity bill was found more than 1500 rupees in two third of ABS PHCs which was significantly higher as compared to Govt. run PHCs. The other areas where the infrastructure of ABS PHCs were better than Govt. PHCs were availability of operation theatre, outpatient room, dispensing room, store room, labour / IUD room, ward, residential facility of health assistant female and male, communication facility (mobile and / or landline), computer facility and internet to send HMIS. Residential facility for doctor (18 PHCs in each category), 24 hours running water to the PHCs and power back-up were equally available both in ABS and Govt. PHCs.

Table 4: Avability and functionality of equipments at PHCs:

Sl. No.	Equipment	ABS		Govt.	
		Available	Functional	Available	Functional
1	Deep Freezer	23	23	24	24
2	ILR	22	21	24	24
3	Cold box	22	22	23	22
4	Vaccine Carrier	24	24	24	24
5	Labour room Table and equipments	23	23	23	23
6	Radiant Warmer	17	17	18	18
7	Photo therapy unit	5	4	3	3
8	Fumigation machine	6	3	7	7
9	Oxygen cylinder	24	23	22	21
10	Adult weighing machine	24	24	24	24
11	Infant weighing machine	24	24	24	24
12	MTP Instruments	17	12	22	14
13	Autoclave	24	20	21	19
14	Steam steriliser	16	14	14	13
15	BP Instruments	24	24	24	23
16	Thermometer	24	24	23	23
17	Needle Destroyer	23	22	23	22
18	Suction apparatus	24	22	22	19
19	Microscope	24	24	21	21

The number of available and functional equipments showed inadequacy in both ABS and Govt. PHCs. Especially availability and functionality of Radiant warmers, Photo therapy units, Fumigation machine, Steam sterilizer and MTP instruments were very critical in both ABS and Govt. run PHCs.

Table 5: Avability of Drugs / Vaccines / Kits at PHCs:

Drugs / Vaccines / Kits	ABS		Govt		Total		X^2 / Fisher's Exact	p value
	No.	%	No.	%	No.	%		
Kit G IUD Insertion	24	52.2%	22	47.8%	46	100.0%	2.087	0.245
Kit I Normal Delivery Kit (DDK)	23	53.5	20	46.5	43	100.0	2.009	0.174
Oral Pills	24	58.5	17	41.5	41	100.0	8.195	**0.005**
Condoms	23	52.3	21	47.7	44	100.0	1.091	0.304
Copper T	24	53.3	21	46.7	45	100.0	3.200	0.117
BCG	24	51.1	23	48.9	47	100.0	1.021	0.500
DPT	24	50.0	24	50.0	48	100.0	--	--
OPV	24	51.1	23	48.9	47	100.0	1.021	0.500
Measles	24	50.0	24	50.0	48	100.0		
TT	24	51.1	23	48.9	47	100.0	1.021	0.500
DT	12	46.2	14	53.8	26	100.0	0.336	0.562
Hepatitis B	24	50.0	24	50.0	48	100.0		
Vitamin A solution	22	51.2	21	48.4	43	100.0	0.223	0.500
IFA (Small)	19	54.3	16	45.7	35	100.0	0.569	**0.337**
IFA (Large)	24	52.2	22	47.8	46	100.0	2.087	0.245
ORS Packet	18	52.9	16	47.1	34	100.0	0.403	0.525
Disposable Delivery Kit	19	63.3	11	36.7	30	100.0	5.689	**0.017**
Antipyretics / Analgesics	24	51.1	23	48.9	47	100.0	1.021	0.500
Inj. Gentamycin / Inj Ampicillin	21	52.5	19	47.5	40	100.0	0.600	0.439
Anti – snake venom	21	47.7	23	52.3	44	100.0	1.091	0.304
Chloroquin Tablets	14	42.4	19	57.6	33	100.0	2.424	0.119
I / V fluids	23	51.1	22	48.9	45	100.0	0.001	0.745
Tubectomy kit	10	41.7	14	58.3	24	100.0	1.037	0.308
Anti rabies vaccine	18	51.4	17	48.6	35	100.0	0.105	0.745
Anti tubercular drugs	22	47.8	24	52.2	46	100.0	2.087	0.149
Emergency tray drugs	23	50.0	23	50.0	46	100.0	0.001	1.000
Madilu Kits	23	50.0	23	50.0	46	100.0	0.001	1.000

The availability of most of the drugs / vaccines / kits was more in ABS PHCs than govt. PHCs. This value was significantly ($p<0.05$) high among ABS PHCs with respect to the availability of oral pills and disposable delivery kits.

Table 6: Services at PHCs:

Services	ABS		Govt		Total		X^2 / Fisher's Exact	p value
	No.	%	No.	%	No.	%		
24*7 Functional Facility	12	40.0	18	60.0	30	100.0	3.200	0.074
Availability of the Doctor 24*7	15	57.7	11	42.3	26	100.0	1.343	0.247
Deliveries conducted in the facility	23	52.3	21	47.7	44	100.0	1.091	0.296
Conducting of deliveries 24*7	23	53.5	20	46.5	43	100.0	2.009	0.156
Deliveries before 4 pm								
Doctor	8	47.1	9	52.9	17	100.0	1.432	0.698
Nurse	13	52.0	12	48.0	25	100.0		
Doctor and Nurse	2	66.7	1	33.3	3	100.0		
ANM	0	0.0	1	100.0	1	100.0		
Deliveries after 4 pm								
Doctor	5	100.0	0	0.0	5	100.0	6.759	0.080
Nurse	16	44.4	20	55.6	36	100.0		
Doctor and Nurse	2	66.7	1	33.3	3	100.0		
ANM	0	0.0	1	100.0	1	100.0		
Availability of Assisted Delivery service	1	33.3	2	66.7	3	100.0	0.356	0.551
Parenteral Oxytocin Administration	22	56.4	17	43.6	39	100.0	3.419	0.064
Parenteral Antibiotics	22	52.4	20	47.6	42	100.0	0.762	0.333
Services for managing PPH	14	51.9	13	48.1	27	100.0	0.085	0.771
Essential Newborn services	14	51.9	13	48.1	27	100.0	0.085	0.771
Services for Diarrhoea management	19	63.3	11	36.7	30	100.0	5.689	**0.017**
Services for ARI / Pneumonia Management	11	50.0	11	50.0	22	100.0	0.001	1.000
ANC Services	24	50.0	24	50.0	48	100.0		
Haemoglobin estimation	24	52.2	22	47.8	46	100.0	2.087	0.245
TT Injection	24	50.0	24	50.0	48	100.0		
IFA Tablets	24	50.0	24	50.0	48	100.0		
Haematological tests	24	52.2	22	47.8	46	100.0	2.087	0.245
Malaria Test	24	52.2	22	47.8	46	100.0	2.087	0.245
Sputum examination	15	55.6	12	44.4	27	100.0	0.762	0.383
Blood Sugar	23	57.5	17	42.5	40	100.0	5.400	**0.020**
Urine Routine	0	0.0	2	100.0	2	100.0	2.087	0.245
Stool examination	5	50.0	5	50.0	10	100.0	0.001	1.000

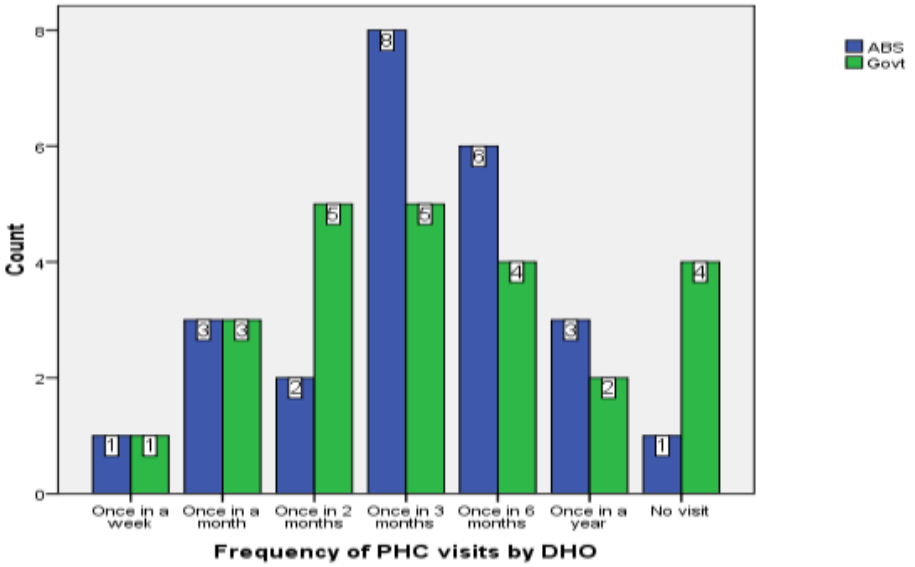
There were 18 PHCs under govt. and 12 under ABS designated as 24X7 PHCs. Even though insignificant, round the clock availability of the doctor in PHC, availability of delivery services and conducting of deliveries 24X7 were better in ABS PHCs than govt. PHCs. Regarding deliveries being conducted in the PHCs, staff nurses played the key role before and after 4 pm both in ABS and Govt. PHCs. Other services like parenteral administration of oxytocins, antibiotics, managing PPH were provided more in ABS PHCs than Govt. PHCs. The scope of laboratory services was wider in ABS PHCs than Govt. PHCs in conducting haemotological tests, malaria blood smear preparation/ microscopy, sputum collection / testing and blood sugar testing. The availability of services for diarrhoea management and blood sugar testing services was significantly ($p < 0.05$) high among ABS PHCs.

Table 7: Quality control at PHCs:

	ABS		Govt		Total		X^2 / Fisher's Exact	p value
	No.	%	No.	%	No.	%		
Colour bins for BMW Segregation	24	50.0	24	50.0	48	100.0		
Needle destroyer	24	50.0	24	50.0	48	100.0		
BMW disposed by Common treatment facility	12	54.5	10	45.5	22	100.0	0.336	0.562
Deep burial pit for BMW disposal	24	50.0	24	50.0	48	100.0		
Fumigation of OT	9	52.9	8	47.1	17	100.0	0.091	0.763
Fumigation of labour room	18	58.1	13	41.9	31	100.0	2.277	0.131
Patient complaint register	16	66.7	8	33.3	24	100.0	5.333	**0.021**
Action taken against complaints during last month	13	59.1	9	40.9	22	100.0	1.343	0.247
Display of Citizen Charter	23	51.1	22	48.9	45	100.0	0.356	0.551
List of services displayed	23	51.1	22	48.9	45	100.0	0.356	0.551

Fumigation of OT was being carried out in 9 (out of 18) ABS PHCs, and 8 (out of 15) Govt. PHCs. Similarly fumigation of LR was being done in 18 (out of 23) ABS PHCs and 13 (out of 22) Govt. PHCs. Patient complaint register / box was present with high significance ($p < 0.05$) in ABS PHCs than govt. PHCs and the action taken on those complaints was also comparatively high in ABS PHCs. Other quality indicators like facilities for biomedical waste management (separate bins for segregation and disposal of waste), display of citizen charter and available services were equally available in both categories of PHCs.

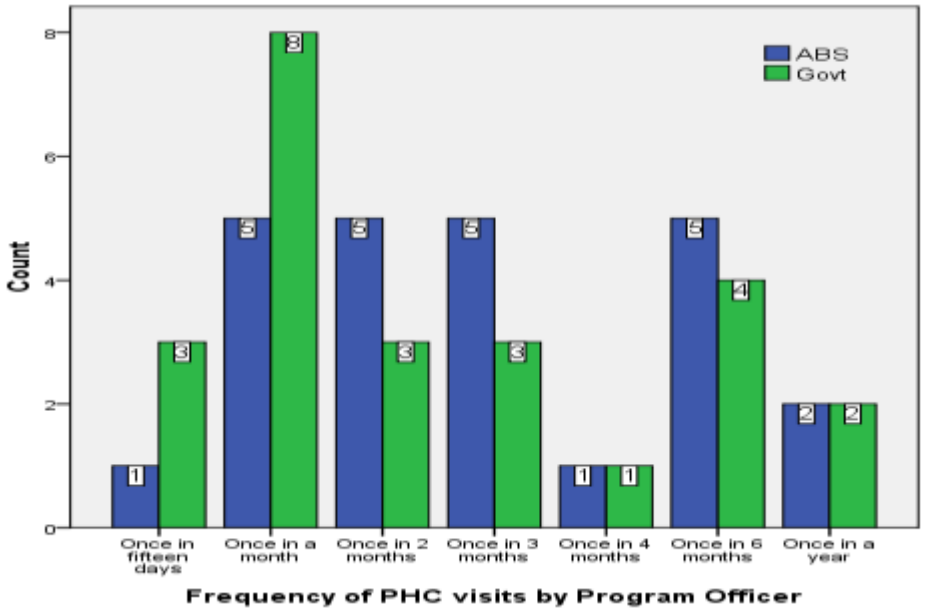
Graph 3: Frequency of PHC visits by DHO



Visit to PHCs by the respective DHOs ranged from once in a week to no single visit. Most of the PHCs responded that DHOs' visits to their PHCs had been once in 3 months (13) followed by

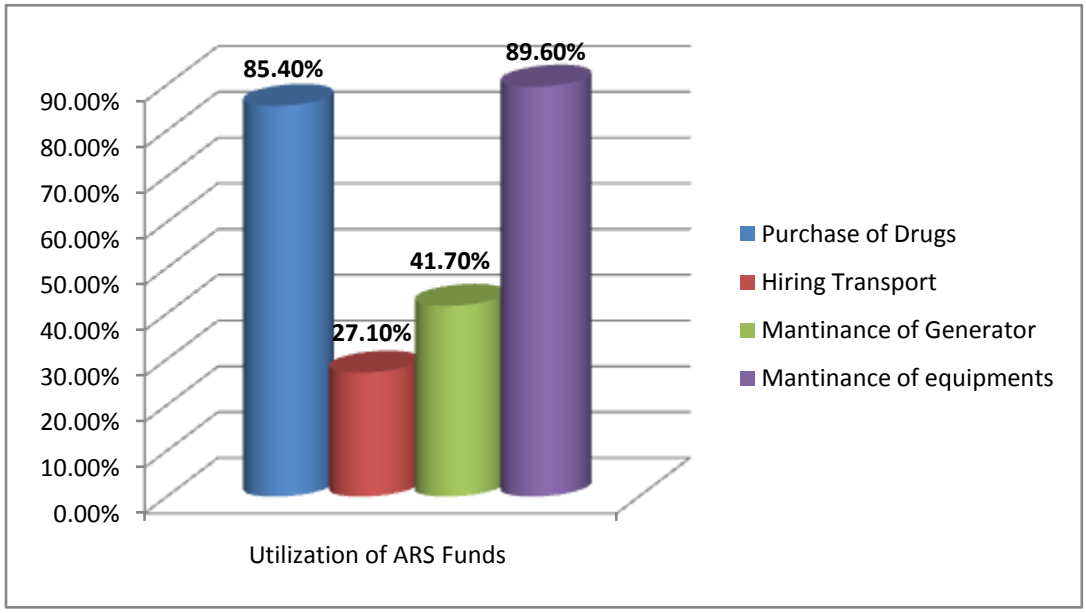
once in six months (10), once in 2 months (7), once in a month (6), once in year (5), once in a week (2) and no visits (5).

Graph 4: Frequency of PHC visits by Program Officer



Most of the PHCs were visited by programme officers every month (13), once in 2 months (8) and once in three months (8). In four PHCs visits were made once in 6 months and once in year and in two PHCs once in 4 months.

Graph 5: Utilization of ARS Funds by the PHCs



The Arogya Raksha samithi associated with the PHCs were allotted funds for the activities of the PHCs. Those funds were utilized mainly for maintenance of the equipments (89.6%), for purchase of emergency and essential drugs (85.4%), for maintenance of generator or other power backup (41.7%) and for hiring transport to shift the critically ill patients to higher facilities (27.1%).

B. FINDINGS OF HOUSEHOLD SURVEY

Table 8: Distribution of surveyed households

Distance from PHC	Type of PHC				Total	
	ABS		GOVT			
	No.	%	No.	%	No.	%
Inner One-third	313	50.2%	311	49.8%	624	100.0%
Middle One-third	310	49.1%	322	50.9%	632	100.0%
Outer One-third	317	50.7%	308	49.3%	625	100.0%
TOTAL	**940**	**50.0%**	**941**	**50.0%**	**1881**	**100.0%**

A total of 1881 HHS could be surveyed successfully with an equal distribution (50 – 50%) in community who are getting benefits from ABS PHCs and Govt. PHCs. Out of those HHs 33.17% were from inner one third of the maximum radial distance from PHC and 33.60% and 33.23% from middle and outer one thirds, respectively.

Table 9: Demographic Profile of Respondents

Variable	Number	Percent
Age in years		
<=20	115	6.1
21-40	1171	62.3
41-60	509	27.1
>60	86	4.6
Gender		
Male	809	43.0
Female	1072	57.0
Religion		
Hindu	1741	92.6
Muslim	123	6.5
Others	17	0.9
Caste		
SC/ST	839	44.6
OBC	742	39.4
Others/General	300	15.9
Marital Status		
Married	1738	92.4
Unmarried	143	7.6
Type of Family		
Nuclear	1290	68.6
Joint	591	31.4
Total	**1881**	**100.0**

As much as two third (62.3%) respondents belonged to 21 – 40 year age group and 1072 (57%) respondents were females. Majority (92.6%) of them, were Hindus and 92.4% were married. As much as 44.6% respondents were belonging to SC / ST category and 39.4% were belonging to other backward caste category. More than two thirds (68.6%) of the respondents belonged to nuclear family.

Table 10a: Socio-demographic status of Respondents

Variable	Number	Percent
Educational Status		
Illiterate	603	32.1
Just Literate	318	16.9
Primary	338	18.0
Middle School	164	8.7
Secondary	275	14.6
Higher Secondary	131	7.0
Graduation and Above	52	2.8
Occupation		
Agriculture and Animal Husbandry	416	22.1
Service (Government / Private)	49	2.6
Business	80	4.3
Housewife	617	32.8
Skilled Labour	80	4.3
Unskilled Labour	572	30.4
Unemployed / Student	67	3.6
Total	**1881**	**100.0**

Nearly one third (32.1%) respondents were illiterates. Out of total female respondents (1072), 57.55% were housewives. As much as 30.4% and 22.1% respondents were involved in unskilled labour work and, agriculture and animal husbandry.

Table 10b: Economic status of Respondents

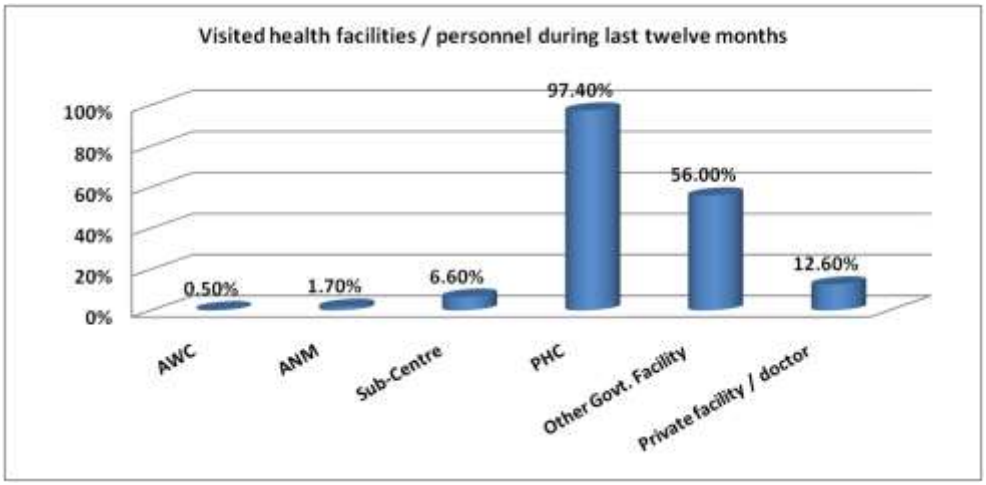
Economic Status	Number	Percent
Economic class as per the World Bank criteria		
<=1.25$ per capita per day	1639	87.1
>1.25$ per capita per day	173	9.2
Economic class as per the B G Prasad classification		
Lower Class	878	46.7
Lower Middle Class	646	34.3
Middle Class	230	12.2
Upper Middle Class	52	2.8
Upper Class	6	.3
Total	**1812**	**96.3**

As per the World Bank criteria, 87.1% respondents had less than $1.25 per capita per day income while as per the B G Prasad classification 81% belonged to lower and lower middle class category.

Graph 6: Visited any health facility / camp during last twelve months

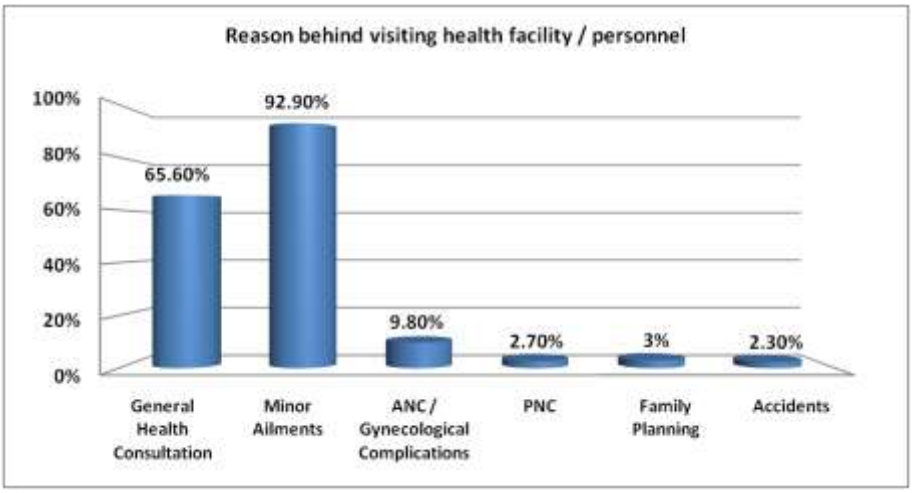
Any member of most (99.0%) of the respondents' family had visited any health facility in the past 12 months from the date of survey.

Graph 7: Health facilities / personnel visited during last twelve months



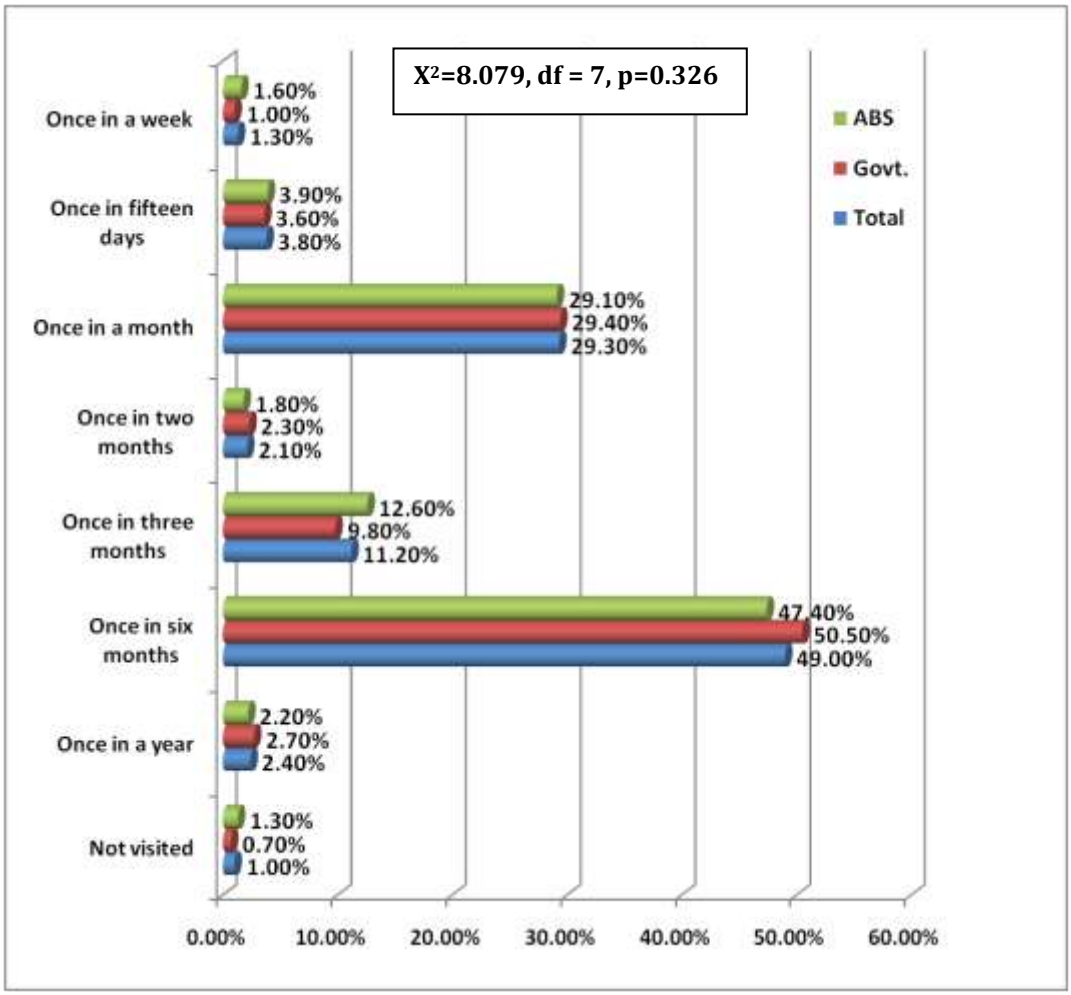
As much as 97.4% persons had visited PHCs in last 12 months. Visits to other government facility, private facility / medical practitioner, SC, ANM and AWC were 56.0%, 12.6%, 6.6%, 1.7% and 0.5% respectively.

Graph 8: Reasons behind visiting health facility / personnel



Majority (92.9%) of visits to health facilities were for minor ailments only. Next other reasons were: general health consultation (65.6%), ANC / gynaecological consultation (9.8%), consultation regarding family planning (3%), etc.

Graph 9: Frequency of visit to near-by PHC in last twelve months



Nearly half of the respondents (49.0%) had sought the healthcare services from the near-by PHC at least once in six months and 29.3% of them had visited every month irrespective of the management of those PHCs (ABS or Govt. run PHCs). Management of PHCs did not have significant influence on the frequency of visits to the nearby PHCs by the community.

Table 11: Community satisfaction level with the services at nearby PHC

Variables	Arogya Bandhu PHC		Government PHC		Total		x^2	p Value
	No.	%	No.	%	No.	%		
Received the services that the repondent went for								
Received	882	49.5%	899	50.5%	1781	100.0%	1.637[a]	0.201
Did not Receive	46	56.8%	35	43.2%	81	100.0%		
Satisfaction with the Services at PHC								
Fully Satisfied	471	48.1%	508	51.9%	979	100.0%	7.072	**0.029**
Partially Satisfied	374	50.2%	371	49.8%	745	100.0%		
Not Satisfied	83	60.1%	55	39.9%	138	100.0%		
Paid for the services								
Yes	61	29.2%	148	70.8%	209	100.0%	40.166	**<0.01**
No	867	52.5%	786	47.5%	1653	100.0%		
Availability of the Doctor in PHC								
Yes	871	49.7%	882	50.3%	1753	100.0%	0.279	0.597
No	57	52.3%	52	47.7%	109	100.0%		
Met the Doctor in PHC								
Yes	869	49.7%	878	50.3%	1747	100.0%	0.105	0.746
No	59	51.3%	56	48.7%	115	100.0%		
Satisfaction with the attention paid by the doctor								
Fully Satisfied	455	47.7%	499	52.3%	954	100.0%	4.356	0.113
Partially Satisfied	357	51.6%	335	48.4%	692	100.0%		
Not Satisfied	57	56.4%	44	43.6%	101	100.0%		
Provided Medicines								
Yes	722	49.8%	728	50.2%	1450	100.0%	0.005	0.941
No	206	50.0%	206	50.0%	412	100.0%		
Met other staff								
Yes	899	49.9%	903	50.1%	1802	100.0%	1.391	0.499
No	29	48.3%	31	51.7%	60	100.0%		
Sufficient time given by the staff								
Yes	704	47.9%	765	52.1%	1469	100.0%	9.256	**0.002**
No	201	56.9%	152	43.1%	353	100.0%		
Satisfaction with the attention paid by the staff								
Fully Satisfied	407	46.2%	473	53.8%	880	100.0%	10.773	**0.005**
Partially Satisfied	397	52.4%	361	47.6%	758	100.0%		
Not Satisfied	102	57.6%	75	42.4%	177	100.0%		
Cleanliness of the Health Facility								
Very clean	603	50.2%	597	49.8%	1200	100.0%	7.128	**0.028**
Somewhat clean	317	49.8%	319	50.2%	636	100.0%		
Not clean	3	17.6%	14	82.4%	17	100.0%		

The majority of ABS and govt. PHCs had been able to provide the services the respondents went for. As compared to ABS PHCs, the satisfaction level with the services was significantly ($p < 0.05$) high (51.9%) with the government run PHCs. The system of pay for health services by the community was significantly ($p < 0.05$) more prevalent in govt. run PHCs rather than ABS PHCs. People who had visited govt. run PHCs were significantly ($p < 0.05$) more satisfied with the time given as well as attention paid by the healthcare staff other than doctor at PHCs. As per the perception of the community, ABS PHCs were significantly ($p < 0.05$) more clean as compared to govt. run PHCs. Availability of doctor in the PHCs, attention paid by them and beneficiaries' satisfaction level with the doctor's service were more in govt. run PHCs rather than ABS PHCs, but this relation was not statistically significant. Medicines were equally provided in both kinds of PHCs.

Table 12: Health activities conducted by PHC in the village

Variables	Arogya Bandhu PHC		Government PHC		Total		x^2	p Value
	No.	%	No.	%	No.	%		
School Health Programme								
Yes	679	48.7%	716	51.3%	1395	100.0%	3.647	0.056
No	261	53.7%	225	46.3%	486	100.0%		
Immunization Programme								
Yes	868	49.3%	894	**50.7%**	1762	100.0%	5.635	**0.018**
No	72	60.5%	47	39.5%	119	100.0%		
Eye Screening								
Yes	458	**55.5%**	367	44.5%	825	100.0%	18.052	**<0.01**
No	482	45.6%	574	54.4%	1056	100.0%		
Cataract Camps								
Yes	237	**68.7%**	108	31.3%	345	100.0%	59.237	**<0.01**
No	703	45.8%	833	54.2%	1536	100.0%		
Health Education activities								
Yes	845	49.9%	850	50.1%	1695	100.0%	0.100	0.752
No	95	51.1%	91	48.9%	186	100.0%		
Total	**940**	**50.0%**	**941**	**50.0%**	**1881**	**100.0%**		

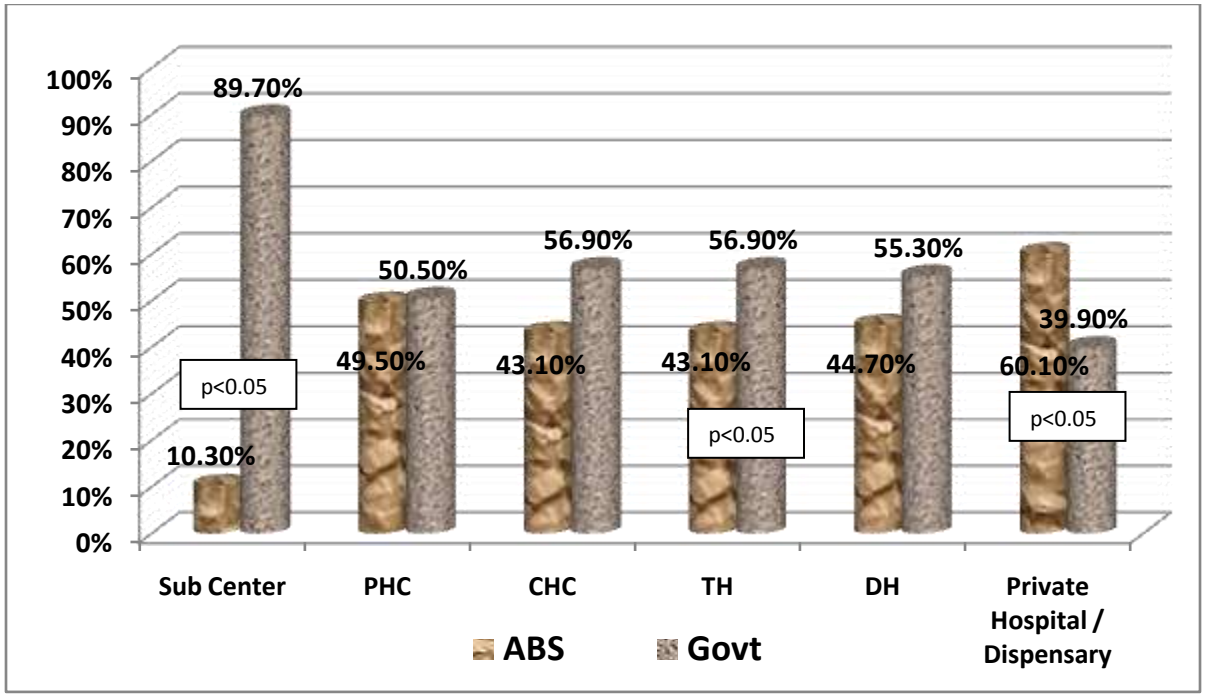
Various community health activities were carried out by the PHCs in the form of school health programmes, immunization programmes, eye- screening activity, cataract camps and health education activities. Among these, immunisation programmes (50.7%) conducted by govt. run PHCs, and eye screening (55.5%) and cataract camps (68.7%) by ABS PHCs were found significantly ($p < 0.05$) high as compared to their counterparts.

Table 13: Community Preference to seek health services for PHCs and SCs

Variables	Arogya Bandhu PHC		Government PHC		Total		x^2	p Value
	No.	%	No.	%	No.	%		
Prefer to seek health services at PHC								
Yes	865	49.5%	882	50.5%	1747	100.0%	2.075	0.150
No	75	56.0%	59	44.0%	134	100.0%		
Prefer to seek health services at SC								
Yes	4	10.3%	35	**89.7%**	39	100.0%	25.129	<0.01
No	936	50.8%	906	49.2%	1842	100.0%		
Total	**940**	**50.0%**	**941**	**50.0%**	**1881**	**100.0%**		

As much as 92.9% of the respondents showed highest preference to seek health services at the near-by PHC and next in line were taluk hospital (55.10%) and private hospital / dispensary (17.10%). Only 39 respondents preferred to seek health services at sub center. Out of this 35 preferred government run SCs, this was statistically significant (p <0.05). The preference for PHC was almost same for both ABS and govt. PHCs.

Graph 10: Community Preference to seek healthcare services at facilities



Among the ABS PHCs, the community preference to visit a private healthcare sector (60.1%) was significantly (p < 0.05) higher than the beneficiaries of govt. PHCs (39.9%).

Table14a: Awareness of respondents regarding PHC management

Type of PHC	Awareness regarding nearby PHC management						Total	
	Government		Private (NGO /Trust / Medical Colleges)		DNK			
	No.	%	No.	%	No.	%	No.	%
ABS	242	25.7%	675	71.8%	23	2.4%	940	100.0%
GOVT	930	98.8%	9	1.0%	2	0.2%	941	100.0%
Total	1172	62.3%	684	36.4%	25	1.3%	1881	100.0%
X^2 = 1070.3, df = 2, p = <0.01								

Correct knowledge about PHC management was significantly (p <0.05) more in the community who was being served by govt. PHCs (98.8%) as compared to community who was being served by PHCs managed by any external agency (71.8%).

Table14b: Awareness of respondents regarding PHC management

Variables	Yes		No		Total		x^2	p Value
	No.	%	No.	%	No.	%		
Heard about Arogya Bandhu scheme								
Government	66	5.6%	1106	94.4%	1172	100.0%	31.282	**<0.01**
Private (NGO /Trust /Society /Medical Colleges)	87	12.7%	597	87.3%	684	100.0%		
DNK	0	0.0%	25	100.0%	25	100.0%		
Aware of Arogya Raksha Samiti								
Government	63	5.4%	1109	94.6%	1172	100.0%	1.799	0.407
Private (NGO /Trust /Society /Medical Colleges)	41	6.0%	643	94.0%	684	100.0%		
DNK	0	0.0%	25	100.0%	25	100.0%		
Total	**104**	**5.5%**	**1777**	**94.5%**	**1881**	**100.0%**		

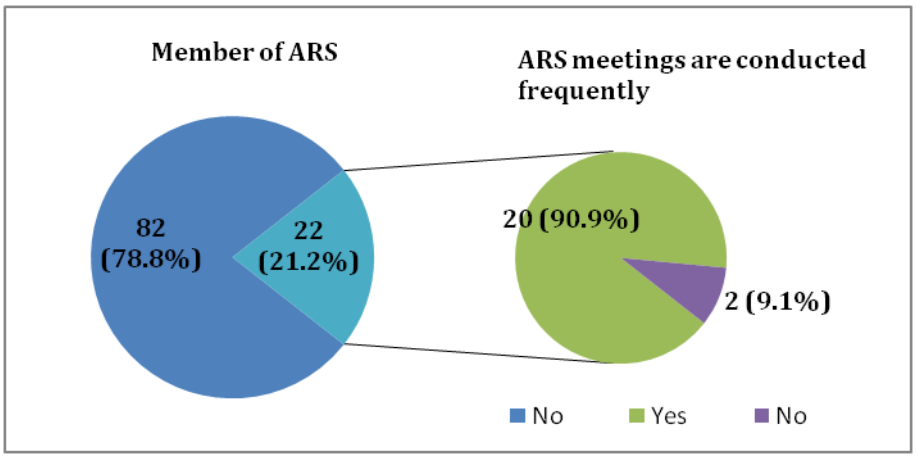
Majority (87.3%) of the respondents residing in the serving area of ABS PHCs were not aware about the name of Arogya bandhu scheme. Irrespective of the PHC management, majority of the respondents (94.5%) were not aware of the Arogya Raksha samithi (ARS).

Table 14c: Awareness of respondents regarding PHC management

Members of the ARS are given power to decide the disbursement of funds to the PHC through consultation	Frequency	Percent
Yes	22	21.2
No	26	25.0
DNK	56	53.8
Total	104	100.0

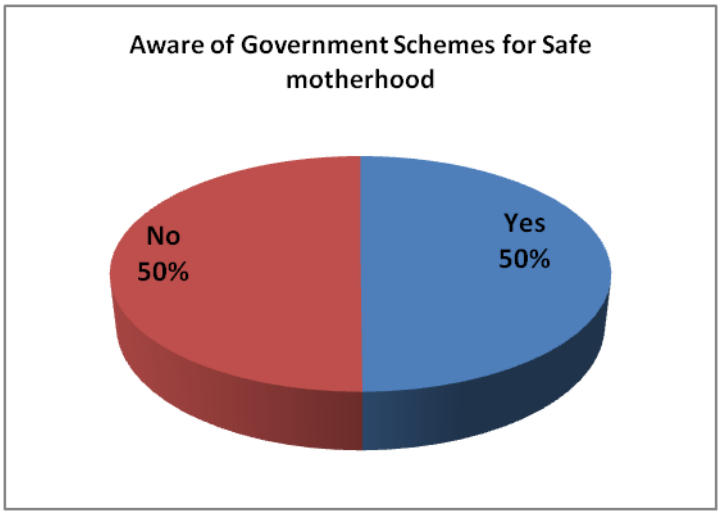
Only 22 (21.2%) respondents said that the disbursement of ARS funds happen in consultation with all members.

Graph 11: ARS membership and meetings conducted



Among all study subjects, only 21.2% of the respondents were the members of their respective ARSs. Out of them90.9% accepted that the ARS meetings happened regularly. As per the respondents, the major activities conducted by ARS were eye screening, conducts health education programmes on various diseases like malaria, dengue, HIV awareness programme, personal and environmental hygiene, ANC, PNC, diet and nutrition, mother and children's health. The major issues discussed during these ARS meetings were: health of women and children, village health and sanitation, general health related issues.

Graph 12: Awareness of respondents about ANY Government Scheme for safe motherhood



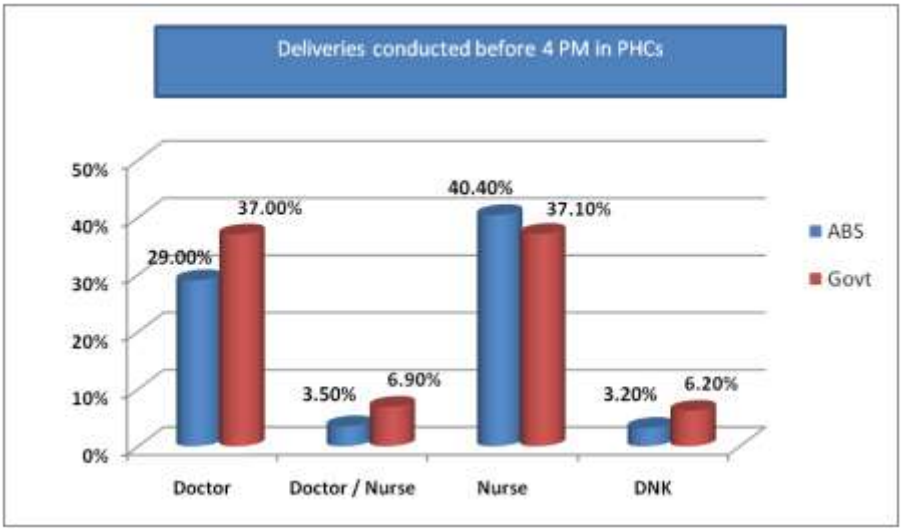
Only of half of the studied community was aware about any government schemes related to safe motherhood. As per the community, the very popular safe motherhood and child related schemes which were being facilitated through PHCs were madilu kit, Bhagyalakshmi yojane, Janani suraksha yojane (JSY), Thayi bhagya and immunization programmes.

Table 15: Availability of 24*7 health services at PHCs

Variables	Arogya Bandhu PHC		Government PHC		Total		x^2	p Value
	No.	%	No.	%	No.	%		
PHC is 24*7 functional health facility								
Yes	638	44.9%	782	55.1%	1420	100.0%	61.162	**<0.01**
No	295	66.1%	151	33.9%	446	100.0%		
DNK	7	46.7%	8	53.3%	15	100.0%		
Doctor is available 24*7 in the PHC								
Yes	286	55.9%	226	44.1%	512	100.0%	9.751	**<0.01**
No	636	47.8%	695	52.2%	1331	100.0%		
DNK	18	47.4%	20	52.6%	38	100.0%		
Deliveries are conducted 24*7								
Yes	716	46.6%	820	53.4%	1536	100.0%	45.609	**<0.01**
No	180	69.2%	80	30.8%	260	100.0%		
DNK	44	51.8%	41	48.2%	85	100.0%		
TOTAL	**940**	**50.0%**	**941**	**50.0%**	**1881**	**100.0%**		

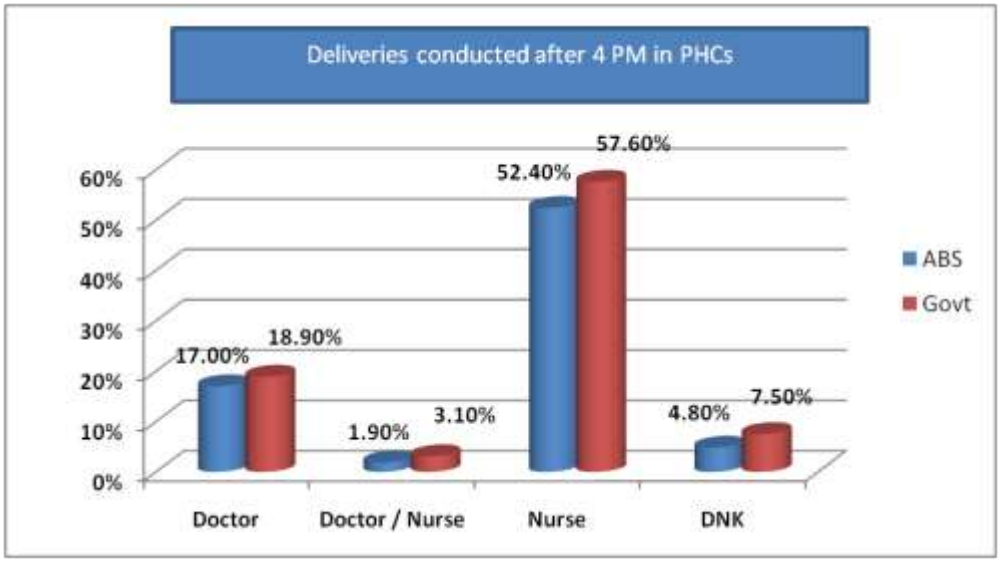
As per the respondents 24*7 functional status was significantly ($p < 0.05$) high among govt. run PHCs (55.1%). But, the availability of doctors on 24*7 basis at PHCs were significantly ($p < 0.05$) high in ABS PHCs (55.9%) as compared to Govt. run PHCs (44.1%). As far as the 24*7 delivery services are concerned, govt. run PHCs were conducting deliveries (53.4%) significantly ($p < 0.05$) more as compared to ABS PHCs (69.2%).

Graph 13a: Personnel conducting deliveries at PHCs (before 4 PM)



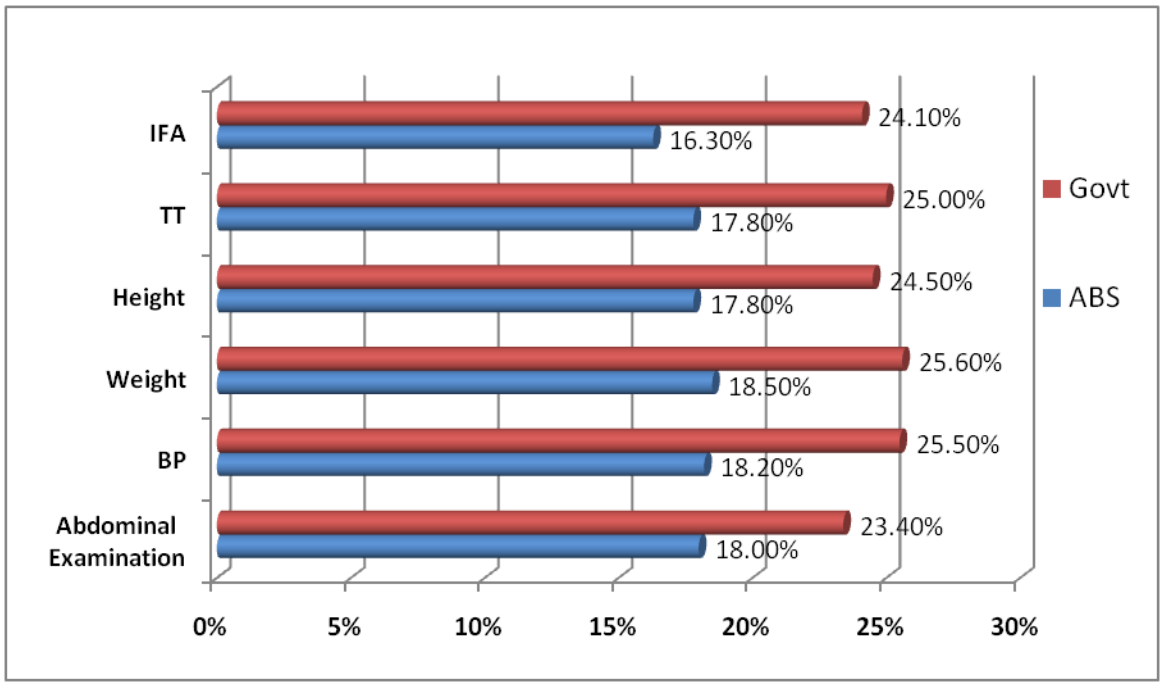
According to the community, the deliveries at PHCs were conducted either by doctor or nurse or both. In ABS PHCs, majority of the deliveries before 4 P. M. were conducted by staff nurses (40.4%) while in govt. PHCs doctors (37%) were also equally contributing in conducting deliveries (~37.0%).

Graph 13b: Personnel conducting deliveries at PHCs (after 4 PM)



Staff nurses were conducting majority of the deliveries after 4 P. M. Their contribution in ABS PHCs and Govt. PHCs were 57.6% and 52.4% respectively. In ABS and Govt. PHCs, Doctors conducted deliveries in 17% and 18.9% of the cases respectively.

Graph 14: Examination usually carried out at nearby PHC during ANC visits



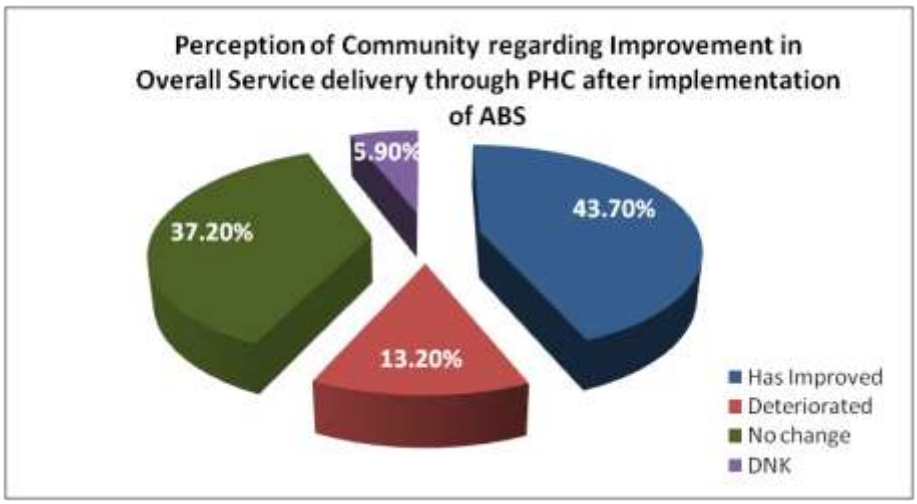
All PHCs irrespective of their management type provide ANC services by performing abdominal examination check the BP, weight, height, give TT injection and IFA tablets to pregnant women. All those services were being provided more in Govt. PHCs than ABS PHCs.

Table 16: Perception of Community regarding Quality of Services offered in the PHC

Improvement in quality of services	Type of PHC				Total	
	ABS		Govt.			
	No.	%	No.	%	No.	%
Yes	634	47.3%	707	52.7%	1341	100.0%
No	306	56.7%	234	43.3%	540	100.0%
Total	940	50.0%	941	50.0%	1881	100.0%
X^2 = 13.573, df = 1, p = <0.01						

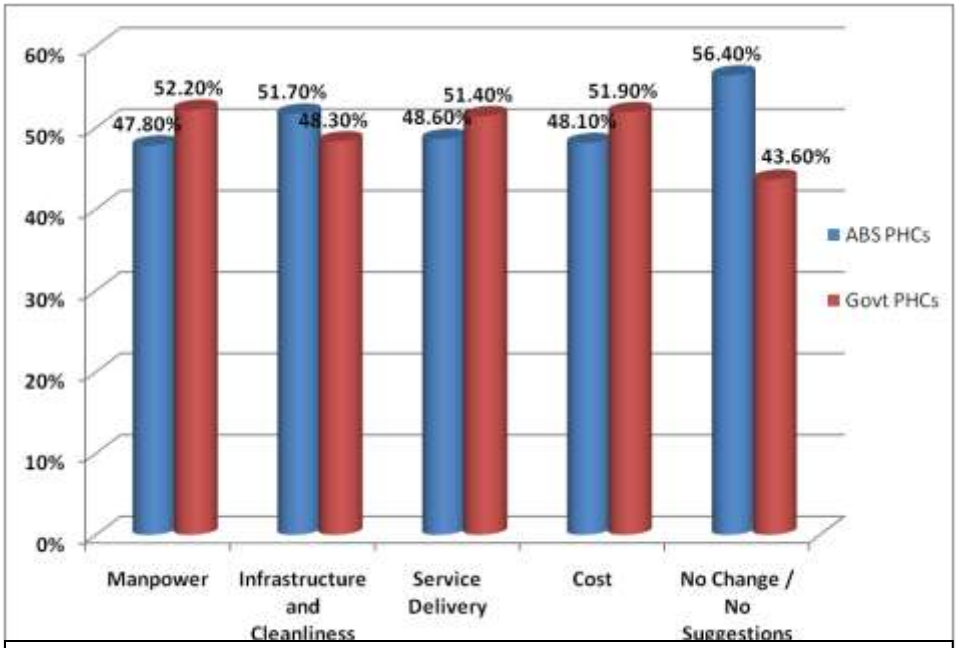
In the community perception, the quality of services had significantly ($p < 0.01$) improved in govt. run PHCs than ABS PHCs.

Graph 15: Perception of Community regarding Improvement in Service delivery through PHC after implementation of ABS



Among the studied ABS PHCs, 43.7% of beneficiaries perceived improvements and 13.2% of beneficiaries perceived deterioration in the overall service delivery by the PHCs after implementation of Arogya Bandhu Scheme. As much as 37.2% did not observed any changes in overall service deliveries through PHCs after implementation of Arogya Bandhu Scheme.

Graph 16: Community felt–needs to Improve Services at PHC



$X^2 = 7.470$, df = 4, p = 0.113

As per the community perception, all PHCs need improvement in terms of manpower, infrastructure, service delivery etc. Beneficiaries who were being served by govt. run PHCs suggested improvements in manpower, service delivery and reducing public expenses on health services while beneficiaries who were being served by ABS PHCs emphasized on infrastructure beside other parameters.

QUALITATIVE RESEARCH FINDINGS

- Availability of only outpatient services and fixed working hours (not 24*7) were the major problems to handle the emergency services at PHC Suttur and PHC Ittamadu. Besides that emergency health services were not available after the working hours at those PHCs as the PHC staff did not stay in the premises.

- Few of the medical colleges run ABS PHCs (PHC Suttur, PHC Ittamadu) were recommending the community to avail the services at their medical colleges and the community had to bear the expenses of such treatments even at discounted cost.

- Community served by PHC Hudem revealed that the doctor in PHC was irregular and did not care for the patients, and the behavior towards the patient was unacceptable and the PHC was highly unclean and not maintained properly.
- Doctors were either retired (PHC Srimangala, PHC Sampaje, PHC Kallusadarahalli, and PHC Idaguru) or aged (PHC Sampaje) to provide services in case of emergency.
- Community served by PHC Bedaguli was highly unsatisfied with the services provided at the PHC and had forced shut down. They demanded for Govt. to take it back and provide health care services.

- As per the perception of the community, satisfaction level of the community with the quality and availability of healthcare services was not up to the mark.

- "Community involvement" with the functioning of the ABS PHCs was observed to be very low based on the awareness of the community about the PHC management, '*Arogya Bandhu*' scheme and arogya raksha samithi.

SWOT ANALYSIS

STRENGTHS:

1. The majority of ABS PHCs had been able to provide the services the respondents went for.
2. As per the perception of the community, ABS PHCs were significantly ($p < 0.05$) more clean as compared to govt. run PHCs.
3. Eye screening (55.5%) and cataract camps (68.7%) by ABS PHCs were being conducted significantly ($p < 0.05$) more as compared to their counterparts.
4. Out of all respondents who were the members of their respective ARSs, majority (90.9%) of them accepted that the ARS meetings happened regularly.
5. Availability of doctors on 24*7 basis at PHCs were significantly ($p < 0.05$) high in ABS PHCs (55.9%) as compared to Govt. run PHCs (44.1%).
6. Among all the studied beneficiaries who were receiving health services from nearby ABS PHCs, 43.7% of them perceived improvements in the overall service delivery by the PHCs after implementation of Arogya Bandhu Scheme.

WEAKNESSES:

1. Availability of doctor in the PHCs, attention paid by them and beneficiaries' satisfaction level with the doctor's service were more in govt. run PHCs rather than ABS PHCs, but this relation was not statistically significant.
2. People who had visited govt. run PHCs were significantly ($p < 0.05$) more satisfied with the time given as well as attention paid by the healthcare staff other than doctor at PHCs.
3. Immunization programmes conducted by govt. run PHCs were found significantly ($p < 0.05$) high as compared to ABS PHCs.
4. Correct knowledge about PHC management was significantly ($p < 0.05$) more in the community who was being served by govt. PHCs (98.8%) as compared to community who was being served by PHCs managed by any external agency (71.8%).

5. Majority (87.3%) of the respondents residing in the serving area of ABS PHCs were not aware about the name of Arogya bandhu scheme.
6. Irrespective of the PHC management, majority of the respondents (94.5%) were not aware of the Arogya Raksha samithi (ARS).
7. As far as the 24*7 delivery services are concerned, govt. run PHCs were conducting deliveries (53.4%) significantly ($p < 0.05$) more as compared to ABS PHCs (46.6%).
8. In ABS PHCs, majority of the deliveries before 4 P. M. were conducted by staff nurses (40.4%) while in govt. PHCs, doctors were also equally contributing in conducting deliveries (~37.0%).
9. All the ANC (performing abdominal examination check the BP, weight, height, give TT injection and IFA tablets to pregnant women) were being provided more in Govt. PHCs than ABS PHCs.

OPPORTUNITIES:

1. As far as the frequency to PHC visits are concerned, majority (97.4%) of the respondents had visited PHCs in last 12 months.
2. Beside that, As much as 92.9% of the respondents showed highest preference to seek health services from the near-by PHC.
3. The system of pay for health services by the community was significantly ($p < 0.05$) more prevalent in govt. run PHCs rather than ABS PHCs.

THREATS:

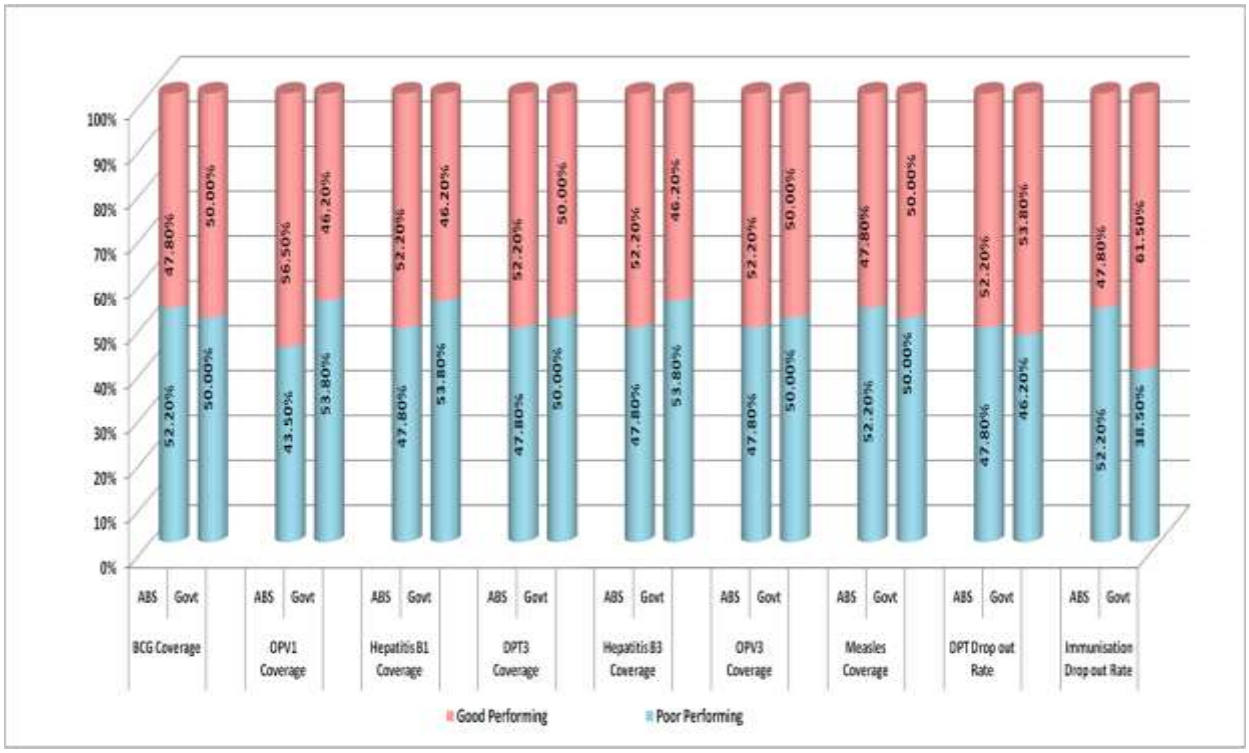
1. Management of PHCs by external agencies could not had significant influence on the frequency of visits to the nearby PHCs by the community.
2. As compared to ABS PHCs, the satisfaction level with the services was significantly ($p < 0.05$) high (51.9%) with the government run PHCs.
3. Only 39 respondents preferred to seek health services at sub center. Out of this 35 preferred government run SCs and only 4 preferred ABS run SCs, this relation was statistically significant.
4. Only 22 (21.2%) respondents said that the disbursement of ARS funds happen in consultation with all members.

5. As per the respondents, 24*7 functional status of PHCs was significantly ($p < 0.05$) high among govt. run PHCs.
6. As per the community perception, the quality of services had significantly ($p < 0.01$) improved with time in govt. run PHCs rather than ABS PHCs.
7. Among the studied ABS PHCs, 13.2% of beneficiaries perceived deterioration and 37.2% did not observed any changes in overall service deliveries by the PHCs after implementation of Arogya Bandhu Scheme.
8. As per the perception of the community, satisfaction level of the community with the quality and availability of healthcare services was not up to the mark.

9. "Community involvement" with the functioning of the ABS PHCs was observed to be very low based on the awareness of the community about the PHC management, '*Arogya Bandhu*' scheme and arogya raksha samithi.

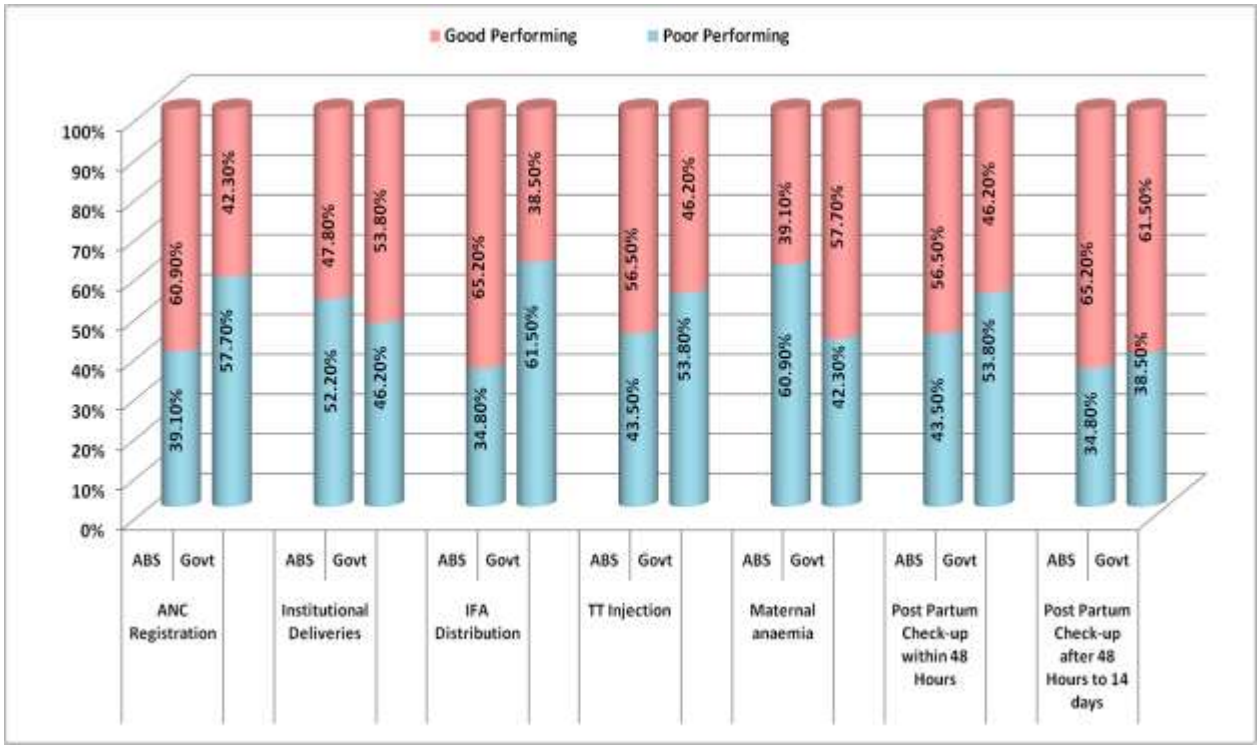
C. FINDINGS FROM SECONDARY DATA ANALYSIS

Graph 17: Immunization Coverage



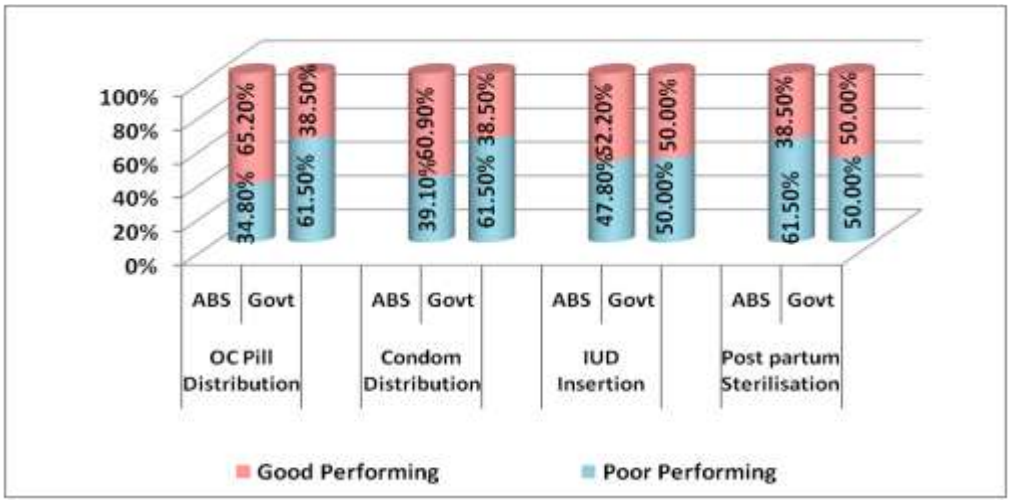
More than half of the ABS PHCs were found to be better performing (above 50th percentile) with respect to vaccination coverage (OPV1, OPV3, Hepatitis B1, B3 and DPT3). But, as much as 61.5% of Govt. PHCs PHC were found to be good performing (above 50th percentile) in terms of Immunization dropout rate, this figure was only 47.8% for ABS PHCs.

Graph 18: ANC PNC Coverage



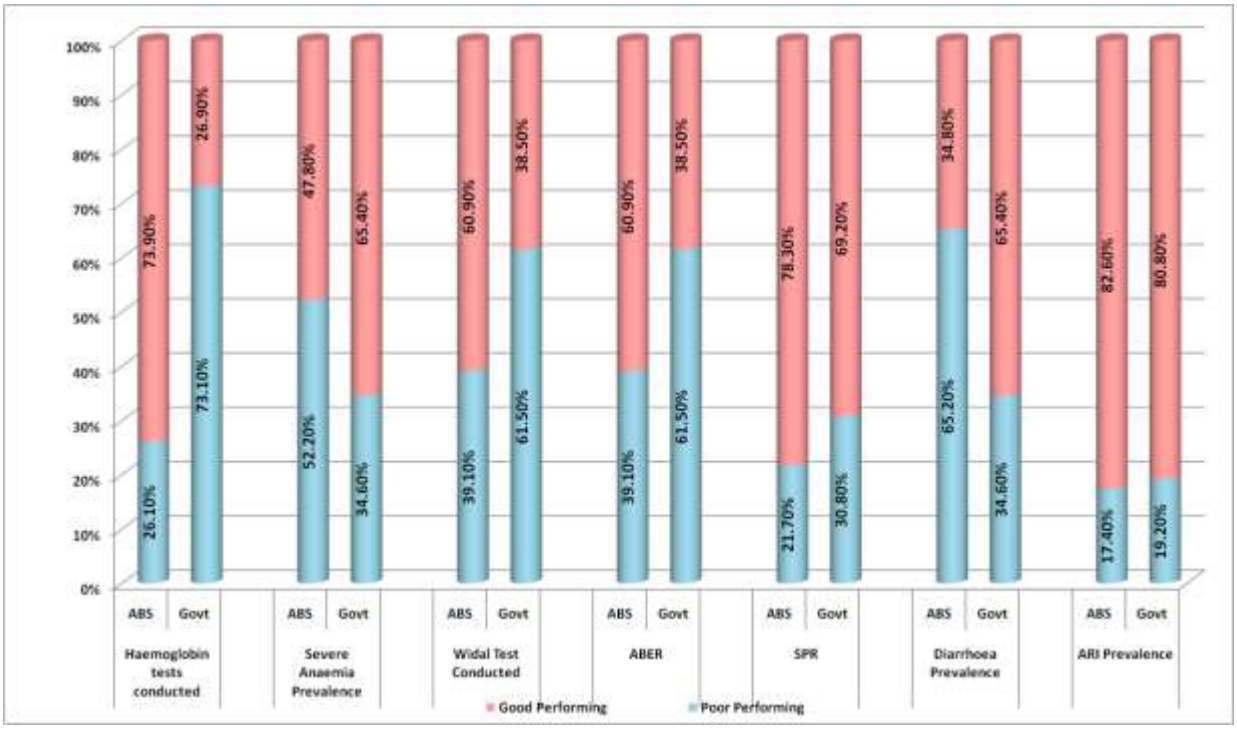
More than half of the ABS PHCs were better performing (above 50th percentile) in registering pregnant women for ANC, distribution of IFA tablets, giving TT inhjections to ANC registered women, post partum check-up within 48 hours and 48 hours to 14 days of delivery. More than 50% of Govt PHCs were above 50th percentile in detecting maternal anaemia, ensuring institutional deliveries and post partum check-up after 48 hours of delivery.

Graph 19: Family Planning



Family planning activities were conducted better by ABS PHCs than Govt PHCs. More than 50% of ABS PHCs were found in better performing category (above 50th percentile) in Family planning activities in terms of distributing OC pills, condoms and IUD insertions.

Graph 20: National Health Programs



As much as 73.9% of ABS PHCs were performing better in terms of Hb testing, while this figure was only 26.9% in Govt. run PHCs. As far as the Anaemia control program is concerned Govt.

run PHCs were performing better (65.4%) as compared to ABS PHCs (47.8%). As much as 60.9% ABS PHCs were performing better in conducting Widal test, which was better than Govt. PHCs (38.5%). In case of malaria control program ABS PHCs were performing better. More than 60% PHCs fall in good performing category in performing ABER and SPR. In case of diarrhea control programe Govt. PHCs were performing better (65.4%) as compared to ABS PHCs (34.8%). While in case of ARI control program majority (>80%) of both ABS and Govt. run PHCs were performing better.

REFLECTION AND CONCLUSIONS

This study has evaluated the physical and financial performance along with SWOT analysis of PHCs under Arogya Bandhu Scheme across the State. All the studied PHCs functioning under Arogya Bandhu Scheme were found to be fully managed by their respective management organizations. There was shortage of manpower in both kinds of PHCs. As far as the qualification and the average salary of higher cadre staff are concerned, Govt. PHCs were better than ABS PHCs. Availability of infrastructure, drugs, equipments and round the clock services were found more in ABS PHCs as compared to Govt. PHCs. The funds allotted by Arogya Raksha Samiti for the activities of the PHCs were utilized manely for maintenance of the equipments, purchase of drugs, maintenance of generator or other power back up and hiring transport to shift critically ill patient to higher facilities.

As per the community perception (SWOT analysis), ABS PHCs were better in terms of cleanliness, conducting eye screening and cataract camps, availability of doctors on 24*7 basis at PHCs and less system of pay for health care services. But beneficiaries' satisfaction level with the doctors and health care staff services and services available at PHCs, round the clock delivery services and functional status of PHCs, contribution of doctors in conducting deliveries, ANC examinations, conducting immunization programs and improvement in overall quality of services with time were main weaknesses and threats for Arogya Bandhu Scheme. Besides that, management of PHCs by external agencies (PPP Model) could not have significant influence on the frequency of the visits to the nearby PHCs by the community. Even though, majority of the respondents had visited nearby PHCs in last 12 months and also showed highest preference to seek health services from the nearby PHC, which is an opportunity to improve the services and fill the gaps in a short span of time.

By analyzing the secondary data it was found that more than half of the ABS PHCs were found to be better performing (above 50th percentile) with respect to immunization coverage, ANC services, Family Planning activities, Hb testing, conducting Widal test and Malaria Control Program (ABER and SPR). But the performance needs improvements in detecting maternal anemia, ensuring institutional deliveries, immunization dropout rates, Anemia Control Program and Diarrhea control program.

Although ABS PHCs showed improvement in infrastructure, manpower, drugs, equipments, data reporting (HMIS) etc., yet they are not able to meet the satisfaction level of the community in terms of quality of services available at PHCs as compared to Govt. run PHCs.

RECOMMENDATIONS

Shortage of Manpower: At the time of implementation of the Arogya Bandhu Scheme it was expected to fulfill the gap of manpower shortage by the scheme for those PHCs which had more number of vacancies for long duration. But as per the study, still there was shortage of manpower as per IPHS standards and needs a lot of improvements to fulfill this gap.

Health care staff: As per the scheme, the management agency shall employ the personnel with at least minimum qualification prescribed by the Government. But study found that all the functioning medical Officer in-charges (MOIC) in Govt. PHCs were MBBS graduates where as 17.4% of MOICs in ABS PHCs were AYUSH, BAMS or BHMS graduates during the time of survey. This requires the refinement in recruitment policy by the agencies.

Average Salary: As per the scheme, the agency is free to fix the remuneration of its employees but it should not be less than fixed by the Government. During the study, it has been noted that the average salaries of the higher cadre staff members like Medical Officer In-charge (MOIC), Medical officer (MO), Senior health Assistants male and female, pharmacist, clerical staff and Group D staff of ABS PHCs were lesser than their colleagues from Govt. PHCs, which indicates the diversion of the money to recruit the lower cadre staff. So it is very important to maintain the standardization in the remuneration for the staff, because it is one of the motivational factors to work in the rural areas. Less discrepancy should be maintained between both Govt. and ABS PHCs salary structure.

Available and functional equipments: The Agency is free to make any additions to the fixed assets, with prior written consent of the District Health & Family Welfare Officer, by furnishing the details of the proposed changes to the fixed assets. But, the number of available and functional equipments at PHCs showed inadequacy which needs fulfillment of the gap. Periodic check in the available and functioning of the equipments is essential in order to provide better services to the community.

Supervisory Visits: As per the scheme, Taluk Health Officer and District Project Management Officer shall monitor the working of the PHC with reference to the services rendered by the PHC under the National and State Health & Family Welfare Programmes and provisions of general health care services in the PHC as per the general directions of the Government. Most of the

PHCs responded that usual frequency of visit to PHC by THO/DHOs' had been once in 3 months and by programme officers had been every month. Periodic visit by the THO/DHO to PHCs helps in knowing the functioning of the PHC and thereby can recommend/Advise the District developmental board to improve in functioning of the PHC.

Beneficiaries' satisfaction level with the service: Community satisfaction is considered as the backbone and ultimate output of idea behind implementing any such kind of schemes. It has been observed that, as compared to ABS PHCs, the satisfaction level with the services was significantly high with the government run PHCs. Availability of doctor in the PHCs, attention paid by them, beneficiaries' satisfaction level with the doctor's service and time given as well as attention paid by the healthcare staff were more in govt. run PHCs rather than ABS PHCs. Regular training of health care staff is essential to provide the services satisfactorily to the community.

Improvement in quality of services: As per the community perception, the quality of services had significantly improved with time in govt. run PHCs rather than ABS PHCs. Regular staff training and motivation, periodic check in the functioning of the equipments helps in delivering the quality services to the community.

Improvement in service delivery: Improvement in service delivery was the main motto to start the Arogya Bandhu Scheme. Among the studied ABS PHCs, 13.2% of beneficiaries perceived deterioration and 37.2% did not observed any changes in overall service deliveries by the PHCs after implementation of this Scheme. The service delivery should be improved based on the community acceptance.

National Health programs: As per the scheme, the agency is responsible for the implementation of all the National and State Health & Family Welfare Programmes and the Health Care Service delivery within the PHC. As compared to Govt. PHCs, ABS PHCs were found significantly poor in implementing immunization programmes, detecting maternal anaemia, ensuring institutional deliveries, Anaemia control program and diarrhea control program. The Medical officer and the Agency should make an attempt to strictly implement the National Health Programmes.

Correct knowledge about PHC management: Majority of the respondents residing in the serving area of ABS PHCs were not aware about the name of Arogya bandhu scheme and even did not have correct knowledge about PHC management. Besides that Management of PHCs by external agencies could not have significant influence on the frequency of visits to the nearby PHCs by the community. Awareness regarding the ABS and PHC management should be made to the community through the local media.

ANC Examinations: All the ANC examinations were being provided more in Govt. PHCs than ABS PHCs. Recruitment of the MBBS Doctors for the post of MO and regular training for the other health care staff is very essential to improve the overall service delivery in terms of various ANC examination.

24*7 functional status and delivery services: As per the respondents, 24*7 functional status of PHCs was significantly high among govt. run PHCs. As far as the round the clock delivery services are concerned, ABS PHCs were found significantly poor in conducting deliveries as compared to Govt. PHCs. Strict 24*7 timing, staffing pattern and training should be followed.

Personals conducting deliveries: Satisfactory contribution of doctors in conducting deliveries was not observed in ABS PHCs. Staffing pattern should be improved especially for the post of Medical Officer by recruiting MBBS graduates.

Status of Sub-Centers: Significantly less preference of Sub-Centers managed by ABS PHCs to seek health services by the community was observed in study. This indirectly reflects the poor management of SCs by those PHCs which in turn needs improvements in availability of services at SCs through better supervision and management.

Disbursement of ARS funds: Only one fifth of respondents, who were the members of their respective ARSs, said that the disbursement of ARS funds happen in consultation with all members which indicated the quality of transparency in fund disbursement. Awareness regarding the utilization of the ARS fund should be made clear to all the members of the ARS team.

IMPORTANT REFERENCES CITED IN THE REPORT

1. Arogya Bandhu Scheme for involving private medical colleges and other agencies in the management of PHCs under Partnership agreement (Arogya Bandhu Scheme Manual) July 2008. Available at: http://karhfw.gov.in/**AROGYA**%20**BANDHU**-PPP%20.pdf
2. Directorate of Health and Family Welfare, Government of Karnataka. Available at: http://karhfw.gov.in/aboutus.html
3. Government of India. Concept note on Public-Private Partnerships. New Delhi: Dept of Family Welfare, Min of Health and Family Welfare; 2005.
4. National Rural Health Mission, Government of Karnataka. Available at: http://karhfw.gov.in/nrhm.html
5. Venkat Raman A, Bjφrkman J W. Public-Private Partnership in the provision of health care services to the poor of India. Available at: http://ctool.gdnet.org/conf_docs/Raman_paper_parallel_2.2.doc

List of individuals or groups interviewed / consulted and sites visited,

Table 1: The study was conducted in 26 districts of Karnataka with the following PHCs.

Sl. No.	Name of the District	Name of the Taluk	Name of the PHC	Type of PHC
1.	Ramanagaram	Ramanagaram	Ittamadu	ABS
2.	Ramanagaram	Ramanagaram	MGPalya	Govt.
3.	Chamarajanagara	Chamrajanagara	Panyadahundi	Govt.
4.	Chamarajanagara	Chamrajanagara	Bedaguli	ABS
5.	Mysore	Nanjanagudu	Suttur	ABS
6.	Mysore	Nanjanagudu	Devanur	Govt.
7.	Kodagu	Virarajapete	Srimangala	ABS
8.	Kodagu	Virarajapete	Balele	Govt.
9.	Kodagu	Madikeri	Sampaje	ABS
10.	Dakshina Kannada	Sullia	Bellare	Govt.
11.	Chikkamagaluru	Shringeri	Begaru	ABS
12.	Chikkamagaluru	Shringeri	Nemmaru	Govt.
13.	Shimoga	Sagara	Aralagudu	ABS
14.	Shimoga	Sagara	Thalaguppa	Govt.
15.	Hassana	Arasikere	Kallusadarahalli	ABS
16.	Hassana	Arasikere	Harnahalli	Govt.
17.	Kolar	bangarapet	Guttahalli	Govt.
18.	Kolar	Mulabagilu	Devarayanasamudra	ABS
19.	Bangalore Rural	Doddaballapura	Kanasawadi	ABS
20.	Bangalore Rural	Doddaballapura	Doddahajjaji	Govt.
21.	Bangalore Urban	Bangalore Urban	Bhikshukara Nirashrita Kendra	ABS
22.	Bangalore Urban	Bangalore Urban	Singasandra	Govt.
23.	Chikkaballapura	Gauribidanur	Idaguru	ABS
24.	Chikkaballapura	Gauribidanur	Manchenahalli	Govt.
25.	Tumkur	Pavagada	Venkatapura	ABS
26.	Tumkur	Pavagada	Kotagudda	Govt.
27.	Chitradurga	Chitradurga	Kyasapura	Govt.
28.	Chitradurga	Chitradurga	Yalagodu	ABS
29.	Davanagere	Jagalur	Mustur	Govt.
30.	Davanagere	Jagalur	Mallapura	Govt.
31.	Bellary	Kudlagi	Hudem	ABS
32.	Bellary	Hospet	Kampli	Govt.
33.	Koppala	Gangavati	Anegundi	ABS
34.	Koppala	Gangavati	Hosakera	Govt.
35.	Raichur	Manvi	Ballatagi	Govt.
36.	Raichur	Raichur	Chandrabanda	ABS
37.	Gulbarga	Jewargi	Biriyala B	Govt.
38.	Gulbarga	Alanda	V K Salagar	ABS

39.	Bidar	Basavakalyana	Kohinoor	Govt.
40.	Bidar	Humnabad	Dubbalagundi	ABS
41.	Bijapur	Sindhagi	Goolageri	Govt.
42.	Bijapur	Sindhagi	Aski	Govt.
43.	Bagalakote	Badami	Nandikeshwara	ABS
44.	Bagalakote	Badami	Mustageri	Govt.
45.	Gadag	Rona	Hirehala	ABS
46.	Gadag	Rona	Savadi	Govt.
47.	Dharwad	Kalghatagi	Galigehula koppa	ABS
48.	Dharwad	Kalghatagi	Mishrekote	Govt.
49.	Belgaum	Khanapur	Ashok Nagar	ABS
50.	Belgaum	Bailahongala	Hunshikatti	Govt.
51.	Uttara Kannada	Joida	Castle Rock	ABS
52.	Uttara Kannada	Joida	Ulvi Rock	Govt.

Table 2: PHCs visited

Sl. No.	Name of the PHC	ABS / Govt.	Name of Medical Officer	Age in years	Reg No (KMC / MCI)
1.	Ittamadu	Raja Rajeshwari Medical College, Bangalore	Dr Sanjeev		
2.	MGPalya	Govt	Dr Chitra	45	48073
3.	Bedaguli				
4.	Panyadahundi	Govt	Dr P M Prasad	45	46955
5.	Suttur	JSS Medical College, Mysore			
6.	Devanur	Govt	Dr Satish	42	41707
7.	Srimangala	Karuna Trust	Dr V Venkatesh	60	14369
8.	Balele	Govt	Dr T D Manjunath	49	52793
9.	Sampaje	KVG Medical College Sullia	Dr S Sadananda Nayak	62	17990
10.	Bellare	Govt	Dr Jayaprakash	42	66994
11.	Begaru	Karuna Trust	Dr Prabha	24	
12.	Nemmaru	Govt	Ram 1yr rural postin	24	
13.	Aralagudu	Karuna Trust	Dr B M Suresh	30	82344
14.	Thalaguppa	Govt	Dr Pradeep H	35	14668
15.	Kallusadarahalli	Karuna Trust	Dr Gangadharappa	62	8727
16.	Harnahalli	Govt	Dr Bhavya	30	76479
17.	Guttahalli	Govt	Dr yamini	34	
18.	Devarayanasamudra	Sri Devaraja Urs Medical College, Tamaka, Kolar	Dr Ananya Lakshmi	25	90824
19.	Kanasawadi	Sapthagiri Medical College and Research Institute, chikkasan	Dr Prasad M M	35	
20.	Doddahejjaji	Govt	Dr K G Shivakumar	52	
21.	Idaguru	Karuna Trust	Dr Thakur Simha	63	20416
22.	Manchenalli	Govt	Dr Chandra Mohan	42	42791
23.	Venkatapura	Swamy Vivekananda Integrated	Dr V Bharath	28	

		Rural Health Center, Pavagada			
24.	Kotagudda	Govt	Dr Ramanjanappa		
25.	Kyasapura	Govt	Dr Chakrapani	57	
26.	Yalagodu	Sri Basaveshwara Medical College, Chitradurga	Dr Sadhika		
27.	Mustur	Govt	Dr G O Nagaraj		
28.	Mallapura	Karuna Trust	Dr Santosh	32	
29.	Hudem	Karuna Trust	Dr Jayasheela L	27	86203
30.	Kampli	Govt	Dr Malleshappa	40	AYUSH
31.	Anegundi	Karuna Trust	Dr Nataraj	31	AYUSH
32.	Hosakera	Govt	Dr Basavaraj	36	AYUSH
33.	Ballatagi	Govt	Dr Shantala	28	81079
34.	Chandrabanda	Karuna Trust	No doctor		
35.	Biriyala B	Govt	Dr Siddharth Patil		
36.	V K Salagar	Karuna Trust	Dr Mallikarjuna Desai	64	
37.	Kohinoor	Karuna Trust	Dr Nandakishore Sharma	34	
38.	Dubbalagundi	Govt	Dr Veeranath	33	80868
39.	Goolageri	Bijapur District Minority National Education Society	Dr Gajanan J Kulkarni	34	
40.	Aski	Govt	Dr Shashikanth Bagewadi		
41.	Nandikeshwara	Karuna Trust	Dr.Niranajn	29	80547
42.	Mustageri	Govt	Dr.Sujatha Patil	38	51947
43.	Hireyala	Karuna Trust	Dr. T. Sadashivappa		
44.	Savadi	Govt	new doctor not joined	-	-
45.	Galigehula koppa	Karuna Trust	Dr.Shashidhar		
46.	Mishrekote	Govt			
47.	Ashok Nagar	Karuna Trust	Dr. Abhijeet	26	93653
48.	Castle Rock	Karuna Trust	Dr. M.V. Hosur	65	
49.	Ulvi	Govt			
50.	Hunshikatti	Govt			48073
51.	Bhikshukara Nirashrita Kendra	Karuna Trust			
52.	Singasandra	Govt			

Dissenting views by evaluation team member or client if any

PROJECT TEAM

Principal Investigator	**Dr Manoj Kumar Gupta**	**MD (Community Medicine)**
Co-Investigator	**Dr Sreenath Reddy**	**PhD, FIPHA, FRFHHA**
Senior Principal Advisor	**Dr Dhirendra Kumar**	**PhD**
Consultant Statistics	**Dr J P Singh** **Dr Reshmi**	**Msc. Stastistics** **PhD**
Research Officers	**Dr Veena R** **Dr Divya Desai** **Dr Srinath V** **Dr Yashoda T C**	**BDS, MSc (HA), QM & AHO** **BDS, PGDHM** **MPH** **MPH**

Short biographies of the principal investigator

Dr Manoj Kumar Gupta has done his MBBS from SMS Medical College, Jaipur and MD in Community Medicine from Banaras Hindu University (BHU), Varanasi. He is working as Assistant Professor and Dean Research Coordinator in IHMR Bangalore. During his MD he has worked in the area of adolescent health and developed a new scoring system for the psychosocial assessment of adolescent girls using WHO "HEEADSSS" approach. He has four year experience of Under Graduate teaching, managing community based programmes and has been involved in various research projects. He has attended different community based medical camps with various National and International NGOs. He has widely published and presented in various National and International journals, conferences and seminars. He is the life member of Indian Public Health Association (IPHA) and Indian Journal of Preventive and Social Medicine (IJPSM). He is Training of Trainers (TOT) for STI/RTI Syndromic case management through NRHM, SIHFW sponsored UPSACS supported training under NACO-NRHM convergence. He is well versed in handling research data with all necessary computer softwares and SPSS.

INCEPTION REPORT

"AROGYA BANDHU" SCHEME FOR INVOLVING PRIVATE MEDICAL COLLEGES AND OTHER AGENCIES IN THE MANAGEMENT OF PHCS: AN EVALUATION STUDY

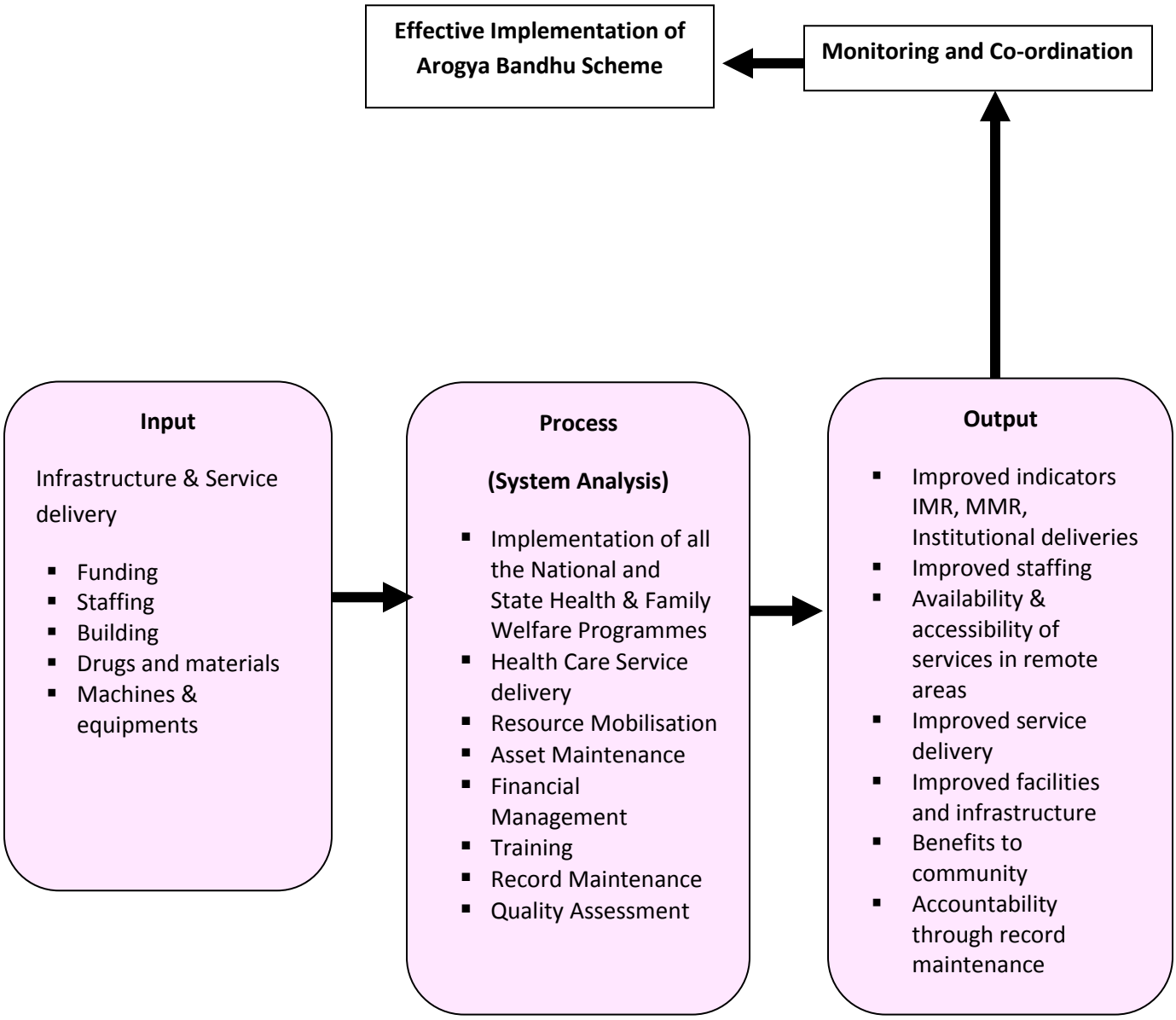
BACKGROUND AND RATIONALE BEHIND THE STUDY

One of the most important as well as fundamental requirements for achieving the Millennium Development Goals and the goals set under the Karnataka family health welfare society launched by the Government of India are access to health care and equitable distribution of health services. In present day situation, many areas in the Country, predominantly tribal and hilly areas, even in well-developed States, lack basic health care infrastructure limiting access to health services. Therefore, to overcome this difficulty, various initiatives have been taken with varied results.

Karnataka is a pioneer of innovative schemes in many spheres including health, one such schemes is involving private medical colleges and other agencies in the management of PHCs under partnership agreement. This scheme was launched in July 2008 under the scheme "Arogya Bandhu". Private Medical Colleges, Non Governmental Organizations (NGOs), Trusts and other charitable Institutions and Philanthropic Organizations, etc. were provided an opportunity to join hands with the Government for providing better health care to the community. The Government is committed to provide quality health services to the people, in the recent past Government has implemented various beneficiary oriented programmes in Health department under National Rural Health Mission. The PHCs under Arogya Bandhu scheme are also implementing these schemes.

The Evaluation Matrix

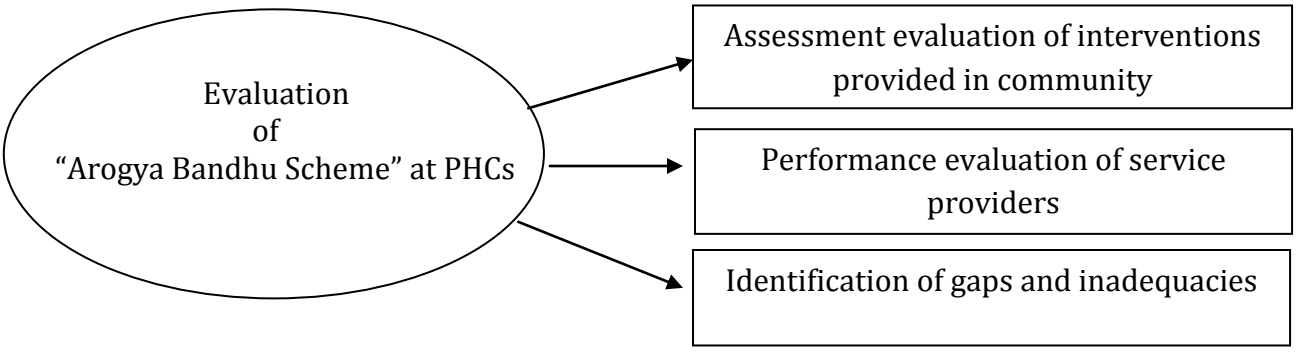
Effective program evaluation is a systematic way to improve and account for public health actions by involving procedures that are useful, feasible, ethical, and accurate.



EVALUATION FRAMEWORK

For effective and efficient intervention of "Arogya Bandhu Scheme" at PHCs there is a need for evaluation of the performance of this initiative.

The evaluation will include three pronged approach:



With this background this study is planned to evaluate the physical and financial performance of PHCs under *Arogya Bandhu* scheme across the state, and also to see the involvement of PHC in community based approach for conducting regular surveys and maintenance of records as per the guidelines of the state and central government. The study will also highlight the opinion of the community about the medical services provided by the PHC.

SCOPE OF THE STUDY:

It will cover;

- Process and Implementation of the scheme
- Comparison of Physical and Financial progress in each facility since inception
- Implementation of NRHM programmes in these facilities
- Human resources employed in these institutions compared to GOI guidelines
- Quality of services provided to the community by the facilities
- Planning and monitoring of Health schemes by the facility
- Maintenance of records

Key Stakeholders

- Private Medical Colleges
- Non-Governmental Organisation (NGOs)
- Trusts
- Charitable Institutions
- Philanthropic Organisations
- PHCs
- Govt. of Karnataka
- Legal Advisors
- Community

OBJECTIVES

The specific objectives for the study will be:

7. To review the existing documents of the scheme.
8. To study the procedure of implementation and process of the scheme in PHC.
9. To review the physical performance, financial and monitoring system of the scheme.
10. To review the degree of utilization of funds released to the facilities by Government.
11. To study whether the scheme benefits the community at large.
12. To carry out a SWOT analysis of the present scheme and suggest appropriate measures to improve and operation of the scheme.

LIMITATIONS TO THE EVALUATION

The community survey and staff interview will involve self-reported data which contains several potential sources of bias like selective memory (remembering of events or experiences that occurred in the past) and attribution bias (attributing positive events and outcomes to one's own agency but attributing negative outcomes to external forces).

EVALUATION METHODS AND TECHNIQUES

Quantitative Assessment:

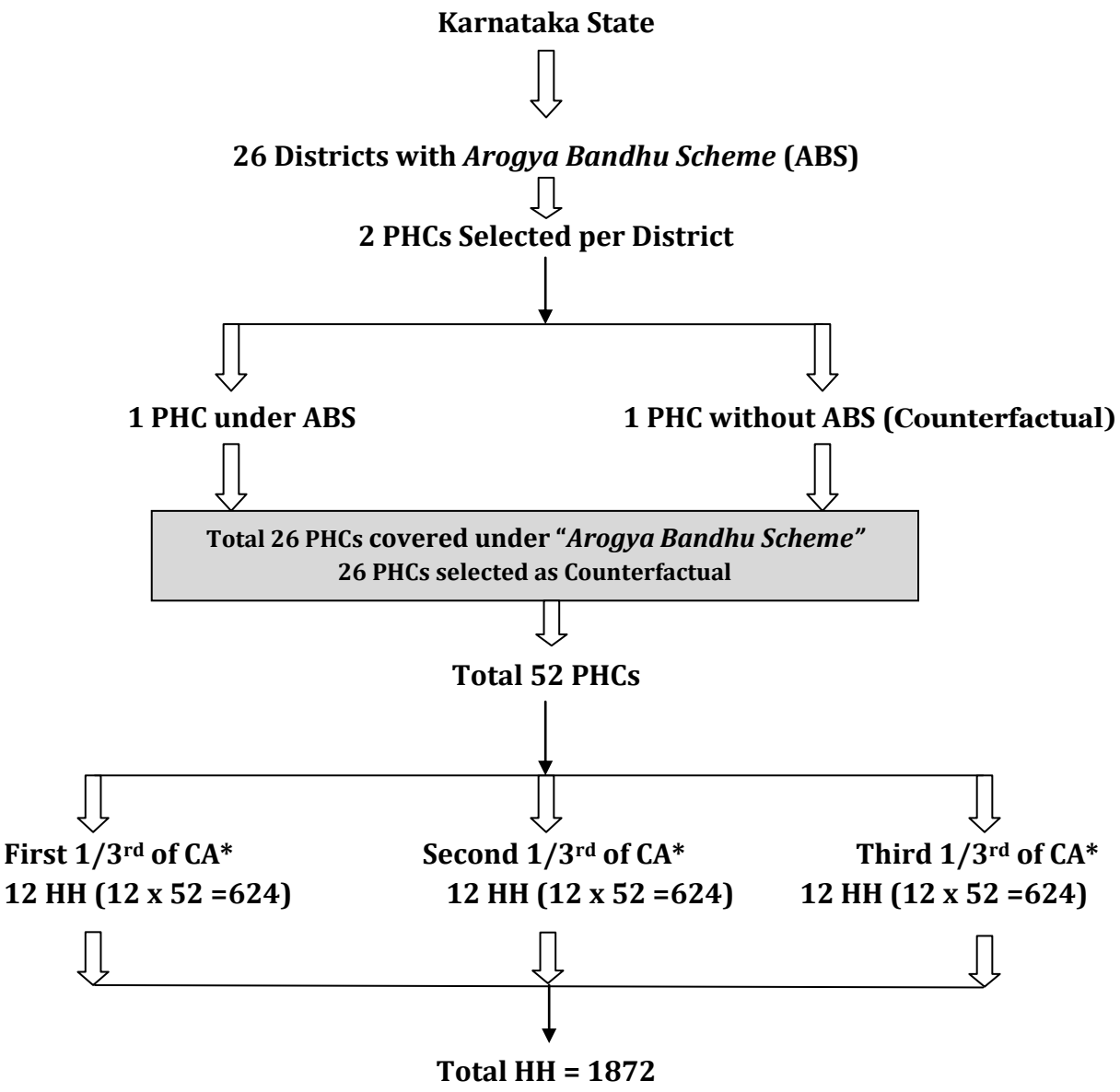
The quantitative assessment for the evaluation of *Arogya Bandhu* Scheme will broadly include, service record analysis, desk surveys and household survey in the area of PHCs and their associated SCs. Available records and MIS data at PHCs will be assessed to collect secondary data. All concerned staff at PHCs will be interviewed. Interactions with beneficiaries by community survey along with SWOT analysis will be carried out.

Qualitative Assessment:

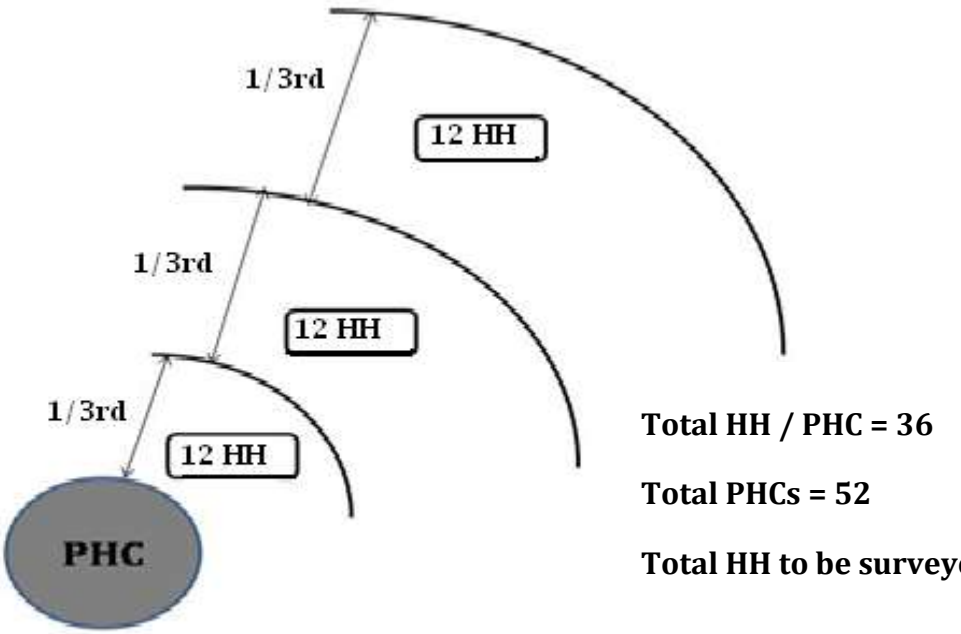
The qualitative tools for the assessment of performances of *Arogya Bandhu* Scheme will be based on interviews with community people, stakeholders and providers in all PHCs and sub centres covered under the scheme. All concerned staff at PHCs and their attached Sub-Centers will be interviewed. Interactions with beneficiaries by community survey will be carried out. For collection of data by interviews, semi-structured interview schedules will be used. SWOT analysis will be carried out of the present scheme.

SAMPLE AND SAMPLING DESIGN

This study will be conducted in all districts of Karnataka. From each district two PHCs will be selected for the study , one PHC with Arogya Bandhu scheme and the other PHC without Arogya Bandhu Scheme as counterfactual. According to the list of PHCs functioning under Arogya Bandhu Scheme, it was found that the facilities with Arogya Bandhu scheme are spread only in 26 districts of the state. Thus, only those 26 districts will be included in the study. Serving area of the PHC will be divided in to three parts (inner 1/3rd,middle 1/3rd and outer 1/3rd) according to the coverage area of the PHC (see diagram below). From each part, twelve households will be interviewed which will be selected by adopting simple random sampling.



* CA refers to the "TOTAL COVERAGE AREA" from each PHC



Total HH / PHC = 36

Total PHCs = 52

Total HH to be surveyed = 1872

DATA COLLECTION TOOLS

The following data collection tools will be used for the study:

d) Checklist for Record analysis (MIS/ available records for the last one year)
e) Interview schedules for concerned staff at PHCs to evaluate operational efficiency.
f) Interview schedule for financial feasibility study.
g) Interview schedules for evaluating beneficiaries (Community survey and SWOT analysis).

At the outset the PHC medical officer will be contacted and will be explained about the purpose of the study. Along with the interviews of concerned PHC staff, records will be analyzed with a checklist.

METHOD OF DATA ANALYSIS

Both primary and secondary data will be analyzed using SPSS v.16 software. Appropriate tables/graphs will be generated and statistical tests (SQC) will be applied to draw inferences.

LAYOUT OF THE FINAL REPORT

I. Summary

i. Abstract
ii. Executive summary

II. Background of Study

i. Rationale behind the study
ii. Review of Literature
iii. Key Stakeholders
iv. Participants
v. Objectives
vi. Activities for the evaluation
vii. Resources used to implement the evaluation
viii. Project's expected measurable outcomes
ix. Limitations

III. Evaluation study questions

i. Questions addressed by the study
ii. Questions that could not be addressed by the study

IV. Evaluation procedures

i. Sample selection methodology
   a. Sample
   b. Representativeness of the sample

ii. Data collection
   a. Methods
   b. Instruments

iii. Summary matrix
   a. Evaluation questions
   b. Variables

c. Data gathering approaches
d. Respondents
e. Data collection schedule

V. Findings
i. Results of the analysis

VI. Conclusions
i. Broad-based, summative statements
ii. Recommendations

WORK SCHEDULE

The study will be conducted for a period of 6 months from the date of assignment. The project will be conducted in phased manner.

First phase: Designing and finalization of tools and schedules, training and collection of secondary data will be done.

Second phase: Operational efficiency and financial feasibility of the "Arogya Bandhu Scheme" at PHCs will be evaluated.

Third phase: Community survey along with SWOT analysis will be conducted and interim report will be submitted.

Forth phase: Finalization of the interim report as per the feedbacks and submission of final report will be done.

		Month 1				Month 2				Month 3				Month 4				Month 5				Month 6			
PHASE	**Activities**	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9	W 10	W 11	W 12	W 13	W 14	W 15	W 16	W 17	W 18	W 19	W 20	W 21	W 22	W 23	W 24
PHASE 1	**Development Of Survey Tools**																								
	Finalization Of Survey Tools And Printing																								
	Training Of Field Investigators																								
	Secondary Data Collection																								
PHASE 2	**Operational Efficiency Study**																								
	Financial Feasibility Study																								
PHASE 3	**Community Survey and SWOT Analysis**																								
	Data Entry And Quality Check																								
	Data Analysis																								
	Sharing Of Key Findings																								
	Draft Report																								
PHASE 4	**Final Report**																								

SHARING OF RESPONSIBILITIES

A. Responsibilities of Karnataka State Health and Family Welfare Society

1. Ensure that the IHMR personnel have access to files, reports, publications, list of works, list of beneficiaries, list of other stake holders and other information that is relevant to evaluation.
2. Nominate nodal Officer(s) at the head office and also in the districts where field work/surveys will be taken up for coordination and providing necessary administrative and logistical support for the evaluation work.
3. Respond promptly to the IHMR evaluator's requests for briefing/debriefing on contextual, facts and figure, for approving changes/modifications to the inception Report, for release of funds as per agreement, for offering comments on any drafts, for arranging meetings with stakeholders and local experts.

B. Responsibilities of the IHMR, Bangalore:

IHMR will:

a. Adhere to the evaluation calendar laid down without any major deviations. Tentative schedule of field visits will be indicated. Any deviations in the agreed schedule will be informed to the nodal officer in advance. Invariably the nodal officer will be debriefed at the end of every field visit.

b. Engage with all stakeholders, particularly those belonging to the deprived sections of the society. The right of such communities to participate, to air their views, to share the information, to know the evaluation findings, to respond to the findings and so on will be fully recognized and such events will be recorded. Potential places to do this survey will be identified.

c. Potential risks and practical limitations of the study will be identified beforehand and remedial measures for overcoming them will be decided

The Team comprises of:

Team leader with relevant experience in public health	**Dr Dhirendra Kumar** **Senior Consultant** **IHMR- Bangalore**	**PhD**
Medical professional/public health professional with substantial experience in the public health field. Adequacy for the project	**Dr Manoj Kumar Gupta** **Consultant** **IHMR- Bangalore**	**MD (Community Medicine), MIPHA, MIJPSM**
Health systems expert	**Dr Sreenath Reddy** **Consultant** **IHMR- Bangalore**	**PhD**
Good statistician to analyze the data	**Dr J P Singh** **Consultant**	**Msc. Stastistics**
Communication expert	**Dr Vinay Tripathi** **Consultant** **Dr Divya Desai** **Research Officer**	**PhD** **BDS, PGDHM**
Field level surveyors with knowledge of local language	**Dr Veena** **Dr Srinath** **Mrs. Triveni** **Dr Yashoda**	**MHA, Q M & AHO** **MPH** **M Pharma** **MPH**

Annexure: Household Survey

IHMR BANGALORE Institute of Health Management Research, Bangalore

1

An Evaluation of the Arogya Bandhu Scheme in the State of Karnataka

Questionnaire for the Community (Households)

Consent

Greetings!!

My name is _____ and I am conducting survey for Department of Health and Family Welfare, Government of Karnataka and Institute of Health Management Research on the Arogya Bandhu Scheme, to know about the utilization pattern, different stakeholder's perception regarding the service and to measure the impact of the program. All information will be held for statistical and study purposes only, and any identifying information will be kept confidential. Your participation is valuable, and it will benefit to the community, as it may help the Government further in improving the services.

Schedule No: _____ **Date:** _____

Investigator's Signature:_____

S. No.	Question	Options/Answer	Response
SECTION 1			
1.1	Name of the District		
1.2	Name of the Taluk		
1.3	Name of the Village		
1.4	Name of PHC in that area		
1.5	Name of the Respondent		
1.6	Gender	1) Male	☐
		2) Female	☐
1.7	Age (Completed Years)		
1.8	Religion	1) Hindu	☐
		2) Muslim	☐
		3) Others	☐
1.9	Caste	1) SC/ST	☐
		2) OBC	☐
		3) Others/General	☐
1.10	Marital status	1) Married	☐

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		2) Unmarried	☐
1.11	Education (Passed)	1) Illiterate	☐
		2) Just Literate (1st -4th Class)	☐
		3) Primary (5th – 7th Class)	☐
		4) Middle School (8th –9th Class)	☐
		5) Secondary (10th –11th Class)	☐
		6) Higher Secondary (12th Pass)	☐
		7) Graduation and Above	☐
1.12	Occupation		
1.13	Monthly Income of Household		
1.14	Colour of Ration Card	1) White	☐
		2) Yellow	☐
		3) Red	☐
		4) Green	☐
		5) No Ration Card	☐
1.15	Type of family	1) Nuclear	☐
		2) Joint	☐
1.16	Total Family members		

SECTION 2			
2.1	Have you visited a health facility or camp for any reason for yourself (or for your children) during the past 12 months?	1) Yes	☐
		2) No (If No, Skip to Q No 2.3)	☐
2.2	If Yes, which health facility / personnel did you visit? (Multiple Answer)	1) AWC	☐
		2) ANM	☐
		3) Sub-Centre	☐
		4) PHC	☐
		5) Any other Govt. Health facility	☐
		6) Private Hospital/Doctor	☐
		7) RMPs	☐
		8) Other Specify _____	☐
2.3	What was the reason behind visit? (Multiple	1) General Health Consultation	☐

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	Answer)	2) Minor Ailments ☐ 3) ANC / Gynecological Complications ☐ 4) PNC ☐ 5) Immunization ☐ 6) Family Planning ☐ 7) Accidents ☐ 8) Any other_____ ☐
2.4	If went to the nearby PHC, what was the frequency in past twelve months?	1) Once in a week ☐ 2) Once in fifteen days ☐ 3) Once in a month ☐ 4) Once in six months ☐ 5) Once in a year ☐

		Yes / No	Remarks
2.5	Did you receive the services that you went for?		
2.6	Are you Satisfied with the PHC Services?	1) Fully Satisfied ☐ 2) Partially satisfied ☐ 3) Not Satisfied ☐	
2.7	Did you pay money to get the services? (How much and for what)		
2.8	Was the doctor available at the health facility?		
2.9	Did you meet the doctor?		
2.10	Are you satisfied with the attention paid by the doctor?	1) Fully Satisfied ☐ 2) Partially satisfied ☐ 3) Not Satisfied ☐	
2.11	Did you get medicines from health facility?		
2.12	Did you meet any other staff? Specify		
2.13	During this visit did the staff spend enough time with you?		
2.14	Are you satisfied with the attention paid	1) Fully Satisfied ☐	

	by the staff?	2) Partially satisfied ☐ 3) Not Satisfied ☐	
2.15	How was the cleanliness of the Health Facility?	1) Very clean ☐ 2) Somewhat clean ☐ 3) Not clean ☐	
2.16	Did you receive any referral services from PHC or Sub Centre?	1) No ☐ 2) Yes from PHC ☐ 3) Yes From SC ☐	
2.17	Where did they refer to?	1) CHC ☐ 2) TH ☐ 3) DH ☐ 4) Medical College Hospital ☐ 5) Private Hospital ☐ Others	
2.18	If yes, then for which health problem?		
2.19	What are the activities conducted by the PHC in the village?	1) School Health Programme ☐ 2) Immunization Programme ☐ 3) Eye Screening ☐ 4) Cataract Camps ☐ 5) Health Education activities ☐ 6) Other Specify_____ ☐	
2.20	Where would you prefer to go to seek health services?	1) Sub Center ☐ 2) PHC ☐ 3) CHC ☐ 4) TH ☐ 5) DH ☐	

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		6) Private Hospital / dispensary ☐	
		7) Others ☐	
2.21	Who manages the nearby PHC?	1) Government ☐	
		2) Private (NGO /Trust /Society /Medical Colleges) ☐	
2.22	Have you heard about Arogya Bandhu scheme?	1) Yes ☐	
		2) No ☐	
2.23	Are you aware of Arogya Raksha Samithi (ARS)?	1) Yes ☐	
		2) No ☐	
2.24	If Yes, what are the activities conducted by ARS?	1) 2) 3) 4)	
2.25	Are you a member of ARS?	1) Yes ☐	
		2) No ☐	
2.26	If yes, are the meetings conducted frequently	1) Yes ☐	
		1) No ☐	
2.27	What are the major issues discussed in these meetings?	1) 2) 3)	
2.28	Are the members of the ARS given power through consultation, to decide the disbursement of funds to the PHC?	1) Yes ☐	
		2) No ☐	
2.29	Are you aware of government schemes for safe motherhood?	1) Yes ☐	
		2) No ☐	
2.30	If Yes, what are the schemes facilitated through the PHC?	1) 2) 3)	
2.31	Is this a functional 24*7 health facility?		
2.32	Is the doctor available 24x7?		

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2.33	Are deliveries conducted 24*7?		
2.34	Who conducts deliveries before 4 PM? (Doctor / Staff Nurse)		
2.35	Who conducts deliveries after 4 PM? (Doctor / Staff Nurse)		
2.36	What kind of examination was done during ANC? **(for women who have delivered in last 12 months)**	Abdominal examination ☐	
		Blood Pressure ☐	
		Weight ☐	
		Height ☐	
		TT ☐	
		IFA ☐	
2.37	Do you think the quality of services offered in the PHC is good?	1) Yes ☐	
		2) No ☐	
2.38	In your opinion have the services provided in the PHC have improved after the implementation of Arogya Bandhu Scheme?		
2.39	How can the PHC services be improved?	1) 2) 3) 4)	

Annexure: Interview with Medical Officers / Management

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An Evaluation of the Arogya Bandhu Scheme in the State of Karnataka

Questionnaire for the Primary Health Center

Consent

Greetings!!

My name is _____ and I am conducting survey for Department of Health and Family Welfare, Government of Karnataka and Institute of Health Management Research on the Arogya Bandhu Scheme, to know about the utilization pattern, different stakeholder's perception regarding the service and to measure the impact of the program. All information will be held for statistical and study purposes only, and any identifying information will be kept confidential. Your participation is valuable, and it will benefit to the community, as it may help the Government further in improving the services.

Schedule No: _____

SECTION 1: BASIC PROFILE			
1.1	Name of PHC:		
1.2	Village:		
1.3	Block/Taluka:		
1.4	District:		
1.5	Sanctioned Beds:		
1.6	Functional Beds:		
1.7	Population covered:		
1.8	Total number of SCs covered:		
1.9	Time taken to reach next higher level of public health facility **(in minutes)**		
1.10	Date of Interview		
1.11	Medical Officer	Name	
		Age	
		Contact No	
		Reg No (KMC / MCI)	
1.13	Signature of the Interviewer		

SECTION 2: PARTNERSHIP DETAILS		
2.1	Name of partner medical college / agency:	

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2.2	This medical college / agency **(please tic)**	Fully manage the PHCs with financial assistance by Govt.		
		Contribute to the improvement of the facility without directly managing the PHCs		
2.3	Since when **(month and year of partnership)**			
2.4	If only contribute, in which component contributing		**Tick**	Remarks
	2.4.1 Equipments and furniture's			
	2.4.2 Computers			
	2.4.3 Additional requirement of drugs and chemicals			
	2.4.4 Water and toilet facility to the hospital			
	2.4.5 Construction and renovation of the existing building			
	2.4.6 Provision of developing hospital garden and fencing or compound			
	2.4.7 Strengthening of Laboratory			
	2.4.8 Provision of solar water heaters			
	2.4.9 Providing n on-clinical services – PHC complex			
	2.4.10 Provision of Ambulance Services in PHC area			
	2.4.11 Provision for water purification system			
	2.4.12 Provision for Bio-medical waste management			
	2.4.13 Building maintenance			
	2.4.14 Provision of Specialist Services			
	2.4.15 Conducting camps			

SECTION 3: MANPOWER							
	Are following staff available in the sub centre?	**IPHS norms**	**Status before Arogya bandhu (YES/NO)**	**Current Status (YES/NO)**	**Through agency (A) / Deputation(D)**	**Qualification**	**Salary in INR**
3.1	Medical Officer In Charge (MOIC)	1					

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3.2	Medical Officer/Doctor	1					
3.3	Senior Health Assistant (Female)	1					
3.4	Senior Health Assistant (Male)	1					
3.5	Junior Health Assistant (Female)	1 / 5000 population					
3.6	Junior Health Assistant (Male)	1 / 1000 population					
3.7	Staff Nurse	3 (2 may be contractual)					
3.8	Lab Technician	1					
3.9	Pharmacist	1					
3.10	Clerical (SDC/FDC) Staff	2					
3.11	Group D/ Class IV staff	4					
3.12	Drivers	1					
3.13	Ophthalmic Assistant	1					
3.14	AYUSH Doctor	1					
3.15	Lady Doctor	1					
3.16	Data Entry Operator	1					

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SECTION 4: INFRASTRUCTURE					
4.1	Type of building: **(Please tic)**	Rented premises			
		Government building			
		Other government building			
		NGO/PRI/Donated building			
					(Yes / No)
4.2	Does the PHC have 24 hour running water supply?				
4.3	Does the PHC have regular electricity supply?				
4.4	Is there any Power backup in PHC? (Generator / inverter)				
4.5	Is there any Communication facility (Mobile / landline) in PHC?				
4.6	Is there Internet facility in PHC?				
4.7	Are there separate public utilities for males and females?				
4.8	Is there residential facility for Doctor?				
4.9	How far does the Doctor stay from the PHC? (in Kilometers)				
4.10	Is there residential facility for Health Assistant (Male)?				
4.11	Is there residential facility for Health Assistant (Female)?				
4.12	Is there residential facility for nurse / ANM?				
4.13	Is a **four wheeler** available for program implementation				
4.14	Is computer facility available for HMIS submission?				
4.15	Are those facilities available?	4.14.1 Operation Theatre			
		4.14.2 Labour Room/ IUD room			
		4.14.3 Outpatient Room			
		4.14.4 Injection room / dressing room			
		4.14.5 Ward			
		4.14.6 Dispensing room for giving medicines			
		4.14.7 Storeroom			
4.16	Monthly bill for **Phone + water + electricity**	≤ 1500 Rs.		If > 1500 Rs. How additional bill paid:	
		> 1500 Rs.			

SECTION 5: EQUIPMENTS					
		Available (Yes / No)	**Functional (Yes / No)**	**From Govt. (G) / by agency (A)**	**Remarks**
5.1	Deep freezer				

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5.2	ILR (Ice Line Refrigerator)				
5.3	Cold Box				
5.4	Vaccine carrier				
5.5	Weighing machine for infants				
5.6	Weighing machine for adults				
5.7	BP instrument				
5.8	Autoclave				
5.9	Steam sterilizer				
5.10	MTP Instruments				
5.11	Labour room table and equipments				
5.12	Microscope				
5.13	Suction Apparatus (Manual or Automatic)				
5.14	Needle Destroyer				
5.15	Oxygen Cylinder				
5.16	Thermometer (oral or Rectal)				
5.17	Fumigation machine				
5.18	Radiant warmer				
5.19	Phototherapy unit				

SECTION 6: DRUGS				
KITS		**Available (Yes / No)**	**Stock out in last 1 month**	**Remarks**
6.1	Kit G IUD Insertion			
6.2	Kit I Normal Delivery Kit (DDK)			
CONTRACEPTIVES				
6.3	Oral Pill			
6.4	Condoms			
6.5	Copper T			
VACCINES				

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6.6	BCG			
6.7	DPT			
6.8	OPV			
6.9	Measles			
6.10	T.T			
6.11	DT			
6.12	Hepatitis B			
6.13	Vitamin A Solution			
OTHERS				
6.14	IFA Tab Small			
6.15	IFA Tab Large			
6.16	ORS packet			
6.17	Disposable delivery kit			
6.18	Antipyretics/Analgesics			
6.19	Inj .Gentamycin /Ampicillin			
6.20	Anti-snake Venom			
6.21	Chloroquin Tablets			
6.22	I/V fluids			
6.23	Tubectomy Kit			
6.24	Anti Rabies vaccine			
6.25	Anti Tubercular drugs			
6.26	Emergency Tray Drugs (Inj. Diazepam,Inj. Lignocanine Hydrochloride, Nifidipine Tablet, Inj. Magnesium Sulphate)			
6.27	Madilu Kits			

SECTION 7: SERVICES		
		Available (Yes / No)
7.1	Is this a functional 24*7 health facility?	
7.2	Is the doctor available 24x7?	
7.3	Are deliveries conducted in this facility?	
7.4	Are deliveries conducted 24*7?	
7.5	Who conducts deliveries before 4 PM? (Doctor / Staff Nurse)	
7.6	Who conducts deliveries after 4 PM? (Doctor / Staff Nurse)	

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7.7	Is service for assisted delivery (forceps or vacuum) provided in this facility?			
7.8	Is administration of parenteral Oxytoxcics available?			
7.9	Is administration of parenteral antibiotics available?			
7.10	Are services for managing PPH available?			
7.11	Are essential **newborn care services** available?			
7.12	Does the facility have the services for managing children suffering from	7.10.1	Diahorrea	
		7.10.2	ARI / pneumonia	
7.13	Are antenatal care (ANC) services provided in this facility?			
	7.13.1	Is Haemoglobin estimation carried out?		
	7.13.2	Is injection TT given to pregnant women?		
	7.13.3	Is IFA tablets provided in ANC?		
7.14	Are the following basic laboratory services provided?			
	7.14.1	Haematological test		
	7.14.2	Malaria test		
	7.14.3	TB test (Sputum testing for mycobacterium)		
	7.14.4	Test for Blood Sugar		
	7.14.5	Routine urine		
	7.14.6	Stool examination		

SECTION 10 : QUALITY CONTROL			
		(Yes / No)	**Remarks**
10.1	Does the PHC have colour bins for BMW segregation?		
10.2	Does the PHC have Needle destroyers?		
10.3	Is BMW disposed by common treatment facility?		
10.4	Is Deep Burial Pit used for disposal of BMW?		
10.5	Is fumigation done in OT?		
10.6	Is fumigation done in Labour room?		
10.7	Is there a patient complaint box/register?		
10.8	Has action been taken against complaints registered in last month?		
10.9	Frequency of PHC visits by DHO (Number)		
10.10	Is there a citizen charter displaying the list of services		

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	available?		
10.11	Is Citizen's charter with the list of available services displayed in local language?		
10.12	Frequency of PHC visits by program officer (Number)		

SECTION 11 : AROGYA RAKSHA SAMITI				
				(Yes / No)
11.1	Is ARS functional?			
11.2	ARS money spent on	11.2.1	Purchase of drugs	
		11.2.2	Hiring transport for referral of patients.	
		11.2.3	For maintenance of generator.	
		11.2.4	For maintenance of equipments.	

What is / are the motivating factor/s to work in this PHC / organisation?

1. _____

2. _____

3. _____

Any Comments:

1. _____

2. _____

3. _____

4. _____

5. _____

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PERFORMANCE INDICATORS FOR PHC

SECTION 12 : PERFORMANCE INDICATORS			
S.No.	Parameters	**Baseline data at the time inception of partnership**	**Data for Previous Month**
MATERNAL MORTALITY RATE			
12.1	Total number of pregnant women Registered for ANC		
12.2	Number of pregnant women received 3 check ups		
12.3	Number of pregnant woman fully immunized (2TT) against tetanus		
12.4	Pregnant women with Hypertension (BP>140/90) or other complications		
12.5	Pregnant women with Anaemia (Hb level<11 g/dl)		
12.6	Number Pregnant women having severe anaemia (Hb<7g/dl) treated at institution		
12.7	Number of institutional deliveries		
12.8	Number of deliveries conducted at home		
12.9	Number of home deliveries attended by a Doctor, Nurse or ANM (SBA trained) during the reporting month.		
12.10	No. of maternal deaths		
12.11	Total number of women who have received post natal check-up		
12.12	Total number of women who have received post partum check-up within two weeks of delivery		
INFANT MORTALITY RATE			
12.13	No. of Infant Deaths.		
12.14	Total number of live births during the reporting month		
12.15	Number of Newborns having weight less than 2.5 kg		
12.16	Number of children exclusively breast fed (6 months)		
12.17	Total Number of children aged between 9 and 11 months		

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12.18	Total Number of children aged between 9 and 11 months who have been immunized for measles		
12.19	Total Number of children aged between 9 and 11 months who have been fully immunized		
12.20	Number of cases of Childhood Diseases reported during the month (0-5 years)		
12.21	Total number of cases of Diarrhoea reported in children below five years		
12.22	Total number of children below 5 years admitted with respiratory infections		
TUBERCULOSIS (RNTCP GUIDELINES)			
12.23	Number of OPD attendance		
12.24	Screening of chest symptomatics (2% of the new adult OPD- Sputum referral)		
12.25	Total number of sputum smear collected (two samples)		
12.26	Total number screened patients diagnosed for TB		
12.27	No of TB patients started DOTS		
12.28	No of TB patients are still smear negative after two months (intensive phase) of DOTS		
12.29	No of TB patients successfully cured		
12.30	No of TB patients left the treatment		
MALARIA			
12.31	Active surveillance (1% of the population)		
12.32	Passive surveillance (15% of the new OPD)		
12.33	Number of slides examined for malaria		
12.34	No. of examined blood slides found positive for malaria		
12.35	No. of blood smears found positive for falciparum		
LEPROSY			
12.36	Prevalence rate per ten thousand population		
12.37	Detection rate per 1 lakh population (ANCDR- Annual New Case Detection Rate)		

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HIV/AIDS/STD			
12.38	Incidence of HIV positive cases		
12.39	Incidence of STD positive case		
ICDS			
12.40	Percentage of Anganawadi Health checkup		
12.41	Distribution of Iron and Folic acid through ICDS		
WATER SUPPLY AND SANITATION			
12.42	Percentage of villages /families access to safe drinking water supply		
12.43	Percentage of villages/families having a sanitation facility		
OTHERS			
12.44	Filaria Endemicity Rate (clinical case or slide positive case or both)		
12.45	No. of cataract operation done		
12.46	Prevalence (number) of mental illness		
12.47	Prevalence (number) IDD cases or goitre		
12.48	Number of MTPs		
12.49	IUD insertion in last 3 month / eligible couple		
12.50	School health visits conducted in last 3 months		
12.51	Number of IPD admissions		
12.52	Number of Male sterilisation operations		
12.53	Number of Female sterilisation operations		

'Arogya Bandhu' Scheme for Involving Private Medical Colleges and Other Agencies in the Management of PHCs: An Evaluation Study

Report on Training for Field Workers and Progress on Field Work

Date: 29th April 2013

Venue: Tutorial Room, IHMR-Bangalore

Funding Agency: Government of Karnataka

Number of Participants: 14

Agenda:

Sl. No.	Activity	Person Responsible
1	Registration	Mr Mahadev
2	Welcoming and Introduction (Participants)	Dr Veena and Dr. Yashoda
3	About IHMR-B and the Project Arogya Bandhu	Dr. Manoj Kumar Gupta
4	Household Survey	Dr Veena R
5	Discussion and Clarification	Dr. Manoj Kumar Gupta
6	Distribution of Questionnaires	Dr. Yashoda and Mr. Mahadev
7	Distribution of IDs and Letters	Dr. Veena R

Minutes:

- The training session started by welcoming the participants to the campus.
- The participants were briefed about the institute and the project 'Assessment of Arogyabandhu Scheme in Karnataka'.
- The session on the survey of Household questionnaire was conducted
- The field workers were provided with details of the facilities to be visited and how to select the households, maps of the districts
- They were also provided with the permission letter from Government of Karnataka to carry out the survey addresses to the Medical Officers
- ID Cards were provided to the field workers to help in their field work
- Role play was conducted for the field workers on conducting the survey
- The tools were handed over to the field workers and informed to start the survey from first week of May 2013 and complete by mid June 2013.

Training of the Field workers

Participants in the training