EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY

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DISSERTATION

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INTRODUCTION

"Evaluation is fact-finding, not fault-finding"[1]

The concept of primary health care is not new to India. The experience and concern in health development and primary health care in India date back to period of the Indus Valley Civilization as far back as 3000 B.C., and one can find evidence of environmental sanitation programs such as underground drains, public baths in the cities.[2] *'Arogya'* or 'health' was given high priority and this concept of health included physical, mental, social and spiritual well being. This cherished value regarding health is also enshrined in an ancient Sanskrit verse "*Om Sarve Bhavantu Sukhinah, Sarve Santu Nir-Aarmayaah, Sarve Bhadraanni Pashyantu, Maa Kashcid-Duhkha-Bhaag-Bhavet"* meaning "May All become Happy; May All be free from illness; May All see what is auspicious; May no one Suffer". In *Ayurveda* i.e. the 'Science of Life', one finds even in 1400 B.C. emphasis on health promotion and health education.

In modern India, The Bhore Committee (1946) gave the concept of Primary Health Centre (PHC) as a basic health unit to provide as close to the people as possible, an integrated curative and preventive health care to the rural population with emphasis on Preventive and Promotive aspects of health care. The health planners in India have visualized the PHC and its Sub-Centres (SCs) as the proper structural units to provide health services to the rural population. The Central Council of Health at its first meeting held in January 1953 had recommended the establishment of PHCs in community development blocks to provide comprehensive health care to the rural population. These centres were functioning as peripheral health service institutions with little or no community involvement. Increasingly, these centres came under

criticism, as they were not able to provide adequate health coverage, partly, because they were poorly staffed and equipped, and lacked basic amenities.[3]

A new approach to health care came into existence in 1978, following an international conference at Alma-Ata (USSR). This is known as "primary health care". It has all the hallmarks of a primary health care delivery, first proposed by the Bhore Committee in 1946 and now espoused world-wide by international agencies and national governments.[4] Before Alma-Ata, primary health care was regarded as synonymous with "basic health services", "first contact care", "easily accessible care", "services provided by generalists", etc. The Alma-Ata international conference gave primary health care a wider meaning. The Alma-Ata Conference defined primary health care as follows[5]:-

"Primary health care is essential health care made universally accessible to individuals and acceptable to them, through their full participation and at a cost the community and country can afford".

The primary health care is equally valid for all countries from the most to the least developed, although it takes varying forms in each of them. The concept of primary health care has been accepted by all countries as the key to the attainment of Health for All by 2000 AD. It has also been accepted as an integral part of the country's health system.

The 6th Five year Plan (1983-88) by Govt. of India proposed reorganization of PHCs on the basis of one PHC for every 30,000 rural populations in the plains and one PHC for every 20,000 population in hilly, tribal and desert areas for more effective coverage. However, as the population density in the country is not uniform,

the number of PHCs would depend upon the case load. PHCs should become functional for round the clock with provision of 24 hours × 7 days/week nursing facilities. Selected PHCs, especially in large blocks where the Community Health Centre is over one hour of journey time away, may be upgraded to provide 24 hour emergency hospital care for a number of conditions by increasing the number of Medical Officers.[3]

PHCs are the cornerstone of rural health services - a first port of call to a qualified doctor of the public sector in rural areas for the sick and those who directly report or referred from Sub-Centres for curative, preventive and promotive health care. It acts as a referral unit for six Sub-Centres and refers out cases to Community Health Centres (CHCs- 30 bedded hospital) and higher order public hospitals at sub-district and district hospitals. PHC has 4-6 indoor beds for patients.[3]

The Ninth Five Year Plan (1997-2002) observed that inappropriate location, poor access, poor maintenance, gaps in critical manpower, mismatches between personnel and equipment, lack of essential drugs/diagnostics, poor referral linkages, are some of the factors responsible for sub-optimal functioning of primary health care institutions.[6]

In 2005, National Rural Health Mission (NRHM) was launched by Govt. of India to strengthen the rural public health system of the country. Since inception, it has met many hopes and expectations. The Mission seeks to provide effective health care to the rural populace throughout the country with special focus on the States and Union Territories (UTs), which have weak public health indicators and/or weak infrastructure. The National Rural Health Mission (NRHM) seeks to provide effective healthcare in rural population throughout the country with special focus on 18

Empowered Action Group (EAG) states, which have weak public health indicators and/or weak infrastructure. According to the NRHM norms, Karnataka has been a non-focus and high performing state. The main goal of the NRHM is to improve the availability of and access to quality health care by people, especially for those residing in the rural areas, poor, women and children. The specific goals are:

- Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR)
- Universal access to public health services such as Women's health, child health, water, sanitation & hygiene, immunization and nutrition
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases
- Access to integrated comprehensive primary health care
- Population stabilization, gender and demographic balance
- Revitalizing local health traditions and mainstream *Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH)*
- Promotion of healthy life styles

In order to provide optimal level of quality health care, a set of standards called Indian Public Health Standards (IPHS) were recommended for Primary Health Centre (PHC) in early 2007 which remain as one of the highlights of NRHM. Indian Public Health Standards (IPHS) are a set of standards envisaged to improve the quality of health care delivery in the country under the National Rural Health Mission. A Task Group under Director General of Health Services (DGHS) was constituted to

recommend the Standards. The IPHS is based on its recommendation and act as a bench mark for facilitating health institutions to reach desirable levels of resource provision.[9]

The implementation framework of NRHM, envisaged that the public health institutions including Sub-centres would be upgraded from its present level to a level of a set of standards called “Indian Public Health Standards (IPHS)”. Towards this end, The Indian Public Health Standards (IPHS) for Sub-centres (SCs),[7] Primary Health Centres (PHCs),[3] Community Health Centres (CHCs),[8] Sub-District[9] and District Hospitals[10] were first published in January / February, 2007 and have been used as the reference point for public health care infrastructure planning and up-gradation in the States and union territories. The IPHS documents have been revised in 2012 keeping in view the changing protocols of the existing programmes and introduction of new programmes especially for Non-Communicable Diseases. Flexibility is allowed to suit the diverse needs of the states and regions.[11]

Health has been declared a fundamental human right. This implies that the state has a responsibility for the health of its people. National governments all over the world are striving to expand and improve their health care services. Health services are designed to meet the health needs of the community through the use of available knowledge and resources.[12]

Two major themes have emerged in recent years in the delivery of health services:

a) Health services should be organised to meet the needs of entire populations and not merely selected groups. Health services should cover the full range of preventive, curative and rehabilitation services. Health services are now seen as part of the basic social services of a country.

b) It is now fully realised that the best way provide health care to the vast majority of undeserved rural people and urban poor is to develop effective "primary health care" services supported by an appropriate referral system.[12]

Among the ten components of the NRHM 'Plan of Action', component – b consists of strengthening sub-centres, component – c strengthening primary health centres and component – d strengthening CHCs for first referral care. In order to facilitate actions in accordance with the above mentioned components there is a need to carry out a "facility survey" to understand the current availability of services.[13]

Our country has a large number of public health institutions in rural areas from Sub-centres at the most peripheral level to the district hospitals at the district level. It is highly desirable that they should be fully functional and deliver quality care.

The health care system in India has expanded considerably over the last few decades; however, the quality of services is not uniform, due to various reasons like non availability of manpower, problems of access, acceptability, lack of community involvement, etc. Hence, standards are being introduced in order to improve the quality of public health level.

As per the Rural Health Statistics Bulletin published by Ministry of Health & Family Welfare, Govt. of India, as on 31st March, 2015, there were, 5,396 Community Health Centres (CHCs), 25,308 Primary Health Centres (PHCs) and 1,53,655 Sub Centres (SCs) functioning in the country and 206 CHCs, 2,353 PHCs and 9,264 SCs of them were functioning in Karnataka.[14] Although the number appears to be impressive, PHCs suffer from issues such as the inability to perform up to the expectation due to non-availability of doctors at PHCs, inadequate physical

infrastructure and facilities, insufficient quantities of drugs, lack of accountability to the public and lack of community participation and also for the lack of set standards for monitoring quality care etc. and they are very much essential for providing quality services. Apart from that, there is also a felt need for qualitative management of health care provided at these centres. Hence a quality assurance procedure in health care delivery system at rural level has to be developed so as to make it more accessible, affordable and accountable[3].

In view of the above considerations, the present study was undertaken to evaluate to what extent standards prescribed by IPHS are followed by CHCs, PHCs and SCs of Belagavi district in North Karnataka. This study also provide some useful insight & suggestions to the policy makers and district health officials, so that necessary measures can be implemented to strengthen the CHCs, PHCs and SCs for effective health care delivery at the grass root level.

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ENDORSEMENT BY THE HEAD OF DEPARTMENT, PRINCIPAL / HEAD OF THE INSTITUTION

This is to certify that the dissertation entitled **"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY"** is a bona fide and genuine research work done by **Candidate Reg.No: BD0113005.**

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I,**REG. NO. BD0113005,** hereby declare that the information and the data mentioned in my dissertation entitled **"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY"** belongs to me and is original.

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OBJECTIVE

1) To Evaluate the Government Health Centres of a district in North Karnataka According to Indian Public Health Standards 2012.

REVIEW OF LITERATURE

History of Public Health Development in India

'History of Health Services in India' points out that India has one of the most ancient civilizations in recorded history.[15] Thousands of years before the Christian era, there existed a civilization in the Indus Valley, known as the Indus Valley Civilization. Excavations in the Indus Valley (e.g., Mohenjo daro and Harappa), showed relics of planned cities with drainage, houses and public baths built of baked bricks suggesting the practices of environmental sanitation, by ancient people as far back as 3,000 B.C. India was invaded by the Aryans around 1,400 B.C. It was probably during this period, the Ayurveda and the Siddha systems of medicine came into existence. Ayurveda developed a comprehensive concept of health. In Ayurveda, one finds even in 1400 B.C., emphasis on health promotion and health education. ‘Ayurveda’ or the ‘Science of Life’ developed a comprehensive concept of health. The Manu Samhita prescribed rules and regulations for personal health, dietetics and hygienic ritual at the time of birth and death, and also emphasised the unity of the physical, mental and spiritual aspects of life. *‘Sarve Jana Sukhino Bhavatu’* (May all men be free from disease and may all be healthy) was an ancient saying of the Indian sages. This concept of happiness has its roots in the ancient Indian philosophy of life, which conceived the oneness and unity of all people, wherever they lived.[16]

The post-Vedic period (600 B.C. – 600 A.D.) was dominated by the religious teachings of Buddhism and Jainism. Medical subjects were introduced in the ancient universities of Taxila and Nalanda, leading to the titles of Pranacharya and Pranavishara.[15] A hospital system was developed during the reign of Rahul Sankrityayana (son of Buddha) for men, women and animals. This system of

medicine during the rule of Emperors Ashoka, Maurya (3rd century B.C.), schools of learning in the healing arts were created. Many valuable herbs and medicinal combinations were employed. Even today, many of these continue to be used. During the reign of Ashoka and Maurya, there was a firm belief that an attempt was really made to provide good health care to all of its citizens. During 650 AD - 1850 AD the Arabic system of medicine, popularly known as Unani was introduced by the Moghul emperors. Since then it became part of Indian Medicine. With changes in the political conditions in India, the torch which was lighted thousands of years ago by the ancient sages grew dim, medical education and medical services became static, and the ancient universities and hospitals disappeared.

Unfortunately, for various reasons and particularly because of the onslaught of series of foreign aggressions and regimes leading to disruption of pre-existing health services as a part of social and cultural interactions and exchanges, the great era was lost to darkness. Ayurveda not only failed to develop, but in fact, it languished because of want of adequate state patronage and recognition.[16]

During the middle of the 18th century, the British Government in India established medical services which were primarily meant for the benefit of the British nationals, the armed forces and a few privileged civil servants. But the vast majority of the native population was denied access to the Western medicine. Indigenous systems of medicine were totally neglected and allowed to languish. Services which were available in general hospitals located in big cities and commercial centers were largely curative for the care of the sick and injured. Later on, some preventive measures were provided for the control of epidemics, and dispensaries were opened in some remote villages. Provincial health departments were established in 1919. But

neither health planning nor medical education was related to the health needs of the people. This strong Western bias was largely responsible for blind adoption of sophisticated modern medicine for a few, neglecting the vital interests of the vast majority.[16]

Changing concepts in provision of health care

Against the background of nation's commitment to improve health in developing countries, several approaches to providing health care came into existence.

These are: A) Comprehensive health care

B) Basic health services and

C) Primary health care.

A. Comprehensive health care:

This concept was put forward by the Bhore Committee in 1946 when it stressed the importance of providing the integrated preventive, curative and promotive health care from 'womb to tomb'. According to this Committee, the Comprehensive health care should have following criteria:

a. Provision of integrated preventive, curative and promotive health care
b. Be as close to the beneficiaries as possible
c. The widest cooperation between people, the services and the profession
d. Availability of health services to all irrespective of their ability to pay
e. Taking care especially of the vulnerable and weaker sections of the community
f. Creating and maintaining a healthy environment both in homes as well as at working places.

The Bhore Committee suggested that comprehensive health care should replace the policy of providing more medical care. This concept formed the basis of national health planning in India and led to the establishment of a network of Primary Health Centres and Sub-Centres. The Government of India, during the successive five year plans has built up a vast infrastructure of rural health services based on primary health centres and sub-centres. However, experience during the past 50 years has indicated that the primary health centres were not able to effectively cover the whole population under their jurisdiction, and their sphere of service did not extend beyond a 2-5 km radius. These facilities often did not enjoy the confidence of the people because they were understaffed and poorly supplied with medicines and equipment; as a result, there was growing dissatisfaction with the delivery of health services.

B. Basic Health Services:

The term 'basic health services' is used by UNICEF/WHO in their Joint Health Policy in the year 1975,[18] where they defined the term as "a network of coordinated, peripheral and intermediate health units capable of performing effectively a selected group of functions essential to the health of an area and assuring the availability of competent professional and auxiliary personnel to perform these functions".

Even though both the above two concepts did not differ materially in the quality or content of health services, the drawbacks of basic health services are lack of community participation and inter-sectoral coordination and dissociation from socio-economic aspects of health.

C. Primary health Care:

This is the new concept that came into existence following an international conference on Primary Health Care at Alma-Ata, USSR, 1978. However, the Bhore Committee has proposed this concept way back in 1946.[18] Before this conference, this health care was regarded as synonymous with 'basic health services, first contact care and easily accessible care'.

The Alma-Ata Conference defined 'Primary health Care' as "an essential health care made universally accessible to individuals & communities and acceptable to them through their full participation and at a cost the community and the country can afford".[20] The concept of primary health care was accepted as the key to the attainment of Health for All by 2000 AD and is an integral part of our country's health system.

Health Planning in India pertaining to strengthening Primary Health Care delivery system:

The National Planning Committee (NPC) set up by the Indian National Congress in 1938 under the chairmanship of Colonel S. Sokhey[21] stated that the maintenance of the health of the people was the responsibility of the State and the integration of preventive and curative functions in a single state agency was emphasized.

While recognizing "the great, lack of doctors", Health Survey and Development Committee (Bhore Committee) was constituted in 1943 to solve the problem. It was guided by the principle as 'nobody should be denied access to health services for his inability to pay' and that the focus should be on rural areas. The

Committee had made elaborate recommendations concerning the training of what it termed as the “basic doctor" and stressed that such training should include “as an inseparable component, education in community and preventive aspects of medicine”. Following the acceptance of Report of Bhore Committee by the rulers of newly independent country, a start was made in 1948 of having one ‘Community Health Worker’ for every 1000 people to entrust ‘people’s health in people’s hands’ and in 1952 primary health centers were setup to provide integrated promotive, preventive, curative and rehabilitative services to entire rural population as an integral component of broader ‘Community Development Programme’ (CDP).[22]

The Health Survey and Planning Committee of 1961 (Mudaliar Committee) felt the growth of infrastructure needed radical transformation and further growth. It admitted that the basic health facilities had not reached at least half the nation and there was gross mal-distribution of hospitals and beds in favour of urban areas. The committee found that the quality of services provided by PHCs were grossly inadequate with poor functioning, lack of referral system and gross under staffing due to insufficient resources. It recommended strengthening of existing PHCs before establishing new PHCs.[23]

The Chadah Committee Report in 1963 has recommended one ‘basic health worker’ for every 10,000 population in rural areas to provide comprehensive health care and also emphasized the need for setting up of “drinking water boards”.[24]

The Multipurpose Health Workers Scheme was planned to organize and use of available manpower to reduce the area and population covered by each field staff in order to reduce the travel time and to make services more effective and more satisfactory. Each multipurpose health worker was entrusted with the task of

providing comprehensive health care to about 5,000 populations. The Committee headed by Kartar Singh (1973) felt that the immunization programs against common childhood diseases have not taken deep roots and coverage continues to be poor.[25]

The adoption of the Western model of medical services has resulted in emphasis on "cure" rather than on "care". Another problem was misdistribution of the facilities. The Srivastava Committee Report on 'Medical Education and Support Manpower' (1975) remained focused on giving recommendations on how the health cadres at the primary level should be distributed.[26]

India has come quite close to the Alma-Ata Declaration on Primary Health Care made by all countries of the world in 1978.[27] The Alma Ata Declaration in 1978 gave an insight into the understanding of Primary Health Care. It included commitment of Governments to consider health as fundamental right.[28] It viewed health as an integral part of the socio-economic development of a country. It provided the most holistic understanding to health and the framework that States needed to pursue to achieve the goals of development.[29] The Declaration recommended that primary health care should include at least the following elements: education concerning prevailing health problems and methods of identifying, preventing and controlling them; promotion of food supply and proper nutrition, and adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against major infectious diseases; prevention and control of endemic diseases, appropriate treatment of common diseases and injuries promotion of mental health and provision of essential drugs. It also recognized that health is influenced by a multitude of factors and not just the health services. The Declaration also recognized the need for a multi-sectoral approach to health and clearly stated that

primary health care had to be linked to other sectors. At the same time, the Declaration emphasized on complete and organized community participation, and ultimate self-reliance among individuals, families and communities assuming more responsibility for their health, facilitated by groups such as the local government, agencies, local leaders, voluntary groups, youth and women's groups, consumer groups and other non-governmental organizations.[32]

First National Health Policy was formulated in 1983 to make architectural corrections in health care system. National Health Policy gave a general exposition of the policies which require recommendations according to the circumstances prevailing in health sector.[31]

The National Rural Health Mission (2005-2012) (NRHM) is a major undertaking by Government of India to honour its commitments under Common Minimum Programme (CMP). NRHM is also strategic framework to implement the second National Health Policy-2002. It has adopted key guidelines given in National Health Policy 2002.[32]

It has been observed that health care system has expanded considerably over last few decades but quality of services is not up to the mark. Hence Indian Public Health Standards are being introduced in order to improve the quality of health care delivery.[31]

HEALTH CARE SYSTEMS IN INDIA

The health care system is intended to deliver the health care services. It constitutes the management sector and involves organizational matters. It operates in the context of the socioeconomic and political framework of the country. In India, it is represented by five major sectors or agencies which differ from each other by the health technology applied and by the source of funds for operation. These are:

1. PUBLIC HEALTH SECTOR

(a) Primary Health Care:

Primary health centres

Sub- centres

(b) Hospitals/Health Centres:

Community health centres

Rural hospitals

District hospital/health centre

Specialist hospitals

Teaching hospitals

(c) Health Insurance Schemes:

Employees State Insurance (ESI)

Central Govt. Health Scheme (CGHS)

(d) Other agencies: Defence services

Railways

2. PRIVATE SECTOR

(a) Private hospitals, polyclinics, Nursing homes, and dispensaries

(b) General practitioners and clinics

3. INDIGENOUS SYSTEMS OF MEDICINE

Ayurveda and Siddha

Unani and Tibbi

Homoeopathy

Unregistered practitioners

4. VOLUNTARY HEALTH AGENCIES

5. NATIONAL HEALTH PROGRAMMES[12]

Levels of health care

1. Primary care level:

It is the first level of contact of individuals, the family and community with the national health system, where "primary health care" (‘essential’ health care) is provided. It is close to the people, where most of their health problems can be dealt with and resolved. At this level that health care will be most effective within the context of the area's needs and limitations.[34]

In the Indian context, primary health care is provided by the complex of primary health centres and their sub-centres through the agency of multipurpose health workers, village health guides and trained dais. Besides providing primary health care, the village "health teams" bridge the cultural and communication gap between the rural people and organised health sector.

2. Secondary care level:

The next higher level of care is the secondary (intermediate) health care level. At this level more complex problems are dealt with. In India, this kind of care is generally provided in district hospitals and community health centres which also serve as the first referral level.[35]

3. Tertiary care level:

The tertiary level is a more specialized level than secondary care level and requires specific facilities and attention of highly specialized health workers.[36] This care is provided by the regional or central level institutions, e.g., Medical College Hospitals, All India Institutes, Regional Hospitals, Specialized Hospitals and other Apex Institutions. A fundamental and necessary function of health care system is to provide a sound referral system. It must be a two-way exchange of information and returning patients to those who referred them for follow-up care.[37] It will ensure continuity of care and inspire confidence of the consumer in the system. For a large majority of developing countries (including India) this aspect of the health system remains very weak.

Curative medicine, instead of functioning as an offshoot of public health, is found to work independent of public health. The phenomenal growth of curative medicine into specialities and super-specialities has affected the very delivery of health care in a coherent and holistic way. The corporate hospitals show more interest in specializations that fetch huge money rather than involving themselves in the provision of primary health care to the masses. Only government institutions cater to the poor that too badly falling short of the requirements. It is found that tertiary care

consumes most of the health care budget while primary health care and health promotion get only step-motherly treatment.[38]

A study conducted in Bangalore urban district in 2011-2012 to evaluate Indian Public Health Standards (IPHS) in five Primary Health Centres showed, due to a greater surplus in the primary health centres (PHCs), there were not enough availability of resources to run the PHCs efficiently. Totally only 67% of the services were available among the PHCs, only 45% of the manpower in the PHCs was functional. From qualitative survey conducted in two PHCs, it was found that the medical officers were unaware of the IPHS. But they knew about the various activities and programmes under National rural health mission (NRHM).[39]

A study conducted in Primary Health Centres of Chittoor District, Andhra Pradesh in 2012 for assessment of infrastructure facilities, manpower and services in 22 PHCs revealed that 63.6% of PHCs were providing in-patient services and 63.6%, the emergency services. 43.9% and 36.3% of the PHCs failed to meet the IPH Standards with respect to having Medical Officer and Lady Medical Officer. Only 59 % of PHCs were conducting deliveries despite the presence of labour room. Sufficient quantity of drugs was present in only 71.9% of PHCs.[40]

One more study conducted in Chittoor district of Andhra Pradesh on the Availability of Physical Infrastructure and Manpower Facilities in 34 Sub-centres (SC) in 2009-2010 revealed that the deficiency in the availability of health workers male and female were found to be 67.7% and 27.5%, respectively. The residential facility for health workers was available only in 26.4% SCs. Only 20.6% of SCs had stethoscope and B.P. apparatus.[41]

A study was conducted in Bharatpur district of Rajasthan in 2011 for assessing IPH Standards for Community health centres (CHCs) according to the revised draft (2010). Infrastructure Facilities - study showed that all the 13 CHCs had one operation theatre, laboratory and cold chain facility, 12 CHCs (92.3%) had labour room and telephone facility, 11 CHCs (84.6%) had availability of e-mail facility and 10 CHCs (76.9%) had fax facility. Human Resources- Around 31% of general surgeons and paediatricians were available as per the requirement. Only one CHC had the availability of anaesthetist. It was found that only four CHCs had general surgeon in place and at the majority of the CHCs (9), general surgeon was not available. Only five CHCs had physician in place while the majority of the CHCs (8) functioning without a physician. Only five CHCs were functioning with obstetrician, while the rest eight CHCs were functioning without an obstetrician. Only four CHCs were functioning with paediatricians, while the rest nine CHCs were functioning without a paediatrician. It showed that the availability of specialists to provide various specialist services at CHCs was found to be very poor. As per the guidelines, only 41% of Medical Officers were there at the CHC level. Only 163 (78.4%) nursing staffs were available out of required 208 nursing staff. Only 12 (30.8%) pharmacists/compounders, 26 (66.7%) laboratory technicians, 13 (50%) radiographers were available for service. Investigative Services – The study showed that pathological tests were available in all the 13 CHCs, X-ray facility in 69.2%, ECG in 23.1% of CHCs. Essential Newborn Care Services – Availability at newborn corner: only 3 (23.1%) radiant warmers, 4 (30.8%) resuscitators, 11 (84.6%) weighing scales, 9 (69.2%) suction pumps, 21 (80.77%) thermometers out of required 26, 11 (84.62%) hub cutters out of required 13 were available. Availability at Newborn Care Stabilization Unit (NBSU): Only 2 (3.8%) radiant warmers, 2 (7.7%) resuscitators, 6

(23.1%) laryngoscope sets, 4 (30.8%) weighing scales, 5 (38.5%) suction pumps were available in the study district. This facility based newborn care services were found to be almost absent in the CHCs of Bharatpur District.[42]

A study conducted in Jhajjar district of Haryana to find the gaps in facilities available at health sub-centres as per IPH Standards in 2011, showed the locality of sub-centres were in the middle of the villages and were easily accessible. Out of 15 study sub-centres, only one had designated building, in other two it was under construction. Rest all were running in the rented buildings and space was not adequate. Water supply, electricity, labour room, communication facilities, separate public utilities for males and females, residential facility were available in only few sub-centres. None of the sub-centres had an independent facility for transport. Services regarding ante-natal, natal and post-natal care, immunisation, family planning and contraceptive services, Oral Rehydration Solution (ORS) and other drugs for minor ailments, smear preparation for malaria, etc were available at all the sub-centres. All the sub-centres were also functioning as Directly Observed Treatment, Short course (DOTS) centres. National health programs, disease surveillance, control of locally endemic diseases, promotion of sanitation and field visits for home care were being carried out at all the sub-centres. At least one multipurpose health worker female [MPHW (F)] was available in all the sub-centres, multipurpose health worker male [MPHW (M)] at 9 sub-centres and additional MPHW (F) at 3 sub-centres were available. Status of quality control- citizen's charter was available in only 3 sub-centres, while guidelines for provision of services were available in 6 sub-centres only. Internal monitoring was being carried out in all the sub-centres but, external monitoring was being carried out in 8 sub-centres. Significant gaps existed in the facilities available at sub-centres. One of the key

factors responsible for non-utilisation of health services was the lack of adequate infrastructure and logistics at the sub-centre level.[43]

Another study was carried out to find out and compare to what extent the IPHS were followed by the PHCs in the selected districts of both the Empowered Action Group (EAG) state of Assam and non EAG state of Karnataka in 2008. 10 PHCs of Gulbarga district of Karnataka (1 from each 10 Talukas of Gulbarga) and 5 PHCs from Dhubri district of Assam were selected. It was a cross-sectional observational study conducted during September - October 2008, where the quality of care and services provided in the selected PHCs as per the IPHS norms was assessed. All the PHCs in both the studied districts were rendering the assured services of OPD, 24 hours general emergency service and referral services, while 24 hours delivery services were being provided by 80% of the PHCs of the selected districts of both the states. Functional labour rooms were available only in 80% and 90% of the studied PHCs in Assam and Karnataka respectively. Basic laboratory facilities, for routine blood, urine and stool examination were available in 80% of the studied PHCs in the non-Empowered Action Group state of Karnataka, while it was only in 20% of the studied PHCs of the Empowered Action Group state of Assam. The findings of the present study revealed important deficiencies as per IPHS norms in the studied PHCs of both Assam and Karnataka.[44]

Indian Public Health Standards (IPHS) Guidelines for Community Health Centres Revised in 2012[8]

Four PHCs are included under each CHC thus catering to approximately 80,000 populations in tribal/hilly/desert areas and 1,20,000 population for plain areas.

Service Delivery in CHCs:

- ❖ OPD Services and IPD Services: General, Medicine, Surgery, Obstetrics & Gynecology, Paediatrics, Dental and AYUSH services.
- ❖ Eye Specialist services (at one ophthalmologist for every 5 CHCs).
- ❖ Emergency Services
- ❖ Laboratory Services
- ❖ National Health Programmes

Every CHC has to provide the following services which have been indicated as Essential and Desirable. All States/UTs must ensure the availability of all Essential services and aspire to achieve Desirable services which are the ideal that should be available:

I. Care of Routine and Emergency Cases in Surgery:

- o This includes dressings, incision and drainage, and surgery for Hernia, Hydrocele, Appendicitis, Hemorrhoids, Fistula, and stitching of injuries.
- o Handling of emergencies like Intestinal Obstruction, Hemorrhage, etc.
- o Other management including nasal packing, tracheostomy, foreign body removal etc.

- Fracture reduction and putting splints/plaster cast.

II. Care of Routine and Emergency Cases in Medicine:

- Specific mention is being made of handling of all emergencies like Dengue Haemorrhagic Fever, Cerebral Malaria and others like Dog & snake bite cases, Poisonings, Congestive Heart Failure, Left Ventricular Failure, Pneumonias, meningoencephalitis, acute respiratory conditions, status epilepticus, Burns, Shock, acute dehydration etc.

III. Maternal Health:

- Minimum 4 ANC checkups including Registration & associated services
- 24-hour delivery services including normal and assisted deliveries.
- Managing labour using Partograph.
- All referred cases of Complications in pregnancy, labour and post-natal period must be adequately treated.
- Ensure post-natal care for.
- Minimum 48 hours of stay after delivery, 3-7 days stay post delivery for managing Complications.
- Proficiency in identification and Management of all complications including PPH, Eclampsia, Sepsis etc. during PNC.
- Essential and Emergency Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions.
- Provisions of *Janani Suraksha Yojana* (JSY) and *Janani Shishu Suraksha Karyakram* (JSSK) as per guidelines.

IV. Newborn Care and Child Health:

- Essential Newborn Care and Resuscitation
- Early initiation of breast feeding and promotion of exclusive.
- Newborn Stabilization Unit.
- Counseling on Infant and young child feeding as per the Infant and Young Child Feeding (IYCF) guidelines.
- Routine and emergency care of sick children including Facility based IMNCI strategy.
- Full Immunization of infants and children.
- Prevention and management of routine childhood diseases, infections and anemia etc.
- Management of Malnutrition cases.
- Provisions of Janani Shishu Suraksha Karyakram (JSSK) as per guidelines.

V. Full range of family planning services.

VI. Other National Health Programmes (NHP):

- Communicable Diseases Programmes – Revised National Tuberculosis Control Programmed (RNTCP), HIV/AIDS Control Programme, National Vector Borne Disease Control Programme (NVBDCP), National Leprosy Eradication Programme (NLEP), National Programme for Control of Blindness (NPCB), Integrated Disease Surveillance Project (IDSP)
- National Programme for Prevention and Control of Deafness (NPPCD)
- National Mental Health Programme (NMHP)

- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
- National Iodine Deficiency Disorders Control Programme (NIDDCP)
- National Programme for Prevention and Control of Fluorosis (NPPCF) - Essential in Fluorosis affected Villages
- National Tobacco Control Programme (NTCP)
- National Programme for Health Care of Elderly – Desirable
- Physical Medicine and Rehabilitation (PMR)
- Oral Health

VII. Other Services: School Health, Adolescent Health Care, Blood Storage Facility, Diagnostic Services, Referral (transport) Services, Maternal Death Review (MDR).

Minimum Requirement for Delivery of the Above-mentioned Services are:

Manpower

PERSONNEL	ESSENTIAL	DESIRABLE
Block Public Health Unit		
Block Medical Officer/Medical Superintendent	1	
Public Health Specialist	1	
Public Health Nurse (PHN)	1	+1
Specialty Services		
General Surgeon	1	
Physician	1	
Obstetrician & Gynaecologist	1	

Paediatrician	1	
Anaesthetist	1	
General Duty Officers		
General Duty Medical Officer (MBBS)	2	
Dental Surgeon (BDS)	1	
Medical Officer - AYUSH	1	
Nurses and Paramedical		
PERSONNEL	ESSENTIAL	DESIRABLE
Staff Nurse	10	
Pharmacist	1	+1
Pharmacist – AYUSH	1	
Lab. Technician	2	
Radiographer	1	
Dietician		1
Ophthalmic Assistant	1	
Dental Assistant	1	
Cold Chain & Vaccine Logistic Assistant	1	
OT Technician	1	
Multi Rehabilitation/ Community Based Rehabilitation worker	1	+1
Counselor	1	
Administrative Staff		

PERSONNEL	ESSENTIAL	DESIRABLE
Registration Clerk	2	
Statistical Assistant/ Data Entry Operator	2	
Account Assistant	1	
Administrative Assistant	1	
Group D Staff		
Dresser (certified by Red Cross/Johns Ambulance)	1	
Ward Boys/Nursing Orderly	5	
Driver	1	3
Total	**46**	**52**

Equipment: The list of Equipments are provided at Annexure V.

Drugs: The list of essential drugs is provided at Annexure VI.

Physical Infrastructure: The CHC should have 30 indoor beds with one Operation theatre, labour room, x-ray, ECG and laboratory facility.

In order to provide these facilities, following are the guidelines:

Location of the centre:

- Should be located at the centre of the block headquarter in order to improve access to the patients.
- The area chosen should have the facility for electricity, all weather road communication, adequate water supply, telephone etc.

- It should be well planned with the entire necessary infrastructure. It should be well lit and ventilated with as much use of natural light and ventilation as possible.
- CHC should be away from garbage collection, cattle shed, water logging area, etc.

Disaster Prevention Measures: Building structure and the internal structure should be made disaster proof especially earthquake proof, flood proof and equipped with fire protection measures.

Entrance Zone: Appropriate signage

Outpatient Department: Clinics for Various Medical Disciplines - These clinics include general medicine, general surgery, dental, obstetrics and gynecology, pediatrics and family welfare.

Waiting room for patients, Pharmacy, Emergency Room/Casualty

Wards: Separate for Males and Females, Ancillary rooms, Operation theatre/Labour room.

Newborn Care Stabilization Unit

Physical Infrastructure for Support Services, Central Sterilization Supply Department (CSSD), Laundry, Engineering Services, Water Supply (arrangements shall be made to supply 10,000 litres of potable water per day to meet all the requirements (including laundry) except fire fighting), Emergency Lighting, Generator, Telephone.

Administrative zone - Separate rooms should be available for Office and Stores

Residential Zone: Minimum 8 quarters for Doctors

Minimum 8 quarters for staff nurses/ paramedical staff

Minimum 2 quarters for ward boys.

Minimum 1 quarter for driver.

If the accommodation cannot be provided due to any reason, then the staff may be paid house rent allowance, but in that case they should be staying in near vicinity of CHC so that they are available for 24 x 7 in case of need.

The total Area should be 1503.32 Sq Mtrs

Quality Assurance in Service Delivery: Standard treatment protocol for all national programmes and locally common diseases should be made available at all CHCs.

Diet: Diet may either be outsourced or adequate space for cooking should be provided in a separate space.

Blood Storage Units

Waste Disposal: “Guidelines for Health Care Workers for Waste Management and Infection Control in Community Health Centres” are to be followed.

Quality Control:

- Internal Monitoring Routine Monitoring by District Health Authority at least once in a month.
- Social Audit: Through Rogi Kalyan Samitis/Panchayati Raj Institution etc.
- Medical audit, Death audit, technical audit, economic audit, disaster preparedness audit etc. Patient Satisfaction Surveys to be done periodically.

- External Monitoring Gradation of the centre by PRI *(Zilla Parishad)* / *Rogi Kalyan Samitis* and Community monitoring.
- Monitoring of laboratory and Record Maintenance

Indian Public Health Standards (IPHS) Guidelines for Primary Health Centres Revised in 2012[3]

From service delivery angle, PHCs may be of two types, depending upon the delivery case load – Type A and Type B.

Type A PHC: PHC with delivery load of less than 20 deliveries in a month

Type B PHC: PHC with delivery load of 20 or more deliveries in a month

All the following services have been classified as Essential (Minimum Assured Services) or Desirable (which all States/Union Territories should aspire to achieve at this level of facility).

I. Medical care: (Essential)

(a) OPD services: A total of 6 hours of OPD services out of which 4 hours in the morning and 2 hours in the afternoon for six days in a week. Minimum OPD attendance is expected to be 40 patients per doctor per day. In addition to six hours of duty at the PHC, it is desirable that MO of the PHC shall spend at least two hours per day twice in a week for field duties and monitoring.

(b) 24 hours emergency services: appropriate management of injuries and accident, First Aid, stitching of wounds, incision and drainage of abscess, stabilization of the condition of the patient before referral, Dog bite/snake bite/scorpion bite cases, and other emergency conditions. These services will be provided primarily by the nursing

staff. However, in case of need, Medical Officer may be available to attend to emergencies on call basis.

(c) Referral services. (d) In-patient services (6 beds).

2. Maternal and Child Health Care Including Family Planning

Essential

a) Antenatal care

i. Early registration of all pregnancies ideally in the first trimester (before 12th week of pregnancy).

ii. Minimum 4 antenatal checkups and provision of complete package of services. Suggested schedule for antenatal visits: 1st visit: Within 12 weeks—preferably as soon as pregnancy is suspected—for registration of pregnancy and first antenatal check-up. 2nd visit: Between 14 and 26 weeks. 3rd visit: Between 28 and 34 weeks. 4th visit: Between 36 weeks and term. Associated services like providing iron and folic acid tablets, injection Tetanus Toxoid etc. Ensure, at-least 1 ANC preferably the 3rd visit, must be seen by a doctor.

iii. Minimum laboratory investigations like Haemoglobin, Urine albumin and sugar, RPR test for syphilis and Blood Grouping and Rh typing.

iv. Nutrition and health counseling.

v. Identification and management of high risk and alarming signs during pregnancy and labour. Timely referral of such identified cases to First Referral Units (FRUs) or other hospitals which are beyond the capacity of Medical Officer PHC to manage.

vi. Tracking of missed and left out ANC.

b) Intra-natal care: (24-hour delivery services both normal and assisted)

i. Promotion of institutional deliveries.

ii. Management of normal deliveries.

iii. Assisted vaginal deliveries including forceps/ vacuum delivery whenever required.

iv. Manual removal of placenta.

v. Appropriate and prompt referral for cases needing specialist care.

vi. Management of pregnancy Induced hypertension including referral.

vii. Pre-referral management (Obstetric first-aid) in Obstetric emergencies that need expert assistance (Training of staff for emergency management to be ensured).

viii. Minimum 48 hours of stay after delivery.

ix. Managing labour using Partograph.

c) Proficient in identification and basic first aid treatment for PPH, Eclampsia, Sepsis and prompt referral

d) Postnatal Care

i. Ensure post- natal care for 0 & 3rd day at the health facility both for the mother and new-born and sending direction to the ANM of the concerned area for ensuring 7th & 42nd day post-natal home visits. 3 additional visits for a low birth weight baby (less than 2500 gm) on 14th day, 21st day and on 28th day.

ii. Initiation of early breast-feeding within one hour of birth.

iii. Counseling on nutrition, hygiene, contraception, essential new born care and immunization.

iv. Others: Provision of facilities under Janani Suraksha Yojana (JSY)

v. Tracking of missed and left out PNC.

e) New Born care

i. Facilities for Essential New Born Care (ENBC) and Resuscitation (Newborn Care Corner in Labour Room/OT).

ii. Early initiation of breast feeding within one hour of birth.

iii. Management of neonatal hypothermia (provision of warmth/Kangaroo Mother Care (KMC), infection protection, cord care and identification of sick newborn and prompt referral.

f) Care of the child

i. Routine and Emergency care of sick children including Integrated Management of Neonatal and Childhood Illnesses (IMNCI) strategy and inpatient care. Prompt referral of sick children requiring specialist care.

ii. Counseling on exclusive breast-feeding for 6 months and appropriate and adequate complementary feeding from 6 months of age while continuing breastfeeding.

iii. Assess the growth and development of the infants and under 5 children and make timely referral.

iv. Full Immunization of all infants and children against vaccine preventable diseases and tracking of vaccination dropouts.

v. Vitamin A prophylaxis to the children

vi. Prevention and control of routine childhood diseases, infections like diarrhoea, pneumonia etc. and anemia etc.

vii. Management of severe acute malnutrition cases and referral of serious cases after initiation of treatment as per facility based guidelines.

g) Family Welfare

i. Education, Motivation and Counseling to adopt appropriate Family planning methods.

ii. Provision of contraceptives such as condoms, oral pills, emergency contraceptives, IUCD insertions.

iii. Referral and Follow up services to the eligible couples adopting permanent methods (Tubectomy / Vasectomy).

iv. Counseling and appropriate referral for couples having infertility.

v. Permanent methods like Tubal ligation and vasectomy / NSV, where trained personnel and facility exist.

3. Medical Termination of Pregnancies (MTP)

Essential: Counseling and appropriate referral for safe abortion services for those in need.

Desirable: MTP using Manual Vacuum Aspiration (MVA) technique will be provided in PHCs where trained personnel and facility exist. Medical Method of Abortion with linkage for timely referral to the facility approved for 2nd trimester of MTP.

3. Management of Reproductive Tract Infections/Sexually Transmitted Infections a) Health education for prevention of RTI / STIs.

b) Treatment of RTI / STIs.

4. Nutrition Services (coordinated with ICDS)

a) Diagnosis of and nutrition advice to malnourished children, pregnant women and others. b) Diagnosis and management of anaemia and vitamin A deficiency. c) Coordination with ICDS.

5. School Health Teachers screen students on a continuous basis and ANMs / HWMs (a team of 2 workers) visit the schools (one school every week) for screening, treatment of minor ailments and referral. Doctor from CHC / PHC will also visit one school per week based on the screening reports submitted by the teams. Overall services to be provided under school health shall include

Essential: Health service provision

a) Screening, health care and referral:

- Screening of general health, assessment of anemia, visual acuity, hearing problems, dental check up, common skin conditions, heart defects, physical disabilities, learning disorders, behavior problems, etc.

- Basic medicines to take care of common ailments, prevalent among young school going children.

- Referral Cards for priority services at District/ Sub-District hospitals.

b) Immunization: Fixed day activity - Coupled with education about the issue

c) Micronutrient (Vitamin A & IFA) management: - Weekly supervised distribution of Iron-Folate tablets coupled with education about the issue - Administration of Vitamin-A in needy cases.

d) De-worming - Biannually supervised schedule - Prior IEC - Siblings of students also to be covered

e) Capacity building Monitoring & Evaluation

f) Mid Day Meal: in coordination with department of school education, Ministry of Human Resource & Development

Desirable: Health Promoting Schools - Counseling services - Regular practice of Yoga, Physical education, health education - Peer leaders as health educators. - Adolescent health education-existing in few places - Linkages with the out of school children - Health clubs, Health cabinets - First Aid room/corners or clinics.

6. Adolescent Health Care: To be provided preferably through adolescent friendly clinic for 2 hours once a week on a fixed day. Services should be comprehensive i.e. a judicious mix of promotive, preventive, curative and referral services

Core package (Essential)

- Adolescent and Reproductive Health: Information, counseling and services related to sexual concerns, pregnancy, contraception, abortion, menstrual problems etc.

- Services for tetanus immunization of adolescents

- Nutritional Counseling, Prevention and management of nutritional anemia

- STI / RTI management

- Referral Services for ICTC and PPTCT services and services for Safe termination of pregnancy, if not available at PHC

Optional/additional services (desirable): as per local need Outreach services in schools (essential) and community Camps (desirable) – Periodic Health checkups and health education activities, awareness generation and Co-curricular activities

7. Promotion of Safe Drinking Water and Basic Sanitation

Essential - Disinfection of water sources and Coordination with Public Health Engineering department for safe water supply. - Promotion of sanitation including use of toilets and appropriate garbage disposal.

Desirable - Testing of water quality using H_2S - Strip Test (Bacteriological).

8. Prevention and control of locally endemic diseases like malaria, Kala Azar, Japanese Encephalitis etc. (Essential)

9. Collection and reporting of vital events. (Essential)

10. Health Education and Behaviour Change Communication (BCC). (Essential)

11. Other National Health Programmes

a) Revised National Tuberculosis Control Programme (RNTCP)

b) National Leprosy Eradication Programme

c) Integrated Disease Surveillance Project (IDSP)

d) National Programme for Control of Blindness (NPCB)

e) National Vector Borne Disease Control Programme (NVBDCP)

f) National AIDS Control Programme (NACP)

i) National Programme for Prevention and Control of Cancer, Diabetes, CVD and Stroke (NPCDCS)

j) National Iodine Deficiency Disorders Control Programme (NIDDCP)

k) National Programme for Prevention and Control of Fluorosis (NPPCF)

l) National Tobacco Control Programme (NTCP)

m) National Programme for Health Care of Elderly (NPHCE)

12. Oral Health (Essential) - Oral health promotion and checkups, appropriate referral on identification.

13. Physical Medicine and Rehabilitation (PMR) Services (Desirable)

14. Referral Services

15. Training (Essential)

BASIC LABORATORY AND DIAGNOSTIC SERVICES

MONITORING AND SUPERVISION

i. Monitoring and supervision of activities of Sub- Centre through regular meetings/periodic visits, by LHV, Health Assistant Male and Medical Officer etc.

ii. Monitoring of all National Health Programmes

iii. Monitoring activities of ASHAs by LHV and ANM.

iv. Health educator will monitor all IEC and BCC activities

SELECTED SURGICAL PROCEDURES (Desirable) - The vasectomy, tubectomy (including laparoscopic tubectomy), MTP, hydrocelectomy as a fixed day approach, have to be carried out in a PHC having facilities of O.T.

INFRASTRUCTURE The PHC should have a building of its own. The surroundings should be clean.

1. PHC Building Location - It should be centrally located in an easily accessible area.
2. Area - It should be well planned with the entire necessary infrastructure. It should be well lit and ventilated with as much use of natural light and ventilation as possible. The plinth area would vary from 375 to 450 sq. metres.
3. Sign-age - The building should have a prominent board displaying the name of the Centre in the local language at the gate and on the building.
4. Disaster Prevention Measures - Building and the internal structure should be made disaster proof especially earthquake proof, flood proof and equipped with fire protection measures.
5. Waiting Area a. This should have adequate space and seating arrangements for waiting clients/patients as per patient load. b. The walls should carry posters imparting health education. c. Booklets/leaflets in local language may be provided in the waiting area for the same purpose. d. Toilets with adequate water supply separate for males and females should be available. Waiting area should have adequate number of fans, coolers, benches or chairs. e. Safe Drinking water should be available in the patient's waiting area.

6. Outpatient Department a. The outpatient room should have separate areas for consultation and examination. b. The area for examination should have sufficient privacy.

7. Wards (5.5 m x 3.5 m each) a. There should be 4-6 beds in a Primary Health Centre. Separate wards/areas should be earmarked for males and females with the necessary furniture.

8. Operation Theatre (Optional) - To facilitate conducting selected surgical procedures (e.g. vasectomy, tubectomy, hydrocelectomy etc.)

9. Labour Room (3.8 m x 4.2 m) Essential a. Configuration of New Born Care Corner (NBCC). Clear floor area shall be provided in the room for newborn corner. It is a space within the labour room, 20-30 sq ft in size, where a radiant warmer (Functional) will be kept. Desirable: Delivery kits and other instruments shall be autoclaved where facility is available.

10. Minor OT / Dressing Room / Injection Room / Emergency a. This should be located close to the OPD to cater to patients for minor surgeries and emergencies after OPD hours. b. It should be well equipped with all the emergency drugs and instruments.

11. Laboratory (3.8 m x 2.7 m) - Sufficient space with workbenches and separate area for collection and screening should be available.

12. General store a. Separate area for storage of sterile and common linen and other materials/drugs/consumable etc. should be provided with adequate storage space.

13. Others: Waste disposal pit, Cold Chain room – Size: 3 m x 4 m, Logistics Room – Size: 3 m x 4 m, Generator room – Size: 3 m x 4 m and Office room 3.5 m x 3.0 m.

Manpower at the PHC:

Staff	Type A		Type B	
	Essential	**Desirable**	**Essential**	**Desirable**
Medical Officer- MBBS	1		1	1
Medical Officer –AYUSH		1		1
Accountant cum Data Entry Operator	1		1	
Pharmacist	1		1	
Pharmacist AYUSH		1		1
Nurse-midwife (Staff-Nurse)	3	+1	4	+1
Health worker (Female)	1		1	
Health Assistant. (Male)	1		1	
Health Assistant (Female) / Lady Health Visitor	1		1	
Health Educator		1		1
Laboratory Technician	1		1	
Cold Chain & Vaccine Logistic Assistant		1		1
Multi-skilled Group D worker	2		2	
Sanitary worker cum watchman	1		1	+1
Total	**13**	**18**	**14**	**21**

Residential Accommodation: Essential - Decent accommodation with all the amenities likes 24-hours water supply, electricity etc. should be available for Medical Officer, nursing staff, pharmacist, laboratory technician and other staff. If the accommodation cannot be provided due to any reason, then the staff may be paid

house rent allowance, but in that case they should be staying in near vicinity of PHC so that they are available 24×7, in case of need.

Boundary wall/Fencing Essential Boundary wall/fencing with Gate should be provided for safety and security.

Computer (Essential): Computer with Internet connection

Equipment and Furniture: List given in Annexure IV and Annexure V

Drugs: List given in Annexure VI

The PHC should have transport Facilities with Assured Referral Linkages.

Laundry Services should be available.

Waste Management at PHC Level "Guidelines for Health Care Workers for Waste Management and Infection Control in Primary Health Centres" are to be followed.

Monitoring of PHC functioning - Internal Mechanisms: Record maintenance, checking and supervision. - Medical Audit - Death Audit - Patient Satisfaction Surveys: For both OPD and IPD patients. Evaluation of Complaints and suggestions received;

- External Mechanisms: Monitoring through the PRI/ Village Health Sanitation and Nutrition Committee / *Rogi Kalyan Samiti* - Social audit

Accountability to ensure accountability, the Citizen's Charter Rights should be made available in each PHC.

Indian Public Health Standards (IPHS) Guidelines for Sub Centres Revised in 2012[7]

As per population norms, there shall be one Sub-centre established for every 5000 population in plain areas and for every 3000 population in hilly/tribal/desert areas.

Type A SC: Shall provide all services as envisaged for the Sub-centre except the facilities for conducting delivery will not be available here.

Staff recommended: One ANM (Essential), two ANMs: (Desirable to split the population between them and one of them provides outreach services and the other is available at the Sub-centre)

One Health Worker (Male) (Essential)

Type B: they will provide all recommended services including facilities for conducting deliveries at the Sub-centre itself. this Sub-centre will act as Maternal and Child Health (MCH) centre with basic facilities for conducting deliveries and Newborn Care at the Sub- centre.

Staff recommended two ANM (Essential) One Health Worker (Male)

(Essential) One Staff Nurse or ANM.

Sub-centres are expected to provide promotive, preventive and few curative primary health care services.

Maternal and Child Health:

i.Antenatal care:

- Essential Early registration of all pregnancies, within first trimester (before 12th week of Pregnancy).
- Minimum 4 ANC including Registration
- Associated services like general examination such as height, weight, B.P., anaemia, abdominal examination, breast examination, Folic Acid Supplementation (in first trimester), Iron & Folic Acid Supplementation from 12 weeks, injection tetanus toxoid, treatment of anaemia etc.

ii. Intra-natal care: Essential Promotion of institutional deliveries

iii. Postnatal care:

- Initiation of early breast-feeding within one hour of birth.
- Ensure post-natal home visits on 0,3,7 and 42nd day for deliveries at home and Sub-centre (both for mother & baby).
- Ensure 3, 7 and 42nd day visit for institutional delivery (both for mother & baby) cases. In case of Low birth weight baby (less than 2500 gm), additional visits are to be made on 14, 21 and 28th days.
- During post-natal visit, advice regarding care of the mother and care and feeding of the newborn and examination of the newborn for signs of sickness and congenital abnormalities as per IMNCI Guidelines and appropriate referral, if needed.
- Counselling on diet & rest, hygiene, contraception, essential newborn care, immunization, infant and young child feeding, STI / RTI and HIV / AIDS.

Child Health Essential: Counselling on exclusive breast-feeding for 6 months and appropriate and adequate complementary feeding from 6 months of age while continuing breastfeeding. Assess the growth and development of the infants and under five children and make timely referral. Immunization Services: Full Immunization of all infants and children.

Family Planning and Contraception: Education, Motivation and counselling to adopt appropriate Family planning methods. Provision of contraceptives such as condoms, oral pills, emergency contraceptives, Intra Uterine Contraceptive Devices (IUCD) insertions. Follow up services to the eligible couples adopting any family planning methods (terminal/ spacing).

Safe Abortion Services: Essential Counselling and appropriate referral for safe abortion services for those in need.

Curative Services: Provide treatment for minor ailments including fever, diarrhea, ARI, worm infestation and First Aid including first aid to animal bite cases (wound care, tourniquet (in snake bite) assessment and referral).

School Health Services: Screening, treatment of minor ailments, immunization, de-worming, prevention and management of Vitamin A and nutritional deficiency anemia and referral services through fixed day visit of school by existing ANM / MPW.

Control of Local Endemic Diseases: Assisting in detection, Control and reporting of local endemic diseases such as malaria, kala Azar, Japanese Encephalitis, Filariasis, Dengue etc.

Disease Surveillance, Integrated Disease Surveillance Project (IDSP)

Out reach/Field Services: Village Health and Nutrition Day (VHND)

Community Level Interactions: Focus group discussions for information gathering and health planning.

Coordination and Monitoring Coordinated services with AWWs, ASHAs, Village Health Sanitation and Nutrition Committee, PRI etc.

National Health Programmes: Communicable Disease Programme

- National AIDS Control Programme (NACP)
- National Vector Borne Disease Control b. Programme (NVBDCP)
- National Leprosy Eradication Programme (NLEP)
- Revised National Tuberculosis Control Programme (RNTCP)

Non-communicable Disease (NCD) Programmes

- National Programme for Control of Blindness (NPCB)
- National Programme for Prevention and Control of Deafness (NPPCD)
- National Mental Health Programme (NMHP)
- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
- National Iodine Deficiency Disorders Control Programme (NIDDCP)

Record of Vital Events Essential Recording and reporting of vital events including births and deaths, particularly of mothers and infants to the health authorities.

Manpower:

Staff	Type A SC		Type B SC	
	Essential	**Desirable**	**Essential**	**Desirable**
ANM/Health Worker (Female)	1	+1	2	
Health Worker (Male)	1		1	
Staff Nurse (or ANM, if Staff Nurse is not available)				+1
Safai-karamchari	1 (Part time)		1 (Full-time)	

Physical Infrastructure:

Location of the Centre: For all new upcoming Sub-centres, following may be ensured: Sub-centre to be located within the village for providing easy access to the people and safety of the ANM. As far as possible no person has to travel more than 3 km to reach the Sub-centre.

Building and Lay out Boundary wall/fencing: Boundary wall/fencing with Gate should be provided for safety and security. Type B Sub-centre should have, about 4 to 5 rooms.

Signage: The building should have a prominent board displaying the name of the Centre in the local language at the gate and on the building.

Equipment and Furniture: List given in Annexure IV and Annexure V

Drugs: List given in Annexure VI.

Waste Management at SC Level "Guidelines for Health Care Workers for Waste Management and Infection Control in Primary Health Centres" are to be followed.

Monitoring Mechanism - Internal mechanisms: Supportive supervision and Record checking at periodic intervals by the Male and Female Health supervisors from PHC (at least once a week) and by MO of the PHC (at least once in a month) etc.

External Mechanisms: By Gram Panchayats, PRI / NGO / SHG.

Quality Assurance and Accountability this can be ensured through regular skill development training / Continuing Medical Education (CME) of health workers (at least one such training in a year), as per guidelines of NRHM.

METHODOLOGY

The Belagavi district is situated in North Karnataka, occupies an area of 13,433 Sq. Km and has a population of 47,79,661 as per Census 2011.[12] There are 17 CHCs, 140 PHCs and 616 SCs in the district, as per the information collected from the District Health Office (DHO), Belagavi (personal contact on 01/10/2013).

Study design: Facility based cross-sectional study.

Study period:

The Study was conducted over a period of one year from 1st January 2014 to 31st December 2014.

Source of data:

Selected Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub-centres (SCs) of Belagavi district

Sample size and Sampling procedure:

Belagavi district has 10 Talukas, 17 CHCs, 140 PHCs and 616 SCs as on 1st December 2013 as per the list obtained from the DHO office, Belagavi. The CHCs, PHCs and SCs were selected by multistage random sampling.

In first stage, 10 CHCs were selected i.e., 1 CHC was selected from each Taluka randomly.

In the second stage, 20 PHCs (2 PHCs from each Taluka, - 1 within the selected CHC and 1 outside the CHC from each taluka of the district) were selected.

In the third stage, 40 SCs (two SCs from Each selected PHC: 1 SC in the PHC headquarters, 1 SC outside PHC headquarters) were selected from the 20 PHCs.

The List and Map of Selected CHCs, PHCs and Sub Centres is given in Annexure VII.

None of the CHC / PHC/SC belonged to tribal/desert/hilly/difficult terrain region.

Instruments used for data collection

Questionnaire

Predesigned and structured questionnaire was constructed according to the proforma for IPHS facility survey given by IPHS guidelines 2012 for CHCs/PHCs/SCs. Predesigned questionnaires were used separately for CHC / PHC/SC (see Annexure IV – Proforma A - CHC, Proforma B - PHC and Proforma C - SC). The pilot study was done on 1 CHC, 1 PHC and 1 SC so as to revise the questionnaire.

Method of collection of data:

The permission letter was taken from the District Health Officer (DHO) of Belagavi before initiating the study (see Annexure – II) and also from the Principal, J. N. Medical College, Belagavi. Written informed consent was obtained from all the participants. (see Annexure III)

Data was collected using a proforma for IPHS facility survey according to IPHS guidelines 2012 for CHCs, PHCs and SCs. (see Annexure IV – Proforma A - CHC, Proforma B - PHC, Proforma C- SC).

All the details of Medical officers' names and contact phone numbers were collected from the DHO office, Belagavi. The investigator intimated concerned Medical officer prior to the visit and a date was fixed according to mutual convenience. The investigator personally visited the selected centres.

Questionnaire was given to the Medical officer / staff to fill the details of services, manpower, training of personnel during previous year, essential laboratory services, physical infrastructure, equipments, drugs, furniture and quality control. Along with it, personal interview was done for the same.

Hospital data was collected from the records for training of personnel during preceding year. Verification was done for physical infrastructure, equipments, drugs and furniture by the investigator.

If a particular facility was not accessed on the fixed date, two more visits were done by the investigator to collect the data subsequently.

Inclusion criteria: All the selected CHCs, PHCs and SCs of Belagavi district were included.

Exclusion criteria: Nil

Analysis plan:

The data collected in the questionnaire was coded and entered in a Microsoft Excel sheet. Separate datasheets was used for CHC / PHC / SC. Tables and Charts were prepared. Rates, Ratios and percentages were calculated. Statistical analysis was done using Chi Square test.

Ethical Clearance

The study was approved from the Institutional Ethics Committee for Human Subject's Research, of the institution. (Ref: MDC/DOME/122 dated- 07/12/2013. See Annexure I)

Definition of study variables

Wherever possible, standard definitions and formulae were used to determine the definitions of the terminologies in the study.

1. Medical Officer: All medical graduates with minimum degree of MBBS; permanently employed or have been working in temporary or contract basis for more than six months.
2. Medical officer – Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) : All medical graduates of any of the streams of Indian systems of Medicine holding at least a bachelors degree; permanently employed or have been working in temporary or contract basis for more than six months.
3. All other staff – Any person with the requisite educational qualification; specifically posted to the designation as mentioned; permanently employed or has been working in temporary or contract basis for more than six months.
4. Emergency services – Managing cases which are deemed to be emergency, by providing basic life support.
5. 24×7 PHCs: PHCs functional for round the clock with provision of 24 hours ×7 days/week nursing facility.

6. Bed occupancy ratio - is derived by the formula –

    a. $$\frac{\text{Average Number of in-patient admissions per day X 100}}{\text{Number of beds}}$$

7. The in-patient census of previous one year, was averaged for the numerator. The denominator was the number of available beds in the CHC / PHC.
8. Daily average OPD attendance:

    $$\frac{\text{Total no. of outpatient attendance during a period}}{\text{1. No. of working days during the period}}$$

9. Provision of contraceptives – Provision of any type of contraceptive – Barrier, Intra-Uterine Contraceptive Device (IUCD)
10. Easy accessibility of CHC / PHC / SC – If the CHC / PHC / SC is located at a place which can be easily reached, with an all weather road to connect from the main road, with sign boards for recognizing the place easily and the way is broad enough for two four-wheelers to pass at a time. Unavailability of any two of the above was considered as "not easily accessible".
11. Reach of the PHC/SC – The distance from the farthest village in the coverage area of the PHC/SC was recorded from the records in kilometers. This would give a measure of the accessibility of the PHC/SC in terms of distance.
12. Maximum time to reach the PHC/SC - The maximum time taken to reach the PHC/SC from a point in its coverage area by the available government/public transport services, which is difficult to reach, either because of its distance or lack of road facilities. This would give a measure of the accessibility of the PHC/SC in terms of travel time.
13. Referral Unit - Any hospital which acts as the first referral unit to the PHC, it can be Community Health Center, Area Hospital, District Hospital or the Medical College hospital, whichever is nearer.

14. Referral transport facility - Transport facility by the hospitals own vehicle other than 108 ambulance service.
15. Percentage of staff availability in CHCs/PHCs –

$$\frac{\text{The total staff (Clinical Manpower + Support staff)} \times 100}{\text{The total required staff at the hospital according to IPHS 2012 norms*}}$$

*see Annexure IV – Proforma A - CHC, Proforma B - PHC, Proforma C- SC.

16. Availability of Residential facility for the Staffs – Only the facilities which are in condition for living are considered as available.

At the CHCs, PHCs and SCs:

1. Records were checked to note the population coverage of the CHC / PHC/SC. Registers were checked for Inpatient and Outpatient services at CHC and PHC, Ante-natal, Intra-natal and Post-natal services at CHC / PHC/SC, School and adolescent health services, water and sanitation services, disease surveillance, collection and reporting of vital statistics, training of personnel.

2. In the CHC / PHCs, the concerned Medical officer was interviewed. In few CHC / PHCs where the Medical offices were not available, the Nursing Staff and Health Assistant (Male) were interviewed and in the SC the ANMs were interviewed to note the following services:

    a) Availability of Manpower Resources at CHC / PHC/SC as per IPHS 2012 norms (see Annexure IV – Proforma A - CHC, Proforma B - PHC, Proforma C- SC).

b) Provision of treatment of specific conditions in PHCs like cataract surgery, primary management of wounds, minor surgeries, management of poisoning, management of burns and management of fractures.

c) Availability of specialist services at CHCs like General surgery, General Medicine, Paediatrics and OBG. Provision of 24 hours emergency services, 24 hour delivery services including normal and assisted deliveries and New-born care.

d) Availability of specific services at CHCs / PHCs like facility for tubectomy and vasectomy, facility for treatment of gynecological disorders, STI / RTI, anemia, family planning services and MTP facility.

e) Availability of Paediatric services like management of Low Birth Weight babies, Immunization services, Management of children suffering from pneumonia, diarrhea with dehydration, and management of children with Severe Acute Malnutrition (SAM) at the CHC / PHC.

f) Availability of AYUSH services and Rehabilitation services at the CHC / PHC.

g) Availability of Communication Facilities in CHC / PHC like Personal computer, Telephone, NIC terminal and E-mail facility and Transport facility.

3. The observations were made to note down the Status of Operation Theatres at CHC / PHC, availability of total equipments as per the IPHS 2012 norms for CHC, PHC and SC (see Annexure V), furniture and Physical infrastructure at CHC / PHC/SC (see Annexure IV).

4. Laboratory technicians were interviewed at CHC / PHC to note down the various Laboratory Services (see Annexure V).

5. Pharmacists were interviewed and the drug registers were checked to note down the available drugs at the CHC / PHC as per IPHS 2012 norms for CHC / PHC (see Annexure VI).

6. Behaviour of the CHC / PHC staff with the patient – It was assessed by personal observation and was categorized as Courteous and Casual/indifferent.

7. Quality Control Mechanism in CHC / PHC/SCs – Observations were made for the display of Citizen's charter in the local language publicly in all the CHC / PHC / SCs. The records were checked for the presence of *Rogi Kalyan Samiti* (RKS) / *Arogya Raksha Samiti* (ARS) and availability of Standard Operating Procedures (SOPs) were noted. Records of Internal monitoring by Social audit/Medical audit/Economic audit and external monitoring by Zila Panchayat (ZP) / RKS were checked and noted.

RESULTS

The present study was conducted in Belagavi district during the period of 1st January 2014 to 31st December 2014. There are 17 CHCs, 140 PHCs and 616 SCs in the district, as per the information collected from DHO office, Belagavi (personal contact on 1st December 2013). The Assessment was done for selected 10 CHCs, 20 PHCs and 40 SCs.

The data obtained was tabulated and analyzed under following headings as below:

I) Profile of CHCs of Belagavi district

II) Profile of PHCs of Belagavi district

III) Profile of SCs of Belagavi district

I) Profile of CHCs of Belagavi district

Table 1: Population covered by CHCs (N=10)

S.No.	Population covered by CHCs	Number of CHCs	Percentage (%)
1	80,000 to 1,20,000	6	60
2	1,20,000 to 2,00,000	2	20
3	> 2,00,000	2	20
	Total	**10**	**100**

In the present study, 60% of Community Health Centres covered the population between 80,000 to 1,20,000, 20% of CHCs covered between 1,20,000 to 2,00,000, 20% of CHCs covered more than 2,00,000 population.

Graph 1: Population covered by CHCs (N=10)

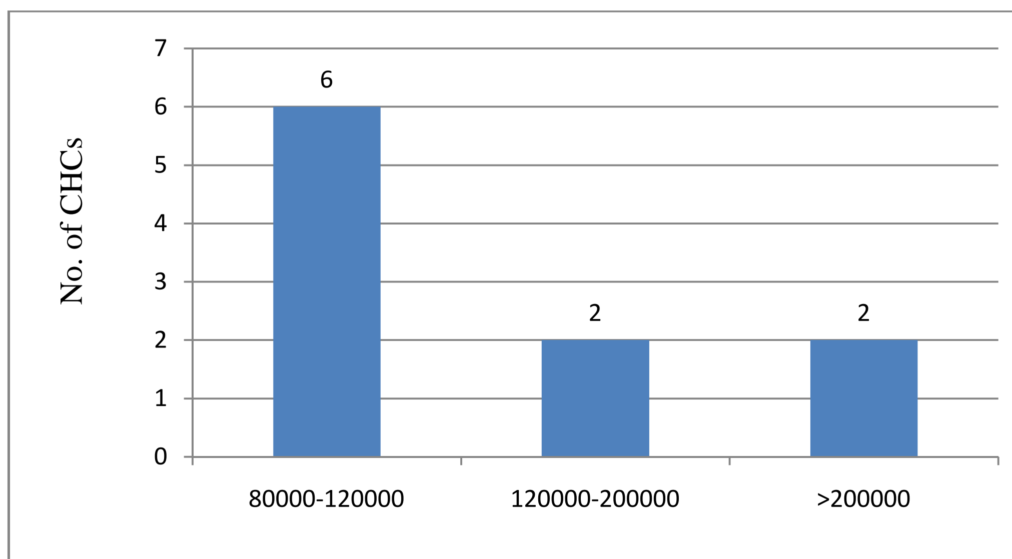


Table 2: Specialist services available in CHCs (N=10)

S. No.	Specialist services in CHCs	Number of CHCs	Percentage (%)
1	General Medicine	0	0
2	General Surgery	0	0
3	OBG	4	40
4	Paediatrics	3	30
5	Emergency services (24 Hours/day)	10	100
6	24 – hour delivery services including normal and assisted deliveries	10	100
7	Emergency Obstetric Care including surgical interventions like LSCS and other medical interventions	4	40
8	New-born care	10	100
9	Emergency care of sick children	6	60
10	Family Planning Services	10	100
11	Full range of FP services including Laparoscopic services	3	30
12	Safe abortion practices	4	40
13	Treatment of STI/RTI	10	100
14	Referral transport facility	9	90

Among the studied Community Health Centres, 40% of CHCs had OBG specialist service, 30% provided paediatric service. No CHC had General Surgery and General Medicine specialty service. All the CHCs provided 24 hours emergency services, 24 hour delivery services including normal and assisted deliveries, New-born care, Family Planning Services and Treatment of STI / RTI.

Emergency Obstetric Care including surgical interventions like Lower segment Caesarian section and other medical interventions were available in 40% of CHCs, Emergency care of sick children in 60%, Full range of FP services including Laparoscopic services in 30%, Safe abortion practices in 40% and Referral transport facility were available in 90% of the CHCs.

Table 3: Inpatient and Outpatient services in CHCs (N=10)

S. No.	Services	Number of CHCs	Percentage (%)
1	Bed Occupancy Rate (BOR) in the last 12 months		
	< 40%	3	30
	40-60%	4	40
	> 60%	3	30
2	Average daily OPD Attendance		
	50-100	3	30
	101-150	3	30
	151-200	2	20
	> 200	2	20

About 30% of Community Health Centres had the Bed Occupancy Rate (BOR) of less than 40%, 40% CHCs had 40-60% of BOR and 30% of CHCs had more than 60% of BOR. 30% of CHCs had average daily OPD attendance of 50 to 100, 30% had 101-150, 20% had 151-200 and 20% of CHCs had the average daily OPD attendance more than 200.

All the CHCs were ICTC centres (Integrated Counseling and Testing Centre). Services like Ante-natal Clinics, Post-natal Clinics and Immunization sessions were conducted regularly in all the CHCs. Facilities for out-patient department in Gynecology/obstetrics was available in all the CHCs.

Availability of Manpower Resources in CHCs (N=10)

Table 4a: Clinical Manpower in CHCs

S. No.	Personnel	Availability in Number of CHCs	Percentage (%)
1	General Surgeon	0	0
2	General Physician	0	0
3	Obstetrician / Gynaecologist	4	40
4	Paediatrician	3	30
5	Anaesthetist	2	20
6	General duty officers (Medical Officers)	10	100
7	Eye Surgeon	0	0
8	Dentist	7	70
9	Public Health Programme Manager	0	0
10	AYUSH Medical Officer	2	20

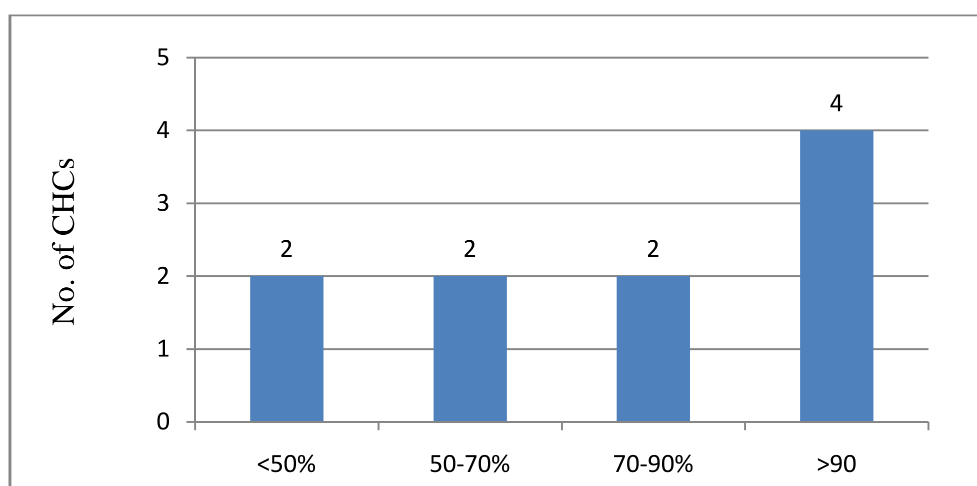
All the Community Health Centres had the General Duty Officer (Medical Officer), 40% of CHCs had OBG specialists, 30% of CHCs had paediatricians, 20% had anesthetists, 70% had dentists, 20% had AYUSH medical officers. None of the CHCs had General surgeons, Physicians, Eye surgeons or Public Health Programme Manager.

Table 4b: Support Manpower in CHCs (N=10)

S. No.	Personnel	Availability in Number of CHCs	Percentage (%)
1	Nursing Staff	10	100
2	Pharmacist	10	100
3	Lab. Technician	10	100
4	Radiographer	7	70
5	Ophthalmic Assistant	7	70
6	Ward Boys	10	100
7	OPD Attendant	10	100
8	Sweepers	10	100
9	Clerks	9	90

All the Community Health Centres had Nursing staff, Pharmacist, Laboratory technician, ward boys, OPD attendant and sweepers. Radiographer and ophthalmic Assistant were present in 70% of CHCs and clerks were present in 90% of CHCs.

Graph 2: Percentage of staff availability in CHCs (N=10)



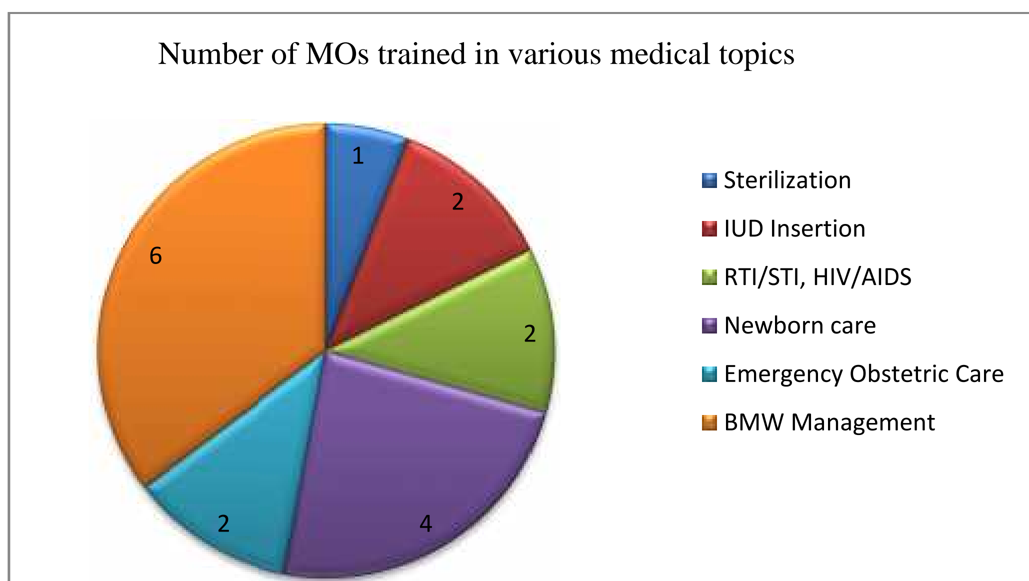
In 40% of CHCs more than 90% of required staff were available, in 20% of CHCs 71 to 90% of total staff were available and in 20% of CHCs 50-70% of staff were available. In another 20% of CHCs, the total staff availability was less than 50%.

Table 5: Number of trainings undergone by MOs of CHCs in the previous year

S.No.	Number of trainings	Number of MOs	Percentage (%)
1	No training	1	10
2	1 training	3	30
3	2 trainings	5	50
4	4 trainings	1	10
	Total	**10**	**100**

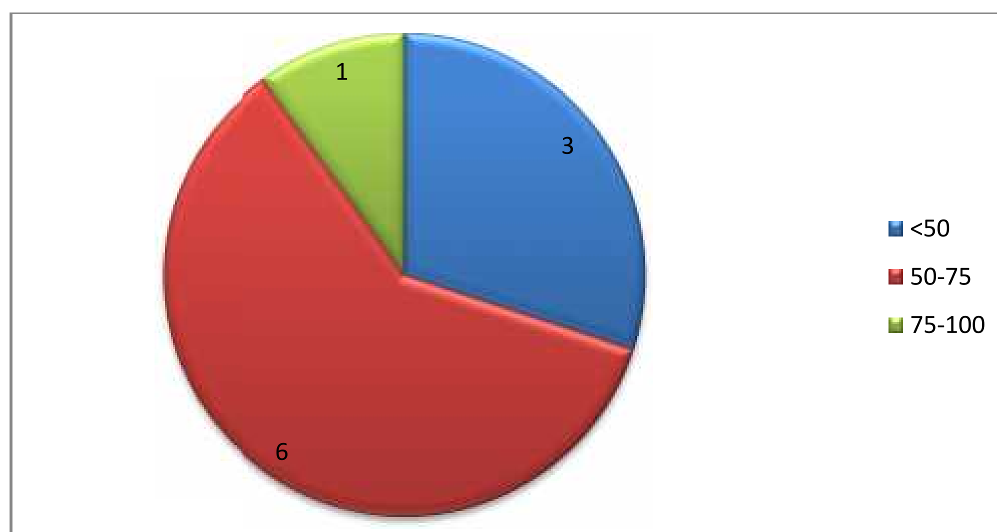
About 50% of CHC Medical Officers had undergone two trainings in the previous one year, 30% of CHC MOs had one training, 10% had four trainings of various medical topics and another 10% of CHC MOs did not attend any training in the previous one year.

Graph 3: Training of MOs during previous year in various medical topics



The sterilization training was undergone by 10% of the CHC Medical Officers, training on IUCD insertion by 20%, RTI/STI, HIV/AIDS management training by 20% of MOs, Newborn care by 40% of MOs, Emergency obstetric care by 20% and Biomedical waste management training was attended by 60% of MOs of CHCs.

Graph 4: Number of Deliveries per Month in CHCs (N=10)



In the studied CHCs, 60% of the CHCs had average 50 to 75 deliveries per month, 30% had less than 50 deliveries per month and 10% of CHCs had more than 75 deliveries per month. In only 50% of the CHCs, the Partograph was used.

Table 6: Other Facilities in CHCs (N=10)

S. No.	Facilities in CHCs	Number of CHCs	Percentage (%)	In working condition	Percentage (%)
1	ECG	5	50	0	0
2	X-ray facility	8	80	8	80
3	Ultrasound facility	0	0	0	0

In 50% of Community Health Centres ECG facility was available, but was not in working condition in any of the CHCs. There was no training for the nursing staff on ECG in any CHC. X-ray facility was available in 80% of the CHCs and was in working condition. None of the CHCs had the Ultrasound facility.

Table 7: Physical Infrastructure of CHCs (N=10)

S. No.	Physical Infrastructure	Number of CHCs	Percentage (%)
1	Compound Wall / Fencing		
	- All around	3	30
	- Partial	7	70
2	Condition of plaster on walls		
	- Good	8	80
	- Coming off in some places	2	20
3	Condition of Floor		
	- Good	10	100
	- Coming off in some places	0	0
4	Feasibility to hold the workforce	8	80
5	Availability of Private Sector Health Facility in the area	9	90

All the Community Health Centres were located within the village/town. All the CHCs had the designated government buildings, but the CHC floor area was inadequate according to the IPHS norms for CHC (CHC should have building area of 1503 square meter). Construction of all the CHCs was complete. 30% of the CHCs had compound wall all around and 70% had partial compound wall.

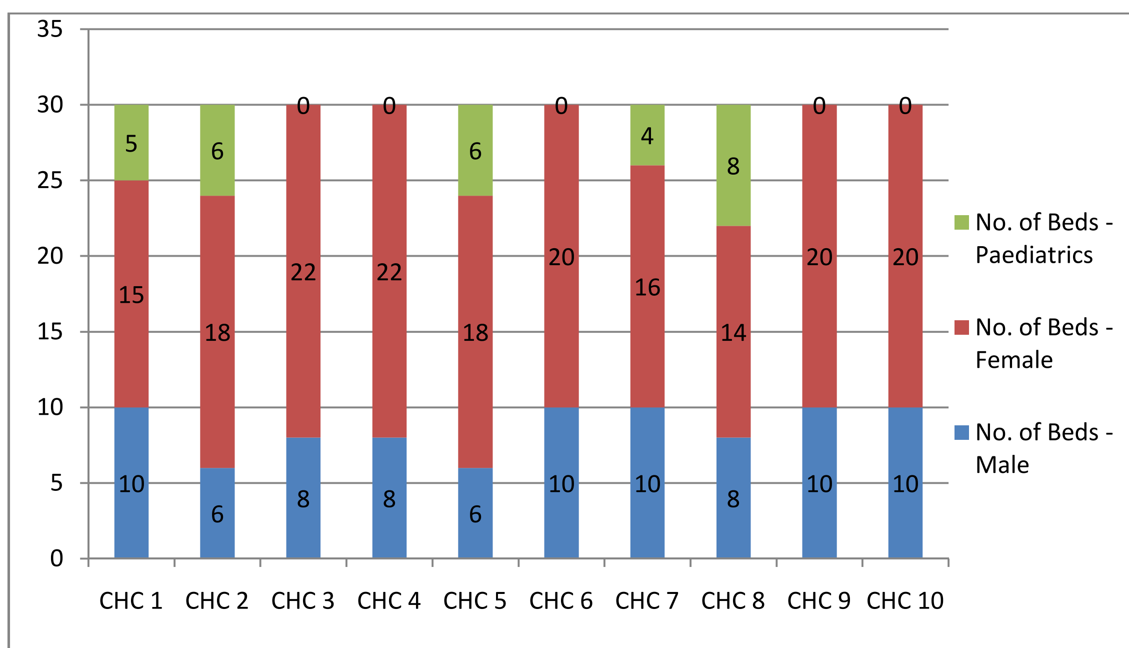
80% of the CHCs were well plastered with plaster intact everywhere, in 20% of PHCs, plaster was coming off in some places. Floor condition was good in all the CHCs. Feasibility to hold the workforce like availability of degree college / municipality was available in 80% of CHC areas.

All the CHCs had the adequate number of OPD rooms, Waiting room for the patients and Emergency room/ Casualty. There were prominent display boards in local languages, Charter of Patient Rights, Registration counters, Pharmacy for drug

dispensing and drug storage, Suggestion/complaint box and separate public utilities for all males and females in all the CHCs.

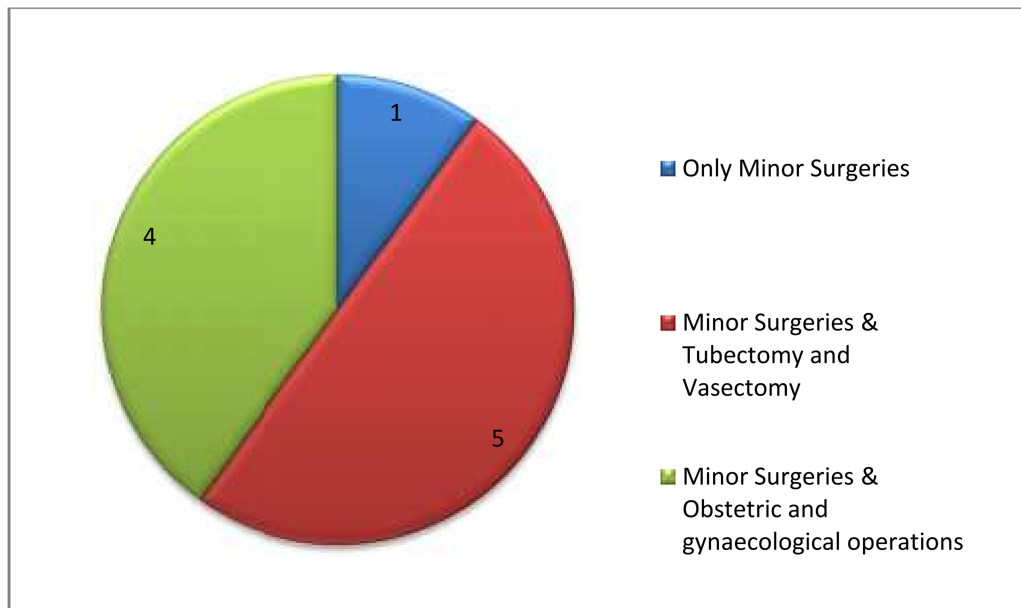
In 90% of the CHC areas, there was availability of Private Sector Health Facility. There were no charitable hospitals or hospitals run by the NGO. All the CHCs were located at less than 2 hours of travel distance by govt. transport from the farthest village and at less than 4 hours of travel distance from the district head quarter hospital.

Graph 5: Number of Beds for Male, Female and Paediatric cases in CHCs (N=10)



All the CHCs had 30 beds each and there were separate wards for Males and Females in all the CHCs. In 50% of CHCs there were separate beds for Paediatric patients, maximum number of beds were for female patients.

Graph 6: Types of Surgeries Conducted in Operation theatre in CHCs (N=10)



Minor surgeries like Incision and drainage, suturing etc., were performed in all the CHCs. Only Tubectomy and vasectomy were performed in 50% of CHCs. Obstetric and gynaecological operations were performed in 40% of CHCs.

Table 8a: Availability of other services / facilities at the CHCs (N=10)

S. No.	Other Services / Facilities	Number of CHCs	Percentage (%)
1	Number of cases of caesarian delivery (During last one year)		
	- 0	6	60
	- < 200	3	30
	- 200-300	1	10
2	Availability of AC in OT	5	50
3	Availability of generator for OT	9	90
4	Operation theatre equipments availability		
	- < 50%	7	70
	- 50-75%	3	30
5	Labour room deliveries	10	100
6	Practice of use of Partograph in Labour room	5	50
7	Blood storage facility	0	0
8	Cold chain equipments	10	100
9	Nurses rest room at CHCs	8	80

Facility for Caesarian delivery was available in 40% of CHCs. In 30% of CHCs less than 200 caesarian deliveries were conducted during the previous year. In only 10% of the CHCs, 200 to 300 Caesarian deliveries were conducted in the previous one year.

Operation theatres were available in all the CHCs and had enough space. 50% of the CHC OT were fitted with air conditioning and for 90% of CHC OTs generator and emergency light were available. In 70% of the CHCs there were less than 50% of the OT equipments and in 30% there were between 50 to 75% of the OT equipments. The days of sterilization was displayed in all the CHCs.

Blood storage unit was not available in any CHC. All the Cold chain equipments were available in all the CHCs. Nurse's rest room at the CHC was available in 80% of the CHCs. The source of water supply in all the CHC was the bore water. In 80% of CHCs, there were 75 to 100% of laboratory equipments available and in 20% of CHCs, 50 to 75% of lab. Equipments were available.

Table 8b: Availability of other services/facilities at the CHCs (N=10)

S. No.	Other Service/Facilities	Number of CHCs	Percentage (%)
1	Type of sewerage system		
	- Soak pit	5	50
	- Connected to Municipal Sewerage	5	50
2	Electricity - Electric line in all parts	10	100
3	Power supply - Continuous Power Supply	5	50
	- Occasional power failure	2	20
	- Regular power cuts	3	30
4	Standby facility (generator/inverter) available in working condition	9	90
5	Laundry facility - Available	1	10
	- Outsourced	9	90

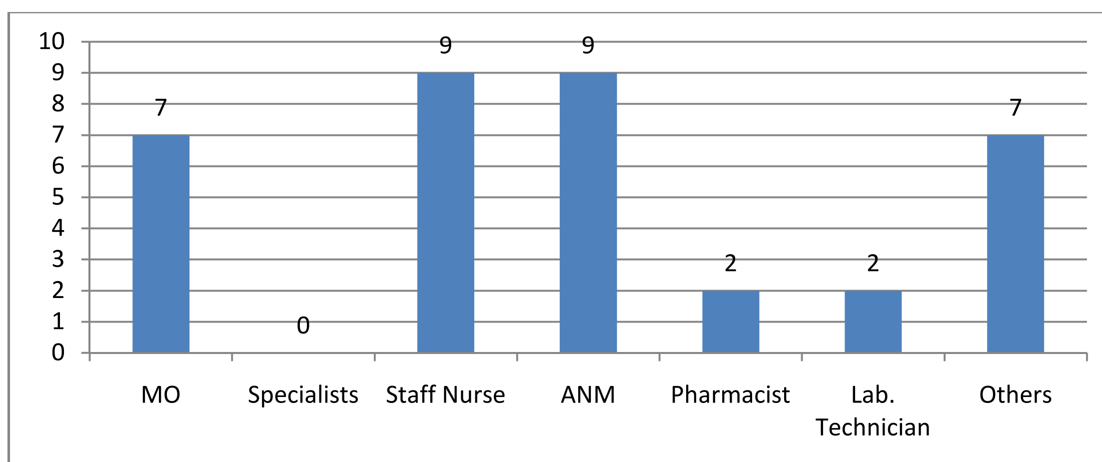
In 50% of the CHCs the type of sewerage system was Soak pit, in other 50% it was connected to the Municipal Sewerage system. Wastes were sent to incinerators outside for disposal. All the CHCs had proper electric lines in all the parts of the centres, continuous power supply was there in 50% of the CHCs, occasional power failure was seen in 20% and regular power cuts was in 30% of the CHCs. Standby power facility was available in 90% of the CHCs. Laundry facility was there in 10% of the CHCs and in remaining 90% it was outsourced.

Table 9: Communication and Transport Facilities in CHCs (N=10)

S. No.	Parameter	Number of CHCs	Percentage (%)
1	Telephone	10	100
2	Personal computer	10	100
3	NIC terminal	10	100
4	Email	10	100
5	Vehicle availability	9	90
6	Accessibility of CHC by - All weather roads - All weather roads including Rail	 10 0	 100 0

All the CHCs had telephone, Personal computer, NIC terminal and email facilities. 90% of the CHCs had their own vehicles. All the CHCs are accessible by all weather roads but none were connected by railway network.

Graph 7: Availability of Residential facility for the Staffs at the CHCs (N=10)



Residential facility for Medical officers and others like class IV and drivers were available in 70% of the CHCs, in 90% of CHCs residential facility for staff nurse and ANMs was available. For pharmacist and laboratory technician residential facility was available in only 20% of CHCs and none of the CHCs had residential facility for the specialists.

Table 10: Other Services/facilities at the CHCs (N=10)

S. No.	Services/Facilities	Number of CHCs	Percentage (%)
1	Office room	9	90
2	Store room	9	90
3	Nurses rest room	8	80
4	Kitchen	1	10
5	Diet provision to indoor patients	0	0
6	Referral Services	9	90
7	Behaviour of the CHC staff with the patient		
	-Courteous	5	50
	-Casual/indifferent	5	50

In the present study, 90% of CHCs had Office room and store room, 80% had Nurses rest room, 10% had Kitchen room, but diet for the indoor patients was not provided in any CHCs. 90% of CHCs had referral services by hospital vehicle. Behaviour of the CHC staff with the patient was Courteous in 50% and casual/indifferent in 50% of the CHCs. All the CHCs had 50-75% of the equipments and drugs as per IPHS norms (see Annexure V and Annexure VI) and all the CHCs had more than 75% of the furniture as per the IPHS norms (see Annexure IV).

Table 11: Quality Control Mechanism in CHCs (N=10)

S. No.	Facility	No. of CHCs	Percentage (%)
1	Citizen’s charter	10	100
2	Rogi Kalyan Samiti	10	100
3	Internal Monitoring	10	100
4	External Monitoring	06	60
5	Availability of Standard Operating Procedures	0	0

Citizen’s charter was available in all the CHCs. *Rogi Kalyan Samiti/ Arogya Raksha Samiti* was constituted in all the CHCs. Internal monitoring by Social audit / medical audit / economic audit was done in all CHCs and external monitoring by *Zilla Panchayat / Rogi Kalyan Samitis* was done in 60% of the CHCs. None of the CHCs had the Standard Operating Procedures.

II) Profile of PHCs of Belagavi district

Table 12: Distribution of PHCs according to size of the population (N=20)

S. No.	Population covered by PHCs	Number of PHCs	Percentage (%)
1	< 15,000	1	5
2	15,000 to 19,999	5	25
3	20,000 to 29,999	6	30
4	30,000 to 39,999	3	15
5	40,000 to 50,000	4	20
6	> 50,000	1	5
	Total	**20**	**100**

In the present study, the 30% of PHCs (6) were catering the services to the population between 15,000-19,999, 25% of PHCs (5) were catering the services for 20,000 to 29,999 population, 20% of PHCs (4) were catering the services for population between 40,000 to 50,000, 15% of PHCs (3) between 30,000 to 39,999; only one PHC was catering the service for population less than 15,000 and one PHC for more than 50,000 population.

Table 13: Availability of Regular services at PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	OPD Services (8 hours/day)	20	100
2	Emergency services (24 hours/day)	17	85
3	Referral services	20	100
4	In-patient services	20	100

In the present study, all the PHCs were giving the regular OPD services, referral services and In-patient services. Emergency services for 24 hours was given by 85% of the PHCs(17). 65% of PHCs (13) were working on 24 hours × 7days/week basis.

Table 14: Inpatient and Outpatient services in PHCs (N=20)

S. No.	Services	Number of PHCs	Percentage (%)
1	**Number of Beds available**		
	6 beds	16	80
	>6 beds	4	20
2	**Bed Occupancy Rate**		
	<40%	11	55
	40-60%	7	35
	>60%	2	10
3	**Average daily OPD Attendance (No. of patients)**		
	0-40	4	20
	41-80	12	60
	81-120	4	20

In the present study, 80% of PHCs had 6 beds and in 20% of PHCs the number of beds available for Inpatient service was more than 6. Bed occupancy rate was less than 40% in 55% of PHCs, 40-60% in 35% of PHCs and more than 60% in 10% of PHCs. The average daily OPD attendance was between 41 to 80 in 60% 0f PHCs, 0 to 40 in 20% of PHCs and 81 to 120 in 20% of PHCs.

Table 15: Treatment of specific conditions in PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	Cataract surgery	0	0
2	Primary wound management	20	100
3	Minor Surgeries	14	70
4	Primary management of fracture	13	65
5	Poisoning management	17	85
6	Burns management	15	75

While cataract surgery was being performed in none of the PHCs, wounds were managed in primary level in all the PHCs. Minor surgeries were conducted in 70% of the PHCs, Poisoning cases were managed in 85%, burns were managed in 75% and fractures were managed in 65% of the PHCs.

Graph 8: Treatment of specific conditions at PHCs

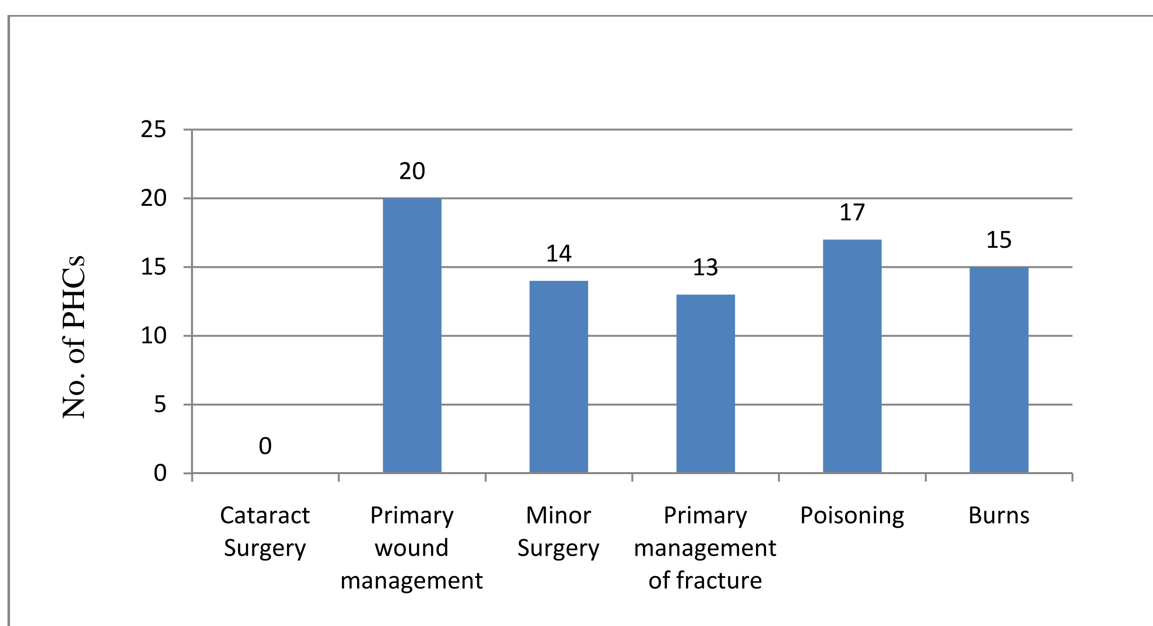


Table 16: Availability of Antenatal and Intra-natal services at PHCs (N=20)

S. No.	Services/Facilities	Number of PHCs	Percentages (%)
1	Ante-natal care	20	100
2	Availability of Labour room	19	95
3	Deliveries conducted in Labour room	18	90
4	Availability of facility for Normal delivery for 24hrs	16	80
5	Use of Partograph where deliveries are conducted	4 (Out of 18)	22*
6	Availability of separate area for septic and aseptic deliveries	0	0

*Percentage calculated out of 18 PHCs where deliveries were being conducted

In the studied PHCs, ANC care was given in all the PHCs, in 95% of PHCs the labour room was available for the normal delivery. Deliveries were conducted in 90% of PHCs (18), but in only 22% of PHCs (4) the Partograph was used. In 80% of PHCs (16) there was availability of facility for normal delivery for 24 hours/day. The reasons for not conducting deliveries in 10% of PHCs (2) were non-availability of labour room and trained staff. New born care services on 24×7 hours basis were present in 90% of the PHCs.

Graph 9: Distribution of PHCs according to the number of deliveries in a month (N=20)

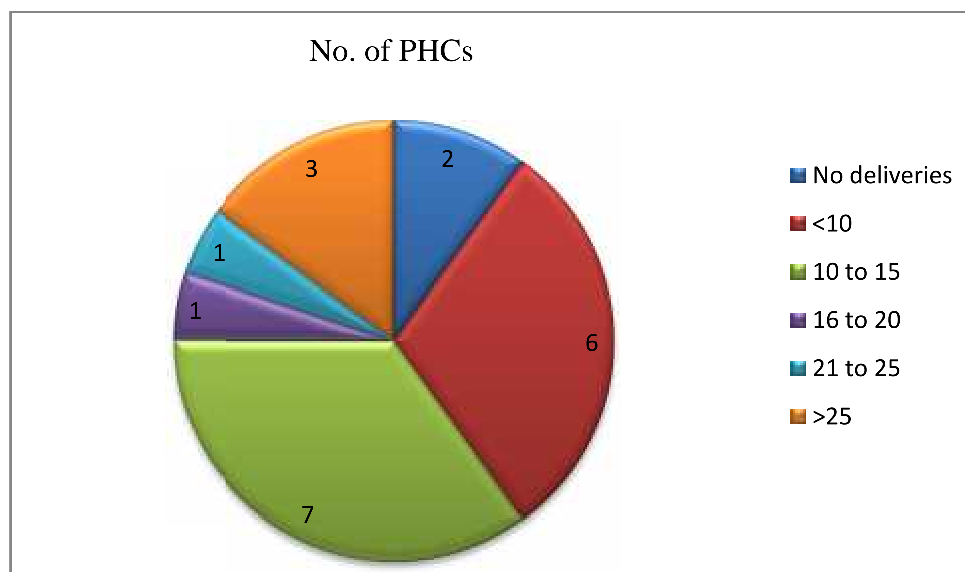


Table 17: Availability of specific services at PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	Availability of facility for tubectomy and vasectomy	11	55
2	Treatment of gynecological disorders	18	90
3	Facility for MTP (abortion)	0	0
4	Family Planning services	20	100
5	Treatment of STI / RTI	18	90
6	Treatment of anemia	18	90

In the studied PHCs, facility for tubectomy and vasectomy was available in 55% of PHCs, facility for treatment of gynecological disorders, STI/RTI and anemia was available in 90% of PHCs, family planning services were given in all the PHCs, but MTP facility was not available in any PHC.

Table 18: Availability of Paediatric services at PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	Management of LBW babies	13	65
2	Immunization Services	20	100
3	Management of children suffering from pneumonia	17	85
4	Management of children suffering from diarrhea with dehydration	13	65
5	SAM management	14	70

In this study, the babies with Low Birth Weight were managed in 65% of PHCs. Immunization services were available in all the PHCs. Management of children suffering from Pneumonia was done in 85% of the PHCs and diarrhea with dehydration in 65% of the PHCs. Children with Severe Acute Malnutrition were managed in 70% of the PHCs.

Graph 10: Paediatric services in PHCs (N=20)

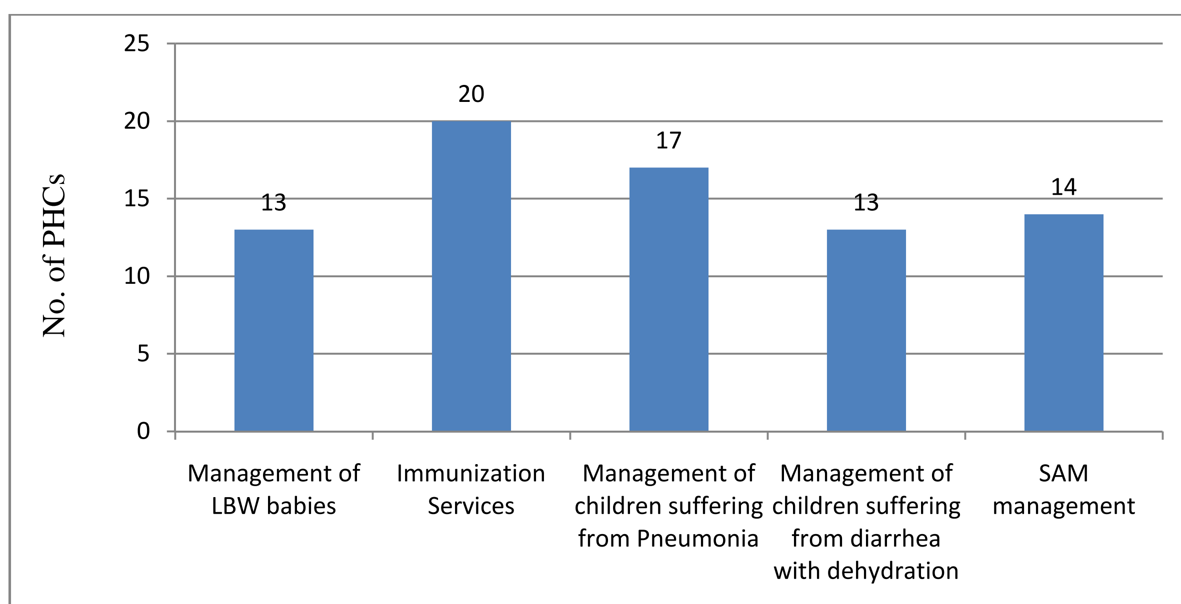


Table 19: School and adolescent health services at PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	School Health Services		
	- Immunization	16	80
	- De-worming activities	16	80
	- Monitoring of Mid-day School meal program	14	70
2	Adolescent friendly clinics done in the preceding year		
	- No Clinics	04	20
	- Weekly once	0	0
	- Once in a month	07	35
	- Once in 3 months	06	30
	- Once in 6 months	03	15

School Health Services like Immunization service and de-worming activities were offered in 80% of PHCs and Monitoring of Mid-day meal program was done in 70% of the PHCs in the preceding year.

Adolescent friendly clinics with dedicated day in a week were not available in any of the PHCs. But 35% of PHCs were conducting the adolescent clinic monthly, 30% of PHCs once in three months and 15% of PHCs conducting adolescent clinic once in six months. 20% of PHCs had not conducted any adolescent clinics in the previous year.

Table 20: Other Services at PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	Water and sanitation services	20	100
2	Disease surveillance	20	100
3	Rehabilitation services	0	0
4	AYUSH services as per local preferences	8	40
5	Collection and reporting of vital statistics	20	100

Water and sanitation services, activities like Disease surveillance, collection and reporting of vital statistics were done in all the PHCs. AYUSH services were available in only 40% of the studied PHCs. Rehabilitation services were not available in any PHC in the preceding year.

Table 21: Availability of Manpower Resources at PHCs (N=20)

S. No.	Personnel	Availability in No. of PHCs	Percentage (%)
1	Medical Officer (MBBS)	18	90
2	AYUSH M.O.	8	40
3	Pharmacist	19	95
4	Staff Nurse	19	95
5	Health Assistant Male (Senior supervisor)	11	55
6	Health Assistant Female (LHV)	12	60
7	Laboratory Technician	17	85
8	Health Educator	2	10
9	Clerks (FDC and/ SDC)	20	100
10	Drivers	4	20
11	Class IV workers	20	100

In the present study, 90% of the Primary Health Centres had the allopathic Medical officers, Pharmacist and staff nurse. Lady Medical Officer (LMO) was available in 20% of PHCs, AYUSH doctors in 40% of the PHCs, Laboratory technicians in 85% of the PHCs, Health Assistant (male) in 55%, Health Assistant (female) in 60%, Health Educator in 10% and drivers in 20% of the PHCs. All the PHCs had the clerical staff and class IV workers.

Graph11: Percentage of Total staff availability at PHCs

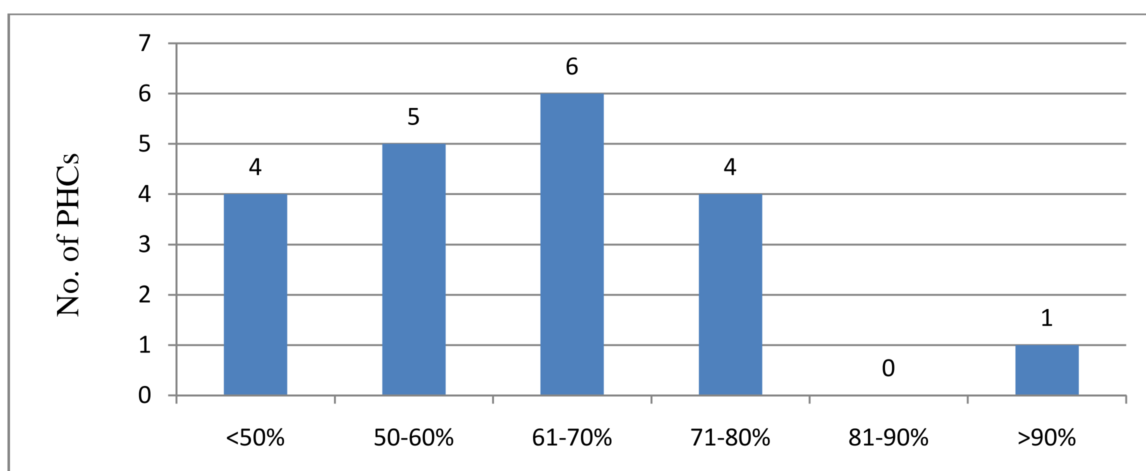


Table 22: Training of PHC Personnel during previous year

S. No.	Personnel	No. of PHCs	Percentage (%)
1	Medical Officer	15	75
2	Paramedics in treatment of minor ailments	14	70
3	Training of ASHAs	19	95
4	Training of Health workers	15	75

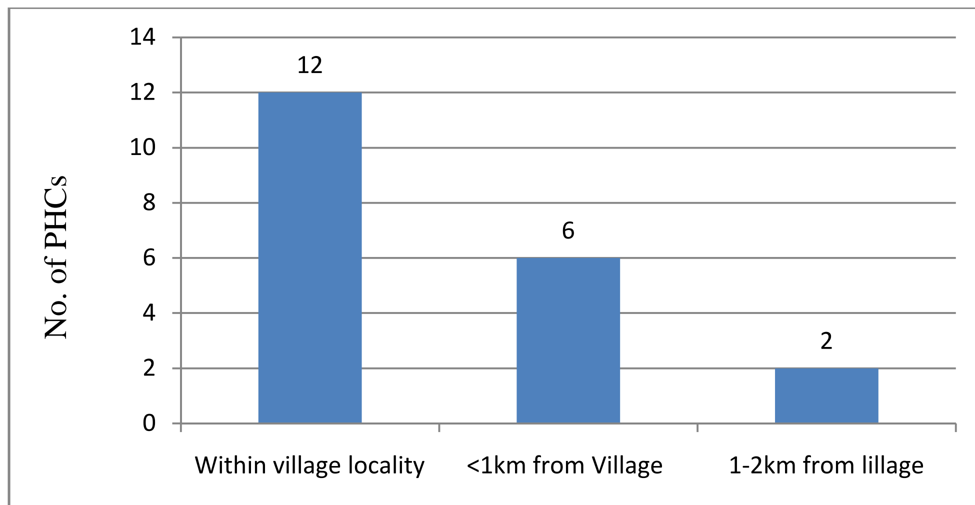
In the studied PHCs, 75% of the Medical Officers had undergone training (in New born care / Bio Medical Waste management / immunization training etc.) in the preceding year. Paramedical staff of 70% of the PHCs, Health workers of 75% of the PHCs, ASHA workers of 95% of the PHCs had underwent training about various health topics in the preceding year.

Table 23: Laboratory Services available at PHCs (N=20)

S. No.	Services	No. of PHCs	Percentage (%)
1	Routine Lab. Investigations	17	85
2	Blood grouping & Rh typing	12	60
3	Bleeding time & Clotting time	12	60
4	Diagnosis of STD/RTIs	4	20
5	Sputum testing for TB	16	80
6	Blood smear examination for Malaria Parasite (MP)	20	100
7	Rapid test for pregnancy	20	100
8	RPR test for Syphilis / Yaws surveillance	2	10
9	Rapid test for HIV	20	100
10	Widal test	8	40

Routine laboratory investigations were present in 85% of PHCs, sputum for AFB in 80%, Rapid test for pregnancy in 100%, Rapid test for HIV in 100%, BT, CT and blood grouping in 60%, diagnosis of STD/RTIs in 20%, RPR test for syphilis/Yaws surveillance in 10%, Widal test in 40%, blood smear examination for Malaria parasite in all the PHCs were done in the preceding year.

Graph 12: Location of the PHCs (N=20)



Among the 20 studied PHCs, 12 were located within the village locality, 6 PHCs were located within one km distance from the village and two PHCs were located within 1-2 km distance from the village.

Table 24: Availability of the Physical infrastructure at the PHCs as per IPHS-2012 (N=20)

S. No.	Physical infrastructure	Number of PHCs	Percentage (%)
1	Availability of designated government building	20	100
2	Building area		
	- Adequate	5	25
	- Inadequate	15	75
3	Present stage of Construction of building		
	- Complete	18	90
	- Incomplete	2	10
4	Compound wall /Fencing		
	- No	3	15
	- All around	3	15
	- Partial	10	50
	- All around with gate	4	20
5	Condition of plaster on walls		
	- Well plastered with plaster intact everywhere	6	30
	- Plaster coming off in some places	14	70
6	Condition of floor		
	- Floor in good condition	16	80
	- Floor coming off in some places	4	20

All the Primary Health Centres had the designated government buildings, 75% of the PHC building area were inadequate according to the IPHS norms (PHC should have building area between 375 square meter to 450 square meter). Construction of the 90% PHCs was complete. 20% of the PHCs had the compound wall all around with gate, 15% had no compound wall, 50% had partial compound wall and 15% of the PHCs had compound wall all around without gate. 30% of the PHCs were well plastered with plaster intact everywhere; in 70% of PHCs wall plaster was coming off in some places. Floor condition was good in 80% of the PHCs.

Table 25: Distances of PHCs from farthest villages

S. No.	Distance of PHC from farthest village in coverage area	Number of PHCs	Percentage (%)
1	<10 km	6	30
2	10-20 km	7	35
3	20-30 km	5	25
4	> 30 km	2	10

In the present study, 30% of the PHCs were less than 10 km distance from the farthest vilage in the coverage area, 35% between 10-20km, 25% between 20-30km and 10% of the PHCs were more than 30 km distance from the farthest village in the coverage area.

Table 26: Travel time to reach the PHC from farthest village in coverage area

S. No.	Travel time to reach the PHC from farthest village in coverage area	Number of PHCs	Percentage (%)
1	<30 minutes	5	25
2	30-60 minutes	8	40
3	1-2 hours	7	35

In the present study, 25% of the PHCs could be reached in less than 30 minutes from the farthest village by the available government/public transport services. 40% in 30-60 minutes and 35% of the PHCs could be reached in 1-2 hours from the farthest village by the available government / public transport services.

Table 27: Distances of the PHCs from the Nearby CHCs

S. No.	Distance	Number of PHCs	Percentage (%)
1	<30 Km	13	65
2	30-40 Km	04	20
3	41-50 Km	02	10
4	>50 Km	01	05

About 65% of Primary Health Centres were within 30 Km from the nearest CHC, 20% between 30-40 Km, 10% between 41-50 Km and only 5% PHCs were more than 50 Km from the nearest Community Health Centre.

Table 28: Distances of PHCs from the District Hospital

S. No.	Distance	Number of PHCs	Percentage (%)
1	< 25 Km	02	10
2	25-50 Km	04	20
3	50-75 Km	06	30
4	75-100 Km	03	15
5	> 100 Km	05	25

About 10% of Primary Health Centres were within 25 Km distance from the district hospital, 20% were between 25-50 Km, 30% between 50-75 Km, 15% between 75-100 Km and 25% of the PHCs were situated more than 100 Km distance from the district hospital.

Table 29a: Other Physical Infrastructure at the PHCs (N=20)

S. No.	Facilities	Number of PHCs	Percentage (%)
1	Prominent display boards in local language	20	100
2	Registration counters	9	45
3	Counter near entrance to obtain contraceptives, ORS packets, Vitamin A and Vaccination	14	70
4	Pharmacy for drug dispensing and drug storage	20	100
5	Separate public utilities for males and females	0	0
6	Suggestion/complaint box	20	100
7	OPD rooms	20	100
8	Adequate no. of windows in the room for light and air in each room	10	50
9	Family welfare clinic	0	0
10	Waiting room for patients	20	100
11	Emergency room/Casualty	0	0
12	Separate wards for males and females	0	0
13	Separate public utilities for males and females	0	0

Prominent display boards in local languages, pharmacy for drug dispensing and drug store, suggestion/complaint box, OPD rooms and waiting rooms for patients were present in all the PHCs. Registration counters were there only in 45% of the PHCs, Counter near entrance to obtain contraceptives, ORS packets, Vitamin A and Vaccination were present in 70% of the PHCs; only 50% of the PHCs had adequate number of windows in the room for light and air in each room. None of the PHCs had Separate wards for males and females or separate public utilities for males and females.

Table 29b: Other Physical Infrastructure at the PHCs (N=20)

S. No.	Facilities	Number of PHCs	Percentage (%)
1	Water Supply – Source		
	-Piped	3	15
	-Bore well	17	85
2	Adequate water supply	16	80
3	Type of sewerage system		
	-Soak pit	19	95
	-Connected to Municipal Sewerage	1	05
4	Waste disposal		
	- By Incineration and dumping	3	15
	- Sent to Incinerators outside for disposal	17	85
5	Electricity -Electric line in all parts of the PHC	20	100
6	Power supply -Occasional power failure	4	20
	-Power cuts in summer only	1	05
	-Regular power cuts	15	75
7	Standby facility (generator/inverter) available in working condition	15	75
8	Laundry facility		
	-Available	2	10
	-Outsourced	18	90

In the studied PHCs, source of water supply for 85% of the PHCs was bore well and 15% of the PHC had piped water supply. Adequate water supply was available in 80% of the PHCs. In 95% of the PHCs, the sewerage system was soak pit and only 5% was connected to the municipal sewerage. In 15% of PHCs the waste disposal method practiced was incineration and dumping, in remaining 85% of PHCs the wastes were sent to incinerators outside for disposal.

Table 30: Communication and Transport Facilities in PHCs (N=20)

S. No.	Parameter	Number of PHCs	Percentage (%)
1	Telephone (Landline)	19	95
2	Personal computer	20	100
3	NIC terminal	19	95
4	Email	19	95
5	Vehicle availability	5	25

Personal computer was available in all the PHCs. Telephone, NIC terminal and email facility was available in 95% of the PHCs, but vehicle was available only in 25% of the PHCs.

All the PHCs were accessible by all weather roads and 10% of the PHCs were accessible by rail route also.

Table 31: Residential facilities for the staff in PHCs (N=20)

S. No.	Residential facilities for PHC Staff	Number of PHCs	Percentage (%)
1	For Medical officers	12	60
2	For Pharmacists	3	15
3	For Nurses	10	50
4	For Other Staff	7	35

Residential facilities for Medical Officers were available in 60% of the PHCs, for nurses in 50% of the PHCs, for pharmacists in 15% and other staff in 35% of the PHCs. None of the Medical Officers did the private practice during or after the duty hours at the PHC.

Table 32: Other Services/facilities at the PHCs (N=20)

S. No.	Services/Facilities	Number of PHCs	Percentage (%)
1	Office room	12	60
2	Store room	9	45
3	Kitchen	3	15
4	Diet provision to indoor patients	0	0
5	Referral Services	20	100
6	Publicly displayed mechanism for register of complaint/grievance	8	40
7	Behavior of the PHC staff with the patient		
	-Courteous	14	70
	-Casual/indifferent	6	30
8	Outbreak of Diseases in the PHC area in the last three years		
	-Malaria	3	15
	-Gastroenteritis	2	10
	-Chikungunya	4	20

Separate Office rooms were present in 60% of the PHCs, store rooms in 45%, Kitchen in 15%, but the diet to the indoor patients was not provided by any PHC. Referral services were offered in all the PHC. Publicly displayed mechanism for register of complaint/grievance was available in 40% of PHCs.

Behaviour of the PHC staff with the patient was courteous in 70% and casual/indifferent in 30% of the PHC (assessed by personal observation). In the last three years, there were reported malaria outbreak in field areas of 15% of the PHCs, Gastroenteritis in 10% and Chikungunya in areas of 20% of the PHCs. The proper investigations (larvae survey, IEC activities, Active blood smear collection etc.) and case managements were done by the PHC staff.

Table 33: Status of Operation Theatres of PHCs (N=20)

S. No.	Parameter	No. of PHCs	Percentage (%)
1	OT exists	19	95
2	Area adequate	19	95
3	Functional	17	85
4	Surgeries conducted	11	55
5	Reasons for not conducting surgeries - No OT -Non availability of doctors/staff -Lack of equipment/poor physical state of OT -No power supply in OT -Not trained	 1 1 2 0 5	45

In 95% of Primary Health Centres, operation theatre was present and had adequate area, but functional in only 85% of the PHCs. Surgeries were conducted in only 55% of the PHCs.

Graph 13: Reasons for not conducting surgeries at PHCs (N=9)

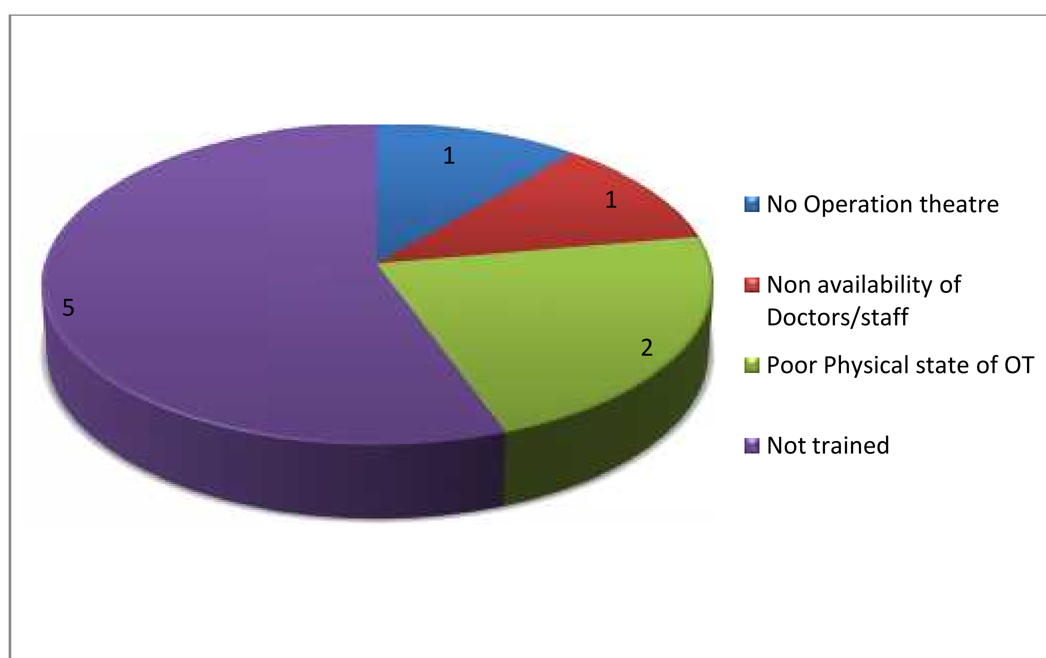


Table 34: Availability of Medical Equipments in PHCs (N=20)

S. No.	Equipments	No. of PHCs where equipment was available	Percentage (%)
1	Normal Delivery Kit	19	95
2	Standard Surgical Kit	13	65
3	Radiant warmer	19	95
4	Suction apparatus	19	95
5	Equipment for Neonatal Resuscitation	19	95
6	IUCD Insertion kit	19	95
7	Cold chain equipments	20	100
8	Anthropometric measurement equipments	20	100

Equipments like Normal delivery kit, Radiant warmer, suction apparatus, equipment for neonatal resuscitation, IUCD insertion kit were available in 95% of the PHCs. Standard surgical kit was available in 65% of the PHCs. All the PHCs had the anthropometric measurement equipments and cold chain equipments for the vaccine storage as per IPHS-2012.

Table 35: Availability of total equipments, drugs and furniture in PHCs (N=20)

S. No.	Items	Availability in No. of PHCs	Percentage (%)
1	Equipments (As per the list)* <50% 50-75%	 10 10	 50 50
2	Essential Drugs ** <50%	20	100
3	Furniture *** 75-100%	20	100

(see *Annexure V **Annexure VI ***Annexure IV)

About 50% of the Primary Health Centres had the equipments less than 50% of the required and 50% of PHCs had 50-75% of the equipments. All the PHCs had less than 50% of the drugs (as per essential drug list). Almost all PHCs had required furniture.

Table 36: Quality Control Mechanism in PHCs (N=20)

S. No.	Facility	No. of PHCs	Percentage (%)
1	Citizen's charter in the local language	20	100
2	*Rogi Kalyan Samiti (RKS)*	20	100
3	Internal Monitoring	12	60
4	External Monitoring	5	25
5	Availability of Standard Operating Procedures (SOP)	2	10

The Citizen's charter was publicly displayed in the local language in all the PHCs. *Rogi Kalyan Samiti (RKS)/ Arogya Raksha Samiti (ARS)* was constituted in all the PHCs. Internal monitoring by Social audit / medical audit / economic audit was done in 60% of PHCs and external monitoring by *Zilla Panchayat (ZP)/RKS* was done in 25% of the PHCs. Only 10% of the PHCs had the Standard Operating Procedures (SOPs).

III) Profile of Sub Centres of Belagavi district

Out of the total 616 Subcentres in the district, 40 SCs were surveyed.

Table 37: Distribution of SCs according to size of population

S. No.	Population covered by SCs	Number of SCs	Percentage (%)
1	3,000-5,000	14	35
2	5,001-8,000	20	50
3	8,001-12,000	4	10
4	12,001-15,000	1	2.5
5	> 15,000	1	2.5
	Total	**40**	**100**

In the studied Subcentres, 50% of SCs were catering the services for population between 5,001 to 8,000, 35% of SCs for 3,000 to 5,000, 10% between 8,001 to 12,000, 2.5% between 12,001 to 15,000 population, 2.5% of SCs were catering the services for population between more than 15,000.

Table 38: Availability of Staff at the SCs (N=40)

S. No.	Personnel	Availability in Number of SCs	Percentage (%)
1	ANM	38	95
2	Male Health Worker	17	42.5
3	Voluntary Worker	1	2.5

In the present study, 95% of SCs had ANMs, Male Health Worker was available in 42.5% of the SCs and Voluntary Worker was available in 2.5% of SCs.

Table 39: Availability of Services at SCs (N=40)

S. No.	Services	No. of SCs	Percentage (%)
1	MCH Services	40	100
2	Visits - MO - Fixed visit day/timings - Awareness of the Residents about the Doctors visit	 28 2 5	 70 5 12.5
3	Visits by HA/LHV	29	72.5
4	Facility for referral	4	10
5	Immunisation services	40	100
6	Treatment of Minor illnesses	27	67.5
7	Facility for taking Peripheral blood	19	47.5
8	DOT centres	39	97.5
9	Other functions and services	34	85
10	Monitoring and Supervision activities	33	82.5
11	Record maintenance	39	97.5
12	Village Health Plan	30	75

In all the SCs the MCH services like Antenatal care, Intra-natal care, Postnatal care, Child care during immunization, Family planning and contraception and adolescent health care were given. Medical officer’s visits to the SCs once in a month was done in 70% of the SCs, but in only 5% of the SCs the visiting time and day was fixed and in 12.5% of the SCs the residents were aware about the doctor’s visit. Regular visits of Health Assistant Male or Lady Health Visitor for at least once a week was done in 72.5% of the SCs. Only 10% of the SCs had the referral service.

Treatment of the minor illnesses was available in 67.5% of the SCs, in 47.5% of the SCs there was facility for taking Peripheral blood. 97.5% of the SCs were the DOT centres. Other functions and services like Disease surveillance, Control of local endemic diseases, Promotion of sanitation, Field visits and home care and National Health Programmes including HIV/AIDS control programmes were done in 85% of the SCs.

Monitoring and supervision activities like Monitoring of water quality, unusual health events, training of ASHA workers and coordinated services with Anganwadi Workers, ASHA and VHSNC (Village Health Sanitation and Nutrition committee) were present in 82.5% of the SCs. Record maintenance was done in 97.5% of the SCs and 75% of the SCs there was Village Health Plan.

Table 40: Distances of SCs from Remotest village in the coverage area (N=40)

S. No.	Distance of SC from farthest village in coverage area	Number of SCs	Percentage (%)
1	< 5 km	19	47.5
2	5-10 km	18	45
3	10-15 km	2	5
4	> 15 km	1	2.5

All the Sub-centres were located within the village locality. In 47.5% of the SCs, the distance of the farthest village in the coverage area was less than 5 km from the SC. In 45% of SCs it was between 5-10 km, 10-15 km in 5% of SCs and more than 15 km in 2.5% of the SCs.

Table 41: Travel time to reach the Sub Centre from the remotes place in the coverage area (N=40)

S. No.	Travel time	Number of SCs	Percentage (%)
1	< 15 minutes	10	25
2	15-30 minutes	23	57.5
3	30 min – 1 hour	6	15
4	> 1 hour	1	2.5

In the studied Subcentres, the travel time to reach the Sub Centre from the remotes place in the coverage area was less than 15minutes in 25% of the SCs, 15 to 30 minutes in 57.5% of the SCs, 30minutes to 1 hour in 15% and more than 1hour in 2.5% of the SCs.

Table 42: Distance of Sub Centres (in Km.) from the PHCs (N=40)

S. No.	Distance of SCs from PHCs	Number of SCs	Percentage (%)
1	<10 km	29	72.5
2	10-20 km	10	25
3	20-30 km	1	2.5

The distance of Sub Centres from the nearest PHCs was less than 10 km in 72.5% of the SCs, 10 to 20 km in 25% and 20 to 30 km in 2.5% of the SCs.

Table 43: The distance of Sub Centre (in km.) from the CHC (N=40)

S. No.	Distance of SCs from PHCs	Number of SCs	Percentage (%)
1	< 25 km	30	75
2	25-50 km	6	15
3	50-75 km	3	7.5
4	75-100 km	1	2.5

The distance of Sub Centres from the CHCs was less than 25 km in 75% of the SCs, 25 to 50 km in 15%, 50 to 75 km in 7.5% of the SCs and 75-100 km in 2.5% of the SCs.

Table 44: Physical infrastructure of the Sub Centres (N=40)

S. No.	Physical infrastructure	Number of SCs	Percentage (%)
1	Availability of designated government building-	22	55
	Rented buildings-	5	12.5
	No building-	13	32.5
2	Building area		
	- Adequate	11	27.5
	- Inadequate	16	40
	- No building	13	32.5
3	Present stage of Construction of building		
	- Complete	27	67.5
	- Incomplete	0	0
	- No building	13	32.5
4	Compound wall /Fencing		
	- No	16	40
	- All around	1	2.5
	- Partial	10	25
	- All around with gate	0	0
	- No building	13	32.5
5	Condition of plaster on walls		
	- Well plastered with plaster intact everywhere	9	22.5
	- Plaster coming off in some places	18	45
	- No building	13	32.5
6	Condition of floor		
	- Floor in good condition	12	30
	- Floor coming off in some places	15	37.5
	- No building	13	32.5

In 55% of the SCs had designated government buildings, 12.5% of SCs were running in the rented building and 32.5% of SCs had no buildings. In 27.5% of the SCs, the building area was adequate as per IPHS 2012 norms for SC (SC building area should be 85 square meter). In 67.5% of SCs, the construction was complete. 40% SCs had no compound wall, 25% had partial and 2.5% had compound wall all around. 22.5% of the SCs were well plastered with plaster intact everywhere and in 45% of SCs the plaster was coming off in some places. Condition of floor was good in 30% and it was coming off in 37.5% of the SCs.

Table 45: Availability of Physical infrastructure in SCs with the buildings (N=27)

S. No.	Physical infrastructure	Number of SCs	Percentage (%)
1	Prominent display boards in local language	19	70
2	Separate public utilities for males and females	0	0
3	Suggestion / complaint box	4	15
4	Labour room	13	48
5	Examination room	22	81
6	Water Supply – Piped Source -No water supply	26 1	96 4
7	Waste disposal By Incineration and dumping Sent for incinerators outside for disposal	 6 34	 15 85
8	Power supply - Regular power cuts	27	100
9	Residential Facility for ANM	23	85
10	Equipments	22	81
11	Drugs	22	81
12	Furniture	22	81

Prominent display boards in local language were present 70% of the SCs where the buildings were present, Suggestion / complaint box in 15%, labour room in 48%, but no deliveries were conducted in SCs. Examination room in 81%, 96% had piped water supply, 4% had no water supply.

In 15% of SCs, the waste disposal method practiced was incineration and dumping, in remaining 85% of SCs wastes were sent to incinerators outside for disposal.

No Sub-Centres had their own telephone and transport facilities. There was regular power cuts in all the SCs, Residential facility for ANM was available in 85% of SCs with building, there was no regular water supply in 4% of the SCs and less

than 50% of the required equipments, drugs and furniture were present in the 81% of the SCs with the building. In Sub Centres without the building, the equipments like Sphygmomanometer, Stethoscope and Weighing machines were present in all the SCs and less than 50% of drugs were present in SCs without building.

Table 46: Quality Control Mechanism in SCs (N=40)

S. No.	Facility	No. of SCs	Percentage (%)
1	Citizen’s charter in local language	17	42.5
2	Internal Monitoring	28	70
3	External Monitoring	1	2.5
4	Availability of various guidelines issued by GOI or State Govt.	3	7.5

Citizen’s charter was available in 42.5% of SCs. Internal monitoring by MO and Male/Female supervisors was done in 70% of SCs and external monitoring by Village Health and Sanitation Committee and evaluation by independent external agency was done in only 2.5%% of the SCs. In 7.5% of SCs there was availability of various guidelines issued by Govt. of India or Govt. of Karnataka.

DISCUSSION

Availability of Services and Manpower at the CHCs

The Community Health Centres (CHCs) were designed to provide referral health care for cases from the Primary Health Centres level and for cases in need of specialist care approaching the centre directly. 4 PHCs are included under each CHC thus catering to approximately 80,000 populations in tribal/hilly/desert areas and 1,20,000 population for plain areas. CHC is a 30-bedded hospital providing specialist care in Medicine, Obstetrics and Gynecology, Surgery and Paediatrics.

In the present study, 60% of CHCs covered the population between 80,000 to 1,20,000, 20% of CHCs covered between 120,000 to 200,000, 20% of CHCs covered >200,000 population, which is more than the IPHS norms for CHCs indicating the less number of CHCs in the district and more burden on the existing CHCs for service delivery. (Table 1, Graph 1)

In the present study, all the CHCs provided 24 hours ×7days/week emergency services, delivery services including normal and assisted deliveries, New-born care, Family Planning Services, and Treatment of STI / RTI. 40% of CHCs had OBG specialist service, 30% provided paediatric specialist service. No CHC had surgery and medicine specialty service. All the CHCs had the General duty officer (Medical Officer), 40% of CHCs had OBG specialists, 30% of CHCs had Paediatricians, 20% had Anesthetists, 70% had dentists and 20% had AYUSH medical officers. No CHCs had General surgeons, Physicians, Ophthalmologists and Public Health Programme Manager. Overall 17.5% of specialists (Surgeons, Gynecologists, Physicians & Paediatricians) were present at the CHCs.(Table 4a, 4b) This was very less when compared to the Rural Health Statistics 2015 data of Karnataka, in which 62% of

CHCs had Surgeons, 84% of CHCs had Gynecologists, 50% Physicians, 48% Paediatricians and overall 61% of specialists (Surgeons, OB & GY, Physicians & Paediatricians) were present at the CHCs.[11] District Level Household and Facility Survey IV (DLHS IV) reports that in Karnataka, 95.7% of CHCs have 24 hours × 7 days/week normal delivery service.[46]

A study was conducted in Bharatpur district of the of Rajasthan in 2011 for assessing IPH Standards for Community health centres (CHCs) on 13 CHCs according to the revised draft (2010) showed that the availability of 31% of general surgeons and paediatricians as per the requirement. Only one CHC had the availability of anaesthetist. Only 38% of CHCs had physician, obstetrician and only four CHCs were functioning with paediatricians. It showed that the availability of specialists to provide various specialist services at CHCs was found to be very poor. As per the guidelines, only 41% of Medical Officers were there at the CHC level. Only 78.4% nursing staffs were available. Only 30.8% pharmacists/compounders, 66.7% laboratory technicians, 50% radiographers were available for service.[42]

Another study conducted during April 2012 to September 2013 in six CHCs for assessment of Health Centers as Per Indian Public Health Standards in Chandigarh, Panchkula and Mohali (Tricity) showed, overall specialists and General duty doctors at CHCs in Chandigarh were more in number as compared to prescribed norms. General surgeon and anesthetist were available at 50% of CHCs in Chandigarh and Panchkula, but none in Mohali. Physician and Paediatrician posts were lying vacant at CHCs in Mohali. Public health programme manager was not posted at CHCs in tricity.[49]

In present study, all the CHCs had Nursing staff, Pharmacist, Laboratory technician, ward boys, OPD attendant and sweepers. Radiographer and Ophthalmic Assistant were present in 70% of CHCs and clerks were present in 90% of CHCs. (Table 4b).

In Chandigarh study, Nurses and para-medical staff were in excess at all CHCs in tricity. Support manpower was found to be poor only being 50%, 44% and 39% CHCs in Panchkula, Mohali and Chandigarh respectively. Infrastructure facilities were adequate in all CHCs. Availability of equipments was found to be maximum in Chandigarh (94%) followed by Panchkula (75%) and Mohali (69%). Ayurvedic medicines and drugs for new born & child care were available only in 50% CHCs in Chandigarh and Mohali.[49]

In the present study, 30% of Community Health Centres had the Bed Occupancy Rate (BOR) of less than 40%, 40% CHCs had 40-60% of BOR and 30% of CHCs had more than 60% of BOR. 30% of CHCs had average daily OPD attendance of 50 to 100, 30% had 101-150, 20% had 151-200 and 20% of CHCs had the average daily OPD attendance more than 200. All the CHCs were ICTC centres (Integrated Counseling and Testing Centre). Services like Ante-natal Clinics, Post-natal Clinics and Immunization sessions were conducted regularly in all the CHCs. Facilities for out-patient department in Gynecology/obstetrics was available in all the CHCs. (Table 3)

Emergency Obstetric Care including surgical interventions like LSCS and other medical interventions were available in 40% of CHCs, Emergency care of sick children in 60%, Full range of FP services including Laparoscopic services in 30%,

Safe abortion practices in 40% and Referral transport facility were available in 90% of the CHCs.(Table 2)

About 50% of CHC MOs had undergone two trainings in the previous one year, 30% of CHC MOs had one training, 10% had four trainings of various medical topics and another 10% of CHC MOs had no training in the previous one year. The sterilization training was undergone by 10% of the CHC MOs, IUD insertion by 20%, RTI/STI, HIV/AIDS management training by 20% of MOs, Newborn care by 40% of MOs, Emergency obstetric care by 20% and Biomedical waste management training by 60% of MOs of CHC.(Table 5, Graph 3) In a study done in Sheikhpur district of Bihar in 2011 showed that, none of the doctors had undergone training in sterilization, RTI / STI, HIV /AIDS, newborn care, emergency obstetric care (EmOC) in the last one year. They underwent training only in IUD insertions, emergency contraception and Integrated Management of Neonatal and Childhood Illness.[50]

In the present study, ECG facility was available in 50% of CHCs, but was not in working condition in any of the CHCs. There was no training for the nursing staff on ECG in any CHC. X-ray facility was available in 80% of the CHCs and was in working condition. No CHCs had the Ultrasound facility. In all the CHCs, blood and urine tests were done. In 80% of CHCs, there were 75-100% of laboratory equipments, in remaining 20% there were 50-75% of laboratory equipments present.(Table 6) In a study done in Sheikhpur district of Bihar showed that, pathological tests were available at all the thirteen CHCs in the study district. Similarly, majority of the CHCs (69.2%) have X-ray facility. However, only three CHCs (23.1%) had facilities for ECG. It was also observed that all necessary reagents,

glass ware and facilities for collecting and transport of samples were available. The analysis suggests that efforts should be made to provide ECG services at CHC level.[50]

Physical Infrastructure of the CHC

All the CHCs were located within the village/town. All the CHCs had the designated government buildings, but the CHC area was inadequate according to the IPHS norms. Construction of all the CHCs was complete. (Table 7) Rural Health Statistics 2015 reported, 93% of CHCs in the country have government buildings.[11]

All the CHCs had 30 beds each and there were separate wards for Males and Females. In 50% of CHCs there were separate beds for Paediatric cases, maximum number of beds were for female cases. (Graph 5)

Minor surgeries like incision and drainage, suturing etc., were performed in all the CHCs. Only tubectomy and vasectomy were performed in 50% of CHCs. Obstetric and gynaecological operations were performed in 40% of CHCs. Facility for Caesarian delivery was available in 40% of CHCs. In 30% of CHCs less than 200 caesarian deliveries were conducted during the previous year. In 10% of the CHCs, 200 to 300 Caesarian deliveries were conducted in the preceding year. (Table 8a, Graph 6) The DLHS-IV reported that, Caesarian delivery service was available in 23.1% of CHCs in Karnataka and 18.7% of CHCs in India.[46]

Operation theatres were available in all the CHCs and had enough space. 50% of the CHC OT were fitted with air condition and for 90% of CHC OTs generator and emergency light were available. In 70% of the CHCs there were <50% of the OT equipments and in 30% there were between 50 to 75% of the OT equipments. (Table

8a) Rural Health Statistics 2015 reported, 83% of CHCs in the country have functional O. T. and 91% have Labour room functional.[14]

Labour rooms were present in all the CHCs and were functional. In 60% of the CHCs, there were 50 to 75 deliveries per month, in 30% of CHCs less than 50 deliveries per month and in 10% of CHCs there were 75 to 100 deliveries per month. In 50% of the CHCs, the Partograph was used. (Graph 4) DLHS-IV reported that, 95.7% of CHCs in Karnataka were having 24×7 hours normal delivery services.[46]

Blood storage unit was not available in any CHC. All the Cold chain equipments were available in all the CHCs. DLHS-III reported that, 5.6% of CHCs in Karnataka and 9.1% of CHCs in India have Blood storage facility.[45]

Residential facility for Medical officers and others like class IV and drivers were available in 70% of the CHCs, in 90% of CHCs residential facility for staff nurse and ANMs was available. For pharmacist and laboratory technician residential facility was available in 20% of CHCs and no CHCs had residential facility for the specialists. (Graph 7) But Rural Health Statistics 2015 reported, 75% of CHCs in the Karnataka and 48% of CHCs in the country have quarters for the specialist Doctors.[14]

In the present study, 50% of the CHCs the type of sewerage system was Soak-pit, in other 50% it was connected to the Municipal Sewerage system. Solid waste was sent outside for incineration. All the CHCs had proper electric lines in all the parts of the centres, continuous power supply was there in 50% of the CHCs, occasional power failure was seen in 20% and regular power cuts was in 30% of the CHCs. Standby power facility was available in 90% of the CHCs. (Table 8b)

The Bihar study showed that, CHC was located in the same PHC premises. Staff quarters were not available. There existed a medical officer (MO) residence which was not in living condition. It had an outsourced generator supply for electricity back up because of frequent load shedding. The sewerage was of soak-pit type. There was a hand pump and an overhead tank with a pump in working condition. The waste disposal was done behind the labour room by burning it and then dumping it in a pit.[50]

In the present study, all the CHCs had telephone, personal computer and email facilities. 90% of the CHCs had the vehicles. The 10% of CHCs without vehicle were dependent on 108 ambulance service. All the CHCs were accessible by all weather roads except rail. (Table 9) A study in Bharatpur district of Rajasthan found that, all the 13 CHCs had one Operation Theater, laboratory and cold chain facility, 12 CHCs (92.3%) had labor room and telephone facility and 11 CHCs (84.6%) had availability of e-mail facility.[42]

In the present study, 90% of CHCs had Office room and store room, 80% had Nurses rest room, 10% had Kitchen room, but diet for the indoor patients was not provided in any CHCs. 90% of CHCs had referral services by hospital vehicle. Behaviour of the CHC staff with the patient was Courteous in 50% and casual/indifferent in 50% of the CHCs. All the CHCs had 50-75% of the equipments and drugs as per IPHS norms (see Annexure V and Annexure VI) and all the CHCs had more than 75% of the furniture as per the IPHS norms (see Annexure IV). (Table 10)

Quality Control mechanisms in CHCs:

The IPHS norms stress not only on the infrastructure but also on the quality of services. In the present study, all the PHCs had quality control mechanisms like setting up of *Rogi Kalyan Samithis (RKS)* and display of citizen charters. Internal monitoring by Social audit / Medical audit / Economic audit was done in 100% of CHCs and external monitoring by *Zila Panchayat / Rogi Kalyan Samitis* was done in 60% of the PHCs. No CHC had the Standard Operating Procedures Manual. (Table 11) Rural Health Statistics in India 2015 had reported that all the 206 CHCs of Karnataka to be having registered *Rogi Kalyan Samithis*.[14] DLHS-III reported that, in 76.3% of CHCs citizen's charter was displayed, RKS was constituted in 70.3% and Monitoring by RKS was done regularly in 85.5% of CHCs in Karnataka.[45]

Availability of Regular services at the PHCs

The NRHM framework seeks to provide one Primary Health Centre (PHC) for 30,000 population (20,000 in tribal/ desert areas).[3] In the present study, 60% of the PHCs covered population less than 30,000. (Table 12) This is same as the finding of DLHS-III,[45] which observed that the average rural population covered by PHCs in Karnataka was 25,673 and was more than the finding of Rural Health Statistics in India 2015, which derived it to be 15,924.[14] In the present study, 40% of the PHCs had coverage higher than the stipulated population amongst which 12.5% had coverage of more than 50,000. This hampers the accessibility of health facilities to the rural population on one hand and also gives a higher work load on the existing staff. In the studied PHCs, 65% of PHCs were functioning on 24 hours×7 days/week basis, which is on higher side when compared to Karnataka state data of 55.6%.[46]

In the present study, regular services like OPD services, inpatient services, and referral services were available in all the surveyed PHCs of the district. Emergency services for 24 hours/day were given in 85% of the PHCs. (Table 13) A study conducted in Primary Health Centres of Chittoor District, Andhra Pradesh in 2012 for assessment of infrastructure facilities, manpower and services in 22 PHCs revealed that 63.6% of PHCs were providing in-patient services and 63.6%, the emergency services.[14] Another study was carried out to find out and compare to what extent the IPHS were followed by the PHCs in the selected districts of both the Empowered Action Group (EAG) state of Assam and non-EAG state of Karnataka revealed that all the PHCs in both the studied districts were rendering the assured services of OPD, 24 hours general emergency service and referral services, while 24 hours delivery services were being provided by 80% of the PHCs of the selected districts of both the

states. Functional labour rooms were available only in 80% and 90% of the studied PHCs in Assam and Karnataka respectively.[44]

In the present study all the PHCs had 4 to 6 inpatient beds. Among them 20% of PHCs had more than 6 beds revealing the sufficiency of the stipulated 6 beds of IPHS norms for PHCs. This was similar to Karnataka state data of 90.9% PHCs with at least 4 beds.[46] The bed occupancy ratio remained less than 40% in 55% of PHCs. Bed occupancy ratio is a good measure of utilization of services.

The daily OPD attendance in 40% of PHCs was between 41 to 60, which was as per the IPHS minimum expected OPD attendance of 40 per day per doctor. In 40% it was more than 60 per day indicating the work overload on the staff. (Table 14)

A study done in Rajkot district on quality assessment of facilities available at primary health care centres in 2011 showed that, all PHCs were providing OPD services, but emergency and inpatient services were available in 92% PHCs. Bed occupancy rate for last 12 months was less than 40% in 85% PHCs.[51]

None of the PHCs was fulfilling the important component of National Blindness Control Programme, that is, camp approach in conducting cataract surgeries. Primary management of wound was done in 100% of the PHCs. The service availability of minor surgeries, management of poisoning, burns and fractures were found to be between 70 to 85%. The major reason for this was the non-availability of staff, operation theatres and adequate training of the staff. (Table 15)

In the studied PHCs, ANC care was given in all the PHCs. In 95% of PHCs the labour room was available for conducting the normal delivery. Deliveries were conducted in 90% of PHCs, but in only 22% of PHCs the partograph was used. The

reasons for not conducting deliveries in 10% of PHCs were non-availability of labour room and staff. In 80% of PHCs there was availability of facility for normal delivery for 24 hours×7 days/week. (Table 16) A study conducted in 22 Primary Health Centres of Chittoor District, Andhra Pradesh in 2012 revealed; only 59 % of PHCs were conducting deliveries despite the presence of labour room.[40]

In the present study, in 60% of PHCs the number of deliveries conducted per month was more than 10. New born care services on 24 hours×7 days/week basis were offered in 90% of the PHCs. These were consistent with the findings of DLHS – 4, in which our state had 64.2% of PHCs where at least 10 deliveries were conducted in the last one month and 96.6% of PHCs where New born care services on 24hours×7days/week basis.[46]

In the studied PHCs, facility for tubectomy and vasectomy was available in 55% of PHCs. Non-availability in other PHCs was mainly due to lack of trained staff. Treatment of gynecological disorders, STI/RTI and anemia was in 90% of PHCs, family planning services were given in all the PHCs, but MTP facility was not there in any PHC due to lack of trained staff. (Table 17)

All of the PHCs were providing all the immunizing agents as per Universal Immunization Programme schedule, including Vitamin – A. Activities like tracking of vaccine dropouts were also conducted by all the PHCs. Immunization activities thus were present in 100% of the PHCs.

Management of Severe Acute Malnutrition (SAM) was done in 70% of PHCs. In remaining 30% of PHCs, the most common answer when asked about lack of management of SAM was that the concerned PHC had not received any cases of SAM till the date of enquiry. (Table 18)

Family Planning services like IEC activities, provision of at least one type of contraception (Barrier / IUCD / Pills), referral and follow up were provided by all the PHCs. The point that demands attention is that the supply of condoms surprisingly remained poor.

School health services, including periodic de-worming activities, immunization and monitoring of mid- day school meal program were provided at satisfactory levels. Regular Adolescent friendly clinics under Adolescent Reproductive and Sexual Health (ARSH) Programme were not functioning in any PHCs. This service needs to be reinforced in future. (Table 19)

Other services like water quality monitoring, sanitation services, epidemiological surveillance of diseases and outbreaks, collection and reporting of vital events were done by all the PHCs.

One of the objectives of the NRHM is to revive AYUSH services through revitalizing local traditions, by providing an AYUSH doctor at PHCs. The availability of AYUSH services in PHCs of Belagavi district was 40%, which is more than the state data 27.6% of PHCs with an AYUSH doctor.[46]

Laboratory facility was available in all the PHCs. Laboratory diagnosis for HIV, pregnancy and blood smear for malaria were found in nearly all the PHCs. Malaria Rapid Diagnostic Test kits were supplied only in 65% of the PHCs. So they were still dependent on peripheral blood smear for diagnosis. This may delay the treatment of malaria. Diagnostic tests for STIs were found in 20% of the PHCs only, but the cases were managed by the syndromic approach as per WHO guidelines. Facilities for CT, BT and Blood grouping and Rh typing were available in 60% of the

PHCs, thus hampering and delaying services to cases like Post Partum Hemorrhage, complications of Dengue, etc.

Another study was carried out to find out and compare to what extent the IPHS were followed by the PHCs in the selected districts of both the Empowered Action Group (EAG) state of Assam and non EAG state of Karnataka in 2008 revealed basic laboratory facilities, for routine blood, urine and stool examination were available in 80% of the studied PHCs in the non-EAG state of Karnataka, while it was only in 20% of the studied PHCs of the EAG state of Assam.[44]

Availability of Health Manpower Resources in PHCs:

The IPHS prescribe one Medical Officer per PHC and 2 Medical Officers, preferably with one Lady Medical Officer is desirable. It also prescribes an AYUSH Medical Officer, a Pharmacist, an AYUSH pharmacist, 1 staff nurse (3 for 24×7 PHCs) and a Lab Technician, Health Assistant Male and Female and Health Educator at the PHC.[3]

In the present study, 95% of the PHCs had Medical officers. Only 5% of the PHCs were working without the Doctors. This is consistent with the Rural Health Statistics 2015 data of the country, in which 8.1% of the PHCs were without doctors.[11] In the present study remaining 5% of the PHCs, the MOs of other PHCs were deputed temporarily for the duty. Out of 95% of the Medical officers, 10% were deputed to the nearby PHCs for the duty, since there was non-availability of the doctors at other centres. These 10% of doctors looked over both the PHCs, indicating the increased workload on the doctors. (Table 21)

Lady Medical Officers were posted in only 20% of PHCs, which is on higher side, when compared with the DLHS-4 data of the State, where the PHCs having Lady Medical Officer was only 7.6%.[46] The availability of AYUSH doctors in PHCs of Belagavi district was 40%, which was also more than the state data 27.6% of PHCs with AYUSH doctor.[46] Rural Health Statistic-2015 data of Karnataka reported 20% of PHCs with AYUSH doctors.[14]

In the present study, the PHCs working without Pharmacist and Laboratory Technician were 5% and 15% respectively. This was better when compared with the Rural Health Statistics-2015 of the country, where 21.9% and 38.1% of the PHCs were working without a Pharmacist and Lab. Technician respectively. In 5% of the PHCs, staff nurse was not available. Rural Health Statistics data 2015 reports, shortfall of nursing staff in 16% of the PHCs.[14]

In the present study, shortfall of the Health Assistant (M) was 45% and LHV/Health Assistant (F) was 40%. This was better than the Rural Health Statistics data 2015 of the country, where shortfall of Health Assistant (M) and LHV/Health Assistant (F) was 61.3% and 49.2% respectively.

While the whole emphasis of any discussion on health manpower in PHCs is tilted towards the availability of medical officers, there is little focus on provision of adequate number of staff nurses. The IPHS have set a minimum of 3 staff nurses to be posted at each 24×7 PHCs. But in the present study, out of 65% 24×7 PHCs, only around 38% had the adequate number of the staff nurses.

A study conducted in 2012-13 in four PHCs for assessment of Health Centers as Per Indian Public Health Standards in Chandigarh Tricity showed, Human

resources were adequate at PHCs in Panchkula (81%) while it was poor at PHCs in Mohali (59%). There was no Block Health Educator & Information officer and no Clerk.[49]

Physical facilities in the PHCs (Table 24)

All of the PHCs were easily accessible, that they were provided by an all weather road, with signboards suggesting of the location and were accessible for vehicles to reach the PHC. The farthest villages in 20% PHC in its coverage area were more than 30kms. 35% of the PHCs could be reached in 1-2 hours from the farthest village by the government transport services. (Table 25, 26) The distance to the PHCs significantly affects the utilization of the services.[48]

About 65% of PHCs were within 30 km from the nearest CHC and 5% PHCs were more than 50 km from the nearest CHC. About 25% of the PHCs were located at more than 100 km distance from the district hospital. This will affect the referral services from PHC to the First Referral Unit for high risk cases. (Table 27, 28)

All the PHCs had the designated government buildings, 75% of the PHC building area were inadequate according to the IPHS norms. This was similar to Rural Health Statistics 2015, where 95% of the PHCs in Karnataka had Government buildings.[14]

The Rajkot study showed that the most important factor affecting the provision of health services is the accessibility of health centre. 50% PHCs were located within the village area and 28% were within one km from village. 92.8% PHCs were in designated government building.[51]

Operation Theatres and Labour Rooms at PHCs (Table 33)

In 95% of PHCs, operation theatre was present and had adequate area, but only functional in 85% of the PHCs. Surgeries were conducted in 55% of the PHCs. The reasons for not conducting surgeries were the lack of training and poor physical state of the OTs. (Table 33) The Rural Health Statistic 2015 reported availability of OTs in 52.7% in the state.

In 95% of PHCs the labour room was available for the normal delivery. Among these, the deliveries were conducted in 95% of PHCs. The common reason for not conducting in PHCs was lack of staff. Among these, in 11% of PHCs the normal delivery for 24 hours was not conducted in the preceding year. The reasons for this were lack of staff and non-availability of the residential facility for the staff. The Rural Health Statistics 2015 report observed that the labour rooms were present 71.3% of PHCs in Karnataka.[14]

Basic Facilities at PHCs: (Table 29a, 29b)

Residential facilities for Medical Officers were available in 60% of the PHCs, for nurses in 50% of the PHCs, for pharmacist in 15% and other staff in 35% of the PHCs. (Table 31) DLHS-4 reported 44.9% PHCs had residential facility for Medical officers.[47] The residential distance affects the operational availability of doctors to the public.[47]

In the present study, 20% PHCs were without regular water supply. But according to Rural Health Statistics 2015 in Karnataka there were 3.9% of PHCs without regular water supply. All the PHCs had separate electrical power supply. 75% PHCs had standby power supply in case of power cuts. Standby supplies like

generator, Uninterruptible power supply (UPS), inverter help in maintaining the cold chain system for immunization.

In 75% PHCs, all the beds for inpatient care were in a single room. No PHC had separate ward and public utility for males and females. This would have a bearing on the privacy of female patients to utilize the facility.

The Suggestions cum complaint box was present in 40% of PHCs only. However all PHCs utilized the area to display health education related materials and banners. All the PHCs had personal computers, 95% had telephone connection, computer with internet facility. Even Rural Health Statistics in India 2015 had reported that 85.6% of PHCs in Karnataka had telephone connection and 91.6% had computer facility. 75% PHCs did not have their own vehicle. Many doctors were using personal vehicles for field work. However, all the PHCs had facilities of 108 Ambulance services. (Table 30)

Equipments like normal delivery kit, radiant warmer, suction apparatus, equipment for neonatal resuscitation, IUCD insertion kit were available in 95% of the PHCs. Standard surgical kit was available in only 65% of the PHCs. All the PHCs had the anthropometric measurement equipments and cold chain equipments for the vaccine storage and transport. (Table 34)

The Rajkot study showed that the signboard was available in 85% PHCs, but Only 42% PHCs had signboard available within premises showing important parts of PHC. 92% PHCs had adequate drinking water facility. Separate toilet facility for ladies and gents was available in 42% PHCs. Locked suggestion and complain box was available in only 21% PHCs. Transport vehicle in working condition was available in 35% PHCs. All PHCs were providing all RCH services, but none of the

PHC was providing MTP services. Operation theatre was not available in any PHC. Residential facility is available in 21% of PHCs.[51]

The IPHS norms specify that the PHCs should have all the equipment required to carry out the desired functions. Equipments like normal delivery kit, radiant warmer, suction apparatus, equipment for neonatal resuscitation, IUCD insertion kit were available in 95% of the PHCs. Standard surgical kit was available in 65% of the PHCs. All the PHCs had the anthropometric measurement equipments and cold chain equipments for the vaccine storage and transport. DLHS – III had reported that 37% of PHCs had newborn care equipment. The findings point out that PHCs are found lacking in some essential equipment, which hampers the performance and service delivery of PHCs.

About 50% of the PHCs had the equipments less than 50% of the required and 50% of PHCs had 50-75% of the equipments. All the PHCs had less than 50% of the drugs (as per essential drug list). About 75-100% of furniture was present in all the PHCs. (Table 35) Rural Health Statistics 2015 reported, 22% Shortfall in Health infrastructure as per 2011 population in India.[14]

The Chandigarh study showed that, all PHCs had their own building. The availability of equipments for laboratory (50%) and eye care & testing (50%) was found to be deficient at PHCs in Panchkula and Mohali. Among drugs it was observed that 93% of drugs were available at PHCs in Panchkula and 64% in Mohali.[49]

Availability of Essential drugs in PHCs (Table 35)

Essential drugs are to be available in adequate quantities so as to ensure complete treatment by all patients. In the present study, all the PHCs had less than

50% of the drugs (as per essential drug list). In contrast, 11% of drugs were present in all the PHCs surveyed. Considering availability of 60% of the drugs as cut off, while DLHS – III reported that 96% of PHCs in the state had good drug supply.[45] In a rather surprising finding, supply of condoms and Oral contraceptive pills was found to be limited to nil in many PHCs.

Quality Control mechanisms in PHCs: (Table 36)

The IPHS norms stress not only on the infrastructure, but also on the quality of services. In the present study, all the PHCs had quality control mechanisms like setting up of *Rogi Kalyan Samithis (RKS)* and display of citizen's charters. Rural Health Statistics in India 2015 had reported that all the 2,353 PHCs of Karnataka to be having registered *Rogi Kalyan Samithis* and 83% of PHCs in India have registered RKS .[11] DLHS-III reported in 66.4% of PHCs citizen's charter was displayed.[45]

Internal monitoring by Social audit / medical audit / economic audit was done in 60% of PHCs and external monitoring by *Zila Panchayat / Rogi Kalyan Samitis* was done in 25% of the PHCs. Only 10% of the PHCs had the Standard Operating Procedures.

Availability of Regular services at the SCs

In the present study, 50% of SCs were catering the services for population between 5,001 to 8,000, 35% of SCs for 3,000 to 5,000, 10% between 8,001 to 12,000, 2.5% between 12,001 to 15,000 population, 2.5% of SCs were catering the services for population more than 15,000. (Table 37) 95% of SCs had ANMs, 42.5% had Male Health Worker available at the SCs and Voluntary Worker was present in 2.5% of SCs. (Table 38) The Rural Health Statistics 2015 data reported, 85% of SCs

had ANMs, 72% of SCs had Male Health Worker available at the SCs and in 8% of SCs there were no ANMs or Male Health Workers available.[14]

In a study conducted to Assessment of Health Centers as per Indian Public Health Standards in Chandigarh Tricity showed, Human resources were maximum (88%) at SCs in Chandigarh. All the Sub Centres in tricity had ANMs while male health worker (MHW) was present only in 50% SCs in Mohali and none in Panchkula.[49] In an another study conducted in Chittoor district of Andhra Pradesh on the Availability of Physical Infrastructure and Manpower Facilities in 34 Sub-centres (SC) in 2009-2010 revealed that the deficiency in the availability of health workers male and female were found to be 67.7% and 27.5% respectively.[41]

In the present study, in all the SCs the MCH services like ANC care, Intra-natal care, PNC care, Child care during immunization, Family planning and contraception and adolescent health care were given. Medical officer visits to the SCs once in a month was present in 70% of the SCs but in only 5% of the SCs the visiting time and day was fixed and in 12.5% of the SCs the residents were aware about the doctors visit. Regular visits of Health Assistant Male or Lady Health Visitor for at least once a week was present in 72.5% of the SCs. 10% of the SCs had the referral service. (Table 39)

Treatment of the minor illnesses was available in 67.5% of the SCs, in 47.5% of the SCs there was facility for taking peripheral blood. 97.5% of the SCs were the DOTS centres. Other functions and services like Disease surveillance, Control of local endemic diseases, Promotion of sanitation, Field visits and home care and National Health Programmes including HIV/AIDS control programmes were done in 85% of the SCs. (Table 39)

Monitoring and supervision activities like Monitoring of water quality, unusual health events, training of ASHA workers and coordinated services with Anganwadi Workers, ASHA and VHSNC (Village Health Sanitation and Nutrition Committee) were present in 82.5% of the SCs. Record maintenance was there in 97.5% of the SCs and 75% of the SCs there was Village Health Plan.

A study conducted in Jhajjar district of Haryana to find the gaps in facilities available at health sub-centres as per IPH Standards in 2011 showed, Services regarding ante-natal, natal and post-natal care, immunisation, family planning and contraceptive services, Oral Rehydration Solution (ORS) and other drugs for minor ailments, smear preparation for malaria, etc were available at all the sub-centres. All the sub-centres were also functioning as Directly Observed Treatment, Short course (DOTS) centres. National health programs, disease surveillance, control of locally endemic diseases, promotion of sanitation and field visits for home care were being carried out at all the sub-centres. At least one Multipurpose Health Worker Female [MPHW (F)] was available in all the sub-centres, Multipurpose Health Worker Male [MPHW (M)] at 9 sub-centres and additional MPHW (F) at 3 sub-centres were available.[43]

Availability of Physical infrastructure in the Sub Centres

In the present study, all the Sub-centres were located within the village locality. In 47.5% of the SCs, the distance of the farthest village in the coverage area was less than 5 Kms from the SC. In 45% of SCs it was between 5-10 Kms, 10-15 Kms in 5% of SCs and more than 15 Kms in 2.5% of the SCs. The travel time to reach the Sub Centre from the remotest place in the coverage area was less than 15 minutes in 25% of the SCs, 15 to 30 minutes in 57.5% of the SCs, 30minutes to 1

hour in 15% and more than 1hour in 2.5% of the SCs. The distance of Sub Centres from the PHCs was less than 10 km in 72.5% of the SCs, 10 to 20 km in 25% and 20 to 30 km in 2.5% of the SCs. (Table 40, 41, 42 and 43)

About 55% of the SCs had designated government buildings, 12.5% of SCs had the rented building and 32.5% of SCs had no buildings. In 27.5% of the SCs, the building area was adequate. In 67.5% of SCs, the construction was complete. This was less when compared with Rural Health Statistics 2015 data which reported, 79% of SCs had Govt. building, 15% SCs had rented building and 6% had rent free Panchayat building in the country. 67% o of SCs had Govt. building, 21% SCs had rented building and 11% have rent free Panchayat building in the Karnataka state.[11] (Table 44)

The study conducted in Jhajjar district of Haryana showed that the locality of sub-centres were in the middle of the villages and were easily accessible. Out of 15 study sub-centres, only one had designated building, in other two it was under construction. Rest all were running in the rented buildings and space was not adequate.[43] Chandigarh Study revealed, SCs in Mohali had their own buildings, while half of centres in Chandigarh and Panchkula ran in own buildings.[49]

Availability of Physical infrastructure in SCs with the buildings (N=27) (Table 45)

In the present study, prominent display boards in local language were present 70% of the SCs where the buildings were present, Suggestion / complaint box in 15%, labour room in 48%, but no deliveries were conducted in SCs. Examination room was available in 81% of SCs and 96% had piped water supply. In 15% of SCs the waste

disposal method practiced was incineration and dumping. In 85% of SCs solid waste was sent to outside for incineration.

No Sub-Centres had the telephone and transport facilities. There was regular power cuts in all the SCs, Residential facility for ANM was present in 85% of SCs with building [Out of 40 SCs, 27 SCs had buildings], and less than 50% of the required equipments, drugs and furniture were present in the 81% of the SCs with the building. In Sub Centres without the building, the equipments like Sphygmomanometer, Stethoscope and Weighing machines were present in all the SCs and <50% of drugs were present in SCs without building. This is similar to Rural Health Statistics 2015 data, which reported that 56.5% of SCs in Karnataka have the ANM Quarters and among these in 90% of the SCs the ANMs resided. 54.7% of SCs in India have the ANM Quarters and among these in 65% of the SCs the ANMs resided.[14]

Chandigarh Study showed that the sphygmomanometers and weighing scales were available at all SCs in tricity. Thermometers were available at 50% of SCs in tricity. All the SCs in tricity had vaccines and contraceptives. Drug kit A & kit B were available at only 38% and 50% of SCs in Chandigarh and Mohali, respectively.[49]

The study conducted in Chittoor district of Andhra Pradesh showed that the residential facility for health workers was available only in 26.4% SCs. Only 20.6% of SCs had stethoscope and B.P. apparatus.[41] Another study conducted in Jhajjar district of Haryana showed that, water supply, electricity, labour room, communication facilities, separate public utilities for males and females, residential facility were available in only few sub-centres. None of the sub-centres had an independent facility for transport.[43]

Quality Control Mechanism in SCs (Table 46)

Citizen's charter was available in 42.5% of SCs. Internal monitoring by MO and Male/Female supervisors was done in 70% of CHCs and external monitoring by Village Health Sanitation and Nutrition Committee and evaluation by independent external agency was done in 2.5%% of the SCs. In 7.5% of SCs there was availability of various guidelines issued by Govt. of India or State Government. The study conducted in Jhajjar district of Haryana showed that, citizen's charter was available in only 3 sub-centres out of 15 studied SCs, while guidelines for provision of services were available in 6 sub-centres only. Internal monitoring was being carried out in all the sub-centres but, external monitoring was being carried out in 8 sub-centres. Significant gaps existed in the facilities available at sub-centres. One of the key factors responsible for non-utilisation of health services was the lack of adequate infrastructure and logistics at the sub-centre level.[43]

CONCLUSION

The present study is an attempt to assess the government health centres of Belagavi district, Karnataka, according to IPHS guidelines 2012. A facility based cross sectional study was designed for this purpose, selecting 10 out of 17 CHCs, 20 out of 140 PHCs and 40 out of 616 SCs of the district by multistage random sampling. A proforma was developed on the basis of IPHS 2012 guidelines was administered. The data thus collected was analysed, results were discussed and the following conclusions were made:

About one third of the CHCs and PHCs covered population more than that required. Only one sixth of the total required specialists were available at the CHCs and in about more than half of the CHCs, PHCs and SCs only two thirds of total required staff was available, indicating the increased workload on the existing staff.

All the CHC/PHC had adequate number of beds, but the Bed Occupancy Rate however, remained low. Services like Ante-natal Clinics, Post-natal Clinics and Immunization sessions were conducted regularly in all the CHC / PHC / SC.

Regular services like OPD services, inpatient services, basic life support in emergencies and referral services were provided by all the PHCs and CHCs.

Medical termination of pregnancy was not available in any PHC. Family planning methods though provided by all PHCs till the level of IEC activities, the supply of contraceptives remained low. This may hamper the progress in achieving the demographic goals of the country.

School health services, adolescent health services, sanitation and water monitoring, epidemiological surveillance were provided upto satisfactory levels. Less

than half of the CHCs and PHCs cater AYUSH services, which goes against the objective of NRHM, i.e., to revive and mainstream AYUSH services.

Laboratory was present in all the CHCs and PHCs, but services for quick identification of malaria, STIs and need for blood transfusions were found lacking in almost all the CHCs and PHCs.

Though the requirement of Medical Officers and pharmacists was fulfilled in almost all the CHCs and PHCs, deficiency was seen in the appointing of specialists at CHCs, AYUSH doctors and staff nurses at PHCs. There is an urgent need of recruiting the deficient staff for efficient functioning of the CHCs and PHCs.

Most of the CHCs / PHCs / SCs were located at easily accessible areas to general public as well as to the ambulances. Two third of the PHCs were within one hour journey from the farthest village in their coverage area. All the CHCs and PHCs had their own building. About one third of the SCs had no buildings.

In half of the PHCs, the surgeries were not carried out. A deficiency worth highlighting in the present study was the absence of residential facilities for the staff in half of the CHCs, PHCs and SCs.

Basic facilities like separate wards and toilets for males and females, suggestion box, own vehicle were found lacking in majority of the PHCs and not upto the standards set by the IPHS. Facilities like safe drinking water, electricity supply, and telephone connection were present in almost all CHCs, PHCs and SCs.

The medical equipment as well as the general equipment was found lacking in many aspects in the CHCs, PHCs and SCs. Some equipment like cold chain, sterilization equipment and normal delivery kits were present satisfactorily.

Serious deficiencies were observed in supply of drugs and only a little more than half of the essential medicine list was available on an average in the CHCs, PHCs and SCs. Service delivery will be compromised if there is such a deficiency.

Components of Quality control like *Rogi Kalyan Samithis*, Citizen's Charters and monitoring by internal and external agencies were found in more than two thirds of the CHCs and PHCs. Proper supervision and monitoring of the service delivery activities of the SC staff should be done by Medical officers, Health Assistant (Male) and Lady Heath Visitor.

The public health facilities, particularly CHCs and PHCs, which have more number of new born cases and which are more utilized because of central location need to be prioritized for better infrastructure and human resources as per IPHS norms for providing newborn health services.

Due to inadequate active community participation in their own care, the health care would remain a dream to be fulfilled till these health institutions are provided all the infrastructure, human resources and logistics as per IPHS norms.

LIMITATIONS

1. Assessment of the Behaviour of the Staff towards the patients was done by personal observation based on single observation.

2. Client satisfactory survey was not done at the facility.

RECOMMENDATIONS

Based on the findings of our study, following recommendations are being suggested for CHCs, PHCs and SCs.

A. Recommendations for Community Health Centres:

1) Recruitment of Specialists should be done at all the CHCs as per the IPHS norms for CHC.
2) There are wide variations in the population coverage of the CHCs, some of them catering very less than the norms and many catering to the population more than the required. The number of CHCs should be increased and made available to cater the services.
3) Laboratory facilities should be improved.
4) Residential facilities or quarters must be provided to the specialists and the staff within the CHC premises so that the staff can be available in the CHC round the clock.
5) Drug supply should not be compromised. All the CHC must be equipped with the medical and general equipment as specified by IPHS.

B. Recommendations for Primary Health Centres:

1) The continuous availability of good quality curative services satisfies people and motivates the community for preventive and promotive services. Incentives should be given to work at remote places and all the post of medical and paramedical workers should be filled up as early as possible.

2) Redistribution of the areas or villages to be covered by PHCs should be done, so as to the cover required population as per IPHS to cater quality services to the community and decrease the burden of work on the PHC staff.
3) Recruitment of staff according to the requirement should be done. Permanent Medical Officers, Lady Medical Officers and AYUSH MOs should be appointed at all the PHCs. Nursing staff should be available in all the PHCs.
4) Laboratory facilities should be improved and laboratory technicians should be available at all the PHCs.
5) Operation theatres must be constructed in all PHCs and the staff should be trained to handle minor surgeries. PHCs should be equipped with requisite facilities for conducting safe medical terminations of pregnancy.
6) Residential facilities or quarters must be provided to all the staff.
7) All the PHCs must have sufficient drugs and be equipped with the medical and general equipment as specified by IPHS.
8) To respect the privacy of women, separate toilets and wards should be provided in all the PHCs. Wherever deficient, construction should take place.
9) The PHC should be periodically surveyed to identify the deficiency
10) All the PHCs should have their own vehicle or else the field work or other activities will be compromised.

C. Recommendations for Sub Centres:

1) Redistribution of the areas or villages to be covered by SCs should be done.
2) Recruitment of SC staff especially the Health Worker Male post should be filled at all the SCs.
3) All the SCs should have their own buildings. Residential facilities or quarters must be provided to the staff within the SC premises.
4) SCs must be equipped with all the equipments and drugs as per the IPHS norms for SCs.
5) The SC should be periodically surveyed to identify the deficiency and necessary action could be taken to correct it. Monitoring of the SCs should be done regularly by the Medical Officers, Lady Health Visitor or Health Assistant Male.

SUMMARY

The present study was conducted in Belagavi district of Karnataka State during the period of 1st January 2014 to 31st December 2014. There are 17 CHCs, 140 PHCs and 616 SCs in the district, as per the information collected from DHO office, Belagavi (personal contact on 1st December 2013). The Assessment was done for selected 10 CHCs, 20 PHCs and 40 SCs.

In the present study, 60% of Community Health Centres covered the population between 80,000 to 1,20,000, remaining 40% of CHCs covered more than 1,20,000 population.

Among the studied Community Health Centres, 40% of CHCs had OBG specialist service, 30% provided paediatric service. No CHC had General Surgery and General Medicine specialty service. All the CHCs provided 24 hours emergency services, 24 hour delivery services including normal and assisted deliveries, New-born care, Family Planning (FP) Services and Treatment of STI/RTI.

About 70% of Community Health Centres had the Bed Occupancy Rate (BOR) of less than 60%. 40% of CHCs had average daily OPD attendance more than 150 per day. All the CHCs were ICTC centres (Integrated Counseling and Testing Centre). Services like Ante-natal Clinics, Post-natal Clinics and Immunization sessions were conducted regularly in all the CHCs.

All the Community Health Centres had the General Duty Officer (Medical Officer), Nursing staff, Pharmacist, Laboratory technician, ward boys, OPD attendant and sweepers. Radiographer and ophthalmic Assistant were present in 70% of CHCs and clerks were present in 90% of CHCs.

About 50% of CHC Medical Officers had undergone two trainings in the previous one year. The sterilization training was undergone by 10% of the CHC Medical Officers, training on IUCD insertion by 20%, RTI/STI, HIV/AIDS management training by 20% of MOs, Newborn care by 40% of MOs, Emergency obstetric care by 20% and Biomedical waste management training was attended by 60% of MOs of CHCs.

In the studied CHCs, 30% had less than 50 deliveries per month and 70% of CHCs had more than 50 deliveries per month.

In 50% of Community Health Centres ECG facility was available, but was not in working condition in any of the CHCs. X-ray facility was available in 80% of the CHCs and was in working condition.

All the Community Health Centres were located within the village/town, had the designated government buildings, but the CHC floor area was inadequate according to the IPHS norms for CHC

All the CHCs had the adequate number of OPD rooms, Waiting room for the patients and Emergency room / Casualty. There were prominent display boards in local languages, Citizen's Charter, Registration counters, Pharmacy for drug dispensing and drug storage, Suggestion/complaint box and separate public utilities for all males and females in all the CHCs. 30% of the CHCs had compound wall all around and 70% had partial compound wall.

All the CHCs were located at less than two hours of travel distance by govt. transport from the farthest village and at less than four hours of travel distance from the district head quarter hospital.

All the CHCs had 30 beds each and there were separate wards for Males and Females in all the CHCs. In 50% of CHCs there were separate beds for Paediatric patients, maximum number of beds were for female patients.

Minor surgeries like Incision and drainage, suturing etc., were performed in all the CHCs. Only Tubectomy and vasectomy were performed in 50% of CHCs. Obstetric and gynaecological operations were performed in 40% of CHCs.

Facility for Caesarian delivery was available in 40% of CHCs. In 30% of CHCs less than 200 caesarian deliveries were conducted during the previous year. In only 10% of the CHCs, 200 to 300 Caesarian deliveries were conducted in the previous one year.

Operation theatres were available in all the CHCs and had enough space. In 70% of the CHCs there were less than 50% of the OT equipments. The days of sterilization was displayed in all the CHCs.

Blood storage unit was not available in any CHC. All the Cold chain equipments were available in all the CHCs. Nurse's rest room at the CHC was available in 80% of the CHCs. The source of water supply in all the CHC was the bore water. In 80% of CHCs, there were 75 to 100% of laboratory equipments available and in 20% of CHCs, 50 to 75% of lab. Equipments were available.

In 50% of the CHCs the type of sewerage system was Soak pit, in other 50% it was connected to the Municipal Sewerage system. Wastes were sent to incinerators outside for disposal. All the CHCs had proper electric lines in all the parts of the centres.

All the CHCs had telephone, Personal computer, NIC terminal and email facilities. 90% of the CHCs had their own vehicles. All the CHCs are accessible by all weather roads but none were connected by railway network.

Residential facility for Medical officers and others like class IV and drivers were available in 70% of the CHCs, in 90% of CHCs residential facility for staff nurse and ANMs was available.

In the studied CHCs, 90% had Office room and store room, 80% had Nurses rest room, 10% had Kitchen room, but diet for the indoor patients was not provided in any CHCs. 90% of CHCs had referral services by hospital vehicle. Citizen's charter was available in all the CHCs. *Rogi Kalyan Samiti/ Arogya Raksha Samiti* was constituted in all the CHCs. Internal monitoring by Social audit/medical audit/economic audit was done in all CHCs and external monitoring by *Zila Panchayat / Rogi Kalyan Samitis* was done in 60% of the CHCs. None of the CHCs had the Standard Operating Procedures.

In the present study, the 60% of PHCs were catering the services to the population less than 30,000. All the PHCs were giving the regular OPD services, referral services and In-patient services. Emergency services for 24 hours was given by 85% of the PHCs. 65% of PHCs were working on 24 hours × 7days/week basis.

In the present study, all the PHCs had 6 beds but the bed occupancy rate remained less than 60% in 90% of PHCs. The average daily OPD attendance was between 41 to 80 in 60% 0f PHCs, 0 to 40 in 20% of PHCs and 81 to 120 in 20% of PHCs.

While cataract surgery was being performed in none of the PHCs, wounds were managed in primary level in all the PHCs. Minor surgeries were conducted in 70% of the PHCs

In the studied PHCs, ANC care was given in all the PHCs; in 95% of PHCs the labour room was available for the normal delivery. Deliveries were conducted in 90% of PHCs. New born care services on 24 hours ×7 days/week basis were present in 90% of the PHCs.

In the studied PHCs, facility for tubectomy and vasectomy was available in 55% of PHCs, facility for treatment of gynecological disorders, STI / RTI and anemia was available in 90% of PHCs, family planning services were given in all the PHCs, but MTP facility was not available in any PHC.

In this study, the babies with Low Birth Weight were managed in 65% of PHCs. Immunization services were available in all the PHCs. Children with Severe Acute Malnutrition were managed in 70% of the PHCs.

School Health Services like Immunization service and de-worming activities were offered in 80% of PHCs and Monitoring of Mid-day meal program was done in 70% of the PHCs in the preceding year.

Adolescent friendly clinics with dedicated day in a week were not available in any of the PHCs. Water and sanitation services, activities like Disease surveillance, collection and reporting of vital statistics were done in all the PHCs. AYUSH services were available in only 40% of the studied PHCs.

In the present study, 90% of the Primary Health Centres had the allopathic Medical officers, Pharmacist and staff nurse. Lady Medical Officer (LMO) was available in 20% of PHCs, AYUSH doctors in 40% of the PHCs, Laboratory technicians in 85% of the PHCs, Health Assistant (male) in 55%, Health Assistant (female) in 60%, Health Educator in 10% and drivers in 20% of the PHCs. All the PHCs had the clerical staff and class IV workers.

In the studied PHCs, 75% of the Medical Officers had undergone training (in New born care / Bio-Medical Waste Management / immunization training etc.) in the preceding year. Paramedical staff of 70% of the PHCs, Health workers of 75% of the PHCs, ASHA workers of 95% of the PHCs had underwent training about various health topics in the preceding year. Routine laboratory investigations were present in 85% of PHCs.

Among the studied PHCs, 60% were located within the village locality. All the Primary Health Centres had the designated government buildings, 75% of the PHC building area were inadequate.

In the present study, 35% of the PHCs were at distance more than 30 km from the farthest village in the coverage area and travel time to reach was more than one hour from the farthest village by the available government / public transport services.

Prominent display boards in local languages, pharmacy for drug dispensing and drug store, suggestion/complaint box, OPD rooms and waiting rooms for patients were present in all the PHCs. Registration counters were there only in 45% of the PHCs, Counter near entrance to obtain contraceptives, ORS packets, Vitamin A and Vaccination were present in 70% of the PHCs; only 50% of the PHCs had adequate

number of windows in the room for light and air in each room. None of the PHCs had Separate wards for males and females or separate public utilities for males and females.

In the studied PHCs, source of water supply in most of the PHCs was bore well. In most of the PHCs the wastes were sent to incinerators outside for disposal. 20% of the PHCs had the compound wall all around with gate, 15% had no compound wall, 50% had partial compound wall and 15% of the PHCs had compound wall all around without gate.

Personal computer was available in all the PHCs. Telephone, NIC terminal and email facility was available in 95% of the PHCs, but vehicle was available only in 25% of the PHCs. All the PHCs were accessible by all weather roads.

Residential facilities for Medical Officers were available in 60% of the PHCs and for nurses in 50% of the PHCs. Referral services were offered in all the PHC. Publicly displayed mechanism for register of complaint/grievance was available in 40% of PHCs.

In the last three years, there were reported malaria outbreak in field areas of 15% of the PHCs, Gastroenteritis in 10% and Chikungunya in areas of 20% of the PHCs. The proper investigations (larvae survey, IEC activities, Active blood smear collection etc.) and case managements were done by the PHC staff.

In 95% of Primary Health Centres, operation theatre was present and had adequate area, but functional in only 85% of the PHCs. Surgeries were conducted in only 55% of the PHCs.

About 50% of the Primary Health Centres had the equipments less than 50% of the required and 50% of PHCs had 50-75% of the equipments. All the PHCs had less than 50% of the drugs (as per essential drug list). Almost all PHCs had required furniture.

The Citizen's charter was publicly displayed in the local language in all the PHCs. *Rogi Kalyan Samiti (RKS) / Arogya Raksha Samiti (ARS)* was constituted in all the PHCs. Internal monitoring by Social audit/medical audit/economic audit was done in 60% of PHCs and external monitoring by *Zila Panchayat (ZP)* was done in 25% of the PHCs. Only 10% of the PHCs had the Standard Operating Procedures (SOPs).

In the studied Subcentres, 65% of SCs were catering the services for population more than 5,000. 95% of SCs had ANMs but the Male Health Worker was available in only 42.5% of the SCs.

In all the SCs the MCH services like Antenatal care, Intra-natal care, Postnatal care, Child care during immunization, Family planning and contraception and adolescent health care were given. Medical officer's visits to the SCs once in a month was done in 70% of the SCs. Regular visits of Health Assistant Male or Lady Health Visitor for at least once a week was done in 72.5% of the SCs. Only 10% of the SCs had the referral service.

Treatment of the minor illnesses was available in 67.5% of the SCs, in 47.5% of the SCs there was facility for taking Peripheral blood. 97.5% of the SCs were the DOT centres. Other functions and services like Disease surveillance, Control of local endemic diseases, Promotion of sanitation, Field visits and home care and National

Health Programmes including HIV/AIDS control programmes were done in 85% of the SCs.

Monitoring and supervision activities like Monitoring of water quality, unusual health events, training of ASHA workers and coordinated services with Anganwadi Workers, ASHA and VHSNC (Village Health Sanitation and Nutrition committee) were present in 82.5% of the SCs. Record maintenance was done in 97.5% of the SCs and 75% of the SCs there was Village Health Plan.

All the Sub-centres were located within the village locality. In 52.5% of the SCs, the distance of the farthest village in the coverage area was more than 5 km from the SC.

In the studied Subcentres, the travel time to reach the Sub Centre from the remotes place in the coverage area was more than 1 hour in 17.5% of the SCs. Maximum number of SCs were at a distance less than 20 km from PHCs.

Only 55% of the SCs had designated government buildings, 12.5% of SCs were running in the rented building and 32.5% of SCs had no buildings. Prominent display boards in local language were present 70% of the SCs where the buildings were present. In 15% of SCs, the waste disposal method practiced was incineration and dumping, in remaining 85% of SCs wastes were sent to incinerators outside for disposal.

No Sub-Centres had their own telephone and transport facilities. There was regular power cuts in all the SCs, Residential facility for ANM was available in 85% of SCs with building and less than 50% of the required equipments, drugs and furniture were present in the 81% of the SCs with the building.

Citizen's charter was available in 42.5% of SCs. Internal monitoring by MO and Male/Female supervisors was done in 70% of SCs and external monitoring by Village Health Sanitation and Nutrition Committee and evaluation by independent external agency was done in only 2.5%% of the SCs. In 7.5% of SCs there was availability of various guidelines issued by Govt. of India or Govt. of Karnataka.

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ANNEXURE I – ETHICAL CLEARANCE CERTIFICATE

K.L.E.SOCIETY'S
JAWAHARLAL NEHRU MEDICAL COLLEGE,
NEHRU NAGAR, BELGAUM-590010 (KARNATAKA-INDIA)
(Affiliated to KLE University, Belgaum)

Website: http/www.jnmc.edu
E-Mail : domejnmc@sancharnet.in
: jnmc@sancharnet.in

Phone: (+ 91-(0)831 Office : 2471350
Principal: 2471701
Fax No. +91 (0)831 – 2470759

Ref: MDC/DOME/ 122 **Date: 07/12/2013**

To,

PG student in MD. Community Medicine,
J.N.Medical College,
BELGAUM.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled **"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY,"** is ethical and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics Committee on Human Subjects Research.

(Dr.Hema Dhumale)
Member Secretary
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belgaum.

(Dr.Ganga Pilli)
Chairman,
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belgaum.

ANNEXURE – II - PERMISSION LETTER - DISTRICT HEALTH & FAMILY WELFARE OFFICER, BELAGAVI

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಕ್ರ.ಸಂ: ಅಭಿವೃದ್ಧಿ/ವಿವ-೯೭/2013-14

ಜಿಲ್ಲಾ ಆರೋಗ್ಯ ಮತ್ತು ಕು.ಕ. ಕಚೇರಿ,
ಬೆಳಗಾವಿ. ದಿನಾಂಕ: 27-12-2013

ಗೆ,

ಅಧೀನ ಸಂಸ್ಥೆಗಳ
ವೈದ್ಯಾಧಿಕಾರಿಗಳಿಗೆ

ಮಾನ್ಯರೇ,

ವಿಷಯ:-ಜಿಲ್ಲೆಯ ಆರೋಗ್ಯ ಸಂಸ್ಥೆಗಳ ಡಾಟಾ ವಿವರ ಪಡೆಯುವ ಕುರಿತು.

ಉಲ್ಲೇಖ:-

ಇವರ ಮನವಿ ದಿನಾಂಕ: 23.12.2013.

= = = = =

ಮೇಲ್ಕಾಣಿಸಿದ ವಿಷಯ ಹಾಗೂ ಉಲ್ಲೇಖಗಳನ್ವಯ, ಬೆಳಗಾವಿ ಜಿಲ್ಲೆಯ ಈ ಕಚೇರಿಯ ಅಧೀನ ಆರೋಗ್ಯ ಸಂಸ್ಥೆಗಳಿಗೆ

ಇವರು ಭೇಟಿ ನೀಡಿ ಡಾಟಾ ವಿವರವನ್ನು ಪಡೆಯುವವರಿದ್ದಾರೆ. ಕಾರಣ ಸದರಿ ವೈದ್ಯಾಧಿಕಾರಿಗಳು ಬಂದ ಸಮಯದಲ್ಲಿ ಸಹಕರಿಸಿ ಮಾಹಿತಿಯನ್ನು ನೀಡಲು ಸೂಚಿಸಲಾಗಿದೆ.

ಜಿಲ್ಲಾ ಆರೋಗ್ಯ ಮತ್ತು ಕು.ಕ.ಅಧಿಕಾರಿಗಳು,
ಬೆಳಗಾವಿ.

ಪ್ರತಿ : ಜಿಲ್ಲೆಯ ಎಲ್ಲ ತಾಲೂಕಾ ಆರೋಗ್ಯಾಧಿಕಾರಿಗಳಿಗೆ ಮಾಹಿತಿಗಾಗಿ

ಪ್ರತಿ :
ಇವರಿಗೆ ಮಾಹಿತಿಗಾಗಿ.

ANNEXURE III – CONSENT FORM

INFORMED CONSENT FORM

"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY"

Investigator: Dr. ___________________ Guide: Dr. _______________

Introduction:

You are invited to participate in the present study "To evaluate the Health standards of selected CHC / PHC / SC of a district in north Karnataka according to IPHS 2012 guidelines". Indian Public Health Standards (IPHS) are a set of standards envisaged to improve the quality of health care delivery in the country under the National Rural Health Mission.

Methodology:

Data will be collected using a proforma for IPHS facility survey given by IPHS guidelines 2012 for CHCs, PHCs and Sub-centres.

Questionnaire will be given to Medical officer/staff to fill the details of services, manpower, training of personnel during previous year, essential laboratory services, physical infrastructure, equipments, drugs, furniture and quality control. Along with it, interview will be done for the same.

Hospital data will be collected from the records for training of personnel during previous year. Inspection will be done for Physical infrastructure, equipments, drugs and furniture.

Possible benefits:

You will not be eligible for any kind of monetary benefits or free services by virtue of your participation in the study. This study will help in assessing the services and giving feedback to appropriate authorities and suggest improvement measures.

Possible risks:

Methods applied to do the study are safe. No risk is involved in the study.

Cost of participation: The cost of the study will be entirely borne by the researcher. You will not have any costs attached to your participation.

Legal rights: By signing this consent form, you are not waiving off any of your legal rights.

Privacy and Confidentiality: All information collected will be coded so that, no one other than the investigator, will know your identity.

Withdrawal from the study: You can withdraw from the study at any time, if you wish to do so.

Authorization to publish the results: The researcher may use the information gathered from this study for presentation/publication in scientific journals. However your personal identity will not be revealed.

Questions:

If you have any queries regarding the study, you can contact **Dr. _______________,** PG Student, Dept. of Community Medicine, Jawaharlal Nehru Medical College, Belagavi-590010, mobile no: __________ or **Dr. _____________,** Professor, Dept. of

Community Medicine, Jawaharlal Nehru Medical College, Belagavi-590010, mobile no: ____________.

If you have any questions about rights as a research participant, you can contact **Prof. (Dr). G. S. Pilli,** Chairperson, Institutional Ethics Committee on Human Subjects' Research, Jawaharlal Nehru Medical College, Belagavi - 590010 phone no: 0831-2471350. **Prof. (Dr.) A. S. Godhi,** Principal, Jawaharlal Nehru Medical College, Belagavi- 590010, phone no- 0831-2471350.

CONSENT STATEMENT

"I volunteer and consent to participate in the study. I have read (or it has been read to me in the language known to me) the information sheet thoroughly. Full opportunity was given to me to ask questions. I am fully satisfied with the answers to the questions I wanted to ask. I hereby voluntarily agree to participate in this research project".

Name and Signature of the study participant: ___________________________________

Name and Signature of the interviewer: ______________________________________

Date: _________ Place: ___________

ANNEXURE IV – PROFORMA

K.L.E. UNIVERSITY'S J.N.MEDICAL COLLEGE, BELAGAVI
DEPARTMENT OF COMMUNITY MEDICINE

ANNEXURE IV-A

RESEARCH QUESTIONNAIRE

Investigator: **Guide:**

"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY"

[Note: All the personal information provided during this study will be kept confidential. Only aggregated data will be published.]

Proforma A

Proforma for Community Health Centres (CHCs) on IPHS guidelines 2012

Identification

Name of the State: Karnataka

District: Belagavi

Tehsil/Taluk/Block:

Location Name of CHC:

Is This Health Facility Recognized as FRU? (Yes/No)

Date of Data Collection:

___ Day ___ Month ___ Year

Name and Signature of the Person Collecting Data:

____

I. Services

S.No.		
1.1.	Population covered (in numbers)	
1.2.	Specialist services available (Yes/No)	
a.	Medicine	
b.	Surgery	
c.	OBG	
d.	Paediatrics	
e.	National Health Programmes (Specify)	
f.	Emergency services (24 Hours)	
g.	24 - hour delivery services including normal and assisted deliveries	
h.	Emergency Obstetric Care including surgical interventions like Caesarean Sections and other medical interventions	
i.	New-born care	
j.	Emergency care of sick children	
k.	Full range of family planning services including Laparoscopic Services	
l.	Safe abortion services	
m.	Treatment of STI / RTI	
n.	Essential Laboratory Services (Specify the type of lab tests conducted)	
o.	Blood storage facility	
p.	Referral transport service	
1.3.	Bed Occupancy Rate in the last 12 months (1- less than 40%; 2 - 40-60%; 3 - More than 60%)	
1.4.	Average daily OPD Attendance	
a.	Male	
b.	Female	
1.5.	Types of Surgeries performed (specify)	
1.6.	HIV / AIDS	
a.	Availability of Counseling facility on HIV/ AIDS / STD etc. (Yes/No)	
b.	Is it a Voluntary Council and Testing Centre (VCTC)?	
1.7.	Service availability	Number of days in a month the services are available
a.	Ante-natal Clinics	
b.	Post-natal Clinics	
c.	Immunization Sessions	
1.8.	Number of cases of caesarian delivery (During last one year)	

1.9.	Total number of paediatric beds	
1.10.	Is separate septic labour room available	
1.11.	Availability of facilities for out-patient department in Gynecology/ obstetric (Yes / No)	
a.	Board /Name plates to guide the clients	
b.	Adequate working space	
c.	Privacy during examination	
d.	Facility for counseling	
e.	Separate toilet with running water	
f.	Facility for Sterilizing instruments	
g.	Male specialist	
h.	Female specialist	

II. Manpower

S.No.	Personnel	IPHS Norm	Current Availability at CHC (Indicate Numbers)	Remarks / Suggestions / Identified Gaps
A.	**Clinical Manpower**			
2.1.	General Surgeon	1		
2.2.	Physician	1		
2.3.	Obstetrician / Gynaecologist	1		
2.4.	Paediatrics	1		
2.5.	Anaesthetist	1		On contractual appointment or hiring of services from private sectors on case to case basis
2.6.	Public Health Programme Manager	1		On contractual appointment
2.7.	Eye Surgeon	1		For every 5 lakh population as per vision 2020 approved Plan of Action
2.8.	Other specialists (if any)			
2.9.	General duty officers (Medical Officer)			

B. Support Manpower

S.No.	Personnel	IPHS Norm	Current Availability at CHC (Numbers)	Remarks / Suggestions / Identified Gaps
2.10.	Nursing Staff	7+2		1 ANM and 1 Public Health Nurse for family welfare will be appointed under the ASHA scheme
a.	Public Health Nurse	1		
b.	ANM	1		
c.	Staff Nurse	7		
d.	Nurse/Midwife			
2.11.	Dresser	1		
2.12	Pharmacist / compounder	1		
2.13.	Lab. Technician	1		
2.14.	Radiographer	1		
2.15.	Ophthalmic Assistant	1		Ophthalmic Assistant may be placed wherever it does not exist through redeployment or contract basis
2.16.	Ward boys / nursing orderly	2		
2.17.	Sweepers	3		
2.18.	Chowkidar	1		Flexibility may rest with the State for requirement of personnel as per needs
2.19.	OPD Attendant	1		
2.20.	Statistical Assistant / Data entry operator	1		
2.21.	OT Attendant	1		
2.22.	Registration Clerk	1		
2.23.	Any other staff (specify)			

C. Training of MOs during previous (full) year

2.24	Available training in	Number of MOs trained
a.	Sterilization	
b.	IUD Insertions	
c.	Emergency contraception	
d.	RTI / STI, HIV/ AIDS	
e.	Newborn care	
f.	Emergency obstetric care	
g.	Other subjects (mention)	

III. Investigative Facilities

S.No.	IPHS Norm	Current Availability at CHC	Remarks / Suggestions / Identified Gaps
3.1.	Availability of ECG facilities (Yes / No)		
3.2.	X-Ray facility (Yes / No)		
3.3.	Ultrasound facility (Yes / No)		
3.4.	Appropriate training to a nursing staff on ECG (Yes / No)		
3.5.	Lab test facilities (specify kind of tests done)		
3.6.	Any lab test / diagnostic test outsourced to private lab / hospital (please specify the test)		
3.7.	All necessary reagents, glassware and facilities for collection and transportation of samples (Yes / No)		

IV. Physical Infrastructure (As per specifications)

S.No.		Current Availability at CHC	If available, area in Sq. mts.)	Remarks / Suggestions / Identified Gaps
4.1.	Where is this CHC located?			
a.	Within Village Locality			
b.	Far from village locality			
c.	If far from locality specify in km			
4.2.	Building			
a.	Is a designated government building available for the CHC? (Yes / No)			
b.	If there is no designated government building, then where does the CHC located			
	Rented premises			
	Other government building			
	Any other specify			
c.	Area of the building (Total area in Sq. mts.)			
d.	What is the present stage of construction of the building			
	Construction complete			
	Construction incomplete			
e.	Compound Wall / Fencing (1-All around; 2-Partial; 3-None)			
f.	Condition of plaster on walls (1- Well plastered with plaster intact everywhere; 2- Plaster coming off in some places; 3- Plaster coming off in many places or no plaster)			
g.	Condition of floor (1- Floor in good condition; 2- Floor coming off in some places; 3- Floor coming off in many places or no proper flooring)			
h.	Whether the cleanliness is Good / Fair / Poor?(Observe)			
	OPD			
	OT			
	Rooms			
	Wards			

		Toilets			
		Premises (compound)			
	1.	Are any of the following close to the hospital? (Observe) (Yes/No)			
	i.	Garbage dump			
	ii.	Cattle shed			
	iii.	Stagnant pool			
	iv.	Pollution from industry			
4.3.		Location			
	a.	Whether located at less than 2 hours of travel distance from the farthest village? (Yes/No)			
	b.	Whether the district head quarter hospital located at a distance of less than 4 hours travel time? (Yes/No)			
	c.	Feasibility to hold the workforce (e.g. availability of degree college, railway station, municipality, industrial/mining belt) (Yes/No) (specify)			
4.4.		Availability of Private Sector Health Facility in the area			
	a.	Private laboratory/hospital/Nursing Home (Yes/No)			
	b.	Charitable Hospital (Yes/No) (specify)			
	c.	Hospital run by NGO (Yes/No)			
4.5.		Prominent display boards in local language / Charter of Patient Rights (Yes/No)			
4.6.		Registration counters (Yes/No)			
4.7.					
	a.	Pharmacy for drug dispensing and drug storage (Yes/No)			
	b.	Counter near entrance of hospital to obtain contraceptives, ORS packets, Vitamin A and Vaccination (Yes / No)			
4.8.		Separate public utilities for males and females (Yes/No)			
4.9.		Suggestion / complaint box (Yes/No)			
4.10.		OPD rooms / cubicles (Yes/No) (Give numbers)			
4.11.		Adequate no. of windows in the room for light and air in each room (Yes/No)			
4.12.		Family Welfare Clinic (Yes/No)			
4.13.		Waiting room for patients (Yes/No)			
4.14.		Emergency Room / Casualty (Yes/No)			
4.15.		Separate wards for males and females (Yes/No)			
4.16.		No. of beds : Male			
4.17.		No. of beds : Female			
4.18.		Operation Theatre			
	a.	Operation Theatre available (Yes/No)			
	b.	If operation theatre is present, are surgeries carried out in the operation theatre?			
		Yes			
		No			
		Sometimes			
	c.	If operation theatre is present, but surgeries are not being conducted there, then what are the reasons for the same?			
		Non-availability of doctors / anaesthetist / staff			

	Lack of equipment / poor physical state of the operation theatre			
	No power supply in the operation theatre			
d.	Any other reason (specify) Operation Theatre used for obstetric / gynaecological purpose (Yes / No)			
e.	Has OT enough space (Yes / No)			
f.	Is OT fitted with air conditioner? (Yes / No)			
g.	Is the air conditioner working? (Yes / No)			
h.	Is generator available for OT? (Yes / No)			
i.	Is emergency light available in OT? (Yes / No)			
j.	Is fumigation done regularly? (Yes / No)			
k.	Is the days of sterilization in a week displayed on the public notice on OT? (Yes / No)			
4.19	Operation Theatre Equipment	Available (Yes/No)	Working (Yes/No)	
	Boyles apparatus			
	EMO Machine			
	Cardiac Monitor for OT			
	Defibrillator for OT Ventilator for OT			
	Horizontal High Pressure Sterilizer			
	Vertical High Pressure sterilizer 2/3 drum capacity			
	Shadow-less lamp ceiling track mounted Shadow-less lamp pedestal for minor OT			
	OT care / fumigation apparatus			
	Gloves & dusting machines			
	Oxygen cylinder 660 Ltrs 10 cylinders for 1 Boyles Apparatus Nitrous Oxide Cylinder 1780 Ltr. 8 for one Boyles Apparatus Hydraulic Operation Table			
4.20 a.	Labour room Labour room available? (Yes/ No)			
b.	If labour room is present, are deliveries carried out in the labour room?			
	Yes			
	No			
c.	Sometimes If labour room is present. But deliveries are not being conducted there, then what are the reasons for the same?			
	Non-availability of doctors / staff			
	Seepage in the labour room			
	No power supply in the labour room			
	Any other reason (specify)			

4.21.		X-ray room with dark room facility (Yes/No)			
4.22.		Laboratory:			
	a.	Laboratory (Yes/No)			
	b.	Are adequate equipment and chemicals available? (Yes/No)			
	c.	Is laboratory maintained in orderly manner? (Yes / No)			
4.23.		Cold Chain	Available?	In working condition?	
	a.	Walk-in coolers (Yes / No)			
	b.	Walk-in freezers available (Yes / No)			
	c.	Ice-lined freezers (Yes / No)			
	d.	Deep freezers (Yes / No)			
	e.	Refrigerators (Yes / No)			
4.24.		Blood Storage Unit			
	a.	Blood Storage Unit available(Yes/No)			
	b.	Is the CHC having linkage with district blood bank? (Yes / No)			
	c.	Is regular blood supply available? (Yes / No)			
4.25. 4.26.		Ancillary Rooms - Nurses rest room (Yes/No) Water supply			
	a.	Source of water (1- Piped; 2- Bore well/ hand pump / tube well; 3- Well; 4- Other (specify))			
	b.	Whether overhead tank and pump exist (Yes / No)			
	c.	If overhead tank exist, whether its capacity sufficient? (Yes/No)			
 4.27.	d.	If pump exist, whether it is in working condition? (Yes / No) Sewerage			
		Type of sewerage system (1- Soak pit; 2- Connected to Municipal Sewerage)			
4.28.		Waste disposal			
	a.	Is there an incinerator? (Yes / No)			
	b.	If yes, type (1- electric; 2- Other (specify)			
 4.29.	c.	If no, how the medical waste disposed off? Electricity			
	a.	Is there electric line in all parts of the hospital? (1- In all parts; 2- In some parts; 3- None)			
	b.	Regular Power Supply (1- Continuous Power Supply; 2- Occasional power failure; 3- Power cuts in summer only; 4- Regular power cuts; 5- No power supply			
	c.	Standby facility (generator) available (Yes / No)			
4.30.		Laundry facilities:			
	a.	Laundry facility available(Yes/No)			
	b.	If no, is it outsourced?			
4.31.		Communication facilities			
	a.	Telephone (Yes/No)			
	b. c.	Number of different telephone lines available Personal Computer (Yes/No)			
	d.	NIC Terminal (Yes/No)			

e.	Email (Yes / No)			
f.	Is CHC accessible by			
i.	Rail (Yes / No)			
ii.	All whether road (Yes / No)			
iii.	Others (Specify)			
4.32.	Vehicles		Number of Vehicles	
a.	If running	Sanctioned	Available	On road
	Ambulance Jeep			
	Car			
b.	If vehicle is not running		Reason	
		Driver not available	Money for POL not available	Money for repairs not available
	Ambulance			
	Jeep Car			
		Current Availability at CHC	**If available, area in Sq. mts.)**	**Remarks / Suggestions / Identified Gaps**
4.33.	Office room (Yes/No)			
4.34.	Store room (Yes/No)			
4.35.	Kitchen (Yes / No)			
4.36.	Diet:			
a.	Diet provided by hospital (Yes/No)			
b.	If no, how diet is provided to the indoor patients?			
4.37.	Residential facility for the staff with living condition			
	General Surgeon			
	Physician			
	Obstetrician / Gynaecologist			
	Paediatrics			
	Anaesthetist			
	General Duty Medical Officer			
	Public Health Programme Manager			
	Eye Surgeon			
	Public Health Nurse			
	ANM			
	Staff Nurse			
	Nurse/Midwife			
	Dresser			
	Pharmacist / compounder			
	Lab. Technician			
	Radiographer			
	Ophthalmic Assistant			
	Ward boys / nursing orderly			
	Sweepers			
	Chowkidar			
	OPD Attendant			

		Statistical Assistant / Data entry operator			
		OT Attendant			
		Ambulance driver			
		Registration Clerk			
4.38.		Accommodation facility for families of admitted patients			
	a.	Facility for stay available (Yes / No)			
	b.	Attached toilet available (Yes / No)			
	c.	Cooking facility available (Yes / No)			
4.39.					
	a.	Is the CHC open for outpatient services for the stipulated OPD time?			
		Yes, on all days excepting designated holidays			
		No, it always closes before time			
		Only on some days it functions for the stipulated time			
	b.	If yes, specify stipulated OPD hours			
4.40		In cases where a patient needs to be admitted for inpatient care, is he/she admitted?			
		Yes, patients who can be managed at CHC are always admitted			
		Some deserving patients are not admitted but are referred to other facilities			
		Patients usually refused admission			
4.41.		Does the CHC provide treatment to emergency patients /victims of accident medical emergencies etc) at any time of the day/ night?			
		Emergency patients are given treatment. Where necessary, they are referred higher level Govt. hospital			
		Emergency patients are often not treated, referred to a public health care facility			
		Emergency patients are often not treated, referred to a private health care facility			
4.42.		If referred to a higher-level health care facility, how is the patient taken there? Free transport by hospital ambulance			
		By hospital ambulance, but fuel and other charges have to be made by the patient Private/ personal conveyance			

4.43.		Behavioral Aspects			
	a.	How is the behavior of the CHC staff with the patient			
		Courteous			
		Casual/indifferent			
		Insulting / derogatory			
	b.	Is there corruption in terms of charging extra money for any of the service provided? (Yes / No)			

c.	Is a receipt always given for the money charged at the CHC? (Yes / No)			
d.	Is there any incidence of any sexual advances. Oral or physical abuse, sexual harassment by the doctors or any other paramedical? (Yes / No)			
e.	Are woman patients interviewed in an environment that ensures privacy and dignity? (Yes / No)			
f.	Are examinations on woman patients conducted in presence of a woman attendant, and procedures conducted under conditions that ensure privacy? (Yes / No)			
g.	Do patients with chronic illnesses receive adequate care and drugs for the entire duration? (Yes / No)			
h.	If the health centre is unequipped to provide the services needed, are patients transferred immediately without delay, with all the relevant papers, to a site where the desired service is available? (Yes / No)			
i.	Is there a publicly displayed mechanism, whereby a complaint/grievance can be registered? (Yes / No)			

V (A). Equipment (As per list)

Equipment	Available	Functional	Remarks / Suggestions / Identified Gaps

V (B). Drugs (As per essential drug list)

Drug	Available	Remarks / Suggestions / Identified Gaps

VI. Furniture

S.No.	Item	Current Availability at CHC	If available, numbers	Remarks / Suggestions / Identified Gaps
6.1.	Examination Table			
6.2.	Delivery Table			
6.3.	Footstep			
6.4.	Bed Side Screen			
6.5.	Stool for patients			
6.6.	Arm board for adult & child			

6.7.	Saline stand			
6.8.	Wheel chair			
6.9.	Stretcher on trolley			
6.10.	Oxygen trolley			
6.11.	Height measuring stand			
6.12.	Iron bed			
6.13.	Bed side locker			
6.14.	Dressing trolley			
6.15.	Mayo trolley			
6.16.	Instrument cabinet			
6.17.	Instrument trolley			
6.18.	Bucket			
6.19.	Attendant stool			
6.20.	Instrument tray			
6.21.	Chair			
6.22.	Wooden table			
6.23.	Almirah			
6.24.	Swab rack			
6.25.	Mattress			
6.26.	Pillow			
6.27.	Waiting bench for patients / attendants			
6.28.	Medicine cabinet			
6.29.	Side rail			
6.30.	Rack			
6.31.	Bed side attendant chair			

VII. Quality Control

S.No.	Particular	Whether functional / available as per norms	Remarks
7.1.	Citizen's charter (Yes/No)		
7.2.	Constitution of Rogi Kalyan Samiti (Yes/No) (give a list of office order notifying the members)		
7.3.	Internal monitoring (Social audit through Panchayati Raj Institution / Rogi Kalyan Samitis, medical audit, technical audit, economic audit, disaster preparedness audit etc. (Specify)		
7.4.	External monitoring (Gradation by PRI (Zila Parishad)/ Rogi Kalyan Samitis		
7.5.	Availability of Standard Operating Procedures (SOP) / Standard Treatment Protocols (STP)/ Guidelines (Please provide a list)		

K.L.E. UNIVERSITY'S J.N.MEDICAL COLLEGE, BELAGAVI
DEPARTMENT OF COMMUNITY MEDICINE

ANNEXURE IV-B

RESEARCH QUESTIONNAIRE

Investigator: Dr. **Guide:**

"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY"

[Note: All the personal information provided during this study will be kept confidential. Only aggregated data will be published.]

PROFORMA-B

Proforma for Primary Health Centres on IPHS guidelines 2012

Identification

Name of the State: Karnataka

District: Belagavi

Tehsil/Taluk/Block :

Location Name of PHC:

Is the PHC providing 24 hours and 7 days delivery facilities:
YES / NO

Date of Data Collection:

____ ____________ __________
Day Month Year

Name and Signature of the Person Collecting Data:

____

I. Services

S.No.			
1.1.		**Population covered (in numbers)**	
1.2.		**Assured Services available (Yes/No)**	
	a.	OPD Services	
	b.	Emergency services (24 Hours)	
	c.	Referral Services	
	d.	In-patient Services	
1.3.			
a.		Number of beds available	
b.		Bed Occupancy Rate in the last 12 months (1- less than 40%; 2 - 40-60%; 3 - More than 60%)	
1.4.		Average daily OPD Attendance	
	a.	Males	
	b.	Females	
1.5.		**Treatment of specific cases (Yes / No)**	
	a.	Is surgery for cataract done in the PHC?	
	b.	Is the primary management of wounds done at the PHC?	
	c.	Is the primary management of fracture done at the PHC?	
	d.	Are minor surgeries like draining of abscess etc done at the PHC?	
	e.	Is the primary management of cases of poisoning / snake, insect or scorpion bite done at the PHC?	
	f.	Is the primary management of burns done at PHC?	

1.6.		**MCH Care including Family Planning**	
	1.6.1.	**Service availability (Yes / No)**	
	a.	Ante-natal care	
	b.	Intra-natal care (24 - hour delivery services both normal and assisted)	
	c.	Post-natal care	
	d.	New born Care	
	e.	Child care including immunization	
	f.	Family Planning	
	g.	MTP	
	h.	Management of RTI / STI	
	i.	Facilities under Janani Suraksha Yojana	
	1.6.2.	**Availability of specific services (Yes / No)**	
	a.	Are antenatal clinics organized by the PHC regularly?	

b.	Is the facility for normal delivery available in the PHC for 24 hours?	
c.	Is the facility for tubectomy and vasectomy available at the PHC?	
d.	Is the facility for internal examination for gynaecological conditions available at the PHC?	
e.	Is the treatment for gynecological disorders like leucorrhoea, menstrual disorders available at the PHC?	
f.	If women do not usually go to the PHC, then what is the reason behind it?	
g.	Is the facility for MTP (abortion) available at the PHC?	
h.	Is there any precondition for doing MTP such as enforced use of contraceptives after MTP or asking for husband's consent for MTP?	
i.	Do women have to pay for MTP?	
j.	Is treatment for anemia given to both pregnant as well as non-pregnant women?	
k.	Are the low birth weight babies managed at the PHC?	
l.	Is there a fixed immunization day?	
m.	Is BCG and Measles vaccine given regularly in the PHC?	
n.	How is the vaccine received at PHC and distributed to Sub-centres?	
o.	Is the treatment of children with pneumonia available at the PHC?	
p.	Is the management of children suffering from diarrhea with severe dehydration done at the PHC?	

1.7.	**Other functions and services performed (Yes / No)**	
a.	Nutrition services	
b.	School Health programmes	
c.	Promotion of safe water supply and basic sanitation	
d.	Prevention and control of locally endemic diseases	
e.	Disease surveillance and control of epidemics	
f.	Collection and reporting of vital statistics	
g.	Education about health / behavior change communication	

h.	National Health Programmes including HIV/AIDS control programs	
i.	AYUSH services as per local preference	
j.	Rehabilitation services (please specify)	
1.8.	**Monitoring and Supervision activities (Yes / No)**	
a.	Monitoring and supervision of activities of sub-centres through regular meetings / periodic visits, etc.	
b.	Monitoring of National Health Programmes	
c.	Monitoring activities of ASHAs	
d.	Visits of Medical Officer to all sub-centres at least once in a month	
e.	Visits of Health Assistants (Male) and LHV to sub-centres once a week	

II. Manpower

S.No.	Personnel	Existing pattern	Recommended	Current Availability at PHC (Indicate Numbers)	Remarks / Suggestions / Identified Gaps
2.1.	Medical Officer	1	2 (one may be from AYUSH and one other Medical Officer preferrably a Lady Doctor)		
2.2.	Pharmacist	1	1		
2.3.	Nurse - Midwife (Staff Nurse)	1	3 (for 24 hour PHCs; 2 may be contractual))		
2.4.	Health Worker (Female)	1	1		
2.5.	Health Educator	1	1		
2.6.	Health Assistant (One male and One female	2	2		
2.7.	Clerks	2	2		
2.8.	Laboratory Technician	1	1		
2.9.	Driver	1	Optional; vehicles may be out-sourced		
2.10.	Class IV	4	4		
	Total	**15**	**17/18**		

III. Training of personnel during previous (full) year

3.1.	Available training for	Number trained
a.	Tradition birth attendants	
b.	Health Worker (Female)	
c.	Health Worker (Male)	
d.	Medical Officer	
e.	Initial and periodic training of paramedics in treatment of minor ailments	
f.	Training of ASHAs	
g.	Periodic training of Doctors through Continuing Medical Education, conferences, skill development training etc. on emergency obstetric care	
h.	Training of Health Workers in antenatal care and skilled birth attendance	

IV. Essential Laboratory Services

S.No.		Current Availability at PHC	Remarks / Suggestions / Identified Gaps
4.1.	Routine urine, stool and blood tests		
4.2.	Blood grouping		
4.3.	Bleeding time, clotting time		
3.4.	Diagnosis of RTI/STDs with wet mounting, grams stain, etc.		
4.5.	Sputum testing for TB		
4.6.	Blood smear examination for malaria parasite		
4.7.	Rapid tests for pregnancy		
4.8.	RPR test for Syphilis / YAWS surveillance		
4.9.	Rapid tests for HIV		
4.10.	Others (specify)		

V. Physical Infrastructure (As per specifications)

S.No.		Current Availability at PHC	If available, area in Sq. mts.)	Remarks / Suggestions / Identified Gaps
5.1.	Where is this PHC located?			
a.	Within Village Locality			
b.	Far from village locality			
c.	If far from locality specify in km			

5.2.		Building			
	a.	Is a designated government building available for the PHC? (Yes / No)			
	b.	If there is no designated government building, then where does the PHC located			
		Rented premises			
		Other government building			
		Any other specify			
	c.	Area of the building (Total area in Sq. mts.)			
	d.	What is the present stage of construction of the building			
		Construction complete			
		Construction incomplete			
	e.	Compound Wall / Fencing (1-All around; 2-Partial; 3-None)			
	f.	Condition of plaster on walls (1- Well plastered with plaster intact everywhere; 2- Plaster coming off in some places; 3- Plaster coming off in many places or no plaster)			
	g.	Condition of floor (1- Floor in good condition; 2- Floor coming off in some places; 3- Floor coming off in many places or no proper flooring)			
	h.	Whether the cleanliness is Good / Fair / Poor?(Observe)			
		OPD			
		Rooms			
		Wards			
		Toilets			
		Premises (compound)			
	I.	Are any of the following close to the PHC? (Observe) (Yes/No)			
	i.	Garbage dump			
	ii.	Cattle shed			
	iii.	Stagnant pool			
	iv.	Pollution from industry			
	j.	Is boundary wall with gate existing ? (Yes / No)			
5.3.		Location			
	a.	Whether located at an easily accessible area? (Yes/No)			
	b.	Distance of PHC (in Kms.) from the farthest village in coverage area			
	c.	Travel time (in minutes) to reach the PHC from farthest village in coverage area			
	d.	Distance of PHC (in Kms.) from the CHC			
	e.	Distance of PHC (in Kms.) from District Hospital			
5.4.		Prominent display boards regarding service availability in local language (Yes/No)			
5.5.		Registration counters (Yes/No)			
5.6.					
	a.	Pharmacy for drug dispensing and drug storage (Yes/No)			
	b.	Counter near entrance of PHC to obtain contraceptives, ORS packets, Vitamin A and Vaccination (Yes / No)			
5.7.		Separate public utilities for males and females (Yes/No)			
5.8.		Suggestion / complaint box (Yes/No)			

5.9.	OPD rooms / cubicles (Yes/No) (Give numbers)		
5.10	Adequate no. of windows in the room for light and air in each room (Yes/No)		
5.11.	Family Welfare Clinic (Yes/No)		
5.12.	Waiting room for patients (Yes/No)		
5.13.	Emergency Room / Casualty (Yes/No)		
5.14.	Separate wards for males and females (Yes/No)		
5.15	No. of beds : Male		
5.16	No. of beds : Female		
5.17.	Operation Theatre (if exists)		
a.	Operation Theatre available (Yes/No)		
b.	If operation theatre is present, are surgeries carried out in the operation theatre?		
	Yes		
	No		
	Sometimes		
c.	If operation theatre is present, but surgeries are not being conducted there, then what are the reasons for the same?		
	Non-availability of doctors /staff		
	Lack of equipment / poor physical state of the operation theatre		
	No power supply in the operation theatre		
	Any other reason (specify)		
d.	Operation Theatre used for obstetric / gynaecological purpose (Yes / No)		
e.	Has OT enough space (Yes / No)		
5.18.	Labour room		
a.	Labour room available? (Yes/ No)		
b.	If labour room is present, are deliveries carried out in the labour room?		
	Yes		
	No		
	Sometimes		
c.	If labour room is present, but deliveries are not being conducted there, then what are the reasons for the same?		
	Non-availability of doctors / staff		
	Poor condition of the labour room		
	No power supply in the labour room		
	Any other reason (specify)		
d.	Is separate area for septic and aseptic deliveries available? (Yes / No)		
5.19.	Laboratory:		
a.	Laboratory (Yes/No)		
b.	Are adequate equipment and chemicals available? (Yes/No)		
c.	Is laboratory maintained in orderly manner? (Yes / No)		
5.20.	Ancillary Rooms - Nurses rest room (Yes/No)		

5.21.		Water supply			
	a.	Source of water (1- Piped; 2- Bore well/ hand pump / tube well; 3- Well; 4- Other (specify))			
	b.	Whether overhead tank and pump exist (Yes / No)			
	c.	If overhead tank exist, whether its capacity sufficient? (Yes/No)			
	d.	If pump exist, whether it is in working condition? (Yes / No)			
5.22		Sewerage			
		Type of sewerage system (1- Soak pit; 2- Connected to Municipal Sewerage)			
5.23.		Waste disposal			
		How the waste material is being disposed (please specify)?			
5.24.		Electricity			
	a.	Is there electric line in all parts of the PHC? (1- In all parts; 2- In some parts; 3- None)			
	b.	Regular Power Supply (1- Continuous Power Supply; 2- Occasional power failure; 3- Power cuts in summer only; 4- Regular power cuts; 5- No power supply			
	c.	Standby facility (generator) available in working condition (Yes / No)			
5.25.		Laundry facilities:			
	a.	Laundry facility available(Yes/No)			
	b.	If no, is it outsourced?			
5.26.		Communication facilities			
	a.	Telephone (Yes/No)			
	b.	Personal Computer (Yes/No)			
	c.	NIC Terminal (Yes/No)			
	d.	Email (Yes / No)			
	e.	Is PHC accessible by			
	i.	Rail (Yes / No)			
	ii.	All whether road (Yes / No)			
	iii.	Others (Specify)			
5.27.		Vehicles			
		Vehicle (jeep/other vehicle) available? (Yes / No)			
			Current Availability at PHC	**If available, area in Sq. mts.)**	**Remarks / Suggestions / Identified Gaps**
5.28.		Office room (Yes/No)			
5.29.		Store room (Yes/No)			
5.30.		Kitchen (Yes / No)			
5.31.		Diet:			
	a.	Diet provided by hospital (Yes/No)			
	b.	If no, how diet is provided to the indoor patients?			
5.32.		Residential facility for the staff with all amenities			
		Medical Officer			
		Pharmacist			

	Nurses		
	Other staff		
5.33.	Behavioral Aspects (Yes / No)		
a.	How is the behavior of the PHC staff with the patient		
	Courteous		
	Casual/indifferent		
	Insulting / derogatory		
b.	Any fee for service is charged from the users? (Yes / No). If yes, specify.		
c.	Is there corruption in terms of charging extra money for any of the service provided? (Yes / No)		
d.	Is a receipt always given for the money charged at the PHC? (Yes / No)		
e.	Is there any incidence of any sexual advances? Oral or physical abuse, sexual harassment by the doctors or any other paramedical? (Yes / No)		
f.	Are woman patients interviewed in an environment that ensures privacy and dignity? (Yes / No)		
g.	Are examinations on woman patients conducted in presence of a woman attendant, and procedures conducted under conditions that ensure privacy? (Yes / No)		
h.	Do patients with chronic illnesses receive adequate care and drugs for the entire duration? (Yes / No)		
i.	If the health centre is unequipped to provide the services how and where the patient is referred and how patients transported?		
j.	Is there a publicly displayed mechanism, whereby a complaint/grievance can be registered? (Yes / No)		
k.	Is there an outbreak of any of the following diseases in the PHC area in the last three years?		
	Malaria		
	Measles		
	Gastroenteritis		
	Jaundice		
l.	If yes, did the PHC staff respond immediately to stop the further spread of the epidemic?		
m.	Does the doctor do private practice during or after the duty hours? (Yes/ No)		
n.	Are there instances where patients from particular social background dalits, minorities, villagers) have faced derogatory or discriminatory behavior or service of poorer quality? (Yes / No)		
o.	Have patients with specific health problems (HIV/AIDS, leprosy suffered discrimination in any form? (Yes / No)		

VI. Equipment (As per list)

Equipment	Available		Functional	Remarks / Suggestions / Identified Gaps

VII. Drugs (As per essential drug list)

Drug	Available	Remarks / Suggestions / Identified Gaps

VIII. Furniture

S.No.	Item	Current Availability at PHC	If available, numbers	Remarks / Suggestions / Identified Gaps
8.1.	Examination Table			
8.2.	Delivery Table			
8.3.	Footstep			
8.4.	Bed Side Screen			
8.5.	Stool for patients			
8.6.	Arm board for adult & child			
8.7.	Saline stand			
8.8.	Wheel chair			
8.9.	Stretcher on trolley			
8.10.	Oxygen trolley			
8.11.	Height measuring stand			
8.12.	Iron bed			
8.13.	Bed side locker			
8.14.	Dressing trolley			
8.15.	Mayo trolley			
8.16.	Instrument cabinet			
8.17.	Instrument trolley			
8.18.	Bucket			
8.19.	Attendant stool			
8.20.	Instrument tray			
8.21.	Chair			
8.22.	Wooden table			
8.23.	Almirah			
8.24.	Swab rack			
8.25.	Mattress			

8.26.	Pillow		
8.27.	Waiting bench for patients / attendants		
8.28.	Medicine cabinet		
8.29.	Side rail		
8.30.	Rack		
8.31.	Bed side attendant chair		
8.32.	Others		

IX. Quality Control

S.No.	Particular	Whether functional / available as per norms	Remarks
9.1.	Citizen's charter (Yes/No)		
9.2.	Constitution of Rogi Kalyan Samiti (Yes/No) (give a list of office order notifying the members)		
9.3.	Internal monitoring (Social audit through Panchayati Raj Institution / Rogi Kalyan Samitis, medical audit, technical audit, economic audit, disaster preparedness audit etc. (Specify)		
9.4.	External monitoring /Gradation by PRI (Zilla Parishad)/ Rogi Kalyan Samitis		
9.5.	Availability of Standard Operating Procedures (SOP) / Standard Treatment Protocols (STP)/ Guidelines (Please provide a list)		

K.L.E. UNIVERSITY'S J.N.MEDICAL COLLEGE, BELAGAVI
DEPARTMENT OF COMMUNITY MEDICINE

ANNEXURE IV-C

RESEARCH QUESTIONNAIRE

Investigator: Dr. **Guide:**

"EVALUATION OF GOVERNMENT HEALTH CENTRES OF A DISTRICT IN NORTH KARNATAKA ACCORDING TO INDIAN PUBLIC HEALTH STANDARDS 2012 – A ONE YEAR CROSS SECTIONAL STUDY"

[Note: All the personal information provided during this study will be kept confidential. Only aggregated data will be published.]

PROFORMA-C

Proforma for Sub-centres (SCs) on IPHS guidelines 2012

Identification

Name of the State: **Karnataka**

District: **Belagavi**

Tehsil/Taluk/Block :

Name of the Village:

Location Name of Sub Centre:

Date of Data Collection:

____ Day ____ Month ____ Year

Name and Signature of the Person Collecting Data:

____

I. Services

S.No.		
1.1.	**Population covered (in numbers)**	
1.2.	**MCH Care including Family Planning**	
1.2.1.	**Service availability (Yes / No)**	
a.	Ante-natal care	
b.	Intra-natal care	
c.	Post-natal care	
d.	New born Care	
e.	Child care including immunization	
f.	Family Planning and contraception	
g.	Adolescent health care	
h.	Assistance to school health services	
i.	Facilities under Janani Suraksha Yojana	
j.	Treatment of minor ailments	
k.	First aid (specify)	
1.2.2.	**Availability of specific services (Yes / No)**	
a.	Does the doctor visit the Sub centre at least once in a month?	
b.	Is the day and time of this visit fixed?	
c.	Are the residents of the village aware of the timings of the doctor's visit?	
d.	Does the Health Assistant (male) or LHV visit the Sub Centre at least once a week?	
e.	Is the Antenatal care (Inj. T.T. IFA tablets, weight and BP checkup) provided by those in the Sub centre?	
f.	Is the facility for referral of complicated cases of pregnancy / delivery available at Sub centre for 24 hours?	
g.	Does the ANM/any trained personnel accompany the woman in labor to the referred care facility at the time of referral?	
h.	Are the Immunization services as per Government schedule provided by the Sub centre	
i.	Is the ORS for prevention of diarrhea and dehydration available in the Sub-centre?	
j.	Is the treatment of minor illness like fever, cough, cold, worm infestation etc. available in the Sub centre	
k.	Is the facility for taking Peripheral blood smear in case of fever for detection available in the Sub centre?	

	l.	Are the contraceptive services like insertion of Copper-T, distributing Oral contraceptive pills or condoms provided by the Sub centre?	
	m.	Is it a DOT centre?	
1.3.		**Other functions and services performed (Yes / No)**	
	a.	Disease surveillance	
	b.	Control of local endemic diseases	
	c.	Promotion of sanitation	
	d.	Field visits and home care	
	e.	National Health Programmes including HIV/AIDS control programmes	
1.4.		**Monitoring and Supervision activities (Yes / No)**	
	a.	Training of traditional birth attendants and ASHA	
	b.	Monitoring of Water quality in the village	
	c.	Watch over unusual health events	
	d.	Coordinated services with AWWs, ASHA, Village Health and Sanitation Committee, PRIs	
	e.	Coordination and supervision of activities of ASHA	
	f.	Proper maintenance of records and registers	
	g.	Is there a Village Health Plan / Sub Centre Plan?	
	h.	Is the scheme of ASHA implemented in Sub Centre?	

II. Manpower

S.No.	Personnel	Existing	Recommended	Current Availability at Sub Centre (Indicate Numbers)	Remarks / Suggestions / Identified Gaps
2.1.	Health Worker (Female)	1	1 or 2 (Optional)		
2.2.	Health Worker (Male)	1	1 or 0 (optional: may be replaced by female health worker)		
2.3.	Voluntary worker to keep the Sub Centre clean and assisting ANM. She is paid by the ANM from her contingency fund @ Rs. 100 per month	1 (optional)	1 (optional)		

III. Physical Infrastructure (As per specifications)

S.No.			Current Availability at Sub Centre	If available, area in Sq. mts.)	Remarks / Suggestions / Identified Gaps
3.1.		Location			
	a.	Where is this Sub Centre located?			
		Within Village Locality			
		Far from village locality			
		If far from locality specify in km			
	b.	Whether located at an easily accessible area? (Yes/No)			
	c.	The distance of Sub Centre (in Kms.) from the remotest village in the coverage area			
	d.	Travel time to reach the Sub Centre from the remotes place in the coverage area			
	e.	The distance of Sub Centre (in Kms.) from the PHC			
	f.	The distance of Sub Centre (in Kms.) from the CHC			
3.2.		Building			
	a.	Is a designated government building available for the Sub Centre? (Yes / No)			
	b.	If there is no designated government building, then where does the Sub Centre located			
		Rented premises			
		Other government building			
		Any other specify			
	c.	Area of the building (Total area in Sq. mts.)			
	d.	What is the present condition of the existing building			
	e.	What is the present stage of construction of the building			

		Construction complete			
		Construction incomplete			
	f.	Compound Wall / Fencing (1-All around; 2-Partial; 3-None)			
	g.	Condition of plaster on walls (1- Well plastered with plaster intact everywhere; 2- Plaster coming off in some places; 3- Plaster coming off in many places or no plaster)			
	h.	Condition of floor (1- Floor in good condition; 2- Floor coming off in some places; 3- Floor coming off in many places or no proper flooring)			
	i.	Whether the cleanliness is Good / Fair / Poor?(Observe)			
	j.	Are any of the following close to the Sub Centre? (Observe) (Yes/No)			
	i.	Garbage dump			
	ii.	Cattle shed			
	iii.	Stagnant pool			
	iv.	Pollution from industry			
	k.	Does boundary wall with gate exist? (Yes / No)			
3.3.		Prominent display boards in local language (Yes/No)			
3.4.		Separate public utilities for males and females (Yes/No)			
3.5.		Suggestion / complaint box (Yes/No)			
3.6.		Labour room			
	a.	Labour room available? (Yes/ No)			
	b.	If labour room is present, are deliveries carried out in the labour room?			
		Yes			
		No Sometimes			
	c.	If labour room is present, but deliveries not being conducted there, then what are the reasons for the same?			
		Staff not staying			
		Poor condition of the labour room			
		No power supply in the labour room			
		Any other specify			
3.7. 3.8.		Clinic Room Examination room			
3.9.		Water supply			
	a.	Source of water (1- Piped; 2- Bore well/ hand pump / tube well; 3- Well; 4- Other (specify))			
	b.	Whether overhead tank and pump exist (Yes / No)			
	c.	If overhead tank exist, whether its capacity sufficient? (Yes/No)			
	d.	If pump exist, whether it is in working condition? (Yes / No)			
3.10.		Waste disposal			
		How the medical waste disposed off (please specify)?			
3.11.		Electricity			

	Regular electric supply available? (Yes / No)			
3.12.	Communication facilities			
a.	Telephone (Yes/No)			
3.13.	Transport facility for movement of staff (Yes / No)			
3.14.	Residential facility for the staff Health Worker (Female)	**Current Availability at Sub Centre**	**If available, area in Sq. mts.)**	**If available, whether staff staying or not?**
3.15.	Whether Health Worker (Male) available in the Sub Centre?			
3.16.	Is he staying at Sub Centre Head Quarter village? (Yes / No)			

IV. Equipment (As per list)

Equipment	Available	Functional	Remarks / Suggestions / Identified Gaps

V. Drugs (As per essential drug list)

Drug	Available	Remarks / Suggestions / Identified Gaps

VI. Furniture

S.No.	Item	Current Availability at Sub Centre	If available, numbers	Remarks / Suggestions / Identified Gaps
6.1.	Examination Table			
6.2.	Writing Table			
6.3.	Armless chairs			
6.4.	Medicine chest			
6.5.	Labour table			
6.6.	Wooden screen			
6.7.	Foot step			
6.8.	Coat rack			
6.9.	Bed side table			
6.10.	Stool			
6.11.	Almirahs			
6.12.	Lamp			
6.13.	Side wooden racks			
6.14.	Fans			
6.15.	Tube lights			

6.16.	Basin stand			
6.17.	Buckets			
6.18.	Mugs			
6.19.	Kerosene stove			
6.20.	Sauce pan with lid			
6.21.	Water receptacle			
6.22.	Rubber / plastic shutting			
6.23.	Talquist Hb scale			
6.24.	Drum with tap for storing water			
6.25.	Others (specify)			

VII. Quality Control

S.No.	Particular	Whether functional / available as per norms	Remarks
7.1.	Citizen's charter in local language(Yes/No)		
7.2.	Internal monitoring: supportive supervision and record checking at periodic intervals by the male and female health supervisors from PHC (at least once a week) and by MO (at least once in a month)		
7.3.	External monitoring: Village health and sanitation committee, evaluation by independent external agency		
7.4.	Availability of various guidelines issued by GOI or State Govt. (specify)		

ANNEXURE - V - LIST OF EQUIPMENTS

1) List of Equipments at CHCs as per IPHS guidelines 2012

SI. No.	Standard Surgical Set
1	Tray, instrument/dressing with cover
2	Gloves surgeon
3	Forceps, sponge holding
4	Forceps, artery
5	Forceps hysterectomy, curved
6	Forceps, hemostatic, halsteads mosquito, straight
7	Forceps, uterine, tenaculum
8	Needle holder, mayo, straight, narrow jaw
9	knife-handle surgical for minor surgery and major surgeries
10	Needles, suture triangular point
11	Retractor, abdominal, Deavers
12	Scissors, operating curved mayo-blunt pointed
13	Retractor abdominal, Balfour 3 blade self-retaining
14	Scissors, operating, straight, blunt point
15	Scissors, gauze, straight
16	Suction tube
17	Clamp intestinal, Doyen, curved and straight
18	Forceps, tissue spring type
19	Catheter urethral Nelaton solid-tip one-eye
20	Proctoscope Mcevedy complete with case
21	Bowl, sponge, 600 ml, stainless steel
22	Speculum vaginal bi-valve graves, medium, stainless steel
23	IUD Insertion Kit (Essential)
24	NSV kit
25	Laparoscope
26	Nebulizer
27	Normal Delivery Kit (Essential)

SI. No.	Equipment for Anaesthesia (Essential)
1	Face mask, plastic w/rubber cushion & headstrap
2	Airway Guedel or Berman, autoclavable rubber
3	Laryngoscope, set with infant, child, adolescent blades
4	Catheter, endotracheal w/cuff, rubber
5	Catheter, urethral, stainless steel
6	Forceps, catheter, Magill, adult and child sizes
7	Connectors, catheter, straight/curved
8	Cuffs for endotracheal catheters, spare for item
9	Breathing tubes, hoses, connectors for item 1, anti-static
10	Valve, inhaler, chrome-plated brass, y-shape
11	Bag, breathing, self inflating, anti-static rubber
12	Vaporiser, halothane, dial setting
13	Vaporiser, ether or methoxyflurane, wick type 2
14	Intravenous set in box
15	Needle, spinal, stainless

SI. No.	Equipment for Neo-natal Resuscitation (Essential)
1	Catheter, mucus, rubber, open ended tip, size 14FR
2	Catheter, nasal, rubber, open tip, funnel end, size 8Fr
3	Catheter, endotracheal, open tip, funnel end rubber, 12Fr
4	Stilette, curved, for stiffening tracheal catheter SS
5	Catheter, suction, rubber, size 8Fr
6	Laryngoscope, infant, w/three blades and spare bulbs.
7	Lateral mask, with ventillatory bag, infant size
8	Resuscitator, automatic, basinet type
9	Lamp, ultra-violet (heat source) with floor stand
10	Cells for item 6 (Laryngoscope)
11	Oxygen Cylinders
12	Nasal Prongs
13	Thermometers
14	Infantometer: Measuring range 33-100 cm
15	Stadiometer: Measuring range 60-200 cm
16	Photo therapy Unit
17	Radiant warmers
18	Dextromsticks 100 sticks
19	Nebulisers/MDI
20	IV Canulas (22 G and 24 G)
21	Scalp vein set No. 22 and 24
22	Nasogastric tube (8,10,12 FG)
23	Oropharyngeal airway (000-4 Guydel size)
24	Plastic/disposable syringes including tuberculin
25	IV infusion sets (adult and pediatric)

SI. No.	Materials kit for Blood Transfusion (Essential)
1	Bovine albumin 20% testing agent, box of 10 x 5 ml vials
2	Centrifuge, angle head for 6 x 1 5 ml tubes, 240 volt
3	Bath, water, serological, with racks, cover, thermostat, 240 v
4	Pipette, volumetric, set of six 1 mol/2 ml/3 ml/5 ml/10 ml/20 ml
5	Test-tube without rim 75 x 12 mm HRG
6	Test-tube without rim 1 50 x 16 mm, HRG
7	Cuff, sphygmomanometer, set of two sizes – Child/Adult
8	Needle, blood collection disposable, 1 7 g x 1-1/3 box of 100
9	Ball, donor squeeze, rubber, dia, 60 mm
10	Forceps, artery, Spencer-Wells, straight 140 mm, stainless steel
11	Scissors, operating, straight 140 mm, blunt/joints, ss
12	CPDA anti-coagulant, pilot bottle 350 mil for collection
13	Microscope, binocular, inclined, 10 x 40 x 100 x magnificent
14	Illuminator 1 Slides, microscope, plain 25 x 75 mm, clinical, box of 100

SI. No.	Equipment for Operation Theatre (Essential)
1	Diathermy machine
2	Dressing drum all sizes
3	Lamps shadow less
4	Sterilizer
5	Suction Apparatus
6	Stand with wheel for single basin
7	Table operation, hydraulic
8	Trolley for patients
9	Trolley for instruments
10	X-ray view box
11	Wheel chairs

SI. No.	Equipment for Labour Room
1	Aprons rubber
2	Cradles baby
3	Wheel Chair
4	Cabinet Instrument
5	Dressing drum
6	Shadow less lamps
7	Table for Obstetric labour and Examination

2) List of Equipments at PHCs as per IPHS guidelines 2012

SI. No.	Equipments	SI. No.	Equipments
1.	Normal Delivery Kit.	2.	Phototherapy unit (Desirable).
3.	Equipment for assisted vacuum delivery	4.	Self inflating bag and mask-neonatal size.
5.	Equipment for assisted forceps delivery.	6.	Laryngoscope and Endotracheal intubation tubes (neonatal).
7.	Standard Surgical Set (for minor procedures like4. episiotomies stitching).	8.	Mucus extractor with suction tube and a foot operated suction machine.
9.	Equipment for Manual Vacuum Aspiration.	10.	Feeding tubes for baby.
11.	Equipment for New Born Care and Neonatal esuscitation.	12.	Phototherapy unit (Desirable).
13.	IUCD insertion kit.	14.	Sponge holding forceps – 2.
15.	Equipment/reagents for essential laboratory investigations.	16.	Vulsellum uterine forceps – 2
17.	Refrigerator.	18.	Tenaculum uterine forceps – 2
19.	ILR (Small) and DF (Small) with Voltage Stabilizer.	20.	MVA syringe and cannulae of sizes 4-8 (2 sets; one34. for back up in case of technical problems).
21.	Cold Boxes (Small & Large): Small- one, Large –two.	22.	Kidney tray for emptying contents of MVA syringe.
23.	Vaccine Carriers with 4 Icepacks: Two per SC12. (maximum 2 per polio booth) + 1 for PHC.	24.	Torch without batteries – 2.
25.	Spare ice pack box: 8, 25 & 60 ice pack boxes per13. vaccine carrier, Small cold box & Large cold box respectively.	26.	Battery dry cells 1.5 volt (large size) – 4.
27.	Waste disposal twin bucket, hypochlorite solution/14. bleach: As per need.	28.	Bowl for antiseptic solution for soaking cotton swabs.
29.	Freeze Tag: 2 per ILR bimonthly.	30.	Tray containing chlorine solution for keeping soiled instruments.
31.	Thermometres Alcohol (stem): Need Based16.	32.	Kits for testing residual chlorine in drinking water.
33.	Ice box.	34.	H2S Strip test bottles.
35.	Computer with accessories including internet facility.	36.	Head Light.
37.	Binocular microscope.	38.	Ear specula.
39.	Equipment under various National Programmes.	40.	B.P. Apparatus table model – 2.
41.	Radiant warmer for new born baby.	42.	Stethoscope – 2.
43.	Adult weighing scale.	44.	3 sets of NSV instruments.
45.	Baby weighing scale.	46.	Minilap kits –5
47.	Height measuring Scale.	48.	Radiant warmer for new born baby.
49.	Table lamp with 200 watt bulb for New born baby.	50.	Adult weighing scale.

ANNEXURE VI - LIST OF ESSENTIAL DRUGS

1) List of Essential Drugs at CHCs as per the IPHS 2012 guidelines

SI. No.	Drugs	SI. No.	Drugs
1	Halothane	26	Trimethoprim & Sulphamethoxazole Tablets IP
2	Atropine Injection	27	Phenoxymethylpenicillin Potassium Tablets
3	Thiopentone Injection	28	Fluconazole Tablets
4	Bupivacaine Injection	29	Cloxacillin Injection
5	Lignocaine Injection	30	Metronidazole Injection
6	Lignocaine Injection	31	Ergometrine Tablets
7	Diazepam Injection	32	Phenytoin Tablets
8	Pentazocine Injection	33	Hydroxyprogestrone Injection
9	Dexmethasone Injection	34	Norethisterone Acetate Tablets
10	Promethazine Injection	35	Insulin Injection
11	Nifedipine Capsules	36	Insulin Zinc Suspension Injection
12	Dopamine Injection	37	Sodium Bicarbonate Injection
13	Digoxin Tablets IP	38	Magnesium Sulphate Injection
14	Methyldopa Tablets IP	39	Phenytoin Injection
15	Frusemide Tablets IP	40	Oxygen IP
16	Frusemide Injection IP	41	Sodium Chloride Injection
17	Ampicillin Injection IP	42	Dextrose Injection
18	Gentamycin Injection IP	43	Nitrous Oxide Gas
19	Amoxycillin Capsules IP	44	Dextran 40 Injection
20	Norfloxacin Tablets IP	45	Sterile Water for injections
21	Doxycycline Capsules IP	46	Lignocaine Hydrochloride
22	Metronidazole Tablets	47	Inj. Insulin Regular Insulin Intermediate
23	Methylergometrine Injection	48	Acetyl Salicylic Acid Tablets
24	Oxytocin Injection	49	Ibuprofen Tablets
25	Etofylline BP plus Anhydrous Theophylline IP Combination Injection	50	Paracetamol
51	Hydrocortisone Acetate Injection	76	Chloroquine Phosphate
52	Salbutamol Tablets	77	Chlorpheniramine Maleate
53	Adrenaline Injection	78	Prednisolone Tablets
54	Succinylcholine Injection	79	Promethazine HCL Tablets
55	ketamine Injection	80	Phenobarbitone Tablets
56	Diazepam Tablets	81	Phenytoin Sodium Capsules or Tablets
57	Vecuronium Bromide Injection	82	Albendazole Tablets
58	Pancuronium Bromide Injection	83	Amoxicillin Powder for suspension

59	Neostigmine Injection	84	Ciprofloxacin Hydrochloride Tablets
60	Benzylpenicillin Injection	85	Clotrimazole Pessaries
61	Fortified Procaine Penicillin Injection	86	Sulfadoxine + Pyrimethamine Tablets
62	Benzathine Penicillin Injection	87	Ferrous Salt Tablets
63	Folic Acid Tablets	88	Benzyl Benzoate Lotion
64	Isosorbide Mononitrate/Dinitrate Tablets	89	Acriflavin + Glycerin Solution
65	Amlodipine Tablets	90	Gentian Violet Paint 0.5%, 1%
66	Digoxin Injection	91	Hydrogen Peroxide Solution 6%
67	Elixir	92	Povidone Iodine Solution 5%, 10%
68	Benzoic Acid + Salicylic Acid Ointment or Cream 6% + 3%	93	Bleaching Powder Powder
69	Miconazole Ointment or Cream 2%	94	Potassium Permanganate Crystals for solution
70	Neomycin + Bacitracin Ointment 5 mg + 500 IU	95	Aluminium Hydroxide + Magnesium Hydroxide Tablet Suspension
71	Silver Sulphadiazine Cream	96	Domperidone Tablets 10 mg Syrup 1 mg/ml
72	Ciprofloxacin Hydrochloride Drops/Ointment 0.3%	97	Local Anaesthetic, Astringent and Anti inflammatory Medicine Ointment /suppository
73	Tetracycline Hydrochloride Ointment 1%	98	Dicyclomine Hydrochloride Tablets 10 mg Injection 10 mg/ml
74	Alprozolam Tab 0.25 mg	99	Oral Rehydration Salts Powder for solution As per IP
75	Salbutamol Sulphate Tablets 4 mg	100	Multivitamin Tablets
101	Glucose Injection 50% hypertonic	122	Atenolol Tablets 50 mg
102	Glucose with Sodium Chloride Injection 5% + 0.9%	123	Fluoxetine Tablets 20 mg
103	Ringer Lactate Injection	124	Amitryptiline Hcl Tablets 25 mg
104	Ascorbic Acid Tablets 100 mg, 500 mg	125	Bisacodyl Tablets 05 mg
105	Calcium salts Tablets 250 mg, 500 mg	126	Tinidazole Tablets 300 mg,
106	Daonil Tablets 5 mg	127	Tab. Enalapril Tablets 2.5/5mg
107	Haloperidol Tablets 1, 2, 5 mg	128	Atorvastatin Tab Tablets 10 mg
108	Sulphacetamide eye drops Drops	129	Inj. Streptokinase
109	Tab. Metoprolol Hydrochlorthiazide Tablets 12.5, 25 mg, 100 mg	130	Inj. Heparin sod.

110	Tab Captopril Tablets 25 mg	131	
111	Glyceryl Trinitrate Inj.	132	Tab. Metformin Tablets 500 mg
112	Carbamazepine Tabs, syrup 100 mg, 200 mg	133	Inj. Crocin Inj
113	Tab. Methyldopa Tablets	134	Inj. Potassium chloride
114	Inj. Manitol Inj	135	Inj. Buscopan Inj
115	Inj. Chloroquine Inj	136	Inj. Duvadilan Inj
116	Inj. Pethidine Inj	137	Inj. Chlormycetin Inj
117	Inj. Chlorpromazine Inj	138	Tab. Enalapril Tablets 2.5/5mg
118	Inj. Pheniramine (Avil)	139	Atorvastatin Tablets 10 mg
119	Inj. Dextrose (10%) Inj	140	Inj. Streptokinase
120	Inj. Salbutamol MDI Inj	141	Inj. Anti Rabies Serum
121	Inj. Anti Rabies Vaccine	142	Inj. Anti Snake Venom

List of Essential Drugs at PHCs as per the IPHS 2012 guidelines

SI. No.	Drugs	SI. No.	Drugs
1.	Oxygen Inhalation	2.	Mebendazole Tablets 100 mg Suspension 100 mg/5 ml
3.	Diazepam Injection 5 mg/ml	4.	Albendazole Tablets 400 mg
5.	Acetyl Salicylic Acid Tablets 300 mg, 75 mg & 50 mg	6.	Diethylcarbamazine Citrate Tablets 150 mg
7.	Ibuprofen Tablets 400 mg	8.	Amoxycillin Powder for suspension 125 mg/5 ml
9.	Paracetamol Injection 150 mg/ml Syrup 125 mg/5ml	10.	Glyceryl Trinitrate Sublingual Tablets 0.5 mg Injection 5 mg/ml
11.	Chlorpheniramine Maleate Tablets 4 mg	12.	Isosorbide 5 Mononitrate Tablets 10 mg
13.	Dexchlorpheniramine Maleate Syrup 0.5 mg/5 ml	14.	Propranolol Tablets 10 mg, 40 mg Injection 1 mg/ml
15.	Dexamethasone Tablets 0.5 mg	16.	Amlodipine Tablets 2.5 mg, 5 mg, 10 mg
17.	Pheniramine Maleate Injection 22.75 mg/ml	18.	Atenolol Tablets 50 mg, 100 mg
19.	Promethazine Tablets 10 mg, 25 mg Syrup 5 mg/5 ml Capsules 250 mg, 500 mg	20.	Enalapril Maleate Tablets 2.5 mg, 5 mg, 10 mg Injection 1.25 mg/ml
21.	Ampicillin Capsules 250 mg, 500 mg Powder for suspension 125 mg/5 ml	22.	Methyldopa Tablets 250 mg
23.	Benzylpenicillin Injection 5 lacs, 10 lacs units	24.	Tab. Metoprolol Tablets 25 mg, 50 mg, 100 mg
25.	Cloxacillin Capsules 250 mg, 500 mg Liquid 125 mg/5 ml	26.	Hydrochlorthiazide Tablets 12.5, 25 mg
27.	Procaine Benzylpenicillin Injection Crystalline penicillin (1 lac units) + Procaine penicillin (3 lacs units)	28.	Tab. Captopril Tablets 25 mg

29. Cephalexin Syrup 125 mg/5 ml	30. Tab. Isosorbide Dinitrate (Sorbitrate) Tablets 5 mg, 10 mg
31. Gentamicin Injection 10 mg/ml, 40 mg/ml	32. Benzoic Acid + Salicylic Acid Ointment or Cream 6%+3%
33. Activated Charcoal Powder	34. Miconazole Ointment or Cream 2%
35. Antisnake Venom Ampoule (Lyophilyzed Polyvalent Serum)	36. Framycetin Sulphate Cream 0.5%
37. Carbamazepine Tablets 100 mg, 200 mg Syrup 20 mg/ml	38. Neomycin +Bacitracin Ointment 5 mg + 500 IU
39. Phenytoin Sodium Capsules or Tablets 50 mg,100 mg Syrup 25	40. Povidone Iodine Solution and Ointment 5%
41. Silver Nitrate Lotion 10%	42. Nalidixic Acid Tablets 250 mg, 500 mg
43. Nitrofurantoin Tablets 100 mg	44. Norfloxacin Tablets 400 mg
45. Tetracycline Tablets or Capsules 250 mg	46. Griseofulvin Capsules or Tablets 125 mg, 250 mg
47. Nystatin Tablets 500,000 IU	48. Clofazimine Tablets 100 mg (loose)
49. 6% Silver Sulphadiazine Cream	50. 1% Betamethasone Cream/Ointment
51. 0.05% Dipropionate	52. Calamine Lotion
53. Zinc Oxide Dusting Powder	54. Glycerin Solution
55. Benzyl Benzoate Lotion	56. 25 % Benzoin Compound Tincture
57. Chlorhexidine Solution 5% (conc. for dilution)	58. Ethyl Alcohol 70% Solution
59. Gentian Violet Paint 0.5%, 1%	60. Hydrogen Peroxide Solution 6%
61. Bleaching Powder Powder	62. Formaldehyde IP Solution
63. Potassium Permanganate Crystals for solution	64. Furosemide Injection, 10 mg/ml Tablets 40 mg
65. Aluminium Hydroxide + Magnesium Suspension Hydroxide	66. Tablet Omeprazole Capsules 10, 20, 40 mg
67. Ranitidine Hydrocholoride Tablets 150 mg, 300 mg Injection 25 mg/ml	68. Domperidone Tablets 10 mg Syrup 1 mg/ml
69. Metoclopramide Tablets 10 mg Syrup 5 mg/ml Injection 5 mg/ml	70. STI syndromic treatment kit As per Need
71. Dicyclomine Hydrochloride Tablets 10 mg Injection 10 mg/ml	72. Hyoscine Butyl Bromide Tablets or 10 mg Injection 20 mg/ml
73. Bisacodyl Tablets/suppository 5 mg	74. Isphaghula Granules
75. Oral Rehydration Salts Powder for solution As per IP	76. Oral Contraceptive pills

77. Condoms (Nirodh)	78. Copper T (380 A)
79. Prednisolone Tablets 5 mg, 10 mg	80. Glibenclamide Tablets 2.5 mg, 5 mg
81. Insulin Injection (Soluble) Injection 40 IU/ml	82. Metformin Tablets 500 mg
83. Rabies Vaccine Injection	84. Tetanus Toxoid Injection
85. Chloramphenicol Eye Drops Drops/Ointment 0.4%, 1%	86. NVP Tablets and bottle (5 ml)
87. Ciprofloxacin Hydrochloride Eye Drops Drops/Ointment 0.3%	88. Gentamicin Eye/Ear Drops 0.3%
89. Miconazole Cream 2%	90. Sulphacetamide Sodium Eye Drops Drops 10%, 20%, 30%
91. Tetracycline Hydrochloride Eye oint Ointment 1%	92. Prednisolone Sodium Phosphate Eye Drops 1%
93. Xylometazoline Nasal Drops Drops 0.05%, 0.1%	94. Diazepam Tablets 2 mg, 5 mg, 10 mg
95. Aminophylline Injection 25 mg/ml	96. Beclomethasone Dipropionate Inhalation 50 mg, 250 mg/dose
97. Salbutamol Sulphate Tablets 2 mg, 4 mg	98. Syrup 2 mg/5 ml Inhalation 100 mg/dose
99. Dextromethorphan Tablets 30 mg	100. Dextrose IV infusion 5% isotonic 500 ml bottle
101. Normal Saline IV Infusion 0.9% 500 ml bottle	102. Potassium Chloride Syrup 1.5 gm/5 ml, 200 ml
103. Ringer Lactate IV infusion 500 ml	104. Sodium Bicarbonate Injection
105. Ascorbic Acid Tablets 100 mg, 500 mg	106. Calcium salts Tablets 250 mg, 500 mg
107. Multivitamins Tablets (As per Schedule V)	108. Broad spectrum antibiotic/antifungal Ear drops
109. Wax dissolving Ear drops	

2) List of Essential Drugs at SCs as per the IPHS 2012 guidelines

SI. No.	Drugs	SI. No.	Drugs
1	Oral Rehydration Salts ORS	10	Dicyclomine tablets IP
2	Iron & Folic Acid tablets (IFA)	11	Chloramphenicol Eye Ointment
3	Folic Acid tablets	12	Povidone Iodine Ointmen
4	Iron & Folic Acid tablets (IFA)	13	Cotton bandage
5	Trimethoprim & Sulphamethoxazole tablets	14	Absorbent Cotton
6	GV Crystals	15	Methylergometrine tablets IP
7	Zinc Sulphate Dispersible tablets	16	Paracetamol tablets IP
8	Water – Miscible Vitamin Concentrate IP (Vitamin A Syrup)	17	Methylergometrine Injection IP
9	Iron & Folic Acid Syrup (as per standards provided)	18	Albendazole tablets IP

3) List of Equipments at SCs as per IPHS guidelines 2012

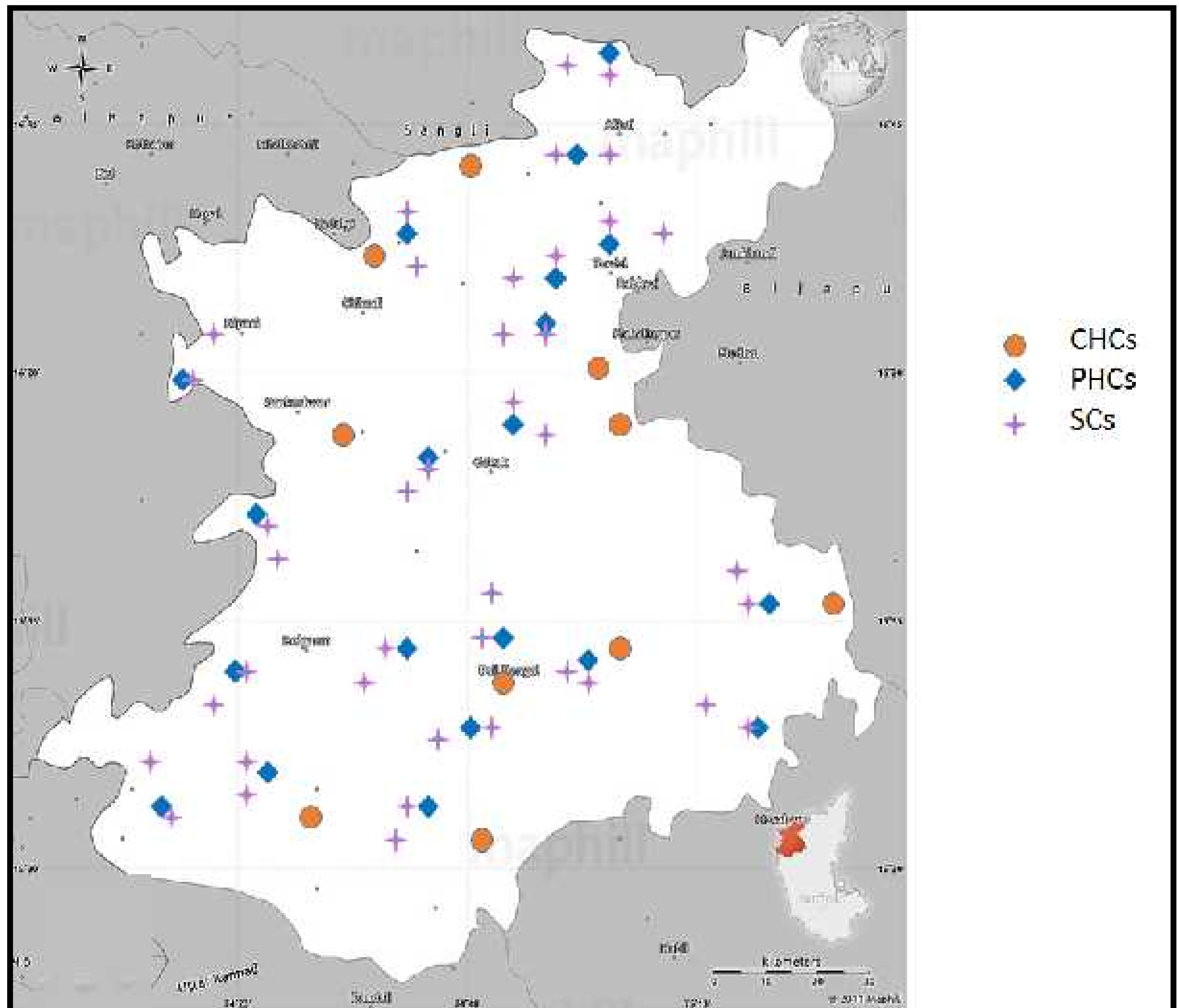
SI. No.	Equipments
1	Basin 825 ml. ss (Stainless Steel)
2	basin deep (capacity 6 litre)
3	tray instrument/Dressing with cover
4	Flashlight/torch box-type pre-focused
5	torch (ordinary)
6	Dressing Drum with cover 0.945 liters stainless steel
7	Hemoglobinometer – set Sahli type complete
8	Weighing Scale – Adult, Infant baby hanging type
9	Sterilizer
10	Surgical Scissors straight 140 mm
11	Sphygmomanometer Aneroid 300 mm with cuff
12	kelly’s hemostat Forceps straight 140 mm
13	Vulsellum uterine Forceps curved 25.5 cm
14	Cusco’s/Graves Speculum vaginal bi-valve medium
15	Sims retractor/depressor
16	Sims Speculum vaginal double ended ISS Medium
17	uterine Sound Graduated
18	Cheatle’s Forcep
19	Vaccine Carrier
20	Ice pack box
21	Sponge holder
22	Plain Forceps
23	tooth Forceps

24	Needle Holder
25	Suture needle straight and curved
26	kidney tray 4(big) & 4 (small)
27	Artery Forceps, straight, 160mm Stainless steel
28	Dressing Forceps (spring type), 160mm, stainless steel
29	Cord cutting Scissors, blunt, curved on flat, 160 mm ss
30	Clinical thermometer oral & rectal
31	talquist Hb scale
32	Stethoscope
33	Foetoscope
34	Hub Cutter and Needle Destroyer
35	Ambu bag(Paediatric size) with baby mask
36	Suction Machine
37	Oxygen Administration Equipment
38	tracking bag and tickler box (Immunization)
39	Measuring tape
40	I/V Stand

ANNEXURE VII - LIST OF SELECTED COMMUNITY HEALTH CENTRES, PRIMARY HEALTH CENTRES AND SUB CENTRES IN BELAGAVI DISTRICT

SI. No.	Taluka	CHCs	PHCs	SCs
1	Belagavi	1) Hirebagewadi	1) Sulebhavi 2) Belagundi	1) Sulebhavi 2) Karadiguddi 3) Belagundi 4) Sonoli
2	Khanapur	2) Nandgadh	3) Kanakumbi 4) Ganebail	5) Kanakumbi 6) Jamboti 7) Ganebail 8) Nittur
3	Bailhongal	3) Kittur	5) Bailur 6) Hunashikatti	9) Bailur 10) Degaon 11) Hunasikatti 12) Turmuri
4	Hukkeri	4) Nidasoshi (Ammanagi)	7) Daddi 8) Bugate Alur	13) Daddi 14) Managutthi 15) Bugate Alur 16) Konkeri
5	Gokak	5) Mudalagi	9) Konnur 10) Balobal	17) Konnur 18) Dupdal 19) Balobal 20) Masaguppi
6	Raibag	6) Mugalkhod	11) Harugeri 12) Hidkal	21) Harugeri 22) Koligud 23) Hidkal 24) Alagwadi
7	Saudatti	7) Yaragatti	13) Murgod 14) Inchal	25) Murgod 1 26) Murgod 2 27) Inchal 28) Haroogoppa
8	Athani	8) Kagawad	15) Ananthpur 16) Shankratti	29) Anantpur 30) Kundewadi 31) Shankratti 32) Shigunshi
9	Chikkodi	9) Examba	17) Ankali 18) Jainapur	33) Ankali 34) Hirekudi 35) Jainapur 36) Hattarwat
10	Ramdurg	10) Hoskoti	19) Batakurki 20) Hulkund	37) Batakurki 38) Channapur 39) Hulkund 1 40) K. Chandaragi

Figure 1: Map of Belagavi district showing the surveyed CHCs, PHCs and SCs.



ANNEXURE IX – KEY TO MASTER CHART

1) CHC Data

A. Population Covered : 1. 80,000-1,20,000,
2. 1, 20,000-2, 00,000
3. >2, 00,000

B. Medicine: 1. Yes 0. No

C. Surgery: 1. Yes 0. No

D. OBG: 1. Yes 0. No

E. Paediatrics: 1. Yes 0. No

F. Emergency services (24 hours/day): 1. Yes 0. No

G. 24hr delivery, Normal & assisted: 1. Yes 0. No

H. Emergency obstetric Care (LSCS & other): 1. Yes 0. No

I. New-born care: 1. Yes 0. No

J. Emergency Care of sick children: 1. Yes 0. No

K. Family planning services: 1. Yes 0. No

L. Full range FP services including Laparoscopic services: 1. Yes 0. No

M. Abortion: 1. Yes 0. No

N. Treatment of STI/RTI: 1. Yes 0. No

O. Referral transport facility: 1. Yes 0. No

P. BOR: 1. less than 40%, 2. 40-60%, 3. More than 60

Q. OPD: 1.< 50, 2. 50-100, 3. 100-150, 4. 150-200,
5. >200

R. OPD (M): 1. < 25, 2. 25-50, 3. 50-75, 4. 75-100, 5. > 100

S. OPD (F): 1. <25, 2. 25-50, 3. 50-75, 4. 75-100, 5. >100

T. ICTC centre: 1. Yes 0. No

U. ANC & PNC services: 1. Yes 0. No

V. Immunization Sessions: 1. Yes 0. No

W. OPD OBG: 1. Yes 0. No

X. General surgeon: 1. Yes 0. No

Y. Physician: 1. Yes 0. No

Z. Gynaecologist: 1. Yes 0. No

AA. Paediatrician: 1. Yes 0. No

AB. Anaesthetist: 1. Yes 0. No

AC. Public health programme manager: 1. Yes 0. No

AD. Ophthalmologist: 1. Yes 0. No

AE. Dentist: 1. Yes 0. No

AF. Gereal duty MO: 1. Yes 0. No

AG. AYUSH MO: 1. Yes 0. No

AH. Nursing Staff: The number of existing nursing staff was entered.

AI. Pharmacist: 1. 1, 0. No, 2. 2, 3. 3

AJ. Lab. Technician: 1. 1, 0. No, 2. 2, 3. 3

AK. Radiographer: 1. 1, 0. No, 2. 2, 3. 3

AL. Ophthal. Asst.: 1. Yes 0. No

AM. Ward boys: The number of existing ward boys was entered.

AN. OPD Attendant: 1. Yes 0. No

AO. Sweepers: The number of existing sweepers was entered.

AP. Clearks: 1. 1, 0. No, 2. 2

AQ. Others: The number of existing other workers was entered.

AR. Total in percentage: 1. <50%, 2. 50-75%, 3. 70-90%, 4. >90%

AS. Training MO - Numbers trained: 1. 1, 0. No, 2. 2, 3. 3, 4. 4

AT. Sterilization: 1. Yes 0. No

AU. IUD Insertion: 1. Yes 0. No

AV. RTI/STI, HIV/AIDS: 1. Yes 0. No

AW. Newborn care: 1. Yes 0. No

AX. Emergency obstetric care: 1. Yes 0. No

AY. BMW management: 1. Yes 0. No

AZ. ECG: 1. Yes 0. No

BA. X-ray room with dark room facility: 1. Yes 0. No

BB. USG: 1. Yes 0. No

BC. ECG training for Nursing staff: 1. Yes 0. No

BD. Location - Accessible: 1. Yes 0. No

BE. Building area: 1. Adequate, 2.Inadequate

BF. Construction complete: 1. Yes 0. No

BG. Compound wall/fencing: 0. No, 1. All around, 2. Partial,
3. All around with gate

BH. Wall Plaster: 1. Good condition; 2. Coming off in some places

BI. Floor: 1. Good condition; 2. Coming off in some places

BJ. Location - <2hrs far village: 1. Yes 0. No

BK.Location - <4hrs from district hospital: 1. Yes, 0. No

BL. Feasibility of workforce: 1. Yes 0. No

BM. Private hosp/lab: 1. Yes 0. No

BN. Separate public utilities M/F: 1. Yes 0. No

BO. Display Boards: 1. Yes 0. No

BP. Registration counters: 1. Yes 0. No

BQ. Pharmacy: 1. Yes 0. No

BR. Suggestion/complaint box: 1. Yes 0. No

BS. OPD rooms: The number of rooms was entered.

BT. No. of Beds M: The number of Beds was entered.

BU. No. of Beds F: The number of Beds was entered.

BV. No. of Paediatric Beds: The number of Beds was entered.

BW. Types of surgery: 0. No, 1.Tubectomy& minor operations, 2. OBG surgeries & minor operations

BX. No. of LSCS (last one year): 1. < 200, 2. 200-400

BY. OT - AC: 1. Yes 0. No

BZ. OT - Generator/Inverter: 1. Yes 0. No

CA. OT equipments Total: 1. < 50%, 2. 50-75%, 3. > 75%

CB. Partograph: 1. Yes 0. No

CC. Nurses rest room: 1. Yes 0. No

CD. Water supply: 1. Piped, 2. Bore well/ hand pump / tube well

CE. Sewerage: 1. Soak pit, 2. Connected to Municipal Sewerage

CF. Power supply: 1. Continuous Power Supply; 2. Occasional power failure; 3. Power cuts in summer only; 4. Regular power cuts

CG. Standby: 1. Yes 0. No

CH. Laundry: 1. Yes, 0. No, 2. Outsourced

CI. Access. By: No=0, Rail=1, All roads=2, Rail & Road=3

CJ. Vehicles: 1. Yes, 0. No

CK. Office room: 1. Yes, 0. No

CL. Store room: 1. Yes, 0. No

CM. Kitchen: 1. Yes, 0. No

CN. Residential facility - MO: 1. Yes, 0. No

CO. Staff nurse: 1. Yes, 0. No

CP. ANM: 1. Yes, 0. No

CQ. Pharmacist: 1. Yes, 0. No

CR. Lab. Technician: 1. Yes, 0. No

CS. Others: 1. Yes, 0. No

CT. Behaviour: 1. Courteous, 2. Casual/indifferent

CU. Citizen’s charter: 1. Yes, 0. No

CV. ARS committee: 1. Yes, 0. No

CW. Internal Monitoring: 1. Yes, 0. No

CX. External monitoring: 1. Yes, 0. No

CY. Standard Operating Procedure Manuals: 1. Yes, 0. No

CZ. No. of deliveries/month: 1. <50, 2. 50-75, 3. >75

DA. Suggested equipments: 1. <50%, 2. 50-75%, 3. >75%

DB. Furnitures: 1. <50%, 2. 50-75%, 3. >75%

DC. Drugs: 1. <50%, 2. 50-75%, 3. >75%

DD. Lab. Equipments: 1. <50%, 2. 50-75%, 3. >75%

2) PHC Data

A. 24 × 7 PHC: 1. Yes 0. No

B. Population Covered:

1. <15,000
2. 15,000-20,000
3. 20,000-30,000
4. 30,000-40,000
5. 40,000-50,000
6. >50,000

C. OPD Services: 1. Yes 0. No

D. Emergency services (24 hours/day): 1. Yes 0. No

E. Referral services: 1. Yes 0. No

F. In-patient services: 1. Yes 0. No

G. Number of Beds available: 1. 1-3 beds 2. 4-6 beds 3. >6 beds

H. Bed Occupancy Rate in last 12 months: 1. less than 40%, 2. 40=60%, 3. more than 60%

I. Average daily OPD Attendance:

1. < 20 2. 20-40 3. 40-60 4. > 60

J. Males: 1. < 10 2. 10-20 3. 20-30 4. 30-40 5. > 40

K. Females: 1. < 10 2. 10-20 3. 20-30 4. 30-40 5. > 40

L. Is surgery for cataract done in the PHC: 1. Yes 0. No

M. Is the primary management of wounds done at the PHC: 1. Yes 0. No

N. Are minor surgeries done at the PHC: 1. Yes 0. No

O. Is the primary management of fracture done at the PHC: 1. Yes 0. No

P. Is the primary management of cases of poisoning / snake, insect or scorpion bite done at the PHC: 1. Yes 0. No

Q. Is the primary management of burns done at PHC: 1. Yes 0. No

R. Ante-natal care, intranatal care, Post-natal care availability: 1. Yes 0. No

S. Family Planning Services: 1. Yes 0. No

T. MTP Services: 1. Yes 0. No

U. Is the facility for normal delivery available in the PHC for 24 hours?

1. Yes 0. No

V. Are Deliveries conducted? 1. Yes 0. No

W. Number of deliveries conducted per month: 1. < 10, 2. 10-15, 3. 15-20, 4. 20-25, 5. > 25

X. Use of Partograph: 1. Yes 0. No

Y. Is the facility for tubectomy and vasectomy available at the PHC?

1. Yes 0. No

Z. Are Gynaecological services available at PHC? 1. Yes 0. No

AA. Treatment of STI/RTI: 1. Yes 0. No

AB. Is treatment for anemia given to both pregnant as well as non-pregnant women?

1. Yes 0. No

AC. Immunisation services: 1. Yes 0. No

AD. Services for treatment of pneumonia: 1. Yes 0. No

AE. Services for diarrhea with severe dehydration: 1. Yes 0. No

AF. Are the low birth weight babies managed at the PHC? 1. Yes 0. No

AG. New born Care: 1. Yes 0. No

AH. SAM Management: 1. Yes 0. No

AI. School Health services: 1. Yes 0. No

AJ. Monitoring of midday meal Programme: 1. Yes 0. No

AK. Adolescent clinics: 0. No, 1. Monthly once, 2. Once in three months, 3. Once in 6 months, 4. Once in a year

AL. AYUSH Services: 1. Yes 0. No

AM. Medical Officer (Male): 1. Yes 0. No

AN. Lady Medical Officer: 1. Yes 0. No

AO. AYUSH Medical Officer: 1. Yes 0. No

AP. Pharmacist: 0. No 1. 1 2. 2 3. 3

AQ. Nurse - Midwife (Staff Nurse):0. No 1. 1 2. 2 3. 3

AR. Senior Health Assistant male: 1. Yes 0. No

AS. Lady Health Visitor: 1. Yes 0. No

AT. Laboratory Technician: 0. No 1. 1 2. 2 3. 3

AU. Health Educator: 1. Yes 0. No

AV. Clerks: 1. Yes 0. No

AW. Driver: 1. Yes 0. No

AX. Class IV worker: 1. Yes 0. No

AY. Total number of staff: 1. > 90%, 2. 80-90%, 3. 70-80%, 4. 60-70%, 5. 50-60%, 6. < 50%

AZ. Percentage of required staff:

1. >90% 2. 80-90% 3. 70-80% 4. 60-70
5. 50-60% 6. <50%

BA. Training of Medical Officer: 0. No 1. 1 2. 2 3. 3

BB. Training of paramedics: 0. No 1. 1 2. 2 3. 3

BC. Training of ASHAs: 0. No 1. 1 2. 2 3. 3

BD. Training of Health workers: 0. No 1. 1 2. 2 3. 3

BE. Routine Laboratory Services: 1. Yes 0. No

BF. Blood tests and Blood Grouping: 1. Yes 0. No

BG. Bleeding time, clotting time: 1. Yes 0. No

BH. Diagnosis of RTI/STDs with wet mounting, grams stain, etc.: 1. Yes 0. No

BI. Sputum testing for TB: 1. Yes 0. No

BJ. Blood smear examination for malaria parasite: 1. Yes 0. No

BK. Rapid tests for pregnancy: 1. Yes 0. No

BL. RPR test for Syphills / YAWS surveillance: 1. Yes 0. No

BM. Rapid tests for HIV: 1. Yes 0. No

BN. Widal test: 1. Yes 0. No

BO. PHC within Village Locality:

1. Within Village, 2. < 1 km, 3. 1-2 km, 4. > 2 km

BP. Total Area of the PHC (Plinth area): 1. Adequate, 0. Inadequate

BQ. Present stage of construction of the building

1. Construction complete 2. Construction incomplete

BR. Compound Wall / Fencing: 0. No 1.All around 2. Partial 3. All around with gate

BS. Condition of plaster on walls

1. Well plastered with plaster intact everywhere
2. Plaster coming off in some places
3. Plaster coming off in many places or no plaster

BT. Condition of floor

1. Floor in good condition
2. Floor coming off in some places
3. Floor coming off in many places or no proper flooring

BU. Whether PHC located at an easily accessible area?

BV. Distance of PHC from the farthest village in coverage area

1. < 10km 2. 10-20km 3. 20-30k 4. >30km

BW. Travel time to reach the PHC from farthest village in coverage area

1. < 30min 2. 30-60 min 3. 1-2 hrs 4. > 2hrs

BX. Distance of PHC from the CHC 1. < 30km 2. 30-40 km 3. 40-50 km 4. > 50 km

BY. Distance of PHC from District Hospital 1. < 25km 2. 25-50 km 3. 50-75 km 4. 75-100 km 5. > 100km

BZ. Displays Boards: 1. Yes 0. No

CA. Registration counters: 1. Yes 0. No

CB. Counter near entrance of PHC: 1. Yes 0. No

CC. OPD rooms / cubicles: 1. 1 2.2

CD. Adequate no. of windows: 1. Yes 0. No

CE. Family Welfare Clinic: 1. Yes 0. No

CF. Waiting room for patients: 1. Yes 0. No

CG. Emergency Room / Casualty: 1. Yes 0. No

CH. Separate wards for males and females: 1. Yes 0. No

CI. Operation Theatre available: 1. Yes 0. No

CJ. Surgeries carried out? 1. Yes 0.No

CK. If operation theatre is present, but surgeries are not being conducted there, then what are the reasons for the same?

1. Non-availability of doctors /staff
2. Lack of equipment / poor physical state of the operation theatre
3. No power supply in the operation theatre
4. Any other reason (specify) - Not trained

CL. Water supply – Source:

1- Piped
2- Bore well/ hand pump / tube well
3- Well
4- Other (specify)

CM. Whether its water is adequate? 1. Yes 0. No

CN. Sewerage: 1. Soak pit 2. Connected to Municipal sewerage

CO. How the waste material is being disposed:

1. Incineration & Dumping 2. Sent Outside for Incineration

CP. Is there electric line in all parts of the PHC?

1- In all parts 2- In some parts 3- No

CQ. Regular Power Supply

1- Continuous Power Supply
2- Occasional power failure
3- Power cuts in summer only
4- Regular power cuts
5- No power supply

CR. Stand by facility: 1. Yes 0. No

CS. Laundry facility available: 1. Yes 0. No 2. Outsourced

CT. Telephone: 1. Yes 0. No

CU. Personal Computer: 1. Yes 0. No

CV. NIC Terminal: 1. Yes 0. No

CW. Internet availability: 1. Yes 0. No

CX. Is PHC accessible by

1.Rail 2. All whether road 3. Rail and road

CY. Vehicle (jeep/other vehicle) available: 1. Yes 0. No

CZ. Office room: 1. Yes 0. No

DA. Store room: 1. Yes 0. No

DB. Kitchen: 1. Yes 0. No

DC. Diet provided by hospital: 1. Yes 0. No

DD. Residence for Medical Officer: 1. Yes 0. No

DE. Residence for Pharmacists: 1. Yes 0. No

DF. Residence for Nurses: 1. Yes 0. No

DG. Residence for Other staff: 1. Yes 0. No

DH. Behavioral of Staff towards Patients

1. Courteous
2. Casual/indifferent
3. Insulting / derogatory

DI. Referral Service: 1. District Hospital, CHC, FRU
2. Private Hospitals
3. Both

DJ. Complaints displayed: 1. Yes 0. No

DK. Any outbreak PHC area: 1. Yes 0. No

DL. Does the doctor do private practice during or after the duty hours: 1. Yes 0. No

DM. Citizen's charter: 1. Yes 0. No

DN. ARS Constitution: 1. Yes 0. No

DO. Internal monitoring: 1. Yes 0. No

DP. External monitoring: 1. Yes 0. No

DQ. Availability of Standard Operating Procedures (SOP):
1. Yes 0. No

DL Number of Subcentres

DM No. of SCs with Govt. buildings (%) : < 30%=1, 30-50%-2, 50-70%=3,
70-90%=4, > 90%=5

DN Number of deliveries/month < 10=1, 10-15=2, 15-20=3,
20-25=4, > 25=5

DO Is it a 24*7 PHC : Yes=1, No=0

DX Total Suggested equipments present
< 50%=1, 50-75%=2, 75-100%=3

EA Total furnitures present <50%=1, 50-75%=2, 75-100%=3

EB Total Drugs present <50%=1, 50-75%=2, 75-100%=3

EC Percentage of Lab. Equipments Present

<50%=1, 50-75%=2, 75-100%=3

3) SC Data

A. Population Covered - <3000=1, 3000-5000=2, 5001-8000=3, 8001-12000=4, 12001-15000=5, >15000=6
B. HW (F): 1. Yes 0. No
C. HW (M): 1. Yes 0. No
D. Voluntary Worker: 1. Yes 0. No
E. LHV: 1. Yes 0. No
F. MCH Care, FP: 1. Yes 0. No
G. Visit by Doctor: 1. Yes 0. No
H. Visit day time fixed ? 1. Yes 0. No
I. Residents aware ? 1. Yes 0. No
J. MHA/LHV Visits 1. Yes 0. No
K. ANC Provided ? 1. Yes 0. No
L. Facility for referral 1. Yes 0. No
M. Immunization services 1. Yes 0. No
N. Treatment of Minor illness 1. Yes 0. No
O. PS facility: 1. Yes 0. No
P. DOTS centre 1. Yes 0. No
Q. Other functions & services 1. Yes 0. No
R. Monitoring 1. Yes 0. No
S. Record maintenance 1. Yes 0. No
T. Village Health Plan 1. Yes 0. No
U. Location: 1. Within Village, 2. Within <1km from village, 3. Within 1-2km, 4. >2km from village
V. Distance 1: The distance of Sub Centre (in Kms.) from the remotest village in the coverage area <5km=1, 5-10km=2, 10-15km=3, >15km=4
W. Travel Time: Travel time to reach the Sub Centre from the remotes place in the coverage area <15min=1, 15-30min=2, 30min-1hrhrs=3, >1hr=4

X. Distance 2: The distance of Sub Centre (in Kms.) from the PHC

<10km=1, 10-20km=2, 20-30km=3, >30km=4

Y. Distance 3: The distance of Sub Centre (in Kms.) from the CHC <25km=1, 25-50km=2, 50-75km=3, 75-100km=4, >100km=5

Z. Building: Govt. building=1, Rented = 2, No building = 0

AA. Area: 1. Adequate, 0.Inadequate, NA - Not Applicable

AB. Present Condition:

1. Construction complete, 0. Construction Incomplete

AC. Compound wall / Fencing:

No=0, 1-All around, 2-Partial, 3=All around with gate

AD. Wall Plaster: 1. Good condition; 2. Coming off in some places

NA - Not Applicable

AE. Floor: 1. Good condition; 2. Coming off in some places

NA - Not Applicable

AF. Display Boards: 1. Yes 0. No

AG. Public utilities M/F: 1. Yes 0. No

AH. Complaint Box: 1. Yes 0. No

AI. Labour Room: 1. Yes 0. No

AJ. Deliveries conducted ? 1. Yes 0. No

AK. Examination room: 1. Yes 0. No

AL. Water source: 1- Piped; 2- Bore well; NA - Not Applicable

AM. Waste Disposal: 1. Incineration & Dumping 2. Sent Outside for Incineration

AN. Regular electric supply: 1. Yes 0. No

AO. Telephone: 1. Yes 0. No

AP. Transport facility: 1. Yes 0. No

AQ. Residential facility: HW (F): 1. Yes 0. No

AR. Citizen's charter: 1. Yes 0. No

AS. Internal Monitoring: 1. Yes 0. No

AT. External monitoring: 1. Yes 0. No

AU. Guidelines availability: 1. Yes 0. No

AV. Total Suggested equipments present: <50%=1, 50-75%=2, 75-100%=3

AW. Total Drugs present: <50%=1, 50-75%=2, 75-100%=3

AX. Total furnitures present: <50%=1, 50-75%=2, 75-100%=3

CHC - MASTER CHART

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1	Popln. Covered	Medicine	Surgery	OBG	Paediatrics	Emergency services(24hrs)	24hr delivery, N & assisted	Emg. obst. Care (LSCS & other)	New born care	Emg. Care of sick children	FP	Full range FP services including Lapar	Abortion	Trtmt of STI/RTI	Referral transport facility	BOR	OPD	OPD M	OPD F	ICTC	ANC & PNC	Immunisation Sessions	OPD OBG	General surgeon	Physician	OBG	Paediatrician	Anaesthetist	Public health programme manager	Ophthalmologists	Dentist	Genral duty MO	AYUSH MO	Nursing Staff	Pharmacist	Lab. Technician
2	2	0	0	1	0	1	1	0	1	1	1	0	0	1	1	2	3	3	3	1	1	1	1	0	0	0	0	0	0	0	1	1	0	12	2	1
3	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	1	1	1	1	0	0	1	1	0	0	0	1	1	0	12	2	3
4	1	0	0	0	0	1	1	0	1	1	1	0	0	1	1	3	4	3	4	1	1	1	1	0	0	0	0	0	0	0	1	1	0	12	1	2
5	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	4	3	4	1	1	1	1	0	0	1	0	1	0	0	1	2	0	14	2	1
6	3	0	0	0	1	1	1	0	1	1	1	0	0	1	1	3	5	3	3	1	1	1	1	0	0	0	1	0	0	0	0	1	0	7	1	1
7	1	0	0	1	0	1	1	1	1	0	1	0	1	1	0	2	2	2	2	1	1	1	1	0	0	1	0	0	0	0	1	1	0	5	1	1
8	2	0	0	1	0	1	1	1	1	0	1	1	1	1	1	2	5	4	5	1	1	1	1	0	0	1	0	2	0	0	1	0	1	8	2	2
9	3	0	0	0	1	1	1	0	1	1	1	0	0	1	1	2	3	4	3	1	1	1	1	0	0	0	1	0	0	0	0	1	0	6	2	2
10	1	0	0	0	0	1	1	0	1	0	1	0	0	1	1	1	2	2	2	1	1	1	1	1	0	0	0	0	0	0	1	1	0	3	1	1
11	1	0	0	0	0	1	1	0	1	0	1	0	0	1	1	1	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	1	1	4	0	1

Page 1

	Radiographer	Ophthal. Asst.	Ward boys	OPD Attendant	Sweepers	Clerks	Others	Total in percentage	Training MO - Numbers trained	Sterilization	IUD Insertion	RTI/STI, HIV/AIDS	New born care	Emergency obstetric care	BMW management	ECG	X-ray room with dark room facility	USG	ECG training for Nursing staff	Location accessible	Building area	Construction complete	Compound wall/fencing	Wall Plaster	Floor	Location <2hrs far vil.	<4hrs from district hosp.	Feasibility of workforce	Private hosp/lab	Separate public utilities: M/F	Display Boards	Registration counters	Pharmacy	Suggestion/complaint box	OPD rooms	No. of Beds M	No. of Beds F	No. of Paediatric Beds
2	1	1	5	1	4	2	0	1	2	0	0	1	0	0	1	1	1	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	10	15	5
3	1	0	2	1	3	1	0	2	2	1	0	0	1	0	0	1	1	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	6	6	18	5
4	2	1	2	1	3	1	0	1	2	0	0	0	1	0	1	0	1	0	0	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	2	8	22	0
5	1	1	1	1	1	2	0	4	1	0	0	0	0	0	1	0	1	0	0	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	4	8	22	0
6	0	1	2	1	2	2	0	3	2	0	0	0	0	1	1	1	0	0	0	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	4	6	18	5
7	1	1	2	1	3	2	0	2	0	0	0	0	0	0	0	1	1	0	0	1	2	1	2	2	1	1	1	0	1	1	1	1	1	1	4	10	20	0
8	2	1	5	1	5	2	3	4	4	0	1	1	1	0	1	0	1	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	4	10	16	4
9	1	1	3	1	2	2	0	3	1	0	0	0	0	1	0	1	1	0	0	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	4	8	14	8
10	0	0	1	1	2	0	0	1	1	0	1	0	0	0	0	0	1	0	0	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	5	10	20	0
11	0	0	1	1	1	1	0	1	2	0	0	0	1	0	1	0	0	0	0	1	2	1	2	1	1	1	1	0	0	1	1	1	1	1	2	10	20	0

	Private hosp/lab	Separate public utilities: M/F	Display Boards	Registration counters	Pharmacy	Suggestion/complaint box	OPD rooms	No. of Beds M	No. of Beds F	No. of Paediatric Beds	Types of surgery	No. of LSCS (last one year)	OT - AC	OT - Generator/Inverter	OT equipments Total	Partograph	Nurses rest room	Water supply	Severage	Power supply	Standby	Laundry	Access. By	Vehicles	Office room	Store room	Kitchen	Residential facility: MO	Staff nurse	ANM	Pharmacist	Lab. Techn.	Others	Behavior	Citizens charter	ARS committee	Internal Monitoring	External monitoring	SOP	No. of deliveries/month	Suggested equipments	Furnitures	Drugs	Lab. Equip. Adequacy
2	1	1	1	1	1	1	3	10	15	5	1	0	1	1	2	1	1	2	2	1	1	2	2	1	1	1	0	1	1	1	0	0	1	2	1	1	1	0	0	2	2	3	2	3
3	1	1	1	1	1	1	6	6	18	6	2	1	0	0	1	1	1	2	1	1	0	2	2	1	0	1	0	1	1	1	0	1	2	1	1	1	1	1	0	2	2	3	2	3
4	1	1	1	1	1	1	2	8	22	0	1	0	0	1	1	0	0	2	2	2	1	2	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	2	2	3	2	3
5	1	1	1	1	1	1	4	8	22	0	2	1	1	1	2	1	0	2	2	1	1	2	2	1	1	1	0	1	1	1	0	0	0	2	1	1	1	0	0	2	2	3	2	3
6	1	1	1	1	1	1	4	6	18	6	1	0	1	1	1	0	1	2	1	2	1	2	2	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	0	2	2	3	2	3
7	1	1	1	1	1	1	4	10	20	0	2	1	0	1	1	1	1	2	1	4	1	2	2	0	1	0	0	0	0	0	0	0	0	2	1	1	1	1	0	1	2	3	2	3
8	1	1	1	1	1	1	4	10	16	4	2	2	1	1	2	1	1	2	2	1	1	1	2	1	1	1	0	1	1	1	0	0	1	2	1	1	1	0	0	3	2	3	2	3
9	1	1	1	1	1	1	4	8	14	8	1	0	0	1	1	0	1	2	2	1	1	2	2	1	1	1	0	1	1	1	1	1	1	2	1	1	1	1	0	2	2	3	2	3
10	1	1	1	1	1	1	5	10	20	0	0	0	1	1	1	0	1	2	1	4	1	2	2	1	1	1	0	0	1	0	0	0	0	1	1	1	1	0	0	1	2	3	2	2
11	0	1	1	1	1	1	2	10	20	0	1	0	0	1	1	0	1	2	1	4	1	2	2	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	0	1	2	3	2	2

PHC - MASTER CHART

1	24×7 PHC	Popln. Covered	OPD Services	Emergency services (24 Hours)	Referral Services	Inpatient services	No. Beds	Bed Oc. Rate	OPD	OPD M	OPD F	Cataract surgery	Wound	Minor surgeries	Fractures	Poisoning	Burns
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
2	0	1	1	1	1	1	3	1	1	2	3	0	1	1	1	1	1
3	0	5	1	0	1	1	2	1	1	2	2	0	1	0	0	0	0
4	0	3	1	1	1	1	2	1	2	2	2	0	1	1	1	1	1
5	0	3	1	1	1	1	3	2	3	2	4	0	1	1	1	1	1
6	1	3	1	1	1	1	2	1	4	3	5	0	1	0	0	0	0
7	1	2	1	1	1	1	3	2	2	2	3	0	1	1	1	1	1
8	1	2	1	0	1	1	2	1	2	2	2	0	1	1	1	1	1
9	0	2	1	0	1	1	2	1	1	2	3	0	1	1	0	1	1
10	1	3	1	1	1	1	2	1	5	4	5	0	1	1	1	1	1
11	1	3	1	1	1	1	3	3	1	3	4	0	1	1	1	1	1
12	1	5	1	1	1	1	2	1	1	5	5	0	1	1	1	1	1
13	0	6	1	1	1	1	2	2	1	1	1	0	1	1	1	1	1
14	1	2	1	1	1	1	2	2	4	5	5	0	1	1	1	1	1
15	1	1	1	1	1	1	2	1	1	3	3	0	1	0	0	1	1
16	1	4	1	1	1	1	2	1	5	5	5	0	1	0	0	1	0
17	1	2	1	1	1	1	2	1	3	3	3	0	1	0	0	1	0
18	1	4	1	1	1	1	2	1	4	4	5	0	1	1	1	1	1
19	1	3	1	1	1	1	2	2	4	3	4	0	1	1	1	1	1
20	1	3	1	1	1	1	2	2	3	3	3	0	1	1	1	1	1
21	0	3	1	1	1	1	2	1	2	3	2	0	1	0	0	0	0

1	ANC, INC, PNC	IP	MTP	ND 24hr	Labour Conducted ?	No. of deliveries/month	Partograph	I & V	Gyn. Services	Treat. STI/RTI	Anemia	Immuniz.	Trt of Pneumonia	Trt of Diarrhea with severe d	LBW mngmt	New born care
	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
2	1	1	0	1	1	2	0	1	1	1	1	1	1	1	0	1
3	1	1	0	0	1	1	0	0	1	1	1	1	0	0	1	1
4	1	1	0	1	1	1	0	0	1	1	1	1	1	1	0	1
5	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1
6	1	1	0	1	1	2	0	0	0	0	0	1	0	0	0	1
7	1	1	0	1	1	2	1	1	1	1	1	1	1	1	1	1
8	1	1	0	1	1	2	0	1	1	1	1	1	1	1	1	1
9	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0
10	1	1	0	1	1	4	1	1	1	1	1	1	1	1	1	1
11	1	1	0	1	1	3	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	2	0	0	1	1	1	1	1	1	1	1
13	1	1	0	0	1	5	0	1	1	1	1	1	1	1	1	1
14	1	1	0	1	1	3	0	1	1	1	1	1	1	1	1	1
15	1	1	0	1	1	1	1	0	1	1	1	1	1	0	0	1
16	1	1	0	1	1	1	0	0	1	1	1	1	1	0	1	1
17	1	1	0	1	1	2	0	0	1	1	1	1	1	0	1	1
18	1	1	0	1	1	2	0	0	1	1	1	1	1	1	0	1
19	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1
20	1	1	0	1	1	3	0	1	1	1	1	1	1	1	1	1
21	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0

1	SAM mngmt	School Health services	Monitoring of Mid-day meal	Adolescent friendly clinics	AYUSH services	Manpower MO (Male)	LMO	AYUSH MO	Pharmacist	Staff Nurse	Sr. H. asst M	LHV	Lab. Technician	Health Educator	Clerks	Driver	Class IV
	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX
2	1	1	1	2	0	0	1	0	1	1	1	1	1	0	2	0	3
3	0	1	1	0	0	1	0	0	1	1	0	1	1	0	1	0	2
4	0	0	0	0	0	1	0	0	1	2	0	1	1	0	1	0	1
5	1	1	1	2	1	0	1	1	1	2	0	1	1	0	1	0	2
6	1	0	0	3	1	0	0	1	1	2	1	0	1	0	1	0	1
7	1	1	1	2	1	0	1	1	1	3	1	1	1	1	2	0	2
8	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	1	2
9	1	1	1	0	0	1	0	0	1	0	0	1	1	0	1	0	1
10	1	1	1	3	1	1	0	1	1	1	1	0	1	0	1	0	2
11	1	1	1	2	0	0	1	0	1	1	1	1	1	0	1	1	2
12	1	1	1	2	0	1	0	0	0	2	0	1	1	1	1	1	1
13	1	1	1	2	0	1	0	0	1	1	1	1	1	0	1	0	1
14	1	1	1	3	1	1	0	1	1	3	2	0	0	0	1	0	1
15	1	0	0	4	0	1	0	0	1	2	0	0	1	0	1	0	1
16	0	1	0	3	0	1	0	0	1	2	1	1	1	0	1	0	2
17	0	1	0	3	1	1	0	1	1	3	1	0	1	0	1	0	2
18	1	1	1	3	1	1	0	1	1	2	1	0	1	0	1	1	2
19	1	1	1	2	0	0	1	0	1	2	1	0	0	0	2	0	2
20	1	1	1	4	0	1	0	0	1	3	0	0	0	0	1	0	1
21	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	1

	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ
1	Total	Total Rank	Training MO	Paramedics	ASHA	Healthworkers	Routine Lab. Investigations	BL Gp.	BT, CT	STD/RTI	Sputum	PS for MP	Rapid test Preg.	RPR	HIV	Widal	Location within village	Building area	Construction	Compound wall	Wall Plaster	Floor	Int. Access	Distance 1	Travel Time	Distance 2	Distance 3	Display boards
2	11	2	0	4	2	1	1	1	1	0	1	1	1	0	1	1	1	0	1	3	1	1	1	1	1	3	1	1
3	9	2	0	0	1	0	1	1	1	0	1	1	1	0	1	0	2	1	1	2	2	1	1	4	3	3	1	1
4	9	2	1	1	2	1	1	0	0	1	1	1	1	0	1	0	2	0	0	0	2	1	1	4	3	2	3	1
5	10	4	0	1	3	1	1	1	1	0	0	1	1	1	1	1	2	0	1	1	2	1	1	3	2	1	2	1
6	9	2	0	1	0	1	1	1	1	0	1	1	1	0	1	0	2	0	1	2	1	1	1	2	3	1	2	1
7	11	1	1	0	1	1	1	1	1	0	1	1	1	0	1	1	2	0	1	3	2	1	1	1	1	1	2	1
8	10	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	2	2	2	2	1
9	6	6	0	0	1	0	1	0	0	0	1	1	1	0	1	0	2	0	1	2	2	2	1	1	2	1	2	1
10	11	2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	2	1
11	10	4	1	1	1	1	1	1	1	0	1	1	1	0	1	1	3	0	1	3	2	1	1	3	2	2	2	1
12	10	4	1	2	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	2	2	2	1	2	2	1	4	1
13	3	5	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	2	2	1	1	3	3	1	5	1
14	10	4	1	1	1	2	0	0	0	0	0	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	2	1
15	7	8	2	1	2	1	1	1	1	0	1	1	1	0	1	0	3	0	1	2	2	2	1	1	1	1	2	1
16	10	4	1	0	1	0	1	0	0	0	1	1	1	0	1	0	1	0	1	0	2	1	1	2	2	4	2	1
17	11	3	1	0	1	0	1	0	0	0	1	1	1	0	1	0	1	0	1	3	1	1	1	2	2	2	2	1
18	12	3	2	2	2	1	1	0	0	0	1	1	1	0	1	0	1	1	1	2	2	1	1	2	2	1	1	1
19	9	3	1	1	2	0	0	0	0	0	0	1	1	0	1	0	1	0	1	2	2	1	1	3	3	1	2	1
20	[illegible]	6	2	1	2	1	0	0	0	0	0	1	1	0	1	0	1	0	1	2	2	1	1	3	3	1	2	1
21	6	6	2	1	1	1	1	1	1	0	1	1	1	0	1	0	1	0	1	2	2	2	1	2	3	1	1	1

	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB
1	Reg. counter	Counter near entrance for di	OPD Rooms	Windows	Family welfare clinic	Waiting room for patients	Casualty/Emergency room	Wards M/F	OT	Surgery conducted	If no, Y2	Water source	Water - Adequate	Sewerage	Waste	Electric line	Power supply	Standby	Laundry	Telephone	PC	NIC terminal	Internet	Access. By	Vehicle	Office room	Store room	Kitchen
2	1	1	1	0	0	1	0	0	1	1		2	1	1	2	1	2	0	1	1	1	1	1	3	0	1	0	0
3	1	1	1	1	0	1	0	0	1	[illegible]	[illegible]	2	1	1	1	1	4	0	2	1	1	1	1	2	[illegible]	1	1	1
4	0	1	1	0	0	1	0	0	1	0	4	2	1	1	1	1	4	1	2	0	1	0	0	2	0	0	1	0
5	0	1	1	1	0	1	0	0	1	1	[illegible]	2	1	1	[illegible]	1	[illegible]	1	2	1	1	1	1	2	0	0	0	0
6	0	0	1	0	0	1	0	0	1	0	1	2	1	1	[illegible]	1	4	0	2	1	1	1	1	2	0	0	1	0
7	0	1	1	1	0	1	0	0	1	[illegible]	[illegible]	2	1	1	3	1	2	1	1	1	1	1	1	2	1	0	0	0
8	1	1	1	1	0	1	0	0	1	[illegible]	[illegible]	2	1	1	[illegible]	1	[illegible]	[illegible]	2	[illegible]	[illegible]	1	1	2	1	1	1	0
9	1	0	1	0	0	1	0	0	0	1		2	1	1	3	1	[illegible]	1	2	1	1	1	1	2	0	1	0	0
10	0	1	1	1	0	1	0	0	1	1		1	1	2	3	1	[illegible]	1	2	1	1	1	1	3	0	1	0	0
11	0	1	1	1	0	1	0	0	1	1		2	1	1	3	1	4	1	2	1	1	1	1	2	1	0	0	0
12	1	1	1	1	0	1	0	0	1	0	2	1	1	1	3	1	2	1	2	1	1	1	1	2	1	1	1	1
13	0	1	1	1	0	1	0	0	1	1		2	1	1	3	1	4	1	2	1	1	1	1	2	0	1	0	0
14	0	0	1	0	0	1	0	0	1	1		2	1	1	3	1	3	1	2	1	1	1	1	2	0	1	1	0
15	0	0	1	0	0	1	0	0	1	0	4	2	1	1	3	1	4	1	2	1	1	1	1	2	0	0	0	0
16	1	0	1	1	0	1	0	0	1	0	4	2	0	1	3	1	4	0	2	1	1	1	1	2	0	1	0	0
17	0	1	1	0	0	1	0	0	1	0	4	2	0	1	3	1	4	0	2	1	1	1	1	2	0	1	0	0
18	1	1	1	0	0	1	0	0	1	0	2	1	1	1	3	1	4	1	2	1	1	1	1	2	1	1	1	1
19	1	1	1	0	0	1	0	0	1	1		2	1	1	3	1	4	1	2	1	1	1	1	2	1	0	1	0
20	1	1	1	1	0	1	0	0	1	1		2	0	1	3	1	4	1	2	1	1	1	1	2	0	1	0	0
21	0	0	1	0	0	1	0	0	1	1		2	0	1	3	1	4	1	2	1	1	1	1	2	0	0	1	0

Page 2

DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC
Diet	Resi. MO	Pharmac	Nurses	Others	Behavior	Ref. to ?	complaint-displayed	outbreak	Private pract.	Citizens charter	ARS	Int. Monit.	Ext. monit.	SOP	N. Delivery Kit	Std. surgical kit	Radiant warmer	Suction apparatus	Equipmt. For New born care &	IUCD insertion kit	Cold chain eqpmts.	Anthro. Eqpmts	Total Equipments	Total Infrastructure	Total Drugs	Lab. Requirements
2	1	0	1	1	1	3	0	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	3	1	2
2	0	0	0	0	1	3	1	1	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	3	1	2
1	0	0	0	0	1	1	0	1	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	3	1	1
2	0	0	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	3	1	2
2	1	0	0	1	2	3	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	3	1	2
2	1	0	0	0	1	3	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	3	1	2
2	0	0	0	0	1	3	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	3	1	2
2	0	0	0	0	2	3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	3	1	1
2	0	0	0	0	1	3	1	3	0	1	1	1	0	0	1	1	1	1	1	1	1	1	2	3	1	2
2	0	0	0	0	1	3	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	2
2	1	1	1	1	2	3	1	4	0	1	1	1	1	0	1	1	1	1	1	1	1	1	2	3	1	2
2	0	0	0	0	2	3	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	2	3	1	2
2	1	1	1	0	2	3	1	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	2	3	1	1
2	1	0	0	0	1	1	0	4	0	1	1	0	0	0	1	0	1	1	1	1	1	1	2	3	1	2
2	1	1	1	1	2	3	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	3	1	2
2	1	0	1	1	1	3	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	3	1	2
2	1	0	1	0	1	1	1	3	0	1	1	1	0	0	1	1	1	1	1	1	1	1	2	3	1	2
2	1	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1
2	1	0	1	0	1	1	0	4	0	1	1	1	0	0	1	1	1	1	1	1	1	1	2	3	1	1
2	1	0	1	0	1	1	0	4	0	1	1	0	0	0	1	1	1	1	1	1	1	1	2	3	1	2