FUNCTIONING MECHANISM OF PRIMARY HEALTH CENTRES IN KERALA - A STUDY WITH REFERENCE TO PATHANAMTHITTA DISTRICT

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Abstract

The Primary Health Centres are the basic structural and functional unit of the public health services established to provide accessible, affordable and available primary health care to people. Presently, it is found that the poor cannot afford to have health care services at lower cost. In this scenario, in order to improve the health care and to bring equity in health services, strengthening of Primary Health Centres(PHCs) is imperative in Kerala. Although the Government of Kerala has given emphasis on the health of its entire people by introducing the PHCs which is affordable to the people but it has many deficiencies. It is the need of the time to analyze the functioning mechanism of the PHCs and to bring out suggestions for strengthening PHCs. With this respect, the research article explains the present facilities and the various services that PHCs provide to the community.

Key Words: Primary Health Centres (PHC), NRHM, AYUSH , IPHS,

1. Introduction

In the State of Kerala, where 52.30 percent of the population lives in rural areas, an all-round health care development system in rural areas is vital. It is to take up this task the Primary health centres(PHC) were established. Primary Health Centres are the first port of call to a qualified doctor. The Primary Health Centres (PHC) are the basic structural and functional unit of the public health services in developing countries. PHCs are the core institutions of rural health service infrastructure in Kerala as in other states. The PHCs were established and maintained by the State Government under the Minimum Needs Programme. In 1997, Primary Health Centres were brought under the control (managerial and disciplinary) of the grama panchayats. Panchayats can appoint temporary staff (against existing vacancy), assign any work related to their area of specialties to the PHC staff, review staff performance, give the required directions and impose minor penalties or suspension if warranted. Government provides funds for the establishment of the centres and at present about 95.77 percent of the PHCs is functioning in government buildings, 2.2 percent of the PHCs are functioning in rent free panchayat buildings and only 2.05 percent are in rented buildings. The State has 137 PHCs in tribal areas and 21 more are sanctioned recently. All the PHCs in these areas are functioning in government buildings with 229 doctors, 125 male health assistants

and 123 female health assistants. The State made substantial progress in setting up new PHCs. In 2001, Kerala had 944 PHCs each catering to an average population of 28997 and a radial distance of 3.4 km. Each PHC has five or six Sub Centres and each Sub Centre serves an average 5153 people. By 2015, Kerala had 852 PHCs; the average rural population for PHC in the State is 20506 and each Sub Centre serving an average 3418 people**.** The PHC in Kerala caters to a rural area of 38sq.km as against122 sq.km in India. A striking point to note is that, the average rural area covered by a PHC in Kerala was lower by 84.4 square kilometers compared to the average rural area covered by a PHC at All India level (The Hindu , April 20, 2017).

Now the State is having PHCs in highland, midland and lowland areas. Highland area includes hilly and forest area. It is in the midland area where most of urban PHCs are located. Lowland area includes the plain and coastal area. Pathanamthitta district of Kerala is taken as the study area. Among the districts of Kerala, Pathanamthitta is one of the district that cover of the three geographical zones referred to above. The district has PHCs in all the three zones.

Data and Sources of data

Civil Registration System (CRS) and Sample registration system (SRS) data, Government of Kerala (GOK) were used for comparing the health indicators of the State Kerala and the District Pathanamthitta. The data from the Directorate of Health Services,Kerala and the District Medical Office of Pathanamthitta were used for assessing the trend of outpatients ,Government Fund in the State and the District Pathanamthitta.

2. Health Profile of Pathanamthitta District

Pathanamthitta district, one of the youngest and 14th revenue district of the State Kerala was formed on 1st November 1982. It abounds in natural splendors undulating hills, dark mysterious forest, exotic wildlife and enchanting valleys. Pathanamthitta district is a part of Central Travancore. The total area of the district is 2637sq km .Of this, 1396.95 sq .km of area comes under forest. About 10.9 percent of the population lives in urban areas and 89.01 percent in the rural areas. The district has its headquarters at Pathanamthitta. Besides the two revenue sub divisions- Thiruvalla and Adoor, the district has five revenue taluks viz, Ranni, Kozhencherry, Adoor, Thiruvalla and Mallappally.

Basic Health Indicators

Pathanamthitta enjoys a unique position in the health map of Kerala. The district has made progress in basic health indicators like birth rate, death rate, Infant Mortality Rate, Maternal Mortality Rate and life expectancy at birth.

Table 1: Selected Health Indicators of Kerala and Pathanamthitta- 2015

Health indicators	State	District
Infant Mortality Rate	5.91	3.85
Average life expectancy	75	78
Crude Death Rate	7.40	9.87
Crude Birth Rate	15.17	13.61
Maternal Mortality Ratio	0.17	0.19

Source: Annual Vital Statistics Report, 2015. Note: Civil Registration System(CRS) data is used here as it is the only source, which can provide vital rates at below state level.

The table 1 shows that, while comparing the State average, the district is performing better in Infant Mortality Rate and Maternal Mortality Rate. In Infant Mortality Rate, out of every 1000 children born, only 3.85 die before attaining their first birth day, whereas in Kerala it is 5.91 (CRS,2015). In Crude Death Rate, it is 9.87 in the district and 7.40 in Kerala. Among the districts of Kerala, Pathanamthitta is one among the five districts having the lowest Crude Birth Rate and ranks first for having the highest Crude Death Rate (CRS,2015).

Public Health Care System in Pathanamthitta

The Public health care system is considered as one of the factors for the attainment of affordable health care in the district. Since the formation of the district in 1982, health care incorporating western and traditional medicine received priorities in the district. The health care facilities in the district consist of Allopathy (western medicine), Ayurveda, Homeopathy and indigenous medicines. The public health care system is composed of General hospitals, District hospitals, Taluk hospitals, Community Health Centres, Primary Health Centres, Tuberculosis (TB) clinics, dispensaries and Sub Centres. The table 2 depicts the growth of public health care institutions in the district.

Table 2: Growth of Public Health Care Institutions since Formation of Pathanamthitta (1984-2015)

Type of Public health institution	**1984**	**1991**	**2001**	**2011**	**2015**
Hospital(General /district/taluk)	4	5	7	7	8
Community Health Centre	NA	3	4	12	12
Primary Health Centre	11	46	51	43	43
TB clinics/Centres	1	1	1	1	1
Dispensaries	31	1	1	1	1
Sub Centres	NA	NA	NA	261	261

Source: District Medical Office, Pathanamthitta, 2015

Note: NA refers to not applicable

The table 2 exhibits an increasing trend in the growth of hospitals and Community Health Centres from 1984. The growth of TB Clinics and dispensaries remains the same over the years. During the period 2001-2011, there was a fall in the number of PHCs and an increase in the number of Community Health Centres by eight. This was due to the standardization of health institutions during 2009. By 2015, the district has the credit of eight hospitals which includes two general hospitals, one district hospital, two specialty hospitals and three taluk hospitals. The district also has 12 Community Health Centres, 43 Primary Health Centres and 261 Sub Centres to its credit**.** Rural health care services are delivered through these Community Health Centres, PHCs and Sub Centres. There are Ayurvedic and home dispensaries also in most of the Panchayats. The services in the health centres are carried out by a team of health staff.

Table 3: Growth of Human Resources in the Health Centres of Pathanamthitta (2001-2015)

Staff in PHC	**2001**	**2005**	**2011**	**2015**

Medical Officers/ Doctors	149	197	212	245
Lady Health Inspector	44	44	44	44
Junior Public Health Nurse	266	266	266	266
Junior Health Inspector	184	180	179	187
Health Inspector	42	42	42	45
Pharmacist	54	63	74	77

Source: Economic Review, Various Issues from 2001 to 2015

The table 3 depicts the growth of human resources in the health centres of Pathanamthitta. It is clear from the table that there is no significant increase in the human resources in the health centres over the years. Only a marginal increase is observed in the number of Junior Health Inspectors, Health Inspectors and pharmacists. The number of Medical Officers increased considerably. This increase is due to the increase in the pass out number of MBBS doctors and more medical colleges. After making a discussion on the public health care system, now the study proceeds to analyse the functioning mechanism of PHCs in Pathanamthitta district.

3. Functioning mechanism of the Primary Health Centres in Pathanamthitta District

The PHCs as referral units for five or six Sub Centres also refer cases to Community Health Centres which have inpatient facilities. The Community Health Centres refer cases to at sub-district and district hospitals. Health centres are evenly distributed among various panchayats. Pathanamthitta has 53 grama panchayats, three municipalities and 43 PHCs. Only one PHC in the district is located in the municipal region and the remaining 42 PHCs are located in the panchayat areas which are rural PHCs. About 80 percent of the panchayats have at least one PHC each in their respective area. Around 20 percent of the panchayats, that is eleven panchayats have either Community Health Centres, district hospital or taluk hospital in their area to cater to the health needs of the people there.

Staff Pattern and their Services in the Primary Health Centres

Each PHC is staffed by a medical officer, nurse, pharmacist, field supervisor, nursing assistant, clerk, five Junior Public Health Nurses, three Junior Health Inspectors, three attendants, a peon and a sweeper. District hospital and Community Health Centre usually serve as its referral units.

PHCs in the district have doctors designated as medical officers where one of them is given administrative responsibility of the centre. He is also the captain of the health team. Medical officer devotes the morning hours to attend the outpatients, and in the afternoon, he supervises the field work. Medical officer has to visit each Sub Centres regularly on fixed days and hours and provide guidance, supervision and leadership to the health team of the Sub Centres. He should spend one day in each month organizing staff meeting at the PHCs to discuss the problems and review the progress of health activities. It is his duty to see that national health programme is being implemented in his area properly. The success of a PHC depends largely on the team leadership of the medical officer. Medical officer must be the planner, the promoter, the director, the supervisor, the coordinator as well as the evaluator. More than one doctor is essential for handling the duties in the PHCs. As per IPHS, there should be two allopathic doctors in a PHC, one

Ayurveda, yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH) and one lady doctor. The inclusion of a lady medical officer is very important for providing maternal care services, as women can confide to a lady doctor easily. However, AYUSH doctor and lady doctor have not yet been posted together in any of the PHCs in the district.

Table 4: Strength of Medical Officers/Doctors in PHCs-Kerala and Pathanamthitta 2015

Number of Medical Officer/Doctors	Kerala(%)	Pathanamthitta(%)
With 3 plus doctor	13.78	20.9
With 2 doctor	5.68	9.3
With 1 doctor	80.6	69.7
Without doctor	0	0
With lady doctor	53.9	62

Source: District Medical Office, Pathanamthitta, 2016.

The table 4 compare the number of medical officers State-wide and in Pathanamthitta district. Only a meagre number of PHCs have three or more doctors both in Kerala (20.9%) and Pathanamthitta (13.78%). Around 80.6 percent and 69.7 percent of PHCs in Kerala and Pathanamthitta respectively have only one doctor each. Only 53.9 percent of PHCs and 62 percent of PHCs in the State and thedistrict respectively have lady doctors. In fact, their presence is very much essential in the health centres in providing the services of maternal and child health services. It is a striking feature to note that no PHCs in Kerala and in Pathanamthitta district runs without a medical officer.

The strength of medical officer is one of the determinant factors of PHCs. Secondary data analysis have shown that remote areas of Wayanad, Idukki and Kasargode experienced non-availability of doctors. The government has not yet addressed some of the genuine issues of the doctors working in the rural areas.

In every PHC, medical officers are being supported by a health assistant who is in charge of the preventive services. In Kerala, a male health assistant is known as health inspector and female health assistant is named as Lady Health Inspector. Health inspectors usually carry out concurrent and consecutive supervision of house visits in their respective area and keep vigilance to detect outbreak of any communicable disease like cholera, malaria etc. They initiate services in giving radical treatment for positive malaria cases, supervise spraying of insecticides, help the community to improve environmental sanitation, conduct inspections of places where food items are prepared and supervise chlorination of water sources.

Lady Health Inspector carries out concurrent and consecutive supervision of house visits and the Sub Centres in their respective area, conducts maternal and child health services, programme on family planning and other educational activities. They visit each Sub Centre at least once in a week on fixed days, reply to urgent calls from lady health workers and render necessary help. It is her duty to render assistance for examining school children.

As per Indian Public Health Standards(IPHS) norms, one health inspector and one Lady Health Inspector should be appointed for supervising Junior Health Inspector and Junior Public Health Nurse in each PHC and sub centre. According to the data from DMO, Pathanamthitta (2015), only 76.7 percent of PHCs have a sanctioned post of Health Inspector and only 60.46 percent of the PHCs have a Health Inspector. On the other hand, only 37.2 percent of the PHCs have one Lady Health Inspector. A few PHCs have both health

inspector and Lady Health Inspector. This shows that, lack of health inspectors in the district hinders the preventive services to the community.

Male health workers at the Sub Centres are called Junior Health Inspectors and female health worker is termed Junior Public Health Nurse. They are allotted 350 to 500 households. Junior Health Inspector makes visit once in a month in each of the family on the allotted area, maintains family and village records and implements health programme, family planning and maternal and child health programme. Junior Public Health Nurse makes at least one visit in a month to each family in the allotted area, implements maternal and child health and family planning services. Their duty is to immunise pregnant women with tetanus toxoid, conduct at least three post-delivery visits of mothers for necessary advices and to provide iron and folic acid tablets and vitamin A drops. They also do immunisation and educate the community the importance and procedures of immunisation, administer of Diphtheria, Pertussis and Tetanus Vaccine (DPT), Diphtheria and Tetanus Vaccine (DT) Tetanus Toxoid (TT) and Polio and Typhoid vaccines.

Under the Multipurpose Worker Scheme, one Junior Public Health Nurse and one Junior Health Inspector are posted at each sub centre for a population of 5000 (3000 in tribal and hilly area). In the district, 69 percent of the Sub Centre have a Junior Public Health Nurse each and 45 percent of Sub Centres have Junior Health Inspectors. This shows that most of the Sub Centres in the district lack the presence of either Junior Public Health Nurse or Junior Health Inspector.

The PHCs are also assisted by pharmacist, staff nurse, nursing assistant, clerks and class four staff. As per IPHS norms, all the PHCs should have a pharmacist. But it is found that although the PHCs in the district have a sanctioned post, in three PHCs there was no pharmacist during the time of the survey.

As per the IPHS norms there should be three posts of staff nurse in every PHC to facilitate the 24 hours emergency services. But it was found that only 74.4 percent of the PHCs in the district have a minimum of one staff nurse (DMO, Pathanamthitta 2015). For assisting the staff nurse in medical care, there should be one nursing assistant in all the PHCs. All the PHC in the district have nursing assistants and in 20.9 percent of the PHCs there are two assistants each. The PHCs should have two posts for clerks, one upper division clerk and one lower division clerk. It is found that, almost all the PHCs have two posts. There should be four class 4 staff peons and in grade 2, a part time sweeper for cleaning and to serve as attender in every PHC. Only 43 percent of the PHCs have the required class 4 staff. In the district, all PHCs with laboratory keep laboratory assistants at its own expense**.**

The secondary data regarding the staff position in PHCs establishes the fact that the PHCs suffer from lack of sufficient staff for the promotion of curative, preventive and promotive services.

Financial Pattern of Primary Health Centres

The Functioning of the PHCs is being supported through finances from different sources. The sources of financial support for PHCs are Government, Panchayat, National Rural Health Mission and Hospital Management Committee.

Government funds are not equally distributed among all the PHCs in the districts. It is the duty of the district medical officer to distribute the funds to the PHCs on the basis of its need, projects and proposals submitted under the different heads-communicable diseases, water borne and vector borne, non-communicable diseases, leprosy, cancer care, tobacco free and dental care.

Every year, government provides plan fund and non-plan fund to the PHCs through district medical office. Under plan fund come the allotment fund and salary of Junior Public Health Nurse which is given from the family welfare head. The allotment fund to the PHC is being allotted to different programme such as

surveillance and controlling of communicable diseases where the fund is used to conduct block level campaign, screening of immigrants, purchasing of water quality testing kits, slides, allotment of lancets and chloroscope for monitoring, supervision and reporting. Government fund is allocated for water and vector borne diseases. Water borne diseases are infectious diseases usually spread primarily through contaminated water. The fund for controlling water borne diseases is mainly used for conducting classes at Community Health Centres, PHCs and at district level. Funds used for vector borne diseases like dengue fever and malaria, anti-malaria programme and other controlling measures. The fund is also utilised for nutrition services, dental care, tobacco free programme, pain and palliative care camp, cancer care control, non-communicable diseases and national programme. Non- plan fund includes the salaries of all staff of PHC except the salary of Junior Public Health Nurse.

The table 5 provides a picture on the contribution of Government plan allotment fund to the PHCs.

Table 5: Government Plan Allotment Fund to Pathanamthitta District and to its PHCs

Year	Total Government plan allotment fund to the district	Total Government plan allotment fund to PHC	Percentage of fund to PHC
2005-06	10654993	305750	2.87
2006-07	7465437	350000	4.69
2007-08	6025393	482500	8.01
2008-09	5900456	145350	2.46
2009-10	5863415	219755	3.75
2010-11	3663900	51000	1.39
2011-12	2959950	390600	13.19
2012-13	14979471	3252700	21.71
2013-14	15812607	1542100	9.75
2014-15	15671214	871000	5.56

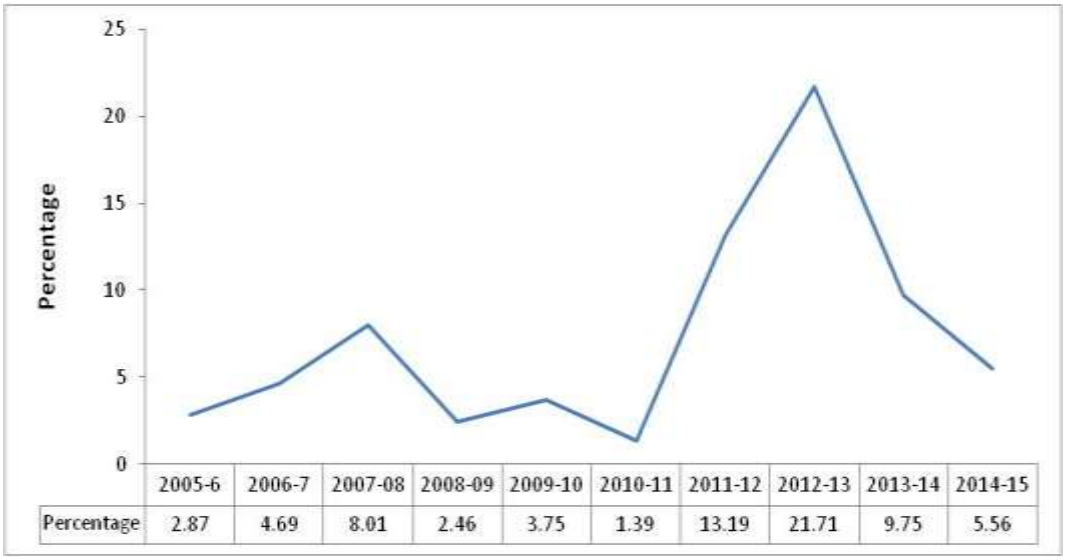
Source: District Medical Office, Pathanamthitta, 2015

Note: *The total Plan allotment fund during the year 2012-13 includes an additional amount of Rs. 50,00000 from the finance commission for an award to Kozhencherry, District Hospital. In the same year, an amount of Rs 2,50000 was separately allotted by government for constructing geriatric toilets in PHC as a part of pain and palliative care programme*

The table 5 infers that from 2005 to 2012, the fund allocated to the district declined which is also reflected in the allotted fund to the PHCs. A correlation coefficient between total government fund allotted to the district and total government fund to the PHCs is calculated and it is 0.71. The value shows that there is a high positive correlation between total government fund to the district and total government fund to PHCs. This infers that government fund to the PHCs depends on the total government fund to the district. The percentage

of government fund allotted to the PHCs are too meagre to carry out the different programme and services of the district.

Figure 1: Government Fund to the PHC (2005-2015)



	2005-6	2006-7	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Percentage	2.87	4.69	8.01	2.46	3.75	1.39	13.19	21.71	9.75	5.56

Source : Computed from Table 5

The figure 1 displays the graph showing government fund to PHC. The graph shows that from 2005 to 2012 there was an increase in fund, but after 2012 there shows a reduction in the fund to PHC. As PHC is the basic level for health services more grants- in - aid be provided especially in prevention areas as more supports are needed to carry out services in a broader way.

Another source of finance to PHCs is the panchayats. Panchayats provide financial support for PHCs for buying medicines, immunisation programme and for construction of buildings and compound wall. The palliative care project is a challenging project run by most of the PHCs with the support of panchayats. The support of panchayat plays a prominent role in the growth of the PHC.A good amount of fund comes from NRHM. It provide untied funds for PHCs, ward fund for sanitation purpose which is equally distributed in all the wards of the panchayat and sub centre fund for the maintenance and pulse polio programme. Apart from this, NRHM gives a helping hand to tribal centres by allocating funds for tribal Reproductive and Child Health and to Hospital Management Committee (HMC). As a part of NRHM, the Suchitha Mission provides separate funds to all the wards in the areas of the respective PHC. At present, in all the PHCs there is a hospital management committee. This committee makes use of the fees obtained from outpatient tickets and laboratory services for emergency and miscellaneous expenses of the PHCs.

Services rendered by the Primary Health Centres

The PHC having sufficient manpower resources being supported by necessary financial aid plays an important role in improving the health conditions of the people. The main services provided are medical care services, public health services, preventive and promotive services.

Medical Care Services

Medical Care

Medical care is provided inside the centre. Medical officers in the PHCs provide medical care to the outpatient in maternal care, child care, immunisation, life style diseases, palliative care and mental diseases. According to IPHS, the medical officers are supposed to be on duty for six hours in the outpatient clinic;

four hours in the morning and two hours in the afternoon for six days in a week. The time schedule varies from State to State. The doctors are expected to attend a minimum of 40 outpatients in a day. In addition to six hours of duty at the PHC, it is expected that medical officer spends at least two hours per day twice in a week for field duties and monitoring. The data from DMO, Pathanamthitta shows that, all the PHCs have outpatient clinics with the services of one or more doctors. No PHC in the district has inpatient services and hardly any PHC function till evening.

Medical care is given for blood pressure, diabetics, cholesterol, T.B, cough, fever, dental problem, dysentery, malaria, dengue, chikungunya, measles, chicken pox, diphtheria, pneumonia, leptospirosis and emergency services like 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 and dog /scorpion bite are also attended by the nursing staff. Medical Officer use to attend emergency cases on on-call basis also. Usually around 50-75 patients daily avail the services of the PHCs every day. During the time of epidemics, it may increase to 110. In all the PHCs in the district, approximately 1500 outpatient (both new and old) avail themselves of this facility in a month.

Table 6: Total Outpatients in the PHC of Pathanamthitta (2005-2015)

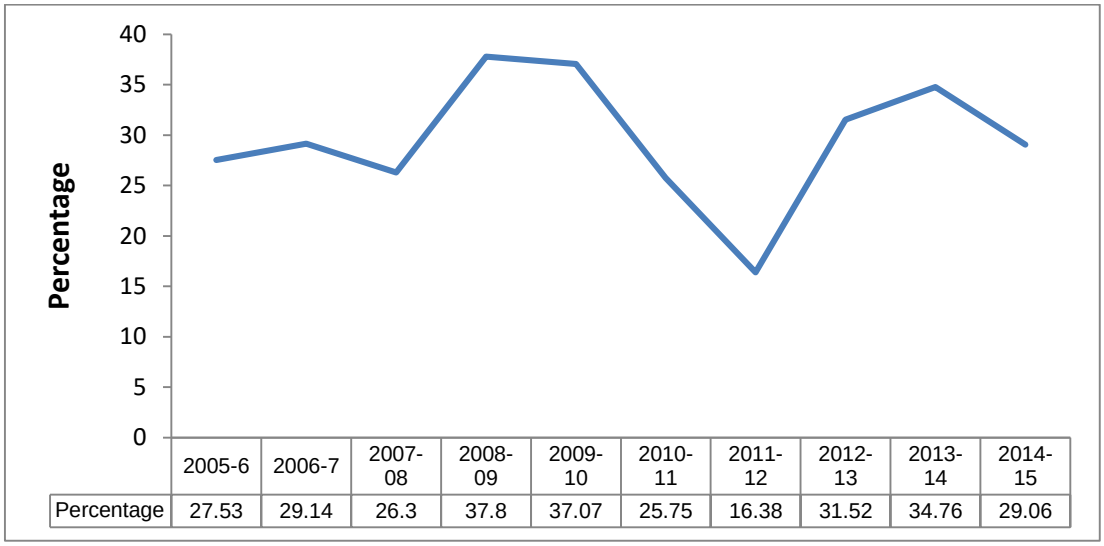
Year	Total Outpatients in Public Health Institutions	Total Outpatient in PHC	Percentage of Outpatients in the PHC
2005-06	2426477	667875	27.53
2006-07	2257686	657861	29.14
2007-08	2755054	723431	26.3
2008-09	2146061	811121	37.8
2009-10	2593771	961582	37.07
2010-11	3254431	838315	25.75
2011-12	4740379	776926	16.38
2012-13	2526839	796625	31.52
2013-14	3051973	1060938	34.76
2014-2015	4197590	1220171	29.06

Source: District Medical Office, Pathanamthitta, 2015

The table 6 gives the number of the outpatients in the public health care system (col 2) and in the PHC (col 3) over the last ten years. The correlation coefficient between total outpatients in the public health institutions and total outpatients in the PHCs is 0.45. This shows that there is medium correlation between total outpatient in the public health institutions and total outpatient in the PHCs. As per the table, the number of outpatients in the PHC in the district is greater than the population of the district. This is because of the fact that when patients visit the PHCs, many times, each visit is considered as one outpatient.

Therefore, the number shows more than what is actual. This brings into light the fact that, the PHCs are not maintaining any systematic health records of each patient which causes difficulty for the doctors to assess the past history of the patients.

Figure 2: Total Outpatients in PHC of Pathanamthitta (2005-2015)



	2005-6	2006-7	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Percentage	27.53	29.14	26.3	37.8	37.07	25.75	16.38	31.52	34.76	29.06

Source: Computed from Table 6

The figure 2 shows the graph of outpatients in the PHCs. The graph depicts almost a constant value from 2005 to 2010, but a sudden fall in 2011-12 and a sharp rise in 2012-13. The patients seeking health care from the PHCs are categorized into male, female and children which is shown in the table 7.

Table 7: Total Patients in the PHC on Gender Basis in Pathanamthitta-2015

Gender	Number of Patients	Percentage
Male	429823	35.22
Female	601770	49.31
Children	188578	15.5
Total patients	1220171	100

Source: District Medical Office, Pathanamthitta, 2016

Note: Children refers to the age below 5

The table 7 depicts that around 35.22 percent are male, 49.31 percent are female and 15.5 percent are children. The number of female is more than male, as most of the working males opt to visit the clinics and health centre near their work places. It is to be noted that, the working time of the PHCs does not suit the working time of employed people. It is observed from the survey that, working of the PHCs round the clock can help all groups to avail of its services.

Maternal and Child Health Service

Maternal and child health care are a vital service of the PHCs. Improvement in women's health status is not possible unless basic health needs are fully met through a comprehensive, integrated and holistic health care

system made available at affordable cost within easy geographical reach. Maternal and child health include antenatal care, intra-natal care, and new born baby care. Since the health centres in Pathanamthitta does not have adequate facilities for laboratory and labour rooms, only antenatal services alone is provided in the PHCs. Antenatal clinics in all sub centres are organised once in a week. Junior Public Health Nurse and ASHA workers frequently visit the houses of pregnant women. The staff motivates and educates the need to use iron and folic acid tablets, better food habits, exercise etc. The PHCs diagnose and render advices to malnourished and undernourished children, pregnant women and others. Vitamin A tablets are distributed wherever it is needed. According to DLHS 4 (2012-13) around 62.5 percent of the pregnant mothers are using either health centres or rural clinics for antenatal care in the district.

Family Welfare Services

The health centres educate, motivate and counsel to adopt appropriate family planning methods and refer the same to appropriate health institutions which provide guidance for those infertile couples. The health centres of the district have few provisions of contraception such as IUD insertion, oral pills and condoms. Referral and follow up services to the eligible couples adopting permanent contraceptive methods are provided.

Immunisation

The PHCs are very much successful in providing the services of immunisation. Vaccination for preventing tuberculosis, diphtheria, whooping cough, tetanus, rubella - mumps, polio and measles are made available for children and vaccination for tetanus for pregnant women are under the Reproductive and Child Health programme. A minimum of four immunisation camps per month are conducted in all the PHCs.

Health Awareness Classes

Two types of health awareness classes are conducted by the PHCs. Classes on health education for mothers and fathers are arranged separately. Water and vector borne diseases such as hepatitis, typhoid, leptospirosis, sanitation, family planning, leprosy, AIDS, Revised National Tuberculosis Control Programme (RNTCP), other national programme, immunisation and breast feeding are the topics taught in these classes. Another type of health classes are also arranged by the staff to promote health awareness for a small group of people, even for one or two persons. Every PHC conducts at least one health awareness class once in a week in each of the ward.

Pain and Palliative care Programme

Palliative care is a challenging programme introduced in 2012. This has been implemented in all the PHCs in the district in coordination with the respective panchayats. Almost all the PHCs have 200-250 patients under this programme. This service is provided to patients who are in need of guidance for appropriate treatment, who are bed-ridden and who suffer from incurable illness. There is a NRHM nurse who is supposed to visit the palliative patients in their respective area once in a month. A maximum of twelve visits are made usually by the team in a month. The nurses provide nursing care, moral support and make them aware of their problem and advise them how to overcome. Some of the PHCs receive support from the panchayat for providing wheel chairs and walking sticks. Kozhencherry District hospital is the only health institution having palliative care centre in the district and the first care centre in the State.

Public Health Services

Dangerous and Offensive Trade Related Services

Dangerous and Offensive Trade related services have been introduced as a part of Safe Kerala Programme which aims in preventing and checking the outbreaks of infectious diseases across the State. The Junior

Health Inspector visits banks, laboratories, libraries, hotels, bakery, poultry farms,clubs, workshops, markets,beauty parlours,orphanages, colleges, business units, shops etc for assessing whether these units create pollution in the surrounding areas or hinder the waste management system. If any of these units act in violation of the rules, the health inspector has the right to close down such units. According to the order of the District Medical Officer, the Junior Health Inspectors are supposed to visit all these units in their respective areas at least once in a year. In some cases, the dates of visits to the units are decided by the District Medical Officer who directs the PHCs for carrying out this job.

The health inspectors issue license to those who want to start hotel, bakery or stationary shop in their area. After assessing the area where the unit has to be established, sanitation certificate is issued. It is issued on certain condition that they should not create problem of waste and pollution etc. Health inspector issues the certificate after inspection. Health cards of all the staff, working in the hotel or bakery are verified every six months. .

School Health Programme

As a part of nutrition services, school health programme are organised**.** Each PHC has to assist 16 to 20 schools in its respective panchayat. The Junior Public Health Nurse visits the school for screening, treatment of minor ailments and referrals. If needed, one day medical camp with doctors, nurses and ASHA workers are also arranged in the school and basic medicines are provided. Once in every year, a team from the PHCs consisting of Medical Officer, Health Inspector, Lady Health Inspector and Junior Public Health Nurse of that area visits all the schools allotted for the PHCs and conduct immunisations programme including Rubella Vaccine for standard 8 to 12 students, who have not taken and also a medical check-up for all. D-Worming programme is also being introduced. As a part of this, camps are held in all schools once in a year. The team also organizes classes on topics like water and vector borne diseases, immunisation, sanitation and other relevant topics related to health. As a part of school health programme, the PHC staff members also participate in taking a pledge on sanitation, waste management, controlling water and vector borne diseases. Sometimes there will be classes on nutrition programme also. Every Monday after lunch, the girl students are provided iron and folic acid tablets. The PHCs also conduct adolescent friendly clinics where adolescent issues and reproductive health information are given.

Anganwady Visit

Each PHC has 14 to 25 anganwadies. Junior Health Inspector and Junior Public Health Nurse visit their respective anganwadies once in a month. The Junior Public Health Nurse visit and provide immunisation to all those who have not taken it. They also check the nails and teeth of the children and provide iron tablets to those found anaemic in the anganwadies. During their visit, the Junior Health Inspector and Junior Public Health Nurse provide awareness regarding nutrition, preventive and promotive health services.

Preventive and Promotive Services

Services that are provided to the society includes preventive measure like control and prevention of vector and water borne diseases, disease surveillance and control of epidemics. Source reduction, fogging and routine immunisation services are done to control and prevent epidemics. They also chlorinate the wells in the panchayat. Vital statistics are collected and reported. As a part of promotive measures, awareness regarding use of safe drinking water, basic sanitation and appropriate garbage disposal are created.

National Programme

Every year camps are arranged by the PHCs. As a part of national programme, migrant screening is done in the areas to identify patients with malaria and filarial cases if any. Migrant screening has become an

important service of the PHCs. Directly Observed Treatment Short Course (DOTS) are also arranged for TB patients. Night surveys and blood smear collection are also done once or twice a year in the areas where migrants live. Once in a month, every PHC opens a mental clinic. Camps are also organised for the different national programme. Through these services the Primary Health Centres have been performing a great role in the community.

4. Concluding Observations

From the preceding discussions, it can be concluded that, even though Kerala is found to be one of the better performing states in the service of health care, there is inequality in the regional distribution of health care infrastructure among districts. The health profile of the region studied gives a vivid description of the functioning mechanism of the PHC in the district. The secondary data regarding the staff in the PHCs establish the fact that the PHCs face the problem of inadequate staff. The data shows that government fund provided to the PHC depend on the total government fund to the district .The number of outpatients in the PHCs increase almost all the years. The study points out the need of having more doctors and health workers in the PHCs and an effective recording system for Out Patient (OP) registration so as to avoid the problem in providing of different OP number for each visit to the same patient. The need to strengthen PHCs is a must of the community as health care is accessible, available and apart from all aspects it is affordable even to the poorest section of the community.

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