

**A STUDY ON UTILIZATION OF DIAGNOSTIC AND THERAPEUTIC SERVICES
OF NATIONAL PROGRAM FOR PREVENTION AND CONTROL OF CANCER,
DIABETES AND CARDIOVASCULAR DISEASES AND STROKE (NPCDCS)**

**FROM PRIMARY HEALTH CARE INSTITUTIONS IN
PATHANAMTHITTA DISTRICT**

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Dissertation submitted in partial fulfilment of the

Requirement for the award of the degree of

Master of Public Health



ACHUTHA MENON CENTRE FOR HEALTH SCIENCE STUDIES

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I submit this small piece of work to the fond memories of my father.

CERTIFICATE

Certified that the dissertation entitled “A study on utilization of diagnostic and therapeutic services of National Program for Prevention and Control of Cancer, Diabetes and Cardiovascular Diseases and Stroke (NPCDCS) from primary health care institutions in Pathanamthitta District” is a record of the research work undertaken by Dr. Shammu Rajan in partial fulfilment of the requirements for the award of the degree of “Master of Public Health” under my guidance and supervision.

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DECLARATION

I hereby declare that this dissertation titled “A study on utilization of diagnostic and therapeutic services of National Program for Prevention and Control of Cancer, Diabetes and Cardiovascular Diseases and Stroke (NPCDCS) from primary health care institutions in Pathanamthitta District” is the bonafide record of my original field research. It has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

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Dear Dr. Shammy Rajan,

The Institutional Ethics Committee reviewed and discussed your application to conduct the study entitled "A STUDY ON UTILIZATION OF DIAGNOSTIC AND THERAPEUTIC SERVICES OF NATIONAL PROGRAM FOR PREVENTION AND CONTROL OF CANCER, DIABETES AND CARDIOVASCULAR DISEASES AND STROKE (NPCDCS) FROM PRIMARY HEALTH CARE INSTITUTIONS IN PATHANAMTHITTA DISTRICT" (IEC/612) on 7th June, 2014.

The following documents were reviewed:

1. Cover page
2. Thesis proposal in prescribed format
3. Resume of investigator
4. Informed consent form (English)
5. Structured Interview Schedule (English)
6. Permission letter for the tool (English)
7. Permission letters from the authority is under processing. I will submit in due course of time.

Page 1 of 2

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1.	Justice Gopinathan. P.S	BSc. LLB	Male	Legal Expert (Chairperson)	No
2.	Dr. Meenu Hariharan	DM	Female	Clinician (Gastro Enterologist)	No
3.	Dr. M.D. Gupte	MD, DPH	Male	Public Health	No
4.	Dr. R.V.G. Menon	PhD	Male	Lay Person	No
5.	Dr. Mala Ramanathan	MSc, PhD, MA	Female	Ethicist/Social Scientist (Member Secretary)	Yes

IEC Decision

1. The researcher is required to submit the permissions obtained to the IEC, as soon as it is obtained
2. The IEC approved the conduct of the study in the present form, but subject to the above condition

Remarks:

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study, any changes in the protocol and patient information/informed consent and asks to be provided a copy of the final report.

There was no member of the study team /guide who participated in voting / decision making process. The ethics committee is organized and operated according to the requirements of Good Clinical Practice and the requirements of the Indian Council of Medical Research (ICMR).

Sincerely,



Mala Ramanathan
Member Secretary, IEC

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Abstract

Background: In Kerala, National program for prevention and control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS) was piloted at Pathanamthitta district in 2011. Three years of the commencement, the details of coverage among public, monitoring and evaluation of the program etc. are not known. Hence this study mainly concentrates on those factors.

Methodology: The study had two parts. First was a cross sectional survey conducted at 5 panchayaths of Pathanamthitta district. The sample size estimated was 320. Subjects were identified by multistage cluster sampling. The second part was observation using a checklist, conducted at randomly selected Health Centers where Non communicable diseases (NCD) clinics were operating. Bivariate and multivariate analyses were done.

Findings: Females constituted 70.9 percent of subjects .Self reported Prevalence of diabetes among study subjects was 25.9 percent and hypertension was 35.3 percent. Self reported NCD Prevalence (DM and/or HTN) was found to be 48.3 percent .Among the study subjects, 67.8% were aware about existence of NPCDCS. The proportion of subjects who utilized screening service was 53.1 percent and 40.9 percent of 154 subjects, who had NCDs, utilized treatment service. People who are regularly visited by health workers and people who were having NCDs before the launching of the program are more likely to utilize the program when compared to others. The program only collects the number of people screened for NCDs and number of those who were diagnosed to be having NCDs. It doesnot have any denominator based data.

Conclusion: The prevalence of NCDs is very high in Kerala, compared to National figures. The health workers play a pivotal role in public utilization of Program. The reporting system is not looking into number of beneficiaries whom are missed out. The level of visibility of NPCDCS shows that Information, Education and Counseling/Communication (IEC) activities are not satisfactory

Chapter 1 Introduction and literature review

1.1 Background

1.1.1 Global scenario

The epidemiologic transition is a model that explains the change in disease pattern among humans over time. According to this model the first transition occurred thousands of years ago which was related to onset of agriculture practices, and the common diseases were infectious diseases (IDs) and nutritional diseases. The second transition happened two centuries back and predominant diseases were infectious and degenerative. Globally we are in the third transition where the infectious diseases still persist but along with some new diseases called Non Communicable Diseases (NCDs) which are emerging at a rapid pace.¹

The nations with rapid development and urbanization were the places in which the transitions become more evident. The study conducted in Accra, the most urbanized and modern city of Ghana, gives the typical picture of relation between pace of development of a nation and the speed of epidemiological transition.² A comparative study, which was done among four Latin American countries had shown similar scenario.³ In developing countries, the transition is causing a double burden of both infectious diseases and non- communicable diseases upon which the NCDs possess the major share.⁴ Most Low and Middle Income Countries have significant dual disease burdens of NCDs such as cardiovascular disease, diabetes and cancer, and IDs including tuberculosis, Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) and parasitic diseases.⁵ But it is a fact that cost-effective public health interventions are not reaching developing country

populations who need them. Programs to deliver these interventions are too often patchy, low quality, inequitable, and short-lived.⁶

NCDs kill more than 36 million people each year. Nearly 80% of NCD deaths - 29 million - occur in low- and middle-income countries. More than nine million of all deaths attributed to NCDs occur before the age of 60; 90 percent of these "premature" deaths occurred in low- and middle-income countries. Cardiovascular diseases account for most NCD deaths, or 17.3 million people annually, followed by cancers (7.6 million), respiratory diseases (4.2 million), and diabetes (1.3 million). These four groups of diseases account for around 80 percent of all NCD deaths. They share four risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets.⁷

1.1.2 Indian Scenario

India is a rapidly developing nation with a population of 1.237 billion and a GDP per capita of 1489.24 United States dollar (USD).⁸ Just like any other developing nation, India also shows the similar picture of rise in NCDs. The number of diabetic people has increased from 19 million in 1995 and is expected to reach 87 million by 2030⁹ and as per the current rate 66.6% of all deaths will be because of NCDs, by 2020.¹⁰ The overall prevalence of diabetes, hypertension, Ischemic Heart Diseases (IHD) and Stroke is 62.47, 159.46, 37.00 and 1.54 respectively per 1000 population of India (2010).¹¹ The total cancer cases are likely to go up from 979,786 cases in the year 2010 to 1,148,757 cases in the year 2020.¹²

In a cross-sectional study conducted at 10 states in India, it was found that, among patients visiting general practitioners, the prevalence of diabetes was 34.7 percent and hypertension was 46 percent among males of mean age of 48.9 ± 13.9 . Among the diagnosed, 7.2 percent

diabetics and 22.2 percent hypertensives were unaware about their disease before getting screened.¹³ In a study conducted at Lucknow, the prevalence of hypertension was found to be 32.8% in urban area and 14.5% in rural area.¹⁴

Burden of non-communicable diseases and resultant mortality is expected to increase unless massive efforts are made to prevent and control NCDs and their risk factors. Government of India (GoI) started efforts to control NCDs from 1970s and supported states who came with individual programmes.¹⁰ The table below shows the details of the program as on 20th March of 2014.

Table 1.1.1: National health programs for NCDs

Year of launch	National health program	Current status
1975	National cancer control program	Integrated with NPCDCS in 2010–11
1976	National blindness control program	Ongoing in all districts
1982	National mental health program	Revised Program (2003) being implemented in 123 districts
1986	National Iodine deficiency disorders control program	Availability of iodated salt 100%. At present, 71% population using iodated salt
2007	National tobacco control program	Being implemented in 42 districts in 21 states
9 th Plan	Trauma care facility on national highways	140 Trauma Care Centers set up along golden quadrilateral highways and NE and SW highways
2006–07	National deafness control program	Initiated in 25 districts. Expanded to cover 203 districts by March 2012
2007–08	National program for prevention and control of fluorosis	Initiated to cover 100 districts
2010–11	National program for prevention and control of cancer, diabetes, CVD, stroke	Initiated to cover 100 districts by March 2012
2010–11	National program for health care of the elderly	Initiated to cover 100 districts by March 2012
2010–11	Pilot program for prevention of burn injuries	Piloted in Assam, Haryana and Himachal Pradesh
2010–11	Up-gradation of department of PMR in medical colleges	In 28 medical colleges
2010–11	Disaster management/Mobile hospitals/CBRN	Technical specifications and operational details finalized
2010–11	Organ and tissue transplant	Model network for organ procurement and distribution in progress. Biomaterial center for tissue being established

http://www.ijcm.org.in/viewimage.aspimg=IndianJCommunityMed_2011_36_5_7_94703_b3

accessed on 25/05/2014

On March 11, 2005 high level officials from the GoI and World health organization (WHO), met at Chennai during the 3rd Madras Diabetes Research Foundation – University of Alabama National Seminar on “Epidemiology of Non-communicable diseases” to discuss about the health burden due to NCDs. They came with the idea of constituting a network of professionals with expertise in NCDs for capacity building, for conducting high class research in NCDs in India as well as to formulate health care policies for preventing NCD in India. Thus they created a new Non –profit organization called INN(Indian network for NCDs).¹⁵ They played a major role in encouraging government to come up with a programme for prevention and control of NCDs.

During the 11th five year plan, there was considerable upsurge to prevent and control NCDs. Public awareness program, integrated management and strong monitoring system would be required for successful implementation of the program and making services universally accessible in the country.¹⁶

With all these evidences, and the knowledge that ‘timely diagnosis and management is the only way to control the crisis’¹³ the Government responded to the situation. A Steering Committee has been constituted to review and expedite the National Programme for Prevention and Control of Diabetes, Cardiovascular Diseases and Stroke in the Chairmanship of Director General of Health Services.¹⁷They designed a programme called NPDCS which was piloted on January 2008. The programme covered 10 states. They were Punjab, Rajasthan, Karnataka, Kerala, Tamil Nadu, Assam, Madhya Pradesh, Andhra Pradesh, Sikkim and Gujarat.¹⁸

On 2011, the GoI, Ministry of Health and Family Welfare (MoHFW) introduced a national program for controlling NCDs called National program for prevention and control of Cancer, Diabetes, Cardio vascular diseases and Stroke (NPCDCS).

In Kerala, The program was piloted in Pathanamthitta during the year 2011.¹⁹

Three years of the commencement, the details of coverage among the public, monitoring and evaluation of the program etc. are not known.

Hence this study mainly concentrates to find the answers of the above questions.

1.2 Brief overview of Indian Health system

Western Medicine was introduced to India during the 17th century by the British. They were mainly intended for the medical needs of the troops and the East India Company. During the end of 18th century, they established three medical departments in Bengal, Madras and Bombay presidencies. These departments delivered services to both military and civilians. After the ‘Sepoy Riot of 1857’, the presidential system was abolished and all those three medical departments were integrated into Indian Medical Services (IMS).²⁰

Since middle of 20th century, a number of committees were made for a proper health planning, starting from Sokhey committee, Bhore committee etc. All these committees gave report on various aspects like improving public health by proper water supply and sanitation, strengthening public health care system by empowering primary, secondary and tertiary health care institutions, improving medical education, maternal and child health, family planning, prevention and control of communicable disease etc.

1.3 Various Health Programs in India

During the post independence period, India was struggling hard socially and economically.²¹ Still we had a very structured and organized Health structure in India, which was planned as per the recommendations of Bhore committee. Initially the health system gave priority to Family Planning, Maternal and Child health, controlling of communicable diseases like Smallpox, Tuberculosis, Malaria, Leprosy, Trachoma, etc. as that was the need for the nation. Till the end of 1970s the primary health care system was not considered seriously. But after signing the Alma Ata declaration of 'Health for All by 2000', on September 1978,²² India also had to strengthen primary health care by empowering primary health care institutions.

As disease pattern changed over time, the GoI had to come up with various new programs to reduce the disease burden and to take care of health of the people.

The current National Programs are: (2011)¹⁸

- National Vector Borne Disease Control Program (NVBDCP)
- School Health Program
- Prevention & Control of Non Communicable Diseases
- Pilot Program on Prevention and Control of Diabetes, CVD and Stroke
- National Program for Prevention and Control of Deafness
- Universal Immunization Program
- National Cancer Control Program
- National Aids Control Program
- National Mental Health Program
- National Iodine Deficiency Disorders Control Program
- National Program for Control of Blindness (NPCB)

- 1.2.12 Revised National TB Control Program (RNTCP)
- National Leprosy Eradication Program
- 1.2.14 National Filaria Control Program
- 1.2.15 National Tobacco Control Program

1.4 Current Approaches of the Health System

1.4.1 Decentralization and Health

Decentralization was implemented in 1993 after a series of debates. Decentralization gives more powers to the Local-self Government so that they will be having authority over the institutions under them; like public health, irrigation, agriculture, public order etc.²³ Public health infrastructure had been improved significantly due to structured procedures and better financial management. Thus the care delivery was also improved.²⁴ But the current share of public health services in Health sector of the nation is only 33.5%.²⁵

1.4.2 National Rural Health Mission (NRHM)

By the beginning of 21st century, the inequities in health were very significant nationwide. There was a huge gap between indicators of health between rural and urban areas, in which the rural areas was performing the worst. In order to face the situation by strengthening rural health system and also facilitate other national programs, the GoI launched National Rural Health Mission (NRHM) in April 2005. The duration of mission was seven years and 666 billion Rs/- were invested. The allocation was equitable where 18 high focus states and

264 high focus districts received more fund. The determinants of health were looked at through various levels. The Roga Kalyana Samiti was such a venture by NRHM to ensure community participation in health care.²⁶ There were State/District level, Village-Health-Sanitation and Nutrition Committees, and Village Nutrition Days.²⁷

1.4.3 Universal Health Coverage

The year 2000 has passed and we could not achieve the target of 'Health for All'. Hence we extended the target to 2015, incorporating it along with the 'Millennium Development Goals'. Subsequent progress seems to be in the form of 'Universal Health Coverage'. A High Level Expert Group' was constituted by Planning Commission of 2010. As per the report on November 2011, the Universal Health Coverage is:-

“Ensuring equitable access for all Indian citizens, resident in any part of the country, regardless of income level, social status, gender, caste or religion, to affordable, accountable, appropriate health services of assured quality (promotive, preventive, curative and rehabilitative), as well as public health services addressing the wider determinants of health delivered to individuals and populations, with the government being the guarantor and enabler, although not necessarily the provider, of health and related services” – High Level Expert Group “(HLEG).²⁸

1.5 Disease pattern and epidemiologic transition in Kerala

Kerala, one among the most developed states in India is having the best health indicators like crude death rate, infant mortality rate, high life expectancy at birth etc.; which are

comparable to many of the developed nations around the world.²⁹ But time and situation made us rethink that the phenomenon called health/epidemiologic transition is happening in our state also. Latest studies show the burden of even the risk factors for Non-Communicable diseases are similar to those in United States of America.³⁰ Kerala is suffering from a heavy load of Dengue fever, Leptospirosis, Hepatitis, Cholera, Malaria , Tuberculosis, etc;³¹ which are almost unseen in many of the developed nations. Hence the double load due to epidemiologic transition affects more to Kerala, than any other states in India.

Naturally the Kerala Health system also started responding and started giving importance to the Non- Communicable diseases along with other programs like RCH,RNTCP, NVBDCP etc. and the NCD control program was launched which was exclusively for diabetes, hypertension, cardiac disease etc. But, like in many states, the response was poor and the program ran along with the routine out- patient services. Being the situation like this, in 2011 the GoI, MoHFW initiated the national program called NPCDCS and it was piloted in Pathanamthitta district at Kerala state in 2011.

1.6The NPCDCS

It had 5 main objectives

- Prevent and control common NCDs through behavior and life style changes
- Provide early diagnosis and management of common NCDs
- Build capacity at various levels of health care for prevention, diagnosis and treatment of common NCDs

- Train human resource within the public health setup viz. doctors, paramedics and nursing staff to cope with the increasing burden of NCDs
- Establish and develop capacity for palliative & rehabilitative care.

The strategies of the program were

- Prevention through behaviour change
- Early diagnosis
- Treatment
- Capacity building of human resource
- Surveillance, monitoring & evaluation

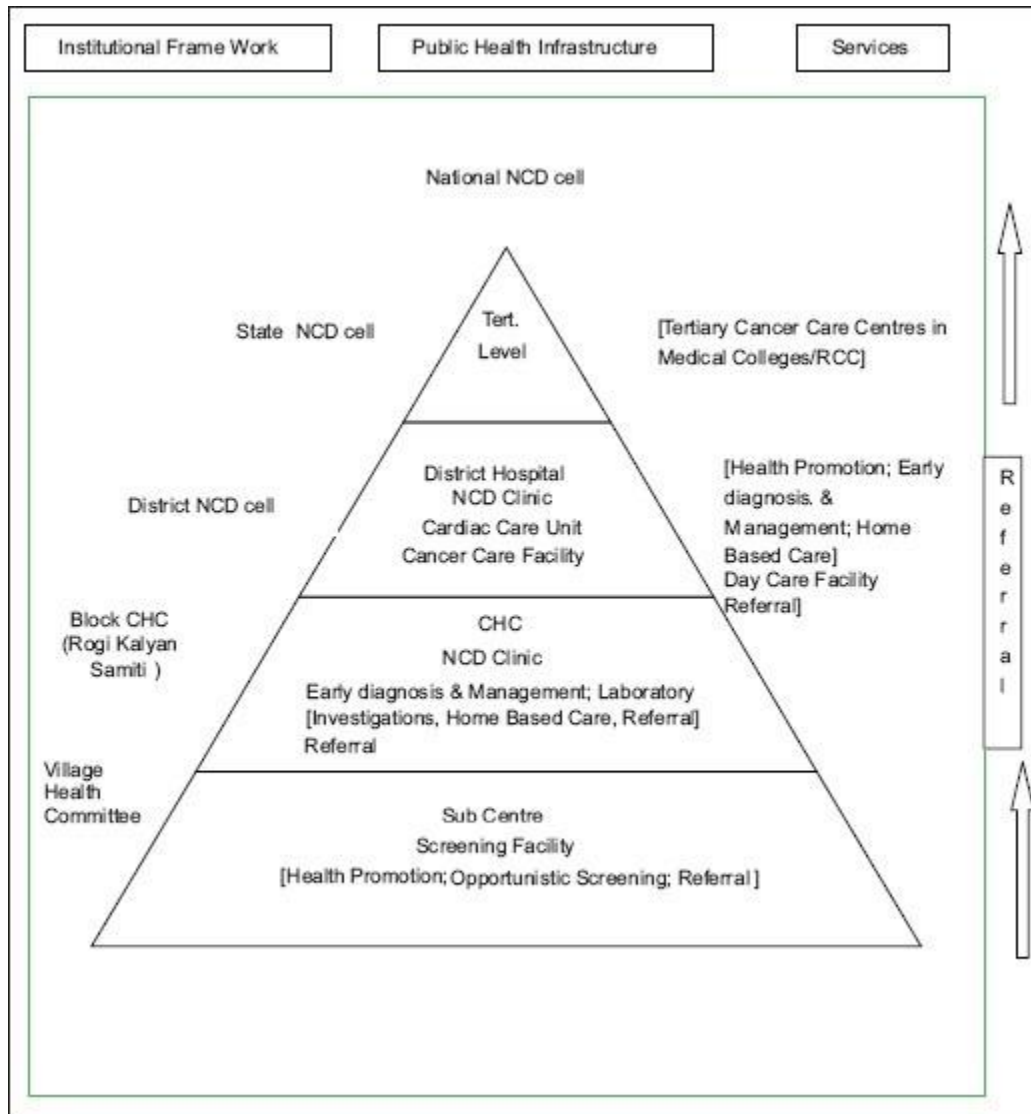
The five main objectives of the NPCDCS were intended to achieve through the strategies of the program. Behaviour change should start from childhood level as a part of early prevention. Early diagnoses was planned to be done by screening all adult above 30 years of age, for diabetes, hypertension, body mass index (BMI) etc. Those who were found positive in screening test will be referred to community health centres (CHC) where an exclusive NPCDCS clinic will be running; equipped with a Medical Officer, Lab technician, Staff nurse, Counsellor, Data entry operator etc.

The patient reaching there should have the diagnosis confirmed and medicines will be issued for a month. The counsellor will give detailed advice on diet, physical activities etc.

Training will be given to staff of different sectors to carry out all the activities. Supervision, monitoring and evaluation will be done concurrently and periodically.

Figure showing services available under NPCDCS at various levels.³²

Figure 1.6: NPCDCS activities at various levels



1.7 Evaluation of health programs

Just like any other programs, health programs also should be evaluated timely. It will help to find out whether the program is going on as expected, is there any rectification required, can an addition of a little more input will make the program more effective, did we achieve what

we had intended to achieve etc.³³ Unfortunately the evaluation of delivery system is poorly defined and therefore a barrier to achieving increased coverage of interventions.³⁴ To determine the effectiveness of health programs, evaluation is essential, especially in developing countries.³⁵

Based on the phase of program; there are two kinds of evaluations³⁶

1.7.1 Formative evaluation

It can be done in three phases. i. e. (i) before the commencement of the program, (ii) during the end of the first phases of the program or while the process is ongoing. This type of evaluation is mainly for managers for focusing the improvement of the design and implementation of the intervention.

1.7.2 Summative design

This type of evaluation is done after the completion of implementation of the program. The external stakeholders will be the people of interest in this. The main objectives are accountability, future planning of budget etc. The policy document of NPCDCS, although it mentions evaluation, does not explicitly say when and how it will be done.

1.8 Factors affecting coverage of health programs

The percentage of the population covered is predictably the most important factor in determining the success of mass control/elimination programs.³⁷ There are various factors that affect the coverage of a health program.

Considering various health programs;

1.8.1 Mass drug administration (MDA) for filariasis

The effectiveness of programs, like MDA, in terms of reductions in the microfilarial density depends critically on the treatment coverage and the pattern of attendance at repeated mass administrations.³⁸ The tablets were distributed during the day time, when most of the population goes to farms, leading to the insufficient coverage. Hence timing is an important factor for adequate coverage of a program. Knowledge about the disease and importance in its treatment also determines the coverage. In the MDA program The IEC activities were conducted in limited areas, and there were prevailing myths and misconceptions, contributing to low compliance rate.³⁹ The priority set by the public also plays a major role. In areas where endemicity of filariasis is very low and people know very little about the disease, they give very low priority to the disease and its prevention. In such areas, coverage and compliance rates were very low.⁴⁰

1.8.2 Reproductive and child health (RCH) program

The home visits made by health workers, access to the health care delivery facility etc. were some of the factors that affected the coverage of RCH program. A reduction in neonatal mortality rates in those receiving postnatal home visits shows potential for the program to have an effect on neonatal deaths.⁴¹ A study done at Bangladesh, among children, full immunization coverage (coverage of all of BCG, DPT1, DPT2, DPT3, Polio1 Polio2, Polio3) was significantly associated with distance to outreach clinics, the greater the distance to the clinics, the less the likelihood of immunization.⁴²

1.9 Rationale for study

In Kerala, The program was piloted in Pathanamthitta during the year 2011. Three years into the commencement; the details of coverage among the public, monitoring and evaluation of the program etc. are not known.⁴³ Hence this study mainly concentrates to find the answers of the above questions.

Chapter 2 –Methodology

2.1 Objectives

a. Major objective

To study the proportions of people of 30 years of age and above, utilizing diagnostic and therapeutic services from primary health institutions, for Non-communicable disease program in Pathanamthitta district.

b. Minor objective

To study the factors affecting the utilization of NCD care services from Primary Health Care Institutions.

2.2 Study design

Cross sectional survey and observational study at health institutions.

2.3 Study setting

- Pathanamthitta district (where the NPCDCS was piloted in Kerala.)
- Pathanamthitta district was having a population of 11, 97,412 according to 2011 census.
- The rural population in 89.01 percent and urban population was 10.99 percent.
- The average literacy rate was 96.90 percent.

2.4 Sample size estimation

- Inclusion criteria:
- People above 30 years of age, residing in Pathanamthitta district from 2010 onwards
- Exclusion criteria
- Those who were unable to participate in the study due to any serious illness.
- Those who were not willing to give the consent.
- Sample size (N) = **320** (Using openepi 3.01).
- Proportion of utilization of public health services was 33 percent.⁴⁴
- Precision was taken 8 percent arbitrarily.
- Design effect was 2 percent.
- Dropout rate was taken as 20 percent.
- Number of clusters was 20.

- Each cluster contained 16 subjects.

2.5 Sample selection procedure

- Multistage cluster sampling
- Total 54 panchayaths in Pathanamthitta district.
- The following 5 panchayaths were selected using "select cases - random sample of cases" function of SPSS-21.0

Block	Panchayath
Koipuram	Eraviperoor
Mallappally	Kunnamthanam
Pulikeezhu	Nedumpram
Koipuram	Puramattom
Konni	Vallicode

- From each ward 16 houses were selected and from each house one person above 30 years was selected. If there were more than one person above 30 years of age then Kish method was used to select the subject from that household
- Currency note method for street selection and then house selection. From the central point of the most prominent junction within the ward, the streets and lanes were numbered first. The street and first house was selected based on the first digit of a randomly selected currency number, and adjacent 16 houses on the same side of the street, away from the centre of the ward were surveyed.

- Permanently locked houses were excluded and other locked houses were revisited once.

2.6 Data collection technique

- Interview method using pre- tested structured interview schedule.
- The questions were about socio-demographic factors, access to health care services, knowledge about NCDs, NCD status, screening services of NPCDCS and treatment services of NPCDCS.
- Check list was used to document the reporting, supervision, monitoring and evaluation at primary levels of NPCDCS care delivery – separate list for Family Welfare Centre (FWC) /Primary Health Centre (PHC), CHC.
- f. Data collection and analysis
- The main data collection was done from July to August of 2014 by the principal investigator. The permission from the concerned authority was obtained. A structured interview schedule was used for data collection from individuals and check list was used for studying the functioning of NPCDCS at institutions. A written informed consent was obtained prior to the interview and using check list at institutions. Privacy and confidentiality of all the informants were taken care off. Interviews were performed at the houses of informants for data from individuals and visit to sub- centre, Primary Health Centre and Community Health Centre were made for studying program functioning using check list at convenient timing of staff of the institutions. The collected data was coded, entered into Epi Data 3.1, and used for analysis. Univariate and bivariate analyses were done using SPSS.21. Multivariate analysis was also done based on the findings, using the same software.

2.7 Ethical considerations

- Confidentiality

The identity of the participant was kept anonymous from the stage of data collection itself. Each participant was given a unique identification number. The separate list of name, contact details and telephone number were separated and maintained strictly confidential under my care.

- Privacy

The interview was conducted at houses of informants and study of functioning of NPCDCS was done at institutions. Privacy of the informants was strictly maintained.

- Consent

The printed permission document from the concerned authority was obtained. Written informed consent was obtained from the informants and staff of institutions prior to the starting of data collection.

The subject had the freedom to refuse at the outset or even withdraw from the study at any stage.

Chapter 3 Results

This chapter summarizes the results of the study. The study was conducted in two parts. The first part comprised a cross sectional survey using semi-structured and pre tested interview schedule, and the second part was an observational study at the FWCs, PHCs and CHCs, using a checklist. The survey was conducted in 5 rural areas coming under 5 panchayaths of Pathanamthitta district in Kerala state. House to house survey was done at selected houses, by multistage cluster sampling, in randomly selected 4 wards of each panchayath. In the

second part, randomly selected 17 FWCs, 3 PHCs and 3 CHCs were visited and observed and the findings were analyzed.

The cross sectional survey was done among the 320 participants who included 70.9 percent females and 29.1 percent males. The prevalence of self-reported Diabetes as 25.9 percent(83) with a 95 percent confidence limit of 21.4 – 31.0, and that of Hypertension was 35.3 percent (113) with a 95 percent confidence limit of 30.3 – 40.7. The prevalence of self reported NCDs, i.e. Diabetes or Hypertension or both, were 48.3 percent with a 95 percent confidence limit of 42.7 – 53.6. as the female proportion was high, standardization to age and sex was done.⁴⁵ The standardized prevalence of Diabetes was 20.0 percent and Hypertension was 20.7 percent.

Further details of findings from the study are described below.

3.1 Socio –demographic characters

A total of 320 persons of age 30 years or above were interviewed out of which 229 were females and 91 were males. The median age was 47 years and during further analysis, the subjects were categorized into two age groups. The first group was having subjects with 47 years of age or less and the second group was having subjects above 47 years of age. The socio – demographic details are given below (Table -1).

Table – 3.1: Socio demographic characteristics

Age	Mean – 48.18yrs (SD – 11.186), Median – 47, Range – 30 to 85	
Sex	Female	227(70.9%)
	Male	93(29.1%)
Education	Up to primary school	128(40.0%)
	High school and above	192(60.0%)
Occupation	Unemployed/ Others*	210(65.6%)
	Employed	110(34.4%)
Socio – economic status	Below Poverty Line card holder	174(54.4%)
	Above Poverty Line card holder	146(45.6%)
Marital status	Unmarried/ Others**	47(14.7%)
	Married	273(85.3%)

*No regular employment

**Separated/ Divorced/ Spouse- expired

3.2 Factors related to access to health care

There were several variables which studied the factors influencing access to health care. Distance to the nearest facility, conveyance, insurance coverage, regular health worker visit, other perceived barriers are a few to mention. The median distance to the nearest health facility from the place of residence reported was 2km and the subjects were regrouped into two based on that. First group was subjects who resided at a distance of 2km or less from the

nearest health facility and second group was those who resided at a distance more than 2kms.

Table -2 gives the details of these factors.

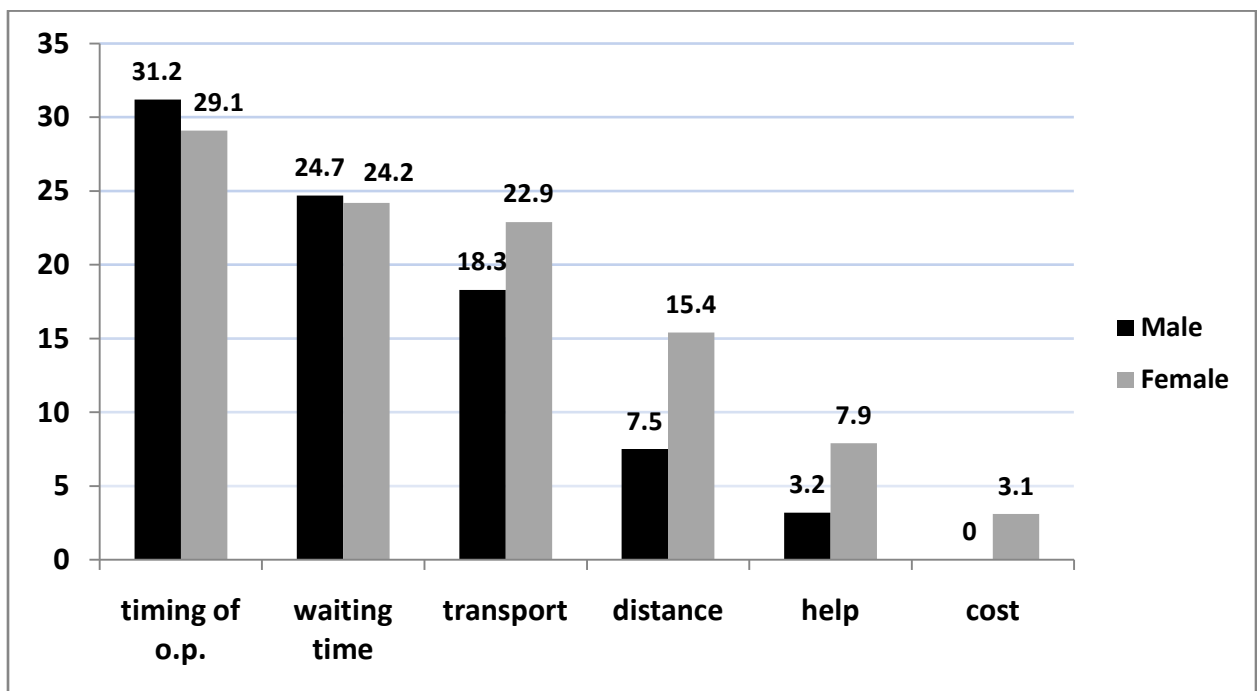
Table – 3.2: Factors related to access to health care

Distance to nearest facility	Mean -1.7km (SD – 1.2), Median – 2km, Range is 0.02 – 8.00km	
Public transport service to nearest health facility	No	104(32.5%)
	Yes	216(67.5%)
Insurance/ Health scheme	Not covered	161(50.3%)
	Covered	159(49.7%)
Perceived barriers	No	200(62.5%)
	Yes	120(37.5%)
Health worker visit in last 6 months	No	49(15.3%)
	Yes	271(84.7%)
Knowledge about NDCs	Not having good knowledge	274(85.6%)
	Have good knowledge	46(14.4%)
Diagnosed NCDs before 2011*	No	254(79.4%)
	Yes	66(20.6%)

*NPCDCS was launched on January 2011

The reported perceived barriers by people in accessing health care were different. The bar diagram (Diagram – 1) shows the details of them, with a gender-wise classification.

Diagram – 3.1: Reported perceived barriers (Figures are in percentage)



3.3 Outcome variables

The outcome variables analyzed to achieve the objectives of study were (i) visibility⁴⁶ of the NPCDCS, i. e. awareness of people about the existence of such a program, (ii) proportion of

people utilized screening service, (iii) proportion of people who complied to referral to higher centre after they were diagnosed to be having NCD by screening and (iv) proportion of people with NCDs who are utilizing treatment service of NPCDCS. Out of the 320 subjects who participated in the survey, 170 people utilized screening program conducted under NPCDCS and 111 among them were diagnosed to have NCD. They were referred to higher centres for further care. The proportion of people who complied with referral was taken from the number of people who were referred. Similarly, the survey found out the prevalence of self-reported NCDs among the study subjects was 48.3 percent, i. e. 154 out of 320 were having Diabetes or Hypertension or both. The proportion of people who utilized treatment service of NPCDCS was calculated from these 154 subjects. The details are shown in Table – 3.

Table – 3.3: Outcome variables

Variable	Category	Number (%)	Total number (%)
(Visibility)Aware about NPCDCS	No	103(32.2%)	320(100%)
	Yes	217(67.8%)	
Utilized screening service	No	150(46.9%)	320(100%)
	Yes	170(53.1%)	
Complied to referral	No	45(40.5%)	111(100%)
	Yes	66(59.5%)	
Utilized treatment service	No	91(59.1%)	154(100%)
	Yes	63(40.9%)	

3.4 Bivariate analysis

A bivariate analysis was done to find the association between independent variables and outcome variables, using chi square test. The number of subjects who utilized screening service was 170 and 111 out of them were referred to higher centers for further measures. Hence these 111 subjects were included during the analysis of the variable Compliance to referral. Similarly, 154 subjects were having a diagnosed NCD and so they only were included while analyzing the variable Utilization of treatment service. Tables 4 -7 shows the results.

Table 3.4.1: Bivariate analysis results for visibility of NPCDCS

Variable	Categories	Know about NPCDCS		Odds
		Yes –N (%)	No – N (%)	Ratio(95%CI)
Sex	Female	161(70.9%)	66(29.1%)	1.6(0.9-2.7)
	Male	56(60.2%)	37(39.8%)	1
Age	> 47 years	115(74.7%)	39(25.3%)	1.8(1.15-3.0)*
	<= 47 years	102(61.4%)	64(38.6%)	1
Education	Up to primary	87(68.0%)	41(32.0%)	1.0(0.6-1.6)
	High school or above	130(67.7%)	62(32.3%)	1
Occupation	Unemployed/others	146(69.5%)	64(30.5%)	1.3(0.8-2.0)
	Employed	71(64.5%)	39(35.5%)	1
Marital status	Unmarried/others	37(78.7%)	10(21.3%)	1.9(0.9-4.0)

	Married	180(65.9%)	93(34.1%)	1
Socio economic status	APL card holder	100(68.5%)	46(31.5%)	1.1(0.7-1.7)
	BPL card holder	117(67.2%)	57(32.8%)	1
Distance to nearest health facility	>2 Km	54(71.1%)	22(28.9%)	1.2(0.7-2.1)
	<= 2 Km	163(66.8%)	81(33.2%)	1
Conveyance	Yes	155(71.8%)	61(28.2%)	1.7(1.1-2.8)*
	No	62(59.6%)	42(40.4%)	1
Insurance/scheme membership	Yes	113(71.1%)	46(28.9%)	1.3(0.8-2.2)
	No	104(64.6%)	57(35.4%)	1
Barriers to access health care	No	137(68.5%)	63(31.5%)	1.1(0.7-1.8)
	Yes	80(66.7%)	40(33.3%)	1
Health worker visit in last 6 months	Yes	192(70.8%)	79(29.2%)	2.3(1.3-4.3)**
	No	25(51.0%)	24(49.0%)	1
Knowledge about NCDs	Good	33(71.7%)	13(28.3%)	1.2(0.6-2.5)
	Not good	184(67.2%)	90(32.8%)	1
Diagnosed NCD before 2011	Yes	61(92.4%)	5(7.6%)	7.7(3.0-19.7)**
	No	156(61.4%)	98(38.6%)	1

(* - P value <0.05, ** - P value <0.01)

Table 3.4.2: Bivariate analysis results for utilization of screening service

Variable	Categories	Utilized screening services		Odds
		Yes – N (%)	No – N (%)	Ratio(95%CI)
Sex	Female	137(60.4%)	90(39.6%)	2.8(1.7-4.6)**
	Male	33(35.5%)	60(64.5%)	1
Age	> 47 years	93(60.4%)	61(39.6%)	1.8(1.1-2.7)*
	<= 47 years	77(46.4%)	89(53.6%)	1
Education	Up to primary	80(62.5%)	48(37.5%)	1.9(1.2-3.0)**
	High school or above	90(46.9%)	102(53.1%)	1
Occupation	Unemployed/others	131(62.4%)	79(37.6%)	3.0(1.9-4.9)**
	Employed	39(35.5%)	71(64.5%)	1
Marital status	Unmarried/others	28(59.6%)	19(40.4%)	1.4(0.7-2.6)
	Married	142(52.0%)	131(48.0%)	1
Socio economic status	BPL card holder	104(59.8%)	70(40.2%)	1.8(1.2-2.8)**
	APL card holder	66(45.2%)	80(54.8%)	1
Distance to nearest health facility	>2 Km	41(53.9%)	35(46.1%)	1.0(0.6-1.8)
	<= 2 Km	129(52.9%)	115(47.1%)	1
Conveyance	Yes	124(57.4%)	92(42.6%)	1.7(1.1-2.7)*
	No	46(44.2%)	58(55.8%)	1
Insurance/scheme membership	Yes	101(63.5%)	58(36.5%)	2.3(1.5-3.6)**
	No	69(42.9%)	92(57.1%)	1

Barriers to access health care	No	112(56.0%)	88(44.0%)	1.4(0.9-2.1)
	Yes	58(48.3%)	62(51.7%)	1
Health worker visit in last 6 months	Yes	158(58.3%)	113(41.7%)	4.3(2.2-8.7)**
	No	12(24.5%)	37(75.5%)	1
Knowledge about NCDs	Not good	148(54.0%)	126(46.0%)	1.3(0.7-2.4)
	Good	22(47.8%)	24(52.2%)	1
Diagnosed NCD before 2011	Yes	48(72.7%)	18(27.3%)	2.9(1.6-5.2)**
	No	122(48.0%)	132(52.0%)	1

(* - P value <0.05, ** - P value <0.01)

Table 3.4.3: Bivariate analysis results for compliance to referral

Variable	Categories	Complied to Referral		Odds Ratio(95%CI)
		Yes - N (%)	No – N (%)	
Sex	Male	21(67.7%)	10(32.3%)	1.6(0.7-3.9)
	Female	45(56.2%)	35(43.8%)	1
Age	> 47 years	50(61.7%)	31(38.3%)	1.4(0.6-3.3)
	<= 47 years	16(53.3%)	14(46.7%)	1

Education	Up to primary	38(60.3%)	25(39.7%)	1.1(0.5-2.3)
	High school or above	28(58.3%)	20(41.7%)	1
Occupation	Employed	17(63.0%)	10(37.0%)	1.2(0.5-3.0)
	Unemployed/others	49(58.3%)	35(41.7%)	1
Marital status	Married	54(62.1%)	33(37.9%)	1.7(0.7-4.1)
	Unmarried/others	12(50.0%)	12(50.0%)	1
Socio economic status	BPL card holder	41(60.3%)	27(39.7%)	1.1(0.5-2.4)
	APL card holder	25(58.1%)	18(41.9%)	1
Distance to nearest health facility	<= 2 Km	53(61.6%)	33(38.4%)	1.5(0.6-3.6)
	>2 Km	13(52.0%)	12(48.0%)	1
Conveyance	Yes	50(63.3%)	29(36.7%)	1.7(0.8-4.0)
	No	16(50.0%)	16(50.0%)	1
Insurance/scheme membership	Yes	39(61.9%)	24(38.1%)	1.3(0.6-2.7)
	No	27(56.2%)	21(43.8%)	1
Barriers to access health care	No	44(69.8%)	19(30.2%)	2.7(1.3-6.0)*
	Yes	22(45.8%)	26(54.2%)	1
Health worker visit in last 6 months	Yes	61(60.4%)	40(39.6%)	1.5(0.4-5.6)
	No	5(50.5%)	5(50.5%)	1
Knowledge about NCDs	Not good	56(59.6%)	38(40.4%)	1.0(0.4-3.0)
	Good	10(58.8%)	7(41.2%)	1
Diagnosed NCD	No	34(59.6%)	23(40.4%)	1.0(0.5-2.2)

before 2011	Yes	32(59.3%)	22(40.7%)	1
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(* - P value <0.05, ** - P value <0.01)

Table – 3.4.4: Bivariate analysis results for utilization of treatment service

Variable	Categories	Utilized Treatment Services		Odds
		Yes-N(%)	No-N(%)	Ratio(95%CI)
Sex	Female	46(42.6%)	62(57.4%)	1.3(0.6-2.6)
	Male	17(37.0%)	29(63.0%)	1
Age	> 47 years	47(45.6%)	56(54.4%)	1.8(0.9-3.7)
	<= 47 years	16(31.4%)	35(68.6%)	1
Education	Up to primary	39(45.9%)	46(54.1%)	1.6(0.8-3.1)
	High school or above	24(34.8%)	45(65.2%)	1
Occupation	Unemployed/others	50(45.0%)	61(55.0%)	1.9(0.9-4.0)
	Employed	13(30.2%)	30(69.8%)	1
Marital status	Married	53(41.4%)	75(58.6%)	1.1(0.5-2.7)
	Unmarried/others	10(38.5%)	16(61.5%)	1
Socio economic status	BPL card holder	42(46.2%)	49(53.8%)	1.7(0.9-3.3)
	APL card holder	21(33.3%)	42(66.7%)	1

Distance to nearest health facility	>2 Km	14(42.4%)	19(57.6%)	1.1(0.5-2.3)
	<= 2 Km	49(40.5%)	72(59.5%)	1
Conveyance	Yes	48(48.0%)	52(52.0%)	2.4(1.2-4.9)*
	No	15(27.8%)	39(72.2%)	1
Insurance/scheme membership	Yes	39(47.0%)	44(53.0%)	1.7(0.9-3.3)
	No	24(33.8%)	47(66.2%)	1
Barriers to access health care	No	48(57.1%)	36(42.9%)	4.9(2.4-10.0)**
	Yes	15(21.4%)	55(78.6%)	1
Health worker visit in last 6 months	Yes	59(44.4%)	74(55.6%)	3.4(1.1-10.6)*
	No	4(19.0%)	17(81.0%)	1
Knowledge about NCDs	Not good	54(41.2%)	77(58.8%)	1.1(0.4-2.1)
	Good	9(39.1%)	14(60.9%)	1
Diagnosed NCD before 2011	Yes	29(43.9%)	37(56.1%)	1.3(0.7-2.4)
	No	34(38.6%)	54(61.4%)	1

(* - P value <0.05, ** - P value <0.01)

The timing of the clinics was the most common reason cited by subjects for non utilization of screening service, noncompliance to referral from screening camps and non utilization of treatment service.

3.5 Multivariate analysis

A binary logistic regression was done following bivariate analysis. The outcome variable, Compliance to referral, was avoided in this step as only one independent variable was found

significantly associated with it. The rest three variables were analyzed. Backward LR method was used during analysis. The independent variables which showed P value less than 0.1 were included in multivariate analysis.

The results showed that the visibility of the program was significantly associated with female sex**, having a convenient conveyance facility, having health worker visit* and NCD diagnosed before 2011**. Utilization of screening service had significant association with female sex**, lower level of education*, not having a regular employment*, having a convenient conveyance facility*, having health worker visit** and NCD diagnosed before 2011**. The factors which had significant relation to utilization of treatment service were higher age*, lower level of education*, not having a regular employment*, not having any reported perceived barriers**, having health worker visit and NCD diagnosed before 2011**.

(* - P value <0.05, ** -P value <0.01)

3.6 Institutional visits.

Out of the 23 institutions visited, three were CHCs, three were PHCs and 17 were FWCs. The CHCs conducted the NCD clinics on all days except Sundays. The FWCs were having the clinics on all Thursday afternoons. PHCs did not have a separate NCD clinic. The clinics at CHCs ran along with General Out-Patient Department and patients were seen along with those who came to the institution for other illness. Shortage of drugs was reported from all level of institutions. Several posts were created at CHCs for conducting NCD activities but most of them remained vacant. The registers were all up to date and it had details of people whom underwent screening and those who were diagnosed to have hypertension, diabetes or both. No evidence of any supervisory visit was seen in any of the institutions. Information,

education, communication/counselling (IEC) activities are not mentioned in any of the records.

CHAPTER 4 Discussion, conclusions and recommendations

4.1 Discussion

The various programs under public health sector show a wide range in the aspect of coverage. The MDA for filariasis shows coverage of only 52.3 percent⁴⁷ while immunization program covered almost 80.0 percent⁴⁸ of the beneficiaries. The RNTCP was able to bring 97.0 percent⁴⁹ of sputum smear positive cases under directly observed treatment – short course chemotherapy (DOTS).

The prevalence of NCDs is very high when compared to national figures. Hence the coverage of NPCDCS is a matter that should be given due importance. The findings of the study show that a significant association between health workers visit and NCD diagnosed before 2011 with utilization of the program. Hence it is possible that the utilization may be either health worker initiated or patient initiated. If it is because of health worker visit then that could be strengthened and if individuals are taking initiation then scaling up of IEC activities will improve the utilization. As there was a possibility of recall bias, the study could not look into treatment practice of people who were having NCDs before 2011. The coverage of various programs mentioned above makes us believe that the utilization of a program may be demand driven or self initiated by the beneficiaries.

The most common cause of blindness in India is cataract (62.6 percent).⁵⁰ When the NPCB was launched, it tried to cover all causes of blindness but later they modified strategy in such a way that cataract was given more importance. The program then concentrated on cataract detection camps, surgeries and post surgical follow up. Since the screening was cheap and the disease was curable, the program was able to serve most of the blinds in the nation. Similarly, the NPCDCS may also find the needs of the public first and then restructure the program to incorporate need based services.

The reports of RNTCP shows that a denominator based reporting are possible, which can bring out the proportion of people utilized the program as a whole and for each service. That will help to get the picture of people whom are missed out. Thus the program can be strengthened to bring them under cover.

Only 40.9 percent of people who are diagnosed to have NCDs are utilizing treatment service of the program but still the infrastructure not seems adequate for catering their needs. Hence, if more people are pulled towards the program, how to give good quality services to them is a matter of concern. So the political and administrative commitment could be increased for delivering good quality services to maximum number of beneficiaries. The RNTCP can be taken as an example. The strong international monitoring, good political commitment at all levels, specific and target based strategies, quality diagnostic tools, uninterrupted supply of good quality medicines, strong follow up and continuous delivery of services free of cost makes the RNTCP a successful program. Hence reconstructing the strategies in a target specific way may be helpful for making the implementation, supervision, and monitoring and evaluation process easier.

The role of new actors is also to be considered while planning the IEC activities.⁵¹ The decline in utilization of immunization services was influenced by other system of medicines. At least a few people among the study subjects believed that NCDs can be cured by them. So, maintaining the trust on modern medicine and clearing the false concepts of people regarding NCDs may also addressed while designing the IEC strategies.

The strengths of the study are it is the first evaluation study of NPCDCS in Kerala. The study was performed by single investigator; so inter observer bias is avoided. This study may be scaled up to be incorporated in to the Program as it can be done with minimal infrastructure, less ethical problems and with minimal time consumption.

The limitations of the study are proportion of females were high. Only self reported prevalence of NCDs was calculated, hence real burden of the disease in the community could not be estimated. The study gives a lower prevalence of hypertension which may be because of the bias in sampling and also bias due to self reported prevalence.

4.2 Recommendations

FWC level

- House visits may be strengthened and creating awareness about NCDs and NPCDCS may improve the utilization.
- Timing of the clinics may be changed so that more people can utilize the services of the program (Clinics can be conducted at Sundays or evening hours of working days).

- Retrieval measures may be taken when somebody is found missed from the program after registering into it.

PHC level

- Laboratories may be started at PHC level to carry out basic investigations for follow up of NCD patients so that they can access the services more easily when compared to going to CHCs.
- After the first visit to NCD clinic at CHCs, the patient may be followed up at PHCs and referral to higher centers may be done only if the disease becomes uncontrolled or any complications develop.

CHC level

- The NCD Medical Officer and other staffs which constitute the NPCDCS team may visit the PHCs under the CHC once in a week to conduct clinics.
- Separate clinics may be conducted at CHCs for NCD patients than seeing them at general out – patient department.

District/State level

- Uninterrupted supply of medicines could be ensured.
- Vacant posts may be filled.
- IEC activities may be strengthened which will help in improving visibility of the program.
- Supervision and monitoring activities may be improved and reporting system may be restructured in such a way that the actual coverage of the program can be collected from all levels of institutions.

- A proper guideline regarding the duties and responsibilities of the staff posted under the program may help in improving the coverage and quality of services delivered,
- Co-ordination of the program with other departments of Government, like Education, Local self government, Public works, Agriculture etc. may be done to prevent the early onset of NCDs.
- Collaboration with private sector may be effective in improving the program as almost 70 percent of the people in Kerala depends the private sector for their health care needs.

4.3 Conclusion

This is one of the first studies to assess the performance of the NPCDCS in Kerala after it rolled out in 2011. The study found low levels of visibility and utilization of the program among the community as well as gaps in information and effective management within the program. The level of visibility of the program shows that scaling up IEC activities may help to make public more aware about the program and NCDs. The utilization of NPCDCS is low compared to several other national programs. The reporting system does not have any tools to capture the number of beneficiaries whom are missed out. Considering the ever increasing burden of NCDs in Kerala an overall restructuring of program may help to deal with the prevailing NCD burden of the state more effectively.

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Annexure - 1

CLIENT CONSENT FORM

I, Dr. ShammyRajan, am a student from Achutha Menon Centre for Health Science Studies, SreeChitraThirunal Institute for Medical Science and Technology, Trivandrum.

I invite you to participate in “A study on utilization of diagnostic and therapeutic services of National Program for Prevention and Control of Cancer, Diabetes and Cardiovascular Diseases and Stroke (NPCDCS) from primary health care institutions in Pathanamthitta District.”

This is done as part of my course at SCTIMST.

Procedures- Specifically I am going to ask you some questions like your age, sex, education, disease status, utilization of health care facilities, disease status, treatment etc. The information collected from you will be kept confidential. No information related to your personal identity will be recorded.

Benefits- By participating in this study and answering to my questions you may not get any direct benefits but the information given by you will help to increase our understanding of the needs of the community in terms of Non- communicable disease prevention and control services and about how to improve the quality of services. Your participation in this study is voluntary and you have the right to refuse to participate or not to answer questions if you feel uncomfortable. If you change your mind, you have the right to withdraw at any time. If anything is not clear or if you need further information, I am ready to provide it to you. You can contact me at 9447461355 or the Institutional Ethics Committee Secretary at 0471-2524234 any time.

Declaration of the volunteer

I have understood that the aim of the study is to examine the utilization of NCD control program in Pathanamthitta district. I realize that I will be interviewed for the above said purpose. I am giving consent voluntarily to participate in this study.

Signature of the participant

Signature of investigator

Signature of the witness

Date

Annexure – 2

Client consent form - Malayalam

സമ്മതപത്രം - വ്യക്തിഗതം

നമസ്കാരം. എന്റെ പേര് ഡോ. ഷമ്മി രാജൻ എന്നു ആണ്. ഞാൻ തിരുവനന്തപുരത്തെ ശ്രീ ചിത്തിര തിരുനാളൂ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഫോർ മെഡിക്കൽ സയൻസ് ആൻഡ് ടെക്നോളജി, അച്യുത മേനോൻ സെന്റർ ഫോർ ഹെൽത്ത് സയൻസ് സ്റ്റഡീസിൽ നിന്നു വരുന്നു.

കേന്ദ്ര സർക്കാർ നടത്തുന്ന എൻ പിസിഡിസിഎസ്(National Programme for Cancer, Diabetes, Cardiovascular diseases, Stroke) എന്ന, പത്തനംതിട്ടയിൽ

നടക്കുന്ന, പരിപാടിയെ കുറിച്ചുള്ള എൻറെ പഠനത്തിലേക്ക് ഞാൻ നിങ്ങളെ ക്ഷണിക്കുന്നു. ഇത് എൻറെ വിദ്യാഭ്യാസത്തിൻറെ ഭാഗമാണ്.

പ്രവർത്തനങ്ങൾ: നിങ്ങളുടെ പ്രായം, ലിംഗം, വിദ്യാഭ്യാസം, രോഗവിവരം, ചികിത്സ, ആരോഗ്യസ്ഥാപനങ്ങളുടെ ഉപയോഗം എന്നിവയെ സംബന്ധിക്കുന്ന ചില ചോദ്യങ്ങൾ ചോദിച്ചേക്കാം. നിങ്ങളു നൽകുന്ന എല്ലാ വിവരങ്ങളും അതീവ രഹസ്യമായി സൂക്ഷിക്കുന്നതാണ്. നിങ്ങളെ കുറിച്ചുള്ള വ്യക്തിപരമായ യാതൊരു വിധ വിവരങ്ങളും രേഖപ്പെടുത്തുകയില്ല.

നേട്ടങ്ങൾ:- ഈ പഠനത്തിൽ പങ്കെടുക്കുന്നത് കൊണ്ട് നിങ്ങളു ക്ക് നേരിട്ടു നേട്ടങ്ങൾ ഒന്നും ഉണ്ടാകുക ഇല്ലെങ്കിലും നിങ്ങളു തരുന്ന വിവരങ്ങൾ സമൂഹത്തിനു വളരെ അധികം ഗുണം ചെയ്യും. സ്വയം സന്നദ്ധത മാത്രമാണു നിങ്ങളെ ഈ പഠനത്തിലേക്ക് ആകർഷിക്കുന്നത്. താല്പര്യം ഇല്ലാത്ത ചോദ്യങ്ങൾ ക്ക് നിങ്ങളു ക്ക് ഉത്തരം നൽകാതെ ഇരിക്കാം. പഠനത്തിൻറെ ഏത് അവസരത്തിൽ വെച്ചു വേണമെങ്കിലും നിങ്ങളു ക്ക് പിൻമാറാൻ അവസരമുണ്ട്. നിങ്ങളു ക്ക് എന്തെങ്കിലും സംശയം ഉണ്ടെങ്കിൽ എന്നെയോ (9447461355) എത്തിക്കൽ കമ്മറ്റിസെക്രട്ടറിയെയോ (0471- 2524234) ബന്ധപ്പെടാവുന്നതാണ്.

പ്രഖ്യാപനം

ഈ പഠനം പത്തനംതിട്ട ജില്ലയിലെ എൻ പിസിഡിസിഎസ് എന്ന പരിപാടിയെ കുറിച്ചുള്ളതാണെന്ന് മനസ്സിലായി. അതിനു വേണ്ടി ആണ് ഞാനുമായി അഭിമുഖം നടത്തുന്നത് എന്നു മനസ്സിലായി. അതിനാൽ ഈ പഠനത്തിൽ പങ്കെടുക്കാൻ ഞാൻ സ്വമേധയാ അനുവാദം തരുന്നു.

ഒപ്പ്

ചോദ്യകർത്താവിന്റെ ഒപ്പ്

സാക്ഷിയുടെ ഒപ്പ്

Annexure -3

Informed consent form for staff

Name of the

institution_____

I, Dr. Shammy Rajan, am a student from Achutha Menon Centre for Health Science Studies, Sree Chithra Thirunal Institute of Medical Science and Technology, Trivandrum.

- I invite you to participate in “A study on utilization of diagnostic and therapeutic services of National Program for Prevention and Control of Cancer, Diabetes and Cardiovascular Diseases and Stroke (NPCDCS) from primary health care institutions in Pathanamthitta District.”

Procedures- Specifically I am visiting your institution to observe the functioning of NPCDCS. Some questions may be asked regarding the operations of the program, its monitoring, evaluation etc. The information collected from you will be kept confidential. No information related to your personal identity will be recorded.

Benefits- By participating in this study and answering to our questions you may not get any direct benefits but the information given by you will help to increase our understanding of the needs of the community in terms of Non- communicable disease prevention and control services and about how to improve the quality of our health care delivery services. Your participation in this study is voluntary and you have the right to refuse to participate or not to answer any question that you feel uncomfortable with. If you change your mind, you have the right to withdraw at any time from the study. If anything is not clear or if you need further information, I am ready to provide it to you. You can contact me at 9447461355 or Institutional Ethics Committee Secretary at 0471- 2524234 any time.

Declaration of the volunteer

I have understood that the aim of the study is to examine the utilization of NPCDCS in Pathanamthitta district. I realize that I will be interviewed for the above said study purpose. I consent voluntarily to participate in this study.

Participant's signature

Signature of investigator

Signature of the witness

Date

Annexure - 4

Interview Schedule for Individual Survey

Sl no	Item	Options	
Socio Demographics			
1	Age	_____years	
2	Sex	0 Female 1 Male	<input type="checkbox"/> <input type="checkbox"/>
3	Education	0 Not educated 1 Primary school(1- 7th standard) 2 High school(10 th standard passed) 3 Higher secondary(12 th or Pre- degree passed) 4 Graduation and above	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4	Occupation	0 Unemployed 1 Housewife 2 Student 3 Others (Specify) _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5	APL/BPL card holder	0 BPL	<input type="checkbox"/>

		1 APL	<input type="checkbox"/>
		2 No card	<input type="checkbox"/>
6	Marital status	0 Unmarried	<input type="checkbox"/>
		1 Married	<input type="checkbox"/>
		2 Separated	<input type="checkbox"/>
		3 Divorced	<input type="checkbox"/>
		4 Spouse expired	<input type="checkbox"/>
• Access to health care services			
7.	What is the nearest government owned health care facility?		
8.	What is the distance to this health facility?		
9	Do you have transportation facility to the institution at convenient timing?	0 No	<input type="checkbox"/>
		1 Yes	<input type="checkbox"/>
		2 Not every time	<input type="checkbox"/>
10.	Have you visited any health care facilities in the past 12 months?	0 No	<input type="checkbox"/>
		1 Yes	<input type="checkbox"/>
11.	If yes, what type of facility did you visit?	0 Private allopathic	<input type="checkbox"/>
		1 Government allopathic	<input type="checkbox"/>
		2 Others	<input type="checkbox"/>
12.	Are you currently covered under any health insurance/Health scheme	0 No	<input type="checkbox"/>
		1 Yes	<input type="checkbox"/>

		2 Don't know	<input type="checkbox"/>
13.	If yes, specify		
14.	What are the barriers to receiving health care? [Multiple options possible]	0 No barriers 1 Distance 2 Transportation 3 Waiting time 4 Cost 5 Timing of services 6 Need to depend on someone else 7 Others (specify)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
15.	Have any government health workers (ASHA worker, Junior Public Health Nurse etc) visited your house in the past 6 months?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
Knowledge about NCDs			
16.	Have you heard about diseases like diabetes, hypertension etc.	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
17	Do you think these diseases are completely curable?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
18	If yes, then how can we cure it?		
19	Do you believe you have good knowledge on diseases like this?	0 No 1 Some knowledge	<input type="checkbox"/> <input type="checkbox"/>

		2 Good knowledge	<input type="checkbox"/>
20.	According to your knowledge, people at what age will develop the above said diseases	0 30-40 1 40-50 2 >50	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
21.	Do you think that the above said illnesses can be kept well in control by any of the factors given? [Multiple options possible]	0 Don't know 1 Diet control 2 Exercise 3 Early diagnosis 4 Early onset of treatment 5 Continuous treatment and follow up	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Non-communicable disease (NCD) status			
22.	Have you ever been diagnosed as having or been treated for any of the following conditions? (More than one options can be selected)	0 Not been diagnosed as having or been treated for any of these conditions 1 Hypertension 2 Diabetes mellitus	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
23.	When were you diagnosed as having hypertension or diabetes?	0 Before 2011 1 On or after January 2011	<input type="checkbox"/> <input type="checkbox"/>
24.	Have you ever registered for treatment	0 No	<input type="checkbox"/>

	from government health care facilities on or after January 2011?	1 Yes	<input type="checkbox"/>
25.	Are you aware of any program in the government system that provides free treatment for hypertension and diabetes?	0 No [End of survey] 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
26.	Why have you not accessed these services?	0 Don't know where is the nearest institution 1 Institution is far away 2 Cannot afford the cost 3 No trust on the institution 4 Others(specify)_____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Screening services of NPCDCS			
27.	Have you attended any screening program for diabetes / hypertension in the past 3 years (from 2011)?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
28.	If yes, who organized the program?	0 Don't know / not sure 1 Government health facilities 2 Others	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
29.	What all test did they do? [Multiple	0 Blood test	<input type="checkbox"/>

	options possible]	1 Blood pressure measurement 2 Height measurement 3 Weight measurement 4 Abdominal circumference measurement	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
30.	Were you informed that you need further check up / treatment?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
31.	Were you advised to visit a higher hospital/ health care institution?	0 No 1 Yes 2 Don't know / not sure	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
32.	Did you visit the hospital/ health care institution?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
33.	Reasons for not visiting the hospital/ health care institution	0 Timing of the clinic was not comfortable 1 Staff are not behaving well 2 Long waiting period 3 Others(specify)_____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
34.	Name of the hospital/ institution	_____	
35.	Is this hospital / institution a NCD clinic under the NPCDCS?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
36.	Were any of the tests repeated in this	0 Blood test	<input type="checkbox"/>

	institution? [Multiple options possible]	1 Blood pressure measurement 2 Height measurement 3 Weight measurement 4 Abdominal circumference measurement	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
37.	If blood tests were done, where was the blood taken from?	0 Fingertip 1 Vein 2 Don't remember	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
38.	Were you informed that you needed treatment after the check up?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
Treatment services of NPCDCS			
39.	Were you issued a treatment card? [Show sample card]	0 No 1 Yes 2 Don't know / not sure	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
40.	If yes, can you please show me the card?	0 Card incomplete 1 Not having / lost treatment card 2 Card complete and up to date	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
41.	Status of control of NCD as per treatment card [Recorded by the investigator after reviewing the card]	0 Not controlled 1 Controlled	<input type="checkbox"/> <input type="checkbox"/>
42.	Durability of the card [Recorded by the investigator after reviewing the card]	0 Not durable 1 Durable	<input type="checkbox"/> <input type="checkbox"/>

43.	Are you getting all required medicines from the institution?	0 No 1 Sometimes 2 Always getting	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
44.	Do you take your medicines regularly?	0 No 1 Sometimes 2 Yes	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
45.	If incomplete, or not having / lost treatment card, then are you still continuing the treatment?	0 Not on any treatment 1 Yes, continuing treatment from other places 2 Yes, continuing treatment from same programme using other documents like OP ticket	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
46.	Reasons for stopping treatment	0 I am normal now 1 No one to give medicines at proper time 2 Financial difficulty 3 Difficult to take medicines at work hours 4 Others(specify)_____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
47.	Reasons for changing place of treatment	0 Timing of the clinic was not comfortable 1 Staff are not behaving well	<input type="checkbox"/> <input type="checkbox"/>

		2 Long waiting period	<input type="checkbox"/>
		3 The disease is not getting controlled	<input type="checkbox"/>
		4 Others(specify)_____	<input type="checkbox"/>

Annexure -5

Interview schedule - Malayalam

പത്തനംതിട്ട ജില്ലയിലെ എൻ പി സി ഡി സി എസ് സേവനങ്ങളുടെ ഉപയോഗപ്പെടുത്തലിനെക്കുറിച്ച് ഉള്ള പഠനത്തിനായി തയ്യാറാക്കിയ ചോദ്യാവലി - വ്യക്തികൾക്ക് ഉള്ളത്

1	പ്രായം	_____ വയസ്സ്	
2	ലിംഗം	0 സ്ത്രീ 1 പുരുഷൻ	<input type="checkbox"/> <input type="checkbox"/>
3	വിദ്യാഭ്യാസം	0 വിദ്യാഭ്യാസ രഹിതൻ 1 പ്രൈമറി(1-7) 2 ഹൈ സ്കൂൾ (10) 3 12ആം ക്ലാസ്/ പ്രീഡിഗ്രി	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		4 ബിരുദം/ അതിനു മുകളിൽ	<input type="checkbox"/> <input type="checkbox"/>
4	തൊഴിൽ	0 തൊഴിൽ ഇല്ല 1 ഗൃഹഭരണം 3 വിദ്യാർത്ഥി 4 മറ്റുള്ളവ (വ്യക്തമാക്കുക) _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5	എ.പി.എൽ/ബി.പി.എൽ കാർഡ് ഉടമ	0 ബിപിഎൽ 1 എപിഎൽ 2 കാർഡ് ഇല്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6	വൈവാഹിക നില	0 വിവാഹം കഴിച്ചിട്ടില്ല 1 വിവാഹിതൻ/വിവാഹിത 2 അകന്നു കഴിയുന്നു 3 വിവാഹമോചനം നടത്തി 4 ഭാര്യ/ഭർത്താവ് മരിച്ചു	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7	ഏതാണ് നിങ്ങളുടെ ഏറ്റവും		

	അടുത്തുള്ള സർക്കാർ ആരോഗ്യസ്ഥാപനം?		
8	ഈ സ്ഥാപനത്തിലേക്ക് എത്ര ദൂരം ഉണ്ട്?		
9	ഈ സ്ഥാപനത്തിലേക്ക് പോകാൻ നിങ്ങളു്ക്ക് സൗകര്യപ്രദമായ നേരങ്ങളിൽ വാഹനസൗകര്യം ഉണ്ടോ?	0 ഇല്ല 1 സൗകര്യപ്രദമായ സമയത്ത് ഉണ്ട് 2 സൗകര്യപ്രദമായ സമയത്ത് ഇല്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10	കഴിഞ്ഞ 12 മാസത്തിനിടയിൽ നിങ്ങളു് ഏതെങ്കിലും ആരോഗ്യസ്ഥാപനം സന്ദർശിച്ചിട്ടുണ്ടോ?	0 ഇല്ല 1 ഉണ്ട്	<input type="checkbox"/> <input type="checkbox"/>
11	ഉണ്ടെങ്കിൽ ഏത് തരത്തിൽ ഉള്ള സ്ഥാപനം ആയിരുന്നു?	0 സ്വകാര്യ അല്ലോപതി 1 സർക്കാർ അല്ലോപതി 2 മറ്റുള്ളവ	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12	നിങ്ങളു് ഏതെങ്കിലും ആരോഗ്യ	0 ആണ് 1 അല്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	പദ്ധതി/ഇൻഷുറൻസ് ഇൽ അങ്കം ആണോ?	2 അറിയില്ല	
13	ആണെങ്കിൽ ഏത്?		
14	ആരോഗ്യസേവനം ലഭിക്കാൻ നിങ്ങളുൾക്ക് ഉള്ള തടസ്സങ്ങളുൾ എന്താണ്?(ഒന്നിലുൾ കൂടുതലുൾ ഉത്തരങ്ങളുൾ ആവാം)	0 തടസ്സങ്ങളുൾ ഇല്ല 1 ദൂരം 2 യാത്ര സൗകര്യം 3 കാത്തിരിപ്പുൾ 4 ചിലവുൾ 5 പ്രവർത്തന സമയം 6 പരാശ്രയം വേണം 7 മറ്റുള്ളവ_____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
15	കഴിഞ്ഞ 6 മാസത്തിനിടയിലുൾ സർക്കാർ ആരോഗ്യപ്രവർത്തകർ നിങ്ങളുടെ വീടുൾ സന്ദർശിച്ചിട്ടുണ്ടോ?	0 ഇല്ല 1 ഉണ്ടുൾ	<input type="checkbox"/> <input type="checkbox"/>
16	പ്രമേഹം, രക്തസമ്മർദം മുതലായ രോഗങ്ങളെ	0 ഇല്ല 1 ഉണ്ടുൾ	<input type="checkbox"/> <input type="checkbox"/>

	കുറിച്ചു നിങ്ങളു കേട്ടിട്ടുണ്ടോ?		
17	ഈ രോഗങ്ങളു ചികിത്സിച്ചു ഭേദമാക്കാം എന്നു നിങ്ങളു വിശ്വസിക്കുന്നുണ്ടോ?	0 ഇല്ല 1 ഉണ്ട്	<input type="checkbox"/> <input type="checkbox"/>
18	ഉണ്ടെങ്കിലു അതു എങ്ങനെ?		
19	നിങ്ങളു ക്കു ഈ രോഗങ്ങളെ കുറിച്ചു നല്ല അറിവു ഉണ്ടെന്ന് വിശ്വസിക്കുന്നുണ്ടോ?	0 ഇല്ല 1 കുറച്ചു അറിവുണ്ട് 2 നല്ല അറിവുണ്ട്	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
20	നിങ്ങളുടെ അറിവിനു പ്രകാരം ഏതു പ്രായത്തിലു ആണ് ഈ രോഗങ്ങളു വരുന്നത്?	0 30-40 1 40-50 2 >50	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
21	ഈ പറഞ്ഞ രോഗങ്ങളു ഏതൊക്കെ രീതിയിലു നിയന്ത്രിക്കാം? (ഒന്നിലു കൂടുതലു ഉത്തരങ്ങളു	0 അറിയില്ല 1 ആഹാരനിയന്ത്രണം കൊണ്ടു 2 വ്യായാമം കൊണ്ടു 3 നേരത്തെ കണ്ടുപിടിച്ചാലു	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	ആവാം)	4 നേരത്തെ ചികിത്സ തുടങ്ങിയാൽ 5 തുടർച്ചയായ ചികിത്സയും പരിശോധനയും കൊണ്ട്	<input type="checkbox"/> <input type="checkbox"/>
22	നിങ്ങളു്ക്ക് ഇതില് പറയുന്ന ഏതെങ്കിലും രോഗം ഉണ്ടെന്ന് കണ്ടു പിടിക്കുകയോ ചികിത്സിക്കുകയോ ചെയ്തിട്ടുണ്ടോ?	0 ഇല്ല 1 പ്രമേഹം 2 രക്ത അതിസമ്മർദം	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
23	എന്നാണ് നിങ്ങളു്ക്ക് രോഗം ഉണ്ടെന്ന് കണ്ടു പിടിച്ചത്?	0 ജനുവരി 2011 ഇനു മുൻപ് 1 ജനുവരി 2011 ഇനു ശേഷം	<input type="checkbox"/> <input type="checkbox"/>
24	2011 ജനുവരി ക്കു ശേഷം നിങ്ങളു്ക്ക് പ്രമേഹമോ രക്ത അതിസമ്മർദമോ ഉണ്ടെന്ന് കണ്ടു പിടിച്ചിട്ടുണ്ടോ?	0 ഇല്ല 1 ഉണ്ട്	<input type="checkbox"/> <input type="checkbox"/>
25	പ്രമേഹം, രക്ത അതിസമ്മർദം മുതലായ	0 ഇല്ല(ചോദ്യങ്ങളു് അവസാനിച്ചു)	<input type="checkbox"/> <input type="checkbox"/>

	<p>രോഗങ്ങളിൽ സർക്കാരിൽ നിന്നു സൗജന്യമായി ചികിത്സ കിട്ടുന്ന പദ്ധതികളിൽ എന്തെങ്കിലും ഉള്ളതായി നിങ്ങളിൽ അറിയാമോ?</p>	<p>1 അറിയാം</p>	
26	<p>നിങ്ങളിൽ എന്തു കൊണ്ട് ഈ പദ്ധതി ഉപയോഗിച്ചില്ല?</p>	<p>0 അടുത്തുള്ള സ്ഥാപനം ഏത് എന്നു അറിയില്ല</p> <p>1 സ്ഥാപനം ദൂരെ</p> <p>2 ചിലവ് അമിതം</p> <p>3 സ്ഥാപനത്തിൽ വിശ്വാസം ഇല്ല</p> <p>4</p> <p>മറ്റുള്ളവ _____</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
27	<p>നിങ്ങളിൽ പ്രമേഹം രക്ത അതിസമ്മർദ്ദം എന്നിവ കണ്ടു പിടിക്കാനുള്ള ഏതെങ്കിലും രോഗനിർണ്ണയ പരിപാടിയിൽ പങ്കെടുത്തിട്ടുണ്ടോ(2011 ഇനു</p>	<p>0 ഇല്ല</p> <p>1 ഉണ്ട്</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

	ശേഷം)?		
28	ഉണ്ടെങ്കിൽ ആ പരിപാടി ആരാണ് നടത്തിയത്?	0 അറിയില്ല 1 സർക്കാർ 2 മറ്റുള്ളവ	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
29	അവർ എന്തൊക്കെ പരിശോധനകളു് നടത്തി?(ഒന്നിലു് കൂടുതലു് ഉത്തരങ്ങളു് ആവാം)	0 രക്ത പരിശോധന 1 രക്ത സമ്മർദ്ദം 2 ഉയരം 3 തൂക്കം 4 ഉദര വിസ്തീർണം	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
30	നിങ്ങളു് കൂടുതലു് പരിശോധനകളു്/ചികിത്സ ആവശ്യം ഉണ്ടെന്ന് അവർ അറിയിച്ചോ?	0 ഇല്ല 1 അറിയിച്ചു	<input type="checkbox"/> <input type="checkbox"/>
31	കുറച്ചു കൂടി ഉയർന്ന ഒരു ആരോഗ്യ സ്ഥാപനത്തിലു് പോകാൻ അവർ ഉപദേശിച്ചോ?	0 ഇല്ല 1 അറിയിച്ചു 2 അറിയില്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
32	നിങ്ങളു് ആ സ്ഥാപനം	0 ഇല്ല	<input type="checkbox"/> <input type="checkbox"/>

	സന്ദർശിച്ചോ?	1 സന്ദർശിച്ചു	
33	സന്ദർശിച്ചില്ലെങ്കിൽ അതിനു കാരണം എന്താണ്?	0 പ്രവർത്തന സമയം സൗകര്യപ്രദം അല്ല 1 പ്രവർത്തകരുടെ പെരുമാറ്റം മോശം 2 നീണ്ട കാത്തിരിപ്പ് 3 മറ്റുള്ളവ_____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
34	സന്ദർശിച്ച സ്ഥാപനത്തിന്റെ പേര് എന്താണ്?		
35	ഈ സ്ഥാപനം എന്ത് പിസിഡിസിഎസ് പദ്ധതിയിൽപ്പെട്ടതാണോ?	0 അല്ല 1 ആണ്	<input type="checkbox"/> <input type="checkbox"/>
36	ഈ പറയുന്നതിൽ ഏതെങ്കിലും പരിശോധനകള് അവിടെ ആവർത്തിച്ചോ?(ഒന്നിലധികം കൂടുതൽ ഉത്തരങ്ങള് ആവാം)	0 രക്ത പരിശോധന 1 രക്ത സമ്മർദ്ദം 2 ഉയരം 3 തൂക്കം 4 ഉദര വിസ്തീർണം	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

37	രക്ത പരിശോധന നടത്തിയെങ്കിൽ എവിടെ നിന്നാണ് രക്തം എടുത്തത്?	0 വിരല് തുംബില് നിന്നു 1 ഞരമ്പില് നിന്നു 2 ഓര്മ ഇല്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
38	പരിശോധനക്ക് ശേഷം നിങ്ങളുടെ ചികിത്സ ആവശ്യം ഉണ്ടെന്ന് പറഞ്ഞോ?	0 ഇല്ല 1 പറഞ്ഞു 2 ഓര്മ ഇല്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
39	നിങ്ങളുടെ അവർ ഒരു ചിട്ടു തന്നോ?(ചിട്ടിന്റെ നക്കല് കാണിക്കുക)	0 ഇല്ല 1 തന്നു 2 ഓര്മയില്ല	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
40	തന്നെങ്കില് അത് കാണിക്കാമോ?	0 ചിട്ടു പൂര്ണമല്ല 1 ചിട്ടു ഇല്ല/നഷ്ടപ്പെട്ടു 2 ചിട്ടു പൂര്ണം	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
41	ചിട്ടു പ്രകാരം രോഗം നിയന്ത്രണത്തില് ആണോ എന്നു പരിശോധിക്കുക	0 അല്ല 1 ആണ്	<input type="checkbox"/> <input type="checkbox"/>
42	ചിട്ടു നിലവാരം ഉള്ളതാണോ എന്നു പരിശോധിക്കുക	0 അല്ല 1 ആണ്	<input type="checkbox"/> <input type="checkbox"/>

43	നിങ്ങളുടെ ആവശ്യമുള്ള മരുന്നുകളെ കൃത്യമായി കിട്ടുന്നുണ്ടോ?	0 ഇല്ല 1 ചിലപ്പോൾ 2 ഉണ്ട്	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
44	നിങ്ങളുടെ മരുന്നുകളെ കൃത്യമായി കഴിക്കാറുണ്ടോ?	0 ഇല്ല 1 ചിലപ്പോൾ 2 ഉണ്ട്	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
45	പരിശോധന ചിട്ടു പരിപൂർണ്ണം അല്ലെങ്കിൽ അഥവാ നഷ്ടപ്പെട്ടു പോയെങ്കിൽ, നിങ്ങളുടെ ഇപ്പോഴും ചികിത്സയിലാണോ?	0 അല്ല 1 അതേ, മറ്റ് സ്ഥലങ്ങളിൽ നിന്നു 2 അതേ, ഓപി ചിട്ടു ഉപയോഗിച്ച്	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
46	ചികിത്സ നിർത്തിയെങ്കിൽ അതിന് ഉള്ള കാരണങ്ങളെ എന്തൊക്കെ?	0 എന്നിങ്ങനെ ഇപ്പോൾ അസുഖം ഇല്ല 1 എന്നിങ്ങനെ മരുന്ന് എടുത്തു തരാൻ ആരും ഇല്ല 2 സാമ്പത്തിക ബുദ്ധിമുട്ട് 3 ജോലി സമയത്ത് മരുന്ന്	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		കഴിക്കാൻ ബുദ്ധിമുട്ട് 4 മറ്റുള്ളവ	<input type="checkbox"/>
47	ചികിത്സ സ്ഥാപനം മാറ്റിയെങ്കിൽ അതിനു ഉള്ള കാരണങ്ങളെ എന്തൊക്കെ?	0 പ്രവർത്തന സമയം സൗകര്യപ്രദം അല്ല 1 പ്രവർത്തകരുടെ പെരുമാറ്റം മോശം 2 നീണ്ട കാത്തിരിപ്പ് 3 രോഗം നിയന്ത്രിക്കാൻ പറ്റിയില്ല 4 മറ്റുള്ളവ	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Annexure – 6

Permission letter from District Medical Officer (Health), Pathanamthitta

-: ഭരണഭാഷ - മാതൃഭാഷ :-

പത്തനംതിട്ട ജില്ലാ മെഡിക്കൽ ഓഫീസറുടെ (ആരോഗ്യം) നടപടിക്രമങ്ങൾ

വിഷയം:-ആരോഗ്യവകുപ്പ് ജീവനക്കാര്യം - പബ്ലിക് ഹെൽത്തുമായി ബന്ധപ്പെട്ട പഠനം നടത്തുന്നതിന് അനുവാദം നൽകുന്ന ഉത്തരവ്
സൂചന:- അപേക്ഷ തീയതി 16/04/2014

ഉത്തരവ് നമ്പർ എ1-5061/14/ജി.മെ.ആ.പത്തനംതിട്ട/തീയതി.22.5.2014

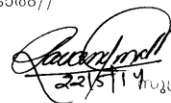
തുമ്പമൺ സാമൂഹികാരോഗ്യകേന്ദ്രത്തിലെ അസിസ്റ്റന്റ് സർജൻ, ഡോ.ഷമ്മി രാജൻ പബ്ലിക് ഹെൽത്തുമായി ബന്ധപ്പെട്ട് ഈ ജില്ലയിലെ പ്രാഥമികാരോഗ്യകേന്ദ്രങ്ങളിലും സബ്സെന്ററുകളിലും സന്ദർശിക്കുന്നതിന് അനുവാദം നേടിയിട്ടുള്ളതാകുന്നു. ടിയാൾക്ക് ഔദ്യോഗിക കൃത്യ നിർവ്വഹണത്തിൽ വീഴ്ച വരുത്താതെ പഠനം നടത്തുന്നതിന് അനുവാദം നൽകി ഉത്തരവാകുന്നു.

ഒപ്പ്
ഡോ.ഗ്രേസി ഇത്താക്ക് കെ
ജില്ലാ മെഡിക്കൽ ഓഫീസർ (ആരോഗ്യം)

ഡോ.ഷമ്മി രാജൻ
അസിസ്റ്റന്റ് സർജൻ

- പകർപ്പ്
- 1. മെഡിക്കലോഫീസർ ഇൻ ചാർജ്, സാമൂഹികാരോഗ്യകേന്ദ്രം,തുമ്പമൺ
- 2. ഫയൽ/കരുതൽ ഫയൽ

//ഉത്തരവിൻ പ്രകാരം//


22/5/14 സൂചന



gtp

Annexure - 7

Check list for Institutional Visit

1	Name of institution		
2	Type	SC PHC CHC	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3	Timing of clinic		
4	Weekday of clinic	<input type="checkbox"/> M <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> T <input type="checkbox"/> F <input type="checkbox"/> S	
5	Are all equipments required for conducting the NCD clinic present?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
6	Are they all in working condition?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
7	If no, which are the instruments not in working condition?	0 Glucometer 1 BP apparatus 2 Stadiometer 3 Measuring tape 4 Weighing machine	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8	Is the stock of medicines adequate for the clients?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
9	If no, what all medicines	Specify	

	are in short?		
10	Is the institution clearly visible from main road there?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
11	If no, is there a proper sign board for directing to the institution	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
12	Is the timing and day of clinic mentioned visibly	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
13	Is the NCD register up to date?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
14	If incomplete, what are missing?(specify)		
15	Is there a record on defaulter retrieval actions?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
16	Is there any record on IEC activities for screening and treatment of NCDs	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
17	How is the reporting of NCD clinic conducted?		

	Format Frequency Reporting authority Check for completeness accuracy timeliness		
18	Do you conduct evaluation of NPCDCS in review meetings?	0 No 1 Yes 3 Sometimes 4 Almost always	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
19	Have there been any supervisory visits in the last 6 months?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>
	If yes, then by whom all? (specify)		
For CHC use only			
20	Are all NPCDCS posts filled in this institution?	0 No 1 Yes	<input type="checkbox"/>

			<input type="checkbox"/>
21	If no, which all posts are vacant? (specify)		
22	Is there a laboratory which delivers services of NPCDCS?	0 No 1 Yes	<input type="checkbox"/> <input type="checkbox"/>