



Community-Oriented Primary Care

Jaffna

A Model Primary Care in Sri Lanka

The story so far

2017-2022

Department of Community and Family Medicine,
University of Jaffna, Sri Lanka.

Community-Oriented Primary Care

Jaffna

A Model Primary Care in Sri Lanka

The story so far

2017 – 2022

Department of Community and Family Medicine,
University of Jaffna, Sri Lanka.

Authors

Dr. S.Kumaran

Miss. Y Shanmuganathan

Mrs. R. P. Saseenthan

Mrs. V. Sureskumar

Dr. P.A.D Coonghe

Publishers

Department of Community and Family Medicine,
University of Jaffna, Sri Lanka.

Pages: IV + 63

ISBN 978-624-98709-2-5

Contents

1. Introduction.....	1
2. Clinical Activities	2
2.1 Institution-based care.....	2
2.1.1. Family Medicine Special Clinic.....	3
2.1.2. Non-Communicable Disease (NCD) Clinic	6
2.1.3. Healthy lifestyle clinics.....	8
2.1.4. Telemedicine	10
2.1.5. Diabetic foot care clinic	11
2.1.6. Laboratory/bleeding clinic	14
2.2 Home-based geriatric care	16
2.2.1 Home visit.....	16
2.3 Community outreach activities.....	18
2.3.1 Neurodevelopment clinic	18
2.3.2 Women empowerment clinic	20
2.3.3 Health promotion for drug addicts / Counseling.....	23
2.3.4 Health promotion for school children	24
2.3.5 Community based nutrition program	26
2.3.6 Community based geriatric care.....	29
3. Students' teaching activities	31
3.1 Family Medicine clinical appointments and Field work	31
4. Practice Management.....	33
4.1 The staff of FHC and duty designations	33
4.2 Clinical and medical records	34
4.3 Infection control measures	37
4.4 Research, Data and Publications.....	40
4.5 Family Health Center Development / Standards operations of procedures/ Future plan on development.....	41
4.6 Internal and external environment maintenance and Family Health Center Garden	41
5. Narrative write-ups by medical students about the functions of FHC.....	43
5.1 NCD Clinic Day	43
5.2 Telemedicine.....	45
5.3 Health Information System.....	47
5.4 Home visit	50
5.5 Community Outreach Activities.....	53
5.6 Healthy lifestyle/weight reduction clinic.....	57
5.7 Neurodevelopment Clinic.....	59
5.8 Bleeding Clinic.....	60
6. Dissemination of Knowledge.....	61
6.1 Oration.....	61
6.2 Journal Articles.....	61
6.3 Abstracts	62
7. References.....	63

List of Figures

Figure 1 Routine clinical activities- Infra Red (IR) therapy	4
Figure 2 Routine clinical activities-Blood sugar checkup	4
Figure 3 Routine clinical activities-Blood pressure monitoring.....	4
Figure 4 Routine clinical activities-Weight measuring.....	5
Figure 5 Routine clinical activities-Height measuring.....	5
Figure 6 Medical Students practicing clinical routines.....	5
Figure 7 Clinical records maintenance.....	5
Figure 8 Medical Students practicing clinical routines.....	7
Figure 9 Available medical records in FHC.....	8
Figure 10 Healthy life-style clinics by nutritionist.....	9
Figure 11 Telemedicine team.....	11
Figure 12 Foot care assessment by Nursing Officer	12
Figure 13 Health education by Nursing Officer.....	13
Figure 14 Teaching diabetic foot care to medical students.....	13
Figure 15 Medical students practicing foot care assessment	13
Figure 16 Blood drawing by Nursing officer	15
Figure 17 Medical students practicing blood drawing	15
Figure 18 Laboratory activities.....	15
Figure 19 Routine Home visit activity	17
Figure 20 Medical students practicing home visit.....	18
Figure 21 Women empowerment activities and get together.....	23
Figure 22 Pharmacist planning clinical activities.....	24
Figure 23 Medical students' involvement in school health promotion program.	26
Figure 24 Photo collection of nutrition programs and healthy meal providing by mothers' club.....	28
Figure 25 Stake holders' meeting on community-based geriatric care.....	31
Figure 26 Family medicine clinical appointment group	32
Figure 27 Consultant Family Physician Teaching Family Medicine	32
Figure 28 Photographs collection of family medicine clinical appointment activities of medical students	33
Figure 29 Storage of clinical records in FHC.....	35
Figure 30 Variety of medical records use in FHC	36
Figure 31 Routine clinical data entering by medical students.....	36
Figure 32 Availability of medical records in FHC.....	37
Figure 33 Waste management system in FHC.....	38
Figure 34 Infection control precautions during COVID 19 pandemic.....	40
Figure 35 Internal and external structure FHC.....	42
Figure 36 Model home gardening in FHC	43

1. Introduction

“Wherever the art of medicine is loved, there is also a love of humanity”

Family Medicine is a specialty that focuses on general healthcare for people of all ages, from newborns to seniors and it was introduced in the curriculum in 2011. Following that the department was renamed as "Department of Family and Community Medicine" on June 24, 2011. Later Family Health Center (FHC) was established on 12.08.2012 in Kondavil.

This article describes the experiences of a novel, evidence-based approach that involves patients and their family members in delivering health care, providing medical education, and conducting research at a primary care institution known as a "Family Health Care Center." Family Health Care Center was established in the newly built maternity block of the District Hospital, Kondavil, with the full support of the hospital's District Medical Officer (DMO) and the Regional Director of Health Services (RDHS), Jaffna. The authors created the basic structural drawings, and the final plan was agreed upon after several discussions with the authorities of both the Provincial Ministry of Health and academics at the Faculty of Medicine, University of Jaffna. The center is an extended arm of the Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna.

This center welcomed young, unemployed family members who had dropped out of formal education after secondary school. Job titles were created based on their identified areas of interest, and job trainings provided to them helped in capacity building as well as social recognition. These trained community members play a variety of roles in the delivery of FHC services, as listed below.

Family medicine is the focal point of primary care, and unlike other specialties that focus on a specific organ or disease, family medicine is a field in which physicians treat most ailments and provide comprehensive health care to people of all ages—from newborns to seniors. Primary care is the provision of integrated, accessible health care services by physicians and their support teams to patients

while developing a sustained relationship with patients within the family and community. The care is person-centered, team-based, community-aligned, and designed to achieve better health and better care at lower costs.

In Sri Lanka, the delivery of primary care is no easy task. Inadequate human resources, limited infrastructure (buildings, furniture, labs, and equipment), a lack of a multidisciplinary approach in team work, inadequate government policies and fund allocation, and a lack of awareness of primary care services among the general population are identified as the main obstacles in delivering the services. The delivery of health services is made more challenging by patients who have multiple health issues, complicated psychosocial problems, transportation issues from their homes to health care facilities, and a lack of awareness of their medical conditions. In addition, the preventive sector is often overlooked in times of crisis, which makes the situation worse. Research studies also play a significant role in primary care as the findings can be used for the betterment of public health-related issues. But such studies have become challenging due to inadequate public participation that affects the data collection and insufficient funding to carry out research. When the healthcare system is in crisis, clinical medicine will receive more attention than research. Further, most doctors also shift their attention away from research. Despite the challenges outlines above, Family Health Center was established and now offers various services to the public as described below.

2. Clinical Activities

Clinical activities are carried out in three settings: the FHC, the patient's home, and the community. Patients and the general public are actively engaged in the delivery of health care services in this setting.

2.1 Institution-based care

It includes,

1. Family Medicine Special Clinic
2. Non-Communicable Disease (NCD) Clinic
3. Healthy lifestyle clinics
4. Telemedicine

5. Diabetic foot care clinic
6. Laboratory/bleeding clinic

2.1.1. Family Medicine Special Clinic

Family Medicine Special Clinic was started to teach family medicine principles to undergraduate medical students who are pursuing family medicine clinical appointments as well as to provide a patient-oriented health service. The doctor-patient relationship and good consultation skills are important in building a successful healthcare system. This clinic serves as the first point of contact between the doctor and the patient. The following are being considered by the family medicine special clinic.

- Management of presenting problems and behaviors.
- Modification of help seeking.
- Management of continuing problems.
- Opportunistic health promotions.

The Family Medicine Special Clinic is conducted at the Family Health Center according to a set of procedures. Such as;

- It is held every Thursday.
- Conducted by a consultant family physician and facilitated by a nursing officer, a medical officer, a nutritionist, a laboratory attendant, and the health assistant.
- A clinical appointment is given to patients with special co-morbidities and various other complications.
- Each patient has a specific time allocation.
- People out of the allocated GS Division (Kondavil J115-J120) also come to this clinic for consultation.
- People are now visiting to this clinic as a result of community-based geriatric care screening activities and telemedicine help line services.

- This clinic serves as the patient's first point of contact with the physician or medical officer.
- A record called the "Family Medicine Special Clinic File" is maintained for the patient's registration.



Figure 1 Routine clinical activities- Infra Red (IR) therapy



Figure 2 Routine clinical activities-Blood sugar checkup



Figure 3 Routine clinical activities-Blood pressure monitoring



Figure 4 Routine clinical activities-Weight measuring



Figure 5 Routine clinical activities-Height measuring



Figure 6 Medical Students practicing clinical routines



Figure 7 Clinical records maintenance

2.1.2. Non-Communicable Disease (NCD) Clinic

Non-communicable Diseases (NCDs) are a common problem that requires lifelong treatment and imposes a significant burden on one's lifestyle. 80% of NCDs are preventable with appropriate dietary and lifestyle choices. Over the last few decades, NCDs, which are chronic in nature and slow in progression, have superseded communicable diseases.

The four main types of NCDs are cardiovascular disease (like ischemic heart disease and stroke), Cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma), and diabetes.

As the leading cause of death globally, NCDs were responsible for 68% of the 56 million deaths in 2012. More than 40% of them were premature deaths; under the age of 70, almost three-quarters of all NCD deaths and the majority of premature deaths occur in low- and middle-income countries like Sri Lanka.

The importance of conducting NCD clinics in primary care is summarized below.

- To identify the long pre-symptomatic phase before the diagnosis. Simple tests to detect preclinical diseases are readily available.
- The duration of the disease is a strong predictor of adverse outcomes.
- Effective interventions are available to prevent disease progression and reduce complications.

As the Family Health Center is a model of a primary care institution, routine NCD clinics are conducted. Activities carried out in the NCD clinic of FHC are listed below.

- It is held every Saturday and Friday.
- Conducted by a consultant family physician and facilitated by a nursing officer, medical officer, nutritionist, laboratory attendant, and health assistant.
- The total number of patients registered for this clinic is 200.

- All patients are divided into two major categories: Diabetic Clinic patients (DC) and Medical Clinic patients (MC), who are also further divided into eight clinical groups. (A, B, C, D, K, L, M, N).
- Each group has specific dates for routine clinical checkups, drug collection, and investigations.
- Rotationally, the groups follow routine clinical activities every month.
- Patients attend the clinic will be marked by the staff, and the absentees will be called to follow the clinic without any interruptions.
- The distribution of drugs is facilitated by Divisional Hospital Kondavil.



Figure 8 Medical Students practicing clinical routines

HEALTH RECORD - ആരോഗ്യ പ്രവർത്തനം
Community Oriented Primary Care, Nallur
ആരോഗ്യ പ്രവർത്തനം, നല്ലൂർ

Case No:
Individual No:

Name (Given):
Type of Sex: Male Female

Age (Years): M F

Address (Home):

Diagnosis (Diagnosed): DM
 H
 HTN

Department of Community & Family Medicine
Faculty of Medicine, University of Jaffna.

Clinical Notes
2022 മെഡിക്കൽ ക്ലിനിക്കിൽ - 15.10.2022
2022 മെഡിക്കൽ ക്ലിനിക്കിൽ - 15.10.2022

DATE: 15/10/2022

Diabetes / Hypertension / BA / COPD / Thyroid disorders / Dyslipidemia / Other

Wt: 62.6	Ht: 1.40	BSM: 28.10
BP: 133/83	PR: 92	PEFR:
Drug compliance: Good Average Poor	ACT score:	CVD risk by assessment:

LAST BLOOD REPORT

FBS: 192.0	T.C:	S.Cr:
DATE: -	DATE: -	DATE: -

2022 മെഡിക്കൽ ക്ലിനിക്കിൽ - 11/11/2022
2022 മെഡിക്കൽ ക്ലിനിക്കിൽ - 09/11/2022 - AB.

FBS: V/C	T.C	S.Cr
----------	-----	------

TSH - - 0.331 mg/ul.
(14/09/2022) -
c/o: No more complaint.

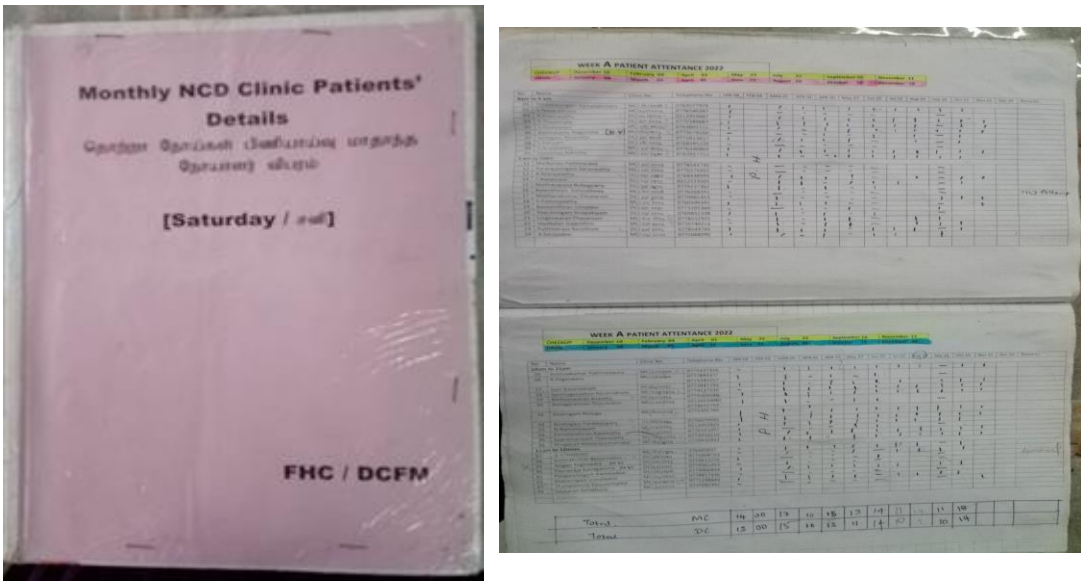


Figure 9 Available medical records in FHC

2.1.3. Healthy lifestyle clinics

Healthy lifestyle clinics focus on risk factors for Non-Communicable Diseases (NCDs) which can be managed at primary care level. Multi-disciplinary perception for NCD care is an evidently proven strategy. Key to the prevention of most NCDs is attitudinal and behavioral change, which will lead to positive modifications in dietary habits, exercise, stress management, smoking, and alcohol use. To lead a good healthy life; it is necessary to follow some recommended strategies, which are listed below.

- Raising awareness of NCDs and positive lifestyle changes among the population as well as target groups including high-risk groups, volunteers, health care staff, and policymakers, is of paramount importance.
- Create awareness of correct weight, waist circumference, and BMI of all family members, to identify obesity / central obesity.
- Monitor substance usage whenever the patient consults, should be enquired about smoking, alcohol consumption, and other substance abuse, and warn them about the impact on their health.

- Assist people who want to quit using drugs or alcohol by arranging for counseling and follow-up. Arrange counseling training for the medical staff as well.
- Pharmacotherapy could also be considered to reinforce smoking cessation. Conduct awareness programs for school children, females, and other adults.
- Make it a habit to inquire about patients' harmful use of substances. Educate patients and the general public about the dangers of excessive alcohol consumption. This could be done directly one-on-one with the assistance of supporting staff, health care volunteers, teachers, and so on.
- When identifying patients who want to quit, assist them by referring them to rehabilitation units.
- To achieve the above stated goals, dietary modification and cessation of smoking, alcohol consumption and substance abuse activities are conducted by the Family Health Center. Facilitated by the registered nutritionist and the registered pharmacist.
- This clinic serves patients who require dietary changes as well as the cessation of smoking and alcohol consumption.
- A record is maintained for registration purposes.
- A progress report will be given to patients by staff.



Figure 10 Healthy life-style clinics by nutritionist

2.1.4. Telemedicine

Telemedicine enables remote physicians to see patients virtually whenever and wherever they are needed. Medical professionals can meet with patients using video or audio equipment to diagnose, treat, and perform follow-up care just as in any traditional medical visit, but in a virtual setting.

The impact and applications of telemedicine with hospitals, providers, and patients continue to grow as all parties continue to adapt to receiving and delivering care in this modern healthcare setting.

The road to successful execution, as with any innovation begins with clearly defined goals and objectives. To do this, you must first need to assess what this means for your medical facility, patients, and providers. To help you get started, we've outlined four potential (and effective) goals to set in place to ensure your telemedicine program is successful and has the greatest impact on your medical facility, patients, and physicians.

Advantages of Telemedicine are

- Comfort and convenience
- Control of infectious illnesses
- Better assessment
- Family connections and improved communications
- Increased access to care
- Improved continuity of care
- Cost savings
- Flexibility
- Increased efficiency
- Increased access to specialists

To fulfill the services, Family Health Center offers physical space and technical support,

- The pilot activity of telemedicine helpline services is going on with the combination of the Atrial Fibrillation research team.

- Aimed to cover the health needs of the 10,000 population in Northern Province.



Figure 11 Telemedicine team

2.1.5. Diabetic foot care clinic

The incidence of diabetes is increasing worldwide and especially in low-middle-income countries like Sri Lanka. The Diabetic microvascular and macro vascular disease leads to ischemia, lack of sensation, and deformities in the foot, which predisposes it to ulceration, cellulite, and deep tissue necrosis, resulting in inflammation and destruction of even tendons, muscles, and bones, gangrene, foot deformities, and finally amputation.

These side effects cause not only pain for the patient along with his or her immediate family members, but also many days off work, reduced earning capacity, lack of mobility, increased expenditure, and even death. Indeed, amputation of the lower extremity is one of the most devastating complications of diabetes.

Most diabetic patients first go to their family physician. He or she is the one who needs to be updated on the modern care of the diabetic foot, as they are on the frontier of diabetic foot care. Educating a patient is usually a one-to-one effect, but educating a family physician can result in the education and benefits of hundreds or thousands of patients.

Family Health Center offers a special foot care assessment for diabetic patients who attend the routine clinic here in order to provide effective management, early identification, and to reduce the rate of amputation.

- It is held every Friday.
- Conducted by a nursing officer.
- All patients with Diabetes Mellitus will attend this clinic on a regular basis.
- A formulated guideline and national guidelines are used to assess the patients.
- Patients will undergo several assessment criteria, like general assessment, inspection, and palpation methods.
- Assessed patients will be categorized under the risk types according to the guidelines.
- Patients will be advised to follow routine checkups according to the type of risk.
- The nursing officer provides self-foot care advice.
- Those classified as high-risk will be referred to the Consultant Family Physician.
- The patients will be evaluated by a consultant family physician and, if necessary, referred to other specialties.



Figure 12 Foot care assessment by Nursing Officer



Figure 13 Health education by Nursing Officer



Figure 14 Teaching diabetic foot care to medical students



Figure 15 Medical students practicing foot care assessment

2.1.6. Laboratory/bleeding clinic

The medical officer requests routine investigations for patients who come in for medical checkups and those who have chronic diseases. Basic investigations are performed in primary care centers.

Fasting Blood Sugar (FBS), Lipid Profile, and Serum Creatinine (S.Cr) are the baseline investigations, which can be done in primary care investigations. Increased blood sugar level (Diabetes Mellitus), Increased cholesterol level (Dyslipidemia), and kidney function will be analyzed through the above-mentioned tests.

Patients may present with the early undifferentiated stages of a serious illness, with symptoms similar to those of a minor illness. In such cases, the doctor employs time as a diagnostic tool, waiting for more information to become available in order to make a definitive diagnosis or for the illness to resolve on its own. A doctor may also use time as a diagnostic tool in conjunction with a few preliminary investigations.

The medical officer is selective in the use of investigations because of the cost, inconvenience, risk, or discomfort, to the patients by an investigation.

Family Health Center is a model of primary health care institution and it has an internal laboratory and provides the basic laboratory services.

- It is held every Wednesday.
- Blood drawing conducted by a nursing officer and facilitated by the laboratory attendant along with a health assistant.
- Basic investigations are prescribed by the doctor and they are carried out in the Family Health Center (FBS, Lipid profile, S.Cr).
- Capillary
- Basic infection control precautions are maintained.
- In case of further investigation, blood is collected and sent to an outside laboratory.
- A small-scale laboratory is available in the Family Health Center.

- Sample analysis is carried out by the Technical Officer (MLT).
- Patients can collect their reports during their particular clinical days.
- The health assistant is trained to do the documentation and labeling.



Figure 16 Blood drawing by Nursing officer



Figure 17 Medical students practicing blood drawing



Figure 18 Laboratory activities

2.2 Home-based geriatric care

2.2.1 Home visit

Home visits by doctors are especially necessary in the care of the elderly, but they may be required in any situation where the patient cannot come to the doctor. There are a number of advantages to having home visits in a healthcare institution, not only for the doctor but also for the patients.

The doctor gets the opportunity to see the patients in his or her environment. This will give the doctor a lot of information about the patient and the family. Patients and families will have the satisfaction and convenience of having their own family doctor visit in their home and give them personalized attention.

Home visits are mainly aimed at providing health services for rehabilitation, palliative care, and geriatric care.

Methods of patient selection include the following;

- Recommendation of the patients who are physically unable to attend the clinics.
- According to other sources of information provided by DMO, DH-Kondavilidentified elderly and disabled patients during his OPD examination. The DMO recommended necessary areas in the Nallur MOH area.
- Further, the attentive and responsible relations who are destined to ~~care to~~ take special care to assist their relation who is unable to visit OPD and clinics.
- The home visit team includes a medical officer, a community nurse, a nutritionist, a health assistant, and medical students (if available).
- The University of Jaffna provides the necessary transport services for home visits.
- Before visiting the respective needy patients, the team will inform them by telephone. Thus, supervision visit is avoided; thereby the team assigns only the respective area for the day.

- Medical records are maintained to confirm and to continue the visit periodically.
- Patients who require interim care are seen in addition to routine care, which is typically provided on a monthly basis.
- During a home visit, perform activities such as health needs assessment and monitoring, which includes assessing cognition, provision of information, drug management, investigation, referral to other services, counseling and emotional support. All these activities are in the records.
- It is held every Tuesday.
- Patients with difficulties in following the in-person clinic will be added to the home visit.
- The total numbers of home visit patients are 25
- Prior to home visit day, patients will be called and informed about the visit by a staff of the Family Health Center.
- A vehicle for home visits is provided by the University of Jaffna.
- Home visit teams include a medical officer, Nutritionist, Community health nurse and a health assistant.
- Medical students also will participate and practice the home visit activities as a part of their Family Medicine curriculum.
- Caregivers receive training and advice during home visits by the team.
- Family Physician involves in the activity over the phone and gives the required medical consultation.



Figure 19 Routine Home visit activity



Figure 20 Medical students practicing home visit

2.3 Community outreach activities

It includes

- Neurodevelopment clinic
- Women empowerment activities
- Health promotion for drug addicts / Counseling
- Health promotion for school children
- Community-based nutrition program
- Community-based geriatric care

2.3.1 Neurodevelopment clinic

This program is provided by the Family Health Center to autistic children and their parents. It is free of charge and conducted for 2 hours per day and five days per week. There are 18 children and their parents benefited so far.

Challenges for autistic children are categorized as self-care, socialization and learning and addressed through early screening, right and continuous guidance.

Well-structured play activities are considered as a highly appreciated right and continuous guidance, not only to children but also to parents. These structured play activities focused on gross motor, fine motor, life skills, creative skills and pre-learning skill development for children and continuous motivation for the parents.

Program to children:

- Play activities

Self-caring skills such as brushing, grooming and feeding are improved through structured dance activities. Gross motor skills and balancing their body are improved through structured Games, PT-Scott and dance. Socialization is improved through planned drama, storytelling, and non-verbal and verbal communication games. Play activities, dancing and playing Musical instruments are being conducted as individual and group programs.

- Pre-learning activities

Pre-learning skills are improved through handcrafting, drawing lines, curves on sand, paper and whiteboard with different tools, such as hands, sticks, stone, chalk, pencil, pen and markers.

- Drawing practice

Coloring with chalk, pencils, water-colored brushes and sponge will help overcome visual sensory issues and fine motor skill development.

- Sensory garden

Textural variation of the surface will help to overcome the sensory touch on the feet. We have a sensory garden set up in the playground.

- Monthly cultural event

On last Saturday of every month is assigned for monthly cultural events. It provides model exposure to social gatherings. Children will perform dance, drama, and songs with minimal support from coaching assistants and enjoy the exhibition of their performance.

- Nutrition Clinic

Providing healthy snacks at the end of the play session will help to introduce healthy foods as it regulates eating habits. Thus, it will help to prevent malnutrition and micro-nutrition among children.

- Periodical assessment

Periodical evaluation is conducted to assess each child's development by hiring a specially trained pediatric nurse.

Program to parents:

- Parental empowerment workshop

Periodical workshops are conducted to improve their understanding of autism care and stress management as well as deal with their own health problems and social stigma.

- Monthly meeting with Family Physician

The monthly individual parent meeting is organized with a consultant family physician.

2.3.2 Women empowerment clinic

Individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns is defined as Quality of Life (QoL) by the World Health Organization (United Nation ESCAP, 2017). Reduction of QoL has been observed in Low Middle-Income Countries (LMIC) with aging, where aggregate levels of wealth are much lower and welfare systems function poorly or may not exist, the financial burden of aging is more likely to fall on families or the older individuals themselves. Health problems in older age, chronic illness management and caregiver burnout, lack of social support, poor economic status and domestic violence against women are the major influencing factors of QoL in LMIC with aging and there is a need to have cognitive, financial and social support programs. Sri Lanka is a LMIC located in the South Asian region and has its own ethnic diversity, culture and tradition. The health system of Sri Lanka has preventive (as

medical officer of health) and curative (primary, secondary and tertiary levels of services) care. In addition to health care, community well-being enrolls by Government administrative bodies (such as district secretary and Predhesa Saba), community centers of the village, religious organizations, national and international non-governmental organizations. However, improving the QoL of the community is challenged with the inadequate trained workforce as service professionals and evaluation, financial constraints, lack of soft skills in human resources (poor teamwork, leadership, inter-sector coordination and finance management) and lack of active community involvement and engagement.

Women have showcased important progress in the aspect of community well-being among LMIC over recent decades. The shared prosperity of empowered women not only shines as the spotlight of each woman but their families and communities also. The World Bank defined women empowerment as “the process of enhancing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes”. Economic hardship, lack of social support and low education level were reported as common lifestyle factors, which influence community well-being in LMIC. An analytical review was done on the current trend of enhancing the community well-being in LMIC and highlighted the women in rural areas were selected.

Sri Lankan women have a high life expectancy (74 years), nearly universal literacy, and access to economic opportunities. A qualitative data collection was done by the Government of Sri Lanka among marginalized and disaster-affected communities in 2019 to study issues, which inhibit women’s participation in the labor force. Care responsibilities, traditional expectations of women, lack of flexibility, safe and convenient workplace, unaffordable transportation and competitiveness (in small-scale enterprises) were accounted as the factors for inhibition. A survey was done in 2016 among 4000 households for post-conflict development initiatives in the Northern Province, Sri Lanka and found that 120 (3%) households run with women as ‘head’.

The above-published data signified that women among the marginalized population are the potential persons for empowerment to reduce the vulnerability to be in the disempowered group with poverty, disabilities, and poor household and/or interfamilial links and require the systemic transformation of institutions that support patriarchal structures.

Community-based peer-to-peer supportive program was designed and successfully adopted with favorable outcomes in terms of reducing loneliness, increasing physical activity and managing chronic disease in South Africa. In India, women were used to disseminate health information and seek to build communities' capabilities for caregiving for their children. Mothers2Mothers (M2M) program showed control over HIV transmission in South Africa. Therefore, women empowerment programs are not only a tool for community well-being but it can break the vicious cycle of being the vulnerable group with low QoL. The unavailability of published implementation research studies at the primary care level paved the way to initiate an implementation study at the Family Health Center, Kondavil (FHC) which is a primary care unit attached to the University of Jaffna.

The main objective is to identify the implementation strategy to use women empowerment as a tool to improve the community's well-being. Through community outreach activities, the Family Health Center enhances the women's empowerment. There are so many activities conducted to empower women in society and these activities have an internal coordinator itself and are supervised by the Consultant Family Physician.

The below activities are under the women empowerment program

- Home-based neurodevelopment program- Selected ladies are empowered to work as shadow teachers for kids with neurodevelopment disorders.
- Community-based nutrition program- Selected ladies are empowered to provide healthy meals and snacks to all the programs organized by Family Health Center.

- Community-based geriatric care- Selected ladies are empowered and trained to screen for NCDs in the geriatric population in society and can refer them for consultation.
- Some of the ladies are empowered and trained to work as health assistants in Family Health Center; they are capable to facilitate clinical activities and home visits.



Figure 21 Women empowerment activities and get together

2.3.3 Health promotion for drug addicts / Counseling

Health promotion is also applied to common, but complex human behaviors such as substance use. Similar to food, sex and other "feel good" things in life, psychoactive substances (drugs) change the way we feel. Substance use has both benefits and the potential to lead us down an unhealthy path, jeopardizing our health, relationships, and sense of self-worth. It is important to view substance use from a broad perspective that considers many factors, rather than simply personal ones such as pain relief, managing difficult feelings, wanting to feel good, or doing better at an activity.

The substance use field has generally focused on ways to measure, prevent and treat the negative effects of using substances. This has led to a continuum of laws, policies, and services that restrict the supply of drugs, reduce drug demand or in some cases, reduce the harms that may be experienced from drug use.

The Family Health Center is expanding its service to promote the health of drug addicts too. A panel of experts selects the high-risk groups and begins promoting those high-risk groups' health by providing individual counseling sessions, group activities, and so on.

A Consultant Family Physician, a team of psychologists, a pharmacist and volunteers from the youth club play a vital role in this activity.



Figure 22 Pharmacist planning clinical activities

2.3.4 Health promotion for school children

Education and health are interdependent and there is a critical synergistic relationship between learning and the health status of a child. This has been recognized even in ancient times when Greek philosophers referred to the relationship between a healthy body and a healthy mind. There is no doubt that the home background, socio-economic status of the family and school-specific factors contribute to better learning; but unless the child is physically healthy and mentally sound, he or she will not be able to realize the full potential of the latent talents in him/her. In turn, an educated person will be better equipped with the knowledge and skills necessary for maintaining good health.

The importance of regular school attendance cannot be over-emphasized in improving the learning achievement of school children. Studies in developing countries in general and in Sri-Lanka, in particular, have shown that children who do not attend school regularly are poor in educational attainment. One of the main reasons for poor attendance is ill health. Constantly falling ill due to bowel diseases, respiratory infections and helminths infections keep children away from schools. Poor nutrition also affects the physical growth and mental ability of pupils. Malnourished children are listless and apathetic in the class-room. In Sri-Lanka under-nutrition as indicated by stunting, wasting and being under-weight continue to be significant problems among school children. Besides anemia, vitamin A deficiency and Iodine deficiency have been identified as other nutritional problems.

Health planners have recognized the role of schools in developing countries in disseminating knowledge and good practices in health to the community. In a country like Sri-Lanka, where there is a widespread network of schools spread throughout the country with a school in every village, it can be utilized as an effective vehicle for promoting community health programs. In turn, the community can also help to meet the needs of the school by mobilizing community resources.

If the aim of national development is to create a nation of future citizens who are healthy and competent to face the challenges that they may confront in the future in a constantly changing environment, a sound school health program that inculcates life skills is imperative.

Tomorrow's communities are in the making today. Empowering School children with the knowledge, attitudes and skills to promote their health and well-being, the health of their families and their communities should be the primary concern of everybody. Promoting health through schools is a singular innovative approach to responding to the needs of school children, school personnel and communities.

The draft School Health Promotion Program has been formulated with that lofty ideal in view.

The Family Health Center is expanding its service to promote the health of school students as well. A panel of experts selects the high-risk groups and starts promoting their health by providing individual counseling sessions, group activities and workshops, etc.

A Consultant Family Physician, a team of psychologists, a nutritionist and medical students play a vital role in this activity.



Figure 23 Medical students' involvement in school health promotion program

2.3.5 Community based nutrition program

Community based nutrition programs play an important role during the economic crisis in Sri Lanka. Increasing daily expenditures force the population into a food pattern which saturated with convenience stores selling affordable packs of refined grains, flour and smaller food items, as well as fast-food restaurants offering an abundance of inexpensive fast foods and empty calories. Businesses with fresh fruits, vegetables and perishable foods are considered to be less profitable. In addition, traditional and cultural believes and myths also influence food habits. This situation creates a transition in food habits which leads to high prevalence of malnutrition and micro nutrients deficiencies among vulnerable groups such as children, young adult women and elders.

Family Health Center, Kondavil targets the most vulnerable population from its coverage area of service delivery, such as children with neurodevelopment disorders with picky eating patterns, young girls who are influenced by advertisements and peer pressures, adult women with poor economic and educational status and empty nest elders. There is evidence of community interventions that aid in the development of healthy eating habits. An iterative model is developed to prevent malnutrition and micro-nutritional deficiencies.

The main object of this model is to create a sustainable food system to address the nutritional issues among the targeted population.

Adult women are empowered to run the nutritious food cottage by a multi-disciplinary team of experts with a consultant family physician, a nutritionist, a research fellow interested in community engagement and involvement, a home science expert and an agriculturist. Informal education is given to those women regarding the importance of nutrition in the lifecycle as knowledge, creative low-cost, nutritious meal preparation recipes using locally available ingredients to change their attitude towards cooking and opportunities to sell the prepared meals as a practice of business skills. Few of them are motivated to cultivate plants from various food groups in their lands in order to support for their food cottage. Young men are also trained to do land preparation and facilitate cultivation. This small-scale food cottage delivers nutritious meals, snacks and beverages for free of cost to the targeted population on a regular basis. A young woman ~~who is~~ interested in money management has been trained to handle the financial status of the whole project under the supervision of experts. A certain percentage of the profit is saved to establish the food cottage and expand its arms and 10% of the earning is saved for the participants' future plans.

This food cottage is collaborated with projects conducted by the Faculty of Medicine, University of Jaffna. Participants of the Global NIHR Atrial Fibrillation prevalence study break their fasting after the blood sample collection with this food cottage' nutritious snacks supply. Similarly, this cottage is collaborated with

the pediatric neurodevelopment clinic to provide evening snacks and milk that is funded by IMS, Manipay.

Evaluation of the program is done by periodic group discussion, field observation; administer dietary questionnaire and monitoring the nutrition status of the targeted vulnerable population.



Figure 24 Photo collection of nutrition programs and healthy meal providing by mothers' club

2.3.6 Community based geriatric care

Healthy elders are independent and contribute to the well-being of their families and communities. The growing elderly population requires proper socioeconomic support for healthy aging, as is evident in low-middle-income countries such as Sri Lanka. Thus, portraying them as passive recipients of social or health services. This myth paved the way for tailored interventions to enhance the health and well-being of the elderly population for social development.

University Family Health Center, Kondavil (FHC, Kondavil) is a primary care center which is associated with the Department of Community Medicine and Family Medicine, Faculty of Medicine, University of Jaffna, located in the premises of Divisional Hospital, Kondavil, and Jaffna. The FHC, Kondavil is sharing the building with Divisional Hospital, Kondavil. FHC is covering 10000 populations of 5 GramaNiladari Divisions (J/115 to J/120).

Community-based geriatric care (CBGC) is one of the services delivered by Family Health Center (FHC), Kondavil. Screening for Non-Communicable Diseases, referrals to NCD clinics and medical management, Home-visits, patient education for self-care and management and care giver empowerment are components of CBGC.

The demand for tailored interventions for elders' health and well-being needs the active participation of community members along with FHC. Therefore, as the first step of the program, the active participants and other resources such as funding, experts, and multi-disciplinary team members should be identified.

The main objective of this activity is to enhance the health and wellbeing among the geriatric population in the FHC coverage area.

Specific objectives:

- To identify the available resources and active participants in the FHC coverage area to achieve the general objective
- To facilitate the identified participants' involvement towards the goal
- To develop a systematic approach to enhance elders' health and wellbeing

- To develop an evaluation standard of the program
- To ensure the sustainability of the developed program

Relaxation techniques for engagement

Relaxation techniques are a great way to help with stress management. Relaxation isn't only about peace of mind or enjoying a hobby. It's a process that decreases the stress effects on the mind and body. Relaxation techniques can help to cope with everyday stress and these techniques can help to long-term stress or stress related-to various health problems, such as heart disease and pain. Practicing relaxation techniques can have many benefits, such as Slowing heart rate, Lowering blood pressure, Slowing breathing rate, Improving digestion, Controlling blood sugar levels, Reducing the activity of stress hormones, Increasing blood flow to major muscles, Reducing muscle tension and chronic pain, Improving focus and mood, Improving sleep quality, Lowering fatigue, Reducing anger and frustration, Boosting confidence to handle problems

Types of relaxation techniques included in the package are:

- Breathing exercises
- Laughter Yoga
- Coffee meditation
- Music therapy
- Play therapy
 - Trained community health assistants are involved in the above-mentioned activities.
 - It is a screening activity for Non-Communicable Diseases among geriatric people.
 - Particular community welfare centers will be selected and those who are surrounded the community welfare centers will be informed to come for the Non-Communicable Diseases' screening.
 - Usual clinical parameters will be assessed. (Blood pressure, Blood glucose level, Body Mass Index).

- Identified people with risk factors will be referred to Family Health Center for further assessment and consultation.
- They will see the consultant family physician and be registered in the routine Non-Communicable Disease clinic register.



Figure 25 Stake holders' meeting on community-based geriatric care

3. Students' teaching activities

3.1 Family Medicine clinical appointments and Field work

Lectures and clinical practices in the Family Medicine undergraduate curriculum were included in the formal undergraduate curriculum with the establishment of the Department of Community and Family Medicine.

Medical students should learn the concepts, principles and process of Family Medicine that demonstrate the uniqueness of this discipline, leaving the vast clinical content to be covered during the Family Medicine clinical appointment.

This above appointment is conducted by Dr. S. Kumaran, Consultant Family Physician as well as the coordinator of the Family Health Center.

- The above clinical appointment is assigned to third-year medical students.
- This appointment is for one month.
- It is conducted by Consultant Family Physician and facilitated by demonstrators and nursing officers.
- Students will be involved in clinical activities as well as home visits.
- Exam point of view preparations will be practiced during the appointment period.
- The staff of the Family Health Center will be involved and act as simulated patients for the students' preparation.
- The internal and external structure of the Family Health Center is modified especially for the purpose of student teaching.



Figure 26 Family medicine clinical appointment group



Figure 27 Consultant Family Physician Teaching Family Medicine



Figure 28 Photographs collection of family medicine clinical appointment activities of medical students

4. Practice Management

4.1 The staff of FHC and duty designations

- Dr. S. Kumaran – Consultant Family Physician and Coordinator
- Mrs. R. P. Saseenthan – Nursing Officer
- Mrs.V. Sureskumar – Technical Officer and MLT
- Miss.Y. Shanmuganathan – Nutritionist
- Mrs. S. Powsiga – Clinical data manager
- Dr. K. Shribavan – Helpline coordinator
- Miss. S. Piranavy- Helpline operator
- Mr. P. Baathusan - Helpline operator
- Mrs. D. Ida – Laboratory Attendant

- Miss. S. Jathushana – Health Assistant
- Miss. P. Sinthuja - Management assistant-Empowered women's activities
- Mrs. S. Mokanavathy - Finance assistant- Empowered Women activities
- Miss. T. Lavanya – Health Assistant, Coordinator of Community based geriatric care
- Miss. N. Thubaraga - Shadow teacher, Coordinator of Neurodevelopment clinic
- Miss. K. Vaishnavi - Coordinator, Community-based nutrition program
- Mrs. P. Suriyakala - Member of the Mothers' Club
- Mrs. M. Jeyanthi - Member of Mothers' Club
- Mr. T. Sutharsan - Gardener
- Mrs. H. Karthika - Handwork and crafts making
- Dr. B. Thayalini -Volunteer
- Mrs. P. Janani -Volunteer
- Mr. A. Piratheepan - Volunteer

4.2 Clinical and medical records

Medical records are essential tools in clinical practices. Well-maintained medical records are very necessary for providing good quality patient care in family medicine practice, which involves in the continuing care of patients over a long period of time.

Information in a medical record should be organized systematically and logically and should reflect the patient's state of health accurately. These medical records should contain all the relevant information regarding the patient's present and past medical problems, family history and social circumstances.

Medical records should contain information that notifies the family physician aware of potential problems that helminths may arise in the future.

At the moment in Family Health Center, paper-based clinical records are maintained and there is a plan to modify the records into Electronic based records in the future.

The categorization of the records are given below.

1. Clinical records
2. Community outreach activity records.
3. Administration records.
4. Maintenance of Family Health Center records.
5. Family Medicine clinical appointment records (Students' teaching)
6. Other program records.



Figure 29 Storage of clinical records in FHC

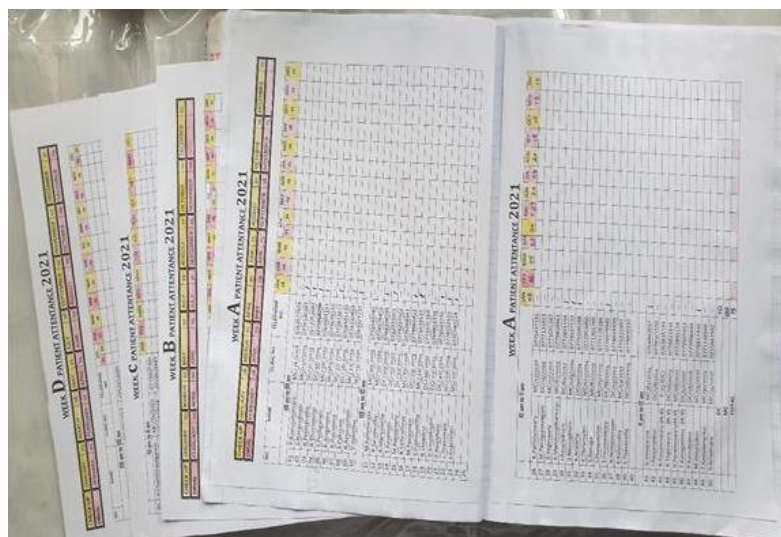
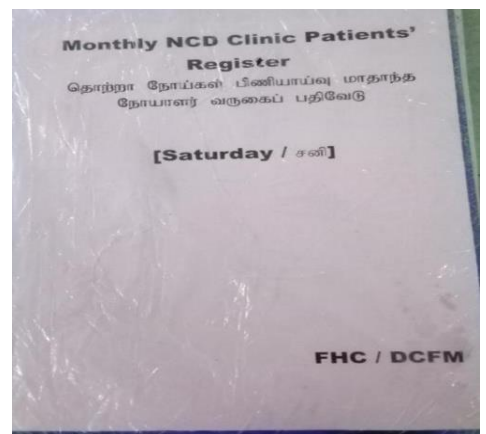
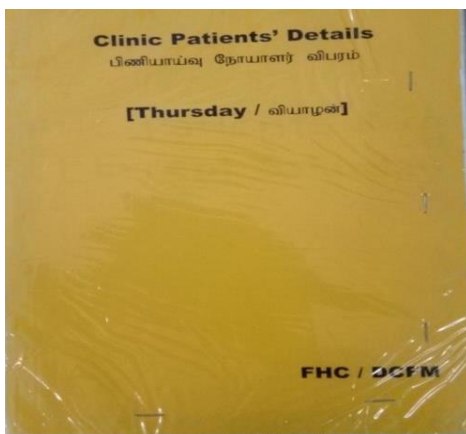




Figure 30 Variety of medical records use in FHC



Figure 31 Routine clinical data entering by medical students



Clinical Notes

(12/10/2022)
12.10.2022
15.10.2022
(12/10)

DATE: 15/10/2022

Diabetes / Hypertension/ BA+/COPD / Thyroid disorders / Dyslipidemia / Other

Wt: 42.6	Ht: 1.42	BMI: 25.10
BP: 133/93	PR: 92	PEFR:
Diastolic score:	Drug compliance/ Good Average Poor	ACT score:
LAST BLOOD REPORT		
FBS: 192.0	T.C: -	S.Cr: -
DATE: -	DATE: -	DATE: -
DADA Anticard		11/11/2022
DADA Anticard End		07/11/2022 - AB.
FBS/V/C		T.C S.Cr

TSH: - 0.331 mIU/L
(19/07/2022)

c/o: No more complaint.

Figure 32 Availability of medical records in FHC

4.3 Infection control measures

Infection control in healthcare settings prevents or stops the spread of infection. This site includes an overview of how infections spread, ways to prevent the spread of infections, and more detailed recommendations based on the type of healthcare setting.

The main objective of Infection Prevention and Control programs is to minimize the spread of infectious diseases or healthcare-associated infections (HAIs) across healthcare facilities. While healthcare facilities aim to keep their patients healthy, facilities can become breeding grounds for infections and diseases.

Therefore, as a model of the primary healthcare sector, the Family Health Center also practices basic infection control policies itself. The nursing Officer acts a vital role in maintaining infection control in FHC. By using the national guidelines of infection control policy, we have formulated suitable infection control guidelines for FHC.

arranged by the patient welfare society at the entrance of the center in order to facilitate hygienic practices. Also, a triage system was developed at the entrance of the building. The health attender was trained to carry out the triage as well as patient involvement was encouraged. A checklist of triage included temperature, symptoms and contacts with cases and suspected cases. The reflection of the pilot plan was discussed with staffs and patient welfare society members of FHC, Kondavil. Patients involved and developed a permanent triage system at the entrance of the center. That facilitated to prevent the community spread as well as routine works of the FHC, Kondavil.

It was decided to reduce the ‘person to person’ exposal time duration to avoid unwanted exposure for both staffs and patients. This challengeempowered the staffs to implement a plan for a quick action not exceeded to 30 minutes with 1meter social distance. Therefore, the regular working station was separated for each tasks and time allocation was limited to maximum 10 minutes per station. Medicines were pre-packed individually the day before the clinic, and the outer cover was labeled with the particular patients’ name, registration number and appointment time. This allowed for a quick exit from the center while avoiding unwanted long-term exposures. It also paved the way for consistent monthly follow-ups and drug delivery.





Figure 34 Infection control precautions during COVID 19 pandemic

4.4 Research, Data and Publications

The Importance of Health Research is like privacy, health research also has high value to society. It can provide important information about disease trends and risk factors, outcomes of treatment or public health interventions, functional abilities, patterns of care, and health care costs and use.

The different approaches to research provide complementary insights. Clinical trials can provide important information about the efficacy and adverse effects of medical interventions by controlling the variables that could impact the results of the study, but feedback from real-world clinical experience is also crucial for comparing and improving the use of drugs, vaccines, medical devices, and diagnostics.

Collectively, these forms of health research have led to significant discoveries, the development of new therapies, and a remarkable improvement in health care and public health. Economists have found that medical research can have an enormous impact on human health and longevity and that the resulting increased productivity of the population contributes greatly to the national economy in addition to the individual benefits of improved health. If the research enterprise is impeded, or if it is less robust, important societal interests are affected.

The FHC conducted several research activities that were successfully completed and implemented in order to fulfill the above component. Some research activities are currently in progress and are listed below.

- Genitourinary health among the patients with chronic conditions, attending the Family Health Center, Kondavil
- Routinely collected data entry and analyzing
- Sub-fertility prevalence study in the Nallur MOH area
- Atrial fibrillations among the Northern Province population

4.5 Family Health Center Development / Standards operations of procedures/ Future plan on development

Family Health Center is providing the best quality of patient care, community outreach activities, and following the practice management components and infection control policies, additionally, it conducts the undergraduate medical students' teaching activities and research.

In the future the services of the FHC will be extended as bellows;

- Maintain Electronic Medical Records (EMR)
- Conduct post-graduate training
- Act as the center of primary care for Northern Province, Sri Lanka.

4.6 Internal and external environment maintenance and Family Health Center Garden

Understanding the complete hospital organizational structure ensures that hospital employees know their own responsibilities, the responsibilities of those around them, to whom they report, and who to talk to about particular responsibilities or fields of knowledge.

Family Health Center consists the modified internal and external structure itself.

- Consultation room
- Laboratory
- Practice management room

- Storeroom
- Lecture hall
- Reception and waiting area for patients
- Telemedicine room
- Computer room
- Counseling room
- Minor surgery room
- External garden

We have a model for home gardens to establish and teach some health-related benefits to the staff, patients and public.

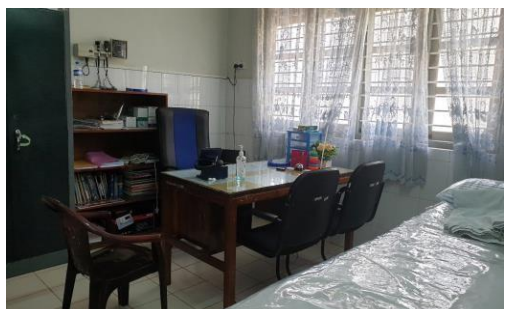


Figure 35 Internal and external structure FHC



Figure 36 Model home gardening in FHC

5. Narrative write-ups by medical students about the functions of FHC

5.1 NCD Clinic Day

The first day of our family medicine appointment. A new day began with new hope in a new place called the Family Health Centre. Family Health Centre, a nice place with neat arrangements that make an impression at first glance. When we arrived, our instructor, Ms. Yalini, greeted us warmly and welcomed us to our new appointment. She gave us an overview of the appointment, the timetable, and the activities we would be doing during our appointment. Then we divided into four smaller groups for the purpose of our upcoming activities. Thanujan, Naseela, and Theepan are in my first group. Then Ms. Yalini showed us around the family health centre, explaining each and every section in this well-organized space. She mentioned that the family health centre is a primary care unit where we provide patient-centered care.

We started by going to the reception area, where patients come to present their clinical books. Then Ms. Yalini introduced us to the "person-oriented medical report," which includes the patient's socio-demographic information as well as a list of problems and clinical remarks. We learned about the checklist that is pasted to the patient-centered medical report. We also saw the register, where they record

patient attendance for drug distribution. Then she introduced the anthropometry measurement area.

Following that, we went to the demonstration area, which is where the risk assessment and management plan are decided. Ms. Yalini stated that diabetic foot care programs will be held in this demonstration area. We then proceeded to the consultation room. There, everything was organized nicely and served a specific purpose, including the calendar for providing dates and the date chart for referrals, among other things.

Then we went to the lab where Atrial fibrillation research is being done. We saw equipment like centrifuge and blood analyzer. Then we also looked at the storage room and the nursing officer's room. We were then led to the counseling room, which at first glance appeared to be very different from previous places. The layout of that room was intended to give the patient a completely calm setting free from interruptions in which to freely communicate their ideas to the consultant. There was a round table with chairs of the same height, showing that there is no hierarchy between the consultant and the patient in this setting. Nothing was on the walls, not even a clock or a calendar. These settings are made so that the patient can freely discuss any difficulties or ideas they may have without being interrupted. A nice environment was seen in that room with good ventilation and adequate light.

The difference between the consultation room and the counseling room was highlighted by Ms. Yalini, In a consultation room, the consultant will be the one making decisions about management and a relevant hierarchy is maintained, but in a counseling room, a patient can express their ideas freely and the consultant will provide options from which the patient can make the final decision. The helping service room was next to what we saw.

The lactation room was the next stop, where the setting was conducive for examinations and procedures like urinary catheterization. That put an end to our

visit to the family health center. The OSPE for microbiology was then conducted by a doctor because we had a microbiology exam that day.

Our Sir spoke to us around 11 am via a Zoom meeting, and the first day of our family medicine appointment came to an end. It was a really pleasant new experience for me, and I learned a lot about the specific arrangements made in the family medicine center in order to provide the best primary, patient-centered care.

“Primary health care is the cornerstone of the health system. It can help us prevent, treat and manage both infectious and Non-Communicable Diseases”-

Chris Elias

5.2 Telemedicine

Tick, Tick, Tick.....

It was almost 8’o clock...

A helpline operator arrived in a hurry and looked for the mobile phone. She told that she has to cover 15 patients per day and the other operator will cover another 15 patients on the same day.

Then, the helpline operator dialed the phone and it was answered by the patient saying “hello!” and they started talking.

Helpline operator – HelloAmma, I am calling from Atrial Fibrillation Research Center. I am Pranavi. Can I talk to Mr.____?

Patient – Yes, hello I am Mr., ____, what do you want?

Helpline operator – Ayya....’ Do you remember that we came & assessed your cardiac condition last year?

Patient – Yes, I do remember.

Helpline operator – Ayya.... We provide telemedicine services as part of that program where you can share your health issues and seek guidance...So Ayya...., would you mind letting me know if you have any health-related problems?

Patient – I have had diabetes since last year and every time I go to the clinic, they advise me to take a balanced diet, but I don't know what a balanced diet is and how to do it. Can you help me with that?

As the conversation continued, the helpline operator found out the problems and provided dietary advice in light of his diabetic condition. She then ended the call by requesting the patient to contact back anytime if he needs assistance. The helpline operator then looked at us and told us that they get many phone calls like this from people with similar problems seeking help through telemedicine service every day. In such cases, helpline operators are trained well to give dietary and simple medical advice. She further informed that, if a caller has a complicated medical history and requires special medical advice, the helpline operator will note down their details and forward them to Sir.

Around 10 a.m., the helpline operator began taking notes about the patients' histories that needed attention and prepared to present the case to sir. The case involved a 45-year-old woman who had been experiencing breathing difficulties for more than a year. She received an injection, which helped with her symptom relief. Then she went to Kilinochchi Hospital complaining of chest pain, where the condition was diagnosed as a heart attack and drugs were administered. Following the ECG and ECHO, the medication administration for the heart attack was stopped. A purple color inhaler was provided to alleviate the symptom.

Sir then instructed us on how to solve this situation following her presentation. He compiled a list of crucial complaints from a detailed history and created a list of potential medical diagnoses based on that list. To better understand the diagnosis, Sir gave the helpline operator a short list of questions to ask the patient.

Sir then instructed the helpline operator to call the patient and let them know that he will now consult with them via telemedicine. Sir and the patient then started to negotiate. "What's your problem, Amma? And how are you now?" were the open-ended questions that Sir used to begin the conversation. When the patient and the

doctor were talking, he asked the patient some questions about her occupation and learned that she had been exposed to respiratory irritants continuously. She also revealed that she had experienced a similar episode when she was younger. Sir then gave her advice regarding the personal protective equipment she could use. Additionally, he asked her to go to a satellite center so he could visit, offer her medical advice, and conduct additional examinations.

After that conversation, we looked through old records and learned that telemedicine operators serve about 10,000 individuals throughout the entire Northern Province and also have satellite clinics where medical teams from various specialties can attend to anyone in need of assistance. People also believe that telemedicine services are more beneficial for those who have trouble traveling to clinics or hospitals.

This led us to conclude that telemedicine services could lower healthcare expenditures, and enhance patient outreach and health outcomes. Telemedicine services will continue to grow over time, increasing their significance in the healthcare sector.

Thank You.

“Telemedicine is the natural evolution of healthcare”-Andrew Watson

5.3 Health Information System

Hello everyone!

I am glad to talk to you all on this occasion about the health information system that I witnessed during my journey in Family Health Center, Kondavil. It was an amazing experience and would like to share it with you all. Health Information System is defined as “a system designed to manage healthcare data which includes systems that collect, store, manage and transmit a patient’s electronic medical record, a hospital operational management or a system supporting healthcare

policy decisions”. I know it's boring to hear these definitions and all. Let me share what I saw at Family Health Center to make it more interesting.

I always looked forward to getting to know a new group of medical students, especially those who came to their first-ever Family Medicine appointment. They arrived for the appointment as freshers and didn't have prior knowledge of the Family Health Center, Kondavil system. But with time, they picked them up quickly and began to run the clinics on their own. It gave me a pleasure to observe how fast they have adapted to the new environment. On Tuesdays, they showed interest in home visits and when they got back from their home visits, they would talk about and share their experiences with other groups of students who weren't able to go with them. Every day, I could see the joy in their eyes.

From their first week on, they managed the NCD clinic with the help of the staff members here. They split up into four stations and started working diligently. Every time, when a patient enters the Family Health Center, I observed them holding a lovely yellow book in their hands, and I pondered what it might contain. Later, I discovered that the medical record books that patients bring with them—the yellow books those people were carrying throughout their visit—are used to keep track of the patients' medical records. They record patient's socio-demographic information, which includes occupation, marital status, past medical and surgical histories, drug usage, family history, social background, as well as current problems and medications in that yellow book. They keep track of the patient's updated measurements and assessments in a table for quick access. I also witnessed how the students took anthropometric measurements (height, weight, BMI), peak expiratory flow rate, blood pressure, and other tasks in one of their stations. Additionally, they fill out the FBS and TC test results at the same station where they were tested the day before at the blood collection clinic.

They maintain separate records for screening tests like TC and FBS, in which they record the results of each patient. There are two types of patients who visit the

clinic: diabetics and non-diabetics. Diabetic patients visit the blood clinic once a month to give blood for the FBS test, while non-diabetic patients visit once every six months to give blood for the TC test. In another station, some students performed the assessments of DASS-21 Score, ACT score and filled up the records. In one station, some other students entered the data into a computer, which are the electronic medical records; these were computerized and kept confidentially, and the doctor could access them whenever necessary. In that station, those students acted as consultants, talking with patients in a very sweet manner and giving them diabetic dietary advice or hypertension lifestyle modifications as needed, which made me envious. They also expressed concern for their family and offered family advice. These students were so responsible at such a young age, and I admire them for being kind and responsible.

During their clinic assessments, I observed them showing some written notes to patients with hearing difficulties and having respond to them nicely. I'm surprised by how they treat patients in certain situations, such as "patients with poor compliance" and "patients with polypharmacy." They cleaned some empty drug bottles, separated their medications into airtight bottles, labeled the drug, dosage, frequency, and before or after meals in a language the patient could understand, and handed them over.

I also saw an elderly lady with a burning sensation and poor drug compliance who has a 12-year-old grandson to support her at home because her daughter works during the day and night. This lady's doctor prescribed medications to treat her *Helicobacter pylori* infection. Two young and beautiful medical students brought her the medications from the pharmacy, which appeared to be loosely packed with paper and may get mixed up. I thought it would be better to identify these elderly patients who are unable to handle medication and who should be given their medications in airtight containers. They do it here, as I previously mentioned, but they should be more conscious to follow this for people who are in more need for it to be better.

When I saw all of this, I thought it was a good thing that I didn't get too old because it's heartbreaking to see these patients with polypharmacy and poor compliance suffers in their old age. There's also the fact that I only observe things with my eyes and don't have time to escape from my surveillance job (Ha..ha..ha..ha..). I also thought that it was crucial for patients with disabilities to have such Family Health Centers nearby to care for them and their families, as it is challenging for them to get to Teaching Hospital in Jaffna by bus with their disabilities amid this country's crisis. I hope that in the future, this type of primary care will be expanded in Jaffna peninsula's remote areas. These dedicated medical students must be taught extensively about Family Practice in the future so that they can choose to serve people in the family practice without regard for money.

Okay, I guess I talked to you more about family health practice than I should have. The most important question you all forgot to ask me was: Who am I? Well, ehrrrrr... I am the CCTV camera that is kept in your class and you know what, nothing could escape from my sight. I'll wrap up this narration with this before you all become bored. I am saddened to see these energetic youngsters depart, but I am looking forward to welcoming the new group of students.

Bye, everyone!!!!

Thank You.

“Development in medical technology have long been confined to procedural or pharmaceutical advances while neglecting the most basic and essential component of medicine: patient information management”- John Doolittle

5.4 Home visit

"Hi guys Good morning, "Are you all set for the visit?" Dansan questioned loudly. All of his colleagues stared at him with perplexed looks, and one of them asked, "About what visit are you talking...?" As you all aware, today is Tuesday, a routine day for our home visit as part of our family medicine activities and I'm

talking about that," he said emphatically and then he glanced at us for our response. We grinned while nodding our heads in pleasure.

Pasindu suddenly rushed to us with a black bag and placed it on the front table in our center and opened it. That bag was found to be a tangled mess of equipment, and he kept all of it outside on the table one by one. He asked us to double-check and confirm that everything was in good working condition. There was a stethoscope, a BP apparatus, a torch, a knee hammer, an ophthalmoscope, an Auriscope, a peak flow meter, a thermometer, cotton wool, gauzes, sprits, bandages, needles, gloves, a normal saline bottle, prescription pad, Letterhead and rubber stamp of the doctor found inside that bag. Pasindu stated that all of these items are necessary during a home visit and asked us to properly arrange them in the 'doctor's bag.' We neatly arranged it all and prepared our own notebooks as well.

Then our Dr. Thaksha and instructor Ms. Yalini showed up and told all of us to gather at the front gate with bicycles. We were enthused and took our bicycles to start our home visit. Our team had eleven members including eight medical students, a doctor, an instructor, and a community health assistant.

At 8:15 am, we started our visit and rode our bicycles onto the road, turned inside a lane in front of the temple after that. As a group, we were pedaling bicycles and talking about the patient we were about to evaluate. "What about the patient from today?" Keerthana enquired. "She is an elderly woman, 86 years old, who has lived in this village for a long time with her granddaughter and her family", said Afra in response. She further elaborated that "she has osteoporosis and is a hypertensive patient. She is taken care of by her granddaughter". "We called her this morning and told her about today's visit. By now, she will be prepared. Therefore, we can meet right away. Additionally, we can go to her house in about 5 minutes", said a nearby community health assistant.

When our team finally arrived at our patient's house, we parked our bicycles in front of their front wall. We knocked on her front door and called, "Amma... Amma." As she turned towards us, she said, "Come inside, dears." As we went to visit the patient, she welcomed us and requested us to sit on the chairs she had set aside in the front yard. She gave us a really cheerful greeting and sat nicely in her easy chair with her long stick. We began to converse with Amma. She patiently listened to our questions and provided kind responses. We gathered all of Amma's history from her. She complained about having body pain for the past three months, and it has become severe in the last week. Her hips were in pain, and it had spread to her legs. She had difficulties in walking, handling objects along with performing her daily activities. Then our colleagues examined her and found some positive findings related to the illness, and we examined further using the equipment we had in the doctor's bag.

Our other group of colleagues asked Amma some questions about her daily activities and assigned scores to the charts we brought with us. These charts were the "Barthel index" and the IADL. We assessed them and compared the scores to previous results. Amma also actively responded to our questions, making it a very interactive experience. The doctor then prescribed some medications and dietary recommendations for calcium supplement needs based on Amma's condition.

Then we spoke with her granddaughter, who is in charge of looking after Amma. We questioned her about any stresses, any burdens as a caregiver, coping strategies, and how she takes care of Amma and everything was noted down. We provided some advice to the caregiver on how to handle the patient and family. The interior of the home was very clean, dust-free, and well-ventilated when we walked inside to see it. Following that, we stepped outdoors to observe the home's surroundings. The backyard of the house was clean and well-kept. The surroundings were quite green and nature-friendly. They then treated us with fruits grown in their own backyard. Afterward Dansan said, "It's time to leave and get back to our center". Amma called us just before we left to let us know how much

better she was than before and how grateful she was that we had all come to her house to see and treat her. After bidding Amma and her granddaughter "goodbye," we departed from their house.

We talked about Amma's current health, the things we need to change for the following home visit, and how to keep the patient calmer and quieter without making her feel uncomfortable when she sees all of us together. Around 11.30am, after having that discussion and other amusing conversations, we arrived at the Family Health Center. All of the information that we collected today was entered into the clinic books and arranged them in order in the corresponding rack. Our home visit came to an end with that. That brightened and delightfully enhanced our day. We all had a great time and it was a beautiful new experience for all of us because the house visit was really interactive and entertaining.

Thank you.

5.5 Community Outreach Activities

The Bell rang at the THJ clinic...

An old man.... walking with a stick in hand, trembling, difficult to walk.... spectacles... with a hearing aid... was struggling to open the door "May I come in doctor?"

-Consultation-

Doctor: Aiya, why do you suffer so much to get here at this age?

Patient: Where else can I go sir? I have a chronic disease and must attend the follow- up clinic.

Doctor: Oh...Butaiya, we have been operating a clinic at a family health center for people like you to easily access doctors; you may go there and have follow-up appointments.

Patient learned about the family health center and began attending routine clinics. There was good compliance and routine clinic follow-up monitoring. One day, after a month, on his clinic visit, he seemed a little restless and worried about something. As a patient-friendly environment, our administrative staff approached him and inquired about the source of his concern. Then he revealed that his neighbor had an unhealed wound for more than 4 months, and as it grew larger and larger, it began oozing, and that small wound had almost spread to his entire right foot.

We told him, "Okay aiya, there is nothing in the world that is impossible." There is a cure for everything. You ask him to come here on Saturday, so we can assess and treat him."

On Saturday, a depressed-looking, limping old man arrived at the clinic. Following an examination of the wound, the patient was asked why he had not attended any clinics up to this point. The patient then elaborated on his situation.

Patient: Sir, I am an elderly poor man. My wife died three years ago and my only daughter and her son live with me. I'm not wealthy enough to provide her with a happy marriage. She is now legally separated from her husband, and she did not study much as she stopped with O/L. As a result, for her educational qualifications, finding a job that pays enough to support a family is impossible. We had tried everything, but it had all been in vain. She is now going for labor work in families, but it is not guaranteed that she will get work on a daily basis. Normally, children are the ones who bring smiles to the faces of family members regardless of the hardships the family is facing, but in my family, it is the other way around.

Doctor: Tell me about your grandson's problem, Aiya.

Patient: What can I say, sir... he'll be eight years old next month, but he still can't connect words and form sentences, he's always sitting alone, not talking to anyone,

he can't wear his dresses on his own, and he can't even eat his meals by himself. He is unaware of the potential risks around him... what I'm trying to say is, doctor, there should always be someone nearby to look after him. So all of my time is spent looking after him, and when my daughter gets home from work, she also has to be with him, so there is no one to look after me, and I am also not concerned about my health.

Doctor: Okay aiya, now let's assess your condition first.

Community-based geriatric screening is one of the community outreach activities. As in this case, we identify the risk population that is not visiting clinics through people who are already visiting the clinic. In the clinic, we begin with anthropometric measurements such as BMI, DAS score, blood pressure, asthma assessment, RBS, and diabetic foot assessment. So, through all of this, the patient will be evaluated in general, and the patient will be asked to return on Wednesday to provide a blood sample to check FBS and TC. The patient will then be assessed with blood reports on Saturday for cardiovascular risk assessment, and if found to be risky, he will be asked to come to the clinic and added to the clinic patients' list.

For this elderly patient, we went through the same process, and his daughter was later requested to meet the doctor on Saturday with her child. The child was assessed by the family physician to confirm the suspicion of autism, and then referred to a child psychiatrist. As a family physician, it is our responsibility to improve the quality and well-being of the child after he is diagnosed with autism because he is having difficulties with self-care, socialization, and learning.

Our multidisciplinary team, which includes the child and caretaker, coaching assistants, pediatrician, parents, psychiatrist, teachers, friends, siblings, neurologist, physiotherapist, and speech therapist, works together to find solutions to these problems. To accomplish this, we divided it into two stages, which are carried out in two centers, Green Memorial Hospital and the Intermediate Center.

We sent the child to Green's Memorial Hospital, where he or she will be trained in self-care and socialization through play therapy, which improves gross motor development, fine motor development, life skill development, creative space skill, and pre-learning skills.

As a result, the child will be able to groom themselves on their own, interact with others appropriately, and eventually reach a point where they can manage their daily life activities independently. The child will be introduced to the intermediate center once he or she has mastered the pre-learning skills. Here, children will be encouraged to write in pencil and participate in activities such as storytelling, drama, singing, dancing, class room cleaning, watering plants, and birthday celebrations. The child's unique talent will be identified and directed toward that field.

Good family support is also required to achieve better child health outcomes. That family should be financially secure. Our family health center's women empowerment outreach activity is involved here. Through this program, we seek out unemployed women in need of financial assistance and provide them with opportunities to improve their lives. In this case, we identified her abilities and appointed her as a shadow teacher. In this instance, we recognized her abilities and appointed her to work as a shadow instructor. She strengthened her skills while working here and was hired as a health care assistant as a result of the opportunities and facilities offered.

As time passed, one day... "Doctor Uncle, doctor uncle, take this chocolate; it's my birthday today."

This was said in front of me by a 10-year-old boy who was well-groomed, well-dressed, and with his mother and grandfather. I then realized that the community outreach effort had successfully accomplished its purpose.

Thank You.

"One of the most important things you can do on this earth is to let people know they are not alone"—Shannon L. Aldor

5.6 Healthy lifestyle/weight reduction clinic

It was another NCD clinic day at the Family Medicine Center today. Ms. Yalini gave us a brief introduction to the lifestyle modification program in the morning before we began the clinic. She explained that there were three types of people in the community that we met through the lifestyle modification program. The first category consists of self-motivated individuals who are willingly participating in a lifestyle modification program. The second category includes those who require outside assistance. People who are uninterested in the program fall into the third category.

People who are truly interested in the program have attitude, skill, and some knowledge of lifestyle modification. They will easily follow the program with our assistance. We only need to provide them with a little more information and guidance. Brochures, leaflets, booklets, and even WhatsApp can be used. We only need to educate them. Knowledge is required to handle these people.

The second category includes people who require external assistance, have skills and attitudes, and require adequate knowledge as well as some physical assistance in some circumstances. We need to find these people and recruit them for our program. As a comprehensive approach, we must target the family rather than the individual. The skills we need to develop in order to guide these people are trustworthiness, demonstration skill, explanation skill, communication skill, and so on.

People who have no interest in these programs fall into the third category. To break the vicious cycle of lifestyle problems, we must empower these people. These people lack knowledge, attitude, and skills. To get these people involved in our programs, we need to be in that community and target them as a single group of people in the same category. We need to develop skills such as creative thinking

and patience in order to get them to follow the program. We must train them manually and gradually, following a well-planned strategy.

Ms. Yalini described some of the programs that were launched to increase the involvement of the third category. She explained that they recruited the third-category people and gradually teach them the proper behavior; proper talking style; proper dressing; and other things at homes where autistic or Attention Deficit Hyperactive Disorder (ADHD) children live. She also stated that we can take financial and other assistance from people in the first category for these programs. She also asked if we had any suggestions to enhance this program further.

The NCD clinic was then held in the same manner as in the last week. We measured blood pressure, weight, and height, calculated BMI, recorded FBS and total cholesterol, and talked to patients about their new complaints at the first station. Then, in the second station, we evaluated DASS21, Ischemic heart disease, asthma control, and Chronic Obstructive Pulmonary Disease (COPD) risks. In the third station, we performed a general examination, instructed the patients, and assessed diabetic patients' foot care.

Then we went to the consultation room with a patient who had Chronic Kidney Disease (CKD), who lived alone, and having difficulties with attending to clinics at Jaffna Teaching Hospital. Our sir requested her to meet him, along with her daughter, who was assumed to be her caregiver. The patient's Glomerular Filtration Rate (GFR) is decreasing, and she was on the verge of developing into end-stage renal disease. She came with her daughter-in-law, who had traveled from abroad. Sir wanted to speak with the patient and her caregiver about whether to care for her at the FHC under the supervision of a consultant nephrologist or to continue her clinic follow-up at the teaching hospital, which she found difficult due to transportation issues. Sir clearly explained the patient's daughter-in-law, about the patient's condition and her issues, and gave her two options, explaining

the benefits and risks of each option, and told her to make a decision to make the arrangements. There, the lady agreed to let the patient attend the family medicine clinic instead of attending to clinic follow-up at the teaching hospital. The lady agreed to let the patient follow the family medicine clinic without having to go to clinics at the teaching hospital so that they may continue their care without difficulties.

5.7 Neurodevelopment Clinic

“Hello everyone, hurry up and get ready to go to the neurodevelopment clinic,"Ms.Yalini said suddenly. “Where Akka?” We all asked as we stared at her. I thought it would be another journey and that we would be transported by bus, as were during our home visit.

"No no. It is just a 10-minute walk from FHC", said Ms.Yalini. However, as time allowed, we all preferred to go by bike. As we approached the clinic, we noticed one of the doctors accompanying his son. We were excited to see the activities at the clinic because Ms.Yalini had already told us about it.

As the name implied that was home-based neurodevelopment clinic. Neurodevelopment is carried out by Family health Center as community outreach activity. Currently seven children are getting benefits from this home-based neurodevelopment clinic. This neurodevelopment clinic mainly improves the skills of children under the age of 14 years with cognitive dysfunctions. There are two levels of children with cognitive dysfunction, and this place mainly focuses on level two children. These level two children are capable to perform basic life skills and communication, but they are poor in education and cognitive functions.

They are autistic,ADHD,Down syndrome children who are guided and educated by shadow teachers. So, from this neurodevelopment clinic, activities are conducted to improve the cognitive skills of those cognitive impaired children through their interest activities like drawing, music, reading, writing and dancing.

Four steps are taken by the management to improve their life skills. Step one is to train them to play and perform self-activities. Step two focuses on their gross motor and fine motor development (creativity, hand working), step three starts with verbal language development (how to count and pronounce), and step four begins with teaching and learning activities. Level one children who do not possess enough life skills and are unable to meet up with their basic skills are initially trained at the behavioral development center, Manipayand then only they are referred to this neurodevelopment clinic.

When we arrived at the clinic, there were about seven children already there, engaged in learning activities with their shadow teachers. Despite the fact they are cognitively impaired children, they appear similar to normal children. They did not interact with us initially, but as time passed, they became friendly and familiar. They asked us to play and dance with them. Even though they are in the early stages of Neurodevelopment, there are no differences between them and children who have reached appropriate milestones.

5.8 Bleeding Clinic

It was the third day of our family medicine appointment. We were all very excited about today because it was the day of the bleeding clinic.

In the early morning, Ms. Yalini divided us into two groups to draw blood from patients in the bleeding clinic. Pasu came first and said, "I first want to draw blood from the patient "and drew blood from the patient like a trained health professional. Then the chance was given to Luckshana, and she started to draw blood from the patient, but it didn't come. Then Mrs. Raincey, the nursing officer came and demonstrated us how to draw the blood by keeping the hand of the patient at an angle that allows the blood to flow, tying the Tourniquet and palpating the vein. Then I thoroughly disinfected the blood drawing area and began to draw blood using the right syringe. After that, she transferred that blood into the tube according to the test they were going to perform. Finally, she

instructed us about waste disposal, especially about how important it is to dispose the used needles into a sharp container.

Mrs. Raincey then explained to us that this facility is available to patients who register with this clinic and this clinic mainly examines the patient's fasting blood sugar and total cholesterol levels. Further, she stated that the bleeding clinic is held every Wednesday, and patients were required to give blood on a specified date before attending the NCD clinics. Following that, we were all given the chance to draw blood from the patients. We were all so excited about it, and this session helped us to improve our clinical skills.

6. Dissemination of Knowledge

6.1 Oration

1. Kumaran, S. (2021). Challenges drive innovation-a pragmatic approach to primary care. Jaffna Medical Association
2. Kumaran. S. (2019)Meeting the primary health care needs of people in Jaffna using the family practice approach –an innovative model in a post-war setting

6.2 Journal Articles

1. Kumaran S, Surenthirakumaran R, Azizul Haq, Nithiyalingam A, Gobith R. Public and Patients involvement in chronic illness care, a way to provide universal health coverage in poor resource setting: A case study. Jaffna Medical Journal; 2018; 30(02): 8-9.
2. Kumaran S, Surenthirakumaran R, Coonghe PAD, Gobith R and Arasu P. A model family health center for rural settings in Sri Lanka: A Case Study. Sri Lankan Family Physician; 2018; 34(1): 51.
3. Kumaran S, Perera DP. Dealing with medically unexplained symptoms in primary care: A Case Study. Sri Lankan Family Physician; 2017; 33(1): 50-53.
4. Surenthirakumaran R, Saseela S, Brien Ann and Kumaran S. Comparison of delivering community-based medical education for undergraduate medical students in Sri Lankan and the UK medical schools: Experience of two institutions. Sri Lankan Family Physician; 2021; 36(1): (accepted for publication)
5. Kumaran S. Meeting the primary health care needs of people in Jaffna using the family practice approach – An innovative model in a post war setting. Sri Lankan Family Physician; 2021. (accepted for publication)

6. Rubavinoth K, Kumaran S. Chronic illness management in COVID 19 era: An experience from primary care centre.
7. Sasrubi Sathees, Kumaran Subaschandren, Yalini Shanmuganathan. Play-based interventions to assess motor domain, cognitive domain, life skill and pre-learning skill in children with autism of Jaffna district, Sri Lanka.

6.3 Abstracts

1. Sanjeevan, Harsheha, Kumaran S, Kumarendren B. A pragmatic approach to align clinical work, teaching and quality assurance in University Family Health Center, Kondavil. 26th Annual sessions of Jaffna Science Association; 2019; 26 (1): 43.
2. Prabu N, Kumaran S, Surenthirakumaran R, Coonghe PAD, Rubavinoth K, Subunca R. Community-oriented primary care in Kondavil: A case study. Annual Scientific Session, Jaffna medical association; 2020.
3. Subunca R, Kumaran S, Rubavinoth K, Gobith R. Community-based geriatric care by the University of Jaffna, Family Health Center, Kondavil- A case study. Annual Scientific Session, Jaffna medical association; 2020.

7. References

1. Community-oriented primary care Jaffna- A model primary care in Sri Lanka, The story so far 2012-2017
2. Companion to screening and management of NCDs in primary care, Sri Lanka Diabetes, Cardiovascular Disease Initiative
3. Lecture notes in Family Medicine- Prof.Nandani de Silva
4. Centers for Disease Control and Prevention (CDC)
5. School Health Promotion Program- School and Adolescent Health Unit, Family Health Bureau, Ministry of Health care and Nutrition.
6. <https://www.heretohelp.bc.ca/infosheet/understanding-substance-use-a-health-promotion-perspective>
7. <https://www.cdc.gov/infectioncontrol/index.html#:~:text=Infection%20control%20prevents%20or%20stops,by%20type%20of%20healthcare%20setting.>