Department of Health and Family Welfare
Government of Kerala
Annexe II, Secretariat
Thiruvananthapuram
Kerala-695001

Kerala HEALTH

HEALTH@KOTTAYAM

December 2025

HEALTH@KOTTAYAM

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Message

GOVERNMENT OF KERALA

Pinarayi Vijayan

CHIEF MINISTER

No. 1319/Press/CMO/25 24 December, 2025.

MESSAGE

The health and well-being of the people of Kerala remain the foremost priority of the Government of Kerala. Over the years, our State has achieved notable improvements in health outcomes through a strong public health system, a committed health workforce, and sustained community participation. Conscious investments across primary, secondary, and tertiary healthcare have been undertaken with the clear objective of reducing out-of-pocket expenditure and ensuring equitable access to quality health services for all.

At a time when emerging health challenges and changing disease patterns demand renewed focus, continuous strengthening of health planning and effective implementation of various programmes at the district level assume critical importance. In this context, district-specific strategies are essential to respond effectively to local needs while enhancing efficiency, equity, and responsiveness in service delivery.

The District Health Document stands as a comprehensive compilation of the district's health status, service delivery mechanisms, achievements, and priority areas. It reflects the collective efforts of the Health Department, local self-government institutions, and line departments in addressing social determinants of health. I am pleased to note that the Department is publishing all fourteen Health@District document series, providing valuable insights into programme implementation and developments in hospital infrastructure.

I appreciate the dedicated efforts of the Health Department in preparing this document. I am confident that this initiative will serve as a valuable guide for policymakers, administrators, researchers, and frontline health workers, and will contribute significantly to strengthening the district health system and advancing our goal of accessible, affordable, and quality healthcare for all. I wish every success to the endeavours of the Health Department.

Pinarayi Vijayan

The Addl. Chief Secretary (Health)
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Smt. Veena George
Minister for Health &
Family Welfare
and Woman & Child Welfare
Development
Government of Kerala

Message

The Government has taken decision to undertake strategic investment in primary, secondary and tertiary health care under the Aardram Mission and Navakerala Karma Padhathi.2. The department is taking various initiatives to improve health care services to people by improving infrastructure and by launching specific health service programs for all segments.

I am delighted to see that the Department has brought out a comprehensive compendium to give information regarding the various health initiatives undertaken in the district of Kottayam. The book gives complete information about the various projects undertaken to improve infrastructure as well as the different programs under implementation to ensure efficient health care services to people.

It is informed to me that the department is taking steps to publish such books of all the districts annually. This initiative of documenting all the activities in the districts will give everyone information not only to health functionaries but also to people. I urge the health functionaries to use the data to study, analyse and based on the evidence take various interventions to improve the health care delivery in Kottayam.

I appreciate the works done by the District Medical Officer, District Project Manager and health functionaries of Kottayam and efforts taken by Directorate of Health Services and National Health Mission Kerala.

I wish a grand success to this initiative.

Veena George

Foreword

The Department of Health and Family Welfare has been taking various initiatives in Health Sector. They are ably supported by the line departments like Local Self Government Department, Revenue Department and others by working on social determinants of health. Health Science always demands well documented data regarding the outputs and outcomes. The foundation of Health Science is an evidence-based practice. In this back ground, the need for documenting a concise compilation of the efforts taken by all health functionaries and our partners was realized.

We have developed a template for the district health documentation and shared it with all the district functionaries to collate the information. It was a difficult task, but with continuous follow ups and coordination, the information was collected. The draft went through series of discussions including aesthetics of presentation and the draft was finalized.

The book **Health@Kottayam** gives information regarding various initiatives such as infrastructure development, state plan and various State and Centrally sponsored schemes, national and state health programs. The book extensively covers the demographic data as well as the vital health statistics of the district. The output and outcome indicators will give all information regarding efficacy of various programs and schemes implemented in the district.

The Department is in the process to publish Books of all the districts and it will be a Health@District encyclopaedia 2025 edition as a part of Nav Kerala Karma Padhati.2
We will focus on involving people at all levels and officials of all the departments to promote "Our Health is Our Responsibility" with the objective of improving preventive and promotive health to reduce morbidity and mortality and to build a healthy productive society.

I am confident that the book **Health@Kottayam** will be a resource book for health functionaries, researchers, students as well as to people to understand the developments in health sector in Kottayam. It will help to assess the progress against the benchmarks set and encourage all to strive to excel.

I take this opportunity to recognise the efforts taken by Smt. Prabha George, State Demographer and her team. All the data tables were validated and appropriate infographics were done properly. These set of documents, hopefully would encourage institutions to publish such informative books in future too. Dr N Priya, DMO Kottayam, Dr Vyas Sukumaran, DPM Kottayam and others have followed up to compile the

information through a series of discussions and feedback. I appreciate the guidance given to the teams by Dr Vinay Goyal SMD NHM, and Dr Reena Director Health Services. I especially appreciate the work of many colleagues who tirelessly work in the field to achieve the result.

I would urge all the colleagues to study the information and to do data analysis for taking further actions to ensure progress in achieving the results. With shared vision and collective actions involving people at the grass roots, we will improve the health care delivery in Kottayam district and all across the state.

Dr Rajan Khobragade IAS

Additional Chief Secretary
Health & Family Welfare and
AYUSH Department
Govt of Kerala.

Message

Department of Health and Family Welfare is publishing a book on Health @District encyclopedia, a comprehensive document that captures the current health landscape, priorities, and programmatic achievements across the district. This book reflects the continued commitment of State Health Department towards strengthening public health systems, ensuring equitable access, and advancing Kerala's long-standing legacy of excellence in health care. These strides have been made possible by the dedication of our health workforce, the support of local self-governments, and the active involvement of other line departments and communities.

The chapters highlight essential aspects of the district health system—including demographic and epidemiological patterns, health infrastructure, human resources, maternal and child health indicators, the burden of communicable and non-communicable diseases, tribal health challenges, and programmatic progress under National Health Mission.

This document is intended to serve not only as a repository of information, but as a strategic tool for planners, administrators, and public health professionals. It will support decision-making, foster inter-sectoral collaboration, and help monitor progress towards achieving the Sustainable Development Goals and Kerala's health sector priorities.

I extend my sincere appreciation to the district health team, programme officers, and all stakeholders, whose dedicated efforts have contributed to the preparation of this document. Their collective efforts continue to strengthen Team Kerala Health and propel us toward achieving the state's health priorities and the broader national vision.

Dr. Vinay Goyal IAS
State Mission Director
National Health Mission
Kerala

Message

ഡോ. റീന. കെ. ജെ
ആരോഗ്യവകുപ്പ് ഡയറക്ടർ

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സന്ദേശം

സംസ്ഥാന ആരോഗ്യ വകുപ്പ് ജില്ലാ അടിസ്ഥാനത്തിൽ 2024 -25 വർഷത്തെ പ്രവർത്തനങ്ങൾ ക്രോഡീകരിച്ച പ്രസിദ്ധീകരിക്കുന്ന പ്രവർത്തനം പൂർത്തിയായിരിക്കുകയാണ്. 2024-25 വർഷം ജില്ലകൾ നടപ്പാക്കിയ പകർച്ചവ്യാധി പ്രതിരോധ നിയന്ത്രണ പ്രവർത്തനങ്ങൾ, ജീവിതശൈലി രോഗ നിയന്ത്രണ പദ്ധതി, മാതൃശിശു ആരോഗ്യ സംരക്ഷണം, മറ്റ് ദേശീയ പദ്ധതികൾ എന്നിവയുമായി ബന്ധപ്പെട്ട നടത്തിയ പ്രവർത്തനങ്ങൾ, ധന വിനിയോഗം, ജില്ലകളുടെ അടിസ്ഥാന വിവരങ്ങൾ,നിലവിലുള്ള ആരോഗ്യ സംവിധാനങ്ങൾ, ആരോഗ്യപ്രവർത്തകരുടെ എണ്ണം, അടിസ്ഥാന സൗകര്യങ്ങൾ എന്നിവ ഉൾപ്പെടുത്തി എല്ലാ ജില്ലകളും തയ്യാറാക്കി സംസ്ഥാനതലത്തിൽ പ്രസിദ്ധീകരിക്കുന്നത് അഭിനന്ദനാർഹമാണ്.

വിവിധ പദ്ധതികളുമായി ബന്ധപ്പെട്ട് ജില്ലകളുടെ പ്രവർത്തന പുരോഗതി വിലയിരുത്തുന്നതിനും വരും വർഷങ്ങളിലെ കർമ്മപദ്ധതി തയ്യാറാക്കുന്നതിനും ഇത് പ്രയോജനപ്രദമാകുന്നതാണ്. ഇതിനു പിന്നിൽ പ്രവർത്തിച്ച എല്ലാവരെയും അഭിനന്ദിക്കുന്നതോടൊപ്പം ഉദ്യമത്തിന് എല്ലാ ആശംസകളും നേരുന്നു.

ആത്മാർത്ഥതയോടെ,

ഡോ. റീന. കെ. ജെ

CHAPTER 1

KOTTAYAM DISTRICT – AN OVERVIEW

1.1 Introduction

Kottayam district, located in the heart of Kerala, is one of the state's most picturesque and culturally vibrant regions. It lies between the Western Ghats on the east and the Vembanad Lake on the west, making it a land of scenic diversity—rich highlands, lush midlands, and fertile lowlands. The district covers an area of about 2,208 square kilometers and shares its boundaries with Ernakulam in the north, Idukki in the east, Alappuzha in the west, and Pathanamthitta in the south. Kottayam town, the district headquarters, is situated approximately 65 kilometers south of Kochi.

The climate of Kottayam is typically tropical, characterized by high humidity and significant rainfall, especially during the southwest and northeast monsoons. The average annual temperature ranges between 22°C and 34°C, while the district receives an average annual rainfall of around 3,000 mm. The pleasant weather, coupled with fertile alluvial soil, makes Kottayam ideal for the cultivation of crops such as rubber, coconut, rice, and spices.

Kottayam is often called the "Land of Letters, Latex, and Lakes." It holds a distinguished place in Kerala's educational and literary history, given that Kottayam municipality was the first town in India to achieve 100% literacy. The presence of several publishing houses and newspapers has earned it the title "Akshara Nagari" (City of Letters). Rubber cultivation plays a vital role in the local economy, with Kottayam being a major centre for rubber production and processing in the state. The district is also home to small and medium-scale industries related to rubber, printing, and book publishing.

Socio-economically, Kottayam is one of Kerala's most progressive districts, boasting high literacy, strong social development indicators, and a vibrant diaspora contributing through remittances. The people of Kottayam enjoy a high standard of living, supported by education, agriculture, trade, and service sectors. The district also features several prominent educational institutions, churches, and cultural centres, reflecting its rich heritage and pluralistic ethos.

In essence, Kottayam stands as a symbol of Kerala's socio-economic progress and cultural depth—a district where natural beauty harmoniously blends with intellectual and industrial vitality.

1.2 Administrative Division

Source: Census Handbook

Figure 1.2.1: District Map-Kottayam

1.3 Demographic Profile of the District

The demographic profile of Kottayam district reflects consistent population growth from 1951 to 2011, with the total population rising steadily across census decades. Population density also increased during this period, indicating greater settlement

concentration per square kilometer. Decadal growth trends reflect gradual expansion, influenced by improvements in health, education, and overall living standards. The district exhibits a clear urban–rural divide, with urban areas experiencing faster growth due to better infrastructure and migration, while rural regions continue to retain a substantial share of the population, preserving Kottayam's cultural and agrarian character.

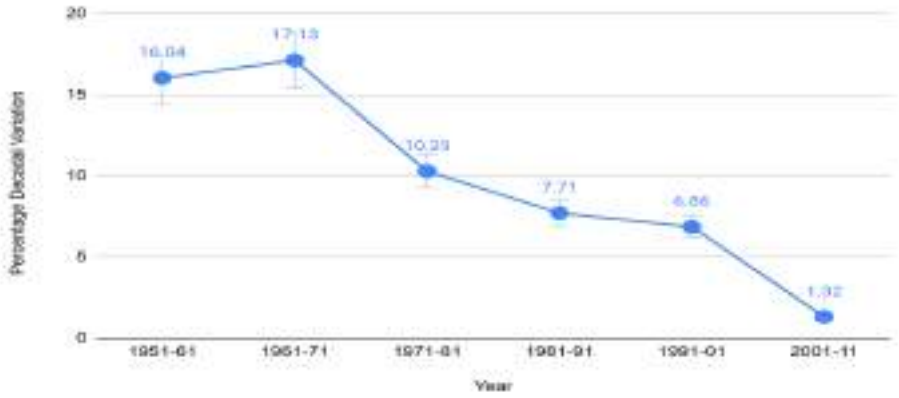
1.3.1 Population Distribution of District (1911- 2011)

Year	Total	Male	Female
1901	4,50,615	2,29,338	2,21,277
1911	4,88,040	2,47,801	2,40,239
1921	5,85,478	3,00,635	2,84,843
1931	7,75,069	3,94,234	3,80,835
1941	9,42,899	4,79,518	4,63,381
1951	11,32,478	5,70,002	5,62,476
1961	13,13,983	6,61,037	6,52,946
1971	15,39,030	7,73,182	7,65,848
1981	16,97,442	8,48,462	8,48,980
1991	18,28,271	9,12,860	9,15,411
2001	19,53,646	9,64,926	9,88,720
2011	19,74,551	9,68,289	10,06,262
Source: Census Handbook			

Table 1.3.1 presents the population distribution of a district from 1901 to 2011, detailing the total, male, and female populations at each census decade. Starting with a total population of 4,50,615 in 1901, the district experienced steady growth over the years, reaching 19,74,551 by 2011. Both male and female populations showed a consistent upward trend, with the male population increasing from 2,29,338 in 1901 to

9,68,289 in 2011, and the female population rising from 2,21,277 to 10,06,262 during the same period. Notably, while the male population remained higher than the female population throughout most of the century, the 1981 census recorded a near balance, and from 1991 onward, the female population slightly surpassed the male population. This data reflects significant demographic growth and a gradual shift in gender distribution over the 110 years.

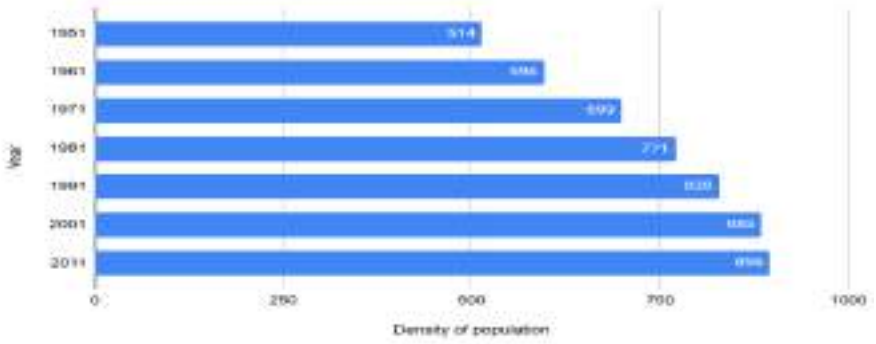
Graph 1.3.1 Decadal Population Growth of District



Source: Census of India 2011

Graph 1.3.1 illustrates the percentage decadal variation in population for a district from 1951 to 2011, revealing a clear declining trend in population growth rates over the six decades. Between 1951-61 and 1961-71, the population grew significantly, with peak decadal growth reaching 17.13% in 1961-71. However, post-1971, a steady decline is evident: the growth rate dropped to 10.29% in 1971-81, followed by 7.71% in 1981-91, 6.86% in 1991-2001, and drastically to just 1.32% in 2001-2011. This consistent decrease suggests a slowing population growth rate, potentially due to factors such as declining birth rates, migration, or effective population control measures. Error bars indicate the possible margin of variation in the data, but the overall downward trend remains clearly visible.

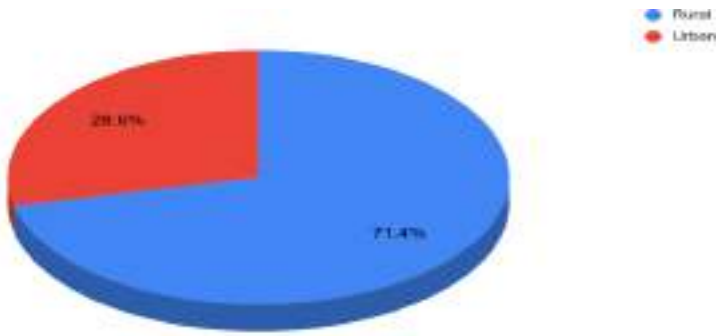
Graph 1.3.2 Density of population per sq.km in Kottayam (1951-2011)



Source: Census of India 2011

The bar graph 1.3.2 illustrates the population density of a district from 1951 to 2011, showing a consistent and steady increase over the six decades. In 1951, the population density was 514 persons per square kilometer, which rose gradually to 596 in 1961 and 699 in 1971. This upward trend continued with 771 in 1981, 828 in 1991, and 885 in 2001. By 2011, the population density reached 896 persons per square kilometer. The data highlights a persistent rise in population concentration, indicating ongoing urbanization, pressure on land resources, and possible migration into the district, contributing to higher population density over time.

Graph 1.3.3 Urban - Rural Population Distribution in Kottayam (2011)



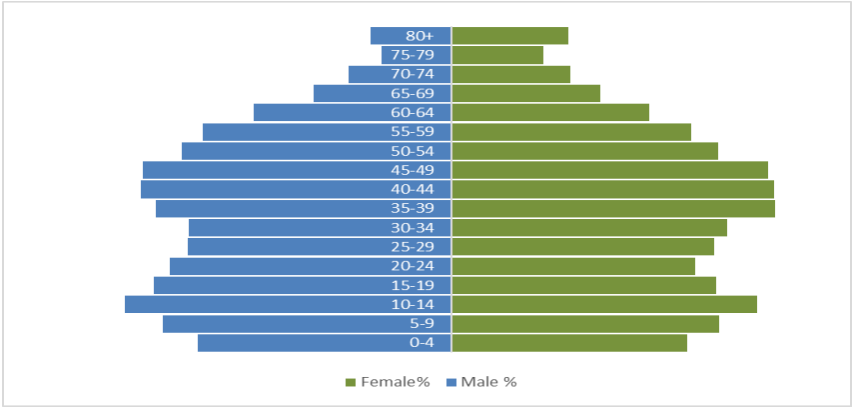
Source: Census of India 2011

The Pie Chart 1.3.3 illustrates the rural-urban population distribution of a district. It shows that a significant majority of the population, 71.4%, resides in rural areas (represented in blue), while the remaining 28.6% lives in urban areas (shown in red). This indicates that the district is predominantly rural, with nearly three-quarters of its population living in villages or countryside areas, suggesting that agriculture or rural livelihoods may play a major role in the local economy, and urbanisation is still relatively limited.

1.4 Age and Sex Distribution

Graph 1.4.1 age and sex distribution of Kottayam district (2011) reveals a population structure characteristic of a mature, ageing society. Females outnumber males across all age groups, with the total female population (10.06 lakh) significantly higher than the male population (9.68 lakh). The younger age groups (0–14 years) show a declining trend, indicating lower birth rates and reduced fertility. The working-age population (15–59 years) remains dominant, while the 60+ age group shows a marked increase, especially among females, reflecting higher female life expectancy and an overall ageing demographic.

Graph 1.4.1 Age and Sex Distribution of Population, Kottayam (2011)



Source: Census of India 2011

Table 1.4.1 Sex Ratio at Birth

Year	Sex Ratio at Birth
2020-21	964
2021-22	955
2022-23	962
2023-24	964
2024-25	916
Source: HMIS	

Table 1.4.1 presents data on Sex Ratio at Birth (number of female births per 1,000 male births) from 2020-21 to 2024-25, highlighting fluctuating trends with a concerning decline in the most recent year. The sex ratio was 964 in 2020-21, declined slightly to 955 in 2021-22, then rose again to 962 in 2022-23 and remained steady at 964 in 2023-24. However, in 2024-25, the sex ratio saw a sharp decline to 916, marking the lowest level in the five years.

Table 1.4.2 Sex Ratio

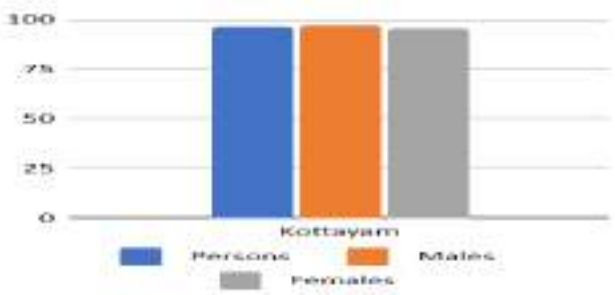
Year	Sex Ratio
1991	1003
2001	1025
2011	1039
Source: census	

Table 1.4.2 presents the overall sex ratio (number of females per 1,000 males) in the district across three census years: 1991, 2001, and 2011. The sex ratio shows a consistent increase over the two decades, indicating an improving gender balance. In 1991, the sex ratio was 1,003, slightly favouring females. It rose to 1,025 in 2001, and further to 1,039 in 2011, suggesting that the female population steadily outpaced the male population. This upward trend reflects a positive demographic shift and may indicate better health outcomes for women, declining gender bias, or successful social policies promoting gender equality.

1.5 Literacy rate

Graph 1.5.1 illustrates the literacy rate of the district in 2011, highlighting the overall, male, and female literacy levels. The overall literacy rate in the district is relatively high, indicating a strong emphasis on education. Male literacy is typically higher, reflecting historical educational access advantages, while female literacy, although lower than male literacy, demonstrates significant progress. The gender gap in literacy is evident but appears to be narrowed compared to previous decades, pointing toward improvements in female education and gender inclusivity. The graph underscores the need for continued efforts in educational outreach, especially targeting rural and female populations to achieve more balanced and inclusive literacy development.

Graph 1.5.1 Literacy rate of Kottayam (2011)



Source: Census of India

1.6 Vulnerable population groups (SC/ST communities, etc.)

Table 1.6.1 presents data from the 2011 Census showing that the total Scheduled Caste (SC) and Scheduled Tribe (ST) population in Kottayam district was 1,75,881, comprising 1,53,909 SCs and 21,972 STs. Among them, males accounted for 86,477 (75,503 SC and 10,974 ST), while females numbered 89,404 (78,406 SC and 10,998 ST), indicating a slightly higher female population in both communities. SCs form the majority (about 88%) of the total SC/ST population, while STs constitute approximately 12%. This data highlights the presence of a significant SC community in the district, along with a relatively smaller yet notable ST population, and reflects a balanced gender distribution within both groups.

Table 1.6.1 SC/ST population of Kottayam (2011)

	SC	ST	TOTAL
Total	**153,909**	**21,972**	**175,881**
Male	**75,503**	**10,974**	**86,477**
Female	**78,406**	**10,998**	**89,404**

Source – Census of India

CHAPTER 2

DISTRICT HEALTH DASHBOARD

District AT A GLANCE

Administrative Divisions

Thaluks –5

Villages – 100

Municipalities – 6

Corporations – 0

Block Panchayath- 11

Grama Panchayath - 71

Population

Population As per Census 2011 – 1974551

Male – 968289

Female – 1006262

Area

Total Area (Sq. K) – 2208km²

Population Density (No per Sq K) - 896

Decadal Population Growth Rate – 1.32

Healthcare Infrastructure under DHS

District Level Hospitals

DH – 0

GH – 4

W&C – 0

4

Sub District Level Hospitals

THQH – 3

3

Community Health Centres

Total CHC – 20

Converted to FHC - 20

20

Primary Health Centres

Total PHC – 55

Converted to FHC – 55

UPHC - 3

58

Janakeeya Arogya Kendram

Janakeeya Arogya Kendram - 333

333

Other Institutions

School of Nursing – 1

Training Center – 1

PH Lab – 1

DVC Units – 1

Offset Press - 1

Blood Bank – 16

Public – 2

Private -14

Blood Storage Unit – 4

Reproductive, Maternal, and Child Health Services 2024-25

Pregnant Women Registration: 2024-25

Pregnant Women- Anaemia 2024-25

Rising C-Section Rates in the District 2024-25

13095

The number of pregnant women in Kottayam shows a sharp decline post-COVID

Maternal Deaths 2024-25

1

Total Maternal Deaths Reported in the Kottayam - 1

Delivery 2024-25

Institutional Delivery in the Kottayam– 15250

Public – 6458

Private – 8792

27%

27% pregnant women were identified as anaemic through VIVA testing.

Preterm Births 2024-25

11%

The proportion of preterm births in the Kottayam -

Home Delivery 2024-25

Home Delivery Reported in the Kottayam –10

No of Migrant Home Delivery - 2

45%

Kottayam continues to maintain a high C-section rate in both public and private sectors

Underweight Newborns 2024-25

18%

The proportion of newborns weighing less than 2.5 kg in the Kottayam -

Live Birth 2024-25

Total Live Birth Reported – 15425

Male – 8050

Female – 7375

Sex Ratio at Birth - 916

CHILD IMMUNIZATION 2024-25

% Birth Dose

Hep B0 – 99

OPV 0 – 100

BCG-100

6 Weeks Vaccines Coverage (%)

OPV1 – 99

Pentavalent 1 - 99

Rotavirus 1 - 99

PCV1 - 99

10 Weeks Vaccines Coverage (%)

OPV2 - 99

Pentavalent 2 - 99

Rotavirus 2 - 99

IPV 1 - 99

% 14 Week Vaccines

OPV3 - 99

Pentavalent 3- 99

Rotavirus 3 – 99

IPV 2 - 99

PCV2-99

% Children Fully Immunized

MR1 - 99

FULLY IMMUNISED - 99

(children aged between 9 and <12 months)

MR 2 Coverage (%)

MR2 - 99

Communicable diseases reported in the District 2024

Cases Reported

Dengue- 464

Malaria- 33

Chikungunya- 0

West Nile-0

Zika- 0

JE- 1

5

Dengue Death

Cases Reported

Kala Azar-0

Scrub Typhus - 12

Leptospirosis-115

5

Leptospirosis Death

Cases Reported

Cholera - 0

Typhoid- 17

Acute Diarrheal Disease -16950

1

ADD Death

Communicable diseases reported in the District 2024

Chicken Pox Cases- 861

MPox Cases-0

0

Chicken Pox Death

Rabies Cases Reported- 0

Shigella cases-2

Amoebic Meningoencephalitis - 0

0

Rabies Death

Cases Reported

Hepatitis A -133

Hepatitis B-91

Hepatitis C-29

Hepatitis E - 1

0

Hepatitis A Death

Source of Data: HMIS, RCH, DHS, District Data

CHAPTER3

HEALTH INFRASTRUCTURE PROFILEOF THE DISTRICT

3.1 Number of Health Facilities in Kottayam

Table 3.1.1 provides a comprehensive overview of the types and number of public health institutions functioning in the district. It highlights the structure and outreach of the healthcare system, ranging from major facilities such as General Hospitals and Taluk Headquarters Hospitals to grassroots-level Sub Centres. It also reflects the district's progress in strengthening primary healthcare, with the presence of 24x7 PHCs, CHCs, and the transformation of many facilities into Family Health Centres (FHCs), aimed at delivering more comprehensive and patient-centred services.

Table 3.1.1: Number of Health Facilities in Kottayam

Type of Health Institution/Facility	Total No. in the district
General Hospital	4
DistrictTBCentre	1
Taluk Head Quarters Hospital	3
Community Health Centre	20
24x7 Primary Health Centre	12
Primary Health Centre	43
CHC/PHC/24X7 PHC converted to FHC	75
UPHC	3
SubCentre	333
Source: District Data	

3.2: Availabilities of Specialized Centre

Table 3.2.1: Availabilities of Specialized Centre

Type of Specialized Centre	No. of Specialized Centre (31st March 2025)
NRC	NIL
DEIC	1
SNCU	2
NBSU	4
Physiotherapy Units	20
Dialysis Unit	5
Cath lab	2
Stroke unit	2
Source: District Data	

3.3: Bed strength in different health facilities

Table 3.3.1presents a comprehensive overview of the public health infrastructure in Kottayam district, detailing the number of health facilities along with their respective sanctioned bed strength.

Table 3.3.1 Number of Health Facilities in Kottayam

Type of Health Institution / Facility	Total No. in the district	Bed Strength
		Sanctioned
General Hospital	4	1064

District TB Centre	1	0
Taluk Head QuartersHospital	3	551
Community Health Centre	20	740
Family Health Centre	55	318
Specialty Hospital	1	150
TOTAL	**84**	**2823**
Source: District Data		

3.4: Health Facilities in Urban-Rural Areas

Table 3.4.1 presents the distribution of various types of health institutions and facilities across rural and urban areas in the district. It includes the total number of each type of facility, along with a breakdown of how many are in rural and urban regions.

Table 3.4.1: Distribution of Health Facilities in Rural and UrbanAreas

Type of Health Institution/Facility	Total No. in the district	No. of health facilities	
		Rural	Urban
MCH	1	1	NIL
GH	4	1	3
THQH	3	2	1
CHC	20	20	NIL
PHC	55	52	3
UPHC	3	NIL	3
UHWC	14	NIL	14

HWC	333	308	25
Source: District Data			

3.5 Health facilities converted to FHC

Table 3.5.1 presents the status of health facility upgrades in the district, highlighting the conversion of 75 institutions—including Primary Health Centres, 24x7 PHCs, and Community Health Centres—into Family Health Centres (FHCs). It also indicates that civil works for all converted facilities were completed by 31st March 2025, marking a significant milestone in the district's efforts to enhance the accessibility and quality of comprehensive primary healthcare services.

Table 3.5.1 Total No. of facilities converted to FHC

Type of Health Institution/Facility	Total no. of facilities converted to FHC	Total no of FHC completed civil work (31st March 2025)
PrimaryHealth Centre	43	43
24x7 Primary Health Centre	12	12
CHC	20	20
Source: District Data		

3.6 Delivery Point in the District

Table 3.6.1provides information on the number of delivery points in the district, categorised by type of health institution and ownership (public or private). It indicates that there is 1 public Maternal and Child Health (MCH) centre and 38 private MCH facilities providing delivery services. Additionally, 4 General Hospitals (GHs) and 1 Sub-District Hospital (SDH) serve as public delivery points.

Table 3.6.1 Number of Delivery Points in the District

Type of Health Institution/Facility	Number of Delivery Points	
	Public	Private
MCH	1	38
GH	4	
SDH	1	
Source: District Data		

3.7 Other Specialised care Centres

Table 3.7.1 provides an overview of the specialised healthcare facilities available in the district as of March 31, 2025, which cater to specific medical needs beyond general care.

Table 3.7.1 Number of other Specialised care Centres

TypeofHealthFacility	**No. of Facility** (31st March 2025)
NRC	**NIL**
DEIC	**1**
SNCU	**2**
NBSU	**4**
Physiotherapy Units	**20**
Dialysis Unit	**5**
Cath lab	**2**
Stroke unit	**2**
Source: District Data	

3.8 NQAS Accredited facilities

Table 3.8.1 presents the status of health facilities accredited under the National Quality Assurance Standards (NQAS) in the district as of 31st March 2025, detailing the number of institutions certified at the state and national levels. It reflects the district's progress in achieving quality benchmarks in public healthcare delivery across various facility types.

Table 3.8.1 NQAS Accredited facilities (31st March 2025)

TypeofHealthInstitution/Facility	Total no. of Institution/Facility	State Certified	Nationally certified
DH	NIL	NIL	NIL
THQH	1	1	NIL
CHC	3		3
PHC	14	1	13
UPHC	1		1
AAM-SC	4	4	
Source: District Data			

CHAPTER 4

HUMAN RESOURCE PROFILEOF THE DISTRICT

This chapter provides a comprehensive overview of the health human resources available under the Department of Health Services (DHS) and related programmes. It highlights key indicators reflecting the availability, distribution, and capacity of medical personnel across different cadres and specialities, serving as a vital component in assessing the strength and efficiency of the healthcare delivery system.

4.1 Health Human Resource - Major Indicators

Table 4.1.1 Health Human Resource - Major Indicators

Indicator	Ratio
The Bed-Population Ratio (based on the Census 2011 population)	1:699
The Doctor-Bed Ratio	1:6
Doctor-Population Ratio (based on Census 2011 population)	1:4498
Source: District Data	

Table 4.1.1 illustrates health infrastructure indicators that reveal the availability and distribution of healthcare resources in the district. The bed-population ratio (1:699) indicates that one hospital bed is available for every 699 people, suggesting moderate inpatient care capacity. The doctor–bed ratio (1:6) shows that there is one doctor for every six hospital beds, reflecting adequate medical staffing in healthcare facilities. However, the doctor–population ratio (1:4498) highlights a shortage of medical professionals relative to the population, underlining the need to increase the number of doctors ensure equitable access to healthcare services across the district.

4.2 Availability of Medical Officers

Table 4.2.1provides a comprehensive overview of the sanctioned medical officer posts under the Directorate of Health Services (DHS) in the district as of December 31, 2025. It categorises the positions into the Administrative and Generalcategories.

Table 4.2.1: Details of Medical Officers Sanctioned under DHS in the Kottayam (As on 31/12/2025)

Category	Sanctioned
Administrative	
Additional Director	Nil
Deputy Director	11
Assistant Director	2
JAMO	2
General	
Assistant Surgeon	243
Assistant Surgeon Dental	6
Civil Surgeon	20
Civil Surgeon Dental	2
Source: District Data	

4.2.2 Speciality and Super Speciality Doctors

Table 4.2.2 lists various medical specialities along with the corresponding number of sanctioned posts - the number of doctor positions officially approved or allocated for each department.

Table 4.2.2: No of Speciality and Super Speciality Doctors under DHS

Category	Sanctioned
Doctors (Speciality)	**153**
Anaesthesia	15
Blood Bank	2
Dental	3
Dermatology& Venerology	6
ENT	10
Forensic Medicine	1
General Medicine	21
General Surgery	15
Microbiology	
Obstetrics &Gynaecolgy	25
Ophthalmology	11
Orthopaedic Surgery	12
Paediatrics	20
Physical Medicine & Rehabilitation	2
Psychiatry	4
Radio Diagnosis/Radio Therapy	2
TB & Chest (Resp. Medicine)	4
Source: District Data	

4.3 Sanctioned Strength of Health Personnel under DHS

Table 4.3.1 presents the sanctioned staff strength across various categories and divisions in Kottayam district. It outlines the number of sanctioned posts for doctors,

nursing staff, technical, and support divisions, reflecting the overall human resource structure of the institution.

Table 4.3.1: Category-wise Sanctioned Strength of Health Personnel under DHS

Category/Division	KTM
Doctors (Administrative Cadre)	15
Doctors (General Cadre)	271
Doctors (Speciality)	153
Nursing Service	640
JPHN To MCH Officer	417
JPHN/Nursing School	10
Dental	11
Lab (General)	108
Pharmacy & Medical Supply	153
Leprosy	2
Public Health	354
TB	6
Ophthalmology	26
Transport	3
Others	1264
Grand Total	**3433**
Source: District Data	

4.4 Health Personnel Working under NHM Kottayam

Table 4.4.1 dataset presents the detailed count of various categories of health personnel currently in position under the National Health Mission (NHM) as of 31st March 2025. It includes a comprehensive list of medical, paramedical, administrative, and support staff working across different health programs and facilities.

Table 4.4.1 Number of Health Personnel Working under NHM Kottayam (As on 31/12/2025)

Category	In-position (as on 31st March 2025)
ANMs	6
Lab Technician	7
Pharmacist	9
Physiotherapist	24
Paediatricians	3
Dental M. O	2
Medical Officer	27
Ayush Medical Officers	50
Mid-level Service Provider	321
ANM - RBSK	62
Staff Nurses	82
HDU Staff Nurses	12
Attenders	6
Medical Officer -MIST	1

Lab Technician	1
JHI MIST	2
Counsellor	13
NPPCD Staffs	7
TBHV	3
Ophthalmic Assistant	2
General Duty Attender	10
Hospital Attender	1
Sanitary Attender	1
Facility-Based DEO	7
Skill Lab Staffs	7
Nodal Officer H&WC	1
DPMSU Staffs	24
Support Staff	1
Epidemiologist	1
Data Manager	1
VBD Consultant	0
Programme Coordinators	4
Accountant -RNTCP	1
DEO	5

PRO	25
ANM	15
Staff Nurses	7
Lab Technician	3
Pharmacist	3
Specialist	3
Dental Specialist	2
MO Full Time	3
Part-Time M.O	3
Supporting Staff	3
District Urban Health Coordinator	1
Accountant cum DEO	1
TOTAL	776
Source: District Data	

CHAPTER 5

MATERNAL AND CHILD HEALTH

The Maternal and Child Health Program at the district level aims to improve the health and well-being of mothers and children through focused interventions. The Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) provides free and quality antenatal care to pregnant women on the 9th of every month, ensuring early detection of high-risk pregnancies. Early ANC registration is promoted to ensure timely and complete antenatal checkups. Immunisation coverage is a key priority, aiming to vaccinate children and pregnant women against preventable diseases. The program also emphasises promoting institutional deliveries to ensure safe childbirth and reduce maternal and neonatal mortality.

5.1 Pregnant Women Registration

Graph 5.1.1 illustrates the trend in the number of pregnant women registrations in Kottayam over eleven years from 2014–15 to 2024–25.

The trend of pregnant women's registration in Kottayam district shows a gradual decline over the past decade. From 21.38 thousand in 2014–15, the number has steadily decreased to 13.1 thousand in 2024–25. After a period of relative stability between 2016–17 and 2019–20, a consistent downward trend is evident from 2020–21 onwards.

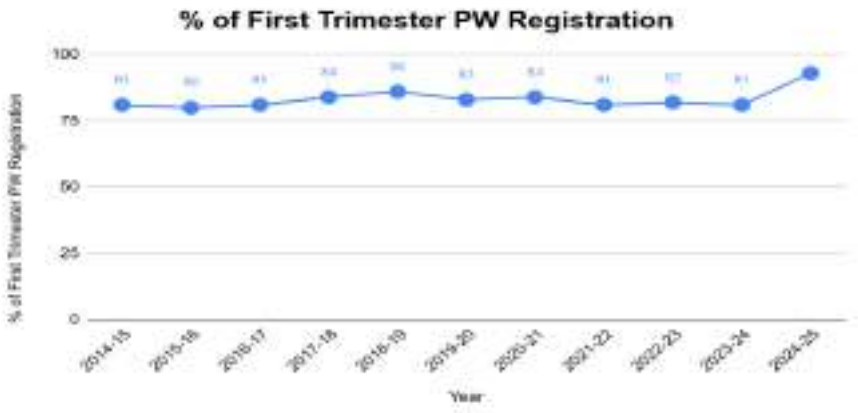
Graph 5.1.1: Trend in Pregnant Women's Registration in the Kottayam District (2014-15 to 2024-25)

Source: HMIS Portal

5.2 Early Initiation of Antenatal Care

Graph 5.2.1 illustrates the percentage of pregnant women registered during the first trimester from 2014–15 to 2024–25. The trend of first-trimester pregnancy registration in Kottayam district has remained consistently high over the years, indicating good awareness and early utilization of antenatal care services. The percentage has fluctuated slightly between 80% and 86% from 2014–15 to 2023–24, showing a stable performance. A notable rise to 93% in 2024–25 suggests improved efforts in promoting early ANC registration and timely maternal health interventions in the district.

Graph 5.2.1: Trend in Percentage of First Trimester ANC Registration (2014-15 to 2024-25)



Source: HMIS Portal

5.3 Immunisation Status of Pregnant Women

Out of a total of 13,095 pregnant women registered for antenatal care (ANC), 11,303 received their first dose of the tetanus (Td1) vaccine, 9,383 received the second dose (Td2), and 883 received the Td booster. This indicates good coverage of immunisation among pregnant women, though there is a gradual decline from registration to subsequent vaccine doses, highlighting the need to strengthen follow-up and ensure completion of the full Td immunisation schedule for better maternal and neonatal protection.

5.3.1: Td Immunisation Status of Pregnant Women – 2024-25

No of PW registered for ANC	No of PW given Td1	No of PW given Td2	No of PW given Td Booster
13095	11303	9383	883
Source: HMIS Portal			

5.4 Abortion

Table 5.4.1 shows a declining trend in spontaneous abortions from 1,078 in 2014–15 to 466 in 2024–25, induced abortions have shown a significant overall increase, rising significantly from 296 in 2014–15 to 1,336 in 2024–25, following an initial dip in the first few years. Overall, while total abortions have increased in recent years, the pattern reflects a shift from spontaneous to induced abortions.

Table 5.4.1: Trends in Spontaneous and Induced Abortions

(2014-15 to 2024-25)

Period	PW	Total Abortions (spontaneous + Induced)	Spontaneous Abortions	Induced Abortions
2014-15	21383	1374	1078	296
2015-16	19454	1089	916	173
2016-17	20032	958	767	191
2017-18	20719	1144	618	526
2018-19	20580	1182	637	545
2019-20	20036	1153	641	512

2020-21	18387	1141	781	360
2021-22	18004	957	569	388
2022-23	16634	1371	593	778
2023-24	15772	1714	556	1158
2024-25	13095	1802	466	1336
Source: HMIS Portal				

5.5 Family Planning

Table 5.5.1 indicates that female sterilisations (including laparoscopic, mini-lap, PPS, and PAS) have consistently remained much higher than male sterilisations (NSV) throughout the years. Among females, PPS continues to be the most common method, though showing a slight decline from 2,410 in 2022–23 to 1,869 in 2024–25. Laparoscopic and mini-lap procedures show minor year-to-year variations without a clear increasing trend. In contrast, male sterilisations remain very low, fluctuating between 8 and 29 cases annually, indicating limited male participation in family planning. Overall, the trend shows predominance of female sterilisation with a gradual decline in total procedures in recent years.

Table 5.5.1: Male and Female Sterilisations (2014-15 to 2024-25)

Period	Laparoscopic sterilisations	Mini-lap sterilisations	PPS	PAS	NSV
2020-21	139	58	2000	58	29
2021-22	214	60	2082	32	9
2022-23	681	74	2410	51	8

2023-24	603	93	2163	51	18
2024-25	588	55	1869	53	14
Source: HMIS Portal					

Table 5.5.2 shows trends in IUCD insertions (Intrauterine Contraceptive Devices) from 2020–21 to 2024–25. Overall, IUCD insertions remained consistently high, increasing from 1,539 in 2020–21 to a peak of 2,050 in 2022–23, followed by a slight decline to 1,967 in 2024–25. Postpartum IUCD (PPIUCD) insertions show a strong upward trend, rising sharply from 104 in 2020–21 to 722 in 2024–25, indicating growing adoption of IUCDs immediately after delivery. In contrast, Post-abortal IUCD (PAIUCD) insertions fluctuated at low levels, ranging between 2 and 35. Overall, the data reflect stable IUCD use with a significant increase in postpartum insertions, suggesting improved counselling and uptake of long-term contraceptives during the postnatal period.

Table 5.5.2: IUCD Insertions Reported (2020-21 to 2024-25)

Period	FP elements	IUCD Insertions
2020-21	IUCD	1539
	PPIUCD	104
	PAIUCD	22
2021-22	IUCD	1561
	PPIUCD	118
	PAIUCD	10
2022-23	IUCD	2050
	PPIUCD	109

	PAIUCD	2
2023-24	IUCD	2010
	PPIUCD	258
	PAIUCD	35
2024-25	IUCD	1967
	PPIUCD	722
	PAIUCD	30
Source: HMIS Portal		

The data (Table 5.5.3) shows the distribution trends of various contraceptives from 2020–21 to 2024–25. The number of Combined Oral Pill cycles distributed fluctuated, peaking at 9,331 in 2022–23 and then slightly decreasing to 8,628 in 2024–25. Condom distribution saw a significant and steady increase, more than quadrupling from 39,194 in 2020–21 to 163,556 in 2024–25, indicating growing demand and awareness. The distribution of Centchroman (weekly) pill strips varied, with a decline in 2022–24 but a notable rise again in 2024–25 to 1,210. Emergency Contraceptive Pills (ECP) distribution showed a strong upward trend, nearly tripling from 518 in 2020–21 to 1,462 in 2024–25, reflecting increased use of emergency contraception over time. Overall, condom and emergency contraceptive use have seen the most significant growth, while oral pill distribution shows moderate variation.

Table 5.5.3: Distribution of Family Planning Commodities (Public Sector)

(2020-21 to 2024-25)

Period	Number of Combined Oral Pill cycles distributed	Number of Condoms distributed	Number of Centchroman (weekly) pill strips distributed	Number of Emergency Contraceptive Pills (ECP) given
2020-21	7887	39194	1031	518
2021-22	7868	68410	1440	642
2022-23	9331	119166	670	468
2023-24	6965	108487	381	1159
2024-25	8628	163556	1210	1462
Source: HMIS Portal				

5.6 Delivery

The trends (Table 5.6.1) show a steady decline in total deliveries from 20,799 in 2020–21 to 15,260 in 2024–25. Both public and private facility deliveries decreased, with private deliveries experiencing a sharper drop. Home deliveries remained consistently low with minimal fluctuations throughout the period.

Table 5.6.1: Trend in Total Deliveries (2020-21 to 2024-25)

Period	Public	Private	Home Delivery	All
2020-21	7844	12950	5	20799
2021-22	7729	12854	7	20590

2022-23	8109	11634	11	19754
2023-24	7667	10013	8	17688
2024-25	6458	8792	10	15260
Source: HMIS Portal				

5.7 Caesarean Section Deliveries

Table 5.7.1 shows that the data indicate C-section rates have remained consistently higher in private hospitals compared to public facilities throughout the years. While the rates in both sectors show slight year-to-year fluctuations, the overall trend indicates stability with a marginal decline in recent years. In 2024–25, the C-section rate was 41.11% in public hospitals and 48.58% in private hospitals, maintaining a persistent gap between the two sectors. Overall, the data reflects a consistently higher preference for C-section deliveries in private facilities than in public ones.

Table 5.7.1: C-Section Rate in Public and Private Hospitals (2020-21 to 2024-25)

Period	Public	Private	All
2020-21	43.47	49.61	47.29
2021-22	43.42	50.95	48.12
2022-23	44.06	48.05	46.41
2023-24	41.03	47.72	44.82
2024-25	41.11	48.58	45.42
Source: HMIS Data			

5.8 Maternal Deaths

Table 5.8.1 shows the trend of maternal deaths from 2014-15 to 2024-25 shows fluctuations with occasional spikes, notably in 2019-20 and 2021-22, but overall indicates a gradual decline, culminating in a significant drop to just 1 death in 2024-25.

Table 5.8.1: Trend of Maternal Deaths (2014-15 to 2024-25)

Period	Maternal Deaths
2014-15	6
2015-16	9
2016-17	8
2017-18	7
2018-19	4
2019-20	12
2020-21	6
2021-22	14
2022-23	4
2023-24	8
2024-25	1
Source: District Data	

5.9 Childbirth

The live birth trends by gender show a gradual decline for both males and females over the period from 2014-15 to 2024-25. Male live births decreased from 13,070 to 8,050, while female live births dropped from 12,504 to 7,375. This overall downward trend reflects a reduction in total live births in the district for both genders during this time.

Table 5.9.1: Trend of Live Births by Gender (Male, Female & Total) – 2014-15 to 2024-25

Period	Male	Female	Total
2014-15	13070	12504	25574
2015-16	12574	12057	24631
2016-17	11268	10908	22176
2017-18	12043	11557	23600
2018-19	12381	11819	24200
2019-20	11429	11234	22663
2020-21	10654	10270	20924
2021-22	10576	10102	20678
2022-23	10159	9770	19929
2023-24	9080	8752	17832
2024-25	8050	7375	15425
Source: HMIS Portal			

5.10 Infant Mortality

Neonatal deaths in the district show a general declining trend from 113 in 2014-15 to around 40-43 in the most recent years, despite some minor fluctuations. This overall decrease suggests improvements in newborn care and health services over the period.

Table 5.10.1: Number of Neonatal Deaths Reported (2014-15 to 2024-25)

Period	Neonatal Deaths (Number)
2014-15	113
2015-16	68
2016-17	82
2017-18	80
2018-19	64
2019-20	53
2020-21	41
2021-22	49
2022-23	49
2023-24	40
2024-25	43
Source - District Report	

Table 5.10.2: Number of Infant Deaths Reported (2014-15 to 2024-25)

Period	Infant Deaths (Number)
2014-15	142
2015-16	105
2016-17	113
2017-18	101
2018-19	96
2019-20	89
2020-21	59
2021-22	80
2022-23	76
2023-24	68
2024-25	61
Source - District Report	

Infant deaths in the district have generally declined from 142 in 2014-15 to 61 in 2024-25, with some fluctuations in between. The overall trend indicates steady progress in reducing infant mortality over the years.

Table No. 5.10.3 shows that Child (under-five) deaths show a fluctuating trend from 2021-22 to 2024-25, with numbers rising from 89 to 97 in 2022-23, then declining to 69 by 2024-25. Overall, there is a recent downward trend indicating progress in reducing child mortality.

Table 5.10.3: Number of Child Deaths (Under 5) Reported

(2021-22to 2024-25)

Period	Child Deaths (Number)
2021-22	89
2022-23	97
2023-24	87
2024-25	69
Source - District Report	

Table 5.10.4: Infant and Neonatal Mortality Rates in Kottayam (2019-20 to 2024-25)

Year	Infant and Neonatal Mortality Rates
2019-20	IMR- 4
	NMR- 2
2020-21	IMR-3
	NMR- 2
2021-22	IMR- 4
	NMR- 2
2022-23	IMR- 4
	NMR- 2

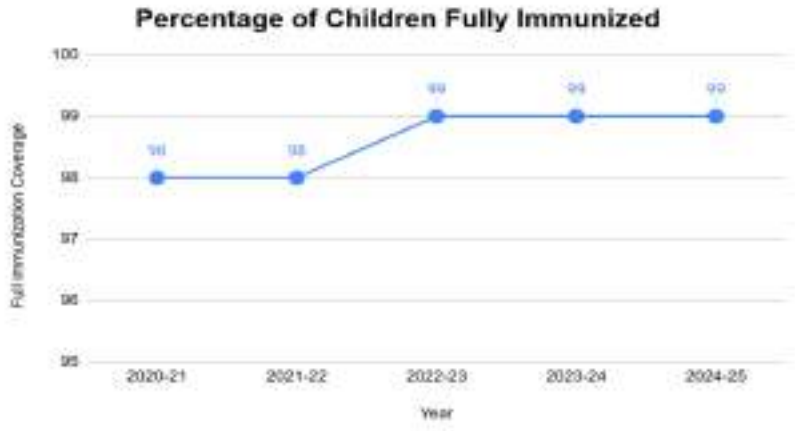
2023-24	IMR- 4
	NMR- 2
2024-25	IMR- 4
	NMR- 3
Source: Monthly District Death Reports and HMIS Live Birth Data	

The infant and neonatal mortality rates remained relatively stable from 2019-20 to 2024-25, with infant mortality fluctuating slightly between 3 and 4, and neonatal mortality staying mostly at 2 before a slight rise to 3 in 2024-25. Overall, the trend indicates consistent and low mortality rates over the years.

5.11 Child Immunisation

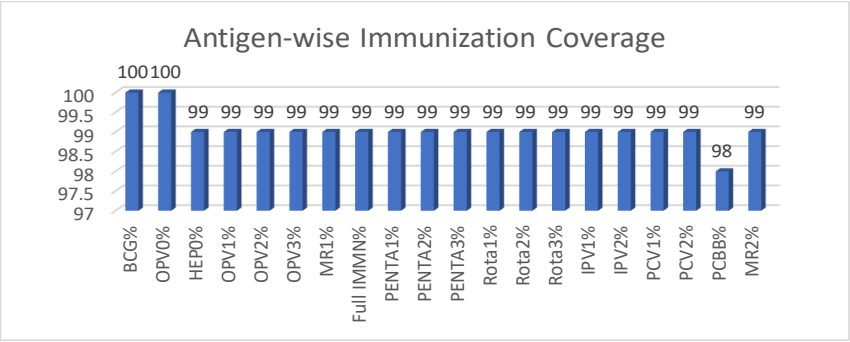
The percentage of children fully immunised shows a consistently high and slightly improving trend from 2020-21 to 2024-25. Coverage increased from 98% in 2020-21 and 2021-22 to 99% from 2022-23 onward, indicating strong and sustained performance in child immunisation efforts.

Graph 5.11.1: Trend in Percentage of Children Fully Immunised



Source: HMIS Portal

Graph 5.11.2: Antigen-wise Immunisation Coverage (Based on RCH Data)



Source: RCH Portal

The antigen-wise immunisation coverage data shows the percentage of children vaccinated for each antigen in the immunisation schedule. Overall, the data indicates very high vaccination coverage, with most antigens having coverage rates between 98% and 100%.

CHAPTER 6

COMMUNICABLE AND NON-COMMUNICABLE DISEASES IN THE DISTRICT

6.1: Disease burden overview: Common communicable diseases

The pattern of communicable diseases in Kottayam district reveals a diverse spectrum of infections, with both water-borne and vector-borne diseases contributing significantly to the overall morbidity burden. Acute Diarrhoeal diseases remain the most prevalent condition, indicating ongoing challenges related to water quality, hygiene, and sanitation practices. Vector-borne diseases such as dengue fever have shown a rising trend over the past few years, reflecting persistent mosquito breeding and transmission risks in urban and peri-urban areas. Respiratory infections, particularly seasonal influenza, have also recorded an increase, suggesting periodic outbreaks linked to climatic and seasonal variations.

Zoonotic infections like leptospirosis and scrub typhus continue to be significant public health concerns, largely due to environmental exposure and agricultural activities common in the district. Vaccine-preventable diseases, including chickenpox, remain endemic, with sporadic cases reported annually, indicating the need for continued vaccination coverage and awareness. The occurrence of hepatitis A underscores the importance of maintaining food and water safety standards. Meanwhile, diseases such as malaria and chikungunya have shown a marked decline, reflecting the positive impact of strengthened vector control and surveillance efforts.

Overall, Kottayam district faces a multifaceted communicable disease profile that demands sustained public health interventions. Strengthening sanitation infrastructure, ensuring access to safe drinking water, intensifying vector control activities, and maintaining robust disease surveillance systems are crucial for reducing the incidence and preventing outbreaks of communicable diseases in the district.

6.1.1: Communicable Diseases – Cases Reported

Kottayam district continues to report a range of communicable diseases, indicating ongoing public health concerns that require sustained attention. Acute Diarrhoeal Disease remains the most frequently reported condition, reflecting persistent challenges in sanitation and access to safe drinking water. Vector-borne diseases such as Dengue, Leptospirosis, and Scrub Typhus continue to occur regularly, underscoring the need for

strengthened vector control and community-level preventive measures. Respiratory infections, particularly Influenza, have shown an increasing trend in recent years, suggesting seasonal spikes and the need for improved respiratory disease surveillance. Although diseases like Japanese Encephalitis, Kala Azar, and Kysanur Forest Disease have not been reported, sporadic cases of Chikungunya, Cholera, and various forms of Hepatitis indicate that vigilance must be maintained. Overall, the disease pattern in Kottayam highlights the importance of continuous surveillance, public health education, sanitation improvements, and timely medical interventions to effectively manage and control communicable diseases in the district.

Table 6.1.1.1: Number of Reported Cases of Communicable Diseases in the District (2020–2024)

Name of Diseases	2024	2023	2022	2021	2020
Acute Diarrhoeal Disease	44826	39987	42702	22694	20790
Dengue Fever: Confirmed	2668	2451	844	485	630
Influenza (H1N1, H3N2, Infl A, Infl B)	1600	154	11	0	1
Chicken Pox	2142	2184	1118	376	1553
Leptospirosis: Confirmed	733	346	324	251	178
Scrub Typhus	733	405	535	357	323
Hepatitis - A: Confirmed	140	31	11	6	20
Malaria	53	30	39	39	23
Hepatitis - B	39	52	103	51	40
Typhoid	35	26	9	4	3
Hepatitis - C	29	36	37	19	11

Shigella	23	5	2	0	0
Chikungunya	15	24	62	315	548
Cholera	13	1	0	0	0
Rabies: Confirmed	4	3	5	1	0
Acute Encephalitis Syndrome	2	6	5	0	1
Japanese Encephalitis (JE)	0	0	0	0	0
Hepatitis - E	0	2	2	0	0
Kala Azar	0	0	0	0	0
Kysanur Forest Disease	0	0	0	0	0
Zika	0	8	14	85	0
West Nile	0	1	0	0	0
Nipah	0	0	0	0	0
Source: https://dhs.kerala.gov.in/en/data-on-communicable-diseases/					

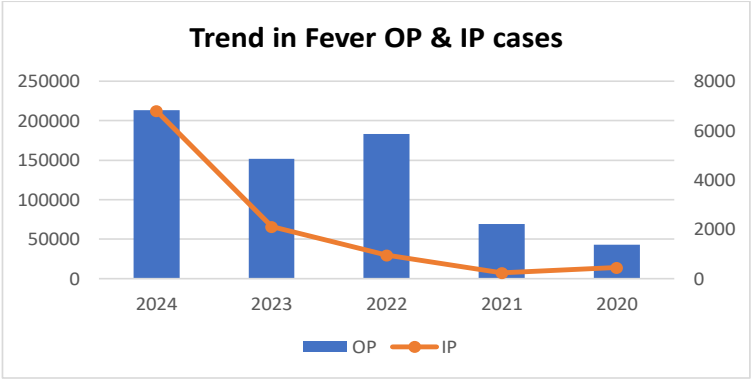
Table 6.1.1.1 represents, communicable disease data from 2020 to 2024 shows a clear upward trend in several diseases across the district, with 2024 recording notably higher case numbers for most conditions. Acute Diarrhoeal Disease remains the most prevalent, with 44,826 cases in 2024—almost double the number reported in 2021—indicating persistent issues related to water quality and sanitation. Dengue Fever has also shown a sharp increase, rising from 485 cases in 2021 to 2,668 in 2024, reflecting growing vector-borne disease transmission. Similarly, Influenza cases surged dramatically to 1,600 in 2024, suggesting enhanced surveillance or possible outbreaks. Chickenpox continues to appear regularly, with over 2,000 cases in last two years, while Leptospirosis and Scrub Typhus both saw notable increases, each reporting 733 cases in

2024. Among the enteric diseases, Hepatitis A showed a marked rise to 140 cases, whereas Hepatitis B and C remained relatively stable. Cholera, absent in recent years, re-emerged with 13 cases, indicating potential lapses in waterborne disease control. Other infections like Chikungunya, Typhoid, and Rabies were reported in smaller numbers, and diseases such as Japanese Encephalitis, Kala Azar, and Nipah recorded no cases. Overall, the 2024 data highlight an increase in water- and vector-borne diseases, underscoring the need for stronger public health measures, improved sanitation, and sustained disease surveillance to prevent future outbreaks.

6.1.2: Trend in Fever Outpatient and Inpatient Cases

The trend in fever-related cases in Kottayam district over recent years shows a clear upward pattern in both outpatient and inpatient visits, indicating a growing public health concern related to febrile illnesses. Outpatient cases have shown significant year-to-year variation but generally remain high, suggesting that fever continues to be a common cause for seeking medical attention at the primary care level. Inpatient cases, although comparatively fewer, have risen sharply in the most recent years, reflecting an increase in the number of severe cases requiring hospitalization. This pattern underscores the need for sustained fever surveillance, early detection, and effective management strategies in Kottayam district to reduce disease severity, prevent complications, and control potential outbreaks.

Graph 6.1.2.1 Trend in Fever Outpatient and Inpatient Cases Reported from All Health Facilities (2020–2024)



Source: https://dhs.kerala.gov.in/en/data-on-communicable-diseases/

The trend shows a steady rise in fever outpatient (OP) cases in Kottayam district from 2020 to 2024, with the numbers increasing significantly over the five-year period. A marked surge is observed after 2021, suggesting either a genuine rise in fever incidence or improved reporting and healthcare access. Inpatient (IP) cases, though fewer in comparison, display fluctuations with relatively lower numbers until 2022, followed by a sharp increase in 2023 and 2024. This recent rise in IP admissions indicates a higher occurrence of severe or complicated fever cases requiring hospitalization. Overall, the data reflect an increasing fever burden in the district, emphasizing the importance of sustained surveillance, early diagnosis, and effective preventive interventions.

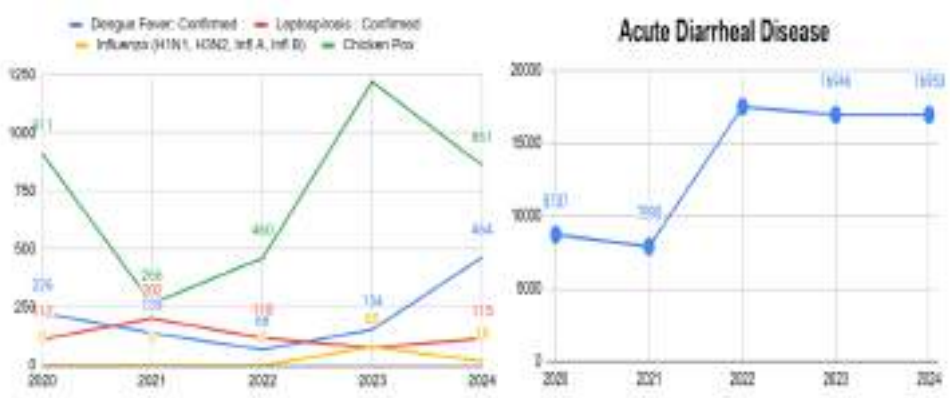
6.1.3: Trend in Top Five Reported Communicable Diseases in the District

An analysis of communicable disease data from 2020 to 2024 reveals that the top five reported diseases in the Kottayam district are Acute Diarrhoeal Disease, Dengue Fever, Chicken Pox, Influenza (H1N1, H3N2, Infl A, Infl B), and Leptospirosis.

Acute Diarrhoeal Disease consistently remains the most reported illness across all years, showing a steady rise from 20,790 cases in 2020 to 44,826 in 2024, reflecting ongoing issues with water and sanitation. Dengue Fever cases have also increased significantly, from 630 in 2020 to 2,668 in 2024, indicating heightened vector activity and seasonal transmission peaks. Influenza cases show a dramatic surge, from negligible numbers before 2022 to 1,600 cases in 2024, likely due to improved diagnostic capacity and post-pandemic viral circulation. Chicken Pox shows year-to-year fluctuations but remains among the top-reported diseases, with 2,142 cases in 2024, suggesting persistent community transmission. Leptospirosis has shown a notable upward trend, rising from 178 cases in 2020 to 733 in 2024, highlighting increased exposure risks during monsoon seasons.

Overall, the data indicate a rising trend in water-borne, vector-borne, and viral infections, emphasizing the need for strengthened surveillance, public health interventions, and preventive measures to curb the growing communicable disease burden in the district.

Graph 6.1.3.1: Trend in Top Five Reported Communicable Diseases in the District (2020–2024)



(Source: https://dhs.kerala.gov.in/en/data-on-communicable-diseases/)

The line chart (Graph 6.1.3.1) illustrates the trend of the top five communicable diseases reported in Kottayam district from 2020 to 2024 — Acute Diarrhoeal Disease, Dengue Fever, Leptospirosis, Influenza, and Chickenpox. Among these, Acute Diarrhoeal Disease consistently records the highest number of cases, showing a general upward trend from 8,707 in 2020 to 16,950 in 2024, reflecting persistent water- and sanitation-related challenges in the district. Dengue Fever shows fluctuations over the years, with a decrease up to 2022 followed by a sharp rise to 464 cases in 2024, indicating renewed vector activity and seasonal outbreaks. Leptospirosis also displays variations, peaking in 2021 with 202 cases before stabilizing at a relatively lower but sustained level by 2024. Influenza cases remained negligible until 2023, when they spiked to 80, before declining again in 2024, suggesting sporadic outbreaks or improved diagnostic efforts. Chickenpox shows year-to-year variation, with a peak in 2023 (1,219 cases) followed by a decrease to 861 cases in 2024. Overall, the trends highlight that Acute Diarrhoeal Disease remains the predominant communicable illness in Kottayam, while vector-borne and viral infections such as Dengue and Chickenpox continue to contribute significantly to the district's disease burden.

6.1.4: Major Communicable Diseases – Deaths Reported (2024)

In the Kottayam district during 2024, a total of 29 deaths were reported from major communicable diseases. Leptospirosis emerged as the leading cause, accounting for the majority of deaths, followed by Dengue Fever and isolated cases of Malaria, Influenza, and Acute Diarrhoeal Disease. No deaths were reported from several other communicable diseases. Overall, the trend indicates that vector-borne infections, particularly Leptospirosis and Dengue, continued to dominate communicable disease–related mortality during the year.

Table 6.1.4.1: Disease-wise Distribution of Deaths Due to Communicable Diseases (2024)

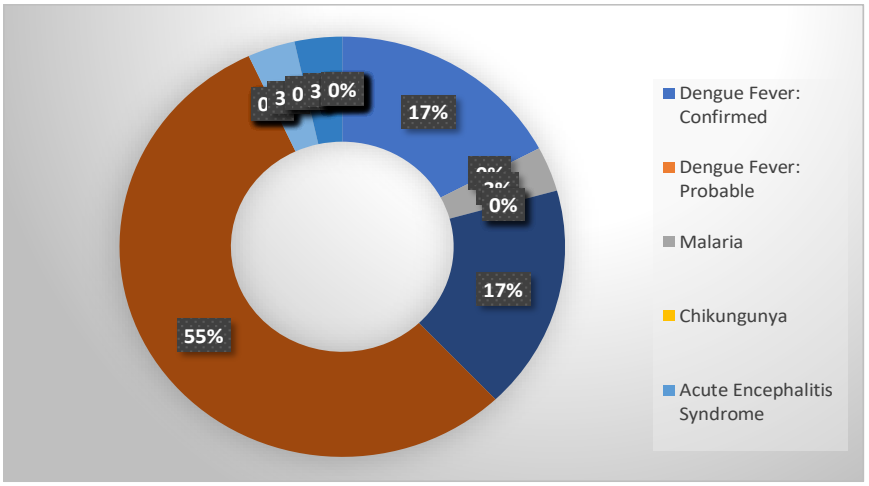
Name of Diseases	Death reported
Dengue Fever: Confirmed	5
Dengue Fever: Probable	0
Malaria	1
Chikungunya	0
Acute Encephalitis Syndrome	0
Japanese Encephalitis (JE)	0
Leptospirosis: Confirmed	5
Leptospirosis: Probable	16
Hepatitis - A: Confirmed	0
Hepatitis - A: Probable	0
Hepatitis - B	0
Hepatitis - C	0

Hepatitis - E	0
Cholera	0
Diphtheria	0
Typhoid	0
Acute Diarrhoeal Disease	1
Food Poisoning	0
Shigella	0
Scrub Typhus	0
Kala Azar	0
Kyasanur Forest Disease	0
Influenza (H1N1, H3N2, Infl A, Infl B)	1
Rabies: Confirmed	0
Rabies: Probable	0
Zika	0
West Nile	0
Prob West Nile	0
M Pox	0
Nipah	0
Amoebic Meningoencephalitis	0
Prob Amoebic Meningoencephalitis	0

Chicken Pox	0
Fever (Undifferentiated)	0

(Source: https://dhs.kerala.gov.in/en/data-on-communicable-diseases/)

Diagram 6.1.4.1: Distribution of Communicable Disease Deaths by Type – 2024



Source: https://dhs.kerala.gov.in/en/data-on-communicable-diseases/

The chart (6.1.4.1) shows deaths reported from various infectious diseases. Most deaths (55%) occurred in probable leptospirosis cases, followed by confirmed dengue fever (17%) and confirmed leptospirosis (17%). Malaria and influenza each accounted for 3% of deaths, while all other diseases reported none. Overall, leptospirosis and dengue fever together made up nearly 90% of all recorded deaths, indicating these as the major contributors to mortality in the dataset.

6.2: Burden of Non-Communicable Diseases in the District

The data on non-communicable diseases (NCDs) in the Kottayam district from 2022 to March 2025 shows a steady increase in the number of reported cases across most conditions, though no deaths were recorded during this period. Hypertension and Type 2 diabetes remain the most prevalent conditions, with both showing a marked rise over

the years, indicating a growing burden of lifestyle-related diseases. Cardiovascular conditions such as ischemic heart disease and cerebrovascular disorders also show consistent case numbers, reflecting the ongoing impact of cardiovascular risk factors. Among cancers, breast and oral cancers are reported more frequently compared to cervical and lung cancers. Mental health disorders, particularly common mental disorders, have increased significantly, suggesting either higher incidence or improved reporting and awareness. Obesity cases have also risen steadily, likely contributing to the increase in metabolic and cardiovascular diseases. Additionally, accidental injuries and road traffic accidents remain common, though without associated fatalities. Overall, the data indicate a rising trend in non-communicable diseases, emphasising the need for comprehensive prevention, early detection, and health promotion initiatives to address lifestyle and behavioural risk factors in the district.

Table 6.2.1: Non-Communicable Diseases in the District

Disease	2022		2023		2024		2025 (Jan-March)	
	Case	Death	Case	Death	Case	Death	Case	Death
Accidental injuries	4863	0	10921	0	14589	0	4394	0
Cancers								
Cancer Cervix	21	0	48	0	40	0	6	0
Breast Cancer	193	0	196	0	175	0	78	0
Lung Cancer	73	0	231	0	103	0	24	0
Oral Cancer	115	0	71	0	224	0	31	0
Cardiovascular Diseases								

Rheumatic fever	0	0	0	0	0	0	0	0
Hypertension	84455	0	122995	0	231243	0	40599	0
Ischemic Heart disease	5844	0	5678	0	5871	0	1404	0
Congenital Heart disease	423	0	106		662	0	0	0
Others	0	0	0	0	0	0	0	0
Diabetes								
Type 1	68	0	61	0	30	0	16	0
Type 2	60854	0	90529	0	143817	0	30785	0
Cerebrovascular disorders	2278	0	3632	0	6241	0	2028	0
Chronic neurological disorders	169	0	321	0	276	0	96	0
Obesity	746	0	812	0	2185	0	364	0
Common Mental disorders	1779	0	5268	0	8048	0	2498	0
Severe mental disorders	0	0	0	0	0	0	0	0

Road Traffic Accident	3946	0	3665	0	3449	0	1511	0
Snake bite	267	0	216	0	275	0	59	0
Source: District data								

Table 6.2.1 shows a steadily increasing burden of non-communicable diseases (NCDs) in the district. The most prevalent conditions include hypertension, Type 2 diabetes mellitus, ischemic heart disease, cerebrovascular disorders, and mental health conditions, reflecting the growing lifestyle and metabolic health challenges in the population.

Cardiovascular and Metabolic Disorders: Hypertension has shown a sharp rise from 84,455 cases in 2022 to 231,243 cases in 2024, indicating a significant upsurge in cardiovascular risk factors. During the first quarter of 2025 alone, 40,599 cases have already been reported, suggesting that the high prevalence continues. Similarly, Type 2 diabetes mellitus increased from 60,854 cases in 2022 to 143,817 in 2024, highlighting an alarming trend of metabolic disorders likely associated with sedentary lifestyles, obesity, and unhealthy dietary habits. Ischemic heart disease (IHD) and cerebrovascular disorders (CVD) have also shown consistent increases, with IHD cases rising slightly from 5,844 in 2022 to 5,871 in 2024, and CVD cases increasing from 2,278 to 6,241 over the same period. Although no deaths were reported, the morbidity data point to a growing cardiovascular disease burden in the district.

Cancer Burden: Among cancers, oral cancer was the most frequently reported in 2024 (224 cases), while breast cancer cases fluctuated between 193 in 2022 and 175 in 2024. Cervical cancer cases remain relatively low but persistently reported each year. This pattern underscores the need to strengthen cancer screening programs under NPCDCS and enhance community-level awareness, particularly among women, to facilitate early detection and treatment.

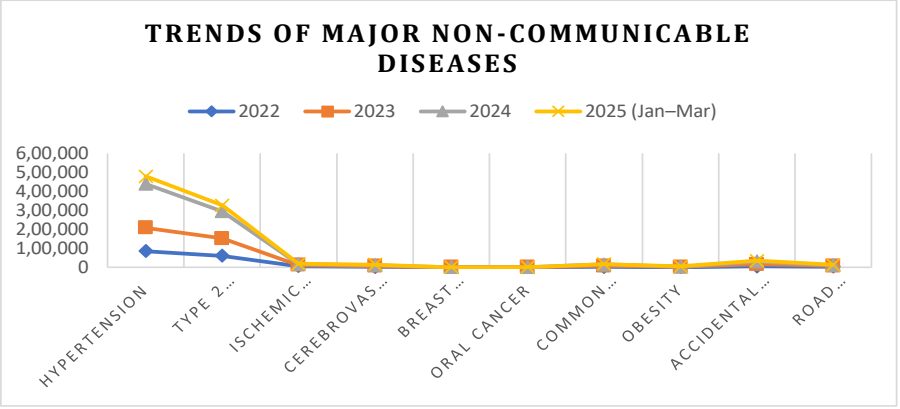
Neurological and Mental Health Disorders: Mental health issues are emerging as a major public health concern in the district. The number of common mental disorder cases increased from 1,779 in 2022 to 8,048 in 2024, reflecting either a genuine rise in prevalence or improved detection and reporting. Chronic neurological disorders, though

reported in smaller numbers ranging from 169 to 276 cases annually, remain consistently present. These findings highlight the urgent need to integrate mental health care into primary health services through the National Mental Health Programme to ensure early intervention and reduce stigma.

Other NCDs and Injuries: Obesity has shown a clear upward trend, with cases rising from 746 in 2022 to 2,185 in 2024, in line with the surge in metabolic diseases. Accidental injuries and road traffic accidents (RTAs) also remain significant contributors to morbidity, with accidental injuries increasing sharply from 4,863 in 2022 to 14,589 in 2024, while RTAs continue to occur at consistently high rates. Although no deaths have been recorded, these figures indicate a substantial burden of non-fatal injuries, which negatively affect productivity and overall quality of life.

Overall, the data point to a rapidly growing challenge of non-communicable diseases and related conditions in the district, necessitating strengthened preventive, diagnostic, and management strategies within the public health system.

Graph 6.2.1 Trends of Major Non-Communicable Diseases



Source: District data

The graph (6.2.1) shows the trend of major non-communicable diseases in the district from 2022 to 2025 (Jan–Mar). The data indicate a consistent rise in hypertension and type 2 diabetes, making them the most prevalent NCDs. Other conditions like ischemic heart disease, cerebrovascular disorders, and obesity show smaller but steady numbers. The overall trend highlights an increasing burden of lifestyle-related diseases in the district.

6.3: District-Specific Outbreaks and Health Concerns

During the reporting period of 2024- 2025, a total of 20 outbreaks were recorded in the district, involving multiple communicable diseases of public health significance. Hepatitis A accounted for the highest number of outbreaks (5 instances), primarily linked to contaminated water sources and inadequate sanitation facilities. Mumps (4 outbreaks) and Chickenpox (3 outbreaks) were the next most frequent, mainly affecting school-aged children and indicating possible gaps in vaccination coverage or clustering in institutional settings.

Dengue fever (3 outbreaks) represented the major vector-borne disease concern, emphasizing the need for strengthened vector control measures and community awareness to eliminate mosquito breeding sites. Single outbreaks of Acute Diarrhoeal Disease (ADD), Acute Gastroenteritis, and Japanese Encephalitis (JE) were also reported, reflecting seasonal patterns and environmental influences. Two outbreaks of viral fever were documented, suggesting non-specific viral illnesses possibly linked to changing climatic or ecological conditions. Overall, the pattern highlights water- and vector-borne infections as leading public health challenges, alongside vaccine-preventable diseases like mumps and chickenpox. Strengthening surveillance, ensuring safe water supply, promoting hygiene practices, improving immunisation coverage, and implementing robust vector control remain key strategies for outbreak prevention and control in the district.

1. The major concern at present in the district is Viral Hepatitis A outbreaks.
2. All the outbreaks were promptly identified and given Event alerts through the IHIP portal
3. Necessary outbreak containment activities were done in the concerned areas under the supervision of the district surveillance unit.
4. Timely intersectoral coordination meetings were conducted at the district level under the chairmanship of the Hon Collector and ensured the participation of all the line departments in outbreak containment activities.

Table 6.3.1: Outbreak Summary 2024 - 2025

Diseases	No of Outbreaks
Hepatitis A	5
Dengue fever	3
Chickenpox	3
ADD	1
Japanese Encephalitis	1
Acute Gastroenteritis	1
Mumps	4
Viral fever	2
Total	**20**
Source: District Data	

During the reporting period 2024 -2025, the district experienced an outbreak involving various communicable diseases. Hepatitis A accounted for the highest number (5 outbreaks), followed by Mumps (4), Dengue fever (3), and Chickenpox (3). Single outbreaks of Acute Diarrhoeal Disease, Acute Gastroenteritis, and Japanese Encephalitis, along with two outbreaks of viral fever, were also recorded. The trend indicates that water-borne, vector-borne, and vaccine-preventable diseases remain the leading public health concerns in the district.

CHAPTER 7

CRITICAL OBSERVATIONS IN NFHS 5 DATA AND APPROPRIATE INTERVENTIONS NEEDED

7.1 Key Indicators

Indicators	NFHS-5 (2019-20)	NFHS-4 (2015-16)
Population and Household Profile	Total	Total
1. Female population age 6 years and above who ever attended school (%)	97.9	98.7
2. Population below age 15 years (%)	18.8	16.7
3. Sex ratio of the total population (females per 1,000 males)	1,071	1,029
4. Sex ratio at birth for children born in the last five years (females per 1,000 males)	865	1,077
5. Children under age 5 years whose birth was registered with the civil authority (%)	97.2	96.8
6. Deaths in the last 3 years registered with the civil authority (%)	97.6	NA
7. Population living in households with electricity (%)	99.6	99.7
8. Population living in households with an improved drinking-water source[1] (%)	97.1	97.1
9. Population living in households that use an improved sanitation facility[2] (%)	98.6	99.1

10. Households using clean fuel for cooking[3] (%)	72.5	62.6
11. Households using iodized salt (%)	97.4	99.1
12. Households with any usual member covered under a health insurance/financing scheme (%)	53.2	50.8
13. Children age 5 years who attended pre-primary school during the school year 2019-20 (%)	33.7	NA
Characteristics of Women (age 15-49 years)		
14. Women who are literate[4] (%)	99.7	NA
15. Women with 10 or more years of schooling (%)	85.8	81.4
Marriage and Fertility		
16. Women age 20-24 years married before age 18 years (%)	1.6	1.3
17. Births in the 5 years preceding the survey that are third or higher order (%)	0.0	1.6
18. Women age 15-19 years who were already mothers or pregnant at the time of the survey (%)	2.8	0.0
19. Women age 15-24 years who use hygienic methods of protection during their menstrual period[5] (%)	94.1	88.6
Current Use of Family Planning Methods (currently married women age 15–49 years)		
20. Any method[6] (%)	44.7	52.9
21. Any modern method[6] (%)	40.3	50.0

22. Female sterilisation (%)	33.0	42.2
23. Male sterilisation (%)	0.0	0.0
24. IUD/PPIUD (%)	1.9	2.0
25. Pill (%)	0.7	0.2
26. Condom (%)	3.6	5.7
27. Injectables (%)	0.0	0.0
Unmet Need for Family Planning (currently married women age 15–49 years)		
28. Total unmet need[7] (%)	16.1	11.2
29. Unmet need for spacing[7] (%)	5.6	7.2
Quality of Family Planning Services		
30. Health worker ever talked to female non-users about family planning (%)	17.5	15.0
31. Current users ever told about side effects of current method[8] (%)	40.8	66.2

Maternal and Child Health	Total	Total
Maternity Care (for last birth in the 5 years before the survey)		
32. Mothers who had an antenatal check-up in the first trimester (%)	81.6	98.0
33. Mothers who had at least 4 antenatal care visits (%)	55.1	85.4
34. Mothers whose last birth was protected against neonatal tetanus[9] (%)	83.6	98.3

35. Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	51.1	59.4
36. Mothers who consumed iron folic acid for 180 days or more when they were pregnant (%)	44.0	37.9
37. Registered pregnancies for which the mother received a Mother and Child Protection (MCP) card (%)	90.4	95.5
38. Mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery (%)	85.0	88.9
39. Average out-of-pocket expenditure per delivery in a public health facility (Rs.)	10,236	6,260
40. Children born at home who were taken to a health facility for a check-up within 24 hours of birth (%)	*	*
41. Children who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery (%)	83.5	NA
Delivery Care (for births in the 5 years before the survey)		
42. Institutional births (%)	98.7	100.0
43. Institutional births in public facility (%)	44.3	49.4
44. Home births that were conducted by skilled health personnel[10] (%)	0.7	0.0
45. Births attended by skilled health personnel[10] (%)	99.3	100.0
46. Births delivered by caesarean section (%)	48.0	28.3

47. Births in a private health facility that were delivered by caesarean section (%)	49.4	43.2
48. Births in a public health facility that were delivered by caesarean section (%)	47.7	13.0
Child Vaccinations and Vitamin A Supplementation		
49. Children age 12-23 months fully vaccinated based on information from either vaccination card or mother's recall[11] (%)	*	95.2
50. Children age 12-23 months fully vaccinated based on information from vaccination card only[12] (%)	*	95.1
51. Children age 12-23 months who have received BCG (%)	*	100.0
52. Children age 12-23 months who have received 3 doses of polio vaccine[13] (%)	*	100.0
53. Children age 12-23 months who have received 3 doses of penta or DPT vaccine (%)	*	100.0
54. Children age 12-23 months who have received the first dose of measles-containing vaccine (MCV) (%)	*	95.2
55. Children age 24-35 months who have received a second dose of measles-containing vaccine (MCV) (%)	*	NA
56. Children age 12-23 months who have received 3 doses of rotavirus vaccine[14] (%)	*	NA
57. Children age 12-23 months who have received 3 doses of penta or hepatitis B vaccine (%)	*	100.0
58. Children age 9-35 months who received a vitamin A dose in	91.2	80.2

the last 6 months (%)		
59. Children age 12-23 months who received most of their vaccinations in a public health facility (%)	*	68.2
60. Children age 12-23 months who received most of their vaccinations in a private health facility (%)	*	31.8
Treatment of Childhood Diseases (children under age 5 years)		
61. Prevalence of diarrhoea in the 2 weeks preceding the survey (%)	10.2	0.6
62. Children with diarrhoea in the 2 weeks preceding the survey who received oral rehydration salts (ORS) (%)	*	*
63. Children with diarrhoea in the 2 weeks preceding the survey who received zinc (%)	*	*
64. Children with diarrhoea in the 2 weeks preceding the survey taken to a health facility or health provider (%)	*	*
65. Prevalence of symptoms of acute respiratory infection (ARI) in the 2 weeks preceding the survey (%)	1.2	0.6
66. Children with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider (%)	86.6	*
Child Feeding Practices and Nutritional Status of Children	Total	Total
67. Children under age 3 years breastfed within one hour of birth[15] (%)	51.1	79.0
68. Children under age 6 months exclusively breastfed[16] (%)	*	*
69. Children age 6-8 months receiving solid or semi-solid food	*	*

and breastmilk[16] (%)		
70. Breastfeeding children age 6-23 months receiving an adequate diet[16,17] (%)	16.9	23.3
71. Non-breastfeeding children age 6-23 months receiving an adequate diet[16,17] (%)	*	*
72. Total children age 6-23 months receiving an adequate diet[16,17] (%)	19.0	23.8
73. Children under 5 years who are stunted (height-for-age)[18] (%)	23.4	22.0
74. Children under 5 years who are wasted (weight-for-height)[18] (%)	8.4	16.2
75. Children under 5 years who are severely wasted (weight-for-height)[19] (%)	2.3	6.2
76. Children under 5 years who are underweight (weight-for-age)[18] (%)	17.3	11.3
77. Children under 5 years who are overweight (weight-for-height)[20] (%)	3.2	3.7
Nutritional Status of Women (age 15-49 years)		
78. Women whose Body Mass Index (BMI) is below normal (BMI <18.5 kg/m^2)[21] (%)	12.3	5.3
79. Women who are overweight or obese (BMI ≥25.0 kg/m^2)[21] (%)	39.8	31.5
80. Women who have high risk waist-to-hip ratio (≥0.85) (%)	63.1	NA
Anaemia among Children and Women		

81. Children age 6-59 months who are anaemic (<11.0 g/dl)[22] (%)	36.8	33.8
82. Non-pregnant women age 15-49 years who are anaemic (<12.0 g/dl)[22] (%)	38.6	29.8
83. Pregnant women age 15-49 years who are anaemic (<11.0 g/dl)[22] (%)	*	6.2
84. All women age 15-49 years who are anaemic[22] (%)	38.7	28.8
85. All women age 15-19 years who are anaemic[22] (%)	38.1	29.9
Blood Sugar Level among Adults (age 15 years and above)		
Women		
86. Blood sugar level - high (141-160 mg/dl)[23] (%)	7.6	NA
87. Blood sugar level - very high (>160 mg/dl)[23] (%)	16.9	NA
88. Blood sugar level - high or very high (>140 mg/dl) or taking medicine to control blood sugar level[23] (%)	28.7	NA
Men		
89. Blood sugar level - high (141-160 mg/dl)[23] (%)	8.9	NA
90. Blood sugar level - very high (>160 mg/dl)[23] (%)	15.5	NA
91. Blood sugar level - high or very high (>140 mg/dl) or taking medicine to control blood sugar level[23] (%)	29.4	NA
Hypertension among Adults (age 15 years and above)		
Women		

92. Mildly elevated blood pressure (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	15.4	NA
93. Moderately or severely elevated blood pressure (Systolic ≥160mm of Hg and/or Diastolic ≥100mm of Hg) (%)	8.6	NA
94. Elevated blood pressure (Systolic ≥140 mm of Hg and/or Diastolic ≥90 mm of Hg) or taking medicine to control blood pressure (%)	34.2	NA
Men		
95. Mildly elevated blood pressure (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	21.0	NA
96. Moderately or severely elevated blood pressure (Systolic ≥160mm of Hg and/or Diastolic ≥100mm of Hg) (%)	9.2	NA
97. Elevated blood pressure (Systolic ≥140 mm of Hg and/or Diastolic ≥90 mm of Hg) or taking medicine to control blood pressure (%)	38.8	NA
Screening for Cancer among Women (age 30-49 years)		
98. Ever undergone a screening test for cervical cancer (%)	2.6	NA
99. Ever undergone a breast examination for breast cancer (%)	3.0	NA
100. Ever undergone an oral cavity examination for oral cancer (%)	1.5	NA
Tobacco Use and Alcohol Consumption among Adults (age 15 years and above)		
101. Women age 15 years and above who use any kind of tobacco (%)	1.7	NA

102. Men age 15 years and above who use any kind of tobacco (%)	18.3	NA
103. Women age 15 years and above who consume alcohol (%)	0.6	NA
104. Men age 15 years and above who consume alcohol (%)	27.4	NA
Source: NFHS-5 &NFHS-4 *Note: * This section is not collected in NFHS 4*		

The National Family Health Survey (NFHS-5, 2019–20) compared with NFHS-4 (2015–16) highlights several important demographic, health, and nutrition trends. The sex ratio of the total population has improved from 1,029 to 1,071 females per 1,000 males, indicating better gender balance overall. However, the sex ratio at birth declined from 1,077 to 865, suggesting a possible preference for male children. The proportion of the population with access to electricity, improved drinking water, and sanitation facilities remains very high at above 97%. The use of clean fuel for cooking has improved from 62.6% to 72.5%, and health insurance coverage also shows a slight rise from 50.8% to 53.2%. Female education indicators remain encouraging, with 97.9% of females aged six years and above having attended school.

Marriage and fertility indicators show that early marriage among women aged 20–24 years remains low at 1.6%, and the use of hygienic menstrual methods has significantly improved from 88.6% to 94.1%. However, the use of family planning methods has declined from 52.9% to 44.7%, with reduced adoption of both female sterilisation and condom use. The total unmet need for family planning has risen from 11.2% to 16.1%, indicating the need to strengthen reproductive health services.

Maternal and child health indicators reveal a concerning decline in antenatal care coverage. The proportion of mothers who had antenatal check-ups in the first trimester dropped from 98% to 81.6%, and those completing four or more ANC visits fell from 85.4% to 55.1%. Protection against neonatal tetanus and iron-folic acid consumption also decreased. Institutional deliveries remain high at 98.7%, though the proportion of caesarean deliveries has increased markedly from 28.3% to 48%. The average out-of-pocket expenditure for deliveries in public facilities has also risen significantly.

In terms of child health, the prevalence of diarrhoea among children under five years increased from 0.6% to 10.2%. While vaccination data for NFHS-5 were not collected, earlier findings indicate high coverage levels. Nutritional indicators show mixed trends — the proportion of stunted children slightly increased to 23.4%, and underweight children significantly rose from 11.3% to 17.3%. However, severe wasting declined notably from 6.2% to 2.3%. Vitamin A supplementation coverage improved from 80.2% to 91.2%.

Among women, undernutrition (BMI <18.5 kg/m^2) increased from 5.3% to 12.3%, while overweight and obesity also rose from 31.5% to 39.8%, indicating a double burden of malnutrition. Anaemia remains a significant concern, with prevalence increasing among children (36.8%), women (38.7%), and adolescent girls (38.1%) compared to NFHS-4 levels.

Non-communicable disease indicators reveal that around one-third of adults have elevated blood sugar or blood pressure levels, showing a growing burden of lifestyle-related diseases. Screening for cancers among women is still very limited — only 2.6% have ever undergone cervical cancer screening and 3% have had a breast examination. Tobacco and alcohol use are more common among men (18.3% and 27.4%, respectively) than women (1.7% and 0.6%).

Overall, NFHS-5 reflects progress in areas such as institutional deliveries, household amenities, and female education, but also highlights emerging challenges like reduced antenatal care coverage, increasing caesarean rates, growing anaemia prevalence, and the rising burden of non-communicable diseases.

CHAPTER 8

DISTRICT MENTAL HEALTH PROGRAMME

The District Mental Health Programme (DMHP) launched in 1996 under India's National Mental Health Programme (NMHP) and integrated into the National Health Mission (NHM), aims to provide accessible, affordable, and comprehensive mental healthcare at the district level. The programme has been decentralized to operate through District Hospitals, Community Health Centres (CHCs), and selected Primary Health Centres (PHCs), strengthening infrastructure, training health personnel, and raising community awareness. In Kottayam, DMHP has expanded to include clinical services, counseling, outreach camps, and school-based mental health initiatives, with a robust referral system for specialized care. Key programmes include 16 fixed-day Outreach Clinics covering all health blocks, the Aswasam Programme (a depression clinic at AAM), and Sampoorna Manasika Aarogyam (SMA), which integrates mental illness treatment into primary care. Under the primary integration programme, staff such as JPHNs, JHIs, and Nursing Officers conduct mental health screening using tools like PHQ-9, with severe or doubtful cases referred for further management. This chapter highlights these initiatives along with community-based interventions, special programmes post-natural disasters, and schemes promoting early detection, treatment, rehabilitation, and psychological well-being for all age groups, emphasizing the district's commitment to reducing stigma and improving mental health outcomes.

8.1 District Mental Health Programme

District Mental Health Programme (DMHP) in Kottayam started in 2013. In April 2017, this programme was undertaken by DHS. It aims at integrating mental health components at different levels of health programme delivery and providing comprehensive care and support to patients with mental health issues and their relatives. Training, mental health care, IEC, and rehabilitation are the major components of DMHP.

Table 8.1.1 provides a year-wise summary of key activities under the Mental Health Programme, highlighting both clinical services and outreach efforts across 2022–2023, 2023–2024, and 2024–2025. The data shows a consistent rise in follow-up visits, peaking at 12,589 in 2023–2024, indicating strong patient retention. New case

registrations and counselling sessions remained relatively stable, while psychoeducation and IEC activities saw notable increases in 2023–2024 before slightly declining. Training programs showed steady growth over the three years, reflecting ongoing capacity-building initiatives. Overall, the table illustrates expanding mental health services with a focus on continuity of care and community engagement.

Table 8.1.1 Mental Health Programme Activities and Outreach

YEAR	2022-2023	2023-2024	2024-2025
New cases	538	741	612
Followup	10320	12589	11843
Counselling	764	867	405
Psycho education	535	777	936
IEC	43	25	23
Training	37	63	72
Source: District data			

8.2 Post-Flood activities & Training programs

Post-flood activities and training programs were implemented to support individuals and families affected by flood-related challenges. A total of 48 training sessions were conducted, during which 1,814 health workers and volunteers were trained to deliver essential supportive services. They carried out 1,381 house visits, reaching affected communities directly. Additionally, psychosocial interventions were provided to 9,505 individuals, helping them cope with stress, trauma, and other mental health concerns arising from the disaster.

8.3 DMHP Targeted Interventions

Table 8.3.1 Tribal and Community-based Mental Health activities

YEAR	2022-2023	2023-2024	2024-2025
Number of the Tribal Mental Health Camps conducted	0	11	2
Suicide Prevention Training	0	11	11
Stress Management Training	3	7	3
School Mental Health programme Training	16	35	31
Source: District data			

This table (**Table 8.3.1**) presents a year-wise summary of key mental health outreach activities and training programs conducted between 2022 and 2025. The data reflects the growing focus on improving mental health awareness, prevention, and capacity building at the grassroots level, particularly among tribal populations and educational institutions.

8.4 Sampoorna Manasika Aarogyam (SMA)

SMA was implemented in 2018 to ensure the psychiatry services at the primary level. Major activities conducted as part of the programme are:

(1) Developing a panel of resource persons to give awareness classes to health professionals, including ASHA workers, (2) Conducting training at the FHC level, and (3) Conducting camps identifying patients by DMHP for care.

Sampoorna Manasika Aarogyam programme implemented in 50 FHCs in Kottayam.

The table (**Table 8.4.1**) summarizes the year-wise progress of mental health case detection and screening under the SMA and Aswasam programs from 2022–23 to 2024–25.

Table 8.4.1 Mental Health Screening and Case Identification under SMA & Aswasam Programme

YEAR	2022-2023	2023-2024	2024-2025
SMA-New cases	250	335	349
Aswasam-screened cases	193	1359	4084
Positive cases	65	286	603
Source: District Data			

8.5 Amma Manas

Amma Manas focused on pre and postnatal mental health, including maternal mental health at the primary level. Block-wise Training was conducted for ASHA and health workers. 509 health workers and 1094 ASHA were trained.

CHAPTER 9

TRIBAL HEALTH PROGRAM

The Tribal Health Programme aims to improve the health status of tribal populations by ensuring access to quality healthcare services in remote and underserved tribal areas. Implemented under the National Health Mission (NHM), the programme focuses on providing comprehensive primary healthcare, strengthening infrastructure in tribal regions, and addressing health disparities through targeted interventions. It emphasizes maternal and child health, nutrition, control of communicable and non-communicable diseases, and health awareness among tribal communities. Through mobile medical units, outreach camps, and community participation, the programme seeks to promote equitable healthcare delivery and enhance the overall well-being of tribal populations.

This chapter highlights the efforts taken by the district health system to address the unique healthcare needs of tribal populations and ensure comprehensive maternal and child health (MCH) services. It covers targeted interventions to improve health indicators, reduce disparities, and ensure equitable access to essential services for women and children, particularly in remote and underserved areas.

9.1 Tribal Health Programme

Tribal health refers to the health status and well-being of indigenous communities, who often face unique challenges due to their geographic location, socio-cultural practices, and limited access to healthcare.

The total tribal population of Kottayam district is 19168(Male – 9406; Female – 9762)

Average antenatal delivery in 2024-25 – 120.

9.2 Maternal Health

Antenatal services provided include early registration, two doses of tetanus toxoid (TT), iron and folic acid (IFA) supplementation, and calcium tablets. Pregnant women receive four antenatal checkups, including weight monitoring, hemoglobin testing, and other essential assessments. Health education is also provided to promote maternal and fetal well-being.

9.3 Delivery Services

Comprehensive delivery services are provided to both mother and child. These include health education, breastfeeding support, guidance on personal hygiene, newborn care, and family planning services.

9.4 Child Health

All immunization services are provided to children. HBYC (Home-Based Young Child Care) and HBNC (Home-Based Newborn Care) services are delivered as per protocol. Newborn screening and RBSK (Rashtriya Bal Swasthya Karyakram) screenings are conducted, with referrals made to the Shalabham and Hridyam programs when needed. Screening for children aged 0–18 years, including haemoglobin (Hb) testing, is also carried out. Health education activities are conducted regularly at Anganwadis and schools.

CHAPTER 10

FINANCIAL ALLOCATION AND UTILIZATION FOR THE LAST FOURYEARS

10.1 Financial allocation and utilisation

Table 10.1.1 presents the financial allocation and utilisation under two funding sources, DHS-Plan and NHM for the years 2024 and 2025, along with cumulative totals. The DHS-Plan shows substantial allocations of ₹132.63 lakh (₹1.32 crore) in 2024 and ₹117.54 lakh (₹1.17 crore) in 2025, with utilisation rates consistently above ₹110 lakh (₹1.10 crore) each year. NHM funding, though comparatively modest, reflects steady growth and improved utilisation, rising from ₹3.14 lakh in 2024 to ₹3.35 lakh in 2025. Overall, the combined total allocation across both sources amounts to approximately ₹373.18 lakh (₹3.73 crore), with a utilisation of ₹288.86 lakh (₹2.89 crore), indicating effective fund absorption and ongoing programmatic support.

Table 10.1.1 Financial Allocation & utilization(in Lakhs)

Source	2024		2025		Total	
	Allocation	Utilisation	Allocation	Utilisation	Allocation	Utilisation
DHS- Plan	132.63	113.87	117.54(2024-25)	110.93 (2024-25)	250.17	224.80
NHM	6.10	3.14	6.28	3.35	12.38	6.49
TOTAL	**138.73**	**117.01**	**123.82**	**114.28**	**262.55**	**231.29**
Source: District Data						

CHAPTER 11

NHM ACTIVITIES IN THE DISTRICT

The National Health Mission (NHM) in the district focuses on strengthening healthcare delivery through a range of programs targeting maternal and child health, immunization, mental health, and community outreach. Key activities include antenatal care, institutional deliveries, full immunization coverage, mental health services, health education, capacity building through training, and special programs for tribal and school populations. These efforts aim to improve health outcomes, ensure early intervention, and promote equitable access to quality healthcare across all sections of society.

11.1 Activities & Achievements under RBSK

Under the Rashtriya Bal SwasthyaKaryakram (RBSK), the district has actively implemented health screening and early intervention services for children from birth to 18 years. Regular screenings were conducted in schools, anganwadis, and health facilities to identify children with 4Ds_Defects at birth, Diseases, Deficiencies, and Developmental delays, including disabilities. Identified children were referred to District Early Intervention Centres (DEICs) for further management. The program also focused on follow-up care, health education, and community awareness, resulting in improved early detection and better health outcomes for children in the district.

11.1.1 Shalabham -Mobile Health

The "Shalabham" scheme is a comprehensive newborn screening program in Kerala,designed to identify and manage birth defects and other health issues in newborns. It aims to improve the survival and well-being of infants by detecting and managing conditions like Visible Birth Defects (VBD) and congenital heart diseases (CHD) early on.

Objectives:

Early Detection: Screening for Visible Birth Defects (VBD), Congenital Heart Diseases (CHD), and other health issues in newborns.

Timely Referral:

Referring screened cases to appropriate healthcare facilities for diagnosis and treatment.

Key Components:

- Visible Birth Defects (VBD) Screening: Physical examination for visible birth defects in the first 24 hours of life.
- Pulse Oximetry Screening: Pulse oximetry to identify congenital heart diseases (CHD) within 24-48 hours of life.
- OAE Screening: OAE (Otoacoustic Emission) screening for hearing loss.
- Screening at Public Sector Delivery Points: Screening is conducted in all public sector hospitals in Kerala.
- Digital Documentation: An Android application is used to document screening results and transfer data to a central server.
- Referral and Follow-up: Screening results are used to refer infants to specialists and for follow-up care.
- Treatment Support: The scheme utilizes resources like Rashtriya Bal SwasthyaKaryakram (RBSK) funds for treatment support.

11.1.2 RBSK and Child Health Initiatives in Kottayam District

In Kottayam district, 90% of children studying in Government and Aided schools have completed health screening under the RBSK (Rashtriya Bal Swasthya Karyakram) programme. At schools and Anganwadis, 4D screening (Defects at birth, Diseases, Deficiencies, and Developmental delays including disabilities) is conducted. Based on the findings, children are referred to the appropriate levels of care, including Community Health Centres (CHCs), General Hospitals (GHs), District Hospitals (DHs), District Early Intervention Centres (DEICs), and Adolescent Friendly Health Clinics (AFHCs).

RBSK nurses conduct routine follow-ups for all referred children, with special focus on those with poor weight gain and non-communicable diseases. Children identified with rare conditions are also prioritized for appropriate treatment under the district's special initiatives. Notably, in 2024, a rare case of sacral agenesis underwent a district-initiated surgical procedure.

Monthly review meetings are conducted to monitor the screening progress. Currently, 7 children with SMA are receiving treatment from SAT Hospital.

To enhance the quality of care, capacity-building training is organized yearly for RBSK nurses, conducted in two batches over three days. Additionally, block-level training sessions are held annually by the RBSK Coordinator and DEIC Manager.

Rashtriya Bal Swasthya Karyakram**:**It focuses on screening and early intervention for 30 specific conditions from birth to age 18. The conditions include birth defects, diseases, deficiencies, and developmental delays.

Arogyakiranam**:** It is a state-initiated entitlement scheme in Kerala for children aged 1 to 18 years, providing free investigations beyond the 30 conditions covered under RBSK.It covers all diseases (OP/IP) for children aged 1 to 18 years, excluding dependents of government employees and income taxpayers.

11.1.3 Hridyam Programme

RBSK nurses actively follow up on children enrolled under the Hridyam programme for congenital heart disease. All follow-up details are updated on the Shalabham portal.

11.1.4 Referral and Treatment

RBSK referral services also utilize the MHT vehicle for transporting children to higher centers. Treatment costs for specific conditions, such as Congenital Adrenal Hyperplasia (CAH), are met from the RBSK Treatment Head.

11.1.5 Treatment Expenditure of RBSK - AK

This table (**Table 11.1.5.1**) presents the year-wise financial expenditure and the number of beneficiariesunder two health programs — RBSK (Rashtriya Bal Swasthya Karyakram) and AK (Arogyakiranam) from 2020–2021 to 2024–2025**.** It also includes a specific subset of RBSK beneficiaries under the Hridyam initiative**.**

Table 11.1.5.1: Treatment Expenditure of RBSK - AK

Year	RBSK	Beneficiaries (RBSK)	AK	Beneficiaries (AK)	Total
2020-2021	18503241/-	80(hridyam)	26190501/-	9216	44693742/-
2021-2022	12380912/-	110(hridyam)	7500000/-	7	19880912/-

2022-2023	9802548/-	180(hridyam)	1689549/-	818	11492097/-
2023-2024	10858257/-	153(hridyam)	10823616/-	19617	21681873/-
2024-2025	9647918/-	118(hridyam)	59156828/-	27760	68804746/-
Source: District Source					

11.1.6 Newborn screening (Visible Birth Defect-VBD Screening)

At each delivery point with more than 50 deliveries, a Shalabham Nurse is posted. All six delivery points have a JPHN assigned.

The following services are being carried out at all six delivery points:

VBD Screening

Pulse Oxymetry

Physical Examination

OAE Screening

IEM Screening

Monthly review meetings are being conducted regularly.

For OAE screening, KSSM has deployed dedicated OAE JPHNs. Currently, MCH, GH Kottayam, and GH Pala have OAE staff in place, while the remaining delivery points have vacancies.

11.1.7 ROP screening is conducted at ICH Kottayam

This table **(Table 11.1.7.1)** outlines the annual performance of newborn screening from 2020–2021 to 2024–2025.

Table 11.1.7.1: Annual performance of newborn screening

Year	Total no of deliveries	Total no of Newborns Screened	No of Conditions identified
2020-2021	7844	7742	359
2021-2022	7729	7609	395
2022-2023	8109	7956	411
2023-2024	7667	7546	381
2024-2025	6150	5998	446
Source: District Data			

11.1.8 Screening under RBSK

This table **(Table 11.1.8.1)** presents data on thenumber of children screened under the Rashtriya Bal SwasthyaKaryakram (RBSK)across two key age groups:0–6 yearsand 6–18 years, for the years2020–2021 to 2024–2025**.** It also provides thetotal number of screeningseach year.

Table 11.1.8.1: Screenings under RBSK

Indicators	2020-21	2021-22	2022-23	2023-24	2024-25
0-6	79724	77769	78769	97706	111221
6-18	81238	80111	80138	158113	142835
Total	160962	157880	158907	255819	246196
Source: District Data					

11.1.9 Adolescent Friendly Health Clinics (AFHCs)

In Kottayam district, four AFHCs are currently functioning at the following locations:

GH Kottayam

CHC Erumely

CHC Koodalloor

CHC Thalayolaparambu

From each block, 50 students are selected annually and provided training, resulting in a total of 200 adolescents trained each year.

11.1.10 Peer Educator Training

Peer Educator (PE) training sessions were conducted at all four AFHC blocks (CHC Erumely, CHC Thalayolaparambu, GH Kottayam, and CHC Koodalloor).A total of 200 Peer Educators were selected and provided six days of comprehensive training.

11.1.11 Student Selection and Training

50 students (both boys and girls) from Standards 7, 8, and 9 were selected from each of the following blocks:

- CHC Koodalloor
- CHC Erumely
- CHC Thalayolaparambu
- GH Kottayam

The training was delivered under the 7 Rainbow Components of the Rashtriya Kishor SwasthyaKaryakram (RKSK) by certified RKSK Master Trainers.

Role of Trained Students – "Kutty Doctors" : After successful training, these students were designated as **"**Kutty Doctors."Their responsibilities include:

Conducting various health-related awareness activities in their respective schools. Identifying and referring fellow students in need of counseling or health services to the concerned AFHCs.

Adolescent Health Day Celebration

A total of 13 international days were celebrated by AFHC. They're Women's Day, AIDS Day, Mental Health Day, Nutrition Day/Week, Environment Day, Blood Donation Day, International Day, Against Drug Abuse and Illicit Trafficking, Anti-Tobacco Day, International girl child day, Yoga Day, Population Day, Suicide prevention day, Deworming day, Autism Day.

Training Sessions for RKSK Trainers: To improve the services in grassroots-level training is given to different categories of field staff.

11.1.12 Mobile Health Team (MHT)

In the Kottayam district, MHT vehicles have been allocated to two blocks: Erumeli and Edamaruku. Additionally, based on requests, MHT vehicles are provided to hard-to-reach panchayats.The MHT team is actively conducting group screenings, Health education, and the MHT vehicle service is also used to transport children in need.

11.1.13 Rashtriya Kishor SwasthyaKaryakram (RKSK)

Table 11.1.13.1 provides a year-wise summary of cases attended by counsellors under the Rashtriya Kishor SwasthyaKaryakram(RKSK) from 2021–2022 to 2024–2025. The data shows a significant rise in total cases, increasing from 837 in 2021–2022 to 5,658 in 2024–2025, indicating expanded service coverage and growing demand for adolescent health counselling. Follow-up cases also rose steadily, peaking at 1,608 in 2024–2025, reflecting continuity of care. Outreach activities showed a marked increase in 2023–2024 and remained stable at 384 in the following year, suggesting sustained community engagement efforts.

Table 11.1.13.1: RKSK: Cases attended by Counsellors

Case Profile	2021-2022	2022-2023	2023-2024	2024-2025
Total Cases	837	1272	3616	5658
Follow-up cases	425	623	1243	1423
Outreach	139	310	384	384

Activities				
Source: District Data				

11.1.14 Training conducted

- WIFS Training in 16 health blocks
- TOT Training conducted
- Peer educators training in 4 adolescent health blocks (50 in each block)
- Club Meetings in 4 adolescent health blocks (60 in each block)
- Day observations conducted
- Health and wellness day (4 in each block)
- Conducted district quiz competitions

11.1.15 Peer Educators Programme -SDC (Student Doctor Cadet)

The Major Objectives of SDC:

- Nurture the scientific understanding of health.
- Increase the awareness of various health issues.
- Improving the mental health of children.

The table **(Table 11.1.15.1)** presents data on the selection and training of Peer Educators over three academic years (2022–2025). In each year, a total of 200 Peer Educators were selected. Full training was achieved in 2022–2023 and again in 2024–2025, with all 200 selected individuals completing the training. However, in 2023–2024, only 150 out of the 200 selected Peer Educators were trained, indicating a gap in training implementation for that year.

Table 11.1.15.1: Peer Educators' selection and Training status

Year	Total Peer Educators selected	Trained
2022-2023	200	200
2023-2024	200	150
2024-2025	200	200
Source: District Data		

11.2 District Early Intervention Centre (DEIC):

The District Early Intervention Centers (DEIC) are being established at the District Hospital level across the country. The purpose of DEIC is to evaluate and manage all children below the age of 6 years by providing medical therapy, physiotherapy, psychological therapy, vision and hearing therapy, and dental therapy under one roof. It will also provide referral support for children requiring surgery or who are above the age of 6 years, provide referral support to children identified with health conditions during health screening by RBSK Mobile Health Teams, primarily for confirmation of preliminary Identification, referral to appropriate facilities for further management for 30 selected health conditions as under RBSK.

Table 11.2.1 presents the annual distribution of new and follow-up cases recorded between 2020–2021 and 2024–2025. Over the five-year period, there is a general upward trend in the total number of cases, indicating an increase in service utilization. The highest total cases were recorded in 2022–2023 (4,987 cases), followed closely by 2024–2025 (4,955 cases). Both new and follow-up cases show year-to-year variation, with follow-up cases consistently higher than new cases, suggesting continued care and effective follow-up mechanisms. Overall, the data reflect sustained engagement of beneficiaries with health services across the years.

Table 11.2.1: Services offered under DEIC at a glance

Year	New case	Follow-up case	Total case
2020-2021	1148	2215	3363
2021-2022	771	1751	2522
2022-2023	1435	3552	4987
2023-2024	1390	3296	4686
2024-2025	1716	3239	4955
Source: Hridyam Portal			

Fig11.2.1: Autism Day observance

Fig11.2.2: International Epilepsy Day Observance

Fig11.2.3: Parental Awareness sessions

Fig11.2.4: Children's Day Celebration

11.2.2 Hridyam:

A unique initiative by the Government of Kerala to support children with congenital heart disease (CHD). This can be used as a web-based registry for CHD cases across Kerala, monitoring the progress of the program envisaged for the management of children with CHD, identifying the bottlenecks for implementing the protocols established at any point and understanding the case status and response time for systems in place and ultimately the outcome of the program.

Table 11.2.2.1 Hridyam: Year-wise Registered cases and Surgeries

Year	Registered case	Surgery done
2022	170	39
2023	170	86
2024	103	50
2025	46	17
Source: Hridyam Portal		

Table 11.2.2.1 shows the annual trend of registered cases and surgeries performed under the Hridyam Programme from 2022 to 2025. The Hridyam initiative focuses on the early detection, management, and surgical correction of congenital heart diseases among children. In 2022 and 2023, the number of registered cases remained constant at 170, with a notable increase in surgeries from 39 in 2022 to 86 in 2023, indicating improved surgical coverage. In subsequent years, both registered cases and surgeries showed a decline, with 103 cases and 50 surgeries in 2024, and 46 cases and 17 surgeries in 2025. This pattern may reflect improved early detection, reduced backlog, or changes in case referral trends. Overall, the data highlight the programme's consistent efforts toward timely cardiac intervention for children.

11.2.3 Mobile Intervention Unit (MIU)

Anuyathra Mobile Intervention Units (MIUs) act as extension services of DEICs, working as fixed-day clinics at identified centers in different health blocks. The major services

made available under MIU include – Developmental Therapy, Physiotherapy, Psychology services, Speech cum audiology services, and Special education.

Table 11.2.3.1 presents the annual distribution of new and follow-up cases registered at the MedicalInterventionUnit (MIU), Kanjirapally, from 2021–2022 to 2024–2025. The data show fluctuations in the total number of cases over the years. The highest total case load was observed in 2024–2025 (2,946 cases), primarily due to a sharp rise in both new and follow-up cases. The lowest number of cases was reported in 2023–2024 (1,378 cases), indicating a temporary decline in service utilization. Across all years, follow-up cases consistently exceeded new cases, reflecting ongoing patient care and monitoring. Overall, the data highlight the MIU's sustained role in providing continuous health services and follow-up care in the Kanjirapally region.

Services offered under the program at a glance (up to March2025):

Table 11.2.3.1: Year-wise record of new, follow-up up and total cases -MIU Kanjirapally

Year	New case	Follow-up case	Total case
2021-2022	262	2379	2641
2022-2023	372	2053	2425
2023-2024	229	1149	1378
2024-2025	659	2287	2946
Source: District Data			

Table 11.2.3.2 illustrates the yearly trend of new, follow-up, and total cases recorded at the Medical Intervention Unit (MIU), Vaikom, from 2021–2022 to 2024–2025. The data reveal a steady increase in both new and follow-up cases over the four-year period, indicating enhanced service utilization and outreach. The total number of cases rose from 912 in 2021–2022 to 2,647 in 2024–2025, marking a significant growth in patient engagement. Follow-up cases consistently outnumbered new cases, reflecting effective continuity of care and monitoring. Overall, the upward trend highlights the MIU's

expanding role in providing accessible and sustained health services to the local population.

Table 11.2.3.2: Year-wise record of new, follow-up up and total cases- MIU Vaikom

YEAR	NEW CASE	FOLLOW-UP CASE	TOTAL CASE
2021-2022	198	714	912
2022-2023	189	1021	1210
2023-2024	237	1169	1406
2024-2025	375	2272	2647
Source: District Data			

11.3 Family Planning

Family planning is a key component of the Reproductive and Child Health (RCH) Programme, aimed at promoting the health and well-being of women, children, and families. The programme focuses on enabling couples to make informed choices about the number and spacing of their children through access to safe, effective, and affordable contraceptive methods.Under RCH, a range of family planning services are provided, including temporary methods such as oral pills, condoms, intrauterine devices (IUDs), and injectables, as well as permanent methods like female and male sterilization. The programme also emphasizes counselling, awareness generation, and community education to address myths and misconceptions related to contraception.

Special attention is given to postpartum and post-abortion family planning, ensuring that women receive guidance and services soon after delivery or termination of pregnancy. Family planning under RCH contributes significantly to reducing maternal and infant mortality, preventing unintended pregnancies, and improving the overall reproductive health status of the population.

Table 11.3.1 presents the year-wise utilization of family planning services from 2020–2021 to 2024–2025, covering various contraceptive methods such as laparoscopic sterilization (Lapro), non-scalpel vasectomy (NSV), condoms (CC), oral pills (OP), and

intrauterine contraceptive devices (IUCDs).The data indicate a progressive increase in overall service utilization, with notable variations across methods. The number of laparoscopic sterilizations rose sharply from 11 in 2020–2021 to a peak of 550 in 2022–2023, before slightly declining in the following years. NSV cases also increased gradually, reaching their highest count (62 cases) in 2023–2024.Among temporary methods, condom distribution (CC) showed a significant rise, from 39,194 in 2020–2021 to 162,420 in 2024–2025, reflecting growing acceptance of male contraceptive methods. The use of oral pills and IUCDs fluctuated modestly over the years, with a general upward trend, indicating steady utilization of spacing methods.

Overall, the data highlight an expansion in the adoption of family planning methods over time, demonstrating effective implementation of reproductive health services and increased awareness among eligible couples.

Table 11.3.1: Year-wise Family Planning Services Utilisation

Year	No. of Lapro Cases	No. of NSV Cases	CC	OP	IUCD
2020-21	11	17	39194	7887	1357
2021-22	143	26	68410	7868	1299
2022-23	550	48	119166	9331	1678
2023-24	505	62	108487	6965	1558
2024-25	460	47	162420	8504	1629
Source: HMIS					

11.4 Biomedical Equipment Maintenance Programme (BEMP)

The **Table 11.4.1** outlines the performance of the Biomedical Equipment Maintenance Programme (BEMP) over two financial years, focusing on equipment maintenance efficiency.

Table 11.4.1: Biomedical Equipment Maintenance Performance

Total Call Registered	Total Call rectified	Pending calls	Percentage of rectified Calls
1929	1869	4	96.88%
2899	2791	2	96.27%
Source: District Data			

11.4.1 Compliance to the norms of AERB for equipment under the Radiology department – 100%

11.4.2 Procurement of Equipment at the State level through KMSCL – NHM

Table 11.4.2 provides year-wise details of sanctioned funds under the ROP for the periods 2022–24 and 2024–26.

Table 11.4.2: Procurement of Equipment at the state-level through KMSCL

Year	Details	Sanctioned Amount (Rs)	Status
2022-24	ROP	31635403	SUPPLY ONGOING
2024-25	ROP	25681115	SUPPLY ONGOING
Source: District Data			

11.5 National Programme for Palliative Care (NPPC)

Palliative care is a holistic approach to those with serious health-related suffering and can be provided relatively simply and inexpensively. Effective palliative care requires a broad multidisciplinary approach that includes the family and makes use of available community resources. In 2008, Govt. of Kerala declared a Palliative Care Policy to ensure palliative service to all the needy. The LSGD level palliative care activities mentioned in the policy were started through the Arogyakeralam Palliative Care program. Currently, in

Kerala, government and nongovernmental organizations are carrying out palliative care services.In the Kottayam district, we have 87 primary units and 28 secondary units, and also have 2 tertiary units.

Primary units led by community nurses are functioning in all panchayats and municipalities in the district. Kottayam municipality has 5 primary units and the Chirakadavu, Ettumanoor, Kanjirappally, Thiruvarppu, and Thrikodithanam panchayats have more than one primary unit. Community nurses visit all bed-bound patients in the respective panchayats and provide basic care.

Secondary units are functioning in all major hospitals and CHS. Secondary units include nurses and physiotherapists, providing secondary level home-based nursing care, Op services and physiotherapy services.

Kottayam district has 2 tertiary units. One at the District hospital, Kottayam and one at Medical College Hospital, Kottayam. Palliative Care District Training Centre District Hospital Kottayam provides Palliative care home care services, Palliative care OP Service, Palliative care IP service, and training. At Medical College Kottayam, we have an OP service and 14 IP beds dedicated to Palliative patients.

11.6 Janani Suraksha Yojana (JSY)

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission, and the objective of reducing maternal and infant mortality by promoting institutional delivery among poor pregnant women. All the women who are delivering in Govt. Hospitals will be eligible for JSY benefit irrespective of their BPL/APL status, @Rs.600 for urban areas, Rs 700 for rural areas, and Rs 500 for Home delivery. Pregnant women in the BPL category aged 19 years and above, and the SC and ST categories opting for deliveries in accredited private health institutions are also eligible.JSY is a 100% centrally sponsored scheme, and it integrates cash assistance with delivery and post-delivery care. All payments are made through DBT/Net Banking, and discharge from the healthcare institutions after delivery.

Table 11.6.1 represents the year-wise progress of the Janani Suraksha Yojana (JSY) from 2020–21 to 2024–25, focusing on the number of beneficiaries and the amount disbursed to promote institutional deliveries.

Table 11.6.1: Year-wise Beneficiary and Disbursement report- JSY11.7 Janani Shishu Suraksha Karyakram(JSSK)

Year	No. of beneficiaries	Amount paid
2020-21	3617	25,06,800
2021-22	2461	17,15,000
2022-23	6126	43,10,600
2023-24	1986	12,10,000
2024-25	5858	40,77,200
Source: District Data		

The Janani Shishu Suraksha Karyakram (JSSK) is an initiative under the Reproductive and Child Health (RCH) Programme of the National Health Mission (NHM). It aims to ensure free and cashless services to all pregnant women and sick newborns, with the objective of reducing Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR). The scheme provides comprehensive maternity and neonatal care, including free services for normal and caesarean deliveries, as well as treatment for sick newborns and infants up to one year of age, across all public health facilities in both rural and urban areas.

There is no distinction between APL and BPL families, no age restriction for pregnant women, and no limit on the number of deliveries covered. The programme ensures zero out-of-pocket expenditure for beneficiaries in all government health institutions.

Free Entitlements for Pregnant Women include:

- Free and cashless delivery
- Free caesarean section
- Free drugs and consumables

- Free diagnostics
- Free provision of blood
- Exemption from user charges
- Free transport from home to health facility and back
- Free transport between facilities in case of referral

Free Entitlements for Sick Newborns include:

- Free drugs and consumables
- Free diagnostics
- Exemption from user charges
- Free transport between facilities in case of referral

The table (**Table 11.6.2**) below provides a year-wise summary of the Janani Shishu Suraksha Karyakram (JSSK) from 2020–21 to 2024–25, focusing on the number of beneficiaries availing services and the expenditure incurred.

Table 11.6.2: Year-wise Beneficiary and Disbursement report- JSSK

Year	No. of beneficiaries	Amount paid
2020-21	7078	1,37,02,139
2021-22	9897	1,67,17,949
2022-23	5852	75,83,491
2023-24	8071	2,17,89,883
2024-25	10174	2,29,97,734
Source: District Data		

11.6.2 JSSK-Mathruyanam

The Mathruyanam Project is an emergency transportation service dedicated exclusively to mothers during childbirth. It aims to strengthen safe motherhood interventions under the Government of Kerala. The project provides free transportation services from hospitals to homes for postnatal mothers and neonates. In Kottayam district, these services have been available at all delivery-point hospitals since August 2023, ensuring timely and safe transfer for mothers and newborns.

Fig 11.6.2.1:Mathruyanam Project - Transportation

11.7 Quality Assurance activities of Kottayam District

Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes. It is based on evidence-based professional knowledge and is critical for achieving universal health coverage. As countries commit to achieving Health for All, it is imperative to carefully consider the quality of care and health services. Quality health care can be defined in many ways, but there is growing acknowledgement that quality health services should be:

- Effective– providing evidence-based healthcare services to those who need them;
- Safe– avoiding harm to people for whom the care is intended; and

- People-centred– providing care that responds to individual preferences, needs, and values.
- To realize the benefits of quality health care, health services must be:
- Timely– reducing waiting times and sometimes harmful delays;
- Equitable– providing care that does not vary in quality on account of gender, ethnicity, geographic location, and socio-economic status;
- Integrated– providing care that makes available the full range of health services throughout the life course;
- Efficient– maximizing the benefit of available resources and avoiding waste.

11.7.1 NATIONAL QUALITY ASSURANCE STANDARDS (NQAS)

National Quality Assurance Standards have been developed keeping in the specific requirements for public health facilities as well as global best practices. NQAS are currently available for District Hospitals, CHCs, PHCs, and Urban PHCs. Standards are primarily meant for providers to assess their own quality for improvement through predefined standards and to bring up their facilities for certification. The National Quality Assurance Standards are broadly arranged under 8 "Areas of Concern"– Service Provision, Patient Rights, Inputs, Support Services, Clinical Care, Infection Control, Quality Management and Outcome. These standards are ISQUA-accredited and meet global benchmarks in terms of comprehensiveness, objectivity, evidence, and rigor of development.

In the financial year 2022-2023, CHC Arunoottimangalam, FHC Kuruppanthara, FHC Kallara, FHC Paipadu, FHC Nattakom where NQAS Accredited and FHC Vazhoor, FHC Onamthuruthu, FHC Onamthuruthu, FHC Maravanthuruthu, FHC Mutholi, UPHC Perunna are NQAS Re-Accredited.

In the financial year 2023-2024, FHC Udayanapuram, FHC Velloor where NQAS Accredited and FHC Velliyannor is NQAS Re-Accredited.

In the financial year of 2024-2025, CHC Koodallooris NQAS accredited and FHC Moonnilavu, FHC Thrikodithanam, where national NQAS assessments are scheduled in February 2025.

In FHC Parathodu, FHC Parampuzha where the SaQaham portal uploading is progressing for the National Assessment. In THQH Vaikom, the institution is waiting for the NQAS, Laqshya, MusQan State-level Assessment.

In the GH Level Hospitals, targets of 2 institutions are selected, GH Pala and GH Kanjirappally.In these institutions, where training and gap-closing activities are going on.

In the AAM level, a total of 100 AAMs are selected for NQAS in this financial year. Among the 60 District Assessment Are completed,25 institutions are eligible for the next level of Assessments, and 20 institutions where state application works are progressing. District-level Training is completed for target AAMs, a District quality committee is formed, chairing DMO is the supervisory authority.NQASupdations, study materials are being uploaded in the WhatsApp group formed for staff (SC-NQAS and Kayakalp), Medical officers/superintendents (AAM NQAS Implementation).

In the financial year of 2025-2026, FHC Moonilavu and FHC Thrikodithanam NQAS were accredited. NQAS State assessment completed at THQH Vaikom, AAM Poovakulam, and AAM Puthuveli.

Evidence of some good practices- Quality Aspects

Fig 11.7.1a:Triage Floor Signage at FHC Onamthuruth

Fig 11.7.1b:Curtains for maintaining the privacy of patients

Fig11.7.1c: Liquid Waste Management FHC Nattakom

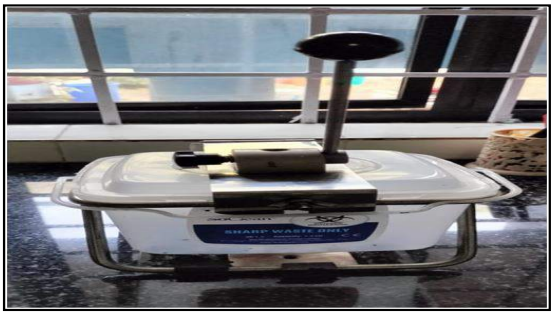


Fig 11.7.1.d: Safe Disposal of Sharps by at Needle hub cutter

11.7.2 KAYAKALP

Clean environment improves healing and Fastens recovery, besides enhancing patient's experience at health facilities. The Union Health and Family Welfare Minister Shri J P Nadda has launched the 'Kayakalp Award Scheme' on May 15, 2015, as an extension of 'Swachh Bharat Mission'. The aim of the initiative is to improve and promote the cleanliness, hygiene, waste management, and infection control practices in public health care facilities and incentivize the exemplary performing facilities. The scheme is intended to encourage and incentivize Public Health Facilities (PHFs) in the country to demonstrate their commitment to cleanliness, hygiene, and infection control practices.

Initiated from District hospitals in 2015, the scheme expanded to PHC level (2016) and UPHCs(2017).

The objectives of the award scheme are:-

1. To inculcate a culture of ongoing assessment and peer review of performance related to hygiene, sanitation, and infection control.

2. To incentivize and recognize public healthcare facilities that show exemplary performance in adhering to standard protocols of cleanliness, infection control, and sanitation,

3. To create and share sustainable practices related to improving cleanliness in public health facilities, which lead to positive health outcomes.

Eco-Friendly Hospitals: An Initiative Under Kayakalp

It is evident that a stable and functional environmental ecosystem leads to the good health of its inhabitants, which is why it is often named a life support system. At the same time, we all are aware that many of the natural systems are constantly under pressure due to an increase in the number of humans & their economic activities.

11.7.3 Swachh SwasthSarvatra

The Ministry of Health & Family Welfare (MoHFW) & Ministry of Drinking Water and Sanitation (MDWS) have started an integrated scheme under the Swachh Bharat Mission named "Swachh SwasthSarvatra" on December 29, 2016. The aim of this scheme is to strengthen Community Health Centres in open defecation-free (ODF) blocks across the country, along with behavioural change, to enable them to achieve higher levels of cleanliness and hygiene with the goal of making India free of open defecation.

Three broad objectives of this scheme are:-

1. Enabling Gram Panchayat where Kayakalp-awarded PHCs are located to become ODF.

2. Strengthening Community Health Centre (CHC) in ODF blocks to achieve a higher level of cleanliness to meet Kayakalp standards through support of Rs 10 Lakh under NHM.

3. Build capacity through training in Water, Sanitation, and Hygiene (WASH) for nominees from covered PHC and CHC.

11.7.4 KAYAKALP ACHIEVEMENTS

Financial Year 2023-2024

In the financial year of 2023-2024, a total of 7 institutions were selected for state-level assessment, among that district got 5 state state-level commendation Awards. At the GH Level, Pala and GH Kanjirappally, THQH level, Vaikom got commendation, CHC Level, CHC Koodalloor, and UPHC Level, Perumbaikadu got good results.

After the District-level Kayakalp assessment, the following institutions got first, second, and third in PHC Level and AAM Levels.

PHC Level

First	-	FHC Onamthuruthu
Second	-	FHC Kuruppanthura
Third	-	FHC Kallara

AAM Level

First	-	HWC Omalloor
First Runner up	-	HWC K S Mangalam
Second Runner up	-	HWC Mattathipar

Financial Year 2024-2025

District Level Assessment of the financial year 2024-2025 is completed. GH Pala, THQH Vaikom, CHC Paika, CHC Koodalloor, and CHC Sachivothampuram are Eligible to appear in State-level Assessment. The result of PHC, AAM levels are not announced yet.

Evidence Of Some Good Practices -Kayakalp Aspects

Fig 11.7.4 a:Maintaining 5S

Fig 11.7.4b:Re-Use of Materials

Fig:11.7.4.c: Final storage area for biohazard wastes

11.8 Accredited Social Health Activist (ASHA)

Accredited Social Health Activist (ASHA) is a community-based health worker instituted under the National Health Mission (NHM). ASHAs are selected from within their own villages, usually women aged between 25 and 45 with at least an 8th-grade education. Each ASHA typically serves a population of about 1,000 people in rural areas. Their primary role is to act as a link between the community and the public health system, ensuring that health services reach even the most remote populations.

The key responsibilities of ASHAs include promoting health awareness, facilitating maternal and child health services such as antenatal care, institutional deliveries, immunizations, and family planning, and providing basic health education on hygiene, nutrition, and disease prevention. They also mobilise communities to participate in government health programs and provide home-based care for newborns, children, and the elderly.

The main objective of the ASHA Programme is to improve maternal and child health outcomes, increase institutional deliveries and immunization coverage, and reduce morbidity and mortality from preventable diseases in rural areas. By serving as motivators, facilitators, and caregivers, ASHAs play a crucial role in strengthening India's rural healthcare system and ensuring equitable access to essential health services.

11.8.1 ASHA Training -

- Completed 9 Module Training for all the working ASHAs in Kottayam District.
- 2 Module Training completed for 18 Hamlet ASHA.
- Various training in connection with concurrent activities such as Shaili Survey Orientation Training, Leprosy, Cancer Screening, etc.

Fig 11.8.1: ASHA Review Meetings

CHAPTER 12

NATIONAL URBAN HEALTH MISSION (NUHM)

12.1: Community process implantation status - NUHM

The **National Urban Health Mission (NUHM)** is a sub-mission under the **National Health Mission (NHM)**, launched by the Government of India to address the healthcare needs of the urban poor, particularly slum dwellers and other vulnerable populations in cities. The mission focuses on strengthening the urban healthcare delivery system through the establishment of **Urban Primary Health Centres (UPHCs)**, deployment of ASHAs, formation of **Mahila Arogya Samitis (MAS),** and conducting outreach activities such as **Urban Health and Nutrition Days (UHNDs)**. NUHM aims to ensure accessible, equitable, and quality healthcare services in urban areas, with a strong emphasis on preventive, promotive, and community-based care.

Table 12.1.1: Community process implantation status - NUHM

Community process	Approved	In position
No. of Mahila Arogya Samithi (MAS) constituted	42	42
No. of MAS Accounts opened	42	42
No. of MAS trainings/ orientations held	3	3
No. of ASHAs	90	90
No. of UHNDs held in 2024-25 with frequency (Weekly, Monthly, Quarterly)	648	648
a. 2023-24	12	12
b. 2024-25	0	0
Population and households assigned per ASHA	2500	2260
Population and households	10000	8900

assigned per JPHN		
NGO Support in Community process if any	0	0
Source: District Data		

Table (12.1.1) provides a detailed overview of the implementation and operational status of key community-based interventions under the Urban Health Mission, particularly focusing on Mahila **Arogya Samitis (MAS)**, ASHAs, and Urban Health and Nutrition Days (UHNDs) for the years 2023–24 and 2024–25.

12.2 Institutional Level Activities:

- Average OP (Per Day): 739 (UPHCs & UHWCs)
- Average Lab (Per Day): 332

Table 12.2.1 shows that during, 2024-25, the urban health services in Kottayam district recorded a total of 203,049 outpatient visits (OP). Among these, 64,850 cases were related to non-communicable diseases (NCDs), reflecting the increasing burden of chronic illnesses in urban populations. Laboratory services were utilized 91,065 times, indicating significant diagnostic activity at Urban Primary Health Centres (UPHCs). No outreach labour camps were conducted during this period.

Table 12.2.1 Service utilisation – Urban Health services

Items	2024-25
Total OP	203049
Total NCD	64850
Total Lab	91065
Total outreach labour camps	0
Source: District Data	

CHAPTER 13

NATIONAL TUBERCULOSIS ELIMINATION PROGRAMME

This chapter outlines the National Tuberculosis Elimination Programme (NTEP), a flagship public health initiative of the Government of India aimed at eliminating tuberculosis (TB) by 2025 - five years ahead of the global target of 2030. Originally launched as the Revised National TB Control Programme(RNTCP) in 1997, it was renamed NTEP in 2020 to emphasize the elimination goal.

13.1 National Tuberculosis Elimination Programme (NTEP)

The **National Tuberculosis Elimination Programme (NTEP)** is the Government of India's flagship public health initiative aimed at eliminating tuberculosis (TB) from the country.

Key Highlights of NTEP:

Objective: To eliminate TB in India by 2025, five years ahead of the global target (2030 set by WHO).

Launched As: Revised National TB Control Programme (RNTCP) in 1997; renamed as NTEP in 2020 to reflect the elimination goal.

Strategy: Early diagnosis, prompt treatment, contact tracing, and community awareness.

13.2 Major Components:

Free Diagnosis & Treatment: TB testing and medications are provided free of cost through public health facilities.

Nikshay Platform: A digital system for TB patient tracking, treatment adherence, and support services.

Private Sector Engagement: Encourages private healthcare providers to notify TB cases and follow standardized treatment.

Nutritional Support: TB patients receive financial support under the **Nikshay Poshan Yojana** (500/month during treatment)

Drug-Resistant TB Management: Special protocols and newer drugs such as Bedaquiline and Delamanid are used for MDR/XDR-TB.

Community Involvement: Includes active case finding, awareness drives, and patient support groups to reduce stigma and ensure treatment adherence.

13.3 Components of NTEP

The Revised National Tuberculosis Control Programme (RNTCP) was renamed as the National TB Elimination Program (NTEP-2020) to emphasize the aim of the Government of India to eliminate TB in India by 2030.

13.4 Programme Implementation

The **Sustainable Development Goal (SDG)** targets regarding TB (baseline 2015) are:

- 85% reduction in incidence
- 90% reduction in mortality
- Zero TB patients and their households face catastrophic costs as a result of TB disease.

The programme has been guided by the **National Strategic Plan**, and key activities are implemented under four strategic pillars – **Detect, Treat, Prevent and Build.**

13.5 Progress in Tuberculosis Eradication in the District

Kottayam district has been actively implementing the **National Tuberculosis Elimination Programme (NTEP)** to reduce the burden of TB. Key interventions include early detection and diagnosis of TB cases, treatment adherence support, contact tracing, and regular follow-up of patients. Efforts also involve community awareness campaigns to promote TB literacy and reduce stigma. The district monitors treatment outcomes, case notifications, and drug resistance, aiming for complete treatment success and contributing to the national goal of TB elimination.

13.5.1: CB-NAAT Testing

Cartridge-Based Nucleic Acid Amplification Test (CB-NAAT) is a rapid molecular diagnostic test used for the detection of Mycobacterium tuberculosis and rifampicin resistance, a key marker of multidrug-resistant TB. It delivers results within two hours, making it highly effective for early diagnosis and timely treatment initiation. The test is highly sensitive and specific, capable of detecting TB even in patients with low bacterial loads and can be used for both pulmonary and extrapulmonary samples. Operating on a single-use cartridge system, CB-NAAT requires minimal infrastructure and a small

sample, making it suitable for peripheral health centres and outreach settings. Under the **National Tuberculosis Elimination Programme (NTEP)**, CB-NAAT plays a crucial role in early case detection, identifying drug-resistant TB, reducing diagnostic delays, and improving treatment outcomes, particularly among high-risk populations such as HIV-positive individuals and residents of urban slums. This technology is a key component in India's efforts to achieve TB elimination by 2025.

Table 13.5.1: Year-wise Testing and Positivity Rate Analysis

Year	No. of tests conducted	Positive cases	Percentage
2020-21	3350	935	27.91
2021-22	1601	368	22.98
2022-23	2554	320	12.52
2023-24	4115	553	13.43
2024-25	4050	429	10.59
Source: District data			

Table 13.5.1 represents CB-NAAT tests conducted and the corresponding positivity rates. In 2020-21, 3,350 tests were conducted, yielding 935 positive cases with a positivity rate of 27.91%. In, 2021-22, the number of tests decreased to 1,601, with 368 positive cases, and a reduced positivity rate of 22.98%. In 2022-23, testing increased to 2,554, but positive cases dropped to 320, resulting in a positivity rate of 12.52%. The years 2023-24 and 2024-25 saw higher testing numbers, 4,115 and 4,050 respectively, with positivity rates of 13.43% and 10.59%, indicating a steady decline in TB-positive cases despite increased testing.

13.6 Challenges in NTEP

- Difficulty in managing destitute and elderly patients living alone, especially when they develop **Adverse Drug Reaction (ADR)**.

- Many patients do not have an insurance card even after admission.
- Expenses related to food, medicine and investigation from outside facilities are an additional burden.
- Lack of rehabilitation facilities for destitute patients after discharge.
- STS Vacancies 2 Nos Since 1st May 2023 and another since 29th May 2024.
- **Nikshay-related challenges** in Direct Benefit Transfer (DBT), such as validation of bank accounts through PFMS.

13.7: Fund allocation for NTEP

The table (Table 13.7.1) provides a year-wise summary of fund utilization from 2020–21 to 2024–25, showing the allocation and expenditure (in lakhs) under relevant programme heads.

Table 13.7.1: Year-wise Fund utilization

Sl. No	Year	Amount (in lakhs)
1	2020-21	69.30
2	2021-22	104.20
3	2022-23	131.37
4	2023-24	140.03
5	2024-25	117.91
Source: District Data		

Figure.13.7.1: World TB Day 2025: TB Free Panchayat celebrations and distribution of awards, Kottayam District

TB MUKT PANCHAYAT

ANNEXURE 2

VERIFICATION FORMAT FOR DISTRICT TB TEAM

1. Name and Designation of the Team members :

2. Dr. Anupa Lekshmi (Prof,Dept of Community Medicine GMC Kottayam) 2. Dr. Anu Elizabeth (MMTC)
3. Dr. Asha Teresa John (DTO Kottayam) 4. Dr. Chippy Catherine Abraham 5. DV Archana K G 6. Dr. Sonia Sneha
7. Rekha Nair(Asst.Dir (STS)) 8. Reshu Thomas (STS)(STS) 9. DV. Anu Elizabeth (MMTC) 10. Anuja Nair N J (STS)
11. Ani Mathew (STS) 12. Sreeraj (STS) 13. Dr. Unni Lazar 14) Binsy A Joy (LHIO Officer Kottayam)
15.Varughese Thomas (Sr.DTO DTC Kottayam)

2. Name of the Block : Kadakkarappally, Kanjirappally, Vaikom, Ramapuram, Thalayolaparambu, Vazhoor, Vakathanam, Vaikom, Velliyanad, Pallam.

3. Name of the District : Kottayam

4. Name of the State : Kerala

5. Number of submitted claim by Panchayat to be verified : 21

Sl No.	Name Eligible Panchayat	Population of the Panchayat	Indicator 1 Presump tive TB Incidence (no/lac)	Indicator 2 TB Notificatio n rate /1000 Population	Indicator 3 Treatment Success rate (%)	Indicator 4 Drug Susceptibility Test Rate (%)	Indicator 5 Ni-Kshay Mithra Yojana (%)	Indicator 6 Nutritional support to TB patients under PMTBMBA (%)	Panchayat t can be declared TB free (Yes / No)	If Yes, Whether Bronze and Silver
1	Ilamdesom Panchayat Kadakkarappally (SP)	17680	568	0.11	100%	100%	100%	100%	Yes	Silver
2	Manjoora Panchayat (Kanjirappally (SP)	24095	715	0.29	100%	100%	100%	100%	Yes	Silver
3	Agricultural Panchayat (Vaikom (SP)	25580	740	0.23	66.8%	66%	100%	100%	Yes	Silver

Sl No.	Name Eligible Panchayat	Population of the Panchayat	Presump tive TB Incidence (no/lac)	TB Notificatio n rate /1000 Population	Treatment Success rate (%)	Drug Susceptibility Test Rate (%)	Ni-kshay Mithra Yojana (%)	Nutritional support to TB patients under PMTBMBA (%)	Panchayat t can be declared TB free (Yes / No)	If Yes, Whether Bronze and Silver
1	Edakkattuvayal Panchayat (Vaikom (SP)	13160	553	0.50	100%	100%	100%	100%	Yes	Silver
2	Manjoora Panchayat (Kanjirappally (SP)	24741	681	0.31	97.5%	100%	100%	100%	Yes	Silver
3	Thalayolaparambu Panchayat (Vaikom (SP)	24180	830	0.77	100%	100%	100%	100%	Yes	Silver
4	Kondoor (Elamkunnapuzha (SP))	23080	647	0.73	100%	100%	100%	100%	Yes	Bronze
5	Kadakkarappally (Ilamdesom (SP))	27577	841	0.58	91.8%	100%	100%	100%	Yes	Bronze
6	Vechoor (Kadakkarappally (SP))	24424	886	0.83	100%	100%	100%	100%	Yes	Bronze
7	Kaipuzha (Kanjirappally (SP))	22728	809	0.84	100%	100%	100%	100%	Yes	Bronze
8	Manjoora Panchayat (Kanjirappally (SP))	27808	878	0.83	96%	100%	100%	100%	Yes	Bronze
9	Velliyanad (Vaikom (SP))	17644	573	0.31	96%	100%	100%	100%	Yes	Bronze
10	Vaikom (Vaikom (SP))	23812	909	0.91	96%	100%	100%	100%	Yes	Bronze

Figure:13.7.2 TB Mukt Panchayat – Kottayam District (*Source: District Data)*

CHAPTER 14

NATIONAL AIDS CONTROL PROGRAMME IMPLEMENTATION IN DISTRICT

14.1: National AIDS Control Programme (NACP) implementation

The formulation of NACP Phase-V was necessitated by the need for continuous action and vigilance in the context of the country's commitment to end AIDS as a public health threat by 2030.

Overview of NACP Phase-V (2021-26) NACP Phase-V is a Central Sector Scheme, fully funded by the Government of India. The NACP Phase-V aims to reduce annual new HIV infections and AIDS-related mortalities by 80% by 2025-26 from the baseline value of 2010. The NACP Phase-V also aims to attain dual elimination of vertical transmission and elimination of HIV/AIDS-related stigma while promoting universal access to quality STI/RTI services to at-risk and vulnerable populations.

Goal 1: Reduce annual new HIV infections by 80%

Goal 2: Reduce AIDS-related mortalities by 80%

Goal 3: Eliminate vertical transmission of HIV and Syphilis.

Goal 4: Promote universal access to quality STI/RTI services among at-risk and vulnerable populations

Goal 5: Eliminate HIV/AIDS-related stigma and discrimination.

Table 14.1.1: NACP has the following service facilities operational in Kottayam

Name of HIV service centers	No. of HIV Service centers
Targeted interventions	5
Integrated counseling and testing centers	5
Designated STI & RTI clinic	2
ART Centre	1

Link ART	2
Blood Banks (Government)	2
Blood Banks (Private)	14
Source: District Data	

The table (14.1.1) outlines the HIV-related health service facilities operational in Kottayam district, covering prevention, testing, treatment, and blood safety services.

14.2: Targeted Intervention projects in Kottayam

Table 14.2.1: Details of Targeted Intervention Projects in Kottayam

Indicator	FSW	Migrant
Total No. of TI Projects	2	1
Total registration till March 2025	1584	10647
New registration 2024-25	200	10647
Total HIV Screening during 2014-25	1977	1938
HIV Positive found	0	0
Total no. of alive HRG currently registered at ART Centres	4	0
Total HRG Positive currently on ART	4	0
Total STI Screening during 2024- 25	4320	168
STI Cases diagnosed and treated	15	0
Total syphilis screening during 2024-25	2236	168

Syphilis positive cases	0	0
Source: District Data		

Table 14.2.1 shows that the Targeted Intervention (TI) projects in Kottayam district focus on two key high-risk groups FSW and Migrant Workers — with the goal of preventing and controlling HIV/AIDS and sexually transmitted infections (STIs). During the financial year 2024–25, there were two TI projects for FSWs and one for migrant workers. A total of 1,584 FSWs and 10,647 migrant workers were registered till March 2025, with 200 new FSWs and 10,647 new migrants registered during the year.

Under these projects, 1,977 HIV screenings were conducted among FSWs and 1938 among migrant workers, with no HIV-positive cases detected in either group. Currently, four FSWs living with HIV are registered and receiving treatment at ART centres. A total of 4,320 STI screenings were done among FSWs and 168 among migrant workers, resulting in 15 STI cases diagnosed and treated among FSWs. Additionally, 2,236 syphilis screenings were carried out among FSWs and 168 among migrants, with no syphilis-positive cases reported.

Overall, the data indicate strong outreach and preventive efforts under the TI projects in Kottayam, ensuring early detection, treatment, and consistent follow-up among high-risk populations, while maintaining zero new HIV detections in the district during 2024–25.

14.3: Testing of General Clients (at ICTCs in the district) - SIMS Data

14.3.1: Details of Testing of General Clients (at ICTCs in the district) - SIMS Data

General Clients (April-March 2025)						
ICTC	FICTC	CBS	PPP	TOTAL	General clients positive	% positive
32946	28399	3722	0	64689	88	0.14
Source: District Data						

Table 14.3.1 presents, during April–March 2025, a total of 64,689 general clients were tested for HIV across various testing facilities in Kottayam district. This included 32,946 tests at ICTCs (Integrated Counselling and Testing Centres), 28,399 at FICTCs (Facility Integrated Counselling and Testing Centres), and 3,722 under CBS (Community-Based Screening), with no testing conducted through PPP (Public-Private Partnership) centres during this period. Out of 64,689 individuals tested, 88 were found HIV positive, yielding a positivity rate of 0.14%. This data reflects the district's sustained efforts in HIV surveillance, early detection, and prevention, contributing to maintaining a low prevalence rate among the general population.

14.4: Prevention of Parent to Child Transmission (PPTCT)

14.4.1: Details of antenatal women tested for HIV

District	ICTC	FICTC	PPP	Total	ANC positive
Kottayam	4056	4056	0	8108	0.04
Source: District Data					

Table 14.4.1 shows that a total of 8,108 antenatal women were tested for HIV in Kottayam district during the reporting period. This included 4,056 tests conducted at ICTCs and 4,056 at FICTCs, with no testing through PPP centres. The ANC HIV positivity rate was 0.04%, indicating a very low prevalence of HIV among pregnant women in the district. These results highlight the effectiveness of routine antenatal HIV screening, counselling, and preventive measures implemented under the National AIDS Control Programme (NACP) to ensure HIV-free childbirths and promote maternal and child health.

14.5 PALS

Table 14.5.1: PALS Data (2024-2025)

Year	Male	Female	Total
2024-2025	81	7	88
Source: District Data			

Table 14.5.1 shows, during the year 2024–2025, Out of the total 88 individuals reported under PALS in 2024–2025, 81 were male and 7 were female, indicating a higher prevalence among males. The data reflects the district's ongoing efforts in identifying, monitoring, and providing care and support services to people living with HIV, ensuring access to treatment, counselling, and social support through the District AIDS Prevention and Control Unit.

14.6: Collection of Blood Units under NACP (2024 -2025)

14.6.1: Details of Blood Units Collected under NACP (2024 -2025)

Year	No. of Blood Units Collected
2024-2025	28405
Source: District Data	

Table 14.6.1 shows that, during 2024 –2025, a total of 28,405 blood units were collected in Kottayam district under the National AIDS Control Programme (NACP). All units were screened for HIV and other infections, ensuring a safe and adequate blood supply through voluntary donations and licensed blood banks.

Annexures

Annexure 1

Details of PHC

DETAILS OF MEDICAL HEALTH INSTITUTIONS																				
Sl. no	Name of Institution	No. of bed	OT	ICU/CCU	Ventilator	CT scanner	MRI scanner	USS canner	TMT	ECHO	EEG	ECG	Angiogram	Angioplasty	Xray	Laser ray	Blood bank	clinical lab	pharmacy	ambulance	ICU ambulance
1	FHC Madappally	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
2	FHC Thrikkodithanam	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
3	PHC Paippad	0	0	0	0		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
4	PHC Vazhapally	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	
5	PHC Nedunkunnam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	PHC Vazhoor	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0

7	**PHC Vellavoor**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
8	**FHC Manimala**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
9	**PHC Kalaketty**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**
10	**PHC Karikkattoor**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**
11	**PHC Koruthodu**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**
12	**PHC Parathanam**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
13	**PHC Parathodu**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0
14	**PHC Vizhikkathodu**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
15	**FHC Aymanam**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	**FHC Athirampuzha**	20	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0
17	**PHC Onamtherthu**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

18	**PHC Thiruvarppu**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
19	**FHC Parampuzha**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
20	**PHC Panachikkadu**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
21	**PHC Puthuppally**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
22	**PHC Manarcadu**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
23	**24X7 PHC Mundankunnu**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
24	**PHC Kooropada**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
25	**PHC Meenadam**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
26	**PHC Pallickathodu**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
27	**FHC KMCH Ettumano**	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

	or																				
28	**PHC Nattakom**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
29	**FHC Poonjar**	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
30	**PHC G V Raja Poonjar**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
31	**PHC Moonilavu**	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
32	**PHC Teekoy Kallam**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
33	**PHC Thalanadu**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
34	**PHC Thalappalam**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
35	**PHC Thidanadu**	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	1	1	0	0
36	**PHC Kadanadu**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	**PHC Karoor**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	**PHC**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Kozhuvanal																				
39	**PHC Meenachal**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	**PHC Mutholi**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	**PHC Kanakkary**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
42	**PHC Veliyannoor**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
43	**FHC Erattupetta**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0
44	**PHC Kattampak**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
45	**PHC Peruva**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
46	**PHC Velloor**	0		0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
47	**PHC Kaduthuruthy**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
	PHC Kallara	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0

49	**PHC Kuruppanthara**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
50	**FHC Marangattupally**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
51	**FHC Brahmamangalam**	17	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
52	**PHC Maravanthuruth**	0	0	0	0	0	0	0	0	0	0	Y	0	0	0	0	0	1	1	0	0
53	**PHC Thalayazhm**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
54	**PHC TV Puram**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
55	**PHC Udayanapuram**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
56	**UPHC Perumbaikadu**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
57	**UPHC Perunna**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
58	**UPHC Veloor**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

Details of CHC

DETAILS OF MEDICAL HEALTH INSTITUTIONS																				
Sl. no	**Name of Institution**	**No of bed**	**OT**	**ICU/CCU**	**Ventilator**	**CT scanner**	**MRI scanner**	**USS canner**	**TMT**	**ECHO**	**EEG**	**ECG**	**Angiogram**	**Angioplasty**	**Xray**	**Laser ray**	**Blood bank**	**clinical lab**	**pharmacy**	**ambulance**	**ICU ambulance**
1	**CHC Vakathanam**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
2	**CHC Sachivothamapuram**	10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
3	**CHC Thottackadu**	71	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
4	**CHC Edayirikkappuzha**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0
5	**CHC Karuckachal**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
6	**CHC Erumely**	30	0	1	1	0	0	0	0	0	0	8	0	0	0	0	0	1	1	1	0
7	**CHC Koottickal**	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0

8	**CHC Mundakayam**	60	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1	1	0
9	**CHC Paika**	26	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0
10	**CHC Ayarkunnam**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
11	**CHC Kumarakom**	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
12	**CHC Thalappady**	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
13	**CHC Edamaruku**	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
14	**CHC Ullanadu**	24	0	0	0	0	0	0	0		0	1	0	0	0	0	0	0	1	0	0
15	**CHC Koodalloor**	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
16	**CHC Kadaplamattom**	12	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
17	**CHC Ramapuram**	49	0	0	0	0	0	0	0	0		2	0	0	0	0	0	1	1	1	0
18	**CHC Arunoottimangalam**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0
19	**CHC Thalayoraparampu**	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
20	**CHC Edayazham**	24	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	2

Details of, FHC, DH, GH, THQH

DETAILS OF MEDICAL HEALTH INSTITUTIONS																				
Sl.no	Name of Institution	No of bed	OT	ICU/CCU	Ventilator	CT scanner	MRI scanner	USScanner	TMT	ECHO	EEG	ECG	Angiogram	Angioplasty	Xray	Laseray	Bloodbank	clinicallab	pharmacy	ambulance	ICU ambulance
1	GH Kottayam	374	2	1	5	1	0	3	0	0	1	1	0	0	1	0	1	1	1	2	0
2	GH Changanachery	225	2	0	1										1			1	1	2	
2	GH Pala	341	3	0	2	0	0	0	0	0	0	6	0	0	1	0	0	1	1	2	0
4	GH Kanjirapilly	142	1	1	8	0	0	0	1	1	0	8	1	1	1	0	0	1	1	2	0
5	THQH Vaikom	272	2	0		0	0	1	0	1	0	5	0	0	1	0	0	1	1	2	0
6	THQH Pampady	150	4	0	0	0	0	0	0	0	0	3	0	0	1	0	0	1	1	2	1
7	THQH Kuravilangad	54	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	1	2	0
8	KRNMS Hospital Uzhavoor	150	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	0

ANNEXURE 2

IEC & BCC ACTIVITIES

The Mega Zumba event held at the Police Parade Ground in Kottayam - inaugurated by Hon. Minister Veena George.

Dengue Prevention activity at Mundankunnu

Inauguration of Family Health Center, Vazhapilly by Hon.Minister Veena George

Flag-off ceremony of the NTEP 100-Days Campaign

Inauguration of Aswamedham 6.0

Launch of the Communicable Disease Campaign.

Launch of multilingual guidance materials for the Sabarimala pilgrimage

The Hon. Minister for Health, Veena George, visited the General Hospital as part of an official review of ongoing public health programs. The visit included interactions with healthcare staff, inspection of facilities, and discussions on future interventions aimed at improving service delivery.

വികസന പ്രവർത്തനങ്ങൾ വിലയിരുത്തുക ലക്ഷ്യം

ആശുപത്രികളിൽ നേരിട്ടെത്തി മന്ത്രി വീണാ ജോർജ്

LEC Health Conclave held at Ettumanoor

മധ്യകേരളത്തിന്റെ ആരോഗ്യനേട്ടങ്ങളും സ്വപ്നങ്ങളും പങ്കുവച്ച് ഏറ്റുമാനൂർ കോൺക്ലേവ്

Blood Donor Day celebration at Govt. ITI Ettumanoor

World Population Day celebration at Mar Augusthinose College, Ramapuram

ANNEXURE 3

INSTITUTIONS WITH PHOTOGRAPHS

MCH Kottayam

ICH Kottayam

General Hospital Kottayam

GHChanganachery

General Hospital Pala

General Hospital Kanjirappally

THQH Vaikom

THQH Pampady

THQH Kuravilangad

KRNM Specialist Hospital Uzhavoor

CHCEdayazham

CHC Koodalloor

CHC Edamaruku

CHC Erumely

CHC Kumarakom

CHC Edayirikkapuzha

CHC Thalayolapparambu

CHC Thalayolapparambu

CHC Karukachal

CHC Paika

CHC Thottackadu

CHC Vakathanam

CHC Ayarkunnam

CHC Kadaplamattam

FHC Mundankunnu

CHC Arunoottimangalam

CHC Ullanadu

CHC Sachivothamapuram

CHC Ramapuram

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