HEALTH@KOLLAM

December 2025

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

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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

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Smt. Veena George
Minister for Health &
Family Welfare
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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 Kollam. 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 Kollam.

I appreciate the works done by the District Medical Officer, District Project Manager and health functionaries of Kollam 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@Kollam** 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 the 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 the officials of all 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@Kollam** will be a resource book for health functionaries, researchers, students as well as to people to understand the developments in health sector in Kollam. 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 Anu M S, DMO Kollam, Dr Dev Kiran, DPM Kollam 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 Kollam 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

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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

KOLLAM DISTRICT - AN OVERVIEW

1.1 Introduction

Kollam, formerly known as Desinganadu and later as Quilon, is a historically significant and economically vibrant district located in the southern part of Kerala, India. With a unique blend of coastal charm, industrial legacy, and cultural richness, Kollam continues to be one of Kerala's most prominent districts in terms of development, heritage, and strategic importance. The district headquarters, Kollam city, is situated approximately 70 kilometers north of Thiruvananthapuram, the state capital, and enjoys seamless connectivity by road, rail, sea, and air.

Fig 1.1.1: Kollam

1.1.1 Geographical Location

Geographically, Kollam is bordered by the Arabian Sea to the west, Tamil Nadu to the east, Alappuzha and Pathanamthitta districts to the north, and Thiruvananthapuram district to the south. It originally comprised of several regions that are now part of Pathanamthitta district, such as Adoor, Konni, Ranni, and Kozhencherry. These areas were separated during the formation of Pathanamthitta district in 1982, thereby reshaping the administrative boundaries of southern Kerala.

Figure 1.1.1.1: Ashtamudi Lake

Spanning an area of approximately 2,492 square kilometers, Kollam showcases a rich tapestry of natural features, ranging from coastal plains to inland lakes, rivers, hills, and lush plantations. The district is home to Ashtamudi Lake, the second-largest lake in Kerala, which plays a pivotal role in the region's tourism, fisheries, and inland navigation. Its unique ecosystem attracts travelers for houseboat cruises, while its waters are crucial for local fishers and trade. In addition, Kollam is also renowned for Sasthamcotta Lake, the largest freshwater lake in Kerala, located in the eastern part of the district. Covering an area of about 3.4 square kilometres, this lake serves as a vital source of drinking water for much of southern Kerala. It is surrounded by scenic hills and lush greenery, making it a tranquil destination for nature lovers and tourists.

Kollam's coastal beauty is further enhanced by its beaches such as Thirumullavaram, Kollam

Figure 1.1.1.2: Kollam Beach

Beach, and Paravur Beach, which are popular among both locals and tourists for their pristine sands, scenic sunsets, and proximity to the urban center of the district.

The district's hilly areas are predominantly found in the eastern parts, near the Western Ghats. The Punalur and Shenduruny areas are noted for their captivating landscapes, including dense forests, steep slopes, and picturesque viewpoints. These hilly regions are home to diverse wildlife species and are rich in biodiversity, attracting trekkers, birdwatchers, and nature enthusiasts. The Shenduruny Wildlife Sanctuary, located in the southern part of Kollam, is a notable example of the area's rich fauna and flora. Despite the terrain, Kollam has relatively few dams, a notable contrast with neighboring districts, making water management heavily reliant on rivers and lakes.

Kollam is also crisscrossed by numerous rivers, with the Punnappra, Munro, and Kallada Rivers being some of the prominent ones. These rivers have played a significant role in shaping the district's agrarian economy, supporting irrigation, and providing water resources for local communities. The Kallada River is famous for its role in the Kallada Boat Race, an annual event that draws crowds and showcases the district's cultural vibrancy.

Figure 1.1.1.3: Kallada River Boat Race

For effective administration, Kollam district is divided into two revenue divisions—Kollam and Punalur—comprising six taluks: Kollam, Karunagappally, and Kunnathur (under the Kollam Division), and Punalur, Pathanapuram, and Kundara (under the Punalur Division). The district also has one Municipal Corporation (Kollam), four

municipalities, and 68 Grama Panchayats, ensuring governance at the grassroots level.

1.1.2 Tourism

Kollam has a rich historical legacy as one of the oldest ports on the Malabar Coast, with records of trade with Phoenicians, Romans, Chinese, and Arabs dating back over 2,000 years. It was a favored port of call for the Chinese voyager Zheng He, and remnants of its maritime past—such as the Chinese fishing nets at Thangassery—still stand as living heritage. Thangassery itself possesses a distinctive colonial heritage, having once hosted a prominent Anglo-Indian community. Many of its members were involved in port operations and trade, and Thangassery functioned as an active trading center, dealing in goods like spices, textiles, and fish products.

Figure 1.1.2.1: Thangassery Fort

Tourism is a growing sector, with destinations such as Munroe Island, Thenmala Ecotourism, Palaruvi Waterfalls, and Jatayu Earth Centre attracting both domestic and international travelers. The district's scenic backwaters, rolling hills, and historic landmarks make it a preferred eco-cultural tourism hub.

Figure 1.1.2.2: Munroe Island

Figure 1.1.2.3: Jadayu Earth Centre

1.1.3 Socio – Economic Characteristics

The Portuguese, Dutch, and British colonial presence further shaped the region into a bustling trade centre. Today, Kollam continues that legacy as a key industrial and export hub, particularly renowned for its cashew industry. The district is often referred to as the "Cashew Capital of the World," housing hundreds of processing units and contributing over 75% of India's cashew exports. Many residents living in the district's centres are employed as factory and load workers, forming the backbone of this labor-intensive sector. These industries provide substantial employment, especially to women, across both urban and rural areas.

Figure 1.1.3.1 Cashew Factory Workers

Figure 1.1.3.2: Neendakara Harbor

Kollam is richly endowed with marine resources, thanks to its extensive coastline and inland water bodies. The Indo-Norwegian Project, the first of its kind in India, was initiated here in Neendakara, one of Kerala's most important fishing harbors. The harbor supports a vast community involved in fishing, fish processing, net making, and boat building. In addition to Neendakara, the Thangassery and Azheekal ports further reinforce Kollam's position as a centre for marine trade and fisheries.

Kollam Port, Kerala's second-largest commercial port, has been modernized to handle

increased cargo traffic, facilitating trade in minerals, sand, industrial machinery, and cashew shipments. Its strategic location and infrastructure make it a vital node in the state's maritime economy. Earlier, the Kollam Aerodrome, located near Asramam Maidan, served as a domestic airstrip in the mid-20th century but was later decommissioned due to spatial and logistical constraints.

Agriculture continues to be a mainstay for rural livelihoods. The district also has one of the highest livestock populations in Kerala, promoting dairy farming and animal husbandry as viable income sources. In Anchal, palm oil plantations have added a unique dimension to the agrarian economy, supporting oil production for both edible and industrial purposes. Meanwhile, in regions like RPR plantations, Sri Lankan Tamils were once employed, especially during the mid-20th century, marking a significant chapter in the region's labor migration history.

The Tamil population in Kollam, primarily in border regions and urban pockets, contributes significantly to the district's linguistic and cultural diversity. Many Tamils migrated decades ago, settling in Kollam for employment in cashew factories, plantations, and the fishing industry, and have since integrated into the broader socio-economic fabric.

Ayurveda is an integral part of Kollam's health and tourism sectors. The district is home to several Ayurveda hospitals, resorts, and traditional practitioners, offering treatments rooted in Kerala's centuries-old healing practices. The serene natural setting, coupled with skilled therapists, attracts wellness tourists seeking authentic Ayurvedic therapies. Among the notable centers is N S Ayurveda Hospital and Panchakarma Centre, located in Palathara, Kollam. This hospital combines traditional Ayurvedic wisdom with modern infrastructure, offering specialized treatments across multiple disciplines, including Panchakarma, orthopedics, gynecology, and naturopathy. With experienced physicians and well-equipped therapy rooms, N S Ayurveda Hospital stands out as a trusted destination for holistic healing.

Figure 1.1.3.3: N S Ayurveda Hospital, Kollam

Figure 1.1.3.4: Technopark, Kollam

Industrial growth is complemented by the rise of technology and services sectors. The Kollam Technopark, a satellite centre of Technopark, Trivandrum, is gradually emerging

as a hub for IT services, startups, and knowledge-based industries. With its proximity to ports, railways, and proposed seaplane services, Kollam is well-positioned for future investments and innovation-led growth.

1.1.4 Healthcare Ecosystem

Kollam has developed a strong healthcare ecosystem with broad public access and advanced medical facilities. The district health system comprises:

- 1 District Hospital
- 1 W&C Hospital
- 1 Govt. Medical College
- 9 Taluk Hospitals
- 16 Community Health Centres (CHCs)
- 58 Family Health Centres (PHCs)
- 5 Urban Primary Health Centres (UPHCs)
- 421 Health and Wellness Centres (HWCs)
- 17 Urban Health and Wellness Centres (UHWCs)

Key institutions include the A. A. Rahim Memorial District Hospital, which offers advanced services in general medicine, surgery, psychiatry, and chemotherapy. The N. S. Memorial Institute of Medical Sciences, a co-operative hospital with 500 beds and 32 specialties, stands out as one of the largest healthcare co-operatives in South India. The historic Government Victoria Hospital, established in 1887, specialises in maternity and child health services and is a vital center for women's healthcare. The Government Medical College in Parippally, the first of its kind in the district, provides both tertiary healthcare and professional medical education.

Figure 1.1.4.1: District Hospital Kollam

Health indicators reflect this robust system: the district has a low infant mortality rate of 6.44 per 1,000 live births, a birth rate of 8.73, and a death rate of 5.04. Life expectancy averages 70 years for men and 74 years for women, demonstrating the success of public health programmes and infrastructure.

Culturally rich, Kollam celebrates a variety of festivals, rituals, and art forms. It is renowned for its temple architecture, coir craft, mural painting, and Kathakali performances. The district's religious and cultural harmony is exemplified in its vibrant celebrations—be it Oachira Kalakettu, Kollam Pooram, or the boat races in Ashtamudi Lake.

1.2 Administrative Division

The administrative framework of Kollam district in Kerala is well-organised and multi-layered, ensuring efficient governance and service delivery across urban and rural areas. The district comprises 6 taluks, which are further divided into 11 revenue blocks for administrative and land management purposes.

Figure 1.2.1: Health institution Map

For healthcare governance, Kollam is divided into 16 health blocks, each responsible for overseeing public health services in its respective area. The district includes one Municipal Corporation—the Kollam Municipal Corporation—which administers the city, and 4 municipalities - Punalur, Paravoor, Kottarakkara and Karunagappally that govern smaller urban centres. In rural areas, local governance is managed through 68 Grama Panchayats, which form the grassroots-level democratic bodies responsible for community development. Furthermore, Kollam is divided into a total of 1,421 wards, the smallest administrative units, each represented by an elected member. This extensive and detailed structure reflects the district's commitment to decentralised governance and inclusive development.

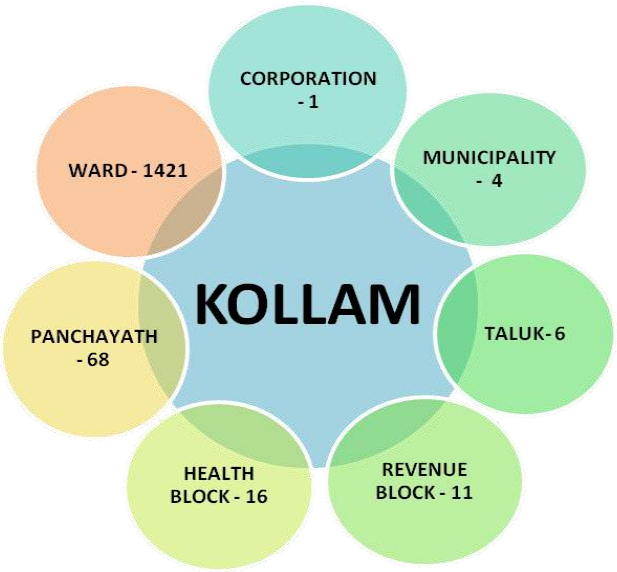


Figure 1.2.2 Administration Division

In conclusion, Kollam is a socially progressive, economically significant, and culturally rich district. With a strong foundation in trade, industry, tourism, and education, Kollam embodies a balanced blend of tradition and modernity. High literacy, favourable gender indicators, robust healthcare system, and administrative efficiency position it as one of Kerala's leading districts in terms of sustainable development and quality of life.

1.3 Demographic Profile of the District

Kollam district, known for its rich cultural heritage and social development, has a total population of 26.35 lakh, contributing 7.89% to Kerala's population. Of this, 12,46,968 are men (47.33%) and 13,88,407 are women (52.67%), giving the district a favorable sex ratio of 1113 females per 1000 males, which is higher than the state average and reflects strong gender equity. The child population (0–6 years) is 2,54,260, with a child sex ratio of 973, underscoring the need for continued focus on child health and gender balance. Geographically, Kollam spans 2,483 sq. km and is one of the most densely populated districts with 1,061 persons per sq. km, reflecting both is urbanised character and demographic profile. The district has recorded a population growth rate of 1.94%, reflecting relatively stable trends compared to other fast-growing regions. Socially, Kollam is diverse with a significant Scheduled Caste population of 3,28,263 and a Scheduled Tribe population of 10,761, many of whom reside in hilly and forested terrains,

highlighting the importance of targeted welfare and health interventions. A major strength of the district lies in its high literacy rate of 94.09%, with male literacy at 95.83% and female literacy at 91.95%, reflecting a narrow gender gap and strong foundation for human development. These demographic features collectively position Kollam as a district with notable progress in education and gender equity, while also presenting unique challenges in addressing the needs of marginalised communities and ensuring equitable access to health and development services.

Table 1.3.1: Demographic details

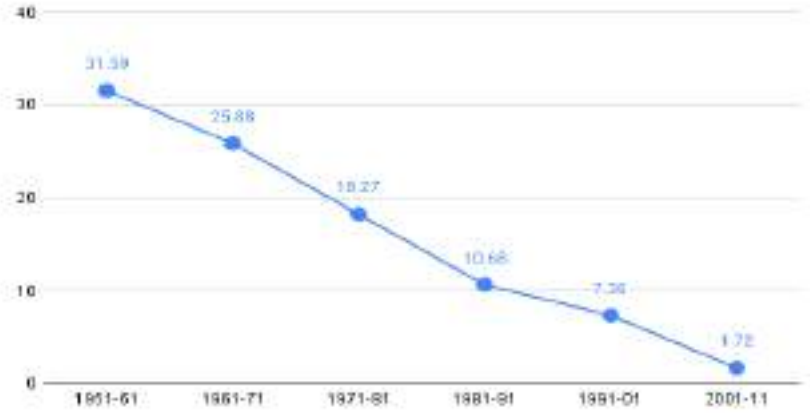
Total Population	**26.35 Lakh**
Men	1,246,968
Women	1,388,407
Population Growth	1.94%
Area Sq. Km	2,483
Density/km2	1,061
Proportion to Kerala Population	7.89%
Sex Ratio (Per 1000)	1113
Child Sex Ratio (0-6 Age)	973
Total Child Population (0-6 Age)	254,260
SC Population	328263
ST Population	10761
Literacy Rate Male	95.83
Literacy Rate Female	91.95
Average Literacy	94.09
Source: Census Handbook	

Table 1.3.2 presents census data for males and females from 1901 to 2011, recorded every ten years. Throughout the period, both populations rose steadily: males increased from 204,371 in 1901 to 1,388,407 in 2011, while females grew from 201,642 to 1,246,968. By 2011, females outnumbered males by 141,439, reflecting continuous demographic growth and a narrowing gender gap. The compound annual growth rate (CAGR) per decade over this period was about 17.89% for males, 19.17% for females, and 18.55% for the total population

Table 1.3.2: Population Distribution of Kollam (1901 – 2011)

Census Year	Total	Males	Females
1901	406,013	204,371	201,642
1911	465,684	234,261	231,423
1921	552,333	277,631	274,702
1931	698,041	347,911	350,130
1941	856,585	425,539	431,046
1951	1,110,362	556,067	554,295
1961	1,461,103	732,042	729,061
1971	1,839,265	919,567	919,698
1981	2,175,339	1,076,052	1,099,287
1991	2,407,566	1,182,810	1,224,756
2001	2,585,208	1,249,621	1,335,587
2011	2,635,375	1,388,407	1,246,968
Source - Census of India			

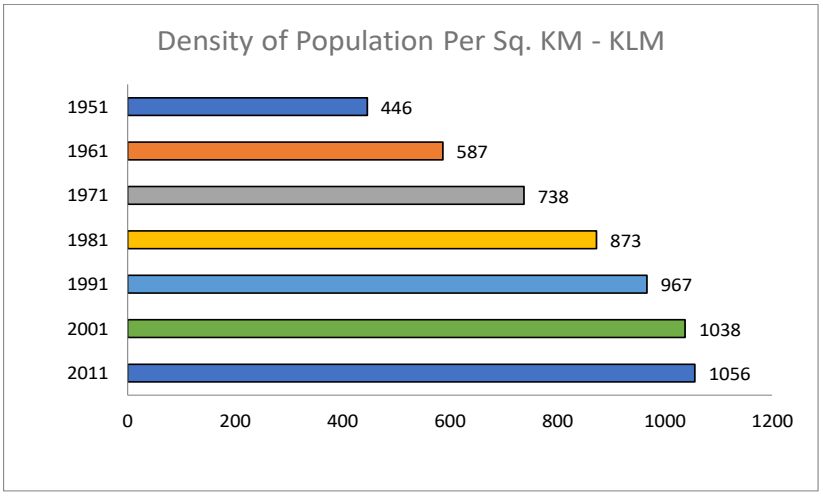
Graph 1.3.1 Decadal Population Growth



Source: Census of India

The population growth rate in Kollam has shown a steady and significant decline over the decades, dropping from 31.59% during 1951-61 to just 1.72% during 2001-11. This trend reflects success of population control measures, increased public awareness, and improvements in health care and education, contributing to stabilisation of population numbers in recent years.

Graph 1.3.2 Density of Population per Sq. km in Kollam (1951-2011)



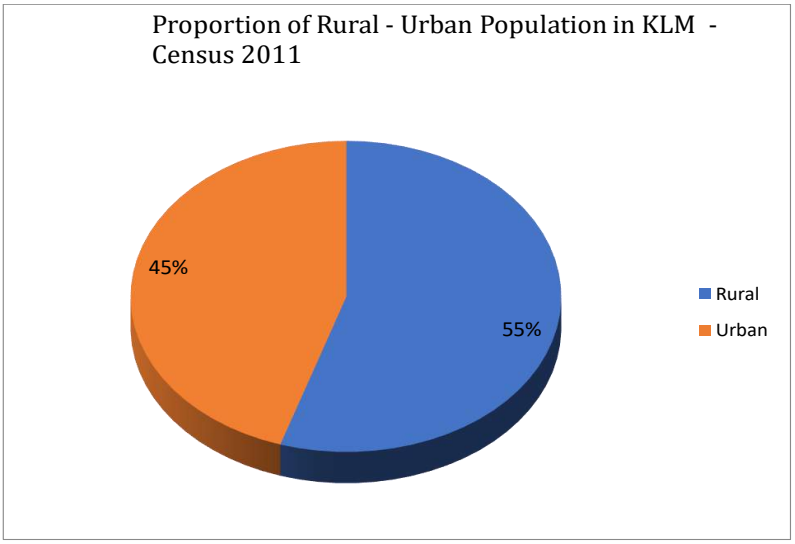
Source: Census of India

Kollam district's population density data from 1951 to 2011 follows the national trend, showing a substantial increase in each decade. The density rose from 446 persons per sq. km in 1951 to 1,056 in 2011, reflecting rapid demographic growth over 60 years

According to the graph 1.3.3, **55% of the population** resides in **rural areas**, represented by the **blue segment**, indicating that most Kollam's residents still live outside urban centres. The **45% of the population** lives in **urban areas**, shown in **red**, reflecting the district's growing urbanisation.

This distribution suggests that **Kollam retains a predominantly rural population**, although the **urban share (45%) is relatively high** compared with many other districts in Kerala. The figures point to a **balanced demographic pattern**, where rural livelihoods such as agriculture and fisheries coexist alongside expanding urban sectors including industry, trade, and services.

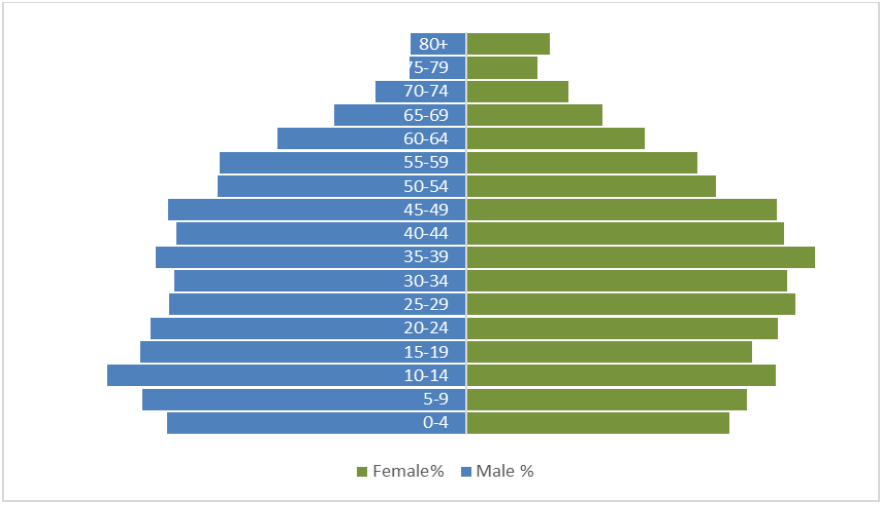
Graph 1.3.3 Urban and Rural difference in Kollam (2011)



Source: Census of India

1.4 Age and Sex Distribution of Population, Kollam (2011)

Graph 1.4.1 Age and Sex Distribution of Population



Source: Census of India

Kollam district's population distribution by age and gender reveals several important demographic trends. Females consistently outnumber males across all age groups, reflecting high life expectancy and favorable health status among women in this region. The difference between male and female numbers becomes especially noticeable after childhood, with women forming the majority even in productive and working age groups. This pattern highlights both the region's strong female workforce potential and the positive outcomes of gender equity initiatives in health and social sectors. Another key insight is the gradual decrease in population share among older age brackets, indicating an ageing population that may require enhanced geriatric care and social support systems in the coming years. Overall, Kollam's demographic profile is marked by a higher proportion of women and a trend toward an older population, aligning with the broader patterns observed throughout Kerala.

Table 1.4.1 Sex ratio at Birth

Year	Sex Ratio at Birth
2020-21	962
2021-22	950
2022-23	972
2023-24	987
2024-25	1,016

Source: HMIS

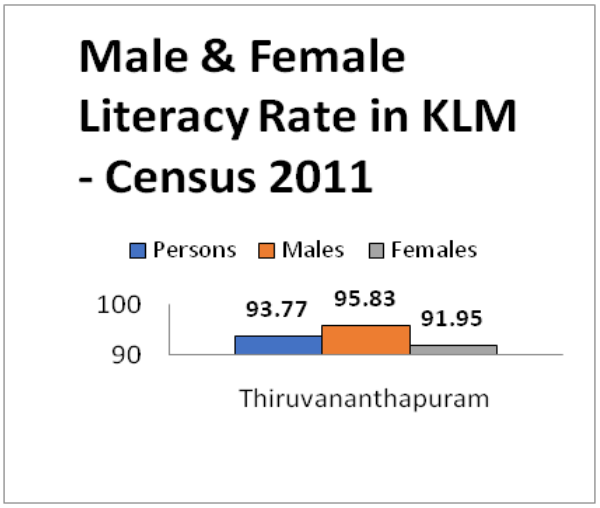
Table 1.4.2 Sex Ratio

Year	Sex Ratio
1991	1,036
2001	1,060
2011	1,087
Source: Census	

According to HMIS records, Kollam district's sex ratio at birth has improved steadily in recent years, rising from 950 in 2021-22 to 1,016 in 2024-25, indicating better gender equity at birth. Additionally, Census data shows the overall sex ratio increased from 1,036 in 1991 to 1,087 in 2011, reflecting long-term advances toward gender parity in the district. These trends highlight the success of local public health and social initiatives in promoting equality.

1.5 Literacy rate

Graph 1.5.1 Male and Female Literacy Rate in Kollam District



Source: Census of India 2011

Kollam district recorded literacy rates of 93.77% overall, with 95.83% for males and 91.95% for females, indicating significant strides in female education and empowerment. Despite a slight gender gap favoring male, Kollam demonstrates effective outreach and policy implementation leading to high literacy levels for both male and female populations, aligning with Kerala's reputation for educational excellence.

1.6 Vulnerable Population Groups (SC/ST Communities, etc.)

According to 2011 census data, the Scheduled Caste (SC) population is 328,263 and Scheduled Tribe (ST) population is 10,761, forming a combined vulnerable population of 339,024. SC women (170,462) slightly outnumber men (157,801), and a similar pattern is seen among ST women (5,566) compared to men (5,195). These figures indicates that Scheduled Castes constitute the dominant vulnerable group. This reveals a modest gender gap and underlining the need for inclusive and targeted welfare initiatives for these socially disadvantaged groups in Kollam district

Table 1. 6 .1 SC/ST Population of Kollam (2011)

	SC	ST	Total
Total	328,263	10,761	339,024
Male	157,801	5,195	162,996
Female	170,462	5,566	176,028

Source: Census of India

Kollam district presents a progressive demographic profile, with a population almost evenly distributed between urban and rural areas, though slightly higher in urban centres. About 54.95% (14,48,217 persons) of the population resides in urban areas, while 45.05% (11,87,158 persons) live in rural regions, making Kollam one of the more urbanized districts in Kerala. The urban population consists of 6,80,687 men and 7,67,530 women, giving a sex ratio of 1128 females per 1000 males, which is higher than the rural sex ratio of 1096, observed among 5,66,281 men and 6,20,877 women. The child sex ratio (0–6 years) remains balanced across regions, recorded at 973 in urban areas and 972 in rural areas, indicating consistent demographic trends. Education is a notable strength of Kollam, as reflected in the high literacy rates across both segments. Urban areas account for 12,33,362 literates, including 5,87,387 males and 6,45,975 females, with an average literacy rate of 94.10% (male 96.14% and female 92.32%). Rural areas too demonstrate equally strong progress, with 10,06,911 literates comprising 4,86,958 males and 5,19,953 females, and an average literacy rate of 94.06% (male 96.03% and female 92.29%). These figures highlight that Kollam has achieved parity in educational attainment between men and women, with only minimal differences between urban and rural populations. The consistently high literacy levels, coupled with a favorable sex ratio, underline Kollam's position as a socially advanced district with strong demographic indicators, where both urbanization and rural development go hand in hand.

CHAPTER 2

KOLLAM DISTRICT-HEALTH DASHBOARD

District AT A GLANCE

Administrative Divisions

Thaluks –6

Villages – 105

Municipalities – 4

Corporations – 1

Block

Panchayath- 11

Grama Panchayath - 68

Population

Population As per Census 2011 – 26,35,375

Male – 12,46,698

Female – 13,88,407

Area

Total Area (Sq. K)– 2483

Population Density (No per Sq K) -1061

Decadal Population Growth Rate – 1.72

Healthcare Infrastructure under DHS

District Level Hospitals

DH – 1

GH – 0

W&C – 1

2

Sub District Level Hospitals

THQH – 5

TH – 4

9

Community Health Centres

Total CHC – 16

Converted to

FHC - 4

16

Primary Health Centres

Total PHC – 58

Converted to

FHC – 58

UPHC-5

63

Janakeeya Arogya Kendram

Janakeeya Arogya Kendram

- 421

421

Other Institutions

School of Nursing – 1

Training Center – 1

PH Lab – 1

DVC Units – 1

Offset Press - 1

Blood Bank – 16

Public – 4

Private -12

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

19657

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

Maternal Deaths 2024-25

14%

14% pregnant women were identified as anaemic through VIVA testing.

Preterm Births 2024-25

55%

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

Underweight Newborns 2024-25

5

Total Maternal Deaths Reported in the District Kollam

5%

The proportion of preterm births in the district -

13%

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

Delivery 2024-25

Institutional Delivery in the district – 16279

Public – 6812

Private – 9467

Home Delivery 2024-25

Home Delivery Reported in the district – 19

No of Migrant Home Delivery - 6

Live Birth 2024-25

Total Live Birth Reported – 16434

Male – 8393

Female – 8041

Sex Ratio at Birth 1016-

CHILD IMMUNISATION 2024-25

% Birth Dose	6 Weeks Vaccines Coverage (%)	10 Weeks Vaccines Coverage (%)
Hep B0 – 99	OPV1 - 99	OPV2 - 99
OPV 0 – 100	Pentavalent 1 - 99	Pentavalent 2 - 99
BCG-100	Rotavirus 1 - 99	Rotavirus 2 - 99

PCV1 - 99

IPV 1 - 99

% 14 Week Vaccines

OPV3 - 99

Pentavalent 3-9 - 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 – 98

Communicable diseases reported in the District 2024

Cases Reported

Dengue- 16766

Malaria- 566

Chikungunya- 31

West Nile-16

Zika- 13

JE- 6

153

Dengue Death

Cases Reported

Kala Azar-3

Scrub Typhus - 614

Leptospirosis- 2417

133

Leptospirosis Death

Cases Reported

Cholera - 26

Typhoid- 103

Acute Diarrheal Disease -486266

2

ADD Death

Communicable diseases reported in the District 2024

Chicken Pox Cases- 26390

MPox Cases-6

4

Chicken Pox Death

Rabies Cases Reported- 17

Shigella cases- 90 Amoebic Meningoencephalitis - 2

17

Rabies Death

Cases Reported

Hepatitis A -1073

Hepatitis B-1147

Hepatitis C-381

Hepatitis E - 5

14

Hepatitis A Death

CHAPTER 3

HEALTH INFRASTRUCTURE PROFILE OF KOLLAM DISTRICT

Kollam district has a well-spread network of 529 health institutions with a total sanctioned bed strength of 2,270. The infrastructure ranges from district-level hospitals to sub-centres, ensuring service delivery across both urban and rural areas.

- **Higher-Level Facilities:** Kollam has 1 District Hospital (537 beds) and 1 District TB Centre, in addition to 5 Taluk Headquarters Hospitals with 703 beds, which serve as major referral centres for specialized care.
- **Community-Level Facilities:** There are 16 Community Health Centres (441 beds), 5 24x7 Primary Health Centres (41 beds), and 53 Primary Health Centres, ensuring accessibility to primary and secondary care.
- **Peripheral Reach:** The district has an extensive network of 421 Sub-Centres, forming the backbone of rural healthcare service delivery.
- **Specialized Facilities:** Kollam also maintains 1 Women & Children Hospital (273 beds) and 4 Taluk Hospitals (269 beds) to cater to maternal and child health needs.
- **Geographic Spread:** The distribution of facilities shows concentration in Kollam (161 facilities), followed by Kottarakkara (121), Karunagappally (84), Punalur (78), Kunnathur (40), and Pathanapuram (26). This indicates uneven distribution, with peripheral blocks requiring more investment to match service equity.

Key Insights:

The district is well-equipped with sub-centres and PHCs, ensuring primary healthcare access. Secondary and tertiary care facilities are concentrated in urban Kollam block, resulting in a rural–urban imbalance. The relatively high bed strength in district and taluk hospitals provides scope for specialised care, but peripheral blocks may experience referral delays. Future planning should focus on strengthening CHCs, 24x7 PHCs, and sub-centres in under-served blocks like Pathanapuram and Kunnathur.

Table 3.1 Health Facilities in District

Institution/ Facility	Total No.	Kollam	Kottarakkara	Kunnathur	Punalur	Pathanapuram	Karunag-appally
District Hospital	1	1	0	0	0	0	0
District TB Centre	1	0	0	0	0	0	0
Taluk Headquarters Hospital	5	0	1	1	1	1	1
Community Health Centre	16	5	4	2	2	0	3
24×7 Primary Health Centre	6	4	2	0	0	0	0
Primary Health Centre	57	18	14	4	8	4	9
Sub-centres	421	130	99	33	67	21	71
Women & Children Hospital	1	1	0	0	0	0	0
Taluk Hospital	4	2	1	0	0	0	1

Fig 3.1 THQH Karunagapally

Fig 3.2 District Hospital, Kollam

Fig 3.3 W&C Kollam

Fig 3.4 TH Kundara

3.5 TB Center

Fig 3.6 TH Kadakkal

CHAPTER 4

HEALTH HUMAN RESOURCE PROFILE OF KOLLAM DISTRICT

4.1 Health Human Resource – Major Indicators

A capable and well-distributed health workforce forms the foundation of a functional healthcare system. The effectiveness and reach of service delivery depend on an appropriate mix of doctors, nurses, paramedical professionals, and support staff. This chapter presents a detailed profile of Kollam district's human resources in health, encompassing both the Directorate of Health Services (DHS) and the National Health Mission (NHM) sectors.

It highlights key workforce indicators—such as Bed–Population Ratio, Doctor–Bed Ratio, and Doctor–Population Ratio—along with the sanctioned and filled positions of medical officers, specialists, and supporting personnel. Collectively, these data provide insight into the district's healthcare capacity and its readiness to meet the service demands of the population.

Table 4.1.1: Bed–Population, Doctor–Bed, and Doctor–Population Ratios in the District (Based on Census 2011 Population)

Indicator	Ratio
The bed population ratio (based on Census 2011 population)	1:1136
The average Doctor bed ratio	1:5
Doctor population ratio (based on Census 2011 population)	1:6017

Source: Census 2011

Kollam district reports a Bed–Population Ratio of 1:1136, indicating moderate bed availability relative to population size. The Doctor–Bed Ratio of 1:5 signifies good clinical capacity per hospital infrastructure, whereas the Doctor–Population Ratio of 1:6017 reflects a satisfactory but improvable doctor density per inhabitant.

4.2 Availability of Medical Officers

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

Category	Sanctioned
Administrative	
Additional Director	1
Deputy Director	2
Assistant Director	11
JAMO	1
General	
Assistant Surgeon	232
Assistant Surgeon Dental	8
Civil Surgeon	21
Civil Surgeon Dental	2
MO All	**278**

Source: District data

Kollam district has 278 sanctioned Medical Officer positions under DHS. The administrative component includes provisions for senior roles such as an Additional Director and Deputy Directors, ensuring policy oversight. The majority fall under the general medical cadre, comprising 232 Assistant Surgeons and 21 Civil Surgeons, which strengthens the clinical workforce at the district and sub-district levels.

Table 4.2.2: Number of Specialty and Super Specialty Doctors under DHS

Type	Sanctioned
Specialty	
Anaesthesia	14
Blood Bank	2
Dental	3
Dermatology & Venerology	7
ENT	10
Forensic Medicine	2
General Medicine	16
General Surgery	11
Obstetrics & Gynaecology	29
Ophthalmology	8
Orthopedic Surgery	14
Pediatrics	22
PH Lab	1
Physical Medicine & Rehabilitation	4
Psychiatry	6
Radio Diagnosis/Radio Therapy	4
TB & Chest (Resp. Medicine)	4

Source: District data

Kollam shows a dynamic mix of medical specialties, with the highest concentration in Obstetrics & Gynaecology (29), followed by Paediatrics (22), General Medicine (16), and Anaesthesia (14). The structure supports maternal and child health, emergency care, and general medicine services. Disciplines such as Psychiatry, Orthopedics, and Radiodiagnosis are reasonably represented, indicating efforts toward balanced specialty coverage.

4.3 Sanctioned Strength of Health Personnel under DHS

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

Category/Division	Sanctioned
Doctors (Administrative Cadre)	15
Doctors (General Cadre)	263
Doctors (Specialty)	157
Doctors (Super Specialty)	3
NURSING SERVICE	580
JPHN to MCH Officer	523
JPHN/NURSING SCHOOL	16
DENTAL	13
LAB (GENERAL)	108
PHARMACY & MEDICAL SUPPLY	146
LEPROSY	6
PUBLIC HEALTH	439
TB	8
OPHTHALMOLOGY	29

TRANSPORT	1
OTHERS	1,178
Grand Total	3,485

Source: District data

A total of 3,485 posts are sanctioned across various sectors within the district. The nursing service constitutes the largest group, accounting for 580 positions, followed by public health cadres (439) and field-level roles under the JPHN/MCH offices (523). The balance between clinical specialists, technical staff, and administrative cadres reflects effective organisational planning aimed at comprehensive healthcare delivery.

Overall Summary

Kollam district demonstrates a robust health workforce structure supported by both clinical and public health personnel. With over 3,400 sanctioned posts under Directorate of Health Services (DHS), the district maintains strong coverage across administrative, medical, paramedical, and support divisions. The diversity in specialties and steady presence of primary-level providers suggest a healthcare system that emphasises both preventive and curative services while sustaining equitable access throughout the region.

CHAPTER 5

MATERNAL AND CHILD HEALTH

The Maternal and Child Health Programme in Kollam district is dedicated to improving the health and well-being of mothers and children through targeted initiatives. The district implements PMSMA (Pradhan Mantri Surakshit Matritva Abhiyan), which offers free, high-quality antenatal care to all pregnant women on the 9th of each month, facilitating the early identification and management of high-risk pregnancies. Kollam actively promotes early ANC registration, ensuring that pregnant women receive timely and comprehensive antenatal check-ups. Immunization is a central focus, with efforts to achieve complete vaccination coverage for both children and pregnant women, protecting them from preventable diseases. Additionally, the program strongly encourages institutional deliveries, aiming to provide a safe childbirth experience and reduce both maternal and neonatal mortality. These coordinated efforts support Kollam's progressive health indicators and contribute to sustainable improvements in maternal and child health throughout the district.

5.1 Pregnant Women Registration

The table below shows the trend in pregnant women registration from 2014-15 to 2024-25 in the district. The percentage started at a low-to-moderate level of around 34-35% in the initial years, reflecting significant gaps in early pregnancy registration coverage. Over the subsequent decade, a pronounced and concerning downward trend is observed, culminating in a low of 19.66% in the latest period. This severe decline suggests systemic challenges related to outreach and utilization as well as potential issues with data reporting or changes in the operational definition of registration. This trend highlights the need for enhanced awareness and targeted interventions to improve early pregnancy registration rates. Monitoring such trends helps healthcare planners identify gaps and optimise service delivery to ensure better maternal and child health outcomes. Overall, the data underscores the importance of continuous program evaluation and strengthening maternal health initiatives.

Table 5.1.1 Trend in Pregnant Women Registration in the District

(2014-15 to 2024-25)

Period	Pregnant Women Registration (%)
2014-15	34.52
2015-16	33.04
2016-17	33.39
2017-18	35.71
2018-19	33.9
2019-20	31.9
2020-21	27.24
2021-22	28.69
2022-23	26.62
2023-24	24.22
2024-25	19.66
Source: HMIS Portal	

5.2 Early Initiation of Antenatal Care

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

Period	First Trimester ANC Registration (%)
2014-15	84
2015-16	86
2016-17	88
2017-18	86
2018-19	90
2019-20	88
2020-21	89
2021-22	88
2022-23	88
2023-24	95
2024-25	98
Source: HMIS Portal	

The table shows the trend of first trimester antenatal care (ANC) registration from 2014-15 to 2024-25. The percentage of pregnant women registered in the first trimester remained consistently high, ranging from 84% to 90% between 2014 and 2023. There was a notable increase to 95% in 2023-24 and further to 98% in 2024-25. Early initiation of ANC is crucial for monitoring pregnancy and ensuring better maternal and fetal health outcomes. This steady increase reflects effective outreach, awareness,

and service delivery improvements over the years. High first trimester registration rates are key indicators of progress in maternal healthcare programs and contribute to reducing maternal and neonatal risks by facilitating timely interventions.

5.3 Immunization Status of Pregnant Women

The table 5.3.1 indicates a high coverage of Td1 immunization, sometimes exceeding the number of women registered, likely due to vaccinations administered to women registered in the previous year or catch-up doses. The coverage for Td2 and Td Booster doses shows a drop compared to Td1, reflecting either follow-up challenges or timing issues during the pregnancy course. High Td immunization coverage is essential for preventing maternal and neonatal tetanus, and ongoing monitoring helps address gaps in booster and second dose completion rates.

Table 5.3.1: Td Immunization 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
19657	19991	17178	1718
Source: HMIS Portal			

5.4 Abortion

Table 5.4.1: Trends in Spontaneous and Induced Abortions (2014-15 to 2024-25)

Period	Pregnant Women	Total Abortions (spontaneous + Induced)	Spontaneous Abortions	Induced Abortions
2014-15	34523	1112	931	181
2015-16	33036	903	676	227
2016-17	33392	767	648	119

2017-18	35714	1287	612	675
2018-19	33898	1164	542	622
2019-20	31899	1230	577	653
2020-21	27240	1234	583	651
2021-22	28690	1638	606	1032
2022-23	26616	2133	500	1633
2023-24	24217	2162	608	1554
2024-25	19657	2552	528	2024
Source: HMIS Portal				

The Table 5.4.1 showing trends in both spontaneous and induced abortions among pregnant women (PW) in the district from 2014-15 to 2024-25:

- The total number of pregnant women registered in the district declined significantly over the decade, decreasing from 34,523 in 2014-15 to 19,657 in 2024-25.
- The sum of spontaneous and induced abortions fluctuated initially but showed a steep and sustained increase in the last four years, ultimately rising from 1,112 in 2014-15 to 2,552 in 2024-25.
- Spontaneous abortions remained relatively stable (ranging from 500–930 per year.
- Induced abortions showed a marked increase, especially after 2017-18, peaking at 2,024 in 2024-25.
- The data highlights a steady trend of spontaneous abortions but a striking and sustained increase in induced abortions. This shift reflects changing reproductive patterns, awareness, or improved reporting of induced abortions over the observed period.

5.5 Family Planning

Table 5.5.1: Male and Female Sterilisations Reported in HMIS

(2020-21to 2024-25)

Period	NSV	Laparoscopic sterilisations	Mini-lap sterilisations	PPS	PAS
2020-21	0	141	214	4522	35
2021-22	2	261	278	4716	30
2022-23	18	423	373	4621	49
2023-24	11	458	440	3044	92
2024-25	16	412	418	2357	77
Source: HMIS Portal					

Table 5.5.1 summarises male and female sterilisations reported from 2020-21 to 2024-25. No-Scalpel Vasectomy (NSV) procedures among males remain extremely low, with only 0-18 cases annually. Female sterilization procedures—both laparoscopic and mini-lap—are far more common, but the overall numbers show minor fluctuations, with mini-lap sterilisations generally exceeding laparoscopic ones each year. The majority of sterilisations occur as Post-Partum Sterilisations (PPS), with a visible declining trend in recent years (from 4,522 in 2020-21 to 2,357 in 2024-25). Post-Abortal Sterilisations (PAS) contribute a small but relatively stable share. These data reflect the continued and overwhelming reliance on female-centered family planning approaches in India, consistent with national trends, while male participation remains limited

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

Period	FP elements	IUCD Insertions
2020-21	IUCD	1302
	PPIUCD	62
	PAIUCD	12
2021-22	IUCD	1258
	PPIUCD	96
	PAIUCD	9
2022-23	IUCD	1979
	PPIUCD	99
	PAIUCD	24
2023-24	IUCD	1689
	PPIUCD	123
	PAIUCD	14
2024-25	IUCD	1361
	PPIUCD	70
	PAIUCD	15
Source: HMIS Portal		

Table 5.5.2 shows IUCD insertions reported in HMIS from 2020-21 to 2024-25. Regular IUCD insertions ranged from 1,258 to 1,979 annually, peaking in 2022-23. Postpartum

IUCD (PPIUCD) insertions showed a general rise from 62 in 2020-21 to 123 in 2023-24, slightly declining to 70 in 2024-25. Post-abortion IUCD (PAIUCD) insertions remained low, fluctuating between 9 and 24. IUCD services are a key part of family planning, offering long-term reversible contraception. The rising trend in PPIUCD insertions indicates growing acceptance of postpartum contraception, although consistent efforts are needed to maintain and expand this uptake. Overall, these figures reflect ongoing efforts to improve spacing and fertility regulation, contributing to better reproductive health outcomes.

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 Condom pieces distributed	Number of Centchroman (weekly) pill strips distributed	Number of Emergency Contraceptive Pills (ECP) given
2020-21	3217	95515	339	227
2021-22	7284	169300	524	134
2022-23	11030	156552	475	56
2023-24	10901	196864	675	79
2024-25	8140	152657	736	444
Source: HMIS Portal				

Table 5.5.3 displays the distribution of family planning commodities in the public sector from 2020-21 to 2024-25. The number of combined oral pill cycles distributed rose significantly from 3,217 in 2020-21 to a peak of 11,030 in 2022-23, before declining to 8,140 in 2024-25. Condom distribution showed an overall increasing trend, peaking at 196,864 pieces in 2023-24 but dropping to 152,657 in 2024-25. Centchroman pill strips, a non-hormonal weekly contraceptive, steadily increased each year, reaching 736 strips in 2024-25. Emergency contraceptive pill distribution fluctuated, with a

notable increase to 444 pills given in 2024-25. This data highlights expanding contraceptive method options and variable usage patterns, reflecting ongoing efforts to meet diverse family planning needs through public health programs.

5.6 Delivery

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

Period	Public	Private	Home Delivery	All
2020-21	10183	13154	18	23355
2021-22	11131	13421	19	24571
2022-23	10371	12749	24	23144
2023-24	8426	11167	23	19616
2024-25	6812	9467	20	16299
Source: HMIS Portal				

Table 5.6.1 presents the trend in total deliveries from 2020-21 to 2024-25, categorised by place of delivery—public health facilities, private facilities, and home deliveries. Total deliveries decreased steadily from 23,355 in 2020-21 to 16,299 in 2024-25. Deliveries in public facilities fell significantly from 10,183 to 6,812, while deliveries in private facilities also declined from 13,154 to 9,467. Home deliveries remained very low and relatively stable, ranging between 18 and 24 annually. The data reflects a sustained decline in overall reported deliveries, especially in public facilities, which may be indicative of demographic changes, service shifts, or variations in reporting. Despite the declines in absolute numbers, institutional deliveries dominate, which is a positive factor for maternal and newborn health outcomes due to better access to skilled care during childbirth. Continued efforts are essential to maintain high institutional delivery rates and address any capacity gaps in public health delivery facilities.

5.7 Caesarean Section Deliveries

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

Period	Public	Private	All
2020-21	46.2	57.89	52.79
2021-22	48.85	59.18	54.5
2022-23	48.93	60.57	55.35
2023-24	52.62	51.47	51.97
2024-25	49.81	59.14	55.24
Source: HMIS Portal			

Table 5.7.1 reveals the trend in caesarean section (C-section) rates in public and private hospitals from 2020-21 to 2024-25 based on HMIS data. C-section rates in public hospitals ranged from 46.2% to 52.62%, showing a slight increase over the years. Private hospitals consistently reported higher rates, fluctuating from 51.47% to 60.57%, with a peak in 2022-23. Overall, the combined C-section rate averaged between 51.97% and 55.35%.

These rates are notably higher than the WHO recommended ideal range of 10%-15%, indicating a widespread reliance on surgical deliveries. The high C-section rate in private facilities might be related to factors such as elective procedures, financial incentives, or managing high -risk pregnancies.

Monitoring these rates and ensuring C-sections are medically justified is crucial to avoid adverse maternal and neonatal outcomes. Strategies to optimize C-section use should focus on addressing clinical indications, improving public awareness, and enforcing policies for safer childbirth practices.

5.8 Maternal Deaths

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

Period	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
No. of Maternal deaths	16	11	5	14	9	10	11	16	3	4	5
Source: HMIS Portal											

Table 5.8.1 shows the trend of maternal deaths in the district from 2014-15 to 2024-25 based on HMIS data. Maternal deaths fluctuated notably over this period, with a highest number of deaths, 16 occurred in 2014-15 and again in 2021-22. The lowest recorded values were 3 deaths in 2022-23 and 4 deaths in 2023-24.

The data indicates significant variability in annual maternal mortality figures. This reflects successful ongoing efforts in maternal health services, improved antenatal care, high institutional delivery rates, and enhanced emergency obstetric care.

Although the absolute number of maternal deaths is relatively low, continued vigilance, timely interventions, and ensuring high quality care remain vital to sustain this reduction, further reduce maternal mortality and ensure safe pregnancies and childbirths.

5.9 Child Birth

Table 5.9.1: Trend of Live Births by Gender (Male, Female & Total)

2014-15 to 2024-25

Period	Male	Female	Total
2014-15	14,797	14,344	29,141
2015-16	14,578	14,048	28,626
2016-17	13,069	12,593	25,662
2017-18	13,998	13,598	27,596

2018-19	13,750	12,777	26,527
2019-20	12,771	12,390	25,161
2020-21	12,599	12,123	24,722
2021-22	12,688	12,057	24,745
2022-23	11,826	11,499	23,325
2023-24	9,946	9,821	19,767
2024-25	8,393	8,041	16,434
Source: HMIS Portal			

Table 5.9.1 shows the trend in live births by gender from 2014-15 to 2024-25. The total live births declined steadily from 29,141 in 2014-15 to 16,434 in 2024-25. Both male and female births decreased proportionally, with male births dropping from 14,797 to 8,393 and female births from 14,344 to 8,041. This decline in total births may reflect demographic transitions such as lower fertility rates. The consistently higher number of male births compared to female births aligns with known sex ratio trends in India, which report slightly more male births than female. Efforts to address gender imbalances continue, but the data suggests a persistently skewed male-to-female birth ratio alongside overall declining birth numbers.

5.10 Child Mortality

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

Period	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
No. of Neonatal Deaths	151	119	104	124	122	107	98	89	85	76	63
Source: District Report											

Table 5.10.1 shows a declining trend in neonatal deaths in the district from 2014-15 to 2024-25. Neonatal deaths dropped from 151 in 2014-15 to 63 in 2024-25, reflecting

progress in newborn health outcomes. This decline aligns with national trends where India has seen a significant reduction in neonatal mortality rates (NMR) over the past decade due to improved maternal and child health interventions, better antenatal care, skilled birth attendance, and newborn care services. Key causes of neonatal mortality include prematurity, birth asphyxia, infections, and low birth weight. Continued efforts focusing on these areas are essential to sustain and accelerate the reduction in neonatal deaths to meet national and global health targets. This decrease is crucial for overall child survival and achieving Sustainable Development Goals related to health.

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

Period	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
No. of Infant Deaths	230	197	167	192	189	172	138	132	143	124	102
Source: District Report											

Table 5.10.2 shows the trend in the number of infant deaths in the district from 2014-15 to 2024-25. The number of infant deaths declined steadily from 230 in 2014-15 to 102 in 2024-25. This reduction reflects improvements in infant healthcare, including better antenatal and post-natal care, increased institutional deliveries, and health program interventions targeting infant survival. Nationally, India has experienced a significant decline in the Infant Mortality Rate (IMR), from 39 per 1000 live births in 2014 to 27 per 1000 live births in 2021. Sustained efforts through programs like the National Health Mission, universal immunization, and newborn care initiatives have contributed to these gains. Continued focus on maternal and child health, nutrition, early detection and treatment of illnesses, and health education is critical to maintain and accelerate the decline in infant mortality.

Table 5.10.3: Number of Child Deaths (Under 5) Reported (2021-22 to 2024-25)

Period	2021-22	2022-23	2023-24	2024-25
No. of Child deaths	157	163	156	120
Source: District Report				

Table 5.10.3 shows the trend in the number of child deaths (under 5 years) reported from 2021-22 to 2024-25. Child deaths slightly increased from 157 in 2021-22 to 163 in 2022-23, followed by a decline to 156 in 2023-24 and a sharper decrease to 120 in 2024-25. This downward trend aligns with broader national improvements in under-five mortality rates across India, driven by enhanced child health interventions such as immunization, nutrition programs, and improved healthcare access. Despite progress, regional disparities and challenges remain, necessitating continued efforts in maternal and child health services, nutrition, infection control, and education. Sustained investments and targeted interventions are critical to further reducing child mortality and moving closer to Sustainable Development Goal targets for child survival.

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

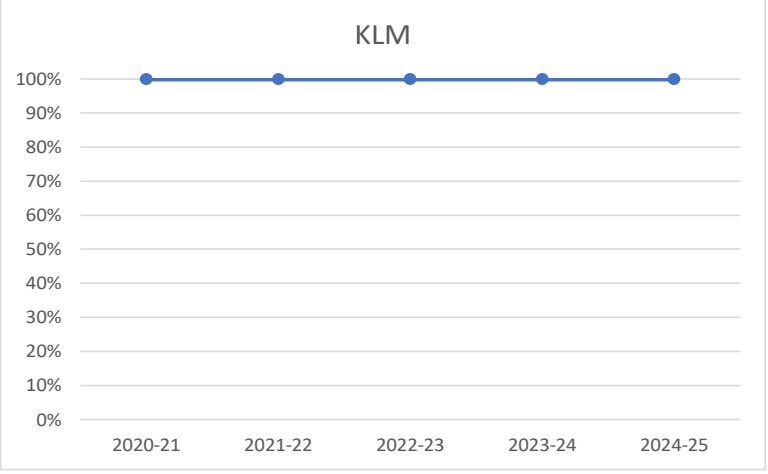
Period	2019-20		2020-21		2021-22		2022-23		2023-24		2024-25	
Infant and Neonatal Mortality Rates	**IMR**	**NMR**	**IMR**	**NMR**	**IMR**	**NMR**	**IMR**	**NMR**	**IMR**	**NMR**	**IMR**	**NMR**
	7	4	6	4	5	4	6	4	6	4	6	4
Source: Monthly District Death Reports and HMIS Live Birth Data												

Table 5.10.4 presents infant mortality rate (IMR) and neonatal mortality rate (NMR) trends in Kerala from 2019-20 to 2024-25. IMR fluctuated slightly but remained low, ranging from 5 to 7 deaths per 1000 live births, while NMR consistently stayed at 4 deaths per 1000 live births throughout this period. Kerala's consistently low IMR and NMR reflect the state's effective public health policies, high institutional delivery rates,

excellent neonatal care, and targeted programs addressing congenital anomalies and neonatal conditions. Kerala's IMR is notably lower than the national average and comparable to developed countries, underscoring its achievement in child health. Focused initiatives like the Hridyam program for congenital heart defects and universal newborn screening have contributed significantly to this success. These stable, low mortality rates demonstrate Kerala's status as a forerunner in India's maternal and child health outcomes and highlight the importance of sustained healthcare investments and outreach

5.11 Child Immunization

Graph 5.11.1 Percentage of children fully immunized (2020-21 to 2024-25)



Source: HMIS Portal

The Graph 5.11.1 displays the trend in the percentage of children fully immunized from 2020-21 to 2024-25. The data line remains steady at 100% across all years presented, indicating that the district achieved and maintained universal full immunization coverage for children throughout this period. This sustained high coverage reflects the strength of the immunization program, effective outreach, and reliable service delivery. Maintaining 100% immunization is critical for the prevention of vaccine-preventable diseases, supporting both individual and community health protection, and contributing to reduced child morbidity and mortality.

CHAPTER 6

COMMUNICABLE AND NON-COMMUNICABLE DISEASES

6.1 Disease Burden Overview – Common Communicable Diseases

The communicable disease profile in Kollam district for 2024 highlights a broad spectrum of infections, with significant morbidity attributed to both water-borne and vector-borne diseases. Acute diarrhoeal disease remains the most prevalent condition, with reported cases increasing sharply year - on - year. This trend strongly reflects ongoing gaps in water quality, public hygiene, and sanitation practices across the district.

Similarly, vector-borne illnesses—especially dengue fever—have demonstrated a pronounced rise over the past several years, signifying persistent mosquito breeding and year-round transmission risks in urban and rural neighborhood.

Respiratory illnesses, led by seasonal influenza, have also seen an upward trend, suggesting episodic outbreaks often associated with climatic and seasonal factors. Zoonotic diseases like leptospirosis have emerged as critical public health concerns in Kollam, particularly after prolonged rainfall and flooding, which increase high-risk exposures among agricultural and labour populations. Vaccine-preventable conditions, most notably chickenpox, continue to be reported annually, reflecting the need for ongoing vaccination, surveillance, and health education.

Other endemic infections—such as hepatitis A and B—underscore the ongoing importance of food and water safety, routine immunization, and infection control. Meanwhile, diseases like malaria and chikungunya have remained at low levels in recent years, suggesting effective local vector control and targeted interventions.

Overall, Kollam faces a diverse and evolving communicable disease landscape that demands sustained, cross-cutting public health strategies. Investments in sanitation systems, reliable water supply, robust disease surveillance, and intensified vector management are central to preventing outbreaks and reducing communicable disease burden in the district.

6.1.1: Communicable Diseases – Cases Reported

Kollam district's surveillance data for 2020–2024 reveals persistent and rising trends in key communicable diseases. Acute diarrhoeal disease continues to be the most commonly

reported, with cases soaring to 20,952 in 2024—nearly three times the 2021 total—emphasizing the district's ongoing challenges in sanitation and water safety. Dengue fever cases have consistently climbed, peaking at 2,639 in 2024, which mirrors increased vector transmission and highlights the importance of rigorous pre-monsoon and year-round vector control efforts.

Leptospirosis also recorded a significant rise, with 240 confirmed cases in 2024, further spotlighting the occupational and environmental risks present, especially during flood seasons. Chickenpox remains endemic, with more than 1,700 cases for the year, indicating gaps in herd immunity and signaling the need for catch-up vaccination in susceptible populations. Notably, Hepatitis A and B show a stable background burden but require ongoing focus due to their potential for outbreaks and chronic health impact.

Diseases such as typhoid, food poisoning, shigella, and influenza (H1N1/H3N2) each reported smaller but important numbers, with seasonal and occasional spikes. In contrast, diseases like malaria, chikungunya, Japanese encephalitis, and Nipah were rare or absent, reflecting positive outcomes from strengthened surveillance and control measures.

Overall, the 2024 data from Kollam signals increasing risks from water-borne and vector-transmitted diseases, demanding enhanced sanitation, vigilant public health interventions, improved outbreak preparedness, and continuous community engagement to mitigate disease incidence and prevent future surges.

Table 6.1.1 Trend in Fever Outpatient and Inpatient Cases

Year	2024		2023		2022		2021		2020	
OP/IP	OP	IP	OP	IP	OP	IP	OP	IP	OP	IP
No. of Fever Cases	165791	1311	169784	3134	164975	1559	79253	417	62690	720

Source: District Surveillance Data

From 2020 to 2024, Kollam district saw a steady increase in fever outpatient cases, rising from 62,690 in 2020 to over 165,000 in 2024, indicating ongoing high community transmission or improved surveillance. Inpatient cases peaked sharply at 3,134 in 2023, but fell to 1,311 in 2024, suggesting either a reduction in severe cases or better outpatient management. The data highlights the need for continued fever surveillance and targeted public health measures to address the persistent high outpatient load and to sustain the recent improvement in inpatient trends.

Table 6.1.2 Number of Reported Cases of Communicable Diseases 2020 - 2024

Sl. No	Name of Diseases	2024	2023	2022	2021	2020
1	Dengue Fever: Confirmed	2639	2473	597	114	460
2	Malaria	46	34	31	13	17
3	Chikungunya	1	0	1	0	3
4	Acute Encephalitis Syndrome	2	1	5	0	0
5	Japanese Encephalitis (JE)	0	0	0	0	0
6	Leptospirosis: Confirmed	240	175	155	63	48
7	Hepatitis - A: Confirmed	130	9	8	0	8
8	Hepatitis - B	143	218	173	89	143
9	Hepatitis - C	43	38	53	21	10
10	Hepatitis - E	2	1	0	0	0
11	Cholera	0	0	0	0	0
12	Typhoid	5	4	1	0	0
13	Acute Diarrhoeal Disease	20952	18317	18325	7005	7767
14	Shigella	12	0	0	0	0

15	Scrub Typhus	54	10	7	6	3
16	Kala Azar	0	0	0	0	0
17	Kysanur Forest Disease	0	0	0	0	0
18	Influenza (H1N1, H3N2, Infl A, Infl B)	1494	46	3	0	10
19	Rabies: Confirmed	5	7	1	2	0
20	Rabies: Probable	1	0	0	0	0
21	Zika	0	0	1	1	0
22	West Nile	0	0	0	0	0
23	Nipah	0	0	0	0	0
24	Chicken Pox	1735	1801	812	292	1259
Source : HMIS data						

The communicable disease profile in Kollam district from 2020 to 2024 highlights both concerning trends and new challenges for public health.

Dengue fever has surged dramatically, with confirmed cases increasing nearly six-fold from 460 in 2020 to 2,639 in 2024, suggesting either enhanced transmission due to environmental factors or gaps in vector control efforts.

Leptospirosis also showed a steady rise, emphasizing the persistent risk after floods or poor sanitation, moving from 48 cases in 2020 to 240 in 2024.

Acute diarrhoeal diseases remain the district's single largest communicable disease burden, with numbers peaking above 20,000 in 2024. This rise points to continuing issues around water safety, hygiene, and food handling.

Influenza (including H1N1, H3N2, Influenza A and B) saw an extraordinary jump to 1,494 cases in 2024 after years of low incidence, possibly due to changes in viral circulation post-pandemic or improved detection and reporting.

Chickenpox and Typhoid, while lower than diarrhoeal diseases, have also increased, suggesting that vaccine coverage and food/water safety measures require reinforcement. Diseases such as Malaria and Rabies are reported in low numbers. No reported cases of Cholera, Japanese Encephalitis (JE), Kala Azar, Kysanur Forest Disease, West Nile, or Nipah, reflecting effective surveillance and control for some diseases.

Overall, the data underscores the urgent need for sustained vector control, WASH (Water, Sanitation, and Hygiene) interventions, and strengthened disease surveillance for early outbreak detection and response in the district

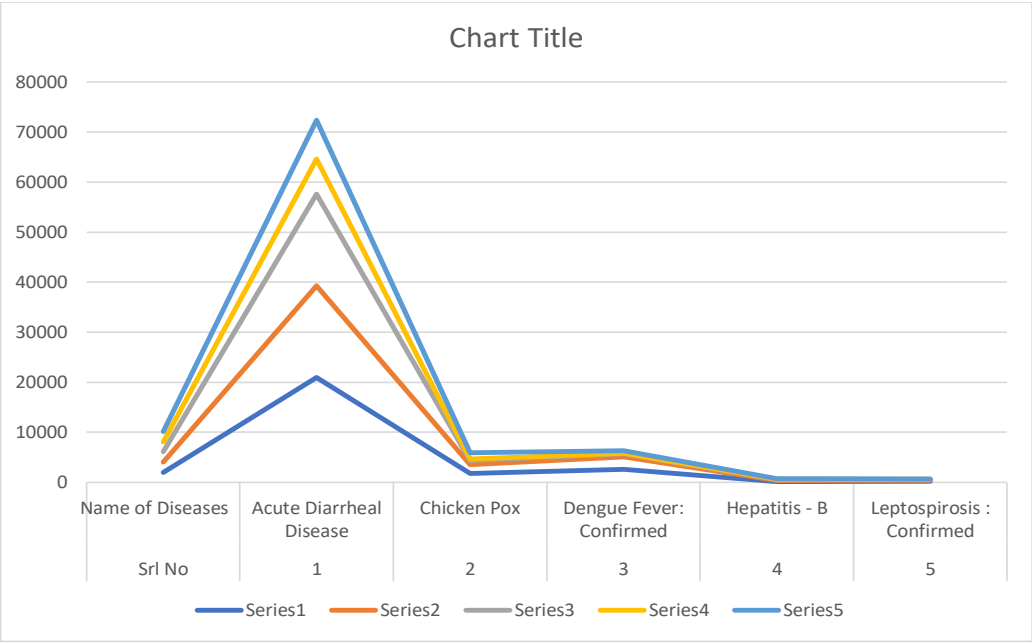
Overall, the data underscores the urgent need for sustained vector control, WASH (Water, Sanitation, and Hygiene) interventions, and strengthened disease surveillance for early outbreak detection and response in the district.

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

Sl.No	Name of Diseases	2024	2023	2022	2021	2020
1	Acute Diarrhoeal Disease	20952	18317	18325	7005	7767
2	Chicken Pox	1735	1801	812	292	1259
3	Dengue Fever: Confirmed	2639	2473	597	114	460
4	Hepatitis - B	143	218	173	89	143
5	Leptospirosis: Confirmed	240	175	155	63	48

Source: HMIS data

Graph 6.1.1 Trend in Top Five Reported Communicable Diseases in the District (2020–2024)



Source: HMIS data

Acute Diarrheal Disease

Acute diarrheal disease remains the leading reported illness, with cases showing a dramatic rise from 7,767 (2020) to 20,952 (2024). This threefold increase suggests persistent or worsening issues in water safety, hygiene, and sanitation, potentially driven by rapid urbanization, climate events affecting drinking water sources, and incomplete implementation of WASH (water, sanitation, and hygiene) programs. Outbreaks may cluster seasonally, especially post-monsoon, calling for intensified community chlorination drives, ward-wise water surveillance, and behaviour-change IEC campaigns targeted at handwashing and safe storage.

Chicken Pox

Chicken pox demonstrates an unpredictable trend: after a low of 292 cases in 2021, numbers rebounded to 1,801 (2023) and remained high at 1,735 (2024). This suggests periodic epidemics likely related to fluctuating herd immunity, lapses in varicella vaccination, or school-based outbreaks. Catch-up vaccination campaigns in outbreak-

prone areas and rapid containment strategies in institutional settings are key to minimizing spread and complications, especially among adolescents and adults.

Dengue Fever

Dengue fever confirmed cases increased sharply, from 460 (2020) to 2,639 (2024), peaking with over a sixfold rise. This sustained upward trend reflects growing challenges in vector control, with Aedes mosquito proliferation amplified by urban construction, poor solid waste management, and stagnant water in peri-urban neighbourhood. The district must strengthen entomological surveillance, pre-monsoon source reduction campaigns, and early warning systems based on larval indices. Cross-sectoral partnerships with local self-governments (LSGIs) and communities are essential for long-term vector management.

Hepatitis B

Reported hepatitis B cases have remained fairly stable (143 in 2020; 143 in 2024, peaking at 218 in 2023), indicating a persistent burden of chronic infection or incomplete vaccine coverage among certain cohorts. Strengthening routine immunization, risk-based screening in antenatal clinics, and targeted health education for at-risk adults should be priorities. Hospital infection control protocols must be regularly monitored, given the risk of nosocomial transmission.

Leptospirosis: The Critical Threat

Leptospirosis, though numerically smaller (48 in 2020 to 240 in 2024), deserves special attention due to its high case fatality rate, especially among vulnerable populations like paddy workers and post-flood cleanup teams. The fivefold rise parallels increased flooding and stagnant water exposure during heavy monsoons. Early warning based on meteorological data, proactive doxycycline chemoprophylaxis for high-risk groups, and rapid referral pathways for febrile illness are vital to reduce deaths. IEC efforts should reinforce early symptom recognition and health-seeking behavior. Improving rodent control and drainage systems in agriculture-heavy blocks can further prevent transmission spikes.

Summary & Public Health Recommendations

- Prioritize WASH interventions, prompt outbreak investigations, and regular water-quality monitoring to stem the surge in diarrheal diseases.

- Expand varicella and hepatitis B vaccine coverage through school and adult-targeted drives.
- Strengthen pre-monsoon dengue control and community-based vector management for sustained impact.
- Treat leptospirosis as a public health emergency during heavy rainfall periods: focus on rapid diagnosis, pre-exposure prophylaxis, and community education especially where fatality risk is highest.

Sustained, integrated interventions and community engagement remain the cornerstone for reducing morbidity and mortality from these leading communicable diseases in Kollam district.

Table 6.1.4 Disease-wise Deaths Due to Communicable Diseases in the District (2024)

Name of Diseases	No of death in 2024
Dengue Fever: Confirmed	18
Dengue Fever: Probable	4
Malaria	0
Chikungunya	0
Acute Encephalitis Syndrome	2
Japanese Encephalitis (JE)	0
Leptospirosis: Confirmed	16
Leptospirosis: Probable	24
Hepatitis - A: Confirmed	1
Hepatitis - A: Probable	0
Hepatitis - B	1
Hepatitis - C	1

Hepatitis - E	0
Cholera	0
Diphtheria	0
Typhoid	0
Acute Diarrheal Disease	0
Food Poisoning	0
Shigella	0
Scrub Typhus	0
Kala Azar	0
Kyasanur Forest Disease	0
Influenza (H1N1, H3N2, Infl A, Infl B)	7
Rabies: Confirmed	5
Rabies: Probable	1
Zika	0
West Nile	0
Prob West Nile	0
M Pox	0
Nipah	0
Amoebic Meningoencephalitis	0
Prob Amoebic Meningoencephalitis	0
Chicken Pox	3

Source: HMIS data

The analysis of communicable disease deaths in Kollam district for the year 2024 reveals compelling public health concerns and targeted areas for intervention. Leptospirosis emerges as the most fatal communicable disease in 2024, accounting for

40 deaths (16 confirmed, 24 probable). This underscores both its high case fatality rate and the challenges associated with early detection and effective management. The significant burden of leptospirosis is particularly troubling given its occupational risk among agricultural workers and its strong association with post-monsoon flooding. This finding highlights the urgent need for pre-monsoon chemoprophylaxis campaigns, improved rodent control, and rapid referral systems for suspected cases.

Dengue fever is the second leading cause, with 22 reported deaths (18 confirmed, 4 probable). Despite widespread public health awareness, fatalities due to dengue suggest persistent gaps in early diagnosis, vector management, and timely referral, especially during peak transmission periods. There is a continued need to focus on effective source reduction and healthcare strengthening during outbreaks to further reduce avoidable deaths.

Influenza (7 deaths) and Acute Encephalitis Syndrome (2 deaths) were also notable contributors to communicable disease mortality in 2024. This pattern emphasizes the need for robust surveillance of respiratory and CNS infections, considering their potential for rapid deterioration and outbreaks.

Rabies, still claimed 6 lives (5 confirmed, 1 probable), indicating critical opportunities for strengthening animal bite management and community post-exposure prophylaxis (PEP) awareness. Isolated deaths from Hepatitis B (1), Hepatitis C (1), Hepatitis A (1), and Chicken Pox (3) serve as reminders that commonly perceived as benign or chronic can also be lethal in the absence of strong preventive strategies and robust healthcare access.

Key Findings 2024:

- Leptospirosis remains the top killer—ramping up early diagnosis, prophylaxis, and awareness among high-risk populations is essential.
- Dengue deaths persist—enhanced vector control, early warning systems, and improved access to supportive treatment will make a significant impact.

The presence of deaths from influenza and rabies calls for ongoing vigilance, increased immunization efforts, and continuous public health education.

6.2: Disease Burden Overview – Major Non-communicable Diseases

6.2.1 Diabetes and Hypertension

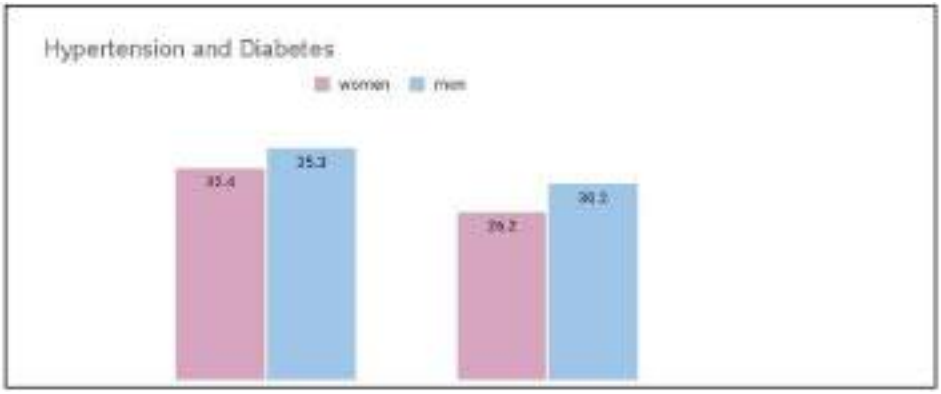
The table 6.2.1 shows the trend of newly diagnosed Diabetes and Hypertension in the district from 2021-22 to 2024-25 (till March). For Diabetes, the total number of reported cases has steadily increased from 729 in 2021-22 to a peak of 18,195 in 2023-24, with males and females both showing a sharp rise. However, in 2024-25 (up to March), the cases declined to 10,449. Similarly, for Hypertension, the total cases rose from 701 in 2021-22 to 23,415 in 2023-24, with females consistently showing higher numbers than males. In 2024-25, the total reported cases decreased to 16,225.

Table 6.2.1 Trend of newly diagnosed Diabetes and Hypertension- 2021-22 to 2024-25

	Diabetes			Hypertension		
Year	**Males**	**Females**	**Total**	**Males**	**Females**	**Total**
2021-22	336	393	729	314	387	701
2022-23	954	1411	2365	1542	2422	3964
2023-24	7273	10922	18195	9169	14246	23415
2024-25	4136	6313	10449	6363	9862	16225

From 2021 to 2025, a total of 31,738 diabetes cases and 44,305 hypertension cases were reported in the district. Considering the total population at risk of 9,80,360, the incidence of diabetes was calculated as 32.42 per 1,000 population, while the incidence of hypertension was higher at 45.19 per 1,000 population over the same period. This indicates that both conditions showed a significant burden in the community, with hypertension emerging as the more prevalent non-communicable disease compared to diabetes.

Graph 6.2.1 Rate of New Hypertension and Diabetes cases - (2021–2025 till March)



Source NFHS data

6.2.2 Cancer

The district has observed a consistent rise in cancer cases between 2022 and 2025 (till March), particularly in breast and oral cancers. Breast cancer cases surged from 1,264 in 2022 to 3,482 in 2024, with a corresponding rise in deaths from 10 to 31. Cervical cancer showed a fluctuating trend, with a drop-in case from 459 in 2022 to 324 in 2023 and a slight increase to 343 in 2024, while deaths declined from 26 in 2022 to 13 in subsequent years, and none reported in early 2025. Lung cancer cases more than doubled from 435 in 2022 to 1,079 in 2024, with a notable increase in mortality from 30 to 47. Similarly, oral cancer cases rose sharply from 428 in 2022 to 1,773 in 2024, with deaths increasing from 19 to 35. Early 2025 (till March) has already recorded significant numbers, indicating an ongoing public health concern requiring strengthened screening and intervention efforts.

Table 6.2.2.1Cases and Deaths of Common Cancers (2022–2025 till March)

Year	2022		2023		2024		2025	
Cancers	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Breast Cancer	1264	10	1934	21	3482	31	574	13
Cervical Cancer	459	26	324	13	343	13	144	0
Lung Cancer	435	30	993	40	1079	47	272	8

Oral Cancer	428	19	1036	26	1773	35	220	4

6.3 Other Non-communicable Diseases in Kollam

Table 6.3.1 Other Non-communicable Diseases - 2022-2025

Disease	2022		2023		2024		2025 (Jan-March)	
	Case	Death	Case	Death	Case	Death	Case	Death
Cardiovascular Diseases								
Rheumatic fever	35	0	32	1	120	0	15	0
Ischemic Heart disease	12066	104	11250	134	12699	125	2493	52
Congenital Heart disease	1315	11	1570	13	1418	10	136	7
Neurological disorders								
Cerebrovascular disorders	4027	26	5187	61	8239	55	1652	13
Chronic neurological disorders	2285	2	1148	4	3333	4	366	0
Renal Failure								
Acute	1320	5	2135	7	1380	9	183	5
Chronic	4695	4	6041	14	7062	11	2935	6
Others								
Obesity	7506	0	9256	0	7213	1	1825	2

Accidental injuries	28117	5	31945	12	38817	6	5055	3
Road Traffic Accident	12343	6	11666	4	11005	10	3340	9
Snake bite	331	0	493	0	538	1	141	0

The table 6.3.1 provides a comprehensive year-wise overview of major non-communicable and other health conditions reported from 2022 to March 2025, including both the number of cases and related deaths. Among cardiovascular diseases, ischemic heart disease remained the most prevalent, with a peak of 12,699 cases in 2024 and a consistently high death toll, followed by congenital heart disease and rheumatic fever. Neurological disorders such as cerebrovascular diseases saw a significant rise, especially in 2024 with 8,239 cases and 55 deaths. Chronic neurological disorders showed a steep increase in 2024 but minimal mortality. Renal failure, particularly chronic, maintained high case counts across the years, reaching 7,062 in 2024. Under the 'Others' category, accidental injuries topped the list with a maximum of 38,817 cases in 2024, while road traffic accidents also remained a major contributor to morbidity and mortality. Obesity showed fluctuating trends but recorded low deaths, and snake bites, though limited in number, were consistently present. The data reveals a growing burden of non-communicable diseases and injuries in the district, emphasizing the need for enhanced preventive and clinical interventions.

CHAPTER 7

CRITICAL OBSERVATIONS IN NFHS 4 & NFHS 5 DATA AND APPROPRIATE INTERVENTIONS NEEDED

7.1: Kollam - Key Indicators

Table 7.1.1 Key indicators – NFHS 4 & 5

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 (%)	96.6	96.8
2. Population below age 15 years (%)	18.9	20.0
3. Sex ratio of the total population (females per 1,000 males)	1,171	1,043
4. Sex ratio at birth for children born in the last five years (females per 1,000 males)	1,135	851
5. Children under age 5 years whose birth was registered with the civil authority (%)	100.0	99.6
6. Deaths in the last 3 years registered with the civil authority (%)	96.2	na
7. Population living in households with electricity (%)	99.8	98.2
8. Population living in households with an improved drinking-water source[1] (%)	95.7	95.4
9. Population living in households that use an improved sanitation facility[2] (%)	97.5	98.1

10. Households using clean fuel for cooking[3] (%)	80.1	58.8
11. Households using iodized salt (%)	99.0	99.0
12. Households with any usual member covered under a health insurance/financing scheme (%)	56.0	45.5
13. Children age 5 years who attended pre-primary school during the school year 2019-20 (%)	(11.8)	na
Characteristics of Women (age 15-49 years)		
14. Women who are literate[4] (%)	98.2	na
15. Women with 10 or more years of schooling (%)	80.6	79.1
Marriage and Fertility		
16. Women age 20-24 years married before age 18 years (%)	1.8	3.7
17. Births in the 5 years preceding the survey that are third or higher order (%)	0.7	1.0
18. Women age 15-19 years who were already mothers or pregnant at the time of the survey (%)	0.0	0.8
19. Women age 15-24 years who use hygienic methods of protection during their menstrual period[5] (%)	99.4	92.3
Current Use of Family Planning Methods (currently married women age 15–49 years)		
20. Any method[6] (%)	62.9	53.1
21. Any modern method[6] (%)	60.5	50.6
22. Female sterilization (%)	57.2	46.2

23. Male sterilization (%)	0.0	0.0
24. IUD/PPIUD (%)	0.6	1.8
25. Pill (%)	0.6	0.2
26. Condom (%)	1.7	2.5
27. Injectables (%)	0.2	0.0
Unmet Need for Family Planning (currently married women age 15–49 years)		
28. Total unmet need[7] (%)	11.9	14.5
29. Unmet need for spacing[7] (%)	7.2	8.1
Quality of Family Planning Services		
30. Health worker ever talked to female non-users about family planning (%)	15.1	19.0
31. Current users ever told about side effects of current method[8] (%)	62.0	56.9
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 (%)	92.6	94.1
33. Mothers who had at least 4 antenatal care visits (%)	79.3	88.7
34. Mothers whose last birth was protected against neonatal tetanus[9] (%)	98.5	96.5
35. Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	89.0	56.7

36. Mothers who consumed iron folic acid for 180 days or more when they were pregnant (%)	81.5	19.8
37. Registered pregnancies for which the mother received a Mother and Child Protection (MCP) card (%)	94.9	84.8
38. Mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery (%)	91.4	80.9
39. Average out-of-pocket expenditure per delivery in a public health facility (Rs.)	6,836	10,299
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 (%)	89.5	na
Delivery Care (for births in the 5 years before the survey)		
42. Institutional births (%)	100.0	99.5
43. Institutional births in public facility (%)	44.7	41.6
44. Home births that were conducted by skilled health personnel[10] (%)	0.0	0.5
45. Births attended by skilled health personnel[10] (%)	100.0	100.0
46. Births delivered by caesarean section (%)	49.1	57.0
47. Births in a private health facility that were delivered by caesarean section (%)	58.4	60.2

48. Births in a public health facility that were delivered by caesarean section (%)	37.6	53.3
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] (%)	(85.4)	(87.3)
50. Children age 12-23 months fully vaccinated based on information from vaccination card only[12] (%)	*	*
51. Children age 12-23 months who have received BCG (%)	(96.3)	(100.0)
52. Children age 12-23 months who have received 3 doses of polio vaccine[13] (%)	(95.6)	(87.3)
53. Children age 12-23 months who have received 3 doses of penta or DPT vaccine (%)	(89.1)	(98.5)
54. Children age 12-23 months who have received the first dose of measles-containing vaccine (MCV) (%)	(89.1)	(93.1)
55. Children age 24-35 months who have received a second dose of measles-containing vaccine (MCV) (%)	(29.9)	na
56. Children age 12-23 months who have received 3 doses of rotavirus vaccine[14] (%)	(11.1)	na
57. Children age 12-23 months who have received 3 doses of penta or hepatitis B vaccine (%)	(82.1)	(85.0)
58. Children age 9-35 months who received a vitamin A dose in the last 6 months (%)	93.9	95.0
59. Children age 12-23 months who received most of their vaccinations in a public health facility (%)	(90.5)	(82.8)

60. Children age 12-23 months who received most of their vaccinations in a private health facility (%)	(9.5)	(17.2)
Treatment of Childhood Diseases (children under age 5 years)		
61. Prevalence of diarrhoea in the 2 weeks preceding the survey (%)	5.5	2.9
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 (%)	5.4	0.5
66. Children with fever or symptoms of ARI in the 2 weeks preceding the survey taken to a health facility or health provider (%)	92.5	*
Child Feeding Practices and Nutritional Status of Children	**Total**	**Total**
67. Children under age 3 years breastfed within one hour of birth[15] (%)	61.6	37.4
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] (%)	(16.7)	(25.4)

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] (%)	(17.3)	(24.1)
73. Children under 5 years who are stunted (height-for-age)[18] (%)	15.5	14.4
74. Children under 5 years who are wasted (weight-for-height)[18] (%)	21.4	18.8
75. Children under 5 years who are severely wasted (weight-for-height)[19] (%)	6.9	7.4
76. Children under 5 years who are underweight (weight-for-age)[18] (%)	17.0	14.2
77. Children under 5 years who are overweight (weight-for-height)[20] (%)	9.4	3.8
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] (%)	9.5	6.7
79. Women who are overweight or obese (BMI ≥25.0 kg/m^2)[21] (%)	43.5	38.2
80. Women who have high risk waist-to-hip ratio (≥0.85) (%)	74.4	na
Anaemia among Children and Women		
81. Children age 6-59 months who are anaemic (<11.0 g/dl)[22] (%)	32.5	18.1

82. Non-pregnant women age 15-49 years who are anaemic (<12.0 g/dl)[22] (%)	36.7	25.7
83. Pregnant women age 15-49 years who are anaemic (<11.0 g/dl)[22] (%)	*	*
84. All women age 15-49 years who are anaemic[22] (%)	36.0	25.5
85. All women age 15-19 years who are anaemic[22] (%)	24.5	31.2
Blood Sugar Level among Adults (age 15 years and above)		
Women		
86. Blood sugar level - high (141-160 mg/dl)[23] (%)	8.1	na
87. Blood sugar level - very high (>160 mg/dl)[23] (%)	13.6	na
88. Blood sugar level - high or very high (>140 mg/dl) or taking medicine to control blood sugar level[23] (%)	26.2	na
Men		
89. Blood sugar level - high (141-160 mg/dl)[23] (%)	9.5	na
90. Blood sugar level - very high (>160 mg/dl)[23] (%)	16.7	na
91. Blood sugar level - high or very high (>140 mg/dl) or taking medicine to control blood sugar level[23] (%)	30.2	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) (%)	16.3	na

93. Moderately or severely elevated blood pressure (Systolic ≥160mm of Hg and/or Diastolic ≥100mm of Hg) (%)	6.6	na
94. Elevated blood pressure (Systolic ≥140 mm of Hg and/or Diastolic ≥90 mm of Hg) or taking medicine to control blood pressure (%)	32.4	na
Men		
95. Mildly elevated blood pressure (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	18.6	na
96. Moderately or severely elevated blood pressure (Systolic ≥160mm of Hg and/or Diastolic ≥100mm of Hg) (%)	8.2	na
97. Elevated blood pressure (Systolic ≥140 mm of Hg and/or Diastolic ≥90 mm of Hg) or taking medicine to control blood pressure (%)	35.3	na
Screening for Cancer among Women (age 30-49 years)		
98. Ever undergone a screening test for cervical cancer (%)	4.5	na
99. Ever undergone a breast examination for breast cancer (%)	2.2	na
100. Ever undergone an oral cavity examination for oral cancer (%)	0.5	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 (%)	1.6	na
102. Men age 15 years and above who use any kind of tobacco (%)	21.5	na

103. Women age 15 years and above who consume alcohol (%)	0.2	na
104. Men age 15 years and above who consume alcohol (%)	22.3	na

Kollam district demonstrates strong performance in public health, with institutional deliveries reaching ~100%, universal immunization coverage, and notable improvement in IFA consumption among pregnant women (81.5%). Care-seeking for childhood illnesses is commendable, and stunting (15.5%) remains lower than national averages, reflecting the district's effective maternal and child health interventions.

Previously challenging areas were now showing encouraging progress. Caesarean section rates remain high (49.1%), yet they also reflect good access to institutional and safe delivery services. Child nutrition, though still an area of concern, has improved compared to earlier years, with wasting (21.4%) and undernutrition showing gradual reduction through targeted interventions. Dietary diversity among children (17.3%) is expanding with nutrition programs now in place. Family planning practices, traditionally reliant on female sterilization, are creating scope for broader contraceptive choices and greater male participation. The increased detection of NCDs such as diabetes and hypertension highlights stronger screening and early diagnosis efforts, enabling timely management. Anemia in women (36%) and children (32.5%) persists, but awareness and supplementation initiatives are steadily addressing the issue.

Overall, the district shows both achievement and progress, positioning itself well to further strengthen health outcomes in the coming years.

Population and Household Profile

The NFHS data for Kollam reveal outstanding progress in household and population-level infrastructure over the years. Female literacy remains consistently high at around 97%, reflecting sustained gender equity in education. The sex ratio in the district has improved impressively, with the total ratio rising from 1,043 to 1,171 females per 1,000 males, and the sex ratio at birth increasing sharply from 851 to 1,135, a significant sign of social and gender progress. Universal access to basic amenities is nearly achieved, as 99.8% of households have electricity, and more than 95% have improved sources of drinking water and sanitation. The proportion of households using clean fuel for cooking has

improved from 58.8% to 80.1%, suggesting effectiveness of clean energy programs. However, a small but crucial section of the population still depends on unsafe fuels, and this gap invites targeted interventions through last-mile LPG distribution and behaviour change communication. Overall, the population data reflect a district nearing saturation in basic infrastructural and literacy achievements, paving the way for deeper focus on health quality and equity.

7.1.1 Marriage & Early Pregnancy

Table 7.1.1.1 Marriage & Early Pregnancy

Indicator	Value (%)	Positive Observation	Suggested Interventions
Women (20–24) married before 18 yrs	1.8	Much lower than state/national average	Sustain awareness campaigns; enforce Child Marriage Act
Men (25–29) married before 21 yrs	Not Reported	Data yet to be documented	Include male indicators in reviews
Women (15–19) pregnant/mothers	Not Reported	Indicates monitoring in place	Strengthen adolescent clinics & counselling

The table presents key indicators related to early marriage and adolescent pregnancy, highlighting current data, observations, and recommended actions. It shows that only 1.8% of women aged 20–24 was married before 18 years, a figure notably lower than the state and national averages, indicating the success of awareness campaigns and legal enforcement. However, data for men aged 25–29 married before 21 years, and women aged 15–19 who are pregnant or mothers, is missing, pointing to gaps in monitoring and documentation. Despite this, the presence of monitoring mechanisms is acknowledged. Suggested interventions include sustaining awareness efforts, enforcing the Child Marriage Act, incorporating male-related indicators in reviews, and strengthening adolescent clinics and counselling services to address the broader aspects of adolescent reproductive health.

7.1.2 Family Planning

Table 7.1.2.1 Family Planning

Indicator	Value (%)	Positive Observation	Suggested Interventions
Any method	62.9	Good coverage of FP methods	Continue IEC on spacing methods
Modern methods	60.5	High adoption of modern FP	Expand access to reversible methods
Female sterilisation	57.2	Strong uptake of permanent FP	Promote spacing methods; encourage male participation
Male sterilisation	0.0	Scope for male involvement	Behavior change & incentivization
Unmet need (15–49 yrs)	Not Reported	Monitoring in progress	Strengthen FP micro-planning at block level
Avg. OOP expenditure (delivery, public)	₹6,836	Reflects strong demand for institutional delivery	Minimize hidden costs; ensure free supplies

The data highlights key indicators related to family planning (FP) and reproductive health services. A high percentage of the population uses FP methods, with 62.9% using any method and 60.5% specifically adopting modern methods, reflecting good overall coverage. However, the data reveals a heavy reliance on female sterilization (57.2%) with no uptake of male sterilization (0.0%), indicating a lack of male involvement. This calls for targeted behavior change strategies and incentives to increase male participation. Although the unmet need for FP among women aged 15–49 is not reported, monitoring efforts are ongoing. Additionally, the average out-of-pocket expenditure for public institutional deliveries stands at ₹6,836, suggesting strong demand but also pointing to the need for reducing hidden costs and ensuring the availability of free supplies. The

suggested interventions focus on expanding access to reversible methods, promoting spacing, and improving micro-level planning for better service delivery.

7.1.3 Maternal Health & Delivery Care

Table 7.1.3.1 Maternal Health & Delivery Care

Indicator	Value (%)	Positive Observation	Suggested Interventions
Institutional births (public)	44.7	Half of deliveries use government facilities	Improve infra & trust in public sector
Home delivery (skilled)	0.0	Excellent – nearly all institutional	Sustain ASHA surveillance
Caesarean sections	49.1	Good access to surgical care	Promote midwifery & audit C-sections
C-sections (private)	58.4	Reflects availability of advanced care	Regulate private sector; encourage normal deliveries

The data highlights key trends in childbirth practices and access to obstetric care. Institutional births in public facilities account for 44.7%, indicating that nearly half of all deliveries occur in government health institutions, though there is room to improve public sector infrastructure and trust. Notably, skilled home deliveries are at 0.0%, which is a positive sign of nearly universal institutional delivery, aided by strong ASHA surveillance. Caesarean section rates are high, with 49.1% overall and an even higher 58.4% in private facilities, reflecting good surgical access and advanced care availability. However, these elevated C-section rates raise concerns, prompting suggested interventions like promoting midwifery, auditing surgical births, regulating private sector practices, and encouraging normal deliveries to ensure balanced and need-based maternal care.

7.1.4 Child Health & Nutrition

Table 7.1.4.1 Child Health & Nutrition

Indicator	Value (%)	Positive Observation	Suggested Interventions
Breastfed within 1 hr	61.6	Majority breastfed early	Strengthen IYCF counselling
Adequate diet (6–23m)	17.3	Children receiving some diverse diets	Expand ICDS, community kitchens
Stunted (<5y)	15.5	Lower than national levels	Strengthen supplementary nutrition
Wasted (<5y)	21.4	Higher detection of acute cases	Scale up CMAM, NRC
Underweight (<5y)	17.0	Moderate burden identified	Intensify multisectoral nutrition efforts

The data provides insight into child nutrition indicators, with a focus on feeding practices and malnutrition among children under five. A promising 61.6% of newborns are breastfed within the first hour, reflecting early initiation of breastfeeding, though further strengthening of Infant and Young Child Feeding (IYCF) counselling is advised. Only 17.3% of children aged 6–23 months receive an adequately diverse diet, suggesting a need to expand community-based nutrition initiatives like ICDS and kitchens. The prevalence of stunting (15.5%) is below national averages, indicating some progress, yet supplementary nutrition remains essential.

7.1.5 Anaemia and Micronutrient Deficiency

Perhaps the most concerning finding is the resurgence of anaemia across age groups. Anaemia prevalence among children almost doubled, and among women it increased from 25% to 36%, despite exemplary coverage of maternal supplementation. This paradox suggests that anaemia is no longer simply an IFA distribution issue but a dietary quality challenge influenced by poor iron absorption, low protein intake, and rising

consumption of refined foods. Addressing this requires a shift toward comprehensive dietary interventions, food fortification through the PDS system, targeted screening in schools, and awareness campaigns promoting local iron- and folate-rich foods. Strengthened community-based anaemia surveillance can help diagnose and treat at-risk populations before severe outcomes emerge.

7.1.6 Non-Communicable Diseases

The NFHS-5 paints a clear picture of Kerala's epidemiological transition. One in four women and one in three men have high or very high blood sugar levels, and over 30% report hypertension. This data underscores the increasing burden of lifestyle diseases in a state known for its aging population and urban lifestyle patterns. The challenge now moves from communicable to non-communicable disease control, emphasizing the need for early detection, lifestyle modification, and sustained follow-up under the NPCDCS framework. Integrating nutrition counselling, physical activity promotion, and workplace or community wellness programs can prevent further escalation of metabolic disorders. The health system must strengthen screening coverage and management continuity to counter emerging cardio-metabolic risks effectively.

7.1.7 Cancer Screening and Lifestyle Behaviours

The data on cancer screening reflects substantial underperformance despite a robust health network. Only 4.5% of eligible women have undergone cervical cancer screening, and smaller fractions have received breast or oral examinations. This indicates that preventive cancer care is not being prioritized at the community level despite high female literacy and health awareness. Efforts must be intensified to mainstream screening through Health and Wellness Centres and provide proactive home-based invitations for eligible women. Additionally, lifestyle trends are polarized; while tobacco and alcohol use among women remains minimal, the male population continues to exhibit high rates of use, underscoring a need for behaviour-modification programs. Integrating substance de-addiction support within PHCs and occupational settings can yield long-term community benefits.

7.1.8 Critical Observations

Kollam's NFHS-5 profile justifies the chapter's title—*Critical Observations and Appropriate Interventions Needed*—by depicting a district that has achieved social and

infrastructural maturity but faces a new generation of health challenges tied to lifestyle, behaviour, and nutrition. The transition from infectious to non-communicable disease dominance, along with growing dietary and metabolic imbalances, demonstrates that traditional program strategies have to evolve. Future interventions must focus on preventive nutrition, behaviour change, equitable reproductive responsibility, and community-based wellness initiatives. The next phase for Kollam and similar districts lies not in expanding basic service coverage but in ensuring quality, rationality, and sustainability of health achievements.

CHAPTER 8

DISTRICT MENTAL HEALTH PROGRAMME

The District Mental Health Programme (DMHP), Kollam serves as a cornerstone of the district's public health system, providing sustainable and community-oriented mental health services. The programme is strategically designed to ensure early detection, timely treatment, stigma reduction, and comprehensive psychosocial support for individuals experiencing mental health challenges.

Key Service Components

- Clinical Services: Monthly mental health clinics are conducted at selected Taluk Hospitals, Community Health Centers (CHCs), and Primary Health Centers (PHCs). These clinics provide a continuum of care through counselling, psychotherapy, and pharmacotherapy.
- Capacity Building: Regular training programmes are organized for health professionals, field staff, and community workers, enabling them to identify, refer, and manage mental health conditions at the community level. Awareness and IEC Activities: Information, Education, and Communication (IEC) initiatives are conducted with the objective of enhancing mental health literacy and reducing stigma among the public.

8.1 Performance Analysis (2020–21 to 2024–25)

Between 2020–21 and 2024–25, the DMHP conducted a total of 1,334 mental health clinics, serving 75,764 patients. Among these, 5,537 were newly registered patients, while 70,227 were follow-up cases. Patient footfall remained consistently high. A year-wise analysis indicates that while new case registrations fluctuated, follow-up cases consistently dominated, highlighting the chronic and recurring nature of mental health conditions and the necessity for continuous care.

Interpretation

The analysis highlights both strengths and areas requiring urgent attention:

- **High patient retention:** The large share of follow-up cases indicates the programme's success in ensuring continuity of care and patient trust in services.
- **Limited new case detection and rehabilitation gaps:** The consistently lower

proportion of new registrations, alongside the high recurrence of follow-up cases, suggests under-detection at the community level and inadequate rehabilitation pathways. This trend highlights the need for stronger community-based screening, timely referrals, and structured rehabilitation measures to reduce dependency on repeated follow-ups.

- **Strategic shift required:** While the high overall participation reflects the programme's wide reach and acceptance, a paradigm shift is necessary. Enhanced focus on early detection, effective rehabilitation, and community reintegration will ensure that success is measured not only by participation but also by sustainable recovery outcomes.

Table 8.1.1 Number of patients attending the clinics- Year wise distribution

Sl No	Year	No Clinics	New	Old	Total	Counselling/ Psychotherapy	Psycho education
1	2020- 21	270	1113	14231	15344	475	636
2	2021-22	249	713	13401	14114	498	1006
3	2022-23	262	1220	13464	14684	1284	1137
4	2023-24	275	1461	14670	16131	683	1684
5	2024-25	278	1030	14461	15491	496	1656
Total		**1334**	**5537**	**70227**	**75764**	**3436**	**6119**

Table 8.1.2 Training programmes April 2020 to March 2025

Sl. No	Year	No of Trainings	Total Participants
1	2020- 21	21	606
2	2021-22	19	1095
3	2022-23	19	974
4	2023-24	16	830
5	2024-25	5	299
Total	**2020-25**	**80**	**3804**

From April 2020 to March 2025, the District Mental Health Programme (DMHP), Kollam conducted 80 training programmes, benefitting 3,804 participants across different professional categories. The highest participation was observed in 2021–22 (1,095 participants), reflecting intensified post-pandemic outreach and capacity building. In subsequent years, participation remained consistent with nearly 1,000 participants annually, ensuring sustained programme impact.

These training programmes covered diverse themes such as depression management (**Aswasam**), Maternal Mental Health (**Amma Manas**), suicide prevention (**Jeevaraksha**), and substance abuse, in addition to general mental health promotion. Participants included medical officers, staff nurses, health inspectors, JPHNs, ASHAs, teachers, counsellors, police personnel, and NGO workers.

The initiative has been transformative for Kollam district. It has:

- Strengthened the capacity of frontline health workers to detect and manage mental health conditions at the primary care level.
- Empowered community gatekeepers such as teachers, ASHAs, and police personnel to provide early support and timely referrals.
- Mainstreamed mental health care into routine healthcare delivery, ensuring that

stigma is reduced, and services are more accessible.

Overall, the programme has not only built a trained and responsive workforce but also transformed the district's public health system into one that is more inclusive, sensitive, and better prepared to address the growing mental health needs of the population.

8.2 IEC Programmes

Table 8.2.1 IEC Programmes (April 2020 to March 2025)

Sl. No	Year	No of IEC	Total Participants
1	2020- 21	7	405
2	2021-22	21	1214
3	2022-23	55	4857
4	2023-24	99	4127
5	2024-25	139	4680
Total	**2020-25**	**321**	**15283**

Graph 8.2.1: IEC Programmes (April 2020 to March 2025)

Between April 2020 and March 2025, the District Mental Health Programme (DMHP), Kollam conducted an impressive 321 Information, Education, and Communication (IEC) programmes, directly reaching 15,283 participants across the district. These programmes formed the backbone of community-level mental health awareness and stigma reduction.

The scale of activities expanded year after year. In 2020–21, only seven programmes were conducted with 405 participants, reflecting the initial groundwork. By 2021–22, this number tripled (21 programmes with 1,214 participants), indicating growing demand for awareness sessions during the pandemic recovery phase. The programme scaled up dramatically in 2022–23, with 55 IEC sessions and 4,857 beneficiaries, signaling a district-wide effort to integrate mental health literacy into community structures.

Peak activity was observed in 2023–24 and 2024–25, with 99 and 139 programmes respectively, together covering nearly 9,000 people. This steady growth demonstrates a deliberate strategy to embed mental health awareness into schools, colleges, anganwadi centres, health facilities, and community forums.

Beneficiaries of these programmes included ASHAs, Anganwadi workers, school and college students, patients and family members, and the public. The topics addressed were highly relevant and practical - mental health awareness, mental hygiene, adolescent mental health, exam stress, suicide prevention (*Jeevaraksha*), and drug abuse prevention.

These IEC initiatives have had a transformative effect in Kollam district:

- Strengthened mental health literacy among diverse community groups.
- Reduced stigma and myths surrounding mental illness, improving help-seeking behaviour.
- Empowered frontline workers and students to act as change agents in their communities.
- Created a ripple effect, ensuring that mental health messages reached families and neighborhoods through participants.

In summary, the IEC programmes helped move Kollam district closer to the vision of community-driven, stigma-free mental health care, complementing the clinical and

training components of DMHP.

Figure 8.1.1 Training programme

8.3 Comprehensive Mental Health Programme (CMHP)

The Comprehensive Mental Health Programme (CMHP) extends the scope of the DMHP by integrating a promotive, preventive, curative, and rehabilitative framework into community health systems. It focuses on mainstreaming mental health care at the grassroots level, ensuring equitable access for all sections of the population.

A notable initiative under CMHP in Kollam is the establishment of **three Pakalveedu centres** – rehabilitation-cum-day-care facilities for individuals with manageable psychiatric illnesses. These centers provide:

- Day-care services and psychosocial rehabilitation
- Skill development and vocational training
- Family counselling and reintegration support

8.4 Institutional Support

The programme is implemented with the active support of the District Programme Management Unit (DPMU), National Health Mission (NHM), Kollam, ensuring alignment with district health priorities, efficient resource utilization, and long-term sustainability.

Table 8.4.1 CMHP Pakalveedu Report April 2020 to March 2025

No of centers	Year	Number of Patients in Day Care Centre
3	2020-21	45
3	2021-22	43
3	2022- 23	42
3	2023-24	45
3	2024-25	43

The table illustrates the annual enrollment of patients in the three Pakalveedu centres under the Comprehensive Mental Health Programme (CMHP) in Kollam for the period April 2020 to March 2025. The data reveal a consistently high level of participation, with the number of patients maintained within a stable range of 42 to 45 each year.

Notably, the centres achieved their highest engagement in 2020–21 and 2023–24 (45 patients each), reflecting their continued relevance and strong acceptance within the community. Even in years with slight variation, the decline was minimal, indicating sustained demand and reliability of services.

The overall trend demonstrates several positive aspects:

- Stability of enrolment, proving the consistent functioning of the centres.
- Strong community acceptance, as reflected in steady participation rates.
- Sustainability of the Pakalveedu model, with no significant drop in beneficiaries across five years.
- Effective service delivery, ensuring that patients and families continue to access and benefit from psychosocial rehabilitation services.

In summary, the data highlight the **success and sustainability** of the Pakalveedu initiative, showcasing it as a positive and dependable model for community-based mental health care.

Fig 8.1.2 Training Program

8.5 Post-Flood Activities & Training Programs

The **District Mental Health Programme (DMHP), Kollam** played a pivotal role in extending psychosocial support and mental health services during and after the devastating floods. Recognizing the urgent need for crisis management, the programme initiated a series of capacity-building activities, counselling interventions, and outreach services for both health providers and the affected community.

Key Interventions

Crisis Intervention Training: Conducted for district counsellors in collaboration with the Social Justice Department, focusing on managing post-traumatic stress and psychosocial issues in disaster situations. Specialized training sessions were also provided to private practitioners, including doctors from modern medicine, Ayurveda, and Homeopathy to strengthen multi-disciplinary response capacity.

Community Outreach & Relief Camp Support:

The DMHP team visited multiple relief camps in Kollam district, where displaced families from both Kollam and Alappuzha districts were accommodated. Psychosocial interventions were delivered to flood-affected families, with emphasis on trauma management, resilience building, and reducing long-term psychological distress.

Significance

These post-flood initiatives highlight the importance of integrating mental health care into disaster management frameworks, ensuring that both immediate and long-term psychosocial needs of the population are addressed. The programme also contributed to building a trained workforce capable of responding to future emergencies.

8.6 DMHP Targeted Interventions

In addition to routine mental health services, the **District Mental Health Programme (DMHP), Kollam**, has implemented several targeted interventions to address priority mental health concerns. These initiatives emphasize early detection, community participation, and culturally sensitive approach to care.

8.6.1 ASWASAM – Depression Management Clinic

Table 8.6.1.1 Aswasam - cases Screened and Positives

Year	Cases Screened	Screened Positive	Pharmacotherapy	Psychosocial Intervention	Referred to DMHP
2020–21	552	51	35	62	3
2021–22	308	37	17	23	2
2022–23	967	283	116	380	4
2023–24	1301	299	154	419	35
2024–25	992	234	121	358	22
Total	**4120**	**904**	**443**	**1242**	**66**

Launched in 2018, the ASWASAM Clinic was designed to integrate depression screening and management into primary care services, aiming to reduce stigma and improve accessibility.

- **Training & Capacity Building:** Health workers and staff nurses were trained on the Patient Health Questionnaire-9 (PHQ-9) to screen for depression and on Psychological First Aid (PFA) to provide immediate emotional support.
- **Role of Primary Care Doctors:** Medical Officers at PHCs and CHCs were trained in both pharmacological and non-pharmacological management of depression.
- **Referral Protocol:** A structured referral pathway was established, enabling moderate to severe cases to be referred to DMHP psychiatrists for specialized care.

This initiative has strengthened early detection and timely treatment of depression at the community level, creating a sustainable and tiered care model within Kollam's health system.

Graph 8.6.1.1 Aswasam - cases Screened and Positives

Between 2020 and 2025, the ASWASAM Depression Management Clinics in Kollam screened a total of 4,120 individuals, of which 904 (22%) tested positive for depression. Among these, 443 patients received pharmacological treatment, while a significantly larger number (1,242 patients) benefited from psychosocial interventions, highlighting the emphasis on counselling and community-based care. Additionally, 66 complex cases

were referred to DMHP psychiatrists for specialized management.

The data shows a steady increase in screening and service utilization over the years, reflecting improved community awareness, strengthened primary care integration, and effective implementation of referral mechanisms.

Fig 8.6.1.1 ASWASAM – Depression Management Clinic

8.6.2 Tribal Mental Health Programme

The Tribal Mental Health Programme in Kollam district was introduced to address the distinctive socio-cultural and geographical challenges faced by tribal populations. The programme aims to bridge gaps in mental health care accessibility and ensure culturally appropriate services. Specialized training sessions were provided to ASHA workers, equipping them to identify and support individuals with conditions such as depression, anxiety, substance use disorders, and psychosis, thereby strengthening early detection and timely referrals. Regular community mental health camps were organized in tribal settlements to deliver screening, counselling, and essential treatment services, while also raising awareness, reducing stigma, and dispelling misconceptions surrounding mental illness. Collectively, these interventions have enhanced accessibility of services in remote areas and facilitated the integration of mental health care into community health structures, fostering greater inclusivity and equity in service delivery.

Graph 8.6.2.1 Tribal Mental Health Programme

Between 2021 and 2023, three mental health camps were conducted in tribal settlements of Kollam, focusing on screening, counselling, and treatment. A total of 98 ASHAs and community volunteers were trained to identify and manage common mental health conditions. The initiative reached 18 new patients and provided follow-up care to 38 individuals, ensuring continuity of services. In all, 56 patients directly benefited, highlighting improved accessibility of mental health support and growing community trust in such services.

Table 8.6.2.1 Tribal Mental Health Programme

Year	No. of Camps	Persons Trained	New Patients	Follow-up Patients	Total Patients
2021–22	1	20	7	0	7
2022–23	2	78	11	38	49
2021–23	**3**	**98**	**18**	**38**	**56**

Fig 8.6.2.1 Tribal Mental Health Programme

8.6.3 Coastal Mental Health Programme

The Coastal Mental Health Programme was developed to address the heightened psychosocial vulnerabilities of coastal communities, who are often affected by livelihood disruptions, disaster risks, and migration pressures. To strengthen early detection and care, ASHAs in coastal villages were trained to identify and refer individuals with mental health concerns.

Community-level mental health camps were organized across the coastal belt, providing counselling, medication, and psychosocial support. Through these interventions, the programme has enhanced community engagement and ensured that vulnerable coastal populations receive timely mental health services, thereby helping to reduce long-term psychosocial stress and promote resilience.

Table 8.6.3.1 Coastal Mental Health Programme

Year	No. of Camps	Persons Trained	New Patients	Follow-up Patients	Total Patients
2021-22	1	26	14	0	14
2022-23	2	78	11	16	27
Total	**3**	**104**	**25**	**16**	**41**

Graph 8.6.3.1 Coastal Mental Health Programme

Fig 8.6.3.1 Coastal Mental Health Programme

Between 2021 and 2023, three coastal mental health camps were conducted in Kollam, reaching vulnerable communities along the coastal belt. A total of 104 frontline workers, including ASHAs, were trained to identify and refer individuals with mental health concerns, thereby strengthening community-level detection. The programme identified 25 new patients and provided follow-up care for 16 individuals, benefiting a total of 41 patients. These efforts highlight the programme's role in improving service accessibility, reducing stigma, and ensuring sustained mental health support for coastal populations.

8.6.4 Jeevaraksha – Suicide Prevention Programme

Launched in 2019, *Jeevaraksha* is a district-level initiative aimed at reducing suicide rates through early detection, awareness creation, and strengthening community vigilance. As part of the programme, community members including teachers, youth representatives, volunteers, and local leaders were trained as "gatekeepers" to identify early warning signs of suicidal behavior and provide immediate support. Alongside this, educational sessions and sensitization campaigns were organized to destigmatize mental illness, encourage help-seeking behavior, and promote timely intervention. Through these combined efforts, the programme has successfully fostered community-based surveillance mechanisms for suicide prevention and established safe referral pathways, thereby strengthening the district's mental health response system.

Fig 8.6.4.1 Jeevaraksha – Suicide Prevention Programme

8.7 Sampoorna Manasika Aarogyam (SMA, 2018)

Introduced in 2018, Sampoorna Manasika Aarogyam (SMA) aims to strengthen the psychiatric services at the primary care level. The programme focuses on building awareness and capacity among frontline workers through regular sensitization classes and structured training sessions at Family Health Centre (FHC) level. In addition, mental health camps are organized to facilitate early identification, ensure timely interventions, and provide consistent follow-up care.

In Kollam district, the SMA programme is currently being implemented across 38 FHCs and CHCs, marking a significant step toward decentralizing mental health care and improving community-level accessibility.

Graph 8.7.1 Sampoorna Manasika Aarogyam Screening

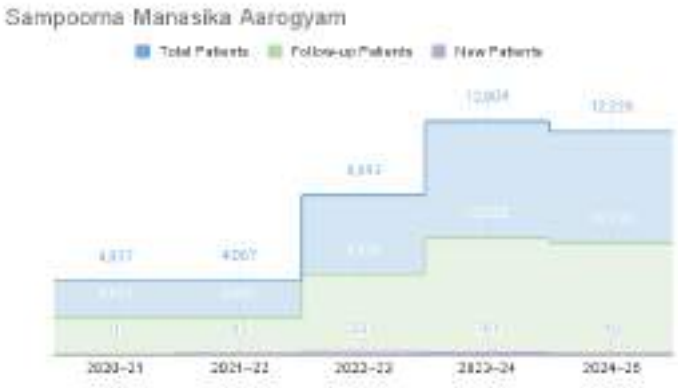


Table 8.7.1 Sampoorna Manasika Aarogyam Screening

Year	New Patients	Follow-up Patients	Total Patients
2020–21	0	4,037	4,037
2021–22	85	3,952	4,067
2022–23	237	8,556	8,693
2023–24	181	12,623	12,804
2024–25	90	12,138	12,228

Fig 8.7.1 Sampoorna Manasika Aarogyam Screening

Between April 2020 and March 2025, the *Sampoorna Manasika Aarogyam (SMA)* programme in Kollam district recorded a total of 41,829 patients. While the number of new patients remained comparatively low, the steadily increasing follow-up numbers reflect strong continuity of care and effective integration of mental health services at the primary care level.

8.8 Amma Manas – Maternal Mental Health

Amma Manas is a maternal mental health initiative focusing on the detection, prevention, and management of perinatal mental health issues. The programme emphasizes early identification and timely support for mothers during pregnancy and the postnatal period, thereby promoting both maternal and child well-being.

- **Capacity Building of Health Workers:** Junior Public Health Nurses (JPHNs) were trained to systematically screen mothers during antenatal and postnatal visits, integrating mental health assessment into routine maternal care.
- **Training and Sensitization:** Structured sessions were conducted for Community Health Centre (CHC) staff and ASHAs to recognize maternal mental health problems at the community level.
- **Early Intervention:** Protocol were established for timely intervention, including counselling, referral, and follow-up support, addressing mental health concerns from pregnancy through the perinatal period.

Overall, Amma Manas has strengthened maternal mental health services by embedding psychosocial care into existing maternal and child health frameworks, reducing stigma, and ensuring holistic care for mothers.

8.9 School Mental Health Programme

The School Mental Health Programme was designed to promote psychological well-being among students and to create a supportive school environment. The initiative focused on equipping teachers, parents, and students with knowledge and skills to recognize early signs of mental health concerns and to respond effectively. Training sessions were organized to strengthen the capacity of teachers and frontline workers, while Information, Education, and Communication (IEC) activities raised awareness and reduced stigma surrounding mental health in schools. By fostering open dialogue and building supportive networks, the programme contributed to early identification, timely intervention, and the integration of mental health into school health systems.

Table 8.9.1 School Mental Health Programme

Year	No. of IEC Sessions	No. of Participants
2020–21	2	201
2021–22	31	1,812
2022–23	17	1,243
2023–24	57	4,053
2024–25	13	861
Total	**120**	**8,170**

Table 8.9.2 IEC Activities (2020–2025)

Year	No. of Trainings	No. of Participants
2020–21	14	1,177
2021–22	35	2,936
2022–23	36	2,428
2023–24	32	2,162
2024–25*	6	396
Total	**123**	**9,099**

Between April 2020 and March 2025, the School Mental Health Programme in Kollam district made significant strides in promoting mental well-being within the education system. A total of 123 training sessions benefited 9,099 participants, alongside 120 IEC activities that reached 8,170 individuals.

The programme enhanced the capacity of teachers, students, and community stakeholders to identify and manage mental health challenges in school settings. It provided students with structured avenues to address stress, anxiety, and behavioral concerns, while fostering resilience and healthy coping strategies.

Importantly, the initiative created a supportive environment that reduced stigma and encouraged timely interventions. Its impact was widely acknowledged by parents, teachers, and community members, and it was particularly appreciated by key opinion leaders who recognized Kollam district's proactive approach in prioritizing school-based mental health. This consistent and well-structured implementation has positioned Kollam as a model district in advancing child and adolescent mental health, ensuring that schools serve not only as centers of learning but also as supportive spaces for emotional well-being.

Fig 8.9.1 IEC Activities (2020–2025)

CHAPTER 9

TRIBAL HEALTH PROGRAMME

Kollam district has a tribal population of 10,761 residing across seven panchayats - Kulathupuzha, Aryankavu, Achankovil, and Thenmala under Kulathupuzha block; Piravanthoor and Mangod Pathanapuram under Pathanapuram block; and Madathara under Nilamel block -with males constituting 48.27% and females the remaining 51.72%. All tribal health activities are carried out through joint efforts of the Tribal Department, Health Department, and Social Justice Department and district administration. The district has introduced several focused programmes to strengthen tribal health, including mobile medical units to provide primary care and referral services in remote hamlets, nutritional support and malnutrition management for children and women through ICDS and Anganwadi linkages, financial assistance to traditional tribal healers to sustain indigenous practices, and integration of tribal communities with mainstream healthcare facilities. Health service delivery is further supported by 25 Hamlet ASHAs selected from within the tribal community, ensuring effective outreach, maternal and child health support, and linkage with government health services. In addition, the district conducts regular health camps, ensures maternal and child health coverage through schemes like JSSK, organizes culturally appropriate health education sessions, and strengthens healthcare infrastructure through HWCs, telemedicine facilities, and partnerships with Kudumbashree and NGOs, thereby creating a comprehensive framework to address the unique health needs of the tribal population in Kollam.

9.1 Malnutrition

To address malnutrition among the tribal population in Kollam, focused interventions are implemented with an emphasis on health education and nutrition support. Tribal families are educated on the importance of a balanced diet and practical ways to achieve it using locally available food resources. This health education is delivered by a dedicated public health team from each block, comprising JHI, JPHN, MLSP, and ASHA workers from the respective tribal communities. The SC and ST Department has also introduced a monthly food kit distribution scheme to every tribal household to ensure basic nutritional security.

Malnourished children under the age of five are identified through growth monitoring at Anganwadi centres, with targeted nutritional supplementation and follow-up care to

improve their health. Screening for malnutrition is actively supported by Hamlet ASHAs, who serve as a vital link between the community and health services. Currently there are no malnourished children in the tribal belt of Kollam district.

An analysis of birth weight trends among the tribal population in Kollam district over the past five years shows a consistent proportion of low birth weight (<2.5 kg) children. In 2024–2025, out of 22 live births, 4 children (0.18%) were recorded with a birth weight below 2.5 kg. Similarly, in 2023–2024, there were 17 live births, of which 3 children (0.17%) were underweight at birth. During 2022–2023, among 18 live births, 3 children (0.16%) had low birth weight. In 2021–2022, out of 15 live births, 3 newborns (0.20%) were reported to weigh less than 2.5 kg. Finally, in 2020–2021, there were 11 live births, and 2 children (0.18%) were identified as low birth weight. Overall, this trend suggests that while the absolute number of low-birth-weight babies remains small, the proportion has shown little variation across the years, hovering between 0.16% and 0.20%, indicating that low birth weight continues to be a persisting issue among the tribal newborns of Kollam district.

Table 9.1.1 Trends in Low Birth Weight (<2.5 kg) among Tribal Newborns (2020–2025)

Year	No of live birth	No. of children having weight <2.5kg	Percentage
2024-2025	22	4	0.18 %
2023-2024	17	3	0.17 %
2022-2023	18	.3	0.16 %
2021-2022	15	3	0.2 %
2020--2021	11	2	0.18 %

9.2 Maternal Health

In Kollam district, several maternal health programmes are implemented to support tribal women, including Janani Shishu Suraksha Karyakram (JSSK), Janani Suraksha Yojana (JSY), Home-Based Young Child Care (HBYC), and Home-Based Newborn Care (HBNC). Pregnant women are identified at the earliest by the respective Hamlet ASHA workers, who ensure timely registration and provide essential maternal health services such as 180 Iron and Folic Acid (IFA) tablets, a minimum of four antenatal check-ups, two doses of Tetanus-Diphtheria (TD) vaccination, and three ultrasound scans. High-risk pregnancies receive special attention under the Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA), with access to specialist consultations and additional investigations, while emergency referral transport services (108 ambulance) are available to manage complications promptly. Institutional deliveries are strongly encouraged through JSY and JSSK, offering free services including cesarean sections and cash incentives to promote safe childbirth. Postnatal care is provided through home visits by ASHAs and JPHNs, with a focus on early detection of complications in both mother and child. Nutritional support is extended through Anganwadi centers under ICDS, which supply supplementary nutrition and counseling on diet during pregnancy and lactation. Special outreach health camps are conducted in tribal areas to bridge accessibility gaps, while efforts to reduce maternal anemia include iron supplementation, deworming, and nutrition education. Family planning counseling and services are also integrated to promote adequate birth spacing, supported by awareness campaigns in local dialects to strengthen health-seeking behavior and reduce maternal morbidity and mortality among tribal women.

9.3 Delivery Services

In Kollam district, institutional deliveries among tribal women are promoted through JSY and JSSK, which provide free maternity services, including cesarean sections, along with cash incentives to encourage safe childbirth. For most tribal women, the Punalur Taluk Headquarters Hospital is the preferred delivery center, as it is the nearest facility offering comprehensive maternal care. The hospital ensures round-the-clock availability of gynecologists on call, making it a dependable option for both normal and high-risk deliveries. In addition, referral transport services (108 ambulances) are available to facilitate timely transfer of pregnant women from remote tribal hamlets to the hospital, ensuring emergency care is accessible without delay. This integrated approach

significantly improves the safety and outcomes of maternal health care for tribal women in Kollam district.

9.4 Child Health

In Kollam district, child health among the tribal population is ensured through a continuum of services covering early screening, immunization, nutrition, and school-based interventions. At the hospital level, Shalabham nurses conduct comprehensive newborn screening within 72 hours of birth, addressing the "four Ds"—Defects at birth, Deficiencies, Developmental delays, and Diseases—to enable timely detection and management. All newborns receive essential birth-dose vaccines such as Vitamin K, Hepatitis B0, OPV-0, and BCG, while continued immunization schedules are followed up by Hamlet ASHAs. Growth monitoring and developmental milestones are regularly assessed, and children with suspected delays or health issues are referred for higher-level care. Nutritional requirements are supported through Anganwadi Centres (AWCs) under ICDS, which provide supplementary nutrition, growth monitoring, and health education to mothers. Village Health and Nutrition Days (VHNDs) and outreach health camps further strengthen service delivery in tribal settlements. Periodic deworming, Vitamin A supplementation, and anemia screening are also undertaken to address common health issues among children. In addition, the Rashtriya Bal Swasthya Karyakram (RBSK) plays a vital role in tribal areas, with mobile health teams visiting schools and Anganwadis to screen children for health conditions, developmental delays, and disabilities, and facilitating referrals when required. Together, these initiatives ensure holistic care for tribal children in Kollam district, promoting healthy growth, development, and long-term wellbeing.

Overall, Kollam district demonstrates a well-structured, proactive, and inclusive approach to tribal health. Through mobile outreach, community-based ASHAs, targeted nutrition programmes, maternal-child care schemes, and partnerships, the district has addressed many health challenges in tribal areas. While low birth weight remains a concern, significant strides have been made in reducing malnutrition, improving institutional deliveries, and enhancing overall maternal and child health outcomes in tribal communities.

Figure: 9.1 FHC Achankovil : A tribal area FHC

Figure: 9.2 A tribal area visit by District Programme Manager, Kollam

CHAPTER 10

FINANCIAL ALLOCATION AND UTILIZATION FOR THE LAST FOUR YEARS

During the last five years, the total allocation under the DHS Plan amounted to ₹4.85 crores, of which ₹4.63 crores has been utilized. Under the National Health Mission (NHM), the total fund allocation for the same period was ₹33,6.1crores, with a utilization of ₹22,8.71 crores.

There has been no allocation or utilization under the Local Self Government (LSG) fund during these years. The Multi-Sectoral Development Programme (MSDP) fund is restricted to aspirational districts, limited to specific panchayats in Palakkad and Wayanad, and therefore, our district is not eligible for it. Similarly, the Tribal fund is a combined allocation across sectors. Since there is no standalone provision for health under the Tribal Department, our district has not received any allocation from that source.

Table 10.1 Financial allocation and utilization for the last four years

Source	2022		2023		2024		2025	
	Allocation	Utilisation	Allocation	Utilisation	Allocation	Utilisation	Allocation	Utilisation
DHS-Plan	1.34	1.28	1.37	1.21	1.45	1.40	0.34	0.02
NHM	55.64	51.67	62.11	39.36	74.47	52.17	78.16	19.84
LSGD	NA	NA	NA	NA	NA	NA	NA	NA
Tribal fund	NA	NA	NA	NA	NA	NA	NA	NA
MSDP fund	NA	NA	NA	NA	NA	NA	NA	NA

Source: District Accounting data in crores

CHAPTER 11

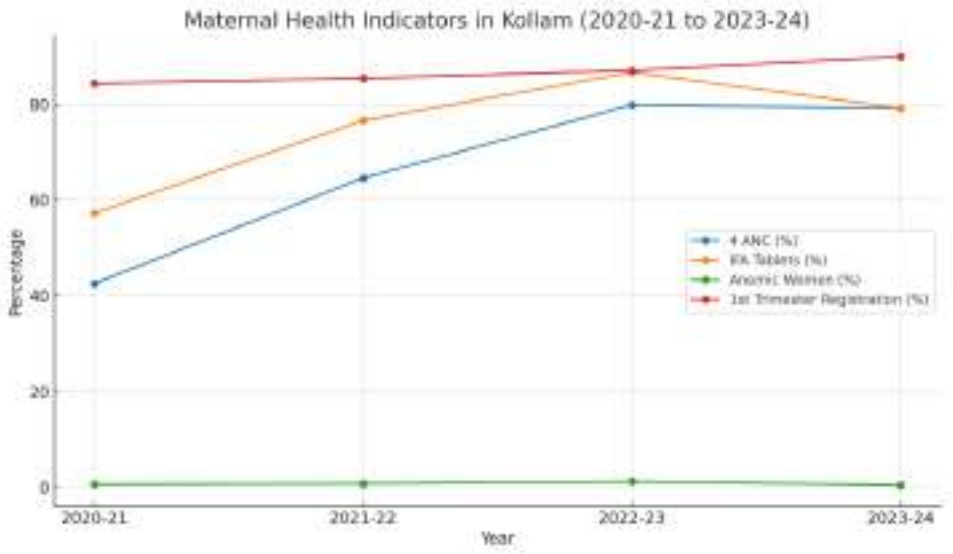
NHM ACTIVITIES IN THE DISTRICT

Over the last five years, Kollam district has achieved significant progress in healthcare delivery through impactful public health programs and service innovations. Strengthened initiatives under NHM, including Hridyam for congenital heart disease, RBSK for early screening and referral, and NTEP for tuberculosis elimination, have enhanced early diagnosis and timely management of major diseases. Vector-borne disease control efforts, particularly against dengue, have reduced fatality rates despite rising case detection, reflecting stronger surveillance and rapid response mechanisms. Non-communicable disease care has expanded through regular screening, priority follow-up, and continuity of care at all tiers, ensuring better control and reducing long-term complications. Maternal and child health outcomes have improved with increased institutional deliveries, effective referral systems, and focused neonatal interventions. Collectively, these advances highlight Kollam's shift towards preventive, promotive, and patient-centered healthcare, ensuring measurable health gains, reduced disease burden, and improved quality of life for the community.

11.1 Maternal Health

Maternal health in Kollam district has shown remarkable progress over the last four years with strong improvements in service coverage and outcomes. The percentage of pregnant women receiving four antenatal check-ups rose from 42.6% in 2020–21 to 79.9% in 2022–23, reflecting a substantial improvement in regular monitoring of maternal health, and remained steady at 79.2% in 2023–24. IFA tablet distribution also improved impressively, from 57.3% in 2020–21 to 86.7% in 2022–23, before stabilizing at 79.2% in 2023–24, showing enhanced efforts to combat anaemia during pregnancy. Importantly, anaemia prevalence among pregnant women has been consistently very low, ranging from 0.63% in 2020–21 to just 0.49% in 2023–24, underscoring the effectiveness of preventive strategies. Early registration in the first trimester has also steadily risen, from 84.38% in 2020–21 to 89.96% in 2023–24, ensuring timely initiation of care. Overall, these positive trends demonstrate the district's strengthened maternal health system and the success of targeted interventions in improving maternal outcomes.

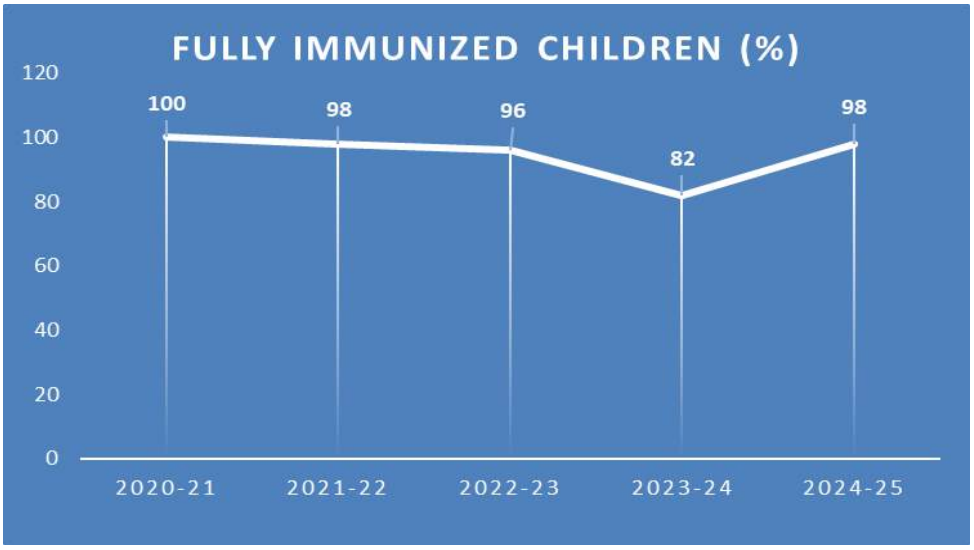
Graph 11.1.1 Maternal Health Indicators in Kollam



11.2 Child Health

Kollam district has shown outstanding performance in immunisation outcomes during 2020–2025, with consistently high achievements across all major indicators. Full immunisation coverage remained above 95% in most years, reaching 100% in 2020–21, which reflects the district's strong service delivery and outreach. Hepatitis-B immunisation also recorded excellent results, with coverage ranging from 91.8% to 100%, and even crossing 100% in 2022–23 and 2024–25, indicating effective follow-up and inclusion of children beyond the original target group. While MMR coverage has gradually declined in recent years due to changing vaccination strategies, Kollam ensured robust MR vaccination, protecting more than 26,000 children annually during peak years. Even during the COVID-19 pandemic, the district sustained very high immunisation rates with minimal dropouts, showcasing the resilience of its health system. These outcomes underline Kollam's strong primary healthcare framework, efficient community-level mobilisation, and commitment to protecting every child, ultimately leading to improved child survival, reduced disease burden, and strengthened community immunity.

Graph 11.2.1 Fully Immunized Children

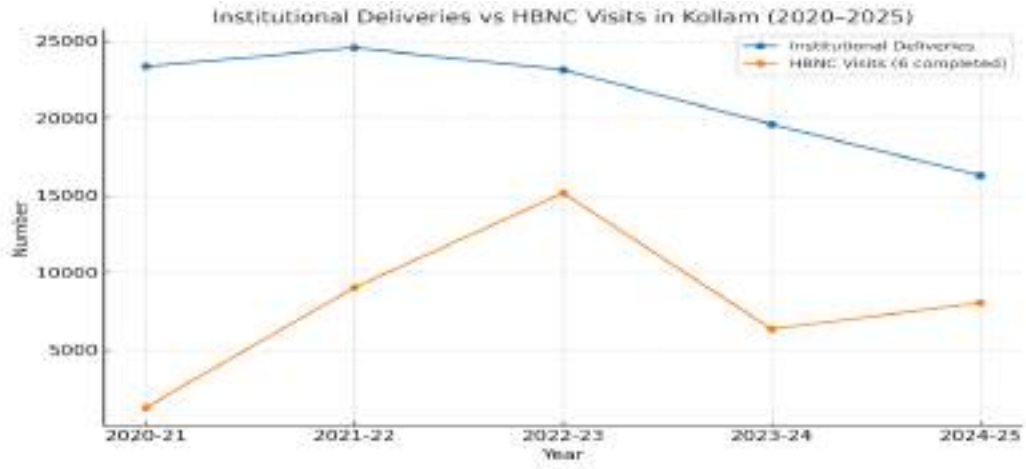


Source: RCH portal

11.2.1 Kollam District – Maternal & Newborn Care (2020–2025)

Kollam district has demonstrated remarkable progress in maternal and newborn health care between 2020 and 2025, setting a strong benchmark for integrated service delivery. The district has consistently maintained a very high proportion of institutional deliveries, ensuring safer childbirth practices and significantly reducing maternal and neonatal risks. At the same time, Home Based Newborn Care (HBNC) services have shown remarkable growth, with the number of new-borns receiving six HBNC visits increasing from just 1,267 in 2020–21 to more than 15,000 by 2022–23. This steady expansion reflects strengthened follow-up systems, improved community outreach, and the effective role of trained ASHA and health teams in reaching families at the household level. The integration of safe institutional deliveries with comprehensive HBNC follow-ups highlights Kollam's holistic approach to maternal and child health, providing both immediate safety at birth and continuity of care during the crucial newborn period. Despite a declining birth cohort, the district has sustained its service delivery momentum, focusing on quality, resilience, and inclusivity. These achievements have not only enhanced maternal health outcomes but also ensured improved newborn survival, reinforcing Kollam's status as a model district for delivering integrated and community-driven maternal and child healthcare.

Graph 11.2.1.1b Institutional Deliveries vs HBNC visits in Kollam (2020-2025)



11.2.2 Rashtriya Bal Swasthya Karyakram (RBSK) & Arogya Kiranam (AK)

The Rashtriya Bal Swasthya Karyakram (RBSK) and Arogya Kiranam (AK) together form a comprehensive child health support system, addressing a wide spectrum of conditions from birth to 18 years. While RBSK focuses on screening and early intervention for 30 specific conditions such as birth defects, diseases, deficiencies, and developmental delays, AK—an exclusive state initiative of Kerala—ensures free investigation and treatment for other health conditions, covering both OP and IP services for children, except those belonging to government servant dependents and income taxpayers.

The treatment expenditure trends reflect consistent beneficiary coverage, with 2021–22 witnessing the highest spending of ₹354.73 lakhs (₹275.40 lakhs under RBSK and ₹79.33 lakhs under AK), benefitting 86,140 children. In 2022–23, ₹278.61 lakhs were utilized solely under RBSK to support 1,00,402 beneficiaries. Subsequently, 71,837 children were covered in 2023–24 with an expenditure of ₹105.15 lakhs, while in 2024–25 (till date), ₹56.91 lakhs have been spent for 67,941 beneficiaries. This pattern highlights sustained programme reach with substantial child health impact, though expenditure levels have declined in recent years, and AK-linked spending was confined to 2021–22, reflecting a gradual shift towards consolidated RBSK-driven treatment support.

11.2.3 Comprehensive Newborn Screening (CNBS) programme

Kollam district has demonstrated outstanding success in ensuring near-universal coverage of newborns, with screening consistently above 98% of institutional deliveries across the last five years. In 2020–21, out of 11,131 deliveries, 11,019 newborns were screened, leading to the detection of 248 conditions. The following year, 2021–22, recorded 10,371 deliveries, of which 10,267 newborns were screened, identifying 234 conditions. In 2022–23, despite a reduced birth cohort of 8,426 deliveries, an impressive 8,341 newborns were screened (99% coverage), with 208 conditions detected. In 2023–24, with 8,146 deliveries, 8,065 newborns were screened, marking another year of high coverage and an increase in early detection with 314 conditions identified. Most recently, in 2024–25 (till date), out of 6,571 deliveries, 6,505 newborns were screened, resulting in the identification of 320 conditions.

This consistent high performance not only reflects the efficiency of institutional delivery–linked screening, but also underlines the strengthened diagnostic and intervention capacity of the district. The upward trend in conditions identified in the last two years indicates improved effectiveness in case detection, ensuring that children with potential health challenges receive timely interventions for better outcomes. Kollam thus stands out as a model in comprehensive maternal and newborn healthcare, ensuring that every child receives a healthier start to life.

11.2.4 Rashtriya Bal Swasthya Karyakram (RBSK)

Kollam district has shown commendable achievements in child health screening over the past five years, ensuring that a vast majority of children are reached effectively. Over the last five years, RBSK in Kollam district has consistently achieved high coverage in the 0–6 years group, maintaining screening levels at over 90–95% of the target population each year, despite a gradual decline in the total target numbers. In contrast, the 6–18 years category showed stronger performance in the initial three years (2020–23) with coverage of more than 75–95%, but experienced a major dip in 2023–24 due to school-level disruptions. Encouragingly, the programme has bounced back in 2024–25 with screening numbers showing significant recovery.

Figure 11.2.4.1 RBSK screening

Overall, RBSK in Kollam has demonstrated robust coverage in the younger age group and encouraging recovery in school-age children, reflecting the system's resilience and adaptability. This performance not only ensures early identification of health conditions and timely interventions but also underscores the district's commitment to child health and developmental well-being.

11.2.5 District Early Intervention Centre (DEIC)

Figure 11.2.5.1 DEIC Kollam

The District Early Intervention Centre (DEIC), Kollam, under the Rashtriya Bal Swasthya Karyakram (RBSK), plays a crucial role in the early detection and intervention of childhood conditions, aiming to reduce disabilities and improve developmental

outcomes. With over 17,000 children screened, 16,090 registered, and nearly 96,800 follow-up consultations completed, DEIC Kollam demonstrates strong outreach and service delivery. The centre screens children for 30 disease conditions and provides a wide range of services including medical care, dental services, physiotherapy, occupational therapy, psychological support, audiology, vision care, speech therapy, and referral services. Supported by a multidisciplinary team of specialists such as paediatricians, physiotherapists, dental surgeons, psychologists, audiologists, special educators, and nurses, the centre ensures holistic care. A unique feature is the Anuyatra Mobile Health Unit, which connects the northern and southern parts of the district, ensuring accessibility for all. Guided by WHO's vision that untreated developmental delays can lead to lifelong handicaps, DEIC Kollam stands as a model for early intervention, disability prevention, and child health promotion, reducing the burden on families and society while strengthening the district's health system.

11.3 Family Planning

Table 11.3.1 Family Planning

Year	No. of Lapro Cases	No. of NSV Cases	CC	OP	IUCD
2022-2023	25	6	7358	793	161
2023-2024	28	7	7835	818	188
2024-2025	31	8	8015	834	194

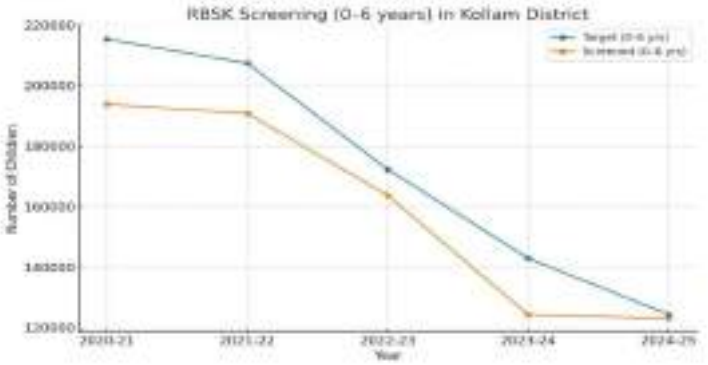
Kollam district has shown notable improvements in family welfare and reproductive health outcomes between 2022 and 2025. The steady increase in laparoscopic sterilization cases, along with higher IUCD insertions, reflects rising acceptance of both permanent and long-term reversible contraception. At the same time, the gradual rise in NSV cases signifies a positive shift toward greater male participation in family planning, breaking traditional gender barriers and encouraging shared responsibility in reproductive health.

Alongside this, the consistent growth in contraceptive counseling, outpatient consultations, and related services points to wider awareness, improved accessibility, and greater community trust in government health facilities. These collective achievements not only expand service coverage but also contribute to better maternal

and child health through reduced unintended pregnancies and healthier birth spacing. Overall, Kollam district demonstrates progressive engagement, inclusivity, and effectiveness in strengthening reproductive health service delivery.

11.4 Adolescent Health

Graph 11.4.1 RBSK Screening (0-6 years)



Under RBSK, Kollam district has demonstrated strong improvement in child health screening, especially in the 0–6 years group where coverage consistently remained above 95% of the target. In the 6–18 years group, despite a significant dip in 2023–24, screening rebounded in 2024–25, reflecting effective corrective measures and renewed outreach. Overall, the programme shows steady progress with sustained efficiency in early childhood coverage and encouraging recovery in school-age group screening.

Graph 11.4.2 RBSK Screening (6-18 years)

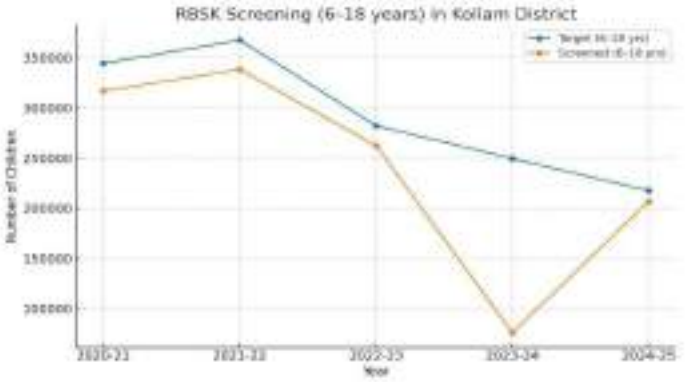


Figure 11.4.1 RBSK Screening

11.5 Rashtriya Kishor Swasthya Karyakram (RKSK)

Kollam district has made significant strides under RKSK, providing counselling support to over 33,000 adolescents in five years. With more than 19,500 follow-up cases, the program reflects strong adolescent trust and engagement. Backed by a sanctioned team of five trained counsellors, services have consistently addressed health, nutrition, mental well-being, and life skills. Even in 2022–23, over 7,200 adolescents benefited, demonstrating steady service delivery. Overall, RKSK has strengthened adolescent-friendly health initiatives in Kollam, fostering healthier lifestyles and empowering youth for a resilient future.

11.6 Peer Educators Programme -SDC (Student Doctor Cadet)

Table 11.6.1 Peer Educator Programme -SDC (Selected and trained:2022-2025)

Year	Total Peer Educators selected	Trained
2022-23	200	200
2023-24	200	200
2024-25	200	200

The Peer Educators Programme – Student Doctor Cadet (SDC) in Kollam district is a school-based health initiative designed to empower students as active partners in promoting health awareness. Through this programme, selected students are trained as peer educators to spread knowledge on healthy lifestyles, disease prevention, mental

health, and hygiene practices among their peers. The SDC model not only strengthens health education in schools but also builds leadership, communication, and social responsibility among students. By fostering a peer-to-peer learning environment, the programme enhances the reach and effectiveness of health messages, contributing to long-term behavioural change and improved community health outcomes.

11.7 The Communicable Disease Control Programme

The Communicable Disease Control Programme in Kollam District plays a vital role in safeguarding public health by preventing, detecting, and managing outbreaks of infectious diseases. The programme focuses on surveillance, early diagnosis, timely treatment, and awareness creation to reduce disease burden and mortality. Special emphasis is given to controlling vector-borne diseases such as dengue, malaria, and chikungunya, as well as tuberculosis, leprosy, filariasis, and other endemic conditions. The district has established a robust network of health institutions, laboratories, and field staff, supported by intersectoral coordination and community participation, to ensure effective implementation. Continuous monitoring, health education campaigns, and rapid response mechanisms have strengthened the district's capacity to address seasonal outbreaks and emerging infectious threats, thereby contributing to improved health outcomes and resilience of the community.

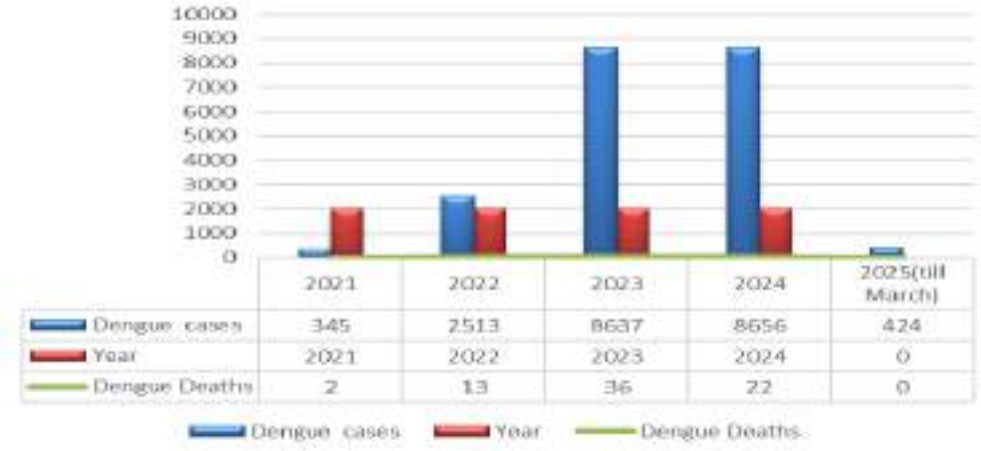
11.7.1 National Vector Borne Disease Control Programme (NVBDCP)

The National Vector Borne Disease Control Programme (NVBDCP) in Kollam District focuses on controlling and preventing vector-borne diseases such as dengue, malaria, chikungunya, lymphatic filariasis, and Japanese encephalitis. Kollam, being a coastal district with dense population and varied ecological conditions, is prone to seasonal outbreaks, especially dengue and filariasis. Under NVBDCP, the district implements intensive surveillance, early case detection, timely treatment, and vector control measures such as source reduction, fogging, larvicidal operations, and community awareness campaigns. Special attention is given to filariasis elimination through Mass Drug Administration (MDA) and morbidity management, as Kollam is one of the endemic districts. Strong inter-sectoral coordination, active community participation, and strengthening of health institutions have enhanced Kollam's capacity to reduce disease burden and effectively respond to outbreaks, thereby contributing to better public health outcomes.

Dengue

In Kollam district, dengue cases showed a sharp increase after 2021, rising from 345 cases to 2,513 in 2022, and reaching a peak in 2023 (8,637 cases) and 2024 (8,656 cases). While mortality was highest in 2023 with 36 deaths, a notable decline to 22 deaths in 2024 reflected improvements in case management and timely interventions. By 2025 (till March), 424 cases were reported with zero deaths, showcasing the district's strengthened health response. The expansion of vector-control measures, enhanced surveillance, community awareness, and early case detection have played a crucial role in reducing mortality despite high caseloads. The achievement of zero dengue deaths in 2025 highlights the effectiveness of Kollam's integrated public health strategies and preparedness in combating vector-borne diseases.

Graph 11.7.1.1 Dengue Cases



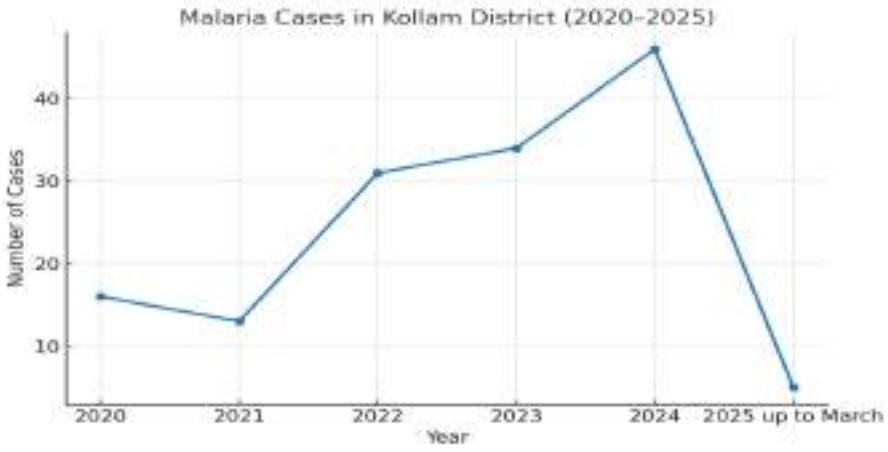
Malaria

The malaria trend in Kollam district over the past five years shows fluctuating but overall increasing case numbers, with a shift from imported to indigenous transmission in recent years. In 2020 and 2021, most cases (16 and 13 respectively) were reported as imported. From 2022 onwards, indigenous transmission became evident, with one indigenous case in 2022, three in 2023, and one in 2024, including a locally acquired case at Chavara. The year 2024 recorded the highest burden with 46 cases, largely due to a sharp rise in

Plasmodium falciparum (Pf) infections (27 cases). Fatalities were reported in 2021 and 2023 due to Pf infections, reflecting its severe clinical impact.

In terms of species distribution, *Plasmodium vivax* (Pv) remained a consistent contributor, with cases ranging from 4 to 16 annually, while mixed infections and occasional *Plasmodium malariae* (Pm) cases were also observed. By early 2025 (up to March), five imported cases were recorded, suggesting continued vigilance is needed to prevent re-establishment of local transmission. Kollam district has made progress in malaria surveillance and reporting, the emergence of indigenous cases highlights the need for sustained vector control, rapid case management, and community awareness to achieve malaria elimination targets.

Graph 11.7.1.2 Malaria Cases

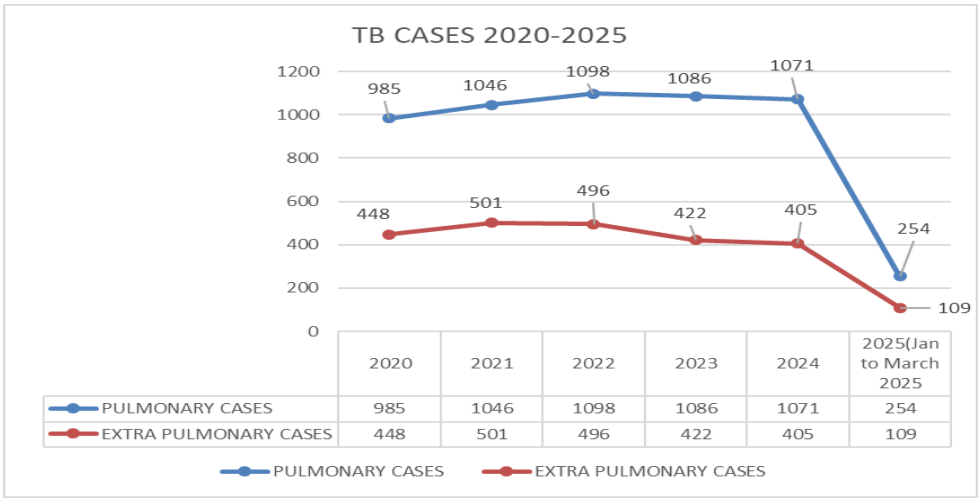


11.7.2 National Tuberculosis Elimination Programme (NTEP)

The National Tuberculosis Elimination Programme (NTEP) in Kollam district is being functioning with the vision of achieving a TB-free Kollam in line with India's 2025 target. The district has strengthened its TB control efforts through early detection, rapid molecular diagnostics, free treatment, drug-resistance testing, and nutritional support under Nikshay Poshan Yojana. Special focus is given to active case finding in vulnerable groups, contact tracing, and community awareness campaigns, ensuring early diagnosis and completion of treatment. With the support of dedicated health workers, TB units, and collaborative initiatives with private healthcare providers, Kollam has made significant

progress in improving treatment success rates, reducing transmission, and enhancing patient care.

Graph 11.7.2.1 TB Cases



	2020	2021	2022	2023	2024	2025(Jan to March 2025
PULMONARY CASES	985	1046	1098	1086	1071	254
EXTRA PULMONARY CASES	448	501	496	422	405	109

In Kollam district, tuberculosis control efforts have shown significant progress in both testing and case management between 2020 and 2025. The number of presumptive TB patients tested increased steadily from 23,047 in 2020 to 52,313 in 2024, demonstrating expanded screening coverage. Molecular testing has become more prominent, rising from 6,380 in 2020 to 28,371 in 2024, while smear testing fluctuated, peaking in 2023 before a slight decline. Despite the higher testing volumes, positive TB cases remained relatively stable, ranging from 1,119 in 2020 to 1,328 in 2024, suggesting improved identification of presumptive cases without a proportional rise in confirmed TB, likely reflecting better control measures. Case distribution highlights pulmonary TB as the dominant form, consistently comprising around 70% of total cases, with numbers rising slightly from 985 in 2020 to 1,098 in 2022 before stabilizing around 1,071 in 2024. Extra-pulmonary TB, meanwhile, declined gradually from 448 in 2020 to 405 in 2024, indicating strengthened diagnostic focus on pulmonary forms. Early 2025 data (Jan–Mar) already reports 17,071 presumptive tests and 363 positive cases (254 pulmonary, 109 extra-pulmonary), projecting trends similar to previous years. Overall, Kollam reflects enhanced diagnostic capacity, wider adoption of molecular methods, stable TB burden, and gradual reduction in extra-pulmonary cases, underscoring the effectiveness of interventions under the National Tuberculosis Elimination Programme (NTEP).

11.7.3 National AIDS Control Programme (NACP)

In Kollam district, the National AIDS Control Programme (NACP) ensures a strong network of HIV prevention and care services through multiple facilities. The district has six Targeted Intervention (TI) projects focusing on high-risk and bridge populations, and six Integrated Counselling and Testing Centres (ICTCs) offering counselling, testing, PPTCT, and HIV–TB cross-referral services. For clinical management, Kollam operates one Designated STI & RTI clinic, one Antiretroviral Therapy (ART) Centre at the District Hospital, and two Link ART Centres (LACs) at the taluk level, which make drug refills and follow-up more accessible for remote and tribal communities. Blood safety is also prioritized through four government blood banks and thirteen private blood banks, all ensuring 100% screening of donated blood. Altogether, these 33 service delivery points under NACP provide Kollam with an integrated framework for HIV prevention, treatment, and support, ensuring coverage for both urban and hard-to-reach populations.

11.7.4 National Leprosy Eradication Programme (NLEP)

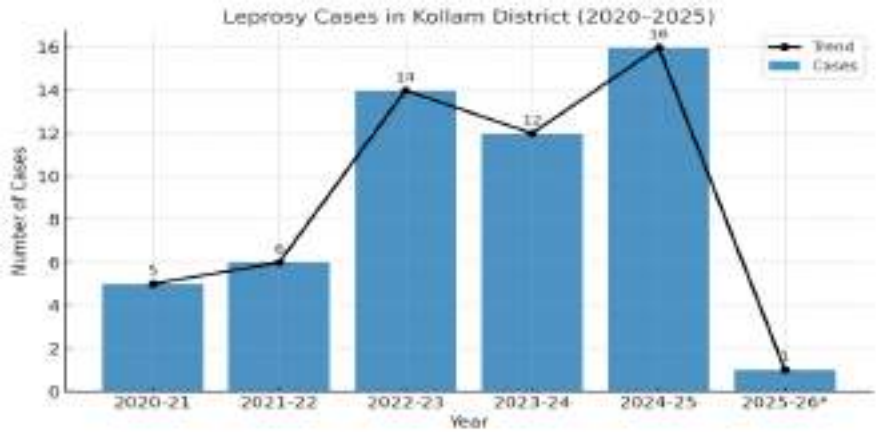
The National Leprosy Eradication Programme (NLEP) in Kollam district is implemented through the general health care system with the active involvement of primary, secondary, and tertiary level institutions. The programme focuses on early case detection, timely initiation of Multi-Drug Therapy (MDT), disability prevention, rehabilitation of affected individuals, and reduction of social stigma. Special emphasis is given to contact tracing, awareness generation, and community participation to sustain leprosy elimination. NLEP activities in Kollam are coordinated by the District Leprosy Office

Figure 11.7.4.1 NLEP Screening

under the District Medical Office, with support from health staff at PHCs, CHCs, and hospitals. Regular Active Case Detection Drives (ACD), school health programs, and IEC campaigns have strengthened early reporting and reduced hidden cases.

Surveillance data from the district shows fluctuating trends in new case detection: 5 cases in 2020–21, 6 in 2021–22, 14 in 2022–23, 12 in 2023–24, 16 in 2024–25, and 1 case in 2025–26 (till date). These findings reflect both the effectiveness of outreach activities and the continued need for vigilance to prevent hidden prevalence and disabilities.

Graph 11.7.4.1 Leprosy Cases



Through integrated efforts in case detection, disability prevention, rehabilitation, and health education, Kollam district remains committed to achieving the vision of a leprosy-free district, in alignment with the national goal of a "Leprosy-Free India".

11.8 Non-Communicable Disease

The Non-Communicable Disease (NCD) Control Programme in Kollam district focuses on addressing the growing burden of chronic diseases such as hypertension, diabetes, cardiovascular diseases, stroke, and cancers, which together account for a major share of morbidity and mortality in the region. Through the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD), Kollam has strengthened its preventive, diagnostic, and treatment services across all levels of healthcare. Regular population-based screenings are conducted through Health and Wellness Centres (HWCs) and primary health institutions to ensure early detection of diabetes and hypertension, which are the most prevalent conditions in the district.

Figure 11.8.1 Diabetic awareness

The district has reported a steady rise in case detection in recent years, reflecting both an increasing burden and improved diagnostic coverage. In 2024 alone, over 89,000 hypertension cases and 94,500 Type 2 diabetes cases were registered, while even by March 2025, nearly 29,900 new hypertension cases and 23,000 Type 2 diabetes cases had already been recorded. This highlights the extensive reach of Kollam's NCD screening and reporting system. By integrating lifestyle counselling, medication adherence support, and community awareness campaigns, the programme ensures continuity of care and better quality of life for patients. Overall, Kollam's NCD programme demonstrates strong progress in early detection, service delivery, and community-level management, aligning with Kerala's broader goals of reducing premature deaths and improving long-term health outcomes.

11.9 National Programme for Control of Blindness & Visual Impairment (NPCBVI)

The National Programme for Control of Blindness & Visual Impairment (NPCBVI), launched in 1976 and expanded in 2017, aims to reduce the burden of avoidable blindness and visual impairment in India through comprehensive eye care services. In Kollam district, the programme is implemented under the National Health Mission with the support of the District Hospital, Government Medical College, and peripheral health facilities. Services include cataract surgery, refractive error correction with free spectacles for schoolchildren, screening for conditions such as diabetic retinopathy and glaucoma, and community-based eye camps, especially targeting vulnerable groups like fishermen communities. Through these initiatives, Kollam district strengthens its eye-

care infrastructure and ensures wider access to preventive, curative, and rehabilitative services, thereby contributing to the national goal of eliminating avoidable blindness.

Figure 11.9.1 Blindness Control Programme

The National Programme for Control of Blindness & Visual Impairment (NPCBVI) in Kollam district has made remarkable progress in recent years through sustained efforts in cataract surgeries, school eye screening, and community-based interventions. While performance was affected during 2020–21 and 2021–22 due to the COVID-19 pandemic, with only 43.89% and 25.48% of cataract surgery targets achieved, the district bounced back strongly in 2022–23 with a record 123.53% achievement. This positive trend continued in 2023–24, achieving 89.65% of the target despite theatre renovations, and further improved in 2024–25 with 118.49% achievement (18,129 surgeries). Eye camps, both government and NGO-led, along with vision centres, screened lakhs of patients, detected cataracts, refractive errors, and other eye diseases, thereby strengthening service delivery across all levels.

In addition to cataract management, Kollam has actively promoted school eye health and community awareness. Thousands of children were screened across hundreds of schools,

with refractive errors detected, spectacles prescribed and distributed, and teachers trained to support early identification.

Figure 11.9.2 Glaucoma Week Programme

Public health education programmes such as the Eye Donation Fortnight, World Sight Day, World Glaucoma Week, and multiple glaucoma screening camps were successfully conducted, screening over a thousand patients and detecting new cases. These combined efforts of government facilities, private hospitals, and NGOs highlight Kollam district's strong commitment to preventing avoidable blindness and ensuring accessible, comprehensive eye care for its population.

11.10 National Mental Health Programme (NMHP)

The District Mental Health Programme (DMHP), Kollam has played a pivotal role in strengthening community-based mental health care through early detection, clinical services, capacity building, and awareness programmes. Between 2020 and 2025, it conducted 1,334 mental health clinics serving 75,764 patients, with follow-up cases dominating, underscoring the programme's success in ensuring continuity of care. Alongside, 80 training sessions benefitting 3,804 participants and 321 IEC programmes reaching 15,283 people significantly enhanced community awareness and frontline capacity. Targeted initiatives such as ASWASAM (depression management), Amma Manas (maternal mental health), Sampoorna Manasika Aarogyam (primary care integration), Jeevaraksha (suicide prevention), and tribal/coastal mental health interventions further expanded the reach of services to vulnerable populations. The

Comprehensive Mental Health Programme (CMHP) with three Pakalveedu centres added a rehabilitative dimension, while post-flood psychosocial interventions highlighted the programme's responsiveness during crises.

Special focus was also given to schools through the School Mental Health Programme, which conducted 123 training programmes for 9,099 participants and 120 IEC sessions reaching 8,170 beneficiaries, fostering resilience and stigma-free dialogue among children, parents, and teachers. Collectively, these initiatives mainstreamed mental health into Kollam's health system, ensured strong community participation, and built a trained workforce to address rising mental health needs. With consistent outreach, patient engagement, and targeted interventions, Kollam district has emerged as a model for inclusive, sustainable, and community-driven mental health care in Kerala.

11.11 National Programme for Prevention & Control of Deafness (NPPCD)

The National Programme for Prevention and Control of Deafness (NPPCD) has been implemented in Kollam district since April 2015 under the National Health Mission, with the District Hospital as the nodal centre. Specialized equipment has been distributed to Taluk Hospitals, Community Health Centres (CHCs), and Primary Health Centres (PHCs) to strengthen early diagnosis and management of ear and hearing-related conditions. The programme is supported by an ENT specialist and audiology staff at the district level, along with audiologists at Taluk level facilities. Over the years, initiatives have included distribution of primary ear care kits, training of medical officers in primary ear care, provision of hearing aids through government and NGO collaborations, auditory-verbal training, speech therapy services, and advanced diagnostic facilities such as Brainstem Evoked Response Audiometry (BERA) and Free Field Audiometry. Expansion of services to Taluk hospitals with soundproof rooms and surgical equipment has further improved accessibility. The programme's achievements also gained international recognition, with Kollam being represented in the WHO World Hearing Forum (WHF) membership for 2021–23 and renewed for 2024–26.

Figure 11.11.1 World Deafness Day Programme

From April 2015 to August 2025, Kollam reported significant service delivery under NPPCD: over **2.9 million outpatient visits**, **6,386 ear surgeries**, **2.6 lakh audiological assessments**, and **77,000+ speech and auditory rehabilitation sessions**. Hearing aid referrals crossed **52,000**, supporting patients across age groups. Year-wise speech therapy interventions rose steadily, peaking in 2022–24 with more than **25,000 sessions**. BERA testing was also scaled up from just **45 cases in 2018–19** to **1,308 in 2023–24**. Even during the COVID-19 pandemic, Kollam ensured continuity of safe audiology and ENT services by setting up UVC-based sterilization and safe practice protocols. Overall, NPPCD in Kollam has evolved into a comprehensive ear and hearing care programme, combining preventive, diagnostic, therapeutic, and rehabilitative components, while establishing the district as a model centre of excellence in Kerala.

11.12 National Programme for Palliative Care (NPPC)

The National Palliative Care Programme (NPCP) aims to provide comprehensive care for patients with life-limiting and chronic illnesses by focusing on pain relief, symptom management, and psychosocial support to improve quality of life. In Kollam district, the programme is implemented through hospitals, primary health centres, and community-based initiatives, following the Kerala model of palliative care with active involvement of trained health workers, volunteers, and local self-government bodies. This integrated approach has made palliative care services accessible and affordable to patients suffering from cancer, chronic kidney disease, neurological disorders, geriatric ailments, and other chronic conditions, ensuring dignity and support for both patients and their families.

The National Programme for Palliative Care (NPPC) in Kollam district has been implemented effectively through a strong network of healthcare professionals and community partnerships. At present, 80 Community Nurses, 25 Staff Nurses, 21 Physiotherapists, one Medical Officer, and one Coordinator are working under the programme, providing services to 8,564 bed-bound patients, 11,237 home-bound patients, and 16,428 people with serious illnesses registered under palliative care. The District Palliative Care Training Centre at District Hospital, Kollam, plays a crucial role by offering various palliative care-related courses. Fourteen Palliative Care Units have doctors licensed to dispense morphine, ensuring access to pain relief, while physiotherapy home visits and early interventions are ensured through primary units. Additionally, the Medical College Palliative Care Unit offers outpatient, inpatient, teleconsultation, training, and home care services, strengthening secondary and tertiary-level interventions.

Kollam also ensures wide stakeholder involvement, with care homes, nursing schools, and colleges linked to secondary units, and campus palliative care programmes functioning in 12 colleges. ISM, Homeo, and modern medicine doctors are actively engaged in home visits, while regular meetings with NGOs and CBOs ensure community participation. Currently, 11 NGOs provide home care services in the district, supplementing government initiatives through a private–public partnership model.


03

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Figure 11.12.1 Telemedicine inaugural

Innovative interventions like **"Meghasparsham"**, an E-Sanjeevani telemedicine facility, have enhanced patient access to services. A separate register for RBSK patients at primary units ensures timely medicine supply through LSGD projects, while children requiring social support are systematically registered under primary palliative care. Through these coordinated efforts, Kollam district has developed a robust and inclusive model of palliative care delivery that addresses the medical, emotional, and social needs of patients and their families.

11.13 Hridyam

Hridyam programme in Kollam district, launched to provide comprehensive care for children with Congenital Heart Disease (CHD), has shown significant early progress. Through the web-based CHD registry, nearly 3,000 children have been registered, ensuring systematic tracking and timely interventions. With strong referral linkages and specialist support, a total of 1,107 corrective surgeries have already been successfully performed, reflecting the programme's effectiveness in improving survival and quality of life. By facilitating early diagnosis, structured follow-up, and coordinated management, Hridyam has strengthened CHD care in Kollam and laid the foundation for reducing morbidity and mortality among affected children.

11.14 Mobile Intervention Unit (MIU)

The Mobile Intervention Unit (MIU) in Kollam district ensures equitable access to healthcare by providing weekly coverage across all six CD Blocks. Stationed at THQHs and CHCs, it strengthens the referral linkage between block-level services and higher centres, thereby decentralizing healthcare delivery. This model brings essential health services closer to communities, reducing travel barriers and improving accessibility. The MIU also enhances community outreach by promoting awareness, facilitating early detection, and ensuring timely medical interventions. By supporting continuity of care and aligning with Kollam's health programmes under the National Health Mission (NHM), the MIU plays a vital role in delivering sustainable and people-centred healthcare services across the district.

11.15 Mobile Health Team (MHT)

Mobile Health Team (MHT), services have been initiated in Kollam district with a focus on reaching underserved populations. A dedicated Mobile Health Team has been started,

and Kulathupuzha tribal block has been selected for its operations to ensure equitable access to healthcare in remote tribal areas. To strengthen service delivery, one doctor has been specifically assigned to the MHT, ensuring that essential medical care and outreach activities are consistently provided to the tribal community. This initiative highlights the district's commitment to inclusive healthcare and addressing the needs of vulnerable populations.

11.16 Biomedical Equipment Maintenance Program (BEMP)

Table 11.16.1: Biomedical Equipment Maintenance & Management Program in Kollam district

Description	Total Call Registered	Total Call rectified	Percentage of rectified calls
Biomedical Equipment Maintenance & Management Program (Data from April 2024 to March 2025)	5257	5122	97

* Total - Asset – 9005

* Total Institutions under BEMP - 95

Under the Biomedical Equipment Maintenance & Management Program in Kollam district, a total of 5,257 service calls were registered. Out of these, 5,122 calls were successfully rectified. This demonstrates a 97% rectification rate, highlighting the district's strong efficiency in biomedical equipment maintenance and its commitment to ensuring uninterrupted healthcare services through timely technical support and effective management.

11.17 Compliance to the norms of AERB for equipment under Radiology department

Compliance to the norms of AERB for equipment under the Radiology Department, Kollam district has achieved 100% compliance, with all 20 out of 20 radiology facilities successfully registered under AERB ELORA. This full compliance ensures adherence to

radiation safety standards, thereby strengthening patient safety, staff protection, and the overall quality of radiology services in the district.

11.18 Procurement of Equipment at State level through KMSCL – NHM

Table 11.18.1: Procurement of Equipment at State level through KMSCL – NHM

Year	Details	Sanctioned Amount (Rs)	Status
2024 -2025	NHM ROP 24-25	16118011	AS given to KMSCL from State office for urgently needed equipment. Equipment supply in progress. Some equipment supplies still pending

In the year 2024–2025, under the provision Procurement of Equipment at State level through KMSCL – NHM, an amount of ₹1,61,18,011 was sanctioned as part of the NHM ROP 2024–25, which also covers Kollam district. Administrative sanction has been issued to KMSCL by the State Office for procuring urgently required equipment. The supply process is currently underway, with a portion of the equipment already delivered to the district, while some items remain pending. This initiative highlights the commitment to strengthening healthcare delivery in Kollam district by ensuring timely availability of critical medical equipment to improve service quality and patient care.

CHAPTER 12

NATIONAL URBAN HEALTH MISSION (NUHM)

The National Urban Health Mission (NUHM) is committed to addressing the health care needs of the urban poor, particularly focusing on slum populations, by ensuring the provision of essential primary health services at the community level. In Kollam district, NUHM has made significant strides in strengthening urban health infrastructure and services. Currently, five Urban Primary Health Centres (UPHCs) are functional in the district. Three of these are located within the Kollam Municipal Corporation area—namely Uliyakovil, Mundakkal, and Vaddy. The Karunagappally Municipality hosts one UPHC, while a newly established UPHC in 2023 now operates under the Punalur Municipality. Each of these five UPHCs has three Urban Health and Wellness Centres (UHWCs) attached, aimed at delivering comprehensive health care closer to the community. However, Kottakkara and Paravoor Municipality do not currently have UPHCs. Instead, they have been provided with two UHWCs each, ensuring access to basic health services even in the absence of a central UPHC facility. This brings the total number of UHWCs in Kollam district to 17. Efforts are ongoing to further expand the health network in the district. Two additional UHWCs are in the process of being established—one at Muslim Street in Kottarakkara and the other at Vadakkumbhagam in Kollam Corporation. This expansion is part of a broader strategy to ensure equitable access to quality health care services for all urban populations.

Each UPHC is staffed with a specialist doctor, staff nurses, a lab technician, a pharmacist, accountant and a JHI, ensuring the delivery of a range of curative and diagnostic services. In addition, every catchment area under a UPHC is assigned a Junior Public Health Nurse (JPHN) and an ASHA, who act as the first point of contact for community-level health needs. The UHWCs function as the peripheral outreach units of the UPHCs and are designed to provide comprehensive primary health care. Each UHWC is manned by one doctor, two staff nurses, one pharmacist, and one supporting staff. Among the two staff nurses, one focuses on curative care, while the other is responsible for preventive, promotive, rehabilitative, and palliative care. In order to ensure skill-building and holistic expertise, the roles of these two nurses are interchanged every 15 days. The Urban Health Mission in Kollam is a model of decentralized, accessible, and people-centric health care delivery. Through a combination of fixed and outreach services, NUHM aims to

strengthen primary health care and improve health outcomes among urban poor communities.

There are 5 UPHC's and 17 UHWC in the district. 4 out of the 5 UPHC's have been accredited with NQAS certification.

The National Urban Health Mission (NUHM) plays a pivotal role in translating various state-level and national health initiatives into actionable programs at the district and grassroots levels, especially among the urban poor and marginalized communities. It serves as a key operational wing in delivering public health services in urban areas, ensuring that no section of the population is left behind due to social or economic barriers. One of the unique features of NUHM is the provision of evening outpatient services (OPs). These are specifically arranged for the working population who are unable to visit health centres during regular working hours. This initiative is implemented with the support of Urban Local Bodies (ULBs), making health care more accessible to employed individuals, daily wage workers, and other underserved groups. The mission actively engages in screening, early detection, and prevention of both communicable diseases (CD) and non-communicable diseases (NCDs). Regular health check-ups, awareness campaigns, and follow-up care help in controlling disease burden in urban areas where lifestyle-related illnesses are on the rise.

NUHM also places strong emphasis on outreach services, particularly in areas like Reproductive and Child Health (RCH) and Adolescent Health. Regular health education sessions, counselling, and mobile medical camps help reach vulnerable groups such as pregnant women, lactating mothers, adolescents, and the elderly in urban slums. To reduce the out-of-pocket expenditure on diagnostics, free laboratory facilities are made available in the Urban Primary Health Centres (UPHCs). This initiative ensures early diagnosis and treatment, especially for the economically weaker sections who often delay care due to cost barriers.

Every urban ward observes Urban Health and Nutrition Day (UHND) at least once a month. These events serve as community-based platforms to deliver maternal and child health services, nutrition counselling, immunizations, and family planning support. They are conducted with the involvement of frontline health workers like ASHAs, JPHNs, and MAS members. The Mahila Arogya Samithis (MAS), formed in urban slums, are community collectives of women who take active leadership roles in health promotion,

sanitation drives, awareness campaigns, and local problem-solving. Their participation ensures community ownership and trust in public health services.

Additionally, Health Management Committee (HMC) meetings are conducted quarterly at each institution. These meetings involve health staff, representatives from local bodies, and community members to discuss performance, challenges, and planning of local health activities. NUHM in Kollam is also involved in IEC (Information, Education, and Communication) campaigns, sanitation awareness drives, mental health counselling, and support for the elderly and people with disabilities through its urban health platforms.

All UPHCs have been transformed into Urban Polyclinics to offer specialized healthcare services based on the specific needs of the communities they serve. Among them, UPHC Mundakkal and UPHC Uliyakkovil have been designated as vision centres, while UPHC Mundakkal also houses a dedicated dental unit.

The **Table 12.1** presents an overview of community process indicators under the NUHM in Kollam district for 2024–25. A total of 70 Mahila Arogya Samithis (MAS) have been constituted, with all 70 MAS accounts successfully opened; however, no training or orientations have been conducted despite one being approved. Out of 92 approved ASHAs, 87 are currently in position, indicating a shortfall of five. Urban Health and Nutrition Days (UHNDs) are being conducted regularly across all 50 urban wards on a monthly basis, reflecting consistent outreach efforts. While core community structures are in place and functional, the lack of MAS training and a minor ASHA shortage highlight areas that need attention for improved implementation.

Table 12.1 Status of Community Processes under NUHM – Kollam District (2024–25)

Community process	Approved	In position
No. of Mahila Arogya Samithi (MAS) constituted	70	70
No. of MAS Accounts opened	70	70
No. of MAS trainings / orientations held	1	0
No. of ASHAs	92	87

The implementation status of Urban Health and Nutrition Days (UHNDs) under the National Urban Health Mission (NUHM) in Kollam district for the year 2024–25:

A total of 50 UHNDs per month were approved across urban areas of the district, and the same number—50 per month—have been successfully conducted as per plan. This indicates full compliance with the approved schedule and reflects the district's commitment to regular and structured health service delivery in urban communities. These monthly UHNDs are crucial for reaching underserved populations with services such as immunization, maternal and child health care, nutrition counseling, and NCD screening.

The population and household coverage assigned to frontline health workers under the NUHM in Kollam district for 2024–25 shows each Accredited Social Health Activist (ASHA) is responsible for approximately 500 individuals or households, and this target has been fully met with assignments in place as approved. Similarly, each Junior Public Health Nurse (JPHN) has been assigned a population of 2,000 individuals or households, with the actual distribution matching the approved figures. However, the row for NGO support in community processes remains blank, suggesting that there is either no NGO involvement currently or that data on such support has not been reported.

The data on the number of special outreach medical camps conducted under NUHM in Kollam District for the years 2023–24 and 2024–25: Although no camps were officially approved in the Record of Proceedings (ROP) for either year, a total of 131 camps were conducted, including 28 in 2023–24 and 103 in 2024–25. These camps were organized in alignment with state-level health campaigns, specifically ‘Arogyam Anandam’ (a cancer screening initiative) and the 100 Days TB Campaign, demonstrating the district's proactive approach in implementing vital public health interventions even without formal approvals.

Table 12.2 Special outreach medical camps conducted under NUHM (2023–2025)

Community process	Approved	In position	Remarks
No. of special outreach medical camps	0	131	There were no camps sanctioned as per the ROP, but the 2 outreach camps were conducted as part of two important campaigns initiated at state level, implemented at the district, 'Arogyam Anandam' (Cancer Screening program) and the 100 Days TB Campaign.
a. 2023-24	0	28	
b. 2024-25	0	103	

12.1 Institutional Activities

The data highlights the institutional service delivery performance under the National Urban Health Mission (NUHM) in Kollam district for the year 2024–25. On average, the district recorded 881 Outpatient (OP) visits per day, amounting to a total of 3,21,288 OP consultations over the year. Additionally, laboratory services averaged 342 tests per day, resulting in a total of 1,24,900 lab investigations conducted. The district also made significant progress in Non-Communicable Disease (NCD) care, with 1,64,796 individuals attending NCD clinics for screening, diagnosis, or management. Moreover, two outreach labour camps were organized, reflecting the district's effort to extend healthcare services to underserved labour populations. These figures indicate a robust institutional response to the urban health needs of the population through both facility-based and outreach services.

Table 12.1.1 Institutional Service Delivery Statistics – NUHM Kollam (2024–25)

ITEMS	2024-25
Average OP (Per Day)	881
Average Lab (Per Day)	342
Total OP	321288
Total NCD	164796(Clinics)
Total Lab	124900
Total Outreach labour camps	2

CHAPTER 13

NATIONAL TUBERCULOSIS ELIMINATION PROGRAMME (NTEP)

The National Tuberculosis Elimination Programme (NTEP) aims to reduce the burden of tuberculosis (TB) in India by 2025. The NTEP implements a National Strategic Plan (NSP) with the following objectives:

- Early diagnosis: Diagnose TB patients early.
- Prompt treatment: Provide prompt treatment with quality drugs and treatment regimens.
- Active case finding: Find cases and trace contacts in vulnerable populations.
- Airborne Infection Control: Controlling Airborne Infections.
- Multi-sectoral response: Address social determinants through a multi-sectoral response.

The NTEP's strategic pillars are DETECT, TREAT, PREVENT, and BUILD. The program also includes the following components: Political and administrative commitment, good quality diagnosis, uninterrupted supply of quality drugs, Directly Observed Treatment (DOT), and Systematic monitoring and accountability.

The NTEP was previously known as the Revised National Tuberculosis Control Programme (RNTCP).

13.1 Components of NTEP

Universal Drug Susceptibility Testing (UDST): Detects drug-resistant TB early.

Free diagnosis and treatment: Available to all TB patients in India.

Nikshay: A web-based system that monitors and manages TB cases.

Private sector engagement: Involves private healthcare providers to ensure standardized care.

Nikshay Poshan Yojana: Provides a financial incentive of Rs. 1000 per month to notified TB patients to improve their nutritional status from November 2024 onwards.

State TB Cell: Coordinates the TB elimination program in the state under the guidance of the State Health Society.

State TB Training and Demonstration Centre (STDC): Supports the State TB Cell with training, supervision, and monitoring activities.

Intermediate Reference Laboratory (IRL): The nodal laboratory for the state.

District TB Centre: Coordinates the TB elimination program in the District.

Tuberculosis unit: There are 5 TB units in the district. The five TB centers are DTC Kollam TU, THQH Kottarakkara TU, HCD Karunagappally TU, TH Nedungolam TU, and THQH Punalur TU.

13.2 Programme Implementation

The National Tuberculosis Elimination Programme (NTEP) is a program that aims to reduce the burden of tuberculosis (TB) in India by 2025. The NTEP implements a National Strategic Plan (NSP) with the following objectives:

Early diagnosis: Diagnose TB patients early.

Prompt treatment: Provide prompt treatment with quality drugs and treatment regimens.

Active case finding: Find cases and trace contacts in vulnerable populations.

Airborne Infection Control: Controlling Airborne Infections.

Multi-sectoral response: Address social determinants through a multi-sectoral response.

13.3 Progress in Tuberculosis Elimination in the District

The district launch of the 100 days campaign started with the inauguration of the Nikshay Vahan by Honorable MLA M. Noushad, and the district-level inauguration was done by Sri. M. Mukesh MLA. IEC materials for TB Elimination and awareness were distributed through the vehicle, which is mainly intended for the screening of TB cases.

21 Grama Panchayats have been selected for TB Mukth Panchayat Status in 2024-2025. The District Collector, Sri. Devi Das, N IAS has distributed the awards for the Panchayats.

A Handheld X-ray unit and a vehicle were purchased using IREL's CSR fund to be used in a manner conducive to TB Eradication.

Sputum samples are collected by one Hub & Spoke vehicle and one hired vehicle and sent to NAAT sites for UDST and Active case finding of symptomatic Patients.

TB Unit-wise Screening Camps are held periodically in Coastal areas, Tribal areas, Slum areas, old age & Poor homes, and Destitute Homes. Periodic screening in Jails is also conducted as part of active case finding. Field-level screening of vulnerable cases is done through ASHA. Sensitization for Haritha Karma Sena members, Kudumbashree Resource Persons (FNHW), providing awareness about TB and its Symptoms. As part of the 100-day campaign, screening and awareness classes will be conducted for NREGA workers and schools/colleges. TB screening camp was conducted in association with the Fisheries Department, Tribal Department, Labour Department, etc.

Pradhan Mantri TB Mukt Bharat Abhiyan Nikshay Mitra Project is going on in the district. We have identified 44 Nikshay Mitras to support 1963 Patients.

Free diagnosis and treatment for TB patients have been done in the district with the participation of the private sector through the STEPS centers. There are 30 STEPS centers in the district. Private hospital consortium, professional coalition has been set up for improved participation of the private sector in the Elimination of TB.

Fig 13.3.1 Nikshay Shivir

Fig 13.3.2 Nikshay Shapath

Fig 13.3.3 School/sensitization meetings

Fig 13.3.4 Supports from other departments

Fig 13.3.5 Nikshay Mitra distributes food baskets

Fig 13.3.6 other innovations

Fig 13.3.7 Private Consortium & Medical Officers training

Table 13.3.1 TB Testing (Microscopy and CBNAAT testing) in Kollam district from 2020-25.

YEAR	Number of Presumptive TB patients tested with smear (A)	Number of Presumptive TB patients tested with molecular test (B)	Total Tested (A+B)	Total Positive Cases
2020	16667	6380	23047	1119
2021	11794	11414	23208	1328
2022	18341	18044	36385	1372
2023	26851	24579	51430	1353
2024	23942	28371	52313	1328
2025 (Jan to March 2025)	3844	13227	17071	318

Source: District Data

The table presents annual data from 2020 to the first quarter of 2025 on presumptive tuberculosis (TB) patients tested using smear and molecular (CBNAAT) diagnostics. Over this period, there has been a significant increase in overall testing volume, with a noticeable upfront in the use of CBNAAT testing methods. Despite this expansion in testing, the number of confirmed TB-positive cases has not increased proportionally-in fact, it has shown a gradual decline or plateau over time. In 2020, there were 1,119 TB cases identified from 23,047 tests. By 2021, even with a similar number of tests (23,208), TB cases rose to 1,328. From 2022 to 2024, the number of individuals tested more than doubled, peaking at over 52,000 in 2024. However, TB cases remained relatively stable-between 1,328 and 1,372 -indicating a drop-in positivity rate. In early 2025 (Jan–Mar), only 318 TB cases were detected from 17,071 tests, suggesting a further decrease in both case numbers and positivity.

This trend highlights a declining burden of TB or improved case detection at earlier, less infectious stages. It may also reflect the success of public health interventions, improved diagnostics, or wider screening coverage, capturing more individuals at lower risk in the district.

Table 13.3.2 TB cases registered in Nikshay portal from 2020-25.

YEAR	PULMONARY CASES	EXTRA PULMONARY CASES
2020	985	448
2021	1046	501
2022	1098	496
2023	1086	422
2024	1071	405
2025(Jan to March 2025)	254	109

Source: District Data

A closer look at the data reveals a notable increase in total TB case registration on the Nikshay portal over the years. The increase in testing, combined with the sustained or rising number of registered TB cases, indicates that Nikshay is capturing a greater proportion of the true TB burden over time. This trend points to improved surveillance, digital reporting, and health system responsiveness to TB at both community and facility levels.

Table 13.3.3 Pulmonary & Extra-Pulmonary TB cases reported from 2020-25.

YEAR	NEW PULMONARY	NEW EXTRA PULMONARY
2020	885	427
2021	936	468
2022	986	469

2023	951	396
2024	873	368
2025(Jan to March 2025)	365	250

Source: District Data

Kollam District has shown consistent efforts in detecting and managing new tuberculosis (TB) cases, with a focus on both pulmonary and extrapulmonary forms. From 2020 to 2022, there was a gradual increase in new pulmonary TB cases, peaking at 986 in 2022, followed by a decline to 873 in 2024. A similar trend is observed in extrapulmonary TB, which rose from 427 cases in 2020 to 469 in 2022, then declined to 368 by 2024. Notably, in the first quarter of 2025, 365 new pulmonary and 250 extrapulmonary TB cases were already reported, suggesting a potentially higher annual burden if the trend continues. This early rise could reflect enhanced case-finding efforts, including intensified screening through outreach camps, ASHA engagement, and mobile diagnostic services. The district's proactive surveillance, supported by public-private partnerships and targeted interventions in high-risk areas, continues to play a vital role in identifying new cases early, ensuring prompt treatment, and moving toward TB elimination goals.

Table 13.3.4 Mortality Rate of Tuberculosis in Kollam District

Year	Died	Mortality Rate
2020	100	3.79
2021	124	4.70
2022	158	5.99
2023	168	6.37
2024	151	5.72
2025(Jan to March 2025)	44	1.66

Source: District Data

The TB mortality rate in Kollam District showed a gradual rise from 3.79 per 100,000 population in 2020 to a peak of 6.37 in 2023, reflecting both improved reporting and challenges in managing TB-related complications. In 2024, the rate declined to 5.72, indicating the positive impact of intensified interventions and patient support mechanisms. As of March 2025, the mortality rate stands at 1.66, suggesting a possible downward trend for the year, provided current efforts in early detection, treatment adherence, and community engagement continue effectively.

Table13.3.5 Direct Benefit Transfer received for TB patients under Nikshay Poshan Yojana.

Year	Paid(%)
2020	90%
2021	88%
2022	85%
2023	84%
2024	67%
2025(Jan to March 2025)	56%

Source: District Data

The table shows the year-wise percentage of patients who received payments under the Nikshay Poshan Yojana through Direct Benefit Transfer (DBT) from 2020 to March 2025. While DBT coverage remained high from 2020 to 2023-ranging from 90% to 84%-a noticeable decline occurred in 2024, with only 67% of beneficiaries receiving payments, primarily due to fund-related issues. In the first quarter of 2025, the percentage further dropped to 56%, attributed not to system inefficiencies but to incomplete treatment among many patients, resulting in only the first installment being disbursed.

CHAPTER 14

NATIONAL AIDS CONTROL PROGRAM (NACP) IMPLEMENTATION

In Kollam district, the National AIDS Control Programme (NACP) operates through a network of Integrated Counselling and Testing Centres (ICTCs), which provide essential services such as HIV counselling and testing, Prevention of Parent-to-Child Transmission (PPTCT), and HIV–TB cross-referrals. These ICTCs are linked with Targeted Intervention (TI) NGOs, ensuring a continuum of care that connects individuals to Antiretroviral Therapy (ART) centre at district hospital, Kollam, outreach and peer-support networks, opportunistic infection (OI) management, and home-based care services. The TI programme, a key component under NACP IV, has been active in Kerala since 1996 and focuses on reducing HIV transmission among core groups like Female Sex Workers (FSWs), Men who have Sex with Men (MSMs), Injecting Drug Users (IDUs), and Transgender persons, along with bridge populations such as interstate migrants and lorry drivers, gate keepers. In Kollam, special attention is given to extending these interventions to tribal regions such as Thenmala, Aryankavu, and Punalur, where limited access to health facilities and migration patterns heighten risk.

For care, support, and treatment (CST), services are provided through ART centres at the District Hospital and Link ART Centres (LACs) in Punalur and Kottarakkara, which make drug refills and follow-up easier for those from remote tribal hamlets. An STI clinic at Kollam District Hospital ensures early detection and treatment of sexually transmitted infections, which play a major role in HIV transmission. In tribal areas, the programme reaches communities through mobile health camps, ICTC outreach, awareness sessions, and involvement of hamlet ASHAs, tribal promoters, and peer educators, who help address stigma and encourage voluntary testing. Additional measures include HIV–TB cross-referral services, nutritional support, psychosocial counselling, and linkage with social welfare schemes for HIV-positive individuals. By integrating testing, prevention, treatment, and community-based support, Kollam district ensures that tribal populations also benefit from the full continuum of HIV prevention and care under the National AIDS Control Programme.

In Kollam district, the National AIDS Control Programme (NACP) provides a wide range of HIV services through six Targeted Intervention (TI) projects focusing on high-risk and

bridge populations, and six Integrated Counselling and Testing Centres (ICTCs) offering counselling, testing, PPTCT services, and HIV–TB cross-referrals. For treatment and management, the district has one designated STI & RTI clinic, one main ART Centre at the District Hospital, and two Link ART Centres (LACs) at taluk level, which make antiretroviral therapy and follow-up care more accessible, especially for remote and tribal populations. In addition, Kollam is supported by four government blood banks and thirteen private blood banks, all mandated to ensure 100% screening of donated blood, thereby strengthening safe transfusion services and contributing to comprehensive HIV prevention, care, and treatment across the district.

Table 14.1. NACP service facilities in Kollam

Name of HIV service centers	No. of HIV Service centers
Targeted interventions	6
Integrated counselling and testing centers	6
Designated STI & RTI clinic	1
ART Centre	1
Link ART	2
Blood Banks (Government)	4
Blood Banks (Private)	13

Source: District data

14.1 Targeted Intervention projects in (Kollam)

In Kollam district, there are a total of three Targeted Intervention (TI) projects functioning under the National AIDS Control Programme (NACP)—two focusing on Female Sex Workers (FSW) and one on Migrant populations. Until March 2025, the TI projects registered 2,747 FSWs and 9,792 migrants. During 2024–25, there were 379 new registrations among FSWs and 6,647 among migrants, with a portion registered in the first quarter itself. In terms of HIV testing, 3,047 FSWs and 2,057 migrants were screened in 2024–25, resulting in the detection of one HIV-positive case among migrants while none were found among FSWs.

With respect to care and treatment, the report shows that six FSWs and four migrants living with HIV are currently registered and receiving treatment at ART centres. During 2024–25, 8,493 FSWs and 5,548 migrants underwent STI screening, which led to the identification and treatment of 81 STI cases among FSWs and 87 among migrants. Additionally, syphilis screening was conducted for 2,258 FSWs and 20 migrants, identifying one syphilis-positive case among FSWs and none among migrants. Overall, the data highlights that Kollam's TI projects are actively registering high-risk and bridge populations, ensuring regular HIV and STI screening, linking HIV-positive individuals to ART services, and addressing co-infections like syphilis. This reflects the district's structured approach in reaching vulnerable groups, particularly FSWs and migrants, under the NACP framework.

Table 14.1.1 Targeted Intervention projects

Indicator	FSW	Migrant
Total No. of TI Projects	2	1
Total registration till March 2025	2747	9792
New registration 2024-25	379	6647
Total HIV Screening during 2024-25	3047	2057
Total no. of alive HRG Currently registered at ART Centres	6	4
Total HRG Positive currently on ART	6	4
Total STI Screening during 2024- 25.	8493	5548
STI Cases diagnosed and treated	81	87
Total syphilis screening during 2024-25	2258	20
Syphilis positive cases	1	0

Source: District data

14.2 Testing of General Clients (at ICTCs in district) - SIMS Data

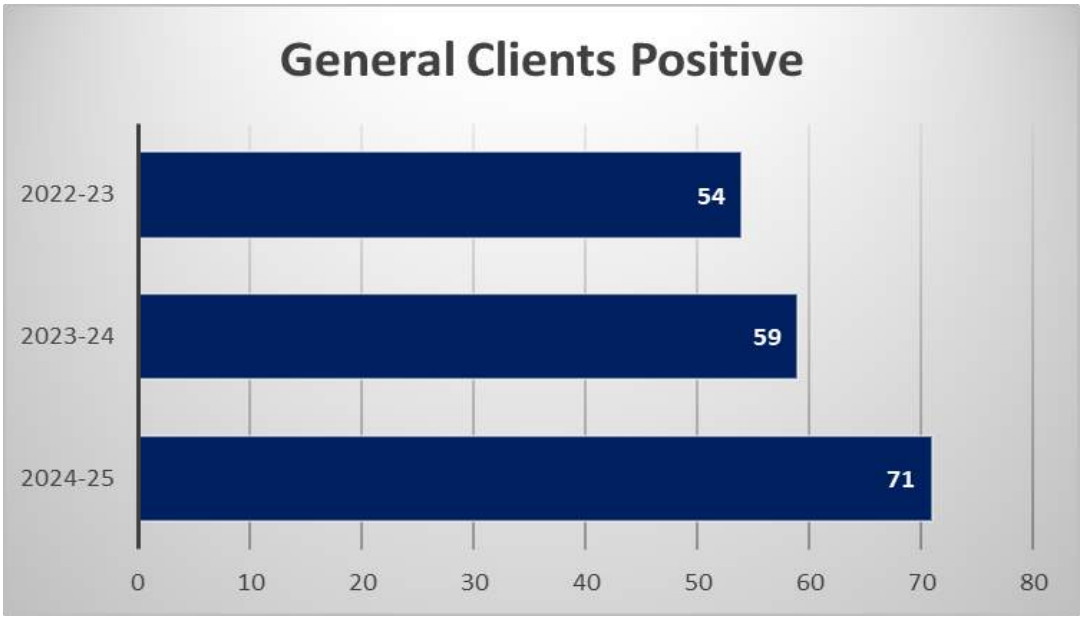
From 2022 to 2025, the testing of general clients for HIV at ICTCs and FICTCs indicates that the prevalence of HIV remains very low, though with slight yearly variations. In 2022–2023, a total of 1,19,404 clients were tested (72,995 at ICTC and 46,449 at FICTC), among whom 54 were found positive, reflecting a positivity rate of 0.04%. In 2023–2024, the overall testing coverage increased significantly to 1,53,486 clients (64,230 at ICTC and 89,256 at FICTC), resulting in 59 positives, again showing a 0.04% positivity rate. In 2024–2025, the number of clients tested decreased to 1,16,714 (55,750 at ICTC and 60,964 at FICTC), but the number of positives rose slightly to 71, giving a positivity rate of 0.06%. Although the total clients tested fluctuated across the years, the data consistently points to a very low prevalence of HIV among general clients, with positivity remaining below 0.1%, highlighting the effectiveness of awareness and preventive measures in the community.

Table 14.2.1 General Clients Details (April-March 2025)

General Clients Details (April-March 2025)							
Year	**ICTC**	**FICTC**	**CBS**	**PPP**	**Total**	**General Clients Positive**	**% Positive**
2024-25	55750	60964	-	-	116714	71	0.06
2023-24	64230	89256	-	-	153486	59	0.04
2022-23	72995	46449	-	-	119404	54	0.04

Source: District data

Graph 14.2.1 General Clients Positive



Source: District data

14.3 Prevention of Parent to Child Transmission of HIV

The data on antenatal HIV testing in Kollam district from 2022 to 2025 shows that while a large number of antenatal clients were tested each year, only a very small number of positive cases were identified, reflecting low prevalence. In 2022–2023, a total of 43,554 antenatal clients were tested, among whom 1 was a known case and 2 were newly detected. In 2023–2024, 35,754 clients were tested, with no known cases but 3 new cases reported. In 2024–2025, 30,605 clients were tested, and while 5 known cases were identified, no new cases were reported. This trend highlights that routine antenatal testing is being effectively implemented, and most of the cases detected are already known, indicating very limited fresh detections in recent years.

Table 14.3.1 Ante Natal HIV cases

Year	ICTC	FICTC	PPP	Total	Antenatal known case	Antenatal New Case
2024-25	14813	15792	-	30605	5	0

2023-24	**15895**	**19859**	**-**	**35754**	**0**	**3**
2022-23	**21056**	**22498**	**-**	**43554**	**1**	**2**

Source: District data

PALS Data

The PALS data provides details of HIV positive cases reported over three years, disaggregated by gender. In 2022–2023, a total of 54 cases were reported, of which 40 were males and 14 were females. In 2023–2024, the total increased slightly to 59 cases, comprising 40 males and 19 females. In 2024–2025, the total number of cases rose further to 71, with 55 males and 16 females. Overall, the data shows a gradual increase in the total number of reported cases across the years, with males consistently representing the majority of cases compared to females. This indicates a persistent gender difference in case distribution, with men being more frequently affected.

Table 14.3.2 HIV Positive Cases by Gender (2022–2025)

Year	Male	Female	Total
2024-25	55	16	71
2023-24	40	19	59
2022-23	40	14	54

Source: District data

14.4 Blood Collection

The table shows details of blood collection for the period April 2024 to March 2025. During this reporting year, government facilities collected a total of 11,864 units of blood and from the private facilities about 21076. This figure reflects the contribution of government health institutions in maintaining adequate blood supply for medical and emergency needs across the district during the specified time frame.

Table.14.4.1 Blood Collection: April 2024 – March 2025

No of Blood Units Collected Year 2024 April to March 2025	
Govt	**11864**
Private	**21076**

Source: District data

In conclusion, Kollam district has established a strong and integrated framework under the National AIDS Control Programme (NACP), offering comprehensive HIV prevention, testing, treatment, and care services. With six ICTCs, six TI projects, an ART center, two Link ART centres, and one STI clinic, the district ensures wide coverage, especially for high-risk groups like FSWs, migrants, and tribal populations. HIV prevalence remains very low, with routine antenatal and general testing showing minimal new detections. Special efforts in tribal outreach, gender-specific data monitoring, and consistent blood safety measures highlight Kollam's effective and inclusive approach to controlling HIV/AIDS.

Annexures

Details of PHC

Details of Medical Health Institutions																				
Sl. no	Name of Institution	No of bed	OT	ICU/ CCU	Ventilator	CT scanner	MRI scanner	US Scanner	TMT	ECHO	EEG	Angiogram	Angioplasty	Xray	Laser ray	Blood bank	clinical lab	pharmacy	ambulance	ICU ambulance
1	PHC Chavara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
2	PHC Alappad	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
3	PHC Azheekkal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
4	PHC Thodiyoor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
5	24X7 PHC Thazhava	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0

6	PHC KS Puram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
7	PHC Vallikkavu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
8	PHC Thevalakkara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
9	PHC Adichanalloor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
10	PHC Chathannoor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
11	PHC Chirakkara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
12	24X7 PHC Paripally	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
13	PHC Paravoor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0

	Pozhikkara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	PHC East Kallada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
15	PHC Perayam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
16	PHC Perinad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
17	24X7 PHC Perumon	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
18	24X7 PHC Mundroe Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
19	PHC Eravipuram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
20	PHC Elampalloor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

21	PHC Kottamkara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0
22	PHC Thrikkovilvattom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
23	PHC Kilikolloor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
24	PHC Thrikkaruva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
25	PHC Sakthikulangara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
26	PHC Melila	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
27	PHC Mylom	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
28	PHC S.N.Pura	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0

	m																				
29	PHC Thalachira	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0
30	PHC Ummannoor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
31	PHC Ezhukone Pavithreswaram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
32	PHC Ezhukone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
33	PHC Neduvathur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
34	PHC Pooyapally	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
35	PHC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

	Veliyam																			
36	PHC KUMMIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
37	PHC Mancode Chithara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
38	24X7 PHC Madathar a	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
39	PHC Elamad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
40	PHC Ittiva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
41	24X7 PHC Chadaya mangala m	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
42	PHC Kunnath ur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

43	PHC Poruvazhy	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
44	PHC Sooranad South	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
45	PHC West Kallada	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
46	PHC Alayamon	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
47	PHC Edamulakkal	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
48	PHC Karavaloor	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
49	PHC Yeroor	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
50	PHC Achenko	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0

	vil																			
51	PHC Aryankavu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
52	PHC Thenmala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
53	PHC Mancode Pathanapuram	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
54	PHC Pattazhi	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
55	PHC Pattazhi Vadakkekkara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
56	PHC Piravanthoor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
57	PHC Thalavoo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

	r																			
58	PHC Vilakkudi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	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**	**US Scanner**	**TMT**	**ECHO**	**EEG**	**ECG**	**Angiogram**	**Angioplasty**	**Xray**	**Laser ray**	**Blood bank**	**clinical lab**	**pharmacy**	**ambulance**	**ICU ambulance**
1	CHC Chavara	46	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	yes	yes	yes	0
2	CHC Mynagapally	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	yes	0
3	CHC Oachira	12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	yes	yes	0	0
4	CHC Thekkumbhagam	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	0	0
5	CHC Kalakod	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	yes	0

	e																					
6	CHC Nedumpana	75	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	yes	yes	0	0	
7	CHC Palathara	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	0	0	
8	CHC Mayyanad	70	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	yes	yes	yes	0	
9	CHC Thrikkadavoor	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	0	0	
10	CHC Kulakkada	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	yes	0	
11	CHC Nedumoncavu	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	0	0	
12	CHC Nilamel	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	0	0	

13	CHC Vellinallor	24	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	yes	yes	0	0
14	CHC Sooranad	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	yes	0
15	CHC Anchal	30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	yes	yes	yes	0
16	CHC Kulathupuzha	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	yes	yes	yes	0

DETAILS OF MEDICAL HEALTH INSTITUTIONS

Sl.	Name of Institution	No of bed	OT	ICU/CCU	Ventilator	CT scanner	MRI scanner	US Scanner	TMT	ECHO	EEG	ECG	Angiogram	Angioplasty	Xray	Laser ray	Blood bank	clinical lab	pharmacy	ambulance
1	THQH Pathanapuram	12	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes
2	THQH Sasthamcotta	140	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes
3	THQH Punalur	425	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4	THQH Krunagappally	190	Yes	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes
5	THQH Kottarakkara	217	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No	yes	Yes	Yes	Yes

6	TH Nedumgolam	66	Yes	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes
7	TH Kadakkal	101	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes
8	TH neendakara	60	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No	Yes	Yes	Yes
9	TH Kundara	22	yes	No	No	No	No	Yes	No	No	Yes	No	No	Yes	No	No	yes	yes	Yes
10	W&C Kollam	273	yes	No	No	No	No	yes	No	No	Yes	No	No	No	No	No	Yes	Yes	Yes
11	DH Kollam	537	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	yes	Yes	Yes	Yes
12	GMCH Parippally	500	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes

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