



# Kerala Medical Value Travel Vision 2030

**Destination for Modern Medicine and Traditional Medicine** 



August 2024

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# Foreword by CII

Dear Patrons.

I am glad to present the report on healthcare, being released at the 11th Edition of Kerala Health Tourism, being organised by Confederation of Indian Industry, Kerala.

As the convenor of the CII Kerala State Healthcare Panel, I am delighted to have worked tirelessly to promote Kerala's cutting-edge healthcare ecosystem, in line with the State Government's vision to establish the state as a premier destination for Medical Value Travel. Through our interactions with various stakeholders and collaborators, CII recognises Kerala's immense potential to emerge as a leading hub for Holistic Healthcare and Wellness. We believe the state is poised to offer immense opportunities for stakeholders to further accelerate the growth of these sectors.

Kerala has long been recognised as a beacon of excellence in healthcare, offering a unique proposition that blends high-quality medical care with an emphasis on holistic well-being. The state's healthcare system stands out not only for its advanced medical infrastructure but also for its innovative approaches to health and wellness. Kerala's commitment to universal healthcare, coupled with its rich tradition of Ayurveda, has positioned the state as a pioneer in Medical Value Tourism.



Visitors from across the globe are drawn to Kerala, not just for its landscapes and scenic beauty but for the assurance of world-class medical treatment at competitive costs. The state's healthcare institutions are equipped with cutting-edge technology and staffed by highly skilled professionals, ensuring that patients receive top-tier care. As we delve into this report, we explore Kerala's healthcare sector, its transformation, and future trends along with its strides in Medical Value Tourism, and the factors that make it a preferred destination for those seeking medical and holistic care. Kerala's healthcare model is a testament to the state's vision of integrating modern medicine with traditional wisdom, offering a blueprint for healthcare excellence.



#### Dr A Marthanda Pillai

Chairman, CII Kerala Health Tourism 2024 & **Chairman and Managing Director** Ananthapuri Hospitals & Research Institute

# Foreword by CII

Dear Patrons.

It gives me immense pleasure to present the report on Kerala's Healthcare sector being released as a part of 6th CII Global Ayurveda Summit and 11th Kerala Health Tourism 2024 event.

As we gather to explore the vast potential of Ayurveda, I am delighted to witness the remarkable growth of this ancient medical system in Kerala. which is now being recognised at a global scale, as a part of holistic wellness. Kerala has embraced Ayurveda's holistic approach, transforming the system into a beacon of wellness and healthcare excellence. Our state's unique blend of traditional knowledge and modern infrastructure has created a thriving ecosystem, attracting health practitioners and end users from across the globe. Our Ayurvedic hospitals, clinics, and retreats have become synonymous with exceptional care and compassion, with quality service delivered ensuring great results customer satisfaction.

As we move forward, I envision Kerala at the forefront of a groundbreaking approach that seamlessly integrates Ayurveda and modern healthcare techniques. By harnessing this synergy, we can transform medical value tourism, delivering exceptional experiences for patients. This report highlights the thriving Ayurveda ecosystem in Kerala, revealing opportunities for growth, innovation, and collaboration. It also encapsulates our vision for Kerala's healthcare sector - unlocking its vast growth potential and bolstering its position as a leader in holistic healthcare.



Dr Saji Kumar

Chairman, CII Global Ayurveda Summit 2024, Past Chairman, CII Kerala & Managing Director Dhathri Ayurveda Pvt Ltd

# Foreword by CII

Dear Patrons.

I am honoured to have collaborated with various stakeholders on this comprehensive report which showcases Kerala's healthcare sector, and I am pleased to release it at the 6th Edition of the Global Ayurveda Summit & 11th Kerala Health Tourism event. This aligns with the state's mission to establish Kerala as a premier holistic healthcare destination. Our unique strength lies in seamlessly integrating traditional Ayurvedic practices with cutting-edge modern medicine. I am delighted to see stakeholders from both Ayurveda and modern medicine come together under the aegis of CII, united in their quest to create a symbiotic ecosystem and promote an integrated approach to healthcare – a distinctive value proposition that Kerala proudly offers.

As I reflect on Ayurveda's remarkable journey in Kerala, I am filled with pride and optimism. Our state has emerged as a beacon of holistic healthcare, harnessing the science of Ayurveda to transform lives. The Ayurveda sector in Kerala has witnessed unprecedented growth, driven by our commitment to excellence, innovation, and patientcentred care.



The theme of the 6th Edition of the Global Ayurveda Summit, 'Mainstreaming Ayurveda Through Branding, Research, Al & Startups,' fills us with confidence about the growth that awaits our state. We are on the cusp of a transformational journey, especially in the Ayurveda sector, with the acceptance and credibility it has gained over the past few decades. Technological advancements, engagements with startups, especially in Al and emerging technologies, will redefine the future of the Ayurveda sector from a user experience perspective.

As evidence-based research expands, Ayurveda's credibility and acceptability as a preventive treatment protocol are gaining global recognition. Looking ahead, I envision Kerala pioneering in evidence-based research in Ayurveda, further solidifying its credibility and efficacy. By embracing cutting-edge technology and collaborations, we can unlock new frontiers in Ayurvedic diagnostics, treatment, and patient outcomes.

This report showcases the vibrant landscape of Ayurveda sector in Kerala, highlighting our achievements, challenges, and opportunities and will chart out the roadmap for a progressive growth of the sector.



#### **Dr P M Varier**

Convenor - CII Kerala Ayurveda Panel & Chief Physician & Trustee Arya Vaidya Sala, Kottakkal

# Foreword by KPMG in India

In the rapidly expanding field of medical value tourism, Kerala emerges as a unique and compelling destination, poised to set new standards on both the national and global stages. Renowned for its robust public health infrastructure, Kerala combines modern medical expertise with the time-honoured traditions of Avurveda and other indigenous healing practices. This integration, coupled with the state's serene natural environment, creates an unparalleled opportunity for Kerala to lead in medical value tourism.

Kerala's healthcare system is distinguished by its accessibility and affordability, ensuring high-quality medical services are available to a diverse population. The state's commitment to integrating modern medical practices with traditional wisdom offers a holistic approach to health that is both innovative and deeply rooted in historical knowledge. This unique blend is further enhanced by Kerala's breathtaking landscape—lush backwaters, tranquil beaches, and verdant hills providing an ideal backdrop for health and wellness retreats. The state's extensive experience in Ayurveda, which is celebrated for its efficacy in promoting overall well-being and preventing chronic diseases, complements its advanced medical facilities. Kerala's wellness market, driven by its rich heritage in Ayurveda, attracts a significant number of international visitors seeking

**KPMG** in India

comprehensive health solutions that combine ancient wisdom with contemporary medicine.

Looking ahead to 2030, the vision for medical value travel encompasses a future where destinations like Kerala are recognised not just for their medical excellence but also for their ability to offer a transformative experience that integrates healing and relaxation. This vision includes the development of specialised health tourism hubs that offer personalised care, advanced medical treatments, and immersive wellness experiences. KPMG in India Healthcare practice is proud to support this vision in partnership with CII Kerala and is eager to see how Kerala's unique assets can be harnessed to establish the state as a global leader in medical value tourism. We anticipate that the strategies outlined in this paper will pave the way for Kerala to not only enhance its position as a top destination for medical value travel but also to set new benchmarks for quality, innovation, and holistic health in the global arena.







# **Executive summary**

Kerala has consistently led India in healthcare, holding the top spot in NITI Aayog's Health Index for four consecutive years (2017-2020). 1 This reflects its robust health system, emphasising universal health coverage, comprehensive primary care, and effective disease control. The state boasts the highest life expectancy in India, averaging around 75 years, with women living up to 78 years, comparable to developed nations.<sup>2</sup> Significant improvements in maternal and child health are evident, with the Maternal Mortality Ratio (MMR) dropping from 81 to 43 per 100,000 live births and the Infant Mortality Rate (IMR) decreasing from 14 to 6.3

Kerala's healthcare infrastructure fares far better than the national average in terms of infrastructure (1.14 beds per 1,000 people) and Human Resources for Health ratio of 2.18 doctors, nurses, and midwives per 1,000 population, surpassing the national average of 1.07.4 Despite a budget allocation for health at 5.5 percent of its total expenditure<sup>5</sup>, Kerala has increased its Health and Family Welfare sector budget significantly. The state is also a hub for international medical tourism, attracting patients globally. Kerala has consistently topped the SDG India Index, 6 excelling in eliminating hunger, providing quality education, and performing well in climate action and gender equality.

Despite, Kerala's comprehensive approach to healthcare, the state grapples with various challenges, like its increased susceptibility to outbreaks given its geography, with its dense forest cover and intense monsoon pattern, along with a globally dispersed population. Despite having a robust public health system, the state has high per capita out-of-pocket expenditure making up to ~68 percent of the total health expenditure. 7 The Indian System of Medicine sector also faces challenges due to insufficient collaboration between the government and private sector, leading to siloed efforts and a lack of trust among professionals. Limited funding for research and development hinders scientific validation and integration with modern medical practices. Career paths in AYUSH are perceived as limited, and the presence of unregistered practitioners undermines the credibility of genuine treatments.

Additionally, AYUSH is often seen as less scientific compared to allopathy given the limited availability of structured research and presence of unregistered practitioners, affecting its acceptance and credibility.8

To address some of these challenges in the healthcare sector of Kerala, a multi-faceted approach is essential, some of which are mentioned in this paper. A holistic healthcare sector development and promotion plan is required to be developed for Kerala. A State level policy and guideline document for medical and wellness tourism development and promotion for projecting the state as best destination for medical tourism globally in needed. A board/ council for medical and wellness tourism development and promotion by bringing together various stakeholders a State Medical and Wellness Tourism Portal, helpdesk and a Patient Management System can be developed. Kerala should establish dedicated medicities/hubs for medical, AYUSH, and wellness to attract and sustain medical tourism.

Developing an academic system for training and certification in medical tourism is essential. The state should strategise to become a hub for healthcare professionals, exploring co-financed healthcare education institutes with private and international partners. Incentives for hospitals, AYUSH manufacturers, and wellness centers are crucial for investment and job creation. Simplifying the regulatory framework with a single-window approval system and adopting standard practices will enhance governance. Establishing a Public Health Observatory and Health Emergency Operation Centers will aid in monitoring health crises. Integrating public health services with AYUSH for effective cross-referral and leveraging resources for holistic population management are key objectives.

This paper outlines key areas of focus for developing Kerala as a global destination for medical value travel with an integrated healthcare system approach of modern medicine and traditional medicine, leveraging public-private sector partnerships, grass root level innovative practices, and interventions that have contributed to its success of become an ultimate destination for MVT by 2030.

Niti Aayog Health Index: Kerala tops in overall performance, UP shows best incremental change, India Today, Dec 2021, accessed on Aug 2024

Economic Review, Kerala, 2023, accessed on Aug 2024

Sample Registration System (SRS)-Special Bulletin on Maternal Mortality In India 2018-20, Census of India, accessed on Aug 2024

<sup>5.</sup> Kerala Budget Analysis, PRS 2024-25, accessed on Aug 2024

<sup>6.</sup> SDG Index dashboard, NITI Aayog, accessed on Aug 2024

<sup>7.</sup> Kerala's private health spending rises despite increased govt. investments in the sector - The Hindu, May 2023, accessed on Aug 2024

<sup>8.</sup> Primary consultation



# Section 1 Overview of Healthcare Sector in Kerala State

Kerala consistently ranks as one of the top states in India for healthcare, maintaining the number one position in NITI Aayog's Health Index from 2017 to 2020. This reflects Kerala's commitment to healthcare, universal coverage, quality infrastructure, and effective disease control. With an average life expectancy of 75 years, higher than the national average, and female life expectancy at 78 years, Kerala's achievements are due to its robust public health infrastructure and communitybased initiatives.

The state's health system serves as a blueprint for sustainable and inclusive healthcare development emphasising on primary care, extensive health service coverage, and active government involvement. The integration of AYUSH, focus on

wellness and medical tourism, and communitybased models offer valuable opportunities. This paper provides an extensive analysis of Kerala's health system, focusing on its status, grass root level innovative practices, and interventions that have contributed to its success. It explores the integration of AYUSH with allopathy, emphasising the linkages and potential for standardisation to enhance holistic healthcare delivery. Additionally, the paper understands current areas of priorities and potential interventions for further strengthening Kerala's health sector, including strategies for developing an integrated health system with AYUSH, advancing wellness, promoting medical tourism, and grass root level health system reforms.

## **Population and Demography**

- Kerala ranks 22nd in India with a geographical area of 38,863 km<sup>2</sup> (RHS 2019) and an estimated population of 3.59 crores, accounting for approximately 2.54 percent of India's total population.9
- Kerala's population has grown from 3.34 crores in 2011 to 3.59 crores in 2024 and is expected to reach 3.69 crores by 2036.10
- Elderly people aged 60 years and above constitute 16.5 percent of the state's total population.
- Kerala has a sex ratio at birth of 957 females per 1000 males, with a declining trend since 2011.10
- The literacy rate increased from 90.9 percent in 2001 to 94.0 percent in 2011, with male and female literacy rates at 96.1 percent and 92.1 percent, respectively.11



#### **Rural-Urban Distribution**

- · Kerala is divided into 14 districts.
- The state exhibits a more balanced rural-urban distribution, with 52.3 percent of its population residing in rural areas and 47.7 percent in urban areas. 12
- In comparison, across India, 64.13 percent of the population lives in rural areas, while 35.8 percent is urban. 11



<sup>9.</sup> Population Projections for India and States, 2011-2036, National Commission on Population, MoHFW, 2011-2036, accessed on Aug 2014 10. Kerala's Census - Population 2011-2024, Government of India, accessed on Aug 2024

<sup>11.</sup> Health Dossier Kerala - NHSRC and NHM, Maj Gen (Prof) Dr. Atul Kotwal, Executive Director, NHSRC, 2021 accessed on Aug 2024

<sup>12.</sup> India Urban Population 1960-2024 | MacroTrends, accessed on Aug 2024

# **Key Healthcare Indices**

- Maternal Health<sup>13</sup>: MMR declined from 81 (2007-09) to 43 (2016-18) per 100.000 live births.
- Neonatal, Infant, and Child Health<sup>14</sup>: IMR dropped from 14 (2005) to 6 (2019). NNMR and stillbirth rates (per 1,000 live births) decreased from 10.9 and 8.8 (2005) to 5 each (2018).
- Disease Profile<sup>15</sup>: In Kerala, communicable, maternal, neonatal, and nutritional diseases (CMNNDs) account for 11.83 percent of the total disease burden, while NCDs contribute 76.92 percent to disability.
- DALY Data: From 1990 to 2021, Kerala saw a shift towards noncommunicable diseases, with four of the top five diseases in 2021 being non-communicable (cardiovascular diseases, neoplasms, musculoskeletal disorders, mental disorders).<sup>16</sup>



## **Healthcare Spending and Budget**

- Kerala's Health Budget: Allocation is 5.5 percent of total expenditure, below the 6.2 percent state average. The Health and Family Welfare budget increased from INR 7,856 crore (2020-21) to INR 10,087 crore (2024-25), a 28.4 percent rise. 17
- Public Health Allocation: The 2024-25 budget reduced public health funding by approximately INR 800 crore, allocating INR 2,052.23 crore, down from INR 2,828.33 crore the previous year. To address this gap, innovative financing strategies, including public donations, were introduced to support government health institutions. This shift may have significant implications for Kerala's healthcare system.<sup>18</sup>



# **Healthcare Out of Pocket Expense**

- Out-of-Pocket Expenditure (OOPE): Per capita OOPE rose from INR 6,772 (2018-19) to INR 7,206 (2019-20), despite an increase in per capita government health expenditure (GHE) from INR 2,479 to INR 2,590, according to the National Health Accounts (NHA) 2019-20 report.<sup>19</sup>
- Total Health Expenditure (THE): Kerala's THE in 2019-20 was INR 37,124 crore, with INR 25,222 crore from OOPE. OOPE accounted for 67.9 percent of THE, the second highest in the country after Uttar Pradesh (71.8 percent).20
- Spending Trends: These trends have remained unchanged since the first NHA report in 2013-14. Kerala continues to lead in both public health spending and OOPE.<sup>21</sup>



- 13. Sample Registration System (SRS)-Special Bulletin on Maternal Mortality In India 2018-20, Census of India accessed on Aug 2024
- 14. National Family Health Survey 4 and 5, MoHFW, accessed on Aug 2024
- 15. Health Dossier Kerala NHSRC and NHM, Maj Gen (Prof) Dr. Atul Kotwal, Executive Director, NHSRC, 2021, accessed on Aug 2024
- 16. Global Burden of Disease 2021, KPMG Analysis, accessed on Aug 2024
- 17. Kerala Budget Analysis- PRS India, 2020-21, 2021-22, 2022-23, 2023-24, 2024-25, accessed on 2024
- 18. Kerala Budget 2024-25 | ₹800 cr. slash in allocation for public health The Hindu, Feb 2024, accessed on Aug 2024
- 19. National Health Accounts Report, 2019-20, accessed on Aug 2024
- 20. Kerala's private health spending rises despite increased govt. investments in the sector The Hindu, May 2023, accessed on Aug 2024
- 21. Kerala's private health spending rises despite increased govt. investments in the sector The Hindu, May 2023, accessed on Aug 2024

### Healthcare Infrastructure

- Kerala has bed availability of 1.14 beds per 1,000 people (2024) which is slightly higher than India average, however, lower than the WHO recommended number of 2.9 beds per 1,000 population. 22
- Kerala has a total of 8,439 health facilities, including 1,284 government hospitals, 5,109 Subcenters, 852 PHCs, 102 UPHCs and 214 UHWCs. 23
- As per NSSO data 2017-18, the OPD percentage of nonhospitalised cases using public facility in Kerala is 52 percent in rural areas and 42 percent in urban areas. The IPD - percentage of hospitalised cases using public facility is 40 percent in urban areas and 36 percent in rural areas. 24



#### **Healthcare Workforce**

- India has an average of 1.07 doctors per 1000 population with Kerala having HRH (doctors, nurses, and midwives) ratio of 2.18 doctors per 1000 population providing significant backbone to the health system. <sup>25</sup>
- Kerala has 32 medical colleges (11 Public, 21 Private) 16 and 134 nursing colleges (19 Public, 115 private). 26
- Over the years, the number of registered nurses have increased in the state, which is seen to cater to the population needs.<sup>27</sup>



#### **Medical Value Travel**

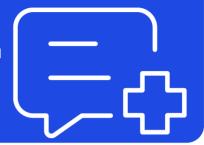
- Kerala has developed as a significant center for international medical tourism and traditionally receives patients from Sri Lanka, Mauritius, Maldives, the Middle East, Afghanistan, Africa, Nepal, Bhutan and Bangladesh. 28
- High quality treatment and wellness services at affordable costs, along with its backwaters, seashores, waterfalls, tea estates, etc. makes it a popular destination for medical tourism. 28
- Kerala Government and private sector/ forums continues towards developing and promoting Kerala as an international medical tourism destination.



- 22. KPMG Analysis
- 23. Kerala HWC Portal (KPMG Portal), accessed on Aug 2024
- 24. Health Dossier Kerala NHSRC and NHM, Maj Gen (Prof) Dr. Atul Kotwal, Executive Director, NHSRC, 2021, accessed on Aug 2024
- 25. KPMG Analysis
- 26. National Health Profile 2022, MoHFW, Nursing Colleges Report, Kerala Nurses and Midwives Council, 2022-23, accessed on Aug 2024
- 27. Number of Nurses: Registered, Kerala: General Nursing and Midwives (2005-2022), Central Bureau of Health Intelligence, CEIC Database, accessed on Aug
- 28. Why Kerala is the most popular destination for Medical Tourism in India and probably in the World- Experience Kerala, Oct 2019 accessed on Aug 2024

## Sustainable Development Goals (SDG)

- · Kerala achieved the highest rank along with Uttarakhand, both scoring 79 points in a composite assessment as per the SDG India Index by NITI Aayog (2023-24).
- Kerala has consistently achieved the first rank from 2018 onwards in the SDG India Index ranking. As per the SDG India Index data available, the state scored 69 points (2018-19), 70 points (2019-2020), 75 points (2020-21) and 79 points (2023-24). 29
- The state excelled in multiple categories, securing the first position in eliminating hunger and providing quality education. It also performed exceptionally well in climate action, ranking second, while attaining the third spot in both gender equality and advancing industry, innovation, and infrastructure.



#### Disease Outbreak and Disease Surveillance

- Given its permeable borders with a large portion of diaspora living abroad, its unique geography and climatic conditions, Kerala is susceptible to various disease outbreaks. Some prominent ones being Monkeypox, Chikungunya, Japanese Encephalitis, Acute Encephalitis Syndrome, West Nile encephalitis, Dengue, Viral Hepatitis, Nipah, Zika virus, anthrax and Swine Flu<sup>30</sup>
- In the last two decades Kerala has also become increasingly susceptible to zoonotic diseases.31



# **Energy & Climate Index**

 Kerala, along with Gujarat and Punjab were ranked as the top three performers in the category of larger states in the NITI Aayog's State Energy & Climate Index (SECI). The index offered a comprehensive evaluation system across six crucial parameters in the energy and climate sector. These parameters encompass DISCOM performance, energy accessibility and affordability, clean energy initiatives, energy efficiency, environmental sustainability, and new innovative efforts. These parameters encompass DISCOM performance, energy accessibility and affordability, clean energy initiatives, energy efficiency, environmental sustainability, and new innovative efforts.32



<sup>29.</sup> SDG Index India Dashboard, NITI Aayog, accessed on Aug 2024

<sup>30. 1</sup> state, multiple outbreaks: Why Kerala is often the first to record diseases - Firstpost, Dec 2023, accessed on Aug 2024

<sup>31.</sup> Kerala's battle against zoonotic diseases - The Hindu, March 2020, accessed on Aug 2024

<sup>32.</sup> Press Release: Launch Event of the State Energy and Climate Index Round 1, Press Information Bureau, Apr 2022, accessed on Aug 2024



# Section 2 Indian System of Medicine in Kerala

In India, the market is usually dominated by states like Kerala, Tamil Nadu and Karnataka, where the tradition of Ayurveda is deeply rooted. Ayurveda through its natural treatment options by herbal medicines, lifestyle modifications, holistic diets and overall wellness services draws both local and international customers. Kerala, with one of the most extensive networks of Ayurvedic experts and wellness facilities contributes to its position as the premier market for herbal products in India.<sup>33</sup> key features of the Traditional Medicine System Sector in Kerala are as follows:

## **Integrated Medicine Health System**

• Kerala Healthcare Delivery System comprises of Traditional Medicine System Sector along with Allopathy which plays an important role in creating an integrated health system. AYUSH system Kerala is mostly dominated by Ayurveda, Yoga, and Homeopathy.



## **Wellness Tourism Destination**

- The Traditional Medicine System, dominated by Ayurveda plays a pivotal role in Kerala's healthcare landscape. In modern times, when Ayurveda and naturopathy are gaining popularity across the western countries, Kerala is emerging as a leader in promoting and adopting these traditional medicine systems.
- Kerala emerged as a hub for medical tourism due to presence of state's rich biodiversity, coupled with centuries-old practices followed in Ayurveda. The medical tourism for Ayurveda in Kerala has been growing at 20-25 percent every year. 34





<sup>33.</sup> Invest Kerala- Ayurveda, accessed on Aug 2024

<sup>34.</sup> Global Avurveda Summit 2020, Cll. accessed on Aug 2024

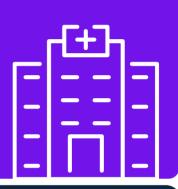
### **AYUSH Practitioners**

- Over the years, growth has been seen in the Traditional Medicine System Sector practitioners in Kerala from 41,606 in 2018 to 45,395 in 2021, where ayurveda doctors has increased from 25,125 in 2018 to 28,965 in 2021.35
- Similar growth trend is seen in other practices as well such as Unani practitioners have increased from 118 to 158, Siddha practitioners from 2,275 to 2,365, Naturopathy from 224 to 288. However, a decline is noticed in case of homeopathy practitioners from 13,847 in 2018 to 13,619 in 2021.35



#### **AYUSH Infrastructure**

- As in 2024, Kerala Traditional Medicine System Sector infrastructure comprises of 165 hospitals and 26 colleges coming with 1,990 seats, 35
- The size of Ayurveda product industry in the state is about Rs 1,500 crores. It has close to 700 Ayurvedic drug manufacturing units. 36



## **AYUSH and Health Sector Promotion**

- Kerala Government has continuously worked since last one decade towards developing and promoting the traditional medicine system and health sector in the State, national and international level.
- · Kerala Government released the AYUSH Health Policy in 2016, Working Group Report on Ayush in 2021 and the State budget reflecting the commitment towards the vision of developing the sector.
- Industry associations, private hospital association, medical tourism facilitator forums and other such bodies significantly contributing in driving sector promotion programme in the state.



Kerala's strong position in the wellness and medical tourism sectors, particularly through its emphasis on traditional Ayurvedic practices. The state continues to attract tourists worldwide due to its effective integration of wellness services with modern healthcare.

<sup>35.</sup> National Health Profile - 2016, 2017, 2018, 2019, 2020, 2021, 2022, Ministry of Health and Family Welfare, accessed on 2024 36. Global Ayurveda Summit 2020, CII, accessed on Aug 2024



**Section 3** Key Initiatives in Healthcare by Kerala

The Kerala health system is renowned for its robust infrastructure, efficient healthcare delivery, and equitable access to services. A unique blend of public and private sector collaboration has helped Kerala achieve high health indicators. The state's government has initiated several key programmes, including the comprehensive care aimed at modernising public health facilities, providing financial assistance for major diseases to name a few. State's focus on preventive healthcare, digital health solutions, and communitybased interventions stands out as a model of excellence in India.

Some of the key initiatives in the healthcare system in Kerala are as follows:

## Kerala Public Health Act 2023 37



The state government designed a comprehensive law to guide public health activities in the state, aims to provide a modern and holistic framework for tackling Kerala's current and future public health challenges. Key features of the new Act include unification of provisions from previous public health act, adoption of the 'one health' approach, focus on social determinants of health and various critical aspects of overall health and wellbeing of the population.

# **Primary Healthcare** Strengthening 38,39



Kerala Government started "Ardram Mission" in 2017 as a pilot project to strengthen the primary healthcare model to focus on expanding the coverage, strengthening existing primary healthcare centres, and addressing the population level needs. The objective of Andram Mission is to "re-engineer primary health centres to family health centres (FHC).

## **Interventions for** TB treatment 40



Government of Kerala has launched "Kerala TB elimination mission" aligning with the Sustainable Development Goals, with objectives to achieve TB Elimination by 2025, zero preventable deaths due to tuberculosis and zero catastrophic expenditure for the families of tuberculosis patients. The mission is envisaged as a peoples' movement against TB and provisioning of required resources, funding, equipment and other support.

# Kerala Against Rare Diseases (KARE) 41



The state has launched KARE in 2024 to address rare diseases holistically and with aims for prevention, early detection, advanced treatment, home-based care, and psychosocial support for patients and caregivers. Developing required healthcare facilities for diagnosis and treatment for the rear disease in the state.

<sup>37.</sup> The Kerala Public Health Act, 2023 Government of Kerala, accessed on Aug 2024

<sup>38.</sup> Kerala's progress towards universal health coverage: the road travelled and beyond, International Journal for Equity in Health, G.S. Adithyan, Aug 2024 accessed on Aug 2024

<sup>39.</sup> National Health Mission, Government of Kerala, accessed on Aug 2024

<sup>40.</sup> Making SDG a reality, Kerala Health, Department of Health and Family Welfare, 2021 accessed on Aug 2024

<sup>41.</sup> KARE initiative to prevent, manage rare diseases a decisive step by Kerala, says CM Pinarayi Vijayan - The Hindu accessed on Aug 2024

# **Elderly and Child** Care Programmes 42



Considering the rise in ageing population, Kerala government has undertaken two initiatives: Vayomithram - supports healthcare and treatment through mobile clinics for people aged above 65 and Pakalveedu (day home), which started off well under the comprehensive mental health programme. The state has implemented a health entitlement scheme from Nov 2022, catering to health care needs of 0 to 18-year-old children.

# **Integration of** healthcare schemes and standardisation 43



Karunya Arogya Suraksha Padhathi (KASP), launched in April 2019 aims to integrate all existing Health schemes through a government order to bring in standardisation in operations and better management by convergence. This scheme is being implemented in an insurance mode with an annual premium rate per family (42 Lakh families) Rs 1671 for the policy period 2019-2020.

## **National Digital** Health Literacy 44



Kerala launched Akshaya project to drive household level computer-literacy and numerous other initiatives such as the IT@School initiative (now known as KITE (Kerala Infrastructure and Technology for Education), which was launched in 2001 to make school students digitally literate, Information Kerala Mission and Kerala State IT Mission.

# **One Health** Initiative<sup>45</sup>



The Kerala state government has prioritised "One Health" approach as a vital collaborative effort to enhance the public health and ways the state has implemented several measures to support this initiative by establishing one Health institutes in Thiruvananthapuram and Kozhikode, training 2,50,000 volunteers for reporting and community and measures.

Kerala's healthcare system continues to be a model for other states in India, demonstrating the effectiveness of strong public health policies, substantial investment in healthcare infrastructure, and a commitment to universal health coverage and disease prevention.



- 42. As Kerala ages ahead of other states, elderly care a major worry, Times of India, Sudha Nambudiri, Sep 2023 accessed on Aug 2024
- 43. State Health Agency Kerala and National Health Authority accessed on Aug 2024
- 44. KPMG Thought Leaderships
- 44. Kerala govt gives priority to 'One Health' initiative for improving public health: Minister Veena George, ET HealthWorld, accessed on Aug 2024

#### Key initiatives in the Traditional Medicine System in Kerala

# **Indian systems of** medicine (ISM) in Kerala



Indian systems of medicine (ISM) have National Ayush Mission<sup>46</sup> (NAM) in place in Kerala, which aims to integrate traditional medicine systems into mainstream healthcare. It focuses on developing evidence-based protocols and improving access to quality AYUSH services. This centrally sponsored scheme (CSS) supports the growth of Ayurveda, Yoga, Unani, Siddha, and Homoeopathy in India. This largely includes Upgradation of AYUSH institutions, Human Resource support, Quality standardisation, and AYUSH Health and Wellness Centers.

## **Integrating AYUSH with National Health Mission**



National Health Mission (NHM), Kerala envisions mainstreaming of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy) and revitalisation of LHT (Local Health Traditions) with over 1300 institutions in these systems of medicine in the state.47 Various key activities undertaken by National Health Mission includes deployment of medical officers to AYUSH dispensaries under local selfgovernment institutions, and others.

# **AYUSH Policy and Working Group**



Kerala AYUSH Health Policy 2016 48 outlined the potential of traditional medicine systems to provide effective and affordable healthcare. This policy aims to nurture individual medicine systems by developing infrastructure, establishing educational institutions, improving drug quality control, building institutional and professional capacity, conducting practical research, and implementing community-based AYUSH interventions for comprehensive healthcare. This approach encompasses preventive, curative, and promotive aspects of health.

# **Increased investment** in AYUSH sector and infrastructure growth



Over the past two years, Kerala has spent more than INR 532.51 crore in the AYUSH sector primarily in infrastructure development, research, and public health programmes 49 with a commitment ~INR 207 Cr. for FY 2024-25 under NAM to enhance research, introducing pilots in supply chain management, diagnostics and mobile treatment units<sup>50</sup>, and upgrading 79 AYUSH hospitals through 'Kayakalp' awards, six Government AYUSH hospitals for NABH accreditation, and 150 government Ayush dispensaries.51

## Ease of Doing Business (EoDB) Reforms



Kerala has emerged as a key player in the AYUSH manufacturing sector through EoDB reforms alongside other states like Uttar Pradesh, Himachal Pradesh, Karnataka, Madhya Pradesh, Uttarakhand, Gujarat, Punjab, Rajasthan, Tamil Nadu, and Telangana.52

<sup>46.</sup> Indian Systems of Medicine - About NAM, Government of Kerala, accessed on Aug 2024

<sup>47.</sup> AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy), National Health Mission, Government of Kerala, accessed on Aug 2024

<sup>48.</sup> Kerala AYUSH Health Policy, 2016, Government of Kerala, accessed on Aug 2024

<sup>49.</sup> NITI Aayog lauds Kerala for initiatives in Ayush sector - The Hindu, accessed on Aug 2024

<sup>50.</sup> Kerala to implement projects worth Rs 97.77 crore in 'ayush' sector, Business Standard, accessed on Aug 2024

<sup>51.</sup> Kerala: Development projects in Ayush sector receive Rs 207.9 crore funding boost, The New Indian Express, Jul 2024, accessed on Aug 2024

<sup>52.</sup> A Decade of Transformative Growth in Ayush- 2014-2024, Ministry of Ayush, Government of India, accessed on Aug 2024

## **AYUSH programmes**



Over the past years, Kerala has launched several state projects like Drishti (ophthalmic care), free geriatric care, Jeevani (diabetes), Koumarabhritya (neonatal and infant care), Manasikarogya (mental health), Nirvisha (endosulfan affected adolescents) to name a few. Additionally, Kerala has also launched the Sports Ayurveda Research Cells (SARC) to support athletes, Dina Panchakarma Scheme for rejuvenation and detoxification and Arunima Project for preventing anaemia in women.

#### **Medical Value Travel**



Kerala's medical tourism sector is experiencing rapid growth, primarily due to its repute in providing cost-effective and quality treatments in modern as well as traditional medicine. Also, known for its wellness tourism, medical tourists from throughout the world travel to Kerala for spa, wellbeing getaways and preventive wellbeing services like stem-cell banking and DNA testing. This is further bolstered by Kerala's unique geography with stunning backwaters, hill stations and beaches providing a perfect gateway for medical tourists.

The competitive pricing of the Indian medical tourism industry is the most lucrative part of it. The orthopedic centers, heart surgery hospitals, dental clinics, and bariatric surgery are offering services at a significantly lesser cost when compared to America and U.K. According to a report, a heart bypass surgery costs USD144,000 in the U.S., USD25,000 in Costa Rica, USD20,000 in Mexico, USD24,000 in Thailand, but only USD8,500 in Kerala, India.53

A substantial number of specialists in India have either studied in the top medicinal schools of the world or have gotten their training abroad. Most medical specialists in Kerala are bilingual, board-certified, and accustomed to dealing with foreign patients. Kerala being well-connected via air to major destinations on the planet. And another appropriate reason is the climate of Kerala that stays moderate consistently



53. Why Kerala is the most popular destination for Medical Tourism in India and probably in the World- Experience Kerala, Oct 2019, accessed on Aug 2024



# **Section 4**

# Key Recommendations for Medical Value Travel in Kerala

# **Key Recommendations for** Medical Value Travel in Kerala

The abundance of opportunities lying in front of Kerala state across health and traditional medicine sector are vast that has potential for social and economic gains in the coming times. This paper based on the secondary research, and primary discussions with kev stakeholders unrevealed some of the key recommendations for developing and promoting healthcare sector in the state. Below are some of the key recommendations for public and private sector to brainstorm and develop structure initiative as deemed fit.



#### **Healthcare Sector Development and Promotion Programme** for State

A holistic healthcare sector development and promotion plan is required to be developed for Kerala State in compassing public health programmes, private sector, AYUSH and wellness. Dedicated and comprehensive efforts are required to drive the healthcare sector promotion agenda with objectives of increasing private sector participation, infrastructure development, investment & promotion engagement at national and international platforms, supporting structured financing at low cost, enabling ease of regulatory approval and interface between investors and the government. The healthcare sector in Kerala has huge potential for medical tourism and attracting foreign investment.



**Promotion** 

First step towards this journey is drafting of the State level policy & guidelines for medical and wellness tourism development and promotion for projecting the state as best destination for medical tourism globally. The guidelines should outline operating framework for providers, operators and patient management emphasising on patient safety and quality of healthcare based upon international norms. Also, there is a need for regular and end-to end monitoring of the services provided to the international patients. For this purpose, the state can establish a committee with clear guidelines for monitoring and evaluation of the services.





#### **Board/ Council for Medical Value Travel Development and Promotion**

Kerala state must evaluate setting up of board/ council for medical and wellness tourism development and promotion by bring together stakeholders from Department of Health and Family Welfare, Indian Systems of Medicine Department, tourism department, private hospital association/bodies, medical tourism facilitators and other stakeholders. The board/ council could work towards promoting health services and strengthening the ties between overseas and local healthcare players, AYUSH and wellness centers. Such a board/ council shall be backed by the Kerala government to promote the state as a medical tourism destination through international roadshows, participation in global healthcare events, and strategic marketing for positioning Kerala as a "medical and wellness hub" in India and globally.



#### State Portal for Medical **Value Travel**

State Medical & Wellness Tourism Portal, a single gateway for patients, providers, partners, and other stakeholders could be developed for experiencing the brand "Kerala". The state portal will empanel and register various providers through stringency criteria and rating system entrusting patients from across the globe with quality care and brand experience of Kerala State Medical & Wellness Excellence. The dedicated portal can be used to provide information about various hospitals, health, AYUSH, wellness centers, manufacturers, and others. Apart from just being a source of information, the web portal can be leveraged to take the entire process of application online, with the inclusion of payment gateway and real time SMS notification on the status of the application.



#### **Strong Patient Management System for Medical Value Travel** (MVT) For Services **Monitoring**

Kerala state could develop medical value travel patient helpdesk (physical, telephonic, mobile app, etc.) in association with private health & AYUSH players to facilitate entire iourney of medical value tourists and experience enhancement. Feedback and grievances could be assessed and resolved to ensure better experience and deliver the brand promises. The feedback collated could also enable the state in setting ratings for hospitals and wellness centers based on patients' experience. This would encourage competitive environment for service providers.



# 06

#### Medicities/ Hubs for Medical, AYUSH and **Wellness across State**

Establishing dedicated medicities/ hubs for medical, AYUSH and wellness to provide an ecosystem critical for attracting and sustenance of medical tourism. Such medicities/ hubs could be developed on PPP model with various private players to create a hub/zones of specialised medical, AYUSH and wellness centers with state of art facilities, medical tourist facilitation center, hotels, residential, transportation, connectivity to tourist spots and other.

Such medicities/ hubs could also house state of art training centres for medical, AYUSH, Yoga, wellness and research.



#### **Medical Tourism Certified Pool of Medical & Wellness Professionals**

Good quality and efficient medical and wellness specialists and support staff are critical in establishing as a preferred destination for care. Kerala should establish an environment for academic system for training, skill building and certification system focusing on medical tourism patients. The academic and skill programmes will be for multiple professionals like doctors, providers, support staff, medical tourism operators and other professionals across the value chain. Creating a medical tourism certified pool of medical & wellness professionals to deliver the promised experience under the brand "Kerala".



#### Setting-up Healthcare & AYUSH Education **Institutes with National** and International **Partnerships**

Kerala in the coming decade could explore setting up of healthcare education institutes in state with private sector and other countries with cofinancing and co-seat sharing model. Many countries across the globe continue to face healthcare workforce challenges and lack of good institutes in their country. Kerala could be hub for setting up of such institutes by the respective country and agreement of seat sharing and financing could be explored with government of India to set-up 'healthcare workforce export.





#### Performance/ **Investment Linked** Incentives scheme for **AYUSH Manufacturers** and Providers

It is important to incentivise hospitals, AYUSH manufacturers, pharmaceutical manufacturers and wellness centers for capital investment, iob creation, and patients treated with successful outcomes. The incentivisation could be in the form of subsidies on electricity, taxation or other form. The government's support as witnessed in promoting sectors like pharmaceuticals, medical devices, agriculture, manufacturing, etc., calls for similar promotion and schemes for the development of the medical and AYUSH sector.



#### **Ease of doing business** in Medical and AYUSH sector

There is an emerging need to simplify the regulatory framework with a singlewindow approval system, minimise compliance requirements and maximise self-governance by the adoption of standard practices and benchmarking. The State needs to develop conducive environment and ease of regulatory framework and process to attract and promote the sector.



#### **Developing Centre** of Excellences for **Traditional Medicines**

The state government has several AYUSH institutes and facilities across the state however, very few a recognised and renowned at the state or national or international level. Kerala has AYUSH embedded in the culture and practices that should be leveraged to further develop selected center of excellence across various streams of AYUSH and promote such institutes for national and international recognition and brand development.





#### Standardisation in **Ayurvedic product** formulations and manufacturing in Kerala

Ayurveda focusses more on holistic treatments and hence, products given as medications for same/similar conditions might vary for different individuals unlike in Allopathic Medicine where product formulations are strictly standardised and molecule targeted. Despite this unique feature of treatment modality. there is a need for national and state guidelines on product standardisation, clinical trials, quality checks, and market access.



#### **Bolster Supply Chain of** Raw material for Indian **Medicine System**

Availability of raw materials is a challenge in Kerala for manufacturing of Indian Medicine System with limited access to herbal farms and unregulated use of pesticides. The state has a rich repository of medicinal plants due to its peculiar phytogeography, but sustainable harvesting and cultivation practices are not uniformly implemented. Additionally, the lack of proper authorisation and regulation of herbal firms exacerbates these issues, impacting the quality and safety of herbal products. There is a need for government and private sector to explore development of raw material supply chain in the sector.



#### Leveraging Indian **Medicine System Beyond Wellness**

There is an untapped therapeutic potential of Indian medicine system like Ayurveda and overlapping of illness and wellness management. Till date, the perception of Ayurveda often leans heavily towards wellness management, like spa treatments, massages, and relaxation therapies. overshadowing the larger scientific and medical aspects of Indian medicine system like Ayurveda. This perception diminishes Ayurveda's credibility as a legitimate medical practice providing long-term health management and hinder its integration into mainstream healthcare. This calls for strategic, dedicated, and focused awareness generation from public and private sector towards sector promotion and emphasising the scientific and therapeutic aspects of Ayurveda over and above the wellness management.





#### Fostering Research and **Development in Indian Medicine System**

Despite the rich heritage and potential of Ayurveda and Yoga, there is limited research and development studies, particularly in the cultivation and utilisation of medicinal plants to scientifically validating their efficacy. This gap hinders the integration of Ayurveda into mainstream healthcare and limits its global acceptance. The state can invest in scientific research to generate evidence supporting the efficacy of AYUSH treatments, helping to establish it as a credible scientific discipline. Avenues can be explored to create innovation hubs and research centers dedicated to the study and development of AYUSH practices and medicines. The government can promote collaborative studies between AYUSH practitioners and modern medical researchers to explore integrative approaches and validate traditional knowledge.



#### **Professional Development of Traditional Medicine Practitioners**

The sector has inadequate staffing in clerical and administrative posts hampering efficient service delivery and data management. There is a need for Ayurveda Finishing Schools and Entrepreneurial Training Centres to equip graduates with both hard and soft skills that increase their employability and entrepreneurial capabilities. Additionally, the significant pay disparity between Avurveda and allopathy practitioners poses a major challenge for attracting and retaining talents in Ayurveda, impacting the overall growth and development of the sector. The career paths in Ayurveda are often seen as limited, with fewer opportunities for advancement and specialisation.



#### State healthcare PPP strategy across Modern **Medicine and Traditional** Medicine

A state level healthcare PPP strategy that articulates the government's intent, propose potential models, outlines structured financing instruments, measures to safeguard PPP projects, and state healthcare PPP cell to promote and enable PPP projects in healthcare system will go a big way in leveraging PPPs. The strategy would highlight the government's commitment to developing, sustaining and safeguarding PPP projects, thus helping gain the confidence of the private sector.

The industry consultations helped in outlining above interventions that will help Kerala to gear towards creating a holistic and integrated health ecosystem that not only meets the healthcare needs of its residents but also positions Kerala as a leading destination for wellness, traditional medicine, and medical tourism. The emphasis on quality, integration, and innovation is expected to drive growth and attract investments, benefiting both the local economy and the health sector.

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# List of abbreviations

ANMs	Auxiliary Nurse and Midwife
ASHAs	Accredited Social Health Activists
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy
CDC	Centers for Disease Control and Prevention
CII	Confederation of Indian Industry
CMNNDs	Communicable, Maternal, Neonatal, and Nutritional diseases
CSS	Centrally Sponsored Scheme
DALYs	Disability-Adjusted Life Years
DISCOM	Distribution Companies
DNA	Deoxyribonucleic Acids
EoDB	Ease of Doing Business
FHC	Family Health Centres
FY	Financial Year
GHE	Government Health Expenditure
HEOCs	Health Emergency Operation Centers
HRH	Human Resources for Health
IMR	Infant Mortality Rate
INR	Indian National Rupees
IPD	In-patient Department
IT	Information Technology
ISM	Indian School of Medicine
KARE	Kerala Against Rare Diseases
KASP	Karunya Arogya Suraksha Padhathi
KITE	Kerala Infrastructure and Technology for Education
LHT	Local Health Traditions
MMR	Maternal Mortality Ratio
MVT	Medical Value Travel
NABH	National Accreditation Board for Hospitals & Healthcare Providers
NAM	National Ayush Mission
NHA	National Health Accounts
NHM	National Health Mission
NITI Aayog	National Institution for Transforming India
NNMR	Neonatal Mortality Rate
OOPE	Out-of-Pocket Expenditure
OPD	Out- patient Department
PHCs	Primary Health Centres
PHO	Public Health Observatory
POE	Point of Entry
PPP	Public Private Partnerships
RHS	Rural Health Statistics
SARC	Sports Ayurveda Research Cells
SDG	Sustainable Development Goals
SECI	State Energy & Climate Index
SHCs	Sub Health Centres
THE	Total Health Expenditure
ТВ	Tuberculosis
UHC	Universal Health Coverage
UPHCs	Urban Primary Health Centres
UHWCs	Urban Health and Wellness Centres
WHO	World Health Organization

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