Advocacy Workshop Report:

National Kidney Health Advocacy Strategy for India

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Executive Summary

Chronic kidney disease (CKD) is a growing public health challenge in India, with an estimated prevalence of 13–16% and a disproportionate burden in rural populations. It is now among the leading causes of mortality, accounting for over 120,000 deaths annually. Despite this, kidney health remains under-prioritized, and care is largely focused on late-stage disease rather than prevention and early detection. This advocacy strategy was developed through preparatory discussions (January-March 2026) and an in-person workshop at the World Congress of Nephrology (WCN) 2026. Using the SMART advocacy framework, participants identified key system gaps and developed actionable, policy-relevant recommendations. The central objective is to integrate early CKD detection into India's existing non-communicable disease (NCD) platform through point-of-care testing for kidney function and albuminuria, targeting high-risk populations such as individuals with diabetes and hypertension. The strategy aims to achieve at least 60% screening coverage through a phased national scale-up over five years. By leveraging existing infrastructure, including the NCD program and primary care platforms, this approach offers a feasible and scalable pathway to shift India's kidney care model from a reactive, dialysis-centered system to a proactive, prevention-focused approach, with the potential to reduce disease burden, improve equity, and lower long-term healthcare costs. Such a transition has the potential to reduce the burden of kidney failure, improve equity in access to care, and mitigate the substantial economic impact of CKD on patients and the health system.

Working Group Composition

The advocacy strategy was developed by a multidisciplinary group of early-career nephrologists and international collaborators representing diverse geographic regions and health system contexts. The group included participants from India, Bangladesh, Sri Lanka, Nigeria, Uzbekistan, Thailand, and Canada, supported by staff from the International Society of Nephrology (ISN). Members brought expertise in clinical nephrology, health systems research, public health, and policy advocacy.

The collaborative nature of the group enabled the integration of both country-specific insights and broader comparative perspectives. Participants from India contributed detailed contextual knowledge of the national health system and policy environment, while others provided experience from similar low- and middle-income settings. This combination facilitated a balanced and pragmatic approach to identifying feasible advocacy strategies that are both locally relevant and globally informed.

Situational Assessment: The Country Case

Context of India

India is the seventh largest country in the world, with a land area of approximately 3.3 million square kilometers,[1] and is currently the most populous nation, with an estimated population of 1.45 billion. Despite its large size, population distribution is uneven, with a high concentration in certain states, contributing to regional variation in development and resource needs (**Figure 1A**).[2] Approximately 60% of the population resides in rural areas, and the country is culturally diverse, with considerable cultural, linguistic, socioeconomic, and geographic diversity across states and regions.

Administratively, India is a federal union comprising 28 states and 8 union territories. States are organized into six broad geographic regions (**Figure 1B**) and have their own governments with legislative powers, allowing for autonomy in policy implementation. In

contrast, union territories are governed directly by the central government.[3] This federal structure shapes governance across sectors, enabling context-specific decision-making at the state level while maintaining national oversight and strategic direction through central authorities.

Epidemiological Burden

Current estimates suggest that the countrywide prevalence of chronic kidney disease (CKD) in India is approximately 12-16%, indicating that nearly one in seven individuals may be affected.[4-6] This includes about 2.5% of the population with reduced kidney function (eGFR <60 mL/min/1.73 m²) and 15.4% with evidence of albuminuria.[7] However, there is substantial regional variation, with a disproportionately higher burden observed in rural compared to urban populations, and reported prevalence ranging from 5.7% to 18.2% across different parts of the country.[5] CKD has emerged as a major public health concern and is now among the leading causes of mortality, accounting for 175,637 deaths annually and ranking as the eighth leading cause of death in the country. Mortality attributable to CKD continues to rise, likely reflecting delayed diagnosis and limited access to timely and effective care. Projections suggest that CKD-related deaths could exceed 396,000 annually by 2040, potentially placing it among the top five causes of death.[8] In addition, CKD contributes to an age-standardised disability-adjusted life year (DALY) rate of 660 per 100,000, representing a substantial loss of productive life years across the population.[4]

The growing burden of CKD is closely linked to India's "dual epidemic" of diabetes and hypertension.[9] Type 2 diabetes is the leading contributor, accounting for nearly one-third of CKD, followed by hypertension at approximately 13%.[10,11] Other contributing factors include glomerulonephritis and environmental exposures.[11] Importantly, CKD also acts as a major amplifier of cardiovascular risk; impaired kidney function is now recognized as a

significant contributor to cardiovascular mortality in India, accounting for approximately 12% of cardiovascular deaths—surpassing obesity as a risk factor.[12] In addition to traditional causes, certain regions have reported a high prevalence of chronic kidney disease of unknown etiology (CKDu), particularly in areas such as the Uddanam region of Andhra Pradesh, where prevalence estimates range from 18% to as high as 60% (**Figure 1C**).[13-15] Similar patterns have also been reported among agricultural laborers in coastal southeastern India, particularly in the Tondaimandalam region spanning Tamil Nadu and Puducherry, where CKDu is the most common cause of CKD (51.7%), with approximately 75% of patients presenting at advanced stages.[16] Proposed contributing factors include environmental exposures such as groundwater contamination, heat stress, dehydration, and agrochemical exposure.[17,18] These findings highlight the heterogeneity of CKD epidemiology within India and underscore the need for region-specific approaches.

A major limitation in accurately characterizing the burden of CKD in India is the lack of comprehensive and nationally representative data.[19,20] Existing data are largely concentrated in southern states, while substantial gaps remain in northeastern regions and rural areas (**Figure 1D**).[5] This fragmented surveillance limits the ability to track disease trends and inform evidence-based policy decisions. Furthermore, deaths occurring outside formal healthcare settings, without proper medical certification, or with incomplete documentation are common and may lead to an underestimation of CKD-related mortality.[21]

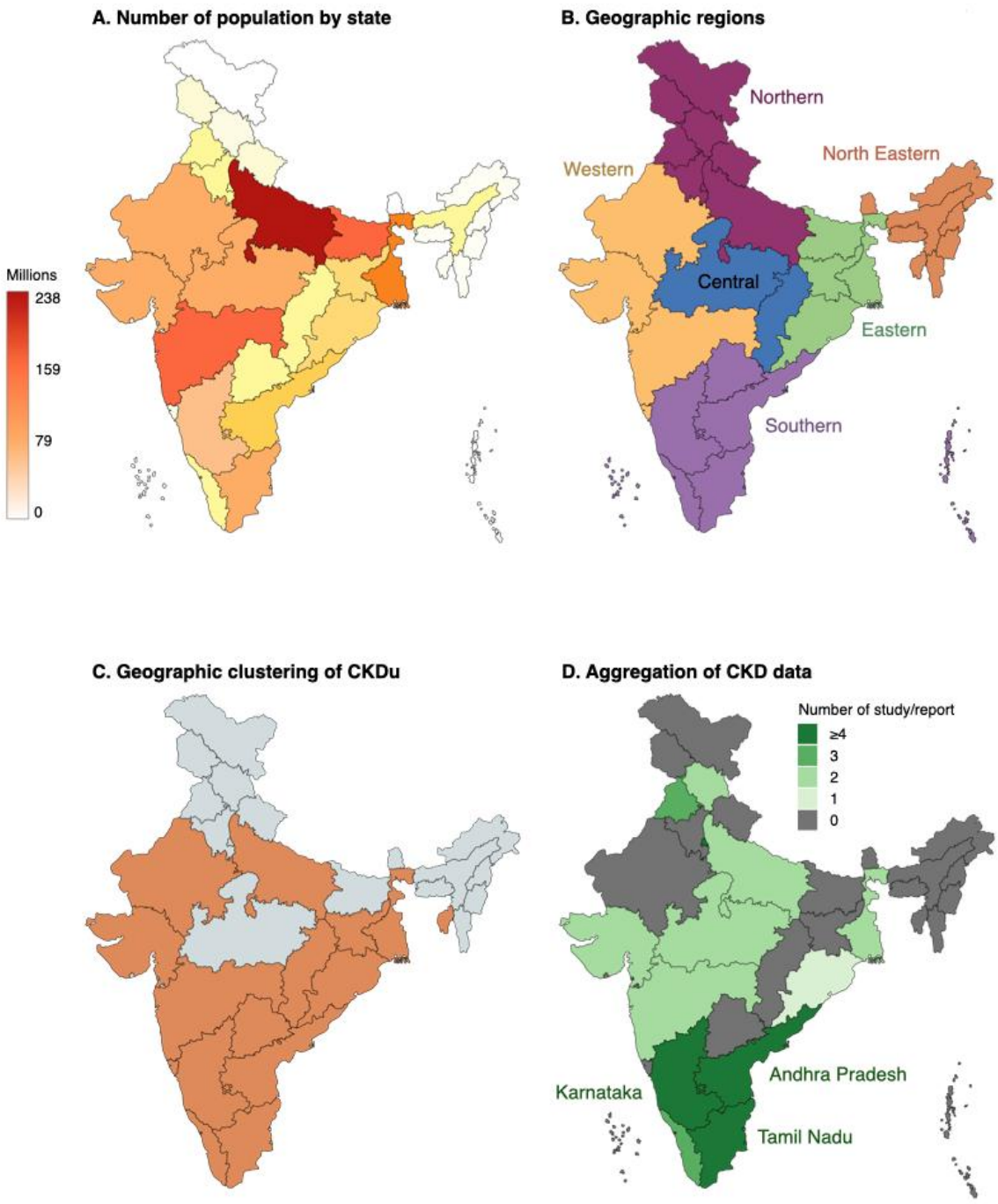


Figure 1. Contextual landscape of India. (A) Population distribution demonstrating marked geographic heterogeneity across states. (B) Six geographic regions of India.
(C) Geographic clustering of chronic kidney disease of unknown etiology (CKDu).
(D) Distribution of available CKD epidemiological data, highlighting substantial regional gaps, particularly in northeastern and rural areas.

Abbreviations: CKD, chronic kidney disease; CKDu, chronic kidney disease of unknown etiology.

Table 1. Situational assessment of kidney care in India across health system domains.

Domain	Challenges
Governance	• No unified national CKD strategy. • Kidney care governance is fragmented. • No national focal point or coordination mechanism for kidney health policy.
Policy	• No national renal policy or CKD-specific program. • Kidney disease is partially addressed through broader NCD initiatives such as the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD). • Dialysis services are supported through government programs (e.g., the Pradhan Mantri National Dialysis Programme), but policy implementation varies widely across states.
Burden and epidemiology	• Overall CKD prevalence 13-16% (variable by region), with approximately 200,000 new cases of kidney failure per year. • Diabetes and hypertension are major drivers. • CKDu is common in many regions.
Primary Care	• Urine dipsticks are generally available at PHCs, but not eGFR and UACR. • Access to laboratory monitoring is limited in many states. • One PHC typically serves 20,000-30,000 people, creating capacity constraints. • No national CKD screening or management program, leading to late diagnosis and referral. • Basic medications such as ACEIs/ARBs and statins are available.
Workforce capacity	• Approximately 3,000 nephrologists (~1.8 PMP), largely concentrated in urban tertiary centres. • Training pathways are well structured (MBBS→MD→DM/DNB), but workforce shortages persist. • Dialysis technician training programs exist but training quality and exposure vary by centre.
Financing and procurement	• Public funding for dialysis in some states, but inconsistent coverage across states. • Unclear eligibility criteria for free dialysis under public schemes. Despite the "One Nation–One Dialysis" program, indirect costs such as travel, food, and accommodation are often not covered, creating financial barriers. Only families with below-poverty-line income covered. • Significant out-of-pocket costs, particularly for medications and long-term care.
Clinical service delivery	• In-centre HD is available in many urban and government facilities. • Home HD is available but fully out-of-pocket. • PD remains underutilized and poorly reimbursed in many states (except Tamil Nadu, Kerala, which have more established PD programs). • Approximately 10,000-12,000 KT annually, mostly living donors. Waiting times up to 4-5 years • KT is coordinated by the National Organ & Tissue Transplant Organization (NOTTO) at national level, but allocation systems operate at state level by the Regional Organ & Tissue Transplant Organization (ROTTO). • Long-term immunosuppression costs lead to significant out-of-pocket expenses. • Conservative kidney management exist in some centres but no national palliative nephrology program.

Data and monitoring	• No national CKD or dialysis registry. • Data are fragmented across states and institutions, which limit ability to conduct national surveillance and evidence-based policy planning.
Awareness and partnerships	• Limited public awareness of CKD relative to other NCDs. • Religious and community organizations sometimes provide support for access to care and education. • National kidney health awareness campaigns are limited and not systematically integrated into broader NCD initiatives.

Abbreviations: ACEIs/ARBs, angiotensin-converting enzyme inhibitors/angiotensin II receptor blockers; CKD, chronic kidney disease; DM, Doctorate of Medicine; DNB, Diplomate of National Board; eGFR, estimated glomerular filtration rate; HD, hemodialysis; KT, kidney transplantation; MBBS, Bachelor of Medicine and Bachelor of Surgery; MD, Doctor of Medicine; NCD, non-communicable disease; PD, peritoneal dialysis; PHC, primary healthcare level; UACR, urine albumin-creatinine ratio.

Health System Landscape

India's healthcare system is characterized by a decentralized and mixed structure, reflecting the country's federal governance model and diverse socioeconomic context.[22] Responsibility for health service delivery lies primarily with state governments, while the central government, through the Ministry of Health and Family Welfare, provides overarching policy direction, national health programs, and strategic frameworks. This results in a hybrid system in which national priorities are defined centrally, but implementation, resource allocation, and service organization vary considerably across states.

The system comprises both public and private sectors, which coexist and play complementary but uneven roles.[22] The public sector forms the backbone of primary care, preventive services, and rural health delivery, and plays a central role in training the health workforce, which remains more prominent within public institutions. In contrast, the private sector dominates outpatient care and a substantial proportion of secondary and tertiary services, particularly in urban areas. This dual structure contributes to variability in access, quality, and continuity of care across regions and population groups.

Financing and Access

In recent years, India has undertaken major initiatives to strengthen its health system. The National Health Policy 2017[23] and the Ayushman Bharat program[24] have aimed to expand access to comprehensive primary care through Health and Wellness Centres and to enhance financial protection through publicly funded insurance. Despite these efforts, the system remains constrained by uneven distribution of infrastructure and workforce, particularly between urban and rural areas, which continues to shape disparities in health outcomes.

Healthcare financing in India follows a layered model, comprising national public funding, state-level top-up schemes, and limited private insurance coverage.[25] This structure contributes to significant inter-state variability and fragmentation across levels of care. Out-of-pocket expenditure remains high, accounting for approximately 47% of total health spending and continues to be a major barrier to equitable access to services.[26]

At the national level, several schemes provide financial protection for kidney-related care (**Table 2**). The Pradhan Mantri National Dialysis Programme (PMNDP)[27] offers free hemodialysis services; however, coverage is largely restricted to individuals below the poverty line (BPL), leaving a substantial proportion of patients—particularly those in low- to middle-income groups—without coverage. The "One Nation–One Dialysis" initiative aims to expand dialysis capacity across districts, but important gaps in financial protection persist.[28] Indirect costs—including transportation, food, and accommodation—are typically not covered, creating substantial barriers to access and continuity of care, especially for patients in rural and underserved areas. The Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (PM-JAY),[29] one of the world's largest publicly funded health insurance programs, covers hospitalization costs, including hemodialysis and kidney transplantation, with ongoing expansion to older populations. In addition, the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) program[30] improves access to affordable, quality-assured generic medicines through a

nationwide network of government-supported outlets, thereby reducing the cost burden of long-term treatment for chronic conditions such as diabetes and hypertension, which are key drivers of CKD.

Other national schemes target specific populations, including the Central Government Health Scheme for government employees, the Employees' State Insurance Scheme for workers in the organized sector, and the Dr. Ambedkar Medical Aid Scheme[31] for socioeconomically disadvantaged groups. Additional national financial assistance programs, such as the Rashtriya Arogya Nidhi[32] and the Prime Minister's National Relief Fund,[33] provide support for life-saving treatments, including kidney transplantation (**Table 2**).

At the state level, a wide range of top-up insurance schemes further shape access to care, although their scope and implementation vary substantially (**Table 2**). For example, the Ayushman Bharat-Arogya Karnataka (AB-ArK) scheme[34] serves as an integrated health assurance model providing cashless inpatient treatment up to ₹5 lakh for below-poverty-line families and subsidized care for above-poverty-line populations, primarily through a structured referral system linking public facilities to empaneled private hospitals. For cases falling outside insurance coverage, the Karnataka Chief Minister's Relief Fund[35] functions as a discretionary financial safety net, requiring direct application for one-time assistance. To address the shortage of in-centre hemodialysis capacity and the travel burden on rural populations, Karnataka has also introduced a peritoneal dialysis (PD) model under the Pradhan Mantri National Dialysis Programme, providing administrative approval for free PD services, including catheter insertion and monthly consumables.[36] This home-based approach utilizes district hospitals for patient training and centralized procurement through the Karnataka State Medical Supplies Corporation Limited, aiming to reduce catastrophic travel-related costs and improve quality of life in remote areas. However, despite evidence supporting the cost-effectiveness of PD, hemodialysis remains the dominant modality.[37-39]

In contrast, Tamil Nadu has implemented a more comprehensive and integrated approach. The Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS)[40] provides coverage for tertiary care, including high-cost procedures and organ transplantation, while the Makkalai Thedi Maruthuvam program[41] extends services into the community by delivering screening and essential medications for hypertension and diabetes directly to households. This model emphasizes early detection and longitudinal management of chronic diseases, thereby addressing upstream drivers of CKD. These examples illustrate the broader heterogeneity across states, where access to kidney care services—including dialysis modalities, transplantation, and long-term management—depends heavily on local policy priorities and implementation capacity.

Overall, while India has made significant progress in expanding financial protection and service availability, persistent gaps in coverage, fragmentation across financing mechanisms, and high out-of-pocket costs continue to limit equitable access to care. Importantly, these structural challenges contribute to delayed diagnosis and treatment, reinforcing a health system that remains oriented toward late-stage, dialysis-dependent care. Addressing these gaps through integrated, prevention-focused strategies—particularly within existing non-communicable disease (NCD) platforms—represents a critical opportunity to improve kidney health outcomes at scale.

Table 2. National health schemes and state-level financing support for kidney care in India

Level	Scheme
National level	**Pradhan Mantri National Dialysis Programme (PMNDP)** - Coverage: Free dialysis services to below-poverty-line families - "One Nation-One Dialysis" (ONOD): Set up an 8-unit dialysis centre per each of 688 districts in 2026, hemodialysis-preferred policy **The Comprehensive Cover: Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PM-JAY)** - World's largest government-funded health insurance scheme - Coverage: hemodialysis and surgical costs of kidney transplantation with expanding to senior ≥70 years in 2026 **Pradhan Mantri Bhartiya Jan Aushadhi Kendra (PMBJK)** - Coverage: offer high-quality generic medicines at lower prices **Central Government Health Scheme (CGHS)** - Coverage: Central government employees and pensioners **Employees' State Insurance Scheme (ESIS)** - Coverage: Employees in organized sectors **Dr. Ambedkar Medical Aid Scheme** - Coverage: Scheduled Caste (SC) and Scheduled Tribe (ST) with low family income - Includes kidney surgery, dialysis and kidney transplantation **Rashtriya Arogya Nidhi (RAN)** - Coverage: One-time grant for life-saving procedures, including kidney transplantation, to below-poverty-line families **Prime Minister's National Relief Fund (PMNRF)** - Coverage: Major illnesses including kidney failure

State level	**Andhra Pradesh:** Dr. YSR Aarogyasri Health Care Trust **Arunachal Pradesh:** Chief Minister Arogya Arunachal Yojana (CMAAY) **Assam:** Ayushman Asom – Pradhan Mantri Jan Arogya Yojana (Atal Amrit Abhiyan) **Delhi:** Delhi Arogya Kosh (DAK) **Goa:** Deen Dayal Swasthya Seva Yojana (DDSSY) **Gujarat:** Pradhan Mantri Jan Arogya Yojana – Mukhyamantri Amrutam (PMJAY-MA) **Haryana:** Ayushman Bharat – Chirayu Haryana Yojana **Karnataka:** Ayushman Bharat – Arogya Karnataka; Chief Minister's Relief Fund (CMRF) **Kerala:** Karunya Arogya Suraksha Padhathi (KASP) **Maharashtra:** Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY) **Odisha:** Biju Swasthya Kalyan Yojana (BSKY) **Punjab:** Mukhmantri Sehat Bima Yojana (MMSBY) **Rajasthan:** Mukhmantri Ayushman Arogya Yojana (MAAY); Delhi Arogya Kosh (DAK); Mohalla Clinics **Tamil Nadu:** Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS); Makkalai Thedi Maruthuvam (MTM) **Telangana:** Aarogyasri Health Care Trust **West Bengal:** Swasthya Sathi Scheme

Key Gaps and Barriers

Despite the growing burden of chronic kidney disease (CKD) in India, several systemic gaps continue to limit effective prevention, early detection, and management (**Table 3**).

1. Limited early detection and screening capacity

CKD is frequently diagnosed at advanced stages due to the absence of systematic, risk-based screening programs at the primary care level.[42] Although diabetes and hypertension programs exist, integration of kidney health—particularly routine serum creatinine with estimated glomerular filtration rate (eGFR) and urine albumin testing—remains inconsistent. As a result, opportunities for early intervention are often missed.

2. Inequitable access to care, particularly in rural areas

Significant disparities exist between urban and rural populations in access to diagnostics, specialist care, and treatment services. Rural and underserved regions face shortages of trained healthcare providers, limited laboratory infrastructure, and delayed referral pathways, contributing to worse outcomes.

3. Fragmented health system integration

Kidney care is not consistently integrated into broader NCD strategies or primary health care services. Care pathways are often fragmented, with limited coordination between primary, secondary, and tertiary levels, leading to inefficiencies and delays in management.

4. Financial barriers and limited coverage for early-stage care

While public financing mechanisms support kidney replacement therapy (KRT) in some settings, coverage for early-stage CKD detection and management—including essential diagnostics and medications (e.g., angiotensin-converting enzyme inhibitors/angiotensin II receptor blockers; ACEIs/ARBs, and sodium-glucose cotransporter 2 inhibitors; SGLT2i)—remains limited or inconsistent. This results in delayed care-seeking and increased out-of-pocket expenditures.

5. Workforce constraints and limited task-sharing

There is a shortage of nephrologists and trained healthcare personnel, particularly in non-urban settings. Task-sharing and task-shifting strategies—such as empowering nurses, community health workers, and primary care providers to deliver CKD screening and management—are not yet fully implemented at scale.

6. Gaps in data systems and surveillance

The absence of a comprehensive, nationally representative CKD surveillance system limits accurate assessment of disease burden, trends, and outcomes. Existing data are fragmented and geographically skewed, constraining evidence-based planning and evaluation.

7. Variable quality and reliability of public health information

With increasing reliance on digital platforms for health information, the quality and accuracy of CKD-related content remain highly variable. Limited regulation and oversight contribute to the spread of misinformation, which may influence patient behaviors and decision-making.

8. Environmental and region-specific risk factors

Certain regions face additional challenges, including high prevalence of CKD of unknown etiology (CKDu), likely linked to environmental exposures such as heat stress, dehydration, and groundwater contamination. These region-specific drivers require tailored public health responses.

Opportunities to address and expand kidney health

Despite existing challenges, India has several strategic opportunities to strengthen kidney health through integration, innovation, and system-level reforms (**Table 3**).

Table 3. Barriers and opportunities for chronic kidney disease detection program in India.

Barriers	• Guideline recommendations to screen for CKD among all outpatient attendees at hospital level are not implemented in real world practice. • Late detection and late referral → dialysis-dependent care • Fragmented care between public & private sectors • Urine dipsticks are generally available at primary healthcare level, but not eGFR and UACR.
Opportunities	• Strong NCD platform (diabetes, hypertension, and common cancers) • Existing infrastructure: - Health & Wellness Centres - Ayushman Bharat Program • Political momentum for NCDs • ACEIs/ARBs are available at primary healthcare level.

Abbreviations: ACEIs/ARBs, angiotensin-converting enzyme inhibitors/angiotensin II receptor blockers; CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; NCD, non-communicable disease; UACR, urine albumin-creatinine ratio.

1. Integrate CKD into existing NCD and primary care platforms

India's established NCD programs and Health and Wellness Centres provide a strong foundation to incorporate CKD detection and management. Integrating routine kidney function testing (serum creatinine with eGFR and urine albumin) into diabetes and hypertension care pathways can enable early identification and timely intervention at scale.

2. Expand risk-based screening and early detection

Targeted screening of high-risk populations—particularly individuals with diabetes, hypertension, or cardiovascular disease—offers a cost-effective approach to identify CKD early. Leveraging point-of-care testing and simplified screening algorithms can facilitate implementation in primary care and community settings.

3. Strengthen workforce capacity through task-sharing

Task-sharing models can extend kidney care beyond specialist settings by training primary care physicians, nurses, and community health workers to perform screening, initiate basic management, and coordinate referrals. This approach is particularly critical in rural and underserved areas.

4. Improve access to essential diagnostics and medications

Ensuring availability and affordability of key diagnostics (e.g., creatinine, urine albumin-to-creatinine ratio; UACR) and evidence-based therapies (e.g., ACEIs/ARBs, SGLT2i) within primary care can significantly improve outcomes. Inclusion of these services and medications in public financing schemes can reduce out-of-pocket costs and improve equity.

5. Leverage digital health and telemedicine

Digital platforms can support screening, risk stratification, follow-up, and patient education. Tele-nephrology models can connect primary care providers with specialists, improving access to expertise in resource-limited settings and enabling more timely referrals.

6. Establish national surveillance and data systems

Developing a standardized, nationwide CKD surveillance system—integrated with existing health information systems—can improve monitoring of disease burden, guide policy decisions, and support evaluation of interventions. Regional data validation and harmonization will be essential.

7. Address misinformation through multi-stakeholder engagement

Given the growing role of digital platforms in health information dissemination, there is an opportunity for professional bodies, academic institutions, and public health agencies to collaborate in developing trusted, evidence-based educational content. Establishing guidance for health communication and partnering with platforms can help mitigate misinformation.

8. Implement region-specific strategies for high-risk areas

Targeted interventions are needed in regions with high prevalence of CKDu, including environmental monitoring, occupational health measures (e.g., heat stress prevention), and community-based screening programs. Tailored approaches will be essential to address local drivers of disease

SMART Advocacy Framework for integrating CKD into primary healthcare

Building on the situational assessment, we applied the SMART Advocacy Cycle to translate identified gaps into coordinated policy action.[43] This framework focuses on aligning stakeholders, defining clear policy asks, and driving implementation through existing health system platforms (**Figure 2**). A central principle underpinning this approach is that early detection serves as the most cost-effective, feasible, and immediately actionable entry point, enabling rapid progress without requiring major new system investments.

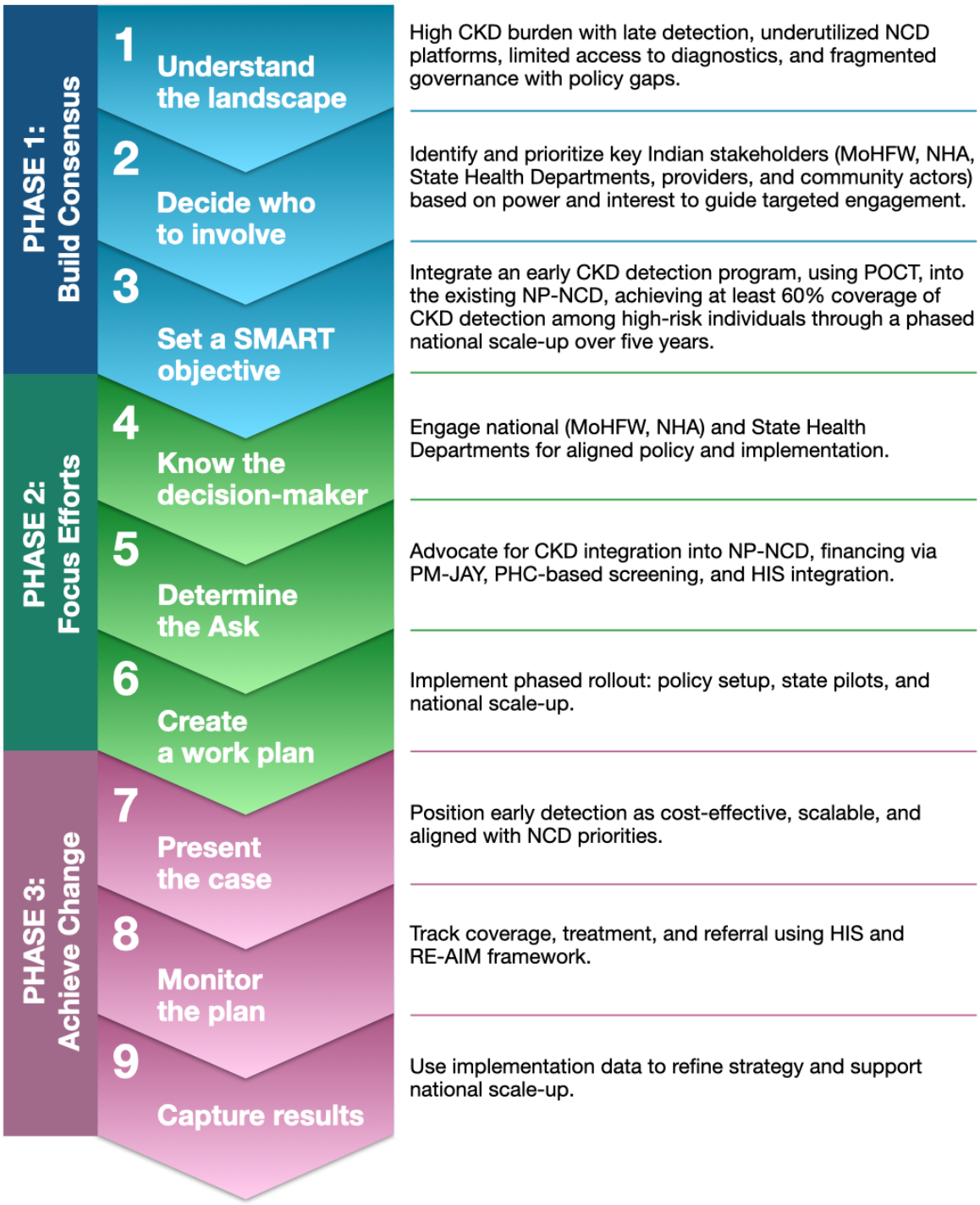


Figure 2. SMART Advocacy Framework for integrating chronic kidney disease detection program into primary healthcare in India.

Abbreviations: CKD, chronic kidney disease; HIS, Health Information System; MoHFW, Ministry of Health and Family Welfare; NCD, non-communicable disease; NHA, National Health Authority; NP-NCD, National Programme for Prevention and Control of Non-Communicable Diseases; PHC, primary health care; PM-JAY, Ayushman Bharat Pradhan Mantri Jan Arogya Yojana Scheme; POCT, point-of-care testing.

Phase 1: Build Consensus

Landscape of CKD detection in India

There are implementation gaps in India. While health system platforms for non-communicable diseases already exist, CKD detection is not systematically embedded within them. This creates a disconnect between available infrastructure and missed opportunities for early intervention. Integrating simple, low-cost tests into routine care represents a practical and scalable solution that can be implemented immediately within current systems.

Key stakeholders and stakeholder mapping

Effective implementation requires coordinated engagement across multiple stakeholders with varying levels of influence and interest. To guide advocacy efforts, stakeholders were mapped according to their level of power (ability to influence policy and resource allocation) and level of interest (degree of engagement in CKD care and outcomes) (**Figure 3**).

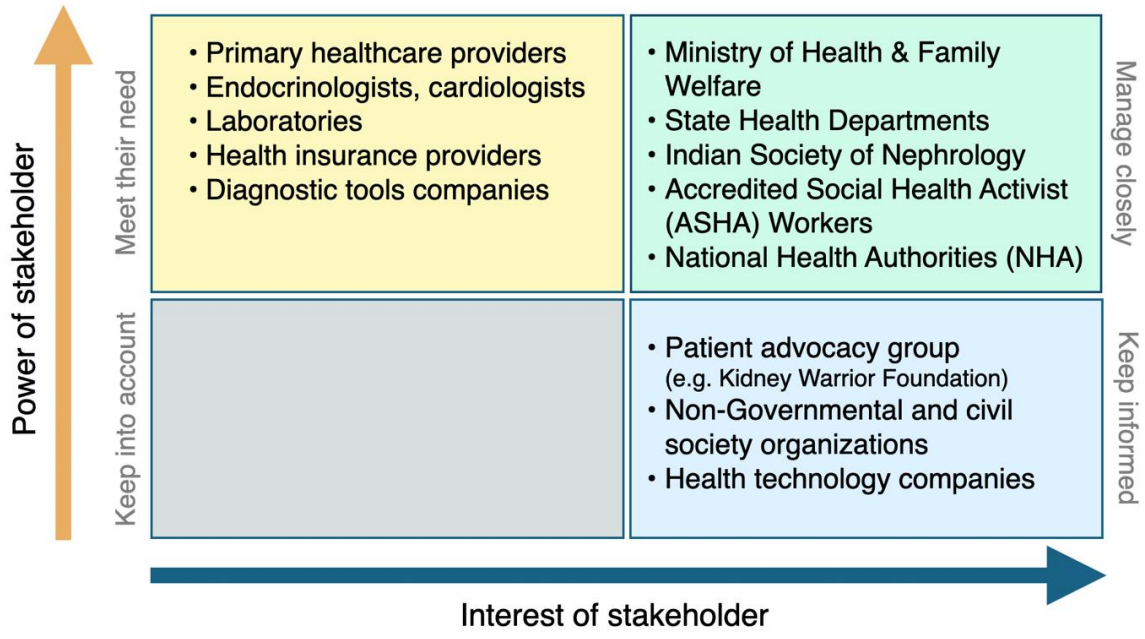


Figure 3. Stakeholder mapping by level of power and interest for chronic kidney disease advocacy in India.

Stakeholders with high power and high interest, including the Ministry of Health and Family Welfare (MoHFW), National Health Authority (NHA), State Health Departments, the Indian Society of Nephrology, and frontline health workers such as accredited social health activists (ASHAs), are critical actors who should be closely engaged and actively managed. These stakeholders are central to policy endorsement, financing decisions, and implementation at scale.

Stakeholders with high power but relatively lower direct interest, such as health insurance providers, diagnostic companies, laboratories, and non-nephrology specialists (e.g., endocrinologists and cardiologists), should be strategically engaged by aligning CKD detection with their existing priorities, particularly within diabetes and cardiovascular care pathways. Their involvement is essential to support service delivery, diagnostics, and sustainability.

Stakeholders with high interest but lower power, including patient advocacy groups, non-governmental organizations, and med-tech startups, play an important role in raising awareness, supporting community engagement, and driving innovation, and should be kept informed and mobilized to strengthen advocacy momentum.

This structured stakeholder mapping enables targeted engagement strategies, ensuring that high-impact actors are prioritized while maintaining broader alignment across the health system. Such an approach is essential to facilitate policy adoption, resource mobilization, and effective implementation of CKD detection within existing primary care and NCD platforms.

Strategic SMART objective

The primary objective is to integrate an early CKD detection program into existing primary healthcare and NCD services. Specifically, we propose the incorporation of point-of-care CKD testing into the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD), targeting high-risk populations, including individuals

with diabetes and hypertension. The program aims to achieve at least 60% coverage of CKD detection among high-risk individuals through a phased national scale-up over five years.

This objective prioritizes interventions that are operationally feasible within existing workflows, leveraging current infrastructure and workforce, while delivering high-impact outcomes at relatively low cost. By focusing on early detection, the strategy enables timely intervention, reduces progression to advanced disease, and optimizes the use of health system resources.

Phase 2: Focus Efforts and Advocacy Strategies

Decision-makers and policy levers

Key decisions related to program integration, financing, service delivery, and monitoring are distributed across national and subnational levels, requiring coordinated engagement with multiple actors. At the national level, the MoHFW is responsible for setting policy direction and issuing programmatic guidance within national health programs, including the NP-NCD. The NHA oversees financing mechanisms within publicly funded insurance schemes, shaping coverage and reimbursement policies.

At the subnational level, State Health Departments are responsible for translating national policies into practice, including implementation within Health and Wellness Centres, workforce deployment, and service delivery organization. Given India’s decentralized health system, effective integration of CKD care depends on alignment between national policy direction and state-level execution capacity.

The advocacy 'Asks'

Based on the identified policy and implementation gaps, we defined a set of targeted, stakeholder-specific advocacy asks aligned with governance, financing, service delivery, and data systems.

At the national policy level, we propose that the MoHFW issue a directive to integrate early CKD detection into the NP-NCD. This should include the use of point-of-care testing (POCT), alongside standardized clinical protocols and clear referral pathways to ensure continuity of care.

From a financing perspective, engagement with the NHA is critical to ensure sustainability. We recommend inclusion of CKD detection and essential medications—such as ACEIs/ARBs and SGLT2 inhibitors—within PM-JAY benefit packages. This would enable reimbursement for both early detection and ongoing management, reducing financial barriers to care.

At the implementation level, State Health Departments should operationalize CKD detection among high-risk populations, particularly individuals with diabetes and hypertension, within Health and Wellness Centres. This includes workforce training, availability of diagnostic tools, and integration into routine primary care workflows.

Finally, to support monitoring and accountability, we recommend that both MoHFW and State Health Departments integrate CKD indicators—such as eGFR, albuminuria, and linkage to care—into existing health information systems. Routine reporting and the development of performance dashboards will be essential to track progress, identify gaps, and guide continuous improvement.

Phased implementation plan for CKD integration

To operationalize the proposed advocacy strategy, we developed a phased implementation pathway aligned with policy, financing, and service delivery structures (**Table 4**).

Table 4. Phased implementation plan for integrating chronic kidney disease detection program into Primary Healthcare in India.

Phase	Stakeholders	Key activities
Phase 1: Policy & setup	MoHFW NHA	• Issue a national directive to integrate CKD detection into the NP-NCD • Define a standardized service package, including point-of-care creatinine testing and urine assessment, with clear referral pathways • Allocate resources to support implementation • Incorporate CKD detection and essential medications into the national benefit packages • Identify and select pilot states for initial implementation
Phase 2: Pilot	State Health Departments	• Implement CKD detection at Health and Wellness Centres using a risk-based approach targeting individuals with diabetes and hypertension • Train frontline health workers • Deploy point-of-care diagnostic tools • Conduct public awareness and community engagement activities • Integrate CKD indicators into the Health Management Information System (HMIS)
Phase 3: Scale-up	MoHFW State Health Departments	• Expand the program nationwide • Strengthen supply chains and referral systems • Integrate CKD detection and management into routine NCD service delivery
Monitoring	State Health Departments	• Monitor key indicators, including screening coverage, early detection, and linkage to care • Establish routine reporting through monthly dashboards and quarterly performance reviews

Abbreviations: CKD, chronic kidney disease; MoHFW, Ministry of Health and Family Welfare; NCD, non-communicable disease; NHA, National Health Authority; NP-NCD, National Programme for Prevention and Control of Non-Communicable Diseases.

Phase 1: Policy and system setup

At the national level, the MoHFW and the NHA play central roles in establishing the enabling environment for CKD integration. This phase focuses on issuing a national directive to incorporate CKD detection into the NP-NCD, alongside defining a standardized service package that includes point-of-care creatinine testing and urine assessment, supported by clear referral pathways.

Key activities include resource allocation, incorporation of CKD detection and essential medications into PM-JAY benefit packages, and selection of pilot states for initial implementation. This phase establishes the policy, financing, and operational foundations necessary for subsequent rollout.

Phase 2: Pilot implementation

Implementation is initiated at the subnational level, led by State Health Departments, through deployment within Health and Wellness Centres using a risk-based approach targeting individuals with diabetes and hypertension. This phase emphasizes workforce capacity building, including training frontline health workers, and deployment of point-of-care diagnostic tools to enable early detection at the primary care level.

Additional activities include public awareness efforts to improve care-seeking behavior and integration of CKD indicators into health information systems (HIS) to support real-time monitoring. Pilot implementation allows for adaptation to local contexts, identification of operational challenges, and generation of implementation evidence to inform scale-up.

Phase 3: Scale-up and integration

Following successful pilot implementation, the program is expanded nationwide through coordinated efforts between the MoHFW and State Health Departments. This phase

focuses on strengthening supply chains, ensuring consistent availability of diagnostics and medications, and reinforcing referral systems to support continuity of care. CKD detection and management are progressively embedded into routine NCD services, transitioning from pilot initiatives to sustained, system-wide practice.

Phase 3: Achieve Change

Presenting the case for action

Advocacy messaging should clearly position early detection as a high-value intervention that reduces long-term system costs and improves outcomes, in contrast to the high resource demands of advanced disease management. Framing the issue in terms of efficiency, affordability, and feasibility strengthens alignment with policy priorities.

Implementation monitoring

Progress should be tracked through a focused set of indicators related to screening uptake, treatment initiation, and care continuity, embedded within existing reporting systems to ensure sustainability. Program implementation is further evaluated using the RE-AIM framework to ensure robust evaluation and scalability: Reach is assessed through coverage of high-risk populations; Effectiveness through early detection rates and linkage to care; Adoption by the proportion of facilities and providers implementing the program; Implementation by fidelity to protocols and integration into routine workflows, and Maintenance by the sustainability of practices over time.[44,45]

Results and continuous improvement

Documenting implementation outcomes and lessons learned will be essential to support iterative refinement and broader scale-up. This feedback loop ensures that advocacy efforts remain responsive and evidence informed.

Learning Outcomes & Reflections

This work highlights key insights into translating evidence into policy and practice for CKD care. Early detection emerged as the most feasible and actionable entry point, as it can be integrated into existing primary care systems at relatively low cost while delivering high-impact outcomes. The process underscored the importance of aligning advocacy with existing health system structures, particularly by leveraging established NCD platforms, financing mechanisms, and primary care infrastructure to ensure feasibility and sustainability.

Insights from the multi-stakeholder workshop reinforced that the primary challenge lies not in a lack of knowledge, but in the gap between guidelines and real-world implementation. A key lesson was the necessity of "piggybacking" on existing programs—particularly those for hypertension and diabetes—rather than developing siloed kidney-specific initiatives. Participants emphasized the importance of defining clear, stakeholder-specific advocacy asks, strengthening task-sharing through engagement of frontline health workers, and embedding data systems and accountability mechanisms early to support monitoring and sustain momentum. They also highlighted that while political will for dialysis is strong due to its visible and immediate impact, advocating for the less visible benefits of early detection and prevention requires stronger data-sharing frameworks and sustained engagement with state-level leadership.

Several challenges were encountered during the exercise. These included translating broad system-level gaps into specific, actionable policy asks, navigating the complexity of India's decentralized health system, and balancing ambition with feasibility across diverse state contexts. In addition, aligning stakeholders with differing priorities—particularly between national policy goals and state-level implementation realities—required careful framing of messages and strategies. Communicating the value of prevention over treatment also posed challenges, given the delayed and less visible benefits of early intervention compared with dialysis services.

The process further demonstrated the value of structured stakeholder engagement and phased implementation, allowing for adaptation to local contexts and iterative learning. Incorporating implementation science frameworks, such as RE-AIM, provides a systematic approach to evaluate reach, effectiveness, adoption, and sustainability, ensuring that scale-up is informed by real-world evidence. Overall, bridging the gap between evidence and implementation will require coordinated advocacy, system-level integration, and sustained political commitment to achieve meaningful improvements in kidney health outcomes.

Conclusion

The integration of an early CKD detection program within existing NCD platforms in India provides a scalable blueprint for transforming the country's approach to kidney care. By shifting from a dialysis-driven model to a prevention-focused approach centered on early detection and primary care integration, this strategy has the potential to substantially reduce catastrophic health expenditures, improve equity—particularly among rural populations—and ultimately lessen the long-term burden on the health system. Beyond clinical outcomes, this transition represents a fundamental reorientation toward proactive, cost-effective care, enabling earlier intervention, slowing progression to kidney failure, and optimizing resource allocation.

Moving forward, sustained collaboration will be essential to translate this strategy into measurable impact. The working group will continue to engage through the dedicated ISN Chat community, facilitating ongoing knowledge exchange, monitoring the progress of pilot implementations, and providing technical support to refine care pathways—particularly strengthening referral linkages between primary care and tertiary nephrology services. This collaborative approach will help ensure that implementation remains adaptive, evidence-informed, and aligned with both national and subnational health system priorities.

References

1. Food and Agriculture Organization of the United Nations. Surface area (sq. km) - India. 2023. https://data.worldbank.org/indicator/AG.SRF.TOTL.K2?locations=IN (accessed April 10, 2026).
2. Government of India. Report Of The Technical Group On Population Proiecttons 2025-2026. 2026. https://www.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%202011-2036%20-%20upload_compressed_0.pdf (accessed April 10, 2026).
3. Government of India. National Portal of India, Governance & Planning. 2026. https://www.india.gov.in/category/governance-planning (accessed April 10, 2026).
4. GBD Chronic Kidney Disease Collaborators. Global, regional, and national burden of chronic kidney disease in adults, 1990-2023, and its attributable risk factors: a systematic analysis for the Global Burden of Disease Study 2023. *Lancet* 2025; **406**(10518): 2461-82.
5. Talukdar R, Ajayan R, Gupta S, et al. Chronic Kidney Disease Prevalence in India: A Systematic Review and Meta-Analysis From Community-Based Representative Evidence Between 2011 to 2023. *Nephrology (Carlton)* 2025; **30**(1): e14420.
6. Liyanage T, Toyama T, Hockham C, et al. Prevalence of chronic kidney disease in Asia: a systematic review and analysis. *BMJ Glob Health* 2022; **7**(1).
7. Ene-Iordache B, Perico N, Bikbov B, et al. Chronic kidney disease and cardiovascular risk in six regions of the world (ISN-KDDC): a cross-sectional study. *Lancet Glob Health* 2016; **4**(5): e307-19.
8. Meshram HS, Chauhan S, Puri S. Burden of chronic kidney disease in India: past, present, and future projections to 2040 from the Global Burden of Disease 2021 Study. *Int Urol Nephrol* 2026.
9. Newtonraj A, Tovia S, Girija G, Manikandan M, Vincent A. Chronic Kidney Disease among Diabetes and Hypertensive Patients in a Remote Rural Area of South India: A Population-based Cross-sectional Study. *Indian J Nephrol* 2021; **31**(4): 420-2.
10. India State-Level Disease Burden Initiative Diabetes C. The increasing burden of diabetes and variations among the states of India: the Global Burden of Disease Study 1990-2016. *Lancet Glob Health* 2018; **6**(12): e1352-e62.
11. Rajapurkar MM, John GT, Kirpalani AL, et al. What do we know about chronic kidney disease in India: first report of the Indian CKD registry. *BMC Nephrol* 2012; **13**: 10.
12. India State-Level Disease Burden Initiative CVDC. The changing patterns of cardiovascular diseases and their risk factors in the states of India: the Global Burden of Disease Study 1990-2016. *Lancet Glob Health* 2018; **6**(12): e1339-e51.
13. Tatapudi RR, Rentala S, Gullipalli P, et al. High Prevalence of CKD of Unknown Etiology in Uddanam, India. *Kidney Int Rep* 2019; **4**(3): 380-9.
14. Maity I, Sati H, Singh G, Bhowmik D, Agarwal SK, Bagchi S. Burden of Chronic Kidney Disease of Undetermined Aetiology (CKDu) in a Tertiary Care Public Hospital in North India. *Nephron* 2024; **148**(11-12): 840-7.
15. John O, Gummudi B, Jha A, et al. Chronic Kidney Disease of Unknown Etiology in India: What Do We Know and Where We Need to Go. *Kidney Int Rep* 2021; **6**(11): 2743-51.

16. Parameswaran S, Rinu PK, Kar SS, et al. A Newly Recognized Endemic Region of CKD of Undetermined Etiology (CKDu) in South India-"Tondaimandalam Nephropathy". *Kidney Int Rep* 2020; **5**(11): 2066-73.
17. Jolly AM, Thomas J. Chronic kidney disease of unknown etiology in India: a comparative study with Mesoamerican and Sri Lankan nephropathy. *Environ Sci Pollut Res Int* 2022; **29**(11): 15303-17.
18. Gowrishankar S, Koshy P, Mathew M, Gopalakrishnan N, Kumar VS, Abraham G. Pathology of Uddanam Endemic Nephropathy. *Indian J Nephrol* 2020; **30**(4): 253-5.
19. Bello AK, Okpechi IG, Levin A, et al. An update on the global disparities in kidney disease burden and care across world countries and regions. *Lancet Glob Health* 2024; **12**(3): e382-e95.
20. Wijewickrama E, Alam MR, Bajpai D, et al. Capacity for the management of kidney failure in the International Society of Nephrology South Asia region: report from the 2023 ISN Global Kidney Health Atlas (ISN-GKHA). *Kidney Int Suppl (2011)* 2024; **13**(1): 123-35.
21. Singh P, Khanna D, Sharma P, et al. A scoping review on the errors in medical certification of the cause of death in India. *Indian J Med Res* 2024; **160**(1): 11-21.
22. Government of India. National Portal of India, Health & Wellness. 2026. https://www.india.gov.in/category/governance-planning (accessed April 10, 2026).
23. Government of India. National Health Policy 2017. 2017. https://nhsrcindia.org/sites/default/files/2021-07/National%20Health%20Policy%202017%20%28English%29%20.pdf (accessed April 1, 2026).
24. Kamath R, Brand H. A Critical Analysis of the World's Largest Publicly Funded Health Insurance Program: India's Ayushman Bharat. *Int J Prev Med* 2023; **14**: 20.
25. Kumar A. The Transformation of The Indian Healthcare System. *Cureus* 2023; **15**(5): e39079.
26. Kamath S, Maliyekkal J, Elstin Anbu Raj S, et al. Understanding out-of-pocket expenditure in India: a systematic review. *Front Public Health* 2025; **13**: 1594542.
27. Government of India. Pradhan Mantri National Dialysis Programme. 2022. https://pmndp.mohfw.gov.in/en (accessed April 10, 2026).
28. Sharma S, Kute V, Prasad N, Agarwal SK. One Nation-One Dialysis: Breaking Barriers, Empowering Lives. *Semin Dial* 2025; **38**(3): 166-75.
29. Saxena A, Trivedi M, Shroff ZC, Sharma M. Improving hospital-based processes for effective implementation of Government funded health insurance schemes: evidence from early implementation of PM-JAY in India. *BMC Health Serv Res* 2022; **22**(1): 73.
30. Government of India. Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP). 2026. https://www.pib.gov.in/PressNoteDetails.aspx?id=157711&NoteId=157711&ModuleId=3&reg=3&lang=1 (accessed April 10, 2026).
31. Government of India. Dr. Ambedkar Medical Aid Scheme. 2026. https://ambedkarfoundation.nic.in/medical.html (accessed Aoril 1, 2026).
32. Government of India. Rashtriya Arogya Nidhi. 2018. https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1524808&reg=3&lang=2 (accessed April 10, 2026).

33. Prime Minister's Office of India. PM National Relief Fund. 2026. https://www.pmindia.gov.in/en/pms-funds/ (accessed April 10, 2026).
34. Angell BJ, Prinja S, Gupt A, Jha V, Jan S. The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and the path to universal health coverage in India: Overcoming the challenges of stewardship and governance. *PLoS Med* 2019; **16**(3): e1002759.
35. National Portal of India. Website Of Chief Minister's Relief Fund, Karnataka. 2026. https://www.india.gov.in/category/money-taxes/subcategory/taxes/details/website-of-chief-ministers-relief-fund-karnataka (accessed April 10, 2026).
36. Mavad A. Karnataka govt to provide free peritoneal dialysis services at home. 2025. https://www.deccanherald.com/india/karnataka/bengaluru/karnataka-govt-to-provide-free-peritoneal-dialysis-services-at-home-3726947#google_vignette (accessed April 10, 2026).
37. Gupta D, Jyani G, Ramachandran R, et al. Peritoneal dialysis-first initiative in India: a cost-effectiveness analysis. *Clin Kidney J* 2022; **15**(1): 128-35.
38. Kumar Jeloka T, Prasad N, Gupta A. Peritoneal Dialysis in India is Dying-Is Weaning from the Ventilator Likely? *Indian J Nephrol* 2025; **35**(2): 123-6.
39. Jha V, Iyengar A, Kher V, et al. Scaling Up Peritoneal Dialysis in India: A Sustainability Perspective Using the Program Sustainability Assessment Tool. *Kidney Int Rep* 2025; **10**(11): 3715-9.
40. Government of Tamil Nadu. Chief Minister's Comprehensive Health Insurance Scheme. 2009. https://www.cmchistn.com (accessed April 1, 2026).
41. Subramaniam S, Somasundaram A, E C, et al. Makkalai Thedi Maruthuvam: evaluating equity in non-communicable disease care through a doorstep primary health program in Tamil Nadu, India. *BMC Prim Care* 2025; **27**(1): 17.
42. Tungsanga S, Fung W, Okpechi IG, et al. Organization and Structures for Detection and Monitoring of CKD Across World Countries and Regions: Observational Data From a Global Survey. *Am J Kidney Dis* 2024.
43. David-Rivera V, Whitmarsh, S., Gillespie, D., Fredrick, B. SMART Advocacy User's Guide. 2021. https://smartadvocacy.org (accessed April 1, 2026.
44. RE-AIM. Welcome to RE-AIM and PRISM: Implementation in Context. https://re-aim.org/ (accessed March 16, 2026).
45. D'Lima D, Soukup T, Hull L. Evaluating the Application of the RE-AIM Planning and Evaluation Framework: An Updated Systematic Review and Exploration of Pragmatic Application. *Front Public Health* 2021; **9**: 755738.