SAHI (Strategy for Artificial Intelligence in Healthcare for India):

A Systematic Narrative Review of Government-Led AI Governance and Its Impact on Healthcare Implementation in India

Prasanna Kumar C S
Research Scholar, GITAM UNIVERSITY,

ABSTRACT

Background: India's healthcare system faces profound challenges including specialist shortages, geographic inequities, and high disease burden. Artificial Intelligence (AI) presents a transformative opportunity to address these gaps. In February 2026, the Ministry of Health and Family Welfare (MoHFW) launched the Strategy for Artificial Intelligence in Healthcare for India (SAHI) alongside the Benchmarking Open Data Platform for Health AI (BODH) at the India AI Impact Summit 2026, marking a seminal milestone in India's digital health governance landscape.

Objectives: This systematic review examines the conceptual foundations, policy architecture, and early implementation impact of SAHI on AI adoption in Indian healthcare. We evaluate SAHI's five strategic pillars, its alignment with global regulatory paradigms, and its potential to reshape AI governance for low- and middle-income countries (LMICs).

Methods: A structured narrative and systematic literature review was conducted using databases including PubMed, SCOPUS, Web of Science, and grey literature sources including government policy documents, WHO reports, and technical reports from NITI Aayog and the National Health Authority (NHA) published between 2018 and 2026.

Results: SAHI offers a comprehensive five-pillar framework covering governance, data stewardship, validation, deployment, and monitoring. Its concurrent launch with BODH — an AI validation infrastructure — is unprecedented among LMICs. India's existing digital public infrastructure (eSanjeevani: 282 million consultations; ABDM: 799 million digital health IDs) provides a robust foundation for implementation. SAHI's 32 specific recommendations and innovation-parity governance philosophy position India as a distinct regulatory model diverging from the EU's precautionary approach.

Conclusions: SAHI represents India's most ambitious and operationally grounded health AI governance framework to date. If successfully implemented, it could serve as a replicable model for LMIC health AI governance. Critical challenges remain in centre-state coordination, digital literacy, infrastructure parity, and financing.

Keywords: *SAHI; Artificial Intelligence; Healthcare India; Digital Health Governance; BODH; Ayushman Bharat Digital Mission; AI Policy; Health Informatics; LMIC; Responsible AI*

1. Introduction

Artificial Intelligence (AI) is reshaping healthcare systems globally — from diagnostic imaging and clinical decision support to public health surveillance and drug discovery. For India, a nation of 1.44 billion people contending with an acute shortage of specialists, stark urban-rural disparities, and a double burden of communicable and non-communicable disease, AI offers not merely an incremental improvement but a potentially transformative force multiplier.

The Government of India recognized AI's strategic importance early. NITI Aayog's 2018 National Strategy for AI envisioned the technology as a 'new engine of growth,' with healthcare designated as one of five priority sectors. Subsequently, the IndiaAI Mission was approved in March 2024 with a budget of Rs 10,371.92 crore (~USD 1.25 billion), establishing institutional momentum for AI-led transformation across sectors including healthcare.

However, AI deployment in healthcare — unlike many other domains — involves life-critical decisions, sensitive patient data, the possibility of algorithmic bias, and complex questions of accountability. The need for a sector-specific governance framework was recognized by the Ministry of Health and Family Welfare (MoHFW), which initiated development of SAHI through an inclusive, multi-stakeholder consultation process spanning all regions of India.

On February 21, 2026, at the India AI Impact Summit 2026 held at Bharat Mandapam, New Delhi — described as the first global AI gathering hosted in the Global South — Union Health Minister Jagat Prakash Nadda formally launched SAHI (Strategy for Artificial Intelligence in Healthcare for India) and BODH (Benchmarking Open Data Platform for Health AI). The launch was globally noted, with the WHO South-East Asia Regional Office commending India as the first country in the region to adopt a comprehensive national health AI strategy.

This review paper systematically examines: (i) the policy architecture of SAHI; (ii) the digital health infrastructure underpinning its implementation; (iii) early impacts on AI adoption across

healthcare domains; (iv) comparative analysis with global frameworks; and (v) key challenges and future directions.

2. Methodology

2.1 Study Design

This paper employs a structured narrative systematic review methodology. Both peer-reviewed literature and grey literature were included, reflecting the recency of the SAHI framework (launched February 2026) and the relative paucity of indexed academic studies at the time of writing.

2.2 Search Strategy

Electronic databases searched included PubMed/MEDLINE, SCOPUS, Web of Science, and Google Scholar. Search terms included: 'SAHI AND India healthcare,' 'AI health policy India,' 'Ayushman Bharat AI,' 'digital health India 2024-2026,' 'BODH health AI benchmarking,' 'IndiaAI mission healthcare.' Grey literature sources included policy documents from MoHFW, NHA, NITI Aayog, WHO-SEARO, ICMR, and MeitY. The search covered publications from January 2018 to March 2026.

2.3 Inclusion and Exclusion Criteria

Included: peer-reviewed articles, government policy documents, technical reports, and conference proceedings addressing AI adoption in Indian healthcare, AI governance frameworks (India and comparator countries), and SAHI/BODH specifically. Excluded: opinion pieces without empirical grounding, non-English sources without verified translations, and studies unrelated to healthcare AI governance.

2.4 Data Synthesis

A thematic synthesis approach was used, organizing findings across five domains: policy architecture, digital infrastructure, clinical impacts, governance comparison, and implementation challenges. Extracted data were triangulated across multiple source types to strengthen evidential quality.

3. Policy Architecture of SAHI

3.1 Foundational Context and Development Process

SAHI was developed through a whole-of-government and whole-of-society approach, reflecting India's federal and pluralistic governance structure. Regional consultations were conducted across North, South, East, and West India, engaging central ministries, state governments, regulators, academic institutions, industry, startups, clinicians, civil society, and international development partners. This consultative process distinguishes SAHI from top-down AI governance frameworks and anchors it in operational realities across India's diverse healthcare delivery landscape.

The strategy is explicitly nested within India's broader digital health agenda — reinforcing progress toward Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being). SAHI formally recognizes existing legal and ethical scaffolding including the Digital Personal Data Protection (DPDP) Act, NHA's Health Data Management Policy, ICMR Ethical Guidelines for AI in Biomedical Research and Healthcare (2023), and MeitY's IndiaAI Governance Guidelines (2025).

3.2 The Five Strategic Pillars

SAHI's framework is organized around five strategic pillars that collectively address the lifecycle of AI in healthcare — from development through monitoring. The table below summarizes each pillar and its core functions:

Pillar	Core Focus Areas	Key Instruments
I. Governance & Ethics	Ethical oversight, risk-based classification of AI tools, regulatory alignment, accountability frameworks	ICMR Guidelines, DPDP Act, MeitY IndiaAI Governance Guidelines
II. Data Stewardship	Consent-based data access, anonymization standards, interoperability rules, federated data ecosystems	ABDM Health Data Management Policy, National Federated Learning Platform
III. Validation & Evidence	Pre-deployment benchmarking, clinical validation requirements, bias testing, performance standards	BODH Platform (IIT Kanpur + NHA), CDSCO SaMD Guidelines (2025)
IV. Deployment & Scale	State-level adoption guidance, procurement frameworks, public-private partnership models, human oversight	IndiaAI Application Development Initiative, Centres of Excellence (AIIMS)
V. Monitoring & Learning	Post-deployment surveillance, outcome tracking, iterative policy refinement, international collaboration	NHA Data Ecosystem, WHO SEARO Partnership, IndiaAI Mission

Table 1: The Five Strategic Pillars of SAHI and Key Instruments

3.3 The SAHI Governance Philosophy: Innovation Parity

A defining and globally distinctive feature of SAHI is its explicit elevation of innovation alongside precaution as a governing principle. The SAHI document states: 'AI innovation in healthcare should aim to maximise overall benefit while reducing the potential of harm. All other things being equal, responsible innovation should be prioritised over cautionary restraint.' This philosophy positions India closer to a risk-proportionate, enabling regulatory model — distinct from the EU AI Act's compliance-heavy precautionary architecture and more aligned with adaptive governance approaches suitable for resource-constrained contexts.

SAHI's 32 specific recommendations span risk classification of AI tools, data-sharing frameworks, workforce development, and outcomes monitoring. Notably, the framework broadly distinguishes high-risk AI uses (clinical diagnosis, patient triage, treatment decision support) from low-risk uses (record-keeping, administrative tasks), though granular sub-classification remains an area requiring further regulatory elaboration by the CDSCO.

4. India's Digital Health Infrastructure: The Foundation for SAHI

Unlike most LMICs that are writing aspirational AI health strategies, India is describing infrastructure it already operates at population scale. SAHI's implementation potential is significantly enhanced by a pre-existing digital health ecosystem that few comparable nations can match.

Platform / Initiative	Scale (as of 2025-26)	Relevance to SAHI
Ayushman Bharat Digital Mission (ABDM)	799M digital health IDs; 410K facilities; 671M linked health records; 670K healthcare professionals	Interoperable data backbone for AI training and deployment
eSanjeevani Telemedicine	282M consultations (Apr 2023–Nov 2025); 12M AI-assisted diagnostics	Largest national AI-integrated telemedicine platform globally
National TB Elimination Programme (AI-enabled)	27% decline in adverse outcomes; AI-assisted non-specialist screening	AI augmenting frontline workforce capacity
National Diabetic Retinopathy Screening (MadhuNetrAI)	7,100+ patients across 38 facilities; launched Dec 2025 by AIIMS	AI enabling community-level specialist-grade screening
Media Disease Surveillance Platform	4,500+ outbreak alerts; real-time AI-driven epidemiological monitoring	AI for public health intelligence and early warning
IndiaAI Compute Infrastructure	10,000+ GPUs; Tier-II city data centres; open-access for startups	Democratized AI development environment

National Federated Learning Platform	MoU: NHA + IIT Kanpur (Oct 2024); open benchmarking for AI health models	Privacy-preserving model development at scale
Centres of Excellence (AI in Healthcare)	AIIMS Delhi, PGIMER Chandigarh, AIIMS Rishikesh; IISc Bengaluru (MoU with NHA)	Indigenous AI research and validation hubs

Table 2: India's Digital Health Infrastructure Underpinning SAHI Implementation

The Ayushman Bharat Digital Mission (ABDM) provides what few national health AI strategies globally can claim: a pre-existing, consent-based, interoperable digital health data ecosystem. With 799 million digital health IDs, 410,000 registered healthcare facilities, and 671 million linked health records as of August 2025, ABDM provides the substrate on which BODH's AI validation and SAHI's deployment standards can be operationalized at national scale.

5. Impact on AI Implementation Across Healthcare Domains

5.1 Diagnostics and Screening

AI-assisted diagnostic tools represent the most mature domain of implementation within India's health AI ecosystem. MadhuNetrAI, launched by AIIMS Delhi in December 2025, enables non-specialist health workers to screen for diabetic retinopathy using retinal images — effectively democratizing specialist-grade ophthalmic care at community level. Thermalytix combines thermal imaging with AI for non-radiation breast cancer screening. The Cancer Imaging Biobank project from NITI Aayog is building a dataset of over 20,000 patient profiles integrating radiology and pathology images to train AI systems for earlier cancer detection.

SAHI's risk-based classification framework provides the regulatory grounding for these tools, distinguishing high-stakes diagnostic AI (requiring rigorous validation via BODH) from lower-risk administrative applications. The CDSCO's October 2025 draft guidance for Software as a Medical Device (SaMD) — classifying AI imaging tools such as CT/MRI analysis as Class C devices — provides complementary regulatory clarity.

5.2 Telemedicine and Clinical Decision Support

eSanjeevani — India's national telemedicine platform — has emerged as one of the world's largest AI-integrated telehealth systems. Of 282 million consultations recorded between April 2023 and November 2025, approximately 12 million were directly supported by AI-powered Clinical Decision Support Systems (CDSS) that analyze patient symptoms and medical records to assist physicians. SAHI's governance framework provides the ethical scaffolding — consent

management, accountability, and algorithmic oversight — necessary to scale this AI-assistance responsibly to all 1.3+ million ABDM-registered practitioners.

5.3 Disease Surveillance and Public Health

The Media Disease Surveillance Platform exemplifies AI's public health utility, generating over 4,500 outbreak alerts through real-time media monitoring and AI analysis. Within the National TB Elimination Programme, AI-enabled screening has facilitated a 27% decline in adverse TB outcomes by empowering non-specialists to conduct high-quality assessments. The UdyogYantra AI System addresses malnutrition monitoring. SAHI's Pillar V (Monitoring and Learning) institutionalizes this epidemiological intelligence within a governed, iterative policy framework.

5.4 Hospital Operations and Private Sector

India's private healthcare sector has independently integrated AI across radiology reporting, pathology workflow optimization, clinical triage, hospital operations management, digital symptom assessment, remote monitoring, and drug discovery acceleration. The pharmaceutical sector is deploying AI for clinical trial optimization, supply chain management, and pharmacovigilance. SAHI's guidance applies equally to private actors, establishing minimum standards without stifling the innovation that characterizes India's health technology startup ecosystem — which counts over 600 startups represented at the India AI Impact Summit 2026.

6. Comparative Global Analysis of Health AI Governance Frameworks

SAHI's governance philosophy merits comparison with three dominant global regulatory models to contextualize its significance:

Dimension	EU AI Act (2024)	US FDA Pathway	India SAHI (2026)
Philosophy	Precaution-first; compliance-heavy	Risk-based; premarket approval	Innovation parity; risk-proportionate
Classification	High-risk health AI: strict conformity	510(k), De Novo, PMA pathways	Broad risk tiers; CDSCO SaMD draft
Validation	Notified body conformity assessment	Premarket performance testing	BODH open benchmarking platform
Legislation	EU AI Act (2024) + MDR	21st Century Cures Act; FDA guidance	DPDP Act + MedDevices Rules 2017
Data Framework	GDPR-compliant health data	FDA Real-World Evidence framework	ABDM + ICMR Ethical Guidelines
Suitability for LMICs	High overhead; limited transferability	Moderate; resource-intensive	High; designed for scale + equity

Table 3: Comparative Analysis of Global Health AI Governance Frameworks

SAHI positions India as neither a passive adopter of Western regulatory frameworks nor an ungoverned frontier. By anchoring innovation alongside safety as co-equal governance principles, India signals its intent to serve as a regulatory model for the 100+ LMICs that face analogous constraints: specialist shortages, limited regulatory overhead capacity, and urgent population health needs that cannot await decade-long conformity assessment processes.

The ICTworks analysis of SAHI (2026) characterizes it as 'a live test case of a specific hypothesis: that a large, federal, mixed-economy LMIC can operationalize risk-based AI governance in healthcare atop existing DPI [Digital Public Infrastructure], without new legislation and without a centralized regulatory agency.' No comparable country has attempted this combination at this scale.

7. Challenges and Limitations

7.1 Regulatory Ambiguity

Despite SAHI's 32 recommendations, the framework does not yet provide granular sub-classification of high-risk versus low-risk AI uses beyond broad categorical distinctions. While the CDSCO's October 2025 SaMD draft guidelines offer complementary specificity for AI/ML medical devices, integration between these instruments remains a work-in-progress. Regulatory clarity is essential for developers navigating market entry decisions and for procuring institutions assessing compliance obligations.

7.2 Centre-State Coordination

India's federal structure means that healthcare delivery is a concurrent subject shared between central and state governments. SAHI's implementation ultimately depends on state-level adoption — in health systems with widely varying digital maturity, workforce capacities, and resource availabilities. The strategy provides guidance for states but lacks binding enforcement mechanisms, raising questions about implementation consistency across India's 28 states and 8 Union Territories.

7.3 Digital Infrastructure Inequities

While India's aggregate digital health indicators are impressive, significant rural-urban and interstate disparities exist. AI solutions trained predominantly on urban hospital data risk performing poorly in rural contexts characterized by different disease epidemiologies, patient

demographics, imaging equipment quality, and network connectivity. BODH's benchmarking value depends critically on the representativeness of its training datasets across India's heterogeneous population.

7.4 Financing Gap

SAHI and BODH are governance and technical frameworks, not financing instruments. The indiaAI Mission's Rs 10,371.92 crore allocation spans all sectors, and health AI's specific share remains undefined. Investment in BODH dataset development, Centres of Excellence capacity building, state-level AI adoption facilitation, and outcome monitoring systems requires dedicated, sustained financing that has not yet been comprehensively articulated.

7.5 Workforce Readiness

AI implementation in clinical settings requires digital literacy among healthcare providers, administrators, and patients. India faces shortages of trained health informaticians, AI-literate clinical professionals, and data governance specialists. SAHI acknowledges workforce development as a priority, with academic institutions — particularly IISc Bengaluru's NHA-partnered Centre of Excellence — playing a key role, but a national-scale capacity building programme has yet to be formally constituted.

7.6 Ethical & Implementational risks of SAHI

Algorithmic bias in underrepresented populations

Risk of over-centralized data governance

Public vs private AI imbalance

Over-reliance on AI in low-skill settings

Example line: “While SAHI emphasizes innovation parity, this approach may inadvertently underweight precaution in high-risk clinical deployments.”

8. Future Directions and Research Agenda

The launch of SAHI and BODH opens a rich research agenda across multiple dimensions. Priority areas include:

Implementation Science: Longitudinal studies tracking SAHI's adoption trajectory across states, measuring uptake of BODH validation requirements, and evaluating the alignment of private sector AI deployments with SAHI guidelines.

Health Equity: Rigorous assessment of whether AI tools deployed under SAHI's framework improve or worsen health outcomes across socioeconomic, geographic, and demographic subgroups — with specific attention to tribal populations, rural communities, and women.

Comparative Effectiveness: Cross-country comparisons of LMIC health AI governance models — with Bangladesh, Kenya, Brazil, and Indonesia as potential comparators — to identify transferable elements of SAHI's design philosophy.

Economic Evaluation: Health technology assessment studies quantifying the cost-effectiveness of SAHI-validated AI tools across clinical applications, informing procurement decisions and resource allocation within the Ayushman Bharat programme.

Regulatory Science: Development of evidence-based criteria for AI risk classification in Indian healthcare contexts, informing the next iteration of CDSCO SaMD guidelines and SAHI's regulatory sub-architecture.

9. Conclusions

SAHI represents the most comprehensive, operationally grounded, and globally distinctive national health AI governance framework to emerge from a low- or middle-income country to date. By launching simultaneously with BODH — an AI validation infrastructure — India has addressed the perennial LMIC strategy-to-implementation gap at the moment of policy announcement, a global first.

SAHI's innovation-parity governance philosophy, nested within India's extraordinary pre-existing digital health infrastructure (ABDM, eSanjeevani, IndiaAI Mission), creates conditions for responsible AI adoption at a scale and equity ambition unmatched globally. The framework's multi-stakeholder development, alignment with WHO SDG goals, and commitment to patient rights and algorithmic accountability establish SAHI as both a domestic governance instrument and a potential model for the Global South.

Critical challenges remain: regulatory granularity, centre-state coordination, infrastructure inequities, workforce capacity, financing, and algorithmic bias. These are not fatal flaws but active implementation frontiers that SAHI's iterative, monitoring-informed design is structurally positioned to address. Whether SAHI fulfills its transformative potential will depend on India's ability to convert governance blueprints into operational infrastructure — a challenge that will test institutional capabilities as much as technological ones.

As AI reshapes global healthcare, SAHI offers a case study of rare importance: a billion-person democracy attempting to govern AI that is already running at population scale inside public health systems. For researchers, policymakers, and global health practitioners, watching this experiment unfold is not optional — it may define the template for responsible health AI governance in the developing world for a generation.

Declarations

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