



Skilling India's healthcare workforce for digital health and AI

Building skills for future care: From the existing workforce to 20+ emerging new roles by 2035



October 2026

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Foreword by FICCI

India's healthcare transformation underscores the importance of embracing emerging technologies to address evolving health priorities in an increasingly dynamic world. Today, the accelerating adoption of digital health and artificial intelligence (AI) is redefining healthcare education and workforce development. The focus is shifting from conventional education to lifelong skilling, reskilling and upskilling. Building a digitally empowered and AI-ready healthcare workforce is critical to creating resilient, accessible, and future-ready health systems.

India has made significant strides in expanding its healthcare workforce through sustained investments in medical and nursing education. However, challenges persist, including workforce shortages, uneven geographic distribution, and limited specialist availability. The growth of digital health and AI, coupled with existing workforce gaps, presents a dual challenge that presses the need for upskilling.

The Government of India has laid a strong foundation for a trusted, interoperable, and inclusive digital health ecosystem through initiatives spanning AI, digital health, data privacy, and cybersecurity. Parallely, evolving compliance requirements, emerging care delivery models, and changing consumer expectations, are reshaping workforce skilling needs, supported through partnerships across government, academia, and the private sector.

The Federation of Indian Chambers of Commerce and Industry (FICCI) recognises the growing imperative to integrate digital health and AI into care delivery and workforce development. This requires a shift towards role- and competency-based approaches to build capabilities that are customised to the needs of different healthcare cadres and functions.

This FICCI-KPMG in India knowledge paper, 'Skilling India's healthcare workforce for digital health and AI - Building skills for the future care', presents a framework for preparing India's healthcare workforce for a digitally enabled and AI-driven future, including emerging roles and upskilling of existing roles. The paper proposes a three-tier workforce architecture with role-based competency pathways to equip healthcare professionals and institutions with the capabilities needed to safely, effectively, and ethically leverage these technologies across care delivery, operations, and public health.

We hope this paper, released during the 20th edition of FICCI's annual healthcare conference, FICCI HEAL 2026, under the theme "HEAL@20: From Vision to Value," serves as a catalyst for meaningful dialogue and collective action towards building a resilient, accessible, value-driven and future-ready healthcare workforce.



Dr Ashutosh Raghuvanshi

Chair, FICCI Health Services Committee and MD & CEO, Fortis Healthcare



Mr Varun Khanna

Co-Chair, FICCI Health Services Committee and MD & Group CEO, Aster DM Quality Care Ltd



Dr Dharminder Nagar

Co-Chair, FICCI Health Services Committee and MD, Paras Health

Foreword by KPMG in India

India's healthcare sector stands at a defining moment. Rising demand for accessible, high-quality care, expanding healthcare infrastructure and changing consumer expectations are driving the evolution of traditional healthcare delivery and the emergence of new-age models designed to make care more accessible, personalised, connected and efficient. Technology integration and patient-centricity are central to this transformation. India's expanding digital public infrastructure, interoperable health ecosystem, evolving data-protection framework and growing focus on responsible AI are extending care beyond traditional boundaries and creating the foundations for trusted, technology-enabled healthcare.

Artificial Intelligence adds a further dimension, emerging as a transformative force reshaping how care is delivered, managed and experienced. Yet, technology alone cannot transform healthcare. Its impact will ultimately depend on the people who use it, i.e. our healthcare workforce.

India has significantly expanded its healthcare workforce, medical education and training capacity. However, gaps in workforce availability, distribution, specialisation, skills and productivity continue to persist. As healthcare infrastructure expands and digital health and AI become increasingly embedded across the patient journey, the workforce challenge will extend beyond numbers to readiness for a digitally connected and AI-enabled health system. Existing healthcare

professionals will need new capabilities in digital health, interoperability, privacy, cybersecurity and responsible AI, aligned to their roles and responsibilities. At the same time, new and specialized roles will emerge at the intersection of healthcare, technology, data and governance. Preparing for this transition will require more than standalone training programmes; it will require a structured and progressive approach to workforce development.

This FICCI-KPMG in India paper examines how existing healthcare roles could evolve, the digital health and AI competencies they may require, and the new roles expected to emerge, as healthcare becomes increasingly connected and technology-enabled. It delves into the Digital Health and AI Competency Framework to support progressive workforce development, from foundational digital readiness to advanced practice and specialist capabilities.

Translating this vision into action will require sustained collaboration across governments, regulators, professional councils, healthcare providers, academia, industry and the skilling ecosystem. India's next healthcare transformation will ultimately be powered not by technology alone, but by a future-ready workforce capable of using digital health and AI safely, responsibly and effectively while preserving the human judgement and compassion at the heart of care.



Nilachal Mishra
Partner and Head,
Government and
Public Services



Sandeep Paidi
Partner and Head,
Health, Human and
Social Services
(HHSS), Government
& Public Services



Lalit Mistry
Partner and Co-head,
Healthcare

Industry voice



"The future belongs to those who use AI to sharpen skills, not surrender judgement. In healthcare, the true power of AI lies not in replacing human expertise, but in augmenting it. As technology transforms diagnostics, clinical decision-making and patient care, skilling and continuous learning will be essential to ensure that healthcare professionals can use these tools effectively, ethically and responsibly. The goal must be to build a workforce that combines technological proficiency with clinical excellence, critical thinking and empathy, ensuring that AI strengthens human judgement, enhances the quality of care and ultimately delivers better health outcomes for all."

Dr. Sanjeev Singh

Medical Director, Amrita Institute of Medical Sciences & Research Centre (AIMSRC) Faridabad & Chief Medical Superintendent, AIMSRC Kochi



"Artificial Intelligence is transforming radiology, medical imaging and diagnostics, enhancing the ability to detect disease earlier, improve diagnostic accuracy and support clinical decision-making. However, the true value of AI will depend on how effectively healthcare professionals are equipped to understand, validate and responsibly integrate these technologies into clinical practice. AI skilling must therefore go beyond technical proficiency to build capabilities in clinical interpretation, data governance and human-AI collaboration. A digitally empowered workforce will be essential to translating AI innovation into better patient outcomes and strengthening the larger healthcare ecosystem provided AI is used ethically, responsibly and within defined guardrails"

Dr. Harsh Mahajan

Mentor- FICCI Health Sector and Founder & Chairman, Mahajan Imaging & Labs



"India has long grappled with limited human and physical resources in healthcare. Technology has helped us increase our efficiency over the years, and digital health and AI now give us a real chance to address some of the most pressing challenges. But their impact on the ground will depend on the readiness of the people who use them. Therefore, preparing our workforce for a digitally enabled care model is the most important investment for this sector."

(Hony) Brig Dr. Arvind Lal

Chair- FICCI Swasth Bharat (Public Health) Task Force; Executive Chairman, Dr Lal PathLabs Ltd. & Managing Trustee, ALVL Foundation



"As healthcare adopts AI, skilling must move beyond basic digital literacy to building the capability to interpret AI outputs, integrate them into clinical and operational workflows, and govern their use responsibly. A role-based approach to workforce readiness will be critical to realising AI's potential across India's healthcare system."

Mr. Gautam Khanna

CEO, PD Hinduja Hospital & Medical Research Centre



"India's healthcare future will be determined not just by the technologies we adopt, but by how confidently and responsibly our teams use them. For hospitals, AI readiness is a clinical and patient-safety imperative .

A common, role-based competency framework like the NDH-AICF will help institutions build capability at every level, so that AI strengthens clinical judgement and keeps care safe and compassionate."

Dr. Santosh Shetty

Executive Director & CEO, Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute

Industry voice



"We believe the true potential of AI in MedTech lies not only in advancing technology, but in empowering physicians to improve patient outcomes. In India, where the burden of non-communicable diseases remains significant, building AI capabilities across the healthcare ecosystem is a critical step toward enabling earlier diagnosis, better-informed clinical decisions, and more accessible care. Our priority is to equip engineers, clinicians, and healthcare professionals with the skills and confidence to apply AI responsibly, effectively, and ethically. By combining human expertise, digital innovation, and an unwavering commitment to patients, we can help shape a future where technology expands access to quality healthcare, improves outcomes, and advances the standard of care for millions across India."

Mr. Mandeep Singh Kumar

Vice President & Managing Director, Medtronic, India Subcontinent Countries (ISC)



"India's healthcare workforce challenge is no longer just about expanding capacity, but building the capabilities to deliver better care in an increasingly digital and AI-enabled environment. As healthcare providers, we must move beyond technology adoption to systematically equip our workforce to integrate AI into clinical and operational decision-making, while upholding patient safety, data privacy and clinical accountability. A structured, role-based approach to digital skilling will be critical to translating technological progress into measurable improvements in care quality, workforce productivity and patient outcomes."

Mr. Vineet Aggarwal

Group Chief Operating Officer, Paras Health



"By 2035, AI agents will handle much of the routine work in hospitals, from managing workflows to coordinating between departments. Doctors, nurses and hospital teams can then focus more on patients, making better decisions and improving care. For India, the focus should be on preparing our healthcare workforce for this change. It is not about replacing people with AI, but helping them do more. The future will be about AI doing the routine work while people focus on what matters most: patients."

Mr. Asit Kumar Vidyarthi

Co-founder and CEO, Prodoc.ai



"The true promise of digital and AI in healthcare lies not in replacing human judgement, but in amplifying human capability and extending quality care to every citizen. For India, this is as much a social sector imperative as a technology opportunity. India must move from fragmented skilling initiatives to a nationally aligned, role-based Digital Health & AI competency framework. The opportunity is to build a workforce that bridges clinical wisdom with intelligent technology, transforming AI into an instrument of trust, better outcomes and equitable care. By placing people at the heart of technological progress, AI can become a force for social impact and a cornerstone of Viksit Bharat 2047."

Sandeep Paidi

Partner and Head - Health, Human and Social Services (HHSS), Government & Public Services, KPMG in India



"I have seen India's health system navigate two major technology shifts — computers in the late 1990s and smartphones in the 2010s. Both taught us the same lesson, technology reaches a hospital long before the workforce is ready to harness it, and we kept paying for software while expecting transformation. With AI, we have a chance to break that cycle. Instead of deploying technology first and skilling people as an afterthought, we must prepare the entire healthcare workforce to use AI responsibly and effectively from the outset. The real transformation will not come from AI alone, but from the people equipped to make it work."

Sandeep Jha

Partner, Digital Health, KPMG in India



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Executive summary

India's healthcare workforce is entering a defining decade. Rising demand for quality care, expanding infrastructure, new-age delivery models, changing patient expectations and the growing adoption of digital health and AI are reshaping healthcare delivery and the capabilities required of its workforce. Today, India has ~9.01 million registered healthcare professionals (doctors, nurses and midwives, dentists, AYUSH practitioners and pharmacists), while education capacity has expanded significantly, with MBBS seats increasing almost threefold (0.5 lakh to 1.4 lakh) between pre-2014 and 2026-27 and annual nursing capacity growing by ~40 per cent (~1.9 lakh to ~2.7 lakh).¹ This expansion provides a strong foundation for the required future workforce by 20235.

Persistent gaps in workforce availability, distribution, specialisation and skills coexist with a healthcare system becoming increasingly digital, connected and AI-enabled. India therefore faces a dual imperative: closing critical workforce gaps while preparing its existing and future workforce for new models of care. The workforce agenda must consequently evolve from a predominantly 'numbers and capacity' challenge to a 'capacity + capability + productivity' transformation, supported by systematic digital health and AI upskilling, with competency pathways tailored to different healthcare roles and levels of proficiency.

India's workforce challenge extends beyond headcount, with distribution and specialist gaps, uneven digital maturity, limited integration of digital health and AI in curricula, and the absence of a standardised competency framework constraining workforce readiness. While on the other hand, the country is building strong policy, infrastructure and governance foundations with ABDM, DPDP Act and other initiatives, creating a connected, secure and responsible ecosystem. As this ecosystem evolves, workforce requirements must move beyond basic digital literacy to include interoperability, data governance, privacy, cybersecurity, AI validation, responsible AI and human-AI collaboration.

Five drivers shaping digital health, AI adoption and workforce skilling

The need for a digitally skilled and AI-ready healthcare workforce is being accelerated by five interconnected drivers:

- Evolving regulatory and compliance requirements
- Rise of new-age players transforming care delivery and providers
- Changing consumer expectations and digital first care skills,
- Providers' focus on digitisation, productivity and operational efficiency
- Expansion of technology-enabled healthcare infrastructure

A growing skilling ecosystem, but not yet a common architecture

India's digital health and AI skilling ecosystem is expanding, with government institutions, professional councils, academia, healthcare providers, and skilling organizations developing programmes for different workforce groups.

However, these efforts remain fragmented across institutions, professions, and competency areas, creating pockets of capability rather than a coordinated national pathway. In contrast, global approaches increasingly embed digital competencies into education, workforce planning, and career progression through common, role-based frameworks.

A three-tiered workforce architecture for 2035

By 2035, India will require digital health and AI capabilities at different depths across its healthcare workforce. SAHI recommends a FRAC (Framework of Roles, Activities and Competencies) based approach to AI competence. The proposed indicative National Digital Health and AI Competency Framework (NDH-AICF) in this paper outlines three workforce tiers:

- 1. Digitally Enabled care workforce**
Foundational capabilities in digital health, data, ABDM, privacy, cybersecurity and AI literacy across the broader healthcare workforce.
- 2. AI-augmented clinical and operational workforce**
Advanced, role-specific skills for selected workers to operate and manage digital tools and AI within clinical care, diagnostics, nursing, pharmacy, public health, and healthcare operations.
- 3. Specialist digital health and AI cadres**
Specialist pipelines for scarce or net-new capabilities in clinical informatics, health data science, interoperability, AI validation and governance, policy design, cybersecurity, privacy, and digital transformation.

1. KPMG in India's 2026 Analysis; Healthcare professionals include allopathic doctors, AYUSH practitioners, nursing personnel (ANM, RN and RM, LHV), dentists and pharmacists
2. Strategy for Artificial Intelligence in Healthcare for India, Ministry of Health and family Welfare, Government of India, February 2026

Every healthcare worker, however, will increasingly need a level of digital competence appropriate to their role. This transformation will lead to evolution of existing healthcare roles as well as emergence of new ones. Doctors, nurses, allied health professionals, frontline workers, administrators, health IT teams, biomedical engineers, policymakers and regulators will increasingly work with AI-enabled decision support, digital care coordination, virtual care, data-driven operations and population intelligence. Alongside this evolution, new specialist roles are expected to emerge across clinical informatics, health data and analytics, AI validation, privacy, cybersecurity, interoperability and digital operations, creating new career pathways across the healthcare ecosystem.

Way forward

The proposed indicative National Digital Health and AI Competency Framework (NDH-AICF) may provide a common competency and implementation architecture for systematically preparing India's

healthcare workforce for digitally enabled care. Through its three-tier workforce approach and progressive proficiency levels, the framework could offer an inclusive roadmap for aligning capabilities with different professional roles and responsibilities, from foundational digital readiness to advanced practice and specialist expertise.

Implementing this framework will require distinct but complementary roles across national and state governments, regulators, professional bodies, healthcare institutions, professionals, academia, industry, development partners and the skilling ecosystem. Technology-enabled and experiential learning, simulation and hands-on exposure can translate competencies into workplace practice, while institutional readiness, credible assessment, certification and career-linked credentials can support implementation at scale. Continuous monitoring and periodic updates will help keep workforce capabilities aligned with evolving technologies, standards and models of care.

Every healthcare worker, however, will increasingly need a level of digital competence appropriate to their role. This transformation will lead to evolution of existing healthcare roles as well as emergence of new ones. Doctors, nurses, allied health professionals, frontline workers, administrators, health IT teams, biomedical engineers, policymakers and regulators will increasingly work with AI-enabled decision support, digital care coordination, virtual care, data-driven operations and population intelligence. Alongside this evolution, new specialist roles will emerge across clinical informatics, health data and analytics, AI validation, privacy, cybersecurity, interoperability and digital operations, creating new career pathways across the healthcare ecosystem.



Section - 1

Indian healthcare workforce landscape



India's healthcare system is undergoing structural transformation, propelled by rising demand for quality care, expanding coverage, growing investment, rapid infrastructure growth, evolving care models, entry of new players and the growing adoption of digital health and AI. India's healthcare transformation hinges on its workforce. Despite significant expansion in the last few decades, persistent gaps in workforce availability, distribution, specialisation, and productivity undermines constraining the sector's next phase of growth. India needs to bridge current skill gaps in its healthcare workforce, while building digital and AI capabilities to deliver future-ready care at scale.

1.1 Large, diversified, and expanding healthcare workforce

India's healthcare sector has emerged as one of the nation's largest contributors to both economic activity and employment, directly engaging over ~9.01 million registered healthcare professionals (doctors, nurses and midwives, dentists, AYUSH practitioners and pharmacists).³ Despite this growth, the demand for healthcare workers continues to outstrip supply, creating significant workforce gaps that hinder the delivery of equitable and quality healthcare services. The total of around 11.90 million healthcare workers consisting of registered professionals and community and primary care providers service the large public and private healthcare infrastructure.⁴ Around 1.17 million annual additions of new healthcare professionals (doctors, nurses and midwives, dentists, AYUSH practitioners and pharmacists)⁵ require future-ready skilling.

Indian healthcare workforce current pool					
Registered professionals			Community and primary care		
Cadre	Number	As of	Cadre	Number	As of
Allopathic doctors	1,535,155	Jul-26	ASHAs	1,101,020	Oct-26
AYUSH practitioners	751,768	Jul-26	CHOs	142,521	Oct-26
Nursing personnel	4,602,133	Jul-26	MPW (males)	78,308	Oct-26
Dentists	405,962	Jul-26	MPW (females)	250,532	Oct-26
Pharmacists	1,713,730	Mar-26	MO	50,390	Oct-26
			Allied health professionals	1,300,000	Dec-22
Total			11,931,519		

The figures represent an indicative estimate based on available registration and programmatic data and may not capture the full breadth of India's healthcare workforce, including several technical, therapeutic, public-health, administrative, digital-health and support cadres.

Annual admission intake of healthcare professionals					
Medical, dental and AYUSH seats			Nursing and allied education seats		
Cadre/Course Category	Number	As of	Cadre/Course Category	Number	As of
MBBS	140,664	Sep- 26	Nursing (GNM + B.Sc. Nursing)	277,331	Mar-25
BDS	28,114	Oct-26	Pharmacy (D. Pharm + B.Pharm)	6,62,903	Mar-26
AYUSH	66,718	Dec- 25			
Total			1,175,730		

India's healthcare professional pool will continue to grow rapidly and faces a dual skilling challenge: upskilling the large existing workforce that has had limited exposure to Digital Health (DH) and AI, while simultaneously preparing the new professionals entering the workforce each year with future-ready capabilities. Without addressing both simultaneously, the skills gap will continue to compound as the workforce expands.

3. Nursing personnel include ANM, RN, RM and LHV

4. KPMG in India's 2026 Analysis; Total healthcare workers include healthcare professionals and community and primary care workers

5. KPMG in India's 2026 Analysis; Addition calculated based on intake capacity of undergraduate medical, nursing, dental, pharmacy, AYUSH courses

Existing human resources for health in India



- India has ~6.08 million (doctors, nurses and midwives), with a density of 42.7 per 10,000 population, which is significantly lower than many other nations such as the United States of America (150.5), the United Kingdom (129.13), Brazil (121.5) and China (67.8).^{6,7,8,9} Further, there is a shortfall of ~0.26 million HRH if compared with the WHO recommended threshold of 44.5.¹⁰
- India has a registered allopathic doctor-to-population ratio of approximately 1:928, compared with the WHO benchmark of 1:1,000.
- India has a Registered Nurse and Registered Midwife (RN and RM)-to-population ratio of approximately 1:409, compared with the WHO benchmark of 1:290.

Existing strength and projected addition for medical doctors



- India has ~1.54 million registered allopathic doctors, representing one of the world's largest physician workforces.¹¹
- At current intake levels, India is expected to add ~1.13 million doctors to the active workforce by 2035–36, increasing the doctor workforce from 1.54 million to ~2.66 million, assuming an 80 per cent workforce participation rate among MBBS graduates.
- The country has expanded medical education capacity significantly, with MBBS seats increasing from 51,348 before 2014 to 1,40,664 in 2026-27, a nearly 2.7-fold increase (174 per cent) over the period.^{12,13}

Current strength and projected addition of nursing personnel



- India has ~4.6 million nursing personnel (comprising ANMs, RN and RM and LHVs).¹⁴
- India has ~3.5 million Registered Nurses and Registered Midwives (RN and RM) and could add ~2.2 million to the active workforce over the next decade, increasing the RN and RM workforce to ~5.7 million by 2035-36, assuming an 80 per cent workforce participation rate among graduates.
- The country has expanded nursing education capacity significantly, with annual GNM and B.Sc (N) seats increasing from 199,036 in 2014 to 277,331 in 2024-35, representing an increase of 39.4 per cent over the period.^{15,16}

Allied health professionals remain largely uncouned



- India has an estimated 1.3 million Allied and Healthcare Professionals (AHPs) across the country.¹⁷
- The country aims to add 1 lakh more AHPs over the next five years (2031), strengthening the availability of skilled healthcare personnel across 10 priority disciplines with upgradation of existing and establishment of new AHP institutions across public and private sector.¹⁸
- India's allied health workforce remains largely uncouned and non-standardised.

6. Doctors refer to registered allopathic doctors; nurses refer to registered nurses and midwives (RN and RM); midwives refer to Auxiliary Nursing Midwives (ANM)

7. Update on Health Workforce Availability in Public Health Facilities, Press Information Bureau, 10th February 2026

8. Unstarred Question No. 1069 "Registration of Nurses and Midwives" Ministry of Health and Family Welfare, 24th July 2026

9. Global Health Observatory, World Health Organization

10. Decade for health workforce strengthening in SEAR 2015-2024, mid-term review, World Health Organization; September 2020

11. Update on Health Workforce Availability in Public Health Facilities, Press Information Bureau, 10th February 2026

12. Unstarred Question No.3394 UG and PG seats in medical college, Ministry of Health and Family Welfare, Lok Sabha, 7th August 2026

13. Undergraduate (MBBS) Courses (excluding INIs), National Medical Commission, September 2026

14. Unstarred Question No. 1069 "Registration of Nurses and Midwives" Ministry of Health and Family Welfare, 24th July 2026

15. Increase in Medical and Nursing Seats in Government and Private Colleges, PIB, August 2021

16. Indian Nursing Council (INC), Annual Report 2024-25

17. Unstarred Question No. 128 on Shortage of healthcare professionals, Ministry of Health and Family Welfare, Lok Sabha Feb 2024

18. Biopharma SHAKTI proposed in Union budget 2026-27 Press Information Bureau, 1st February 2026

Rural-urban disparity of healthcare infrastructure and workforce



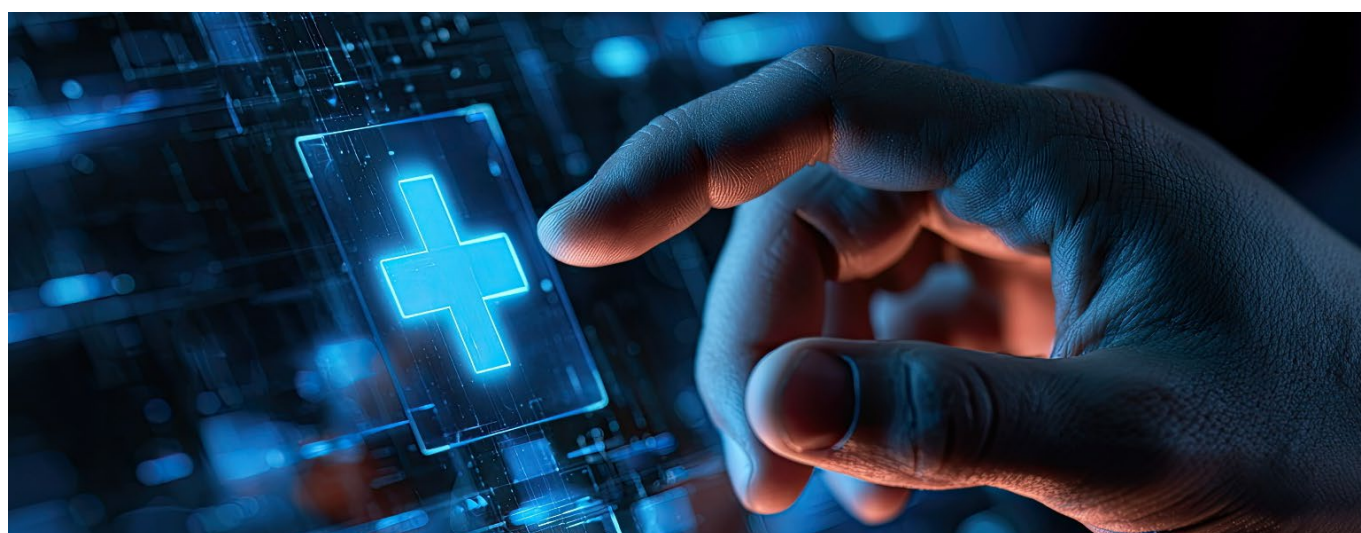
- Nearly 75 per cent of health infrastructure, workforce and resources are concentrated in urban areas, while rural and underserved regions remain largely dependent on public facilities while private providers being concentrated in urban centres.
- Rural areas continue to face gaps in hospital beds, diagnostics, tertiary care and specialists, with CHCs reporting an ~80 per cent specialist shortfall (particularly surgeons, physicians, pediatricians and obstetricians and gynaecologists) despite significant expansion in PG seats since 2014 (177 per cent).^{19,20}
- State-level gaps remain significant, reflected in high referrals (Uttarakhand) and persistent specialist vacancies in rural CHCs of Madhya Pradesh and Rajasthan.^{21,22,23}

Workforce demand with Healthcare infrastructure and expansion



- India's public healthcare system comprises ~36,626 government hospitals (including central, state, and local government bodies) with ~0.84 million beds.²⁴ The public sector faces significant workforce gaps that constrain healthcare service delivery.
- India's private healthcare sector includes ~43,486 private hospitals with ~1.3-1.4 million beds, constituting the majority share of hospital bed capacity and a substantial portion of tertiary care services.²⁵ The private healthcare sector requires a skilled and specialised workforce to deliver high-end care.
- With major hospital chains planning to add over ~34,000 new beds by 2029, India's expanding healthcare infrastructure will require a larger, digitally enabled workforce capable of delivering care in increasingly technology-driven and AI-enabled healthcare systems.²⁶

India's healthcare workforce agenda must evolve from a predominantly 'numbers and capacity' challenge to a 'capacity + capability + productivity' transformation agenda. Building a future-ready workforce will require systematic Digital Health (DH) and AI skilling, reskilling, and upskilling across healthcare cadres, with competency pathways tailored to different roles and levels of proficiency.



19. Health Dynamics of India (Infrastructure and Human Resources) 2022-23 report, Ministry of Health and Family Welfare, Government of India, 2023
20. Starred Question No. 297, "Expansion of PG medical seats", Ministry of Health and Family Welfare, Lok Sabha, 7th August 2026
21. 52,942 referrals, 545 vacancies: RTI shows Uttarakhand's specialist doctor shortage, India Today, October 2026
22. HC pulls up Raj govt over shortage of specialist doctors, The Times of India, 24th July 2026
23. Shortage of specialists makes Rural Healthcare Critical in Madhya Pradesh, The Times of India, 11th December 2024
24. National Health Profile 2023, Ministry of Health and Family Welfare, 2023
25. Medical and Wellness Tourism in India, Press Information Bureau, 2nd May 2026
26. India's leading hospitals line up expansion plans with 34,000 new beds, Business Standard, April 2025

1.2 Key gaps and potential focus areas in digital health and AI skilling

India's healthcare workforce challenge extends beyond headcount to skills, availability, quality and workforce readiness. The evidence base for workforce skilling remains fragmented, with limited national visibility into occupation-level workplace competencies. Existing data largely focus on workforce numbers, staffing, curricula and programme-specific training, making it difficult to systematically identify skill gaps and design targeted skilling, reskilling and credentialing pathways.

Several key considerations as listed below have implications for standardised skilling and structured competency development across India's healthcare workforce.

Existing healthcare workforce lacks digital and AI skilling



Digital workforce readiness remains a global challenge. Across 47 countries assessed by the Global Digital Health Monitor, 65 per cent had minimal workforce readiness, ~52 per cent lacked digital health degree programmes, and only 13 per cent had fully established pre-service and in-service digital health training curricula. The European Observatory on Health Systems and Policies also cites evidence that 30–70 per cent of health workers report lacking the digital skills needed to use new technologies effectively. For India, this underscores the need to embed structured, cadre-specific Digital Health and AI skilling, reskilling and credentialing pathways as technology adoption accelerates

Healthcare education curriculum with limited digital and AI training



Medical, nursing and allied-health education has traditionally centred on clinical competencies, with Digital Health (DH) and AI capabilities yet to be systematically embedded across education and training pathways. Despite growing demand for digitally skilled healthcare professionals, simulation-based training, immersive learning technologies, and AI-assisted systems remain underdeveloped.²⁷ As healthcare becomes increasingly technology-enabled, greater integration of digital health, AI and technology-enabled learning into traditional curricula will be critical to preparing a future-ready workforce.



27. "Bridging the Gap in the Adoption of Trustworthy AI in Indian Healthcare: Challenges and Opportunities." Chettri, S.K., Deka, R.K., and Saikia, M.J. 2025

Disparate digital maturity across providers constrains workforce readiness



Historically, India's digital health ecosystem has relied largely on standards, guidelines and voluntary adoption, limiting uniform implementation across providers. Digital maturity varies across public and private providers, creating uneven exposure of the healthcare workforce to digital systems, data-driven workflows and AI-enabled tools. ABDM participation remains voluntary for many providers, while EHR and interoperability standards see variable adoption. Despite the DPDP Act, 2023, the absence of dedicated EHR legislation contributes to a fragmented regulatory environment for digital health.

Workforce shortages and limited digital upskilling priority



Persistent workforce shortages, high workloads, burnout and competing service-delivery priorities leave healthcare workers with limited time and capacity for continuous digital and AI upskilling. The absence of mandatory digital-skilling requirements and recognized credentials, compounded by connectivity, power and language barriers, particularly across smaller facilities and frontline settings, further constrains workforce readiness.

Absence of a standardised digital and AI competency framework



India currently lacks a nationally standardised digital health and AI competency framework to define, assess and progressively build workforce capabilities across healthcare cadres. In contrast, multiple international competency frameworks have emerged, including TIGER, HITCOMP and the NHS Digital Capability Framework. The absence of a common framework in India contributes to fragmented skilling pathways, inconsistent competency expectations and limited mechanisms to assess digital and AI workforce readiness.²⁸



28. Competency Frameworks and standards for digital health- a landscape analysis, World Health Organization (WHO), 2026, Competency frameworks and standards for digital health: a landscape analysis

Key drivers for future healthcare workforce



2.1 Key drivers shaping digital health, AI adoption and workforce skilling

India's healthcare sector is undergoing significant transformation and growth, driven by the convergence of large-scale healthcare infrastructure investment, accelerating adoption of digital health and AI, evolving patient health-seeking behaviours, emergence of new-age care models, and intensifying competition driving greater operational efficiency.

Some of the key drivers accelerating digital health and AI adoption listed below are transforming healthcare delivery and creating new skilling imperatives for the healthcare workforce.

1 Increasing regulatory compliance requires new skills and roles

Evolving digital health and AI regulations and compliance requirements, including ABDM, DPDP and AI governance frameworks, are accelerating the shift towards interoperable, secure and responsible digital healthcare. This is pushing Indian healthcare providers to strengthen digital infrastructure, compliance and prioritise building capabilities in digital health, data privacy, cybersecurity and responsible AI. Consequently, digital and AI literacy is emerging as a core workforce competency, making continuous upskilling and new expertise critical for a future-ready healthcare workforce.

2 New-age players transforming care delivery and workforce

Digital-first and new-age care players are extending healthcare beyond hospital walls through telehealth, digital care navigation, remote monitoring, home healthcare, digital therapeutics and AI-enabled care. As the new age players make care increasingly virtual, distributed and data-driven, healthcare professionals need new capabilities in remote care delivery, operating digital and AI devices, digital patient engagement, data interpretation and AI-enabled decision support, making digital fluency critical across the healthcare workforce.

3 Changing consumer expectations and digital-first care skills

Consumer expectations are shifting healthcare from facility-centric to connected, digitally enabled, on-demand and personalised care journey, pushing Indian healthcare providers to relook at the existing workflows. This is creating a parallel need to skill the workforce in virtual care, digital engagement and patient-centric service delivery. As digital and AI-enabled care becomes embedded across the patient journey, healthcare workers will need new Digital Health and AI competencies alongside clinical skills.

4 Accelerating digitisation and operational efficiency pushing for new skills

Healthcare providers across the public and private sectors are increasingly focused on improving productivity, efficiency and quality, accelerating the adoption of digital technologies and AI across healthcare operations. As digital and AI-enabled workflows become part of routine healthcare operations, workforce roles and skill requirements are evolving. Digital Health and AI skilling will be critical to enable healthcare workers to effectively use technology, collaborate with AI and deliver safe, efficient and high-quality care.

5 Future healthcare infrastructure demands future ready workforce

India's growing healthcare investment and capacity expansion will require not only a larger workforce, but also one equipped for the next generation of care delivery. As new facilities become increasingly digital, connected and AI-enabled, existing and incoming healthcare professionals will need stronger capabilities in digital health, data and AI. Workforce skilling and reskilling must therefore advance in parallel with healthcare infrastructure expansion. Future-ready infrastructure must be matched by a future-ready, digitally skilled workforce.

2.2 Digital and AI governance advancing healthcare workforce readiness

India's digital health journey has evolved from digitising healthcare processes to building a connected, interoperable and patient-centric health ecosystem across public and private health sector. Given India's fragmented digital landscape and maturity, the digital and AI policies by the government institutions provide essential guardrails for building a trusted, interoperable and inclusive digital health ecosystem at scale for the country. India's digital health transformation is anchored in several governance and enabling initiatives given below:

India's key digital and AI governance and enablement initiatives

Skill India Mission (2015)

The Skill India Mission, an initiative of the Ministry of Skill Development and Entrepreneurship (MSDE), aims to equip India's workforce with industry-relevant skills through initiatives such as Pradhan Mantri Kaushal Vikas Yojana (PMKVY), apprenticeships, digital skilling platforms, and vocational training programmes, with increasing emphasis on emerging technologies, AI, digital literacy, and Industry 4.0 skills. In the healthcare sector, it supports capacity building for healthcare professionals through vocational education, allied healthcare training, digital skilling platforms, and emerging technology competencies.

National Health Policy (NHP) (2017)

National Health Policy (NHP) 2017, issued by the MoHFW, outlined a vision for India's digital health transformation by advocating the creation of a national digital health ecosystem, interoperable health information systems, electronic health records, and the use of digital technologies to strengthen healthcare delivery and continuity of care.

National Strategy for Artificial Intelligence (NSAI) - NITI Aayog (2018)

The National Strategy for Artificial Intelligence (#AIforAll), released by NITI Aayog in 2018, established the foundation for India's AI ecosystem and identified healthcare as one of the five priority sectors for AI adoption. The strategy envisions leveraging AI to improve healthcare access, disease diagnosis, clinical decision-making, public health surveillance, and health system efficiency while promoting inclusive and socially beneficial AI innovation.

Ayushman Bharat Digital Mission (ABDM) (2021)

The National Digital Health Blueprint (NDHB) laid the foundation for the ABDM to operationalise the connected and interoperable digital health ecosystem. The ABDM, under the NHA aims to develop various fundamental building blocks and health information exchange mechanisms. As healthcare providers integrate with the ABDM ecosystem, healthcare workers must acquire skills in electronic health record management, digital documentation, interoperability standards, consent management, and data sharing protocols.

CERT-In Cybersecurity Directions (2022)

The CERT-In Cybersecurity Directions, issued by the Indian Computer Emergency Response Team (CERT-In) under the Ministry of Electronics and Information Technology (MeitY) establishes mandatory cybersecurity requirements for organisations, including incident reporting, log retention, security monitoring, and cyber incident response. The directions aim to strengthen India's cyber resilience and protect critical digital infrastructure as organisations increasingly adopt digital technologies and cloud-based systems.

Digital Personal Data Protection (DPDP) Act, 2023 and Rules (2025)

The DPDP Act, 2023 was passed by Parliament in August 2023 and the Rules were notified in November 2025. The Act establishes India's legal framework for the collection, processing, and protection of personal data, ensuring privacy, consent, accountability, and responsible use of data in digital health and AI applications. It serves as a foundational pillar for trustworthy AI and health data governance. The rules operationalise the Act by defining requirements for consent management, data fiduciary obligations, breach reporting, and governance mechanisms, enabling secure and ethical use of healthcare data while strengthening compliance and AI governance practices.

IndiaAI Mission (2024)

The IndiaAI Mission, led by the Ministry of Electronics and Information Technology (MeitY), is an initiative to build a comprehensive AI ecosystem through investments in AI infrastructure, datasets, compute capacity, skilling, innovation, research, and responsible AI development. The mission aims to accelerate AI adoption across priority sectors, including healthcare, while promoting safe, inclusive, and ethical AI deployment.

India AI Governance Guidelines (2025)

India AI Governance Guidelines (2025), supported by the IndiaAI Mission and Ministry of Electronics and Information Technology (MeitY), provide an overarching framework for the safe, trusted, inclusive, and accountable development and deployment of AI across sectors, including healthcare. Released under the broader IndiaAI Mission, the guidelines adopt a principle-based approach built around seven core principles ("Sutras") including trust, human-centricity, fairness, accountability, explainability, safety, and innovation.

Strategy for Artificial Intelligence in Healthcare for India (SAHI) (2026)

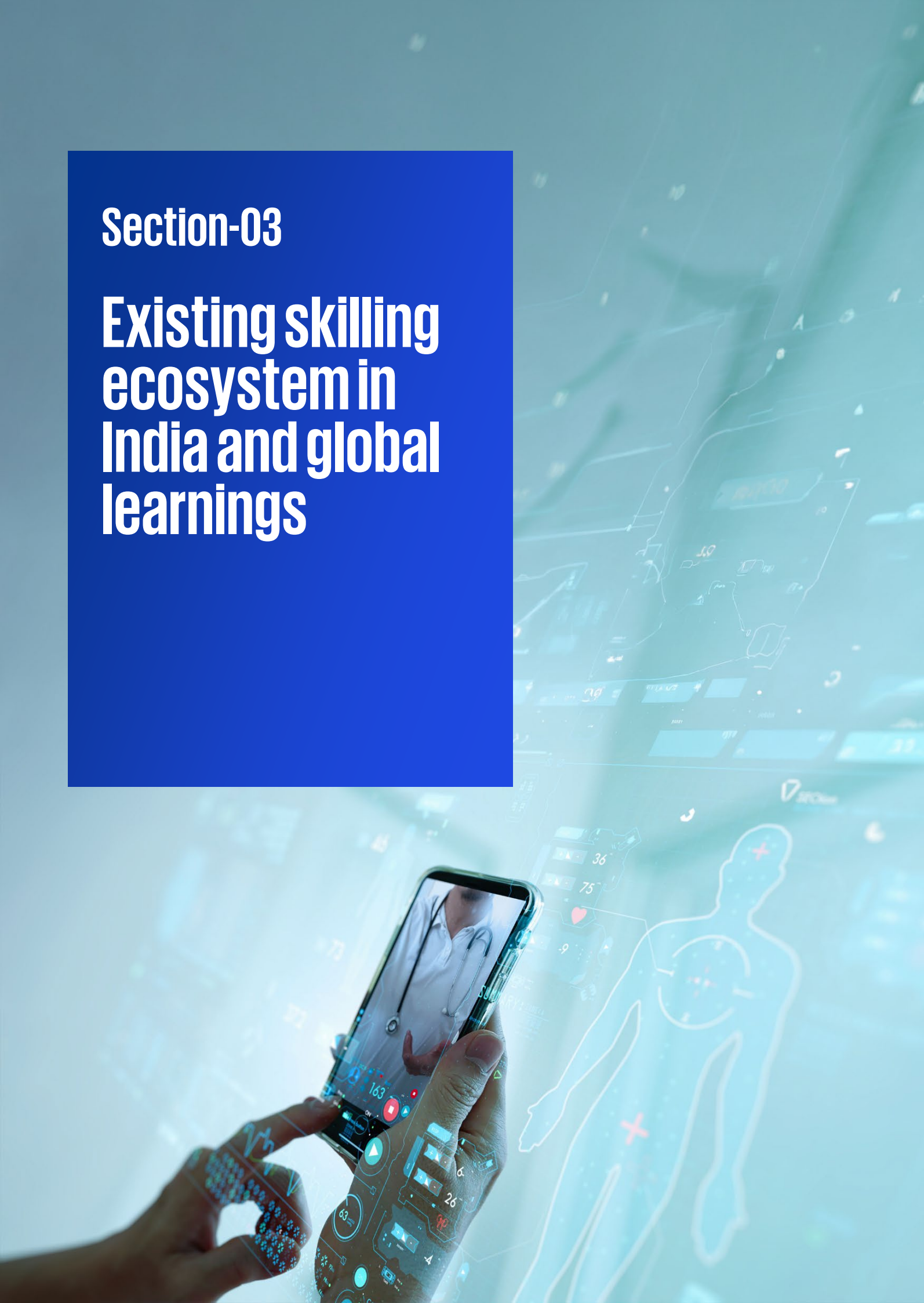
Launched by the MoHFW on February 2026, SAHI is India's national AI governance framework for healthcare that promotes safe, ethical, and accountable AI adoption while driving workforce upskilling in AI literacy, data governance, digital health, and human-AI collaboration. SAHI establishes workforce and institutional capacity building as a key pillar for responsible AI adoption, focusing on competencies, digital literacy, institutional readiness and sustainable change management.

Benchmarking Open Data Platform for Health AI (BODH) (2026)

BODH is a national initiative launched by the Ministry of Health and Family Welfare in February 2026, to support the development, testing, benchmarking, and validation of AI solutions in healthcare. It aims to provide access to high-quality, standardised, representative, and privacy-preserving health datasets, thereby strengthening the digital and data foundations required for trustworthy and scalable health AI innovation in India.

Section-03

Existing skilling ecosystem in India and global learnings



3.1 Existing digital health and AI skilling ecosystem in India

India's digital health and AI skilling ecosystem is supported by a diverse network of government programmes, academic institutions, professional bodies, not-for-profit organisations, and industry-led platforms. Together, these stakeholders deliver foundational education, specialised training, continuing professional development, and workforce capacity-building initiatives.

The ecosystem can be broadly organised into the following four broad categories.

1.0 Government institutions skilling programmes



Government-led initiatives providing large-scale training for healthcare professionals, administrators and frontline workers on digital health systems and tools.

- **National Health Authority (NHA) Digital Health Academy** hosts 66 courses, and ~1.87 lakh learners, covering ABDM implementation, health informatics, interoperability, leadership, digital transformation, AI, digital health standards for hospitals, toolkits, and programme-specific training modules.²⁹
- **NHA in collaboration with Indian Institute of Science (IISc) has introduced a course on AI in healthcare**, covering machine learning, deep learning, medical imaging AI, AI regulation, interoperability, and digital health systems.
- **ABDM workshops, capacity building and resources**, led by NHA and State ABDM Missions, supports onboarding and training for healthcare professionals, health facilities, hospital administrators, and frontline workers on ABHA generation, HPR, HFR, Health Information Exchange, interoperability, consent management, and digital health records.
- **eSanjeevani trainings for Medical Officers (MOs) and Community Health Officers (CHOs)**, implemented by the MoHFW, has trained ~2.14 lakh CHOs, MOs and other healthcare providers on telemedicine service delivery, referral mechanisms, virtual consultations, and digital workflows.^{30, 31}
- **Skill India Digital Hub**, operated by Ministry of Skill Development and Entrepreneurship, offers courses across sectors including healthcare on applied AI for digital health systems, AI foundation for digital health, offered by private hospitals as well as state governments.
- **FutureSkills Prime, a platform developed by Ministry of Electronics and Information Technology (MeitY) and a premier trade association**, offers healthcare courses in AI, data science, cloud computing, cybersecurity, and analytics pathways.³²

2.0 Academic Institutions Skilling Programmes



Universities and higher education institutions offering dedicated digital health programmes and certifications, often in collaboration with national and global partners.

- **Dedicated digital health centres established by a leading foundation within leading higher education institutions** as India's first academic centre for digital health, offering programmes to integrate digital health, simulation, analytics, LLMs, and AI-enabled care into allied health curricula.
- Many schools of health sciences and skilling universities in India offer PG Diploma and Executive Diploma courses in Digital Health, standalone or in collaboration with United Nations Institute for Training and Research (UNITAR).
- **UNICEF in India has partnered with a premier healthcare management institute in New Delhi and a leading education institution in Mumbai**, for the Digital Health Enterprise Planning course, which aims to strengthen the capabilities of healthcare and technology professionals, policymakers, administrators, and implementation stakeholders, equipping them with the knowledge and skills needed to advance digital transformation across health systems.
- **A leading global tech company, in partnership with a premier trade association, and AIIMS Delhi**, has launched the AI Research Foundations curriculum and healthcare AI initiatives using MedGemma models. These programmes support AI literacy, LLM development, AI research, and India-specific clinical AI applications.

29. NHA Digital Academy, National Health Authority

30. Policy brief: Improving the eSanjeevani program and tech platform to Unlock its Full Potential for Universal Health Access in India, IntelHealth,

31. Induction training module for Community Health Officers, National Health System Resource Centre,

32. FutureSkills Prime

3.0 Professional councils and bodies



Professional councils and bodies embedding digital health and AI skilling into regular and continuing education programmes.

- **NBEMS national AI training programme**, launched in January 2026 by MoHFW, aims to train nearly 50,000 doctors in AI-enabled healthcare, diagnostics, and clinical decision support. Over 42,000 doctors have enrolled in the programme.³³
- **A reputed digital health academy** offers programmes such as Essentials of Digital Health, Professional Development Programme in Digital Health for Nurses, Certified Digital Diabetes Nurse Educator Programme, and the Chief Digital Health Officer Programme. They focus on digital health adoption, telemedicine, health informatics, leadership, and AI-enabled healthcare applications.
- **Professional Development Program in Digital Health for Nurses** is a joint initiative by the Indian Nursing Council (INC), a reputed digital health academy, and a leading management institute in Raipur. It introduces nurses to digital health, telemedicine, health informatics, digital documentation, remote patient monitoring, and technology-enabled care delivery, and carries Continuing Nursing Education (CNE) credits.
- **NABH's digital health toolkit training programme**, which are continuing education modules on hospital digital transformation, digital maturity assessment, digital health standards, EMR adoption, and health information governance for healthcare administrators.
- **National Skills Development Corporation (NSDC) and Healthcare Sector Skill Council (HSSC)** provide workforce skilling initiatives for healthcare professionals and allied health cadres across digital health, emergency and diagnostic services, clinical care and patient support etc., and includes 100+ courses with 8,000+ professionals trained so far.

4.0 Hospital and industry-led capacity building initiatives



Leading hospitals and private-sector organisations delivering digital health and AI skilling programmes.

- **A leading hospital chain in Delhi NCR has established National Council for Vocational Education and Training (NCVET) recognised skilling programmes** focusing on digital healthcare, AI-enabled service delivery, workforce development, and technology adoption, signalling growing private-sector investment in structured digital and AI competency building.
- **The knowledge centre of a leading hospital chain across India** offers an accredited programme covering digital health policies, healthcare IT systems, digital transformation, smart hospitals, project management, and implementation of digital health solutions for clinicians, administrators, and healthcare professionals.
- **A large healthcare industry association offers a Digital Health Master Class (DHMC)**, designed to support digital transformation among small and mid-sized healthcare providers, particularly in Tier-2 and Tier-3 cities. Conducted across multiple cities and reaching over hundreds of healthcare providers, the programme focuses on ABDM, NHCX, EMRs, HMIS, compliance, and digital adoption.

33. "Union Minister of State Smt. Anupriya Patel Launches NBEMS Online Training Programme on Artificial Intelligence in Medical Education", Ministry of Health and Family Welfare, Press Information Bureau, January 21, 2026,

3.2 Global learnings- case studies

Countries are increasingly adopting structured frameworks and programmes to build the digital capabilities required across the health workforce. The following global case studies illustrate diverse approaches to competency development, workforce planning, training, and technology adoption, offering relevant lessons for designing scalable and context-responsive digital health skilling initiatives.

BeWell Initiative to prepare the healthcare workforce for the digital transition | European Union

The BeWell initiative (2022–26), funded by the European Commission under the ERASMUS+ programme, aims to prepare the healthcare workforce for the digital transition by developing skills intelligence, competency frameworks, and large-scale training partnerships. The project aims to: (i) develop a health-sector skills blueprint, (ii) establish a pan-European partnership targeting 75 per cent digital-skills training participation by 2030, and (iii) pilot digital and green-skills training for emerging roles. It has 24 courses on digital skills, green skills, and emerging occupational profiles.³⁴

Digital Workforce Framework, National Health Service (NHS) | United Kingdom

NHS has embedded digital capabilities into workforce planning through its Digital Capability Framework, defining competencies across clinical, leadership, informatics, data, and digital roles. The framework supports workforce assessment, career progression, and continuing professional development. They are establishing sustainable models for supplying digital skills to recent graduates, school leavers, individuals re-entering the workforce, and professionals seeking career transitions. Some of their major projects include: (i) Digital supply – NHS Graduate Digital, Data and Technology Programme (DDaT), and (ii) the Topol Digital Health Fellowship.

Health Information Technology Competencies Tool (HITCOMP) Framework | United States of America

Canada Health Infoway, established by the Government of Canada, has supported clinician digital readiness through EMR/EHR adoption, virtual care, peer networks, training and integration of technology into clinical workflows. It established the Centre for Clinical Innovation in Digital Health (CIDH) to drive interoperability adoption. The approach combines technology implementation with workforce capability development. Infoway regularly surveys workforce to understand affect of technology on their work.

National Digital Health Workforce Development, Canada Health Infoway | Canada

Canada Health Infoway, established by the Government of Canada, has supported clinician digital readiness through EMR/EHR adoption, virtual care, peer networks, training and integration of technology into clinical workflows. It established the Centre for Clinical Innovation in Digital Health (CIDH) to drive interoperability adoption. The approach combines technology implementation with workforce capability development. Infoway regularly surveys workforce to understand affect of technology on their work.

34. Blueprint alliance for a future health workforce strategy on digital and green skills, BeWell project, European Union

Digital Health Capability Framework (DHCF) | Australia

The Digital Health Capability Framework (DHCF) provides a common structure for developing and benchmarking digital health capabilities across the healthcare workforce. It covers five domains: digital professionalism, leadership and advocacy, data and information management, digitally enabled care and service delivery, and technology, across formative, intermediate, and proficient levels. Focused on practical competencies, it is aligned with the National Digital Health Strategy (2023–28).³⁵

Skills Framework and Initiatives for Healthcare Workforce | Singapore

The Skills Framework for Healthcare, jointly developed by SkillsFuture Singapore, Workforce Singapore, and the Ministry of Health (MOH), outlines career pathways, competency maps, and emerging skills for future healthcare delivery.³⁶ In 2023, SingHealth and AI Singapore partnered to develop AI curricula, training pathways, and innovation programmes, while NUHS has trained over 40 per cent of its workforce in AI and innovation and is upskilling allied health professionals in AI, virtual care, and data-driven service delivery.^{37, 38}



35. Australian Digital Health Capability Framework, Australian Institute of Digital Health

36. Skills framework for healthcare, Skills future, Ministry of Education, Government of Singapore

37. SingHealth and AI Singapore Sign Memorandum of Understanding to Boost AI Education in Healthcare, SingHealth,

38. How AI and automation transform Singapore's allied health workforce, GovInsider, October 2026



Section-04

Emerging digital health and AI competency framework for India's healthcare workforce for 2035



“By 2035, India’s healthcare workforce imperative may extend beyond expanding workforce capacity to ensuring that healthcare professionals are equipped to thrive in an AI-enabled, and digitally connected health system. India’s healthcare sector would need to skill ~1.25 million professionals annually in Digital Health & AI to build workforce readiness at scale. Sustained through 2035, this effort could enable a significant share of the healthcare workforce to become future-ready.”

- Lalit Mistry, Partner and Co-head, Healthcare, KPMG in India

The proposed indicative National Digital Health and AI Competency Framework (NDH-AICF) in this paper can provide a common architecture for building digital and AI capabilities across India’s healthcare workforce. The NDH-AICF recognises that digital and AI competency must be role-based, not uniform across the health workforce. This direction is consistent with the direction of India’s ABDM ecosystem, competency-based professional education and it aligns with SAHI’s emphasis on workforce readiness, role-appropriate competencies and responsible AI adoption. AI is positioned to augment, not substitute, professional judgement, with appropriate human oversight, accountability embedded in healthcare workflows and robust governance.

SAHI recommends a FRAC (Framework of Roles, Activities and Competencies) based approach to AI competence rather than standardised training or instruction focused on individual tools. It creates a clear distinction between skills to build across the existing workforce for AI and specialist capabilities that warrant dedicated roles.

4.1 Three-tier healthcare workforce architecture by 2035

The proposed NDH-AICF outlines a three-tier healthcare workforce architecture:

- 1. Digitally enabled care workforce —** Foundational skills for most workers with digital health, data, ABDM, privacy, cybersecurity, and AI literacy across the broader healthcare workforce.
- 2. AI-augmented clinical and operational workforce —** Advanced, role-specific skills for selected workers to operate and manage digital tools and AI within clinical care, diagnostics, nursing, pharmacy, public health, and healthcare operations.
- 3. Specialist digital health and AI cadres —** Specialist pipelines for scarce or net-new capabilities in clinical informatics, health data science, interoperability, AI validation and governance, policy design, cybersecurity, privacy, and digital transformation.



Three-tier healthcare workforce architecture by 2035

1 Digitally enabled care workforce



Purpose

Build digital readiness across the broader healthcare workforce so professionals can safely operate in a digitally connected health system.

Illustrative workforce/ roles

- Doctors and clinical specialists
- Nurses and midwives
- Allied health professionals
- Administrative and support staff
- Frontline and community workers
- Public health professionals
- ICT and data staff
- Biomedical engineering
- Hospital administrators/managers
- Policy makers and regulators

Typical DH and AI competency level

L1–L2: Awareness and application

Target skilling by 2035

Target 80% to 90% of total healthcare professionals

Learning: 8–24 hours

2 AI-augmented clinical and operational workforce



Purpose

Enable selected professionals to integrate advanced digital tools, analytics and AI into clinical, public-health and operational workflows.

Illustrative workforce / roles

- AI-enabled clinicians
- Virtual-care nurses
- Digital and AI diagnostic professionals
- Teleservices operators
- Population-health analysts
- Digital workflow/ hospital managers
- Revenue cycle managers

Typical DH AI and competency level

L2–L3: Application and advanced practice

Target skilling by 2035

Target 50% to 60% of total healthcare professionals

Learning: 40–120 hours

3 Specialist digital health and AI workforce



Purpose

Build specialist capability to design, implement, validate, govern and secure digital-health and AI ecosystems.

Illustrative workforce / roles

- Clinical informaticians
- Data protection officer
- Independent data auditor
- Health-data scientists
- Integration and interoperability specialists
- Consent manager and auditor
- Cybersecurity specialists
- IT/security compliance
- Privacy compliance specialists
- AI and DH policy governance leads

Typical DH AI and competency level

L3–L4: Advanced practice and specialist/leadership

Target skilling by 2035

Target 10% to 15% of total healthcare professionals

Learning: 3–24 months

4.2 Eight skill domains for digital health and AI skilling

The eight digital health and AI skill domains establish a common competency architecture spanning digital foundations, care delivery, data, AI, interoperability, cybersecurity, transformation and leadership. The framework adopts a role and responsibility-based approach, enabling proficiency levels to be differentiated across healthcare workforce cadres.

#	Competency domain	Competency intent	Illustrative skills / competencies	Workforce emphasis
D1	Digital health foundations 	Understand the digital-health ecosystem and digitally enabled models of care.	Digital-health ecosystem; ABDM blocks and fundamentals; ABHA and digital health records; EHR/HMIS; telehealth; digital diagnostics; remote monitoring; digital therapeutics; connected care	Foundational for all healthcare workers
D2	Digital clinical and care delivery 	Apply digital technologies safely and effectively within healthcare delivery and patient journeys.	Digital documentation; e-prescribing; digital referrals; teleconsultation; virtual care; remote patient monitoring; digital care coordination; digital discharge; home-based digital care; digital patient engagement	Core for clinical and care-delivery roles
D3	Health data and analytics 	Capture, interpret and use health data to support clinical, operational and population-health decisions.	Data literacy; data quality; structured documentation; clinical coding; health indicators; dashboards; population-health analytics; predictive analytics; data visualization; evidence-based decision-making	Baseline literacy for all; advanced for analytical roles
D4	AI literacy and AI-enabled practice 	Understand, critically assess and safely use AI while preserving professional judgement and accountability.	AI fundamentals; generative AI; clinical decision support; AI-assisted diagnostics; predictive models; AI-assisted documentation; algorithm limitations; bias and fairness; explainability; human oversight; AI escalation	Role-based competency proportional to AI use and decision responsibility

#	Competency domain	Competency intent	Illustrative skills / competencies	Workforce emphasis
D5	Interoperability and digital health standards 	Operate effectively within connected, standards-based digital-health ecosystems.	ABDM interoperability; health information exchange; APIs; FHIR; SNOMED CT; LOINC; DICOM; terminology management; master data; health information architecture	Awareness for most HCWs; deep proficiency for technical specialists
D6	Privacy, ethics, cybersecurity and responsible AI 	Protect patients, health information and digital systems while enabling ethical and responsible technology use.	Digital consent; privacy; data protection; cyber hygiene; phishing awareness; access control; incident reporting; AI ethics; algorithmic bias; responsible AI; clinical AI safety; medical-device cybersecurity	Core responsibility for all; advanced competency for governance/security roles
D7	Digital operations and transformation 	Redesign and improve healthcare operations through technology, automation and digitally enabled workflows.	Digital workflow redesign; automation; hospital command centres; digital patient flow; workforce analytics; digital supply chains; digital revenue cycle; technology procurement; vendor management; programme management; change management	Advanced for operational, managerial and transformation roles
D8	Digital leadership, innovation and governance 	Set direction, govern investments and lead responsible digital and AI-enabled health-system transformation.	Digital-health strategy; AI governance; technology investment; clinical governance; digital operating models; innovation management; workforce transformation; adoption management; benefits realization; digital-health policy; AI risk governance	Leadership / specialist competency

4.3 Competency proficiency levels for digital health and AI skilling

Digital Health and AI proficiency should be differentiated across competency domains and workforce tiers, reflecting each role's responsibilities and technology exposure. Progression from L1 Awareness to L4 Specialist/Leadership enables targeted capability building rather than uniform skilling.

Competency level	Proficiency	Expected capability	Illustrative skills
L1	Awareness 	Understand digital-health and AI concepts, opportunities, limitations and risks	- Digital-health fundamentals - ABDM awareness - AI basics, privacy and consent - Cyber hygiene - Responsible AI
L2	Application 	Use approved digital technologies safely and effectively within routine workflows	- EHR/HMIS - Digital documentation - Telehealth - Digital referral - e-prescribing - Data quality - Approved AI tools
L3	Advanced practice 	Apply, interpret and optimize digital and AI technologies within clinical, operational or public-health workflows	- AI-assisted decision support - Remote monitoring - Digital diagnostics - Predictive analytics - Population-health analytics - Workflow automation
L4	Specialist/ leadership 	Design, validate, govern and lead digital-health and AI systems	- Clinical informatics - Interoperability - AI validation - Model monitoring - Cybersecurity - Privacy engineering - Responsible AI - Digital transformation

4.4 Evolution of existing 10 cadres with digital health and AI competency pathways

Existing healthcare cadres will evolve rather than be replaced, with Digital Health and AI competencies embedded into their existing roles and career pathways. Structured proficiency pathways can progressively build capabilities from digital foundations and ABDM literacy to data-driven decision-making, AI-enabled care, and advanced digital leadership. Cadre-specific learning pathways will ensure that clinicians, nurses, allied health professionals, administrators, and public-health workers acquire competencies aligned to their roles and scope of practice. This approach enables a future-ready workforce while preserving core clinical and professional expertise.

Existing role / position	2035 digitally enabled role (L1-L2)	DH and AI new skills and competencies	Emerging advanced roles (L3-L4)
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1 Workforce cadre: Doctors

Diagnosis, treatment, procedures, clinical decision-making and end-to-end patient management.

AI-augmented clinical decision-makers who combine professional judgement with digital platforms, analytics and AI-enabled decision support.

Digital foundations: EHR and ABDM-enabled documentation; digital consent; health-information exchange

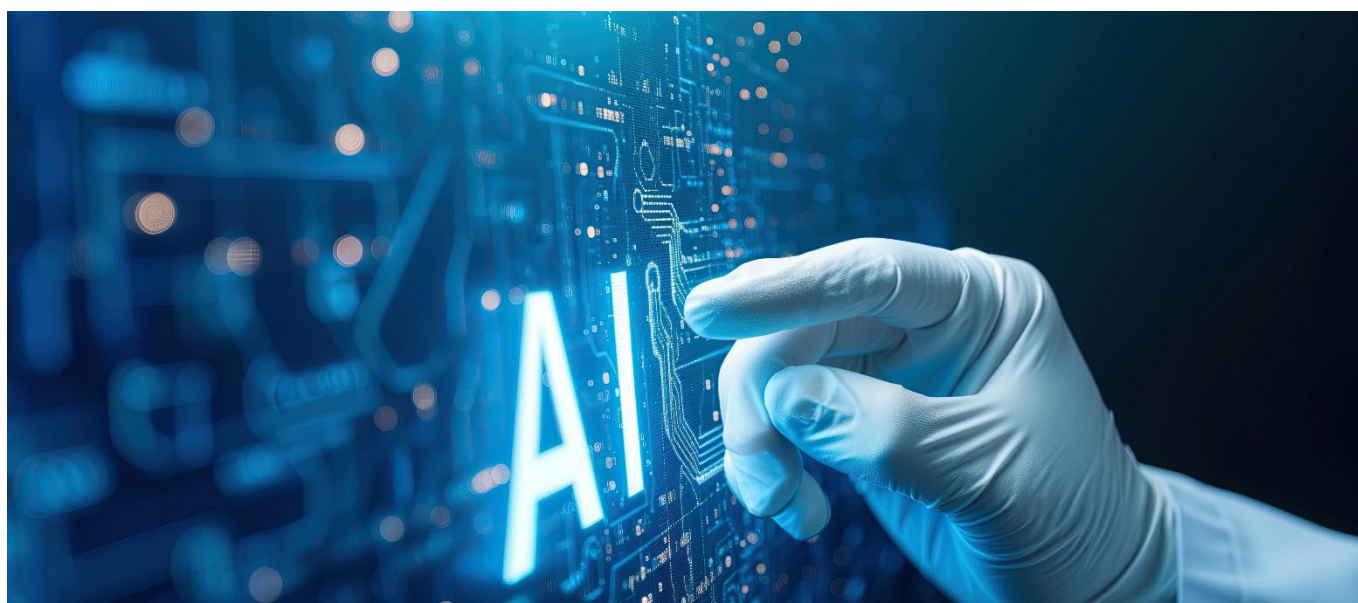
Virtual care: Teleconsultation; hybrid-care delivery; remote patient monitoring; digital therapeutics

AI-enabled practice: AI-assisted diagnosis; clinical decision support; interpretation of AI-generated recommendations

Responsible AI: Understanding algorithm limitations and bias; human-AI accountability

Data and trust: Data-driven clinical quality improvement; cybersecurity; patient-data privacy

- Clinical informatics physician
- Chief medical information officer
- Clinical AI lead
- AI validation and safety physician
- Virtual care physician
- Digital therapeutics specialist
- Population health physician
- Precision medicine / genomics physician



2 Workforce cadre: Nurses and midwives

Patient monitoring, clinical documentation, medication administration, care coordination and patient education across the care continuum.

Digitally enabled care coordinators using connected monitoring, virtual-care tools and AI-supported alerts across the patient journey.



Digital nursing: Digital nursing documentation; electronic medication administration

AI-supported care: AI-supported early-warning systems; escalation protocols

Virtual care: Remote patient monitoring; virtual nursing; tele-triage; hospital-at-home support

Connected care: Digital discharge management; wearable and device monitoring; digital patient education

Quality and trust: Data-driven nursing quality management; cybersecurity and privacy awareness

- Nurse informaticist
- Virtual care nurse
- Remote monitoring nurse
- Digital care coordinator
- Nurse data / quality analyst
- Digital chronic-care nurse
- Hospital-at-home nurse
- Clinical AI nursing champion

3 Workforce cadre: Allied and healthcare professionals

Laboratory, imaging, rehabilitation and other diagnostic or therapeutic services delivered by NCAHP-regulated professions.

AI-enabled diagnostic and rehabilitation professionals operating within automated, connected and data-intensive clinical workflows.



AI-enabled diagnostics: AI-assisted diagnostics; AI quality assurance; digital pathology

Digital workflows: Digital imaging workflows; PACS, RIS and LIS; automated laboratory systems

Connected devices: Connected medical devices; wearable and sensor-data interpretation

Virtual rehabilitation: Remote rehabilitation; digital patient communication

Clinical data: Creation and use of structured clinical data

- AI-enabled diagnostic technologist
- Digital pathology technologist
- Imaging AI quality specialist
- Digital rehabilitation specialist
- Remote rehabilitation coordinator
- Clinical device data specialist
- Digital laboratory workflow specialist

4 Workforce cadre: ASHA, ANM, CHO and last-mile workforce

Community-level screening, outreach, maternal and child health, primary-care coordination and referral support.

Digitally enabled community-health navigators and primary-care coordinators, supported by simple tools that augment rather than overcomplicate frontline work.

Digital access: Digital beneficiary identification; ABHA-enabled workflows

Screening and decision support: Digital screening; mobile clinical decision support

Connected care: Teleconsultation facilitation; digital referral; remote monitoring; digital follow-up

Community data: Community-level health data; digital health education

Trust and safety: Consent and privacy; fraud, OTP and cybersecurity awareness

- Community digital health navigator
- Telehealth facilitator
- Digital screening coordinator
- Community remote-monitoring coordinator
- Digital health outreach supervisor
- ASHA to digitally enabled community health navigator
- ANM to digital maternal, child and population-health practitioner
- CHO to technology-enabled primary-care coordinator

5 Workforce cadre: Public-health workforce

Population-health programme management, surveillance and public-health decision-making at district, state and national levels.

Data- and AI-enabled public-health professionals using surveillance, geospatial intelligence and predictive analytics for population-level decisions.

Digital surveillance: Digital disease surveillance; AI-supported outbreak detection

Population intelligence: Population-health dashboards; programme analytics; risk stratification

Advanced analytics: GIS and geospatial analytics; predictive epidemiology; data visualisation

Governance: Health-data governance; responsible use of population data and AI

Communication: Digital public-health communication

- Digital epidemiologist
- Population health data analyst
- Public health data scientist
- Digital surveillance specialist
- Health intelligence analyst
- AI-enabled disease surveillance specialist
- District health analytics manager

6 Workforce cadre: Administrative and support staff

Patient registration, appointment scheduling, billing, claims, revenue-cycle support, supply-chain administration, records management and other non-clinical workflows.

Digitally enabled service and workflow coordinators using integrated platforms, automation and analytics to deliver efficient, accurate and patient-centred administrative operations.



Digital front office: Digital registration; ABHA-enabled patient identification; omnichannel appointment scheduling; digital payments

Revenue and claims: E-claims and NHCX-enabled workflows; coding and billing systems; denial tracking; fraud and anomaly awareness

Workflow automation: Workflow-management tools; robotic process automation; electronic document and records management

Patient service: Digital navigation; chatbot and contact-centre support; accessibility and service recovery

Supply and support operations: Digital inventory; e-procurement; asset and vendor tracking

Data and trust: Dashboard literacy; data quality; consent, privacy and cybersecurity awareness

- Digital patient access coordinator
- Digital revenue-cycle specialist
- Health claims and NHCX coordinator
- Healthcare workflow automation specialist
- Digital supply-chain coordinator
- Patient experience technology coordinator
- Health records and data-quality specialist
- Administrative digital super-user

7 Workforce cadre: Health IT and data workforce

Hospital IT focused primarily on hardware, networks, infrastructure and hospital information-system support.

Clinical-workflow, interoperability, data, AI, cybersecurity and digital-platform specialists supporting the full digital-health ecosystem.



Interoperability standards: FHIR; SNOMED CT; LOINC; DICOM; ABDM interoperability

Digital architecture: Cloud architecture; APIs; clinical-workflow design

Data and AI: Clinical data engineering; AI and machine-learning operations; model monitoring

Security: Cybersecurity; medical-device security; privacy engineering

Governance: Data quality; metadata; access controls; data governance

- Health informatics specialist
- Clinical informatics architect
- Healthcare interoperability engineer
- Health data engineer
- Healthcare data scientist
- Clinical AI engineer
- Healthcare cybersecurity specialist
- Medical device cybersecurity engineer
- Health data governance specialist
- AI model monitoring specialist

8 Workforce cadre: Biomedical engineering

Planning, procurement, installation, calibration, maintenance, safety testing and lifecycle management of medical equipment and devices.

Connected-device and clinical-technology specialists managing smart equipment, interoperable device ecosystems, predictive maintenance and safe AI-enabled medical technologies.

Connected medical devices: IoMT architecture; device connectivity; integration with EHR, PACS and clinical systems

Smart asset management: Computerised maintenance-management systems; real-time location systems; digital asset registries

Predictive maintenance: Sensor-based condition monitoring; equipment analytics; uptime and lifecycle optimisation

Device cybersecurity: Secure configuration; vulnerability and patch management; network segmentation; incident coordination

AI-enabled technologies: Evaluation, validation and performance monitoring of AI-enabled medical devices

Safety and governance: Procurement specifications; interoperability and data standards; risk, quality and regulatory documentation

- Clinical Technology Informatics Specialist
- Connected Medical Device Engineer
- IoMT Integration Engineer
- Predictive Maintenance and Asset Analytics Engineer
- Medical Device Cybersecurity Engineer
- AI-enabled Medical Device Validation Specialist
- Digital Clinical Engineering Manager
- Smart Hospital Technology Architect

9 Workforce cadre: Hospital administrators/managers

Management of hospital capacity, workforce, patient flow, procurement, revenue cycle, quality and operational performance.

Data-driven digital-operations leaders managing increasingly automated, predictive and connected hospital systems.

Command and capacity: Hospital command centres; predictive capacity planning; AI-enabled scheduling

People and patient flow: Workforce analytics; digital patient-flow management

Financial and supply operations: Automated revenue-cycle management; digital procurement; AI-enabled supply-chain management

Quality and risk: Digital quality management; cyber-risk governance; AI procurement and governance

Transformation: Digital transformation; operating-model redesign; change management

- Digital Hospital Transformation Manager
- Healthcare Automation Manager
- Hospital Command Centre Manager
- Digital Patient Flow Manager
- Healthcare Analytics Manager
- AI Governance Manager
- Digital Operations Manager

10 Workforce cadre: Policy Makers and Regulators

Health policy formulation, regulation, standards-setting, programme oversight, financing, compliance monitoring and stewardship of the health system.

Digital-health and AI stewards shaping interoperable, trusted and equitable ecosystems through evidence-based policy, adaptive regulation and accountable governance.

Digital policy and strategy: Digital-health strategy; ecosystem and platform policy; public digital infrastructure

Standards and interoperability: ABDM architecture; health-data and terminology standards; certification and conformance oversight

Data governance: Privacy, consent, data-sharing and data-access frameworks; secondary use of health data

AI governance: Risk-based AI oversight; transparency, bias and safety requirements; post-deployment monitoring

Regulatory innovation: Regulatory sandboxes; health-technology assessment; procurement and reimbursement policy for digital health and AI

System intelligence and inclusion: Use of dashboards and analytics for policy; digital inclusion; accessibility; equity and grievance redressal

- Digital Health Policy Specialist
- Health Data Governance and Privacy Lead
- AI Regulation and Assurance Specialist
- Digital Health Standards and Conformance Lead
- Regulatory Sandbox and Innovation Lead
- Digital Health Technology Assessment Specialist
- National / State Digital Health Mission Lead
- Public Digital Health Ecosystem Architect



4.5 New and emerging 20+ job roles in healthcare with digital and AI

Digital health (DH) and AI are likely to create new specialised and hybrid roles appearing in job postings, policy documents and hospital organograms between 2026-2035. Some are new titles, while others are existing jobs with a substantially changed skill mix. These roles are expected to bridge clinical expertise, technology, data and governance, enabling healthcare organizations to safely design, deploy, monitor and scale digitally enabled and AI-driven models of care. Smaller facilities may combine several roles into one post or share them across a hospital network or district health facilities.

Broad role cadre: Clinical and health informatics

Role	What the role does	Likely feeder	Sector
1. Chief medical information officer or clinical informatics lead	Bridges clinicians and IT; owns EMR design, decision support and clinical data standards	Senior clinician with informatics training	Both
2. Nursing informatics specialist	Designs nursing documentation, trains wards, drives adoption	Medical records technician, life-science graduate	Both
3. Health information management professional or clinical coder	Codes records, assures record quality, manages release of information	Staff nurse with 5+ years	Both
4. EMR or HIS application specialist	Configures modules, supports go-live, trains users	Nurse, technologist, hospital administration graduate	Both

Broad role cadre: Health data and analytics

Role	What the role does	Likely feeder	Sector
5. Health data analyst	Builds dashboards and indicator reports for hospitals and programmes	Statistician, public health graduate, upskilled data-entry operator	Both
6. Clinical data scientist	Develops predictive models and real-world evidence	Data science or biostatistics with health domain training	Mainly private
7. Health data steward	Runs data governance, master data and anonymisation for secondary use	Health information manager, analyst	Both
8. Public health informatics officer	Integrates programme, surveillance and HMIS data at district and state level	Programme manager, epidemiologist	Mainly private

Broad role cadre: Artificial intelligence

Role	What the role does	Likely feeder	Sector
9. Clinical AI lead or AI nodal officer	Prioritises use cases, assesses tools, oversees deployment, as SAHI's AI units envisage	Clinician or senior manager with AI training	Both
10. AI validation and assurance specialist	Validates tools locally, tests for bias, monitors drift, uses benchmarking platforms such as BODH	Biostatistician, clinician-researcher	Both
11. Clinical AI implementation specialist	Codes records, assures record quality, manages release of information	Fits AI tools into workflows and trains users	Mainly private
12. Medical data annotator	Labels images, signals and text for model development and testing	Radiographer, nurse, laboratory technologist, medical graduate	Mainly private

Broad role cadre: Data privacy and cybersecurity

Role	What the role does	Likely feeder	Sector
13. Healthcare information security manager (CISO)	Owns security policy, risk and incident response	IT security professional with health domain training	Both
14. Data protection officer or privacy manager	Manages notices, consent, rights requests, breach intimation and vendor contracts under DPDP	Compliance, legal or quality manager	Both
15. Security operations analyst (healthcare)	Monitors systems, triages alerts, responds to incidents	IT or network administrator	Both



Broad role cadre: Virtual care and patient-facing digital services

Role	What the role does	Likely feeder	Sector
16. Telehealth services coordinator	Schedules and runs teleconsultations, sets up equipment, maintains records (existing HSSC qualification at NSQF Level 4)	ANM, multipurpose worker, front-desk staff	Both
17. Remote monitoring or virtual ward nurse	Watches remote patient data, triages alerts, coordinates escalation, including tele-ICU	Staff nurse, critical-care nurse	Both
18. Digital health navigator	Helps patients with ABHA, health-record apps, consent and digital services	Front-desk staff, Arogya Mitra	Both

Broad role cadre: Interoperability, claims and digital operations

Role	What the role does	Likely feeder	Sector
19. ABDM integration or interoperability engineer	Builds and maintains FHIR-based exchange and registry integrations	Software developer	Both
20. Digital claims and revenue cycle specialist	Manages e-claims through NHCX, coding accuracy and denial analytics	Billing or insurance-desk executive	Both
21. Chief digital officer or digital health programme manager	Leads the digital portfolio, budgets, vendors and change	Hospital administrator, programme manager	Both



Section-05

Way forward for NDH-AICF Implementation



The proposed National Digital Health and AI Competency Framework (NDH-AICF) could serve as the foundation for systematically preparing India's healthcare workforce for the future of digitally enabled care. Through an inclusive and comprehensive roadmap, it can bring together national and state authorities, regulators, healthcare providers, professionals, academia, industry and development partners around a common competency and implementation architecture

The framework can be expected to promote innovative, technology-enabled and experiential learning supported by robust assessment, certification and career aligned credentials. Dedicated institutional mechanisms will provide the governance, partnerships, financing and implementation capacity required to translate the framework into sustained action. Continuous monitoring, feedback and periodic upgradation has the potential to ensure that workforce capabilities remain relevant as technologies, standards, service-delivery models and public-health priorities evolve.

The key stakeholders are expected to play critical role under the proposed indicative National Digital Health and AI Competency Framework and drive the agenda for creating future healthcare workforce as listed below:

Central government and institutions

MoHFW, NHA, DHR, MeitY and other institutions



1. **Develop a national competency framework-** that defines the digital health and AI capabilities required across healthcare cadres and proficiency levels. The framework should provide a common reference for curriculum design, training, assessment and workforce planning.
2. **Provide dedicated funding-** to develop, pilot and scale training programmes across public and private healthcare settings. Financing should support content development, learning platforms, faculty capacity, simulation infrastructure and participation by frontline workers.
3. **Issue clear and regularly updated guidelines-** covering digital health practices, data protection, consent, privacy and cyber security. These guidelines should translate policy requirements into practical expectations for institutions and healthcare professionals.
4. **Create mechanisms for coordination-** across ministries, regulators, skilling agencies and national digital platforms. Convergence will reduce duplication, align standards and enable consistent implementation across the healthcare ecosystem.

State governments and health missions

State NHM, DHS, SHA, DME and other institutions



5. **Embed digital health and AI workforce development-** within state health plans, programme implementation plans and institutional budgets. This will connect skilling priorities with service-delivery needs, technology investments and state health outcomes.
6. **Strengthen state and regional training institutions-** with qualified faculty, digital learning facilities, simulation environments and access to relevant technologies. A distributed training network can support continuous learning across districts and facility levels.
7. **Designate digital health champions and nodal officers-** at state, district and institutional levels to coordinate implementation. These leaders should support workforce engagement, resolve adoption barriers and promote good practices.
8. **Track training and monitoring-** of coverage, competency attainment, technology adoption and operational outcomes across districts and healthcare facilities. Regular monitoring will help identify gaps, target support and improve programme effectiveness.

Regulators and councils

NMC, INC, NCAHP, NCISM, state level and other bodies



9. **Integrate new age skills** - digital health, AI, data literacy, telemedicine, privacy, and cybersecurity competencies into pre-service education, licensing requirements, and accreditation frameworks to ensure workforce readiness for technology-enabled care.
10. **Develop and institutionalize role-based skills**- like digital health and AI competency standards for all health workforce cadres, aligning skills requirements with professional responsibilities, care settings, and levels of technology adoption.
11. **Continuous education and skilling**- include digital health and AI learning within continuing professional development and continuing medical education requirements. Periodic learning will help the existing workforce keep pace with evolving technologies, standards and risks.

Healthcare providers

Public, private and other healthcare providers



12. **Strengthen institutional governance for digital health**- and data stewardship through robust frameworks for data protection, consent management, access controls, cybersecurity, and accountable leadership roles in digital health, clinical informatics, and data governance
13. **Provide hands-on digital health training** – supporting infrastructure with access to digital tools, connectivity, software platforms, protected learning time, and practical training environments that mirror real-world service delivery settings.
14. **Continuous workforce assessment and capacity-building**- mechanisms to evaluate competencies before and after technology deployment, identify skill gaps, and provide targeted refresher training, peer support, and role-based professional development.

Healthcare professionals

All cadres



15. **Develop the digital, AI and data capabilities**- required for each professional role and maintain them through regular practice and learning. Competence should cover effective tool use as well as associated clinical, ethical and operational responsibilities.
16. **Use ABDM-enabled services**- like telemedicine platforms, electronic records and other digital tools in accordance with approved workflows and professional standards. Responsible use includes accurate data entry, appropriate clinical judgement and clear communication with patients
17. **Apply data-protection and security measures**- awareness of consent, confidentiality and information-security requirements in day-to-day work. Professionals should access and share information only for authorised purposes and promptly report suspected privacy or security incidents.

Skilling platforms

NSDC, HSSC, iGOT Karmayogi and other institutions



18. **Create modular training content and assessments-** tailored to specific healthcare roles, care settings and proficiency levels. Certifications should provide credible evidence of competence and support progression from foundational to advanced capabilities.
19. **Use multi-mode and incentivized learning pathways-** by delivering digital health and AI training through blended learning models (online, mobile, classroom, and workplace-based formats) and recognizing achievement through credits, micro-credentials, professional development records, and career progression opportunities to encourage continuous skill development and workforce mobility.
19. **Build a pool of ToTs-** master trainers, faculty members and institutional mentors who can deliver and contextualise digital health and AI education. Train-the-trainer models can improve reach, consistency and local ownership of skilling initiatives.
20. **Continuing professional development-** embed digital health and AI learning into continuing professional development (CPD), continuing medical education (CME) initiatives, and professional competency assessments to enable lifelong learning and ensure the workforce remains responsive to evolving technologies, standards, and risks

Development partners, industry and academia

Foundations, academic institutions and industry players



22. **Foster partnership-** like government, academia, healthcare providers, industry and development partners together to design curricula grounded in real service-delivery needs. Simulation and case-based learning can help learners practise complex workflows and responsible decision-making in controlled environments.
23. **Introduce relevant developments-** in AI, data analytics, automation and digital care into training content and practical learning. Programmes should balance innovation with clinical safety, ethics, privacy and appropriate human oversight.
24. **Support fellowships, applied research, communities** – for practice and knowledge-exchange programmes that build specialised capability. These mechanisms can generate evidence, develop future leaders and accelerate the spread of effective approaches.
25. **Create structured partnerships-** that connect academic learning with technology development and healthcare delivery environments. Internships, demonstrator projects and workplace assignments can provide practical exposure while helping institutions address real implementation challenges.

The future of healthcare is expected to be shaped not only by new infrastructure and technologies, but by the capabilities of the workforce that delivers care. New-age delivery models and digitally empowered consumers by 2035 will require a future-ready workforce equipped with the skills and knowledge to effectively, safely and ethically leverage digital health and AI. Skilling the workforce of today is therefore essential to build the healthcare system of tomorrow

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List of abbreviations

ABDM	Ayushman Bharat Digital Mission	DME	Directorate of Medical Education
ABHA	Ayushman Bharat Health Account	DPDP	Digital Personal Data Protection
AHP	Allied Health Professional	EHR	Electronic Health Record
AIIMS	All India Institute of Medical Sciences	EMR	Electronic Medical Record
ANM	Auxiliary Nurse Midwife	ERASMUS +	European Union Programme for Education, Training, Youth and Sport
API	Application Programming Interface	FHIR	Fast Healthcare Interoperability Resources
ASHA	Accredited Social Health Activist	FRAC	Framework of Roles, Activities and Competencies
BODH	Benchmarking Open Data Platform for Health AI	GIS	Geographic Information System
CERT-In	Indian Computer Emergency Response Team	GNM	General Nursing and Midwifery
CHC	Community Health Centre	HCW	Healthcare Worker
CHO	Community Health Officer	HFR	Health Facility Registry
CIDH	Centre for Clinical Innovation in Digital Health	HIS	Hospital Information System
CISO	Chief Information Security Officer	HIMS	Hospital Information Management System
CNE	Continuing Nursing Education	HITCOMP	Health Information Technology Competencies Framework
DDaT	Digital, Data and Technology	HMIS	Health Management Information System
DHCF	Digital Health Capability Framework	HPR	Healthcare Professionals Registry
DHMC	Digital Health Master Class	HRH	Human Resources for Health
DHR	Department of Health Research	HSSC	Healthcare Sector Skill Council
DICOM	Digital Imaging and Communications in Medicine	ICT	Information and Communication Technology

List of abbreviations

iGOT	Integrated Government Online Training	NHCX	National Health Claims Exchange
IISc	Indian Institute of Science	NHS	National Health Service
IIT	Indian Institute of Technology	NHM	National Health Mission
INC	Indian Nursing Council	NMC	National Medical Commission
IoMT	Internet of Medical Things	NSAI	National Strategy for Artificial Intelligence
LHV	Lady Health Visitor	NSDC	National Skill Development Corporation
LIS	Laboratory Information System	NSQF	National Skills Qualifications Framework
LOINC	Logical Observation Identifiers Names and Codes	PACS	Picture Archiving and Communication System
MeitY	Ministry of Electronics and Information Technology	PHC	Primary Health Centre
MoHFW	Ministry of Health and Family Welfare	PMKVY	Pradhan Mantri Kaushal Vikas Yojana
MSDE	Ministry of Skill Development and Entrepreneurship	RIS	Radiology Information System
NABH	National Accreditation Board for Hospitals & Healthcare Providers	SAHI	Strategy for Artificial Intelligence in Healthcare for India
NBEMS	National Board of Examinations in Medical Sciences	SHA	State Health Agency
NCAHP	National Commission for Allied and Healthcare Professions	SNOMED CT	Systematized Nomenclature of Medicine Clinical Terms
NCISM	National Commission for Indian System of Medicine	Tele-ICU	Tele-Intensive Care Unit
NCVET	National Council for Vocational Education and Training	TIGER	Technology Informatics Guiding Education Reform
NDH-AICF	National Digital Health and Artificial Intelligence Competency Framework	UNICEF	United Nations Children's Fund
NDHB	National Digital Health Blueprint	UNITAR	United Nations Institute for Training and Research
NHA	National Health Authority	WHO	World Health Organization

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Established in 1927, FICCI is the largest and oldest apex business organization in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organization, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.

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