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Review Article

Healthcare Delivery System in Kashmir, India: Organization, Infrastructure, Recent Health Initiatives, Opportunities, and Challenges—A Narrative Review

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Abstract:

Introduction: Kashmir's healthcare delivery system has undergone substantial transformation through infrastructure expansion, national health programmes, medical education development, and universal health coverage initiatives, yet geographical constraints, workforce shortages, and accessibility disparities persist.

Methods: This narrative review aimed to provide a comprehensive overview of the organization, infrastructure, recent health initiatives, opportunities, and challenges of the healthcare system in Kashmir. A comprehensive literature search was conducted in PubMed, Web of Science, and Embase for studies published between January 2010 and March 2026, supplemented by Google Scholar, government reports, WHO publications, and Ministry of Health and Family Welfare documents; finally, 35 studies were included.

Results: The system follows a three-tier structure of primary, secondary, and tertiary care, delivering preventive, promotive, curative, rehabilitative, and palliative services. Recent reforms, including Ayushman Bharat Health and Wellness Centres, AB-PMJAY and SEHAT schemes, medical college expansion, free drug and diagnostic services, digital health, and emergency care strengthening, have improved accessibility and service utilization. Nevertheless, specialist workforce shortages, difficult terrain, inequitable resource distribution, and rising disease burden remain major challenges.

Conclusion: Strengthening primary healthcare, improving human resources, enhancing referral systems, and reducing geographical inequities are essential for achieving equitable, accessible, and high-quality healthcare.

Keywords: Delivery of Health Care; Health Services Accessibility; Primary Health Care; Public Health; Health Facilities; Health Policy; Jammu and Kashmir.

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Introduction

Healthcare systems play a central role in improving population health by ensuring equitable access to preventive, promotive, curative, rehabilitative, and palliative healthcare services. An efficient healthcare system not only improves health outcomes but also contributes substantially to social and economic development. According to the World Health Organization (WHO), health is defined as a state of complete physical, mental, and social well-being and not

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merely the absence of disease or infirmity (1). Consequently, strengthening healthcare systems has become a global priority for achieving Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs) (2,3).

India has one of the world's largest mixed healthcare systems comprising public and private healthcare providers. Public healthcare services are organized through a three-tier structure consisting of primary, secondary, and tertiary healthcare institutions, while private providers complement service delivery, particularly in urban settings (4,5). The Ministry of Health and Family Welfare provides national policy direction, whereas individual States and Union Territories are primarily responsible for planning, financing, and delivering healthcare services (6).

Within this national framework, Jammu and Kashmir presents unique challenges because of its mountainous topography, difficult climatic conditions, dispersed rural settlements, and geographical barriers that influence healthcare accessibility and utilization. These factors necessitate a robust healthcare delivery system capable of providing equitable health services across remote and underserved populations (7).

The public healthcare system in Kashmir is organized through Sub-centres, Primary Health Centres (PHCs), Community Health Centres (CHCs), District Hospitals, Medical Colleges, and specialized tertiary healthcare institutions. These facilities function within a structured referral network that facilitates continuity of care from community-level preventive services to advanced specialized treatment. The organizational framework of the healthcare delivery system is illustrated in Figure 1.

The WHO Health System Framework identifies six interrelated building blocks essential for an effective health system: service delivery, health workforce, health information systems, access to essential medicines, health financing, and leadership/governance (8). Together, these components provide a widely recognized framework for understanding health system performance and the factors that influence healthcare delivery.

Primary healthcare remains the cornerstone of an effective healthcare system because it emphasizes disease prevention, health promotion, early diagnosis, and community participation. Strengthening primary healthcare reduces unnecessary referrals, improves population health outcomes, and enhances the efficiency of secondary and tertiary healthcare services (9). In recent years, initiatives such as Ayushman Bharat–Health and Wellness Centres have further strengthened comprehensive primary healthcare services across Jammu and Kashmir.

Although considerable progress has been achieved through expansion of healthcare infrastructure, establishment of new medical colleges, implementation of health insurance schemes, and modernization of healthcare facilities, important challenges remain. Shortages of specialist healthcare professionals, unequal distribution of healthcare resources, difficult terrain, seasonal weather conditions, and increasing demand for specialized healthcare continue to affect equitable service delivery in several districts of Kashmir (7,10).

This narrative review aims to provide a comprehensive overview of the healthcare delivery system in Kashmir by examining its organizational structure, healthcare infrastructure, recent policy initiatives, and the opportunities and challenges influencing healthcare delivery. The review also highlights areas requiring continued policy attention to strengthen health system performance and improve equitable access to quality healthcare.

Materials and Methods

This narrative review was conducted through a comprehensive literature search to identify published evidence on the healthcare system in Kashmir. Electronic databases including *PubMed, Web of Science, and Embase* were searched for studies published between January 2010 and March 2026. Additional records as reported in figure 2 as other sources were identified through *Google Scholar, reference lists of relevant articles, government reports, World Health Organization (WHO) publications, and official reports from the Ministry of Health and Family Welfare, Government of India.*

The search strategy combined Medical Subject Headings (MeSH) and free-text terms using Boolean operators. The principal search terms

included: *"Kashmir" OR "Jammu and Kashmir" AND "healthcare system" OR "health services" OR "health infrastructure" OR "primary healthcare" OR "health workforce" OR "health financing" OR "health policy" OR "public health".*

Only studies published in English were considered. Eligible publications included original research articles, systematic reviews, government reports, policy documents, and reports from recognized national and international organizations addressing healthcare delivery, infrastructure, workforce, financing, governance, or health outcomes in Kashmir. Editorials, conference abstracts, letters to the editor, duplicate publications, studies without accessible full text, and articles not directly relevant to the objectives of the review were excluded.

Results

A total of *260 records* were identified through database searching and other sources. After *removing duplicate records (n = 160),* 100 unique records remained for title and abstract screening. Following preliminary screening and looking at the scope of review, 50 full-text articles were assessed for eligibility. Of these, 15 articles were excluded because they did not meet the inclusion criteria or lacked sufficient relevance to the review objectives. Finally, 35 studies were included in the narrative review. The study selection process is illustrated in Figure 2 following the PRISMA flow diagram

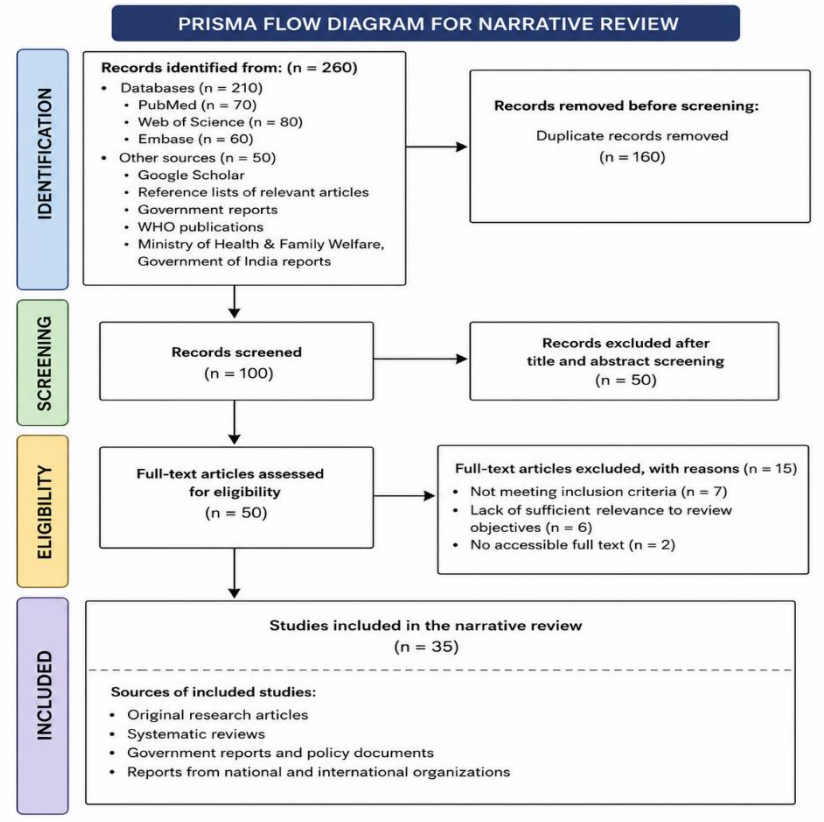


Figure 2. PRISMA diagram of review of literature

Healthcare Infrastructure in Kashmir

The healthcare delivery system in Kashmir follows the three-tier public healthcare model recommended by the Ministry of Health and Family Welfare, Government of India. The system comprises primary, secondary, and tertiary healthcare institutions that function through an organized referral mechanism to ensure continuity of care. Public healthcare facilities remain the principal providers of preventive and essential health services, particularly in rural and geographically inaccessible areas, while private healthcare institutions are concentrated mainly in urban centres and predominantly provide secondary and tertiary care (4,5). Figure 3 illustrates the organizational structure of the public healthcare delivery system in Kashmir.

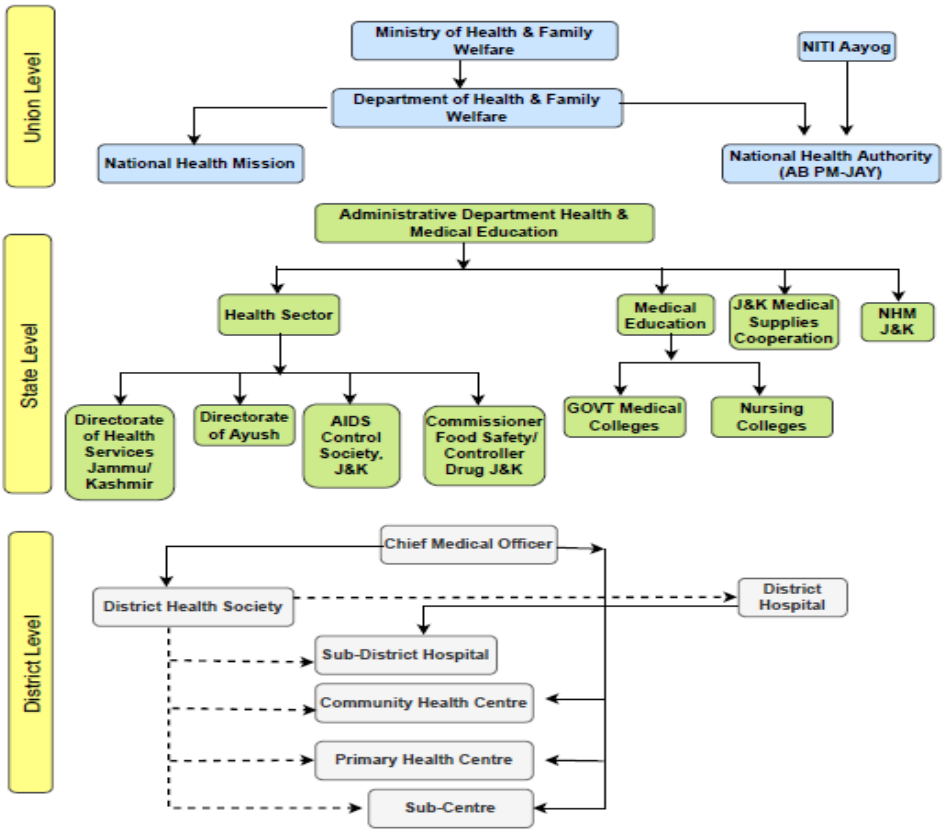


Figure 3. Organizational structure of the public healthcare delivery system in Kashmir

Sub-centres (SCs))

Sub-centres (SCs) are the first and most peripheral level of the public healthcare system and serve as the initial point of contact between rural communities and formal health services. Established under the Indian Public Health Standards (IPHS), SCs serve a population of about 5,000 in plain areas and 3,000 in hilly, tribal, or difficult-to-reach regions. They provide maternal and child health services, immunization, family planning, nutrition services, disease surveillance, health education, and implementation of national public health programmes (11,12).

As of 31 March 2021, Jammu and Kashmir had 2,426 rural and 45 urban Sub-centres. Each rural Sub-centre served an estimated population of 3,872 people and covered approximately three villages. The Union Territory required 2,426 Female Health Workers (Ancillary Nurse & Midwives), whereas 3,467 were in position. In contrast, only 1,024 Male Health Workers were available against the sanctioned requirement of 2,426, indicating a substantial workforce deficit (13).

Table 1. Recommended staffing pattern for Sub-centres according to Indian Public Health Standards

Staff (as of 31st March 2021)	Type A	
	Essential	Desirable
Staff Nurse (ANM, If Staff Nurse is not available)	NA	NA
Health worker (Female)/ Ancillary Nurse Midwife (ANM)	1	1
Health worker (Male)	1	NA
Safai-Karamchari	1 (Part-Time)	

The existing Sub-centre network provides satisfactory geographical coverage across Kashmir. However, the considerable shortage of Male Health Workers may adversely affect disease surveillance, vector-borne disease control, environmental sanitation, and community outreach activities. Although the surplus of ANMs strengthens maternal and child health services, achieving an appropriate workforce balance remains essential for comprehensive primary healthcare delivery. Table 1 shows the recommended staffing pattern for Sub-centres according to Indian Public Health Standards (IPHS).

Primary Health Centres (PHCs)

Primary Health Centres (PHCs) function as the first point of contact between the community and a qualified medical officer and serve as referral units for Sub-centres. They provide integrated preventive, promotive, curative, and basic emergency healthcare services while implementing national health programmes. PHCs are established for a population of approximately 30,000 in plain areas and 20,000 in hilly and difficult geographical regions (11). As of 31 March 2021, Jammu and Kashmir had 891 rural and 82 urban PHCs. Rural PHCs served an estimated population of 10,542 persons, with each PHC covering an average of eight villages. Workforce availability demonstrated adequate numbers of Medical Officers (965 in position against 891 required) and Female Health Workers (951 against 891 required). However, substantial shortages were observed among Health Assistants (104 available against 1,782 required), AYUSH Medical Officers (481 against 891 required), and Nursing Professionals (605 against 891 required) (13).

Table 2. Recommended staffing pattern for Primary Health Centres according to Indian Public Health Standards

Staff (as of 31st March 2021)	Rural		Urban	
	Essential	Desirable	Essential	Desirable
Medical officer (MBBS)	1	NA	1	1
Medical officer (AYUSH)	NA	1	NA	1
Pharmacists	1		1	NA
Accountant cum Data entry operator	1	NA	1	NA
Staff Nurse	3	1	4	1
Health worker (Female)/ ANM	1	NA	1	NA
Health worker (Male)	1	NA	1	NA
Health Assistant/ Lady Health Visitor	1	NA	1	NA
Health Educator	NA	1	NA	1
Laboratory Technician	1	NA	1	NA
Vaccine Logistics Assistant	NA	1	NA	1
Multi-skilled Workers	2	NA	2	NA
Sanitary worker/Watchman	1	NA	1	1
Total	**13**	**18**	**14**	**20**

ANM – Auxiliary Nurse Midwife; AYUSH – Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy; MBBS – Bachelor of Medicine, Bachelor of Surgery (from the Latin Medicinae Baccalaureus, Baccalaureus Chirurgiae); NA – Not Applicable

While the PHC network has expanded considerably, shortages of Health Assistants, AYUSH Medical Officers, and nursing professionals may limit the delivery of comprehensive primary healthcare services. Addressing these workforce gaps is essential for strengthening preventive healthcare, early disease detection, and effective referral to higher-level facilities. Table 2 shows the recommended staffing pattern for Primary Health Centres according to IPHS.

Community Health Centres (CHCs)

Community Health Centres (CHCs) constitute the secondary level of healthcare and function as referral centres for PHCs. They provide specialist services in surgery, medicine, obstetrics and gynaecology, paediatrics, anaesthesia, and emergency care, while

supporting diagnostic and inpatient services. According to IPHS norms, CHCs are established for populations of approximately 120,000 in plain areas and 80,000 in hilly and tribal regions (11).

By 31 March 2021, Jammu and Kashmir had 63 rural and 16 urban CHCs. The average rural CHC served 149,095 people and covered approximately 109 villages. Workforce data indicated adequate availability of nursing professionals (920 available against 441 sanctioned). However, shortages persisted among specialist physicians, surgeons, paediatricians, and anaesthetists, limiting the availability of comprehensive specialist care (13).

Table 3. Recommended staffing pattern for Community Health Centres according to Indian Public Health Standards

STAFF	Essential	Desirable
Block Public Health Unit		
Block Medical Officer/ Medical Superintendent	1	NA
Public Health Specialist	1	1
Public Health Nurse	1	NA
Speciality		
General Surgeon	1	NA
Physician	1	NA
Obstetrician & Gynecologist	1	NA
Pediatrician	1	NA
Anesthetist	NA	NA
General Duty Officers		
Dental Surgeon	1	NA
General Duty Officer	2	NA
Medical Officer-AYUSH	1	NA
Nurse And Paramedical		
Staff Nurses	10	NA
Pharmacist	1	1
Pharmacist- AYUSH	1	NA
Lab Technician	2	NA
Radiographer	1	NA
Dietician	NA	1
Ophthalmic Assistant	1	NA
Dental Assistant	1	NA
Cold Chain & Vaccine Logistics Assistant	1	NA
OT Technician	1	NA
Multi Rehabilitation/ Community Based Rehabilitation Worker	1	1
Counsellor	1	NA
Administrative Staff		
Registration Clerk	2	NA
Statistical Assistant/ Data Entry Operator	2	NA
Account Assistant	1	NA
Administrative Assistant	1	NA
Group D Staff		
Dresser (certified by Red Cross/ Johns Ambulance)	1	NA
Ward Boys/ Nursing Orderly	5	NA
Driver	1	3
Total	46	53

Despite improvements in infrastructure and nursing workforce availability, shortages of specialist doctors remain a major challenge for CHCs in Kashmir. These deficiencies

contribute to increased referrals to district hospitals and tertiary care institutions, resulting in overcrowding and increased healthcare costs. Table 3 shows the recommended staffing pattern for Community Health Centres according to IPHS.

District Hospitals

District Hospitals provide comprehensive secondary healthcare and serve as the principal referral centres for CHCs and PHCs. These hospitals deliver specialized inpatient and outpatient services, emergency care, intensive care, diagnostic services, surgical interventions, maternal and neonatal care, trauma management, rehabilitation, and public health support. They also play an important role in disease surveillance, programme implementation, and district health administration (14).

As of 31 March 2021, Jammu and Kashmir had 16 District Hospitals with 3,408 sanctioned paramedical posts, of which 2,578 were filled (13).

The District Hospitals form the backbone of secondary healthcare delivery in Kashmir. However, vacancies among paramedical staff and increasing patient referrals from peripheral facilities place significant pressure on available resources. Strengthening human resources and diagnostic capacity at this level is critical to improving service efficiency and reducing unnecessary referrals to tertiary hospitals.

Medical Colleges and Tertiary Care Institutions

Medical Colleges represent the highest level of healthcare delivery in Kashmir by providing advanced diagnostic, therapeutic, educational, and research services. These institutions function as tertiary referral centres for complex medical and surgical conditions while also contributing to undergraduate and postgraduate medical education and health workforce development.

Major tertiary healthcare institutions include Sher-i-Kashmir Institute of Medical Sciences (SKIMS), Soura, Government Medical College Srinagar, Government Medical College Anantnag, and Government Medical College Baramulla. According to available data, Kashmir had five government medical colleges during the review period, with subsequent expansion under centrally sponsored schemes (13,15).

Expansion of medical colleges has substantially increased healthcare accessibility, specialist services, and opportunities for medical education in Kashmir. Nevertheless, equitable distribution of specialist services across districts, strengthening of superspecialty care, and retention of skilled healthcare professionals remain important priorities for the health system.

New Health Initiatives in Jammu and Kashmir

Over the past decade, Jammu and Kashmir has witnessed significant improvements in healthcare delivery through the implementation of several national and Union Territory-specific initiatives. These reforms have focused on strengthening healthcare infrastructure, expanding financial protection, improving accessibility, increasing the healthcare workforce, and modernizing health services. Collectively, these initiatives have enhanced health system performance while advancing progress towards Universal Health Coverage (UHC) (6,16).

Ayushman Bharat – Health and Wellness Centres (AB-HWCs)

The Ayushman Bharat programme transformed existing Sub-centres and Primary Health Centres into Health and Wellness Centres (HWCs) to provide comprehensive primary healthcare. In Jammu and Kashmir, these centres have expanded service delivery beyond maternal and child health to include screening and management of non-communicable diseases, mental health services, geriatric care, palliative care, oral health, ophthalmic care, and essential diagnostic services (16,17).

The introduction of HWCs has strengthened preventive and promotive healthcare by facilitating early disease detection, continuity of care, community participation, and health promotion. Digital health initiatives and teleconsultation services have further improved healthcare accessibility, particularly in geographically remote areas.

The transition from conventional primary healthcare facilities to Health and Wellness Centres represents a major shift from disease-oriented care to comprehensive people-centred healthcare. However, sustained

success depends on the availability of trained human resources, uninterrupted supply of medicines and diagnostics, digital infrastructure, and effective referral linkages with secondary and tertiary healthcare facilities.

Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) and SEHAT Scheme

Financial protection against catastrophic health expenditure has been contributed to strengthening through Ayushman Bharat–Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) and the SEHAT Scheme. Unlike many other Indian states, the SEHAT Scheme extends health insurance coverage to all residents of Jammu and Kashmir, thereby ensuring universal financial protection for secondary and tertiary healthcare services (18).

The scheme covers hospitalization expenses for a broad range of medical and surgical conditions across empanelled public and private hospitals. Cashless treatment has significantly improved healthcare utilization among economically disadvantaged populations and reduced out-of-pocket expenditure.

Universal health insurance coverage has improved financial access to healthcare in Kashmir and increased utilization of institutional health services. Nevertheless, disparities in awareness, geographic accessibility of empanelled hospitals, and utilization patterns between urban and rural populations remain important challenges requiring continued policy attention.

Expansion of Medical Colleges and Healthcare Infrastructure

The Government of India and the Government of Jammu and Kashmir have substantially expanded medical education and tertiary healthcare infrastructure through the establishment of new Government Medical Colleges and All India Institutes of Medical Sciences (AIIMS) under centrally sponsored programmes (19).

Expansion of medical institutions has increased specialist healthcare services, strengthened referral care, enhanced diagnostic capabilities, and improved opportunities for undergraduate and postgraduate medical education. The increased number of teaching hospitals has also strengthened emergency and critical care services across the region.

Expansion of medical colleges has considerably strengthened tertiary healthcare capacity and human resource development. However, equitable distribution of specialist services across districts and retention of trained healthcare professionals continue to influence the effectiveness of these investments.

Strengthening of Diagnostic and Free Drug Services

Several initiatives under the National Health Mission have improved access to essential medicines and diagnostic investigations by strengthening laboratory infrastructure, establishing free diagnostic services, and ensuring the availability of essential drugs across public healthcare facilities (20). Improved diagnostic capacity facilitates early disease detection, timely treatment, and appropriate referral while reducing financial burden on patients.

Strengthening diagnostic services has improved the quality and efficiency of healthcare delivery. Continued investment in laboratory infrastructure, equipment maintenance, quality assurance, and skilled laboratory personnel remains essential for sustaining these improvements.

Digital Health and Telemedicine

Digital health technologies have emerged as an important component of healthcare delivery in Jammu and Kashmir. Telemedicine services, electronic health records, online appointment systems, and digital health platforms have enhanced access to specialist consultation, particularly for patients residing in remote and difficult-to-reach areas (21).

These initiatives have become increasingly valuable in reducing travel requirements, improving continuity of care, and facilitating specialist consultations across healthcare levels.

Digital health has considerable potential to improve healthcare accessibility in geographically challenging regions. However, its effectiveness depends upon reliable internet connectivity, digital literacy among healthcare providers and patients, and adequate technological infrastructure.

Emergency and Critical Care Strengthening

Recent investments have strengthened emergency medical services through improved trauma care facilities, intensive care units, oxygen generation plants, ambulance services, and disaster preparedness programmes (19,20). These developments have enhanced the health system's capacity to respond to medical emergencies, communicable disease outbreaks, and public health crises.Strengthening emergency and critical care infrastructure has improved the resilience of the healthcare system. Continued workforce training, equipment maintenance, and integration with referral services are essential to maximize long-term benefits.

Nursing and Allied Health Professional Education

Expansion of nursing colleges, paramedical institutions, and skill development programmes has contributed to improving the healthcare workforce in Jammu and Kashmir. Increased educational opportunities have enhanced the availability of qualified nurses and allied health professionals required for expanding healthcare services (22).

Continuous professional development programmes and competency-based training have further strengthened the quality of patient care. Human resource development remains fundamental to strengthening healthcare delivery. Future policy should emphasize recruitment, retention, equitable deployment, and continuing professional education to address workforce shortages, particularly in rural and underserved areas.

Overall Synthesis of Recent Health Initiatives

The implementation of healthcare reforms in Jammu and Kashmir has contributed to strengthening health service delivery through improvements in infrastructure, financial protection, workforce development, digital health, and primary healthcare. These initiatives collectively support the WHO health system building blocks by improving service delivery, financing, workforce capacity, governance, and access to essential health services (8). Despite these achievements, challenges related to workforce shortages, geographical accessibility, unequal resource distribution, specialist availability, and long-term sustainability continue to influence health system performance. Addressing these challenges through evidence-based planning and equitable resource allocation will be essential for achieving Universal Health Coverage and improving health outcomes across the region.

Strategies for Strengthening Healthcare Delivery in Kashmir

Although the healthcare delivery system in Kashmir has undergone substantial improvements, further strengthening is required to ensure equitable, accessible, efficient, and high-quality healthcare services. Sustainable health system strengthening requires coordinated interventions across healthcare infrastructure, workforce development, financing, governance, digital health, and quality assurance in accordance with the WHO Health System Framework (8).

Strengthening Primary Healthcare

Primary healthcare serves as the foundation of an effective healthcare system by providing preventive, promotive, curative, rehabilitative, and palliative services at the community level. Expanding the functionality of Health and Wellness Centres through adequate staffing, uninterrupted availability of essential medicines, improved diagnostics, and community participation can substantially reduce avoidable referrals to higher-level institutions (9,16). Investment in primary healthcare is likely to improve early disease detection, reduce hospital overcrowding, and enhance health outcomes while improving the efficiency of the overall healthcare system.

Human Resource Development

The availability of a competent and motivated healthcare workforce remains central to effective healthcare delivery. Existing shortages of specialists, nursing professionals, allied health personnel, and Male Health Workers should be addressed through evidence-based workforce planning, timely recruitment, equitable deployment, and continuous professional development (13,22).

Retention of healthcare professionals in remote and underserved districts may be improved through financial incentives, career advancement opportunities, supportive working environments, and improved living conditions. Human resource strengthening

represents one of the most cost-effective strategies for improving healthcare quality and reducing disparities in access to specialized services.

Digital Health and Health Information Systems

Digital health technologies can substantially improve healthcare accessibility, particularly in geographically difficult regions of Kashmir. Expansion of telemedicine services, electronic health records, integrated health information systems, and digital disease surveillance will facilitate continuity of care and improve health system responsiveness (21).

Strengthening digital infrastructure and improving digital literacy among healthcare professionals will be essential for maximizing the benefits of these technologies. Digital transformation has the potential to reduce geographical inequities and improve coordination between different levels of healthcare delivery.

Quality Improvement and Patient Safety

Continuous quality improvement should remain a priority across all healthcare institutions. Regular clinical audits, adherence to standard treatment guidelines, infection prevention and control measures, accreditation programmes, patient safety initiatives, and quality assurance mechanisms can substantially improve healthcare outcomes (23). Monitoring key performance indicators and promoting a culture of continuous quality improvement will further strengthen healthcare delivery. Quality improvement initiatives contribute not only to better clinical outcomes but also to increased patient satisfaction, efficient resource utilization, and greater public confidence in healthcare services.

Opportunities and Challenges

The healthcare system in Kashmir has experienced remarkable progress over recent years through expansion of infrastructure, implementation of universal health coverage initiatives, modernization of healthcare facilities, and increased public investment. Nevertheless, several structural and operational challenges continue to influence healthcare delivery.

Opportunities

Several opportunities exist to further strengthen healthcare delivery in Kashmir:

- Expansion of comprehensive primary healthcare through Health and Wellness Centres.
- Universal health insurance coverage under the SEHAT Scheme.
- Strengthening of medical and nursing education institutions.
- Increasing adoption of digital health technologies and telemedicine.
- Expansion of research, innovation, and evidence-based healthcare planning.
- Improved collaboration between public and private healthcare providers.
- Growing emphasis on quality assurance and accreditation programmes (16,18,21).

These developments provide a strong foundation for achieving Universal Health Coverage and improving population health outcomes.

Challenges

Despite these achievements, several important challenges remain:

- Difficult geographical terrain and climatic conditions affecting healthcare accessibility.
- Shortage of specialist doctors and skilled healthcare professionals.
- Unequal distribution of healthcare infrastructure between urban and remote rural areas.
- Increasing burden of non-communicable diseases, mental health disorders, and ageing populations.
- Workforce retention challenges in remote districts.
- Limited digital connectivity in geographically isolated regions.
- The findings presented in this review were compared and cross-verified with publicly available data from multiple authoritative sources up to 2020–2021. However, given the rapidly evolving healthcare landscape in Kashmir, additional evidence, policy changes, and healthcare developments may have emerged during the subsequent five years (2021–2026). Consequently, the review may not fully capture the most recent advancements, representing a potential gap in the available literature.
- Increasing demand for tertiary healthcare services resulting in overcrowding at referral hospitals (7,13,21).

Addressing these challenges requires sustained investment, strategic workforce planning, infrastructure development, strengthened

referral systems, and evidence-based policymaking. While recent reforms have significantly improved healthcare delivery, reducing regional disparities and strengthening health system resilience remain essential priorities for achieving equitable healthcare access throughout Kashmir.

Conclusion

The healthcare delivery system in Kashmir has undergone substantial transformation through expansion of healthcare infrastructure, implementation of national health programmes, strengthening of primary healthcare, and increased investment in medical education and tertiary healthcare services. Recent initiatives, including Ayushman Bharat–Health and Wellness Centres, AB-PMJAY, the SEHAT Scheme, expansion of medical colleges, digital health services, and modernization of healthcare infrastructure, have contributed to strengthening healthcare accessibility, financial protection, and service delivery.

Despite these achievements, persistent challenges—including geographical barriers, shortages of specialist healthcare professionals, inequitable distribution of healthcare resources, and increasing healthcare demands—continue to affect health system performance. Addressing these challenges requires sustained investments in human resources, digital health infrastructure, quality improvement programmes, and strengthened referral mechanisms.

Future health policies should prioritize equitable resource allocation, workforce retention, integrated primary healthcare, and evidence-informed decision-making to enhance health system resilience and ensure universal access to high-quality healthcare services throughout Kashmir. Continued monitoring and evaluation of healthcare reforms will be essential to sustain improvements and achieve long-term health system goals.

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Conflicts of Interest

The authors declare that they have no competing interests.

Author Contributions

Conceptualization: UA and AP
Literature review: UA, NA
Manuscript preparation: UA, NA
Critical revision: All authors
Final approval: All authors

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