

## Healthcare in Gilgit Baltistan: A Prevalence Study

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### Abstract

The healthcare system in Gilgit Baltistan includes both public and private facilities. Studies indicate that public services are insufficient, lacking doctors, limited lab testing, and shortages of trained technicians, nurses, and basic medicines. NGOs play a crucial role in delivering quality healthcare to residents. The Aga Khan University supports the government by integrating mobile health and the Hayat web portal into the regional health infrastructure. This initiative helps the health department collect, store, and analyze data for better policy-making. The digital health platform will be supported by a data center located in Gilgit. Despite financial limitations, the Gilgit Baltistan government is working toward enhancing healthcare services to an acceptable level.

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### General

Gilgit Baltistan (GB), formally known as the Northern Areas of Pakistan, is a newly established province of Pakistan. Located between the three largest mountain ranges of Karakoram, the Himalayas, and the Hindu Kush and due to its mountainous topography, this region is environmentally very sensitive part of Pakistan. With an expanse of about 27,188 square miles, GB presents a challenging situation for the provision of healthcare due to the land of the trans-Himalayan character of narrow valleys, high mountains, extreme weather conditions, and an inadequate means of communication network. With a population of 1.8 million, this territory has three administrative divisions of Gilgit, Baltistan, and Diamer, comprising fourteen districts.

### GB -Health System

The health sector in GB has been neglected for a long time, with the common people suffering from usual health hazards. Consisting of both public and private health facilities, it is now coming up well despite many challenges. Public health contributes a major proportion of healthcare and is complemented by private health facilities and NGOs such as Aga Khan Health Services (AKHS), Maarifi Foundation, Sehat Foundation, Peoples Primary Health Care Initiative (PPHI), Al-Shifa Trust, etc. AKHS is providing health care services in Gilgit, Ghizer, and Hunza-Nagar districts, Maarifi Foundation is operating in the Baltistan region, and Sehat Foundation and

Al-Shifa Trust mainly organize eye and dental camps (Anwer, M., Ali, N., Jaffar, A., & Ali, D. (2015)).

As regards the public health sector, GB DG's health head office is located in Gilgit with regional offices in Gilgit, Skardu, and Astore. Their health facilities include a network of 5 District Headquarters Hospitals, 27 Civil Hospitals, 15 Basic Health Units, and 2 Rural Health Centers, etc (Saliha, Syeda & Khan, Zeeshan & Zaheer, Kashif. (2026)). All components of healthcare have specific areas of services:-

**Rural Health Centers.** These are managed through public-private partnerships and operated by governments and AKHS, the second-largest healthcare provider in Gilgit. This service comprises basic health centers, comprehensive health centers with 10-30 beds, and a 50-bed medical center, covering over 700,000 people. These centers provide primary care, maternal/child health, and emergency services with inpatient beds and ambulances.

**Basic Health Units.** These are the primary rural health centers often operated by public-private partnerships. They render essential services including maternal care, immunization, and disease control. Basic Health Units face infrastructure deficiencies, equipment, and staff shortages. AKHS, the second-largest healthcare provider after the government, operates more than 125 health centers in GP.

**A Class Dispensaries.** These are crucial components of GB's primary healthcare network. Acting as intermediate facilities, they connect Basic Health Units with District Hospitals and Rural Health Centers. They provide vital services such as outpatient care, basic diagnostics, and minor treatments, especially in densely populated regions. Although they alleviate some pressure on District Hospitals, they face systemic challenges, including staffing shortages, inadequate equipment, and a lack of medicines.

**C Class Dispensaries.** These are primary healthcare units providing basic public health services in typical remote areas facing environmental challenges of floods and glacial melt. These facilities are usually managed by dispensers or medical technicians for common ailments and refer serious cases to civil hospitals.

**Civil Hospitals.** Civil hospitals, though usually under-resourced, provide primary to secondary care across ten districts in GB. These hospitals provide essential services such as emergency care, OPDs, and maternal and child health treatments. 27 Civil Hospitals now operate in the territory, forming the backbone of the GB public health system.

**DHQ Hospitals.** These are public health facilities providing primary to specialized care. These hospitals are central facilities in providing emergency, inpatient, diagnostic, and specialized healthcare services in respective jurisdictions. DHQ Hospital Gilgit is the largest tertiary care hospital in the region. DHQs in Chilas, Hunza, Nagar, Ghizer, and other districts serve as referral hospitals. They generally face shortages of doctors and medicines. Advanced equipment in certain hospitals also remains underutilized due to inadequately trained professionals.

**Maternal and Child Health.** These services are mainly operated by the AKHS. They focus on reducing high maternal and infant mortality rates by counselling in family planning and maternal nutrition provided by trained community midwives, lady health visitors, and specialized facilities in remote places.

**Expanded Programme on Immunization (EPI) Centers.** These facilities operate across GP districts to provide polio, measles, and tetanus vaccinations. These centers function in hospitals and specific rural health centers and expand their services to remote areas using mobile vans.

**Private Healthcare.** Many private healthcare facilities operate in GP. They offer specialist, diagnostic, and surgical services. AKHS are the major health services providers, focusing on high-quality diagnostics and specialist care such as cardiology, urology, dermatology, orthopedic surgery, and psychiatry.

According to a public health facility assessment conducted in 2017, all DHQs, THQs,

BHUs, and dispensaries were of limited utility to the public because of a doctor-to-population ratio of 1:4100, compared with national statistics of 1:1206. There were shortages of basic medicines and lifesaving drugs. Laboratory investigations were minimal due to scarcity of trained laboratory and operating room technicians and trained nursing staff. None of these health facilities was fully functional in providing complete Emergency Obstetric and Newborn Care (EmONC) services. Even DHQ hospitals were unable to provide 24/7 complete EmONC services; as a result, GB had a maternal mortality rate of 600/100,000, which is considered very high within the context of developing countries. It indicated an extreme crisis in maternal health services associated with serious inadequacies in healthcare infrastructure and the skilled birth professionals (Mahmood, A., & Mattoo, A. S. (2017)). Only 22% of the population received antenatal care, and 28% of children received TT immunization. The statistics revealed that GB lagged far behind other parts of the country in health services.

### **Agha Khan Foundation's role in GB Healthcare**

The Aga Khan Foundation plays a key role in providing quality healthcare services to the people of GB. It operates one of the region's largest not-for-profit private healthcare systems, serving people through widely distributed rural health centers, in public-private partnerships with the GB government. The expansion of the Aga Khan Medical Centre in Gilgit and the opening of a new Aga Khan Health Centre in Hunza greatly complement the Government's efforts to achieve healthcare goals. Recent expansions include critical care, advanced diagnostics (including CT scans), dermatology, cardiology, nephrology, urology, dialysis, ophthalmology, tele-consultations, tele-ICU services, emergency medicine, oxygen generation, a full PCR lab, and a blood bank (Zeenat, N., & Jan, R., 2015)).

The Aga Khan University is assisting the GB government in integrating its Mobile Health platform and the Hayat web portal into the mainstream health system at districts and provincial levels. Started in 2018, this initiative targets maternal, neonatal, and child health services, along with immunization programs. The digital health application's data center was collaboratively funded by Grand Challenges Canada and the Aga Khan Foundation Canada (Kazi, A. M., Qazi, S. A., Ahsan, N., Khawaja, S., Sameen, F., Saqib, M., ... & Stergioulas, L. K., 2020). The project's operations are directly overseen by the Secretary of Health, GB.

Hayat has enabled government officials and healthcare supervisors to access real-time information on health workers' performance. It also enables the collection, storage, and evaluation of essential data to inform evidence-based policy decisions. This public-private partnership has fostered innovation and produced immense value for digital health interventions that strengthen GB health systems. By using Hayat's infrastructure, the government is progressively replacing paper-based processes for reproductive, maternal, newborn, and child health services, including vaccinations, antenatal care, nutrition, preventive health services, postnatal care, child growth monitoring, and family planning. More than 500 health workers are using the Hayat app for collecting needed data. (**Times, 2021**).

The digital health application is to be powered by a data center based in Gilgit that was voluntarily established by Agha Khan University and has now been handed over to the local government at no cost. The initiative will aid the government's plans to digitize the health system to enhance the efficiency, transparency, and accountability of the provision of health services.

## **How to Address Healthcare Issues in GB**

Healthcare issues in GB require a multi-dimensional approach. Main issues to be focused on include infrastructure development, digital health adoption, capacity building, training health workers, and human resource retention. Telemedicine is key to reducing the need to travel for quality care in remote rural areas, especially for emergencies.

Enhancing healthcare in GB faces challenges, including a shortage of trained personnel, weak supply chains, and limited healthcare facilities due to the region's mountainous terrain. Remote locations also make access to health services difficult, especially during harsh weather conditions. These challenges require improving infrastructure and expanding professional training. Main emphasis should remain on reinforcing primary healthcare services, essential drug supply, staff training and retention, by providing better working conditions and digital connectivity.

### **Conclusion**

Health is the most important component of our country's public service delivery system. Despite this, our health spending merely constitutes 3% of domestic GDP, and as a result, overall health status has not reached the required standards. Financial constraints have been the main concern for the government of GB in improving its healthcare to a reasonable standard. Within available resources, the GB government is making every effort to improve its healthcare, fully supported by well-known NGOs and international agencies.

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