

PAKISTAN'S NURSING CRISIS: WORKFORCE SHORTAGE AND MIGRATION OF NURSES A RESEARCH-BASED ANALYSIS OF SUPPLY, DEMAND, AND OUTMIGRATION IN PAKISTAN'S NURSING WORKFORCE (2019-2026)

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Abstract

Pakistan is experiencing a dual situation regarding the nursing profession, both in terms of a low number of nurses in the country and sending a large number of Pakistanis nurses to other countries to work in health care systems. This article relies on the data of the Bureau of Emigration and Overseas Employment (BEOE), Pakistan Business Council/Aga Khan University School of Nursing and Midwifery (SONAM) 2025 report, WHO benchmarks, and recent peer-reviewed and institutional research to explore the magnitude of the shortage, the migration speed, and the structural drivers that link the two. The ratio of nurses per population in Pakistan is merely 5.2 per 10,000 people, which is only one-sixth of the recommended level of 30 per 10,000 by WHO; the health system only produces 5,600 nursing graduates in a year, whereas it is estimated that over 700,000 nurses are required in Pakistan. Meanwhile, the number of Pakistani nurses who have registered for overseas employment has surged at a compound annual growth rate of almost 54 per cent from 2019 to 2024, the fastest of any other highly qualified occupation category in Pakistan's migration statistics. But it's no accident that an underfunded, doctor-centric health system, which offers nurses poor pay and working conditions, is failing to train enough nurses or keep them from leaving, and there is a global demand for nurses that will grow to a deficit of 4.1 million by 2030, offering an increasingly appealing alternative. The article ends with policy recommendations focused on the capacity and development of nursing education, incentives for nursing retention, and a managed migration that includes remittance and skills transfer benefits while not undermining the nursing workforce.

Keywords: Healthcare human resources, nursing education, remittances, healthcare worker shortage, nurse-to-population ratio, nurse migration, brain drain, Bureau of Emigration and Overseas Employment (BEOE), nursing benchmark set by WHO, nursing retention policy.

1. Introduction

Nurses make up about half of the health workers worldwide and are the first to interact with most patients in any health system. However, the health system is constructed around doctors, and nursing is regarded as a subservient and poorly funded profession in Pakistan. The impact is

reflected in the basic ratios of health workers: Pakistan has 5.2 nurses per 10,000 population, compared with the WHO-recommended ratio of 30 per 10,000, which means that Pakistan has one of the lowest ratios of nurses per capita in comparison with other countries.

This shortage, by itself, would be quite significant. The second, faster trend is that of nurses – the registrations for overseas employment have increased at about a compound annual growth rate of 54 per cent between 2019 and 2024, which is higher than the compound annual growth rates for doctors, engineers and accountants. This article will explore both these dynamics, as they reinforce each other: any health system which is not able to keep nurses in its own country will always feel short of nurses, no matter how many it may train.

2. Methodology

This study does not involve field research but rather is descriptive and uses secondary data. Data for workforce indicators and migration indicators were compiled from: (1) the Pakistan Business Council and Aga Khan University SONAM joint report, 'Pakistan's Nursing Workforce: Export Potential, Challenges and Recommendations' (2025) based on data from BEOE registration; (2) peer-reviewed brain-drain research covering healthcare professional migration from 1971-2022; (3) World Health Organization benchmarks on workforce; and (4) recent reporting from institutions and media on nursing shortages and hospital staffing as of mid-2026.

The figures reported here are a conservative estimate of the number of migrants because BEOE data only reports formal BEOE registrations, whereas many nurses may travel to countries through informal arrangements or as family sponsors or be directly recruited. For indicators that were reported by multiple sources and had slightly different figures from the various sources (e.g., nurse migration growth, with 54.2 percent growth using the base year and data set compared to 31.4 percent growth using the other base year and data set), both figures are reported but not reconciled into one number.

3. Domestic Shortage: Scale and Structure

The problem of shortage of nurses in Pakistan can be better understood with these three related figures. First, the current stock: currently (2020) there are only 116,658 registered nurses throughout the country, and an estimated need of about 700,000 in order to supply basic population health needs. This is more than 500,000 short of the required number of nurses. Secondly, the flow: nursing colleges produce only 5600 new nurses in a year in the country, which is far less than the number of people who need to be produced in any reasonable planning period to fill the gap, and less than the production in India or Bangladesh. Third, the ratio: Pakistan has only 5.2 nurses per 10,000 population compared to the minimum recommended by WHO of 30 per 10,000; and the nurse: Doctor ratio is 0.4, which is a typical ratio of a system that is designed around doctors.

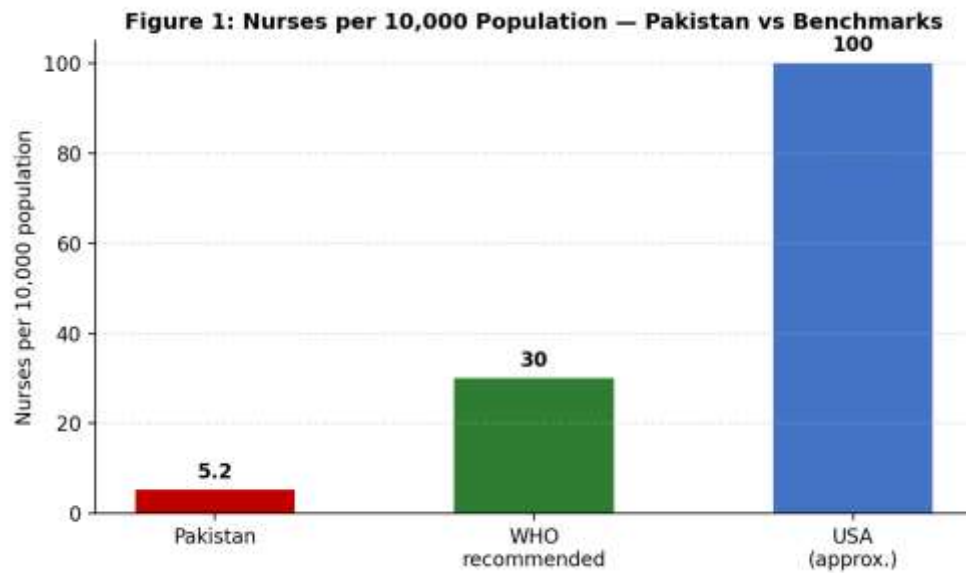


Figure 1. Nurses per 10,000 people — Pakistan and comparison to WHO-recommended target and illustrative high-income comparator. The data has been collected from WHO and Pakistan Business Council/AKU SONAM (2025).

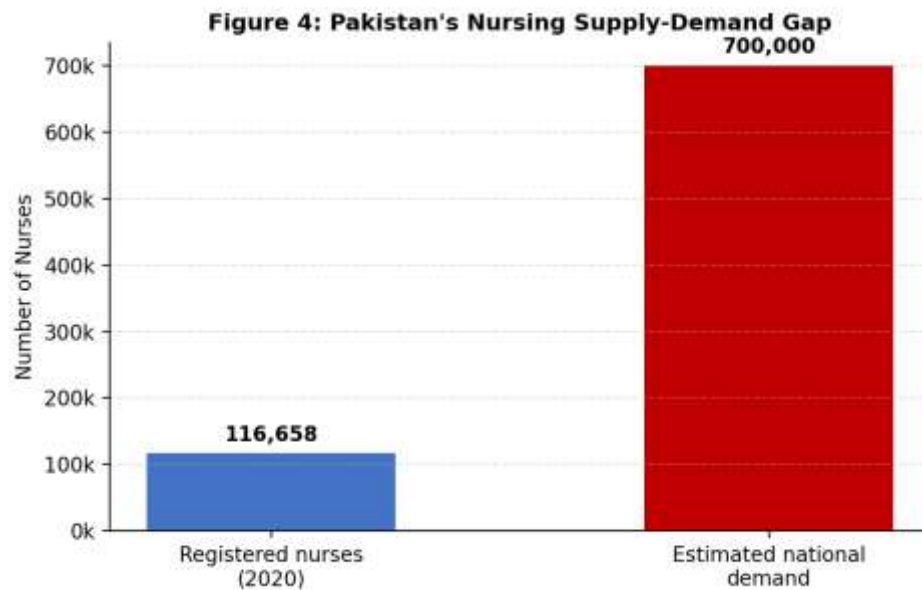


Figure 4 (see Table 1 for full figures). Registered nurses versus estimated national demand.

Source: The Express Tribune, citing BEOE/provincial nursing directorate data, 2025.

Table 1. Key indicators for Pakistan's nursing workforce

Indicator	Value	Note/benchmark
Nurses per 10,000 population	5.2	WHO recommended: 30 per 10,000
Nurse-to-doctor ratio	0.4	Reflects a doctor-centric system
Registered nurses (2020)	116,658	Estimated national demand: ~700,000

Indicator	Value	Note/benchmark
Nursing graduates per year	5,600	Fewer than in India and Bangladesh
Projected national demand by 2030 (Punjab estimate)	100,000 (province level)	Partially fulfilled by the province: ~3,000
Global nursing deficit by 2030	4.1 million	WHO / global workforce estimate

Note. The information in this table is drawn from the sources cited in the References section.

4. The Outflow: Nurse Migration Trends

The country's healthcare institutions are experiencing a shortage of skilled people to operate their facilities; meanwhile, nurses are the fastest-growing category in the export of skilled workers to Pakistan. The nurse registration for overseas jobs has recorded a compound annual rate of growth of around 54.2 per cent during 2019-2024, which is higher than all the other highly qualified occupations, such as managers, engineers, accountants or doctors, according to the data compiled by the Pakistan Business Council (PBC) and AKU SONAM. Although the number of nurses registered abroad in 2024 was still low in comparison with other professions, with the lowest number of registered highly qualified workers, they had the highest growth rate among them, standing fifth in the rank.

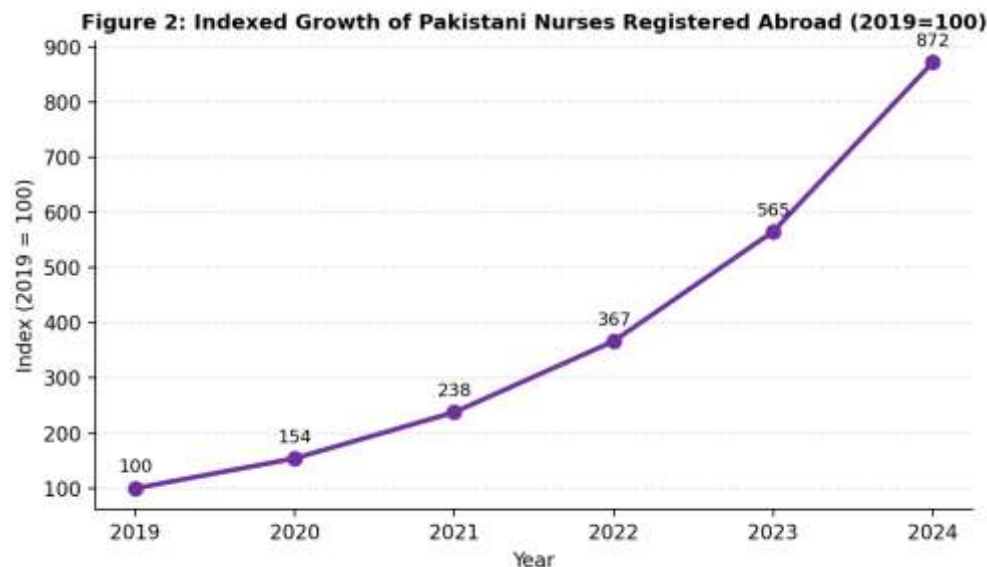


Figure 2. Reported CAGR of 54.2% for indexed growth of Pakistani nurses registered for overseas employment, 2019=100. Data from BEOE, presented by Pakistan Business Council (2025)/AKU SONAM.

A longer look at historical data, dating back to 1971, reveals a similar trend over the past five decades – from 1971 to 2022, approximately 50,110 healthcare professionals relocated from Pakistan, with 12,853 being nurses, 31,418 doctors, and 5,839 pharmacists. During this one year alone (2022), 1,768 nurses and 2,464 doctors left the country. Compared to other skill groups, registered overseas employment in nursing has increased at a faster rate in percentage terms over the past few years compared to all other groups, which saw an increase from 151 percent to 172 percent in migration applications from 2011 to 2024.

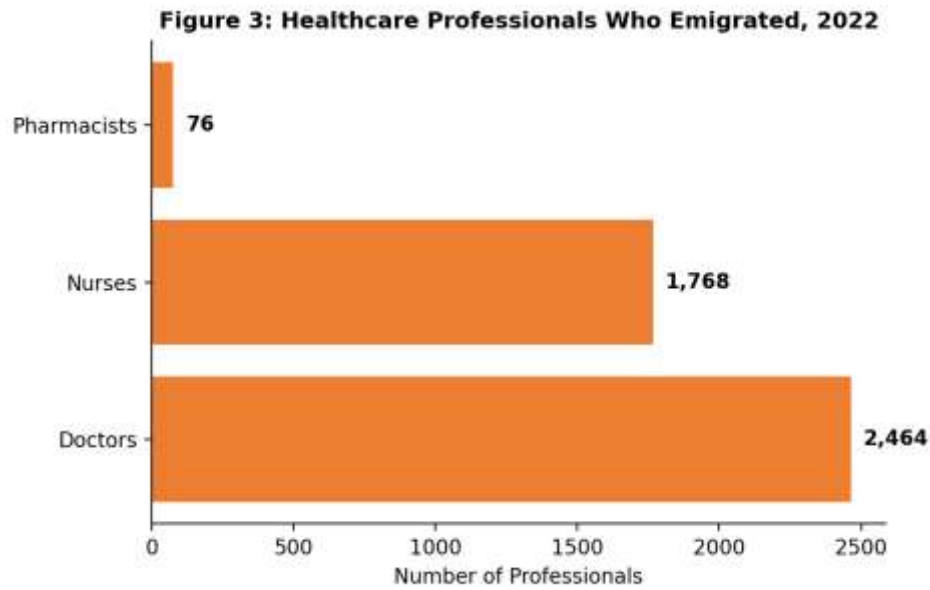


Figure 3. Healthcare professionals who emigrated from Pakistan, 2022. Source: PMC/NCBI, 'Brain drain of healthcare professionals from Pakistan from 1971 to 2022'.

Table 2. Cumulative number of healthcare professionals migrated from Pakistan (1971-2022)

Category	Number (1971-2022)	Share
Doctors	31,418	62.7%
Nurses	12,853	25.6%
Pharmacists	5,839	11.7%
Total healthcare professionals	50,110	100%

Note. Source: PMC/NCBI, 'Brain drain of healthcare professionals from Pakistan from 1971 to 2022'.

5. Why Nurses are Leaving – Push and Pull Factors

- Pay and working hours: nurses feel they are poorly paid, lack good benefits, and are overworked compared to staff numbers, and overseas careers are very appealing, especially when they offer better pay.
- It is also a doctor-centric culture in Pakistan where nursing is considered to be a profession to avoid due to the socioeconomic stigma, and so progress in the career and professional status is restricted at home.
- Among those who remain, there are concerns about the lack of practical nursing training, outdated educational programs, and limited access to clinical simulation training among nursing graduates, especially from unregulated private colleges, which pose a challenge to the domestic system of nursing.
- There are very well-established pathways for nurses to migrate to destination countries, including Gulf States, the United Kingdom, and Canada, and there is a strong pull from destination countries with significant projected shortfalls, such as a global shortage of 4.1 million nurses by 2030.

- Working conditions and safety are repeatedly reported to be a reason for nurse turnover, both within hospitals and from the country, and the COVID-19 pandemic has made this situation worse, with reports of workplace violence, harassment, and burnout being exacerbated by this crisis.

6. Impact on Pakistan's Health System

The impact that vacancies will have on the health system will be immediate: hospitals will find it difficult to recruit nurses, especially in hospitals in rural areas and public hospitals, where the capacity ratio of patients to nurses has already come under strain, (one study of paediatric intensive care units for example, found that nearly half had a worse capacity ratio than 1:3, which is linked to higher risk to patients safety). Increased demand for less-skilled allied health workers as experienced nurses retire from their jobs highlights the direct threat of poor quality of care that hospitals face, according to the Pakistan Business Council report.

However, there is an economic side to offset this. Nurses are also said to be sending higher and more stable remittances than other migrant groups, as the overall remittances of overseas workers in 2024 were estimated at \$34.7 billion, which helped Pakistan to achieve a modest current account surplus in that year. That means that, in the short run, nurse migration will hurt domestic care capacity, while, in the longer run, it can help to support foreign exchange inflows, which are vital for macroeconomic stabilisation — which, in turn, is supposed to be funded by improved domestic spending on health.

7. Policy Recommendations

- Increase the capacity of accredited nursing education by a significant number beyond the annual production of 5600 nursing students, with measures imposed on private nursing colleges to bridge the theory-practice divide, as found by recent research.
- Improve the development of pay scales, staffing levels and progression for nurses to the nursing profession, including the implementation of clear structures and standards for progression, pay and staffing levels; and to specialisation and leadership within the nursing profession.
- Fund workplace safety and anti-harassment compliance in hospitals, which is an often-repeated driver of burnout and leaving the profession.
- Manage nurse outmigration by formalising the concept of 'managed migration' in agreements that also include ethical nursing recruitment standards, skills-transfer or return provisions and predictable remittance channels with major destination countries (Gulf countries, UK, Canada), instead of an unmanaged loss.
- Improve regular BEOE and provincial nurse migration data collection that currently does not include informal and family-sponsored migrations, providing policymakers with a true current view of nurse migration.

8. Discussion

There are two policy framings that can be considered. One sees nurse migration only as a loss and wants to reduce it as much as possible – it is a loss of valuable human capital, which is very expensive to train, and the system can't afford to lose it. The former, as advanced in the Pakistan Business Council/AKU SONAM 2025 report, views nurses as a potential 'export' industry: If Pakistan's capacity to train nurses can be scaled up and the quality and international recognition of the nursing education system is enhanced, then the country could squarely look at nursing as a remittance generating sector, similar to the Philippines' export system for healthcare workers. Though the two framings do not necessarily exclude one another, they have different meanings,

the first being the retention-first policy, the latter being the capacity-expansion-first policy; and Pakistan's current trajectory — low domestic capacity and high migration growth — is the clear need for the former, if ever they veer towards the latter.

9. Conclusion

The nursing problem in Pakistan is manifested as a shortage of nurses and an exodus of nurses at the same time, and one reinforces the other. A nurse-to-population ratio that is only about one-sixth of WHO recommendations, combined with an annual graduate production of just 5,600 and a nurse migration growth rate higher than all other skilled professions in the country, form a health workforce in severe and compound stress. This will take a holistic approach to the issue of retention, compensation, education capacity, and migration policy — rather than just a series of independent problems — because the more nurses we send to the pipeline, the more nurses we'll send to the pipeline abroad if they're not being paid and valued more at home.

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