Brief report

Are we the "Catalyst" to accomplish pragmatic solutions against challenges in Pakistani healthcare?

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Abstract

The healthcare system in Pakistan faces several challenges, namely due to incompetence and a lack of provider responsiveness to the needs of consumers. Two parallel systems exist in the healthcare system of Pakistan. One consists of public hospitals that remained short, even, of basic healthcare facilities, and the other consists of private hospitals that are too costly for the people of Pakistan to afford. Solutions to the stumbling and compromised healthcare system of Pakistan are adequate financial support and infrastructure development. A dire need to invest in the healthcare system is required; otherwise, the healthcare system in Pakistan will continue fighting for its survival rather than improving and competing with the healthcare systems of other nations in the region. The overall data quoted here demonstrates that up-scaling of initiatives in the country would require lot of cautions to be taken by the government.

Graphical abstract

Key words: healthcare, challenges, solution, public hospital, private hospital, primary healthcare facility, infrastructure, investment

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Introduction

The healthcare sector in Pakistan has been facing uphill challenges with a multitude of factors leading to its decline since the mid-eighties. The obsolete approach of political leaders and planners, coupled with continuous pattern of omission of the increasing healthcare needs and the costs associated with unplanned population growth, have led to a messy healthcare system over past three decades.

According to the World Economic Forum, currently Pakistani Healthcare System ranks at 108th position out of her 125 global competitors in overall health and primary education (1, 2).

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The recent advances in medical science and technology internationally necessitate innovative but proficient teaching methodologies and skill development, which have unfortunately been ignored in terms of their essence of understanding and appreciation.

The healthcare system is currently at the mercy of the governance systems that is spending less than even 1% of the total (Gross Domestic Product) GDP of Pakistan. Given that, lack of public health vision by the policy makers has even worsened the situation. The multitude of issues, ranging from enormous scarcity of qualified personnel to poor working conditions, discourages subject specialists to return from abroad despite their patriotic desire to contribute pragmatically (1, 3). In addition to this, there is a substantial disconnect between service delivery by the health sector (both public and private) with academia without any time-tested carrier pathway and employment opportunities. Among other factors, this one in particular, poses serious risks to the skilled human resources at national level.

This article focuses on the foundational aspects of this healthcare system amid ongoing debates about its catastrophic manifestation when it is compared with other healthcare systems within the same continent along with those, which are overseas. Presently, young doctors are often criticized for delivering substandard services, which usually leads to protests and roadblocks. The aim here is to highlight the facts and accept them out of concern for the suffering of the population and the frustration among future physicians and not to unfairly defend any of the aggrieved on either side. As major countries of the world prepare to meet the challenges of an ambitious set of Sustainable Development Goals (SDGs), nations with a lot left to be achieved from the Millennium Development Goals (MDGs) targets of 2015; the member states including Pakistan need to develop a clear roadmap to achieve the set targets. Those goals are set by the SDGs, but there are more commitments to be fulfilled that have been signed under the auspices of the World Health Assembly (WHA) and the United Nations (UN). In order to overcome existing challenges, the World Health Organization (WHO) has already developed several global health sector strategies. Those plans include managing communicable diseases, non-communicable diseases and health systems approaches, which were endorsed by the Sixty-Ninth World Health Assembly (WHA) in 2016. Additionally, Pakistan, along with all the Member States is a signatory to International Health Regulations (IHR) 2005 (1), which calls for the countries to work together to efficiently prevent, detect and respond to the public health emergencies under the IHR.

Different aspects of the problem

The root cause of this sheer instability includes disregarding the prioritization for human resource development and the well-being of the masses, specifically in education and health. The allocation of miserable budgets exacerbates the situation, with insufficient spending on actual treatment and preventive services provision when compared with the actual number of human population on ground. The inaccessibility of medical care due to understaffing further complicates the existing challenges (3-4).

Turning to the current narrative between the government's healthcare machinery with lack of public health approach, primary healthcare and young doctors, it is essentially crucial to appreciate both sides of the story. The arduous journey of a medical graduate, coupled with substantial government investment in their education, highlights the challenges they face. However, young doctors also need to recognize the government's investment of public funds and address the reasonably rightful demands without causing undue harm at any level whatsoever.

According to the World Health Organization Healthcare System building blocks framework, for a well-functioning healthcare system, all the essential components must function in harmony (3). A distinct interruption present in the demand and supply of the services shows inadequate healthcare financing and inadequately remunerated health workforce. Critical review of present scarcity in the Healthcare Sector, after analysis of health workforce, and financial comparison population wise for few areas is presented.

Health Indicators of Pakistan

Pakistan is ranked at the 6th position in the list of most populous country in the world with an estimated population of slightly above 188 million with the annual population growth rate of around Two (5). Pakistan lags far behind other countries in South Asia in terms of social and human development indicators; the country also performed poorly in achieving MDG. Other than poverty as a marker, it could not register notable progress on some of the critical indicators like maternal mortality and infant mortality rates.

The Ministry of Health was devolved in 2011 because of the 18th constitutional amendment, with most of the functions of health care financing being delegated to the provincial governments. According to the available data, the indicators show that Pakistan Health Profile is lagging behind the global indicators (Table 1). For analysis, the data for the years 2014 and 2018 were analyzed, for convenience 2014 data was selected, which was found more relevant for regional and country wise comparison (6, 7).

Table 1. Pakistan health indicators

Variable /Indicator	Value
Total population (2015)	188,925,000
Gross national income per capita (PPP international $, 2013)	4
Life expectancy at birth m/f (years, 2015)	66/68
Probability of dying under five (per 1 000 live births, 0)	93 (MICS2014)
Probability of dying between 15- and 60-years m/f (per 1 000 population, 2013)	189/155
Total expenditure on health per capita (Intl $, 2014)	129
Total expenditure on health as % of GDP (2014)	2.6
GDP-gross domestic product	

Health expenditure analysis of Pakistan

Five variables are selected and analyzed from world developmental indicators , the total health expenditure of Pakistan is 2.6, which is less than recommended. Health expenditure, public (% of total health expenditure) is 35.2. Out-of-pocket health expenditure (% of total expenditure on health) for Pakistan is 56.3, the external resources for health (% of total expenditure on health) is 8, health expenditure per capita (current US$) is 36 and health expenditure per capita, PPP (constant 2011 international $) is 129 (Table 2) (8).

Table 2. Health expenditure- regional wise comparison 2014

Regions	Health expenditure regional comparison					
	Total	Public	Out of pocket	External resources	per capita	per capita
	% of GDP 2014	% of total 2014	% of total 2014	% of total 2014	$ 2014	2011 PPP $ 2014
World Average	9.9	60.1	18.2	0.2	1.061	1.276
East Asia & Pacific	6.9	66.2	25.1	0.3	643	903
Europe & Central Asia	9.5	75.5	17	..	2.420	2.577
Latin America & Caribbean	7.2	51.2	31.7	0.5	714	1.112
Middle East & North Africa	5.3	60.7	31.1	0.8	433	960
North America	16.5	49.6	11.2	..	8.990	8.925
South Asia	4.4	31.2	61.5	2.3	67	234
Sub-Saharan Africa	5.5	42.6	34.5	11.2	98	200
GDP-gross domestic product, PPP - health expenditure per capita						

The available information (Table 3) explains that healthcare financing in Pakistan is far lower than in other countries as per her objective comparison at global standards. For a developing country like Pakistan, maintaining its economic stability, healthcare service delivery and political commitment could be really challenging on ground. The national health budget of Pakistan is 650 billion in Pakistani Rupee (PKR), whereas this Universal Health Coverage (UHC) would cost about 400 billion PKR (around 62%) (9).

Table 3. Health expenditure country wise comparison

Name of Country	Health expenditure country wise comparison					
	Total	Public	Out of pocket	External resources	per capita	per capita
	% of GDP 2020	% of total 2014	% of total 2020	% of total 2014	$ 2014	2011 PPP $ 2014
Afghanistan	15.53	35.8	74.81	23	57	167
Bangladesh	5.67	27.9	11.21	11.8	31	88
India	2.63	30	74.00	1	75	267
Indonesia	11.98	37.8	13.60	1.1	99	299
Iran, Islamic Republic	3.41	41.2	31.79	0	351	1.082
Kenya	2.96	61.3	50.59	27.5	78	169
Pakistan	5.34	35.2	37.06	8	36	129
Saudi Arabia	4.29	74.5	24.06	0	1.147	2.466
Sudan	2.95	21.4	55.44	2.6	130	282
Turkey	5.5*	77.4	15.8*	0	568	1.036
United Arab Emirates	3.02	72.3	52.96	..	1.611	2.405
United Kingdom	4.62	83.1	16.43	..	3.935	3.377
Zambia	5.62	55.3	8.81	38.4	86	195

GDP-gross domestic product, PPP - health expenditure per capita
List of Variables
1.Health expenditure, total (% of GDP) 2.6
2.Health expenditure, public (% of total health expenditure) 35.2
3.Out-of-pocket health expenditure (% of total expenditure on health) 56.3
4.External resources for health (% of total expenditure on health) 8
5.Health expenditure per capita (current US$) 36
6.Health expenditure per capita, PPP (constant 2011 international $) 129

Human Resource for Health Profiling

Pakistan is among those 57 countries that are facing critical shortage of healthcare workforce below the threshold level which is defined by the WHO. As a result of this shortage, achieving an efficient healthcare system is an overwhelmingly arduous challenge.

Analysis of Health Workforce versus capital is analyzed in Table 4 that demonstrates the physician rate per 1000 population lower than many developing countries (9).

Nurses and midwives include professional nurses, professional midwives, auxiliary nurses, auxiliary midwives, enrolled nurses, enrolled midwives, and other associated personnel, such as dental nurses and primary care nurses. The rate, which is mentioned in the Table 5, shows a great shortage in Pakistan as per data available by the WHO (9).

Table 4. Physician rate/ 1000 population	
Name of Countries	**Physicians per 1,000 people (2008-14)[i]**
Afghanistan	0.3
Bangladesh	0.4
India	0.7
Indonesia	0.2
Iran, Islamic Republic	0.9
Kenya	0.2
Pakistan	0.8
Saudi Arabia	2.5
Sri Lanka	0.7
Sudan	0.3
Turkey	1.7
United Kingdom	2.8
United States	2.5
Zimbabwe	0.1

Table 5. Nurses and midwives (per 1,000 people)	
Name of the Country	**Nurses and midwives per 1,000 people (2008-14)[1]**
Afghanistan	0.1
Bangladesh	0.2
India	1.7
Indonesia	1.4
Iran, Islamic Republic	1.4
Kenya	0.9
Pakistan	0.6
Saudi Arabia	4.9
Sudan	0.8
Turkey	2.4
United Kingdom	8.8
United States	9.8
Zimbabwe	1.3

It is important to know that Pakistan healthcare is funded through grants, which typically flow from the federal government, external sources, private organizations and individuals/households. However, the share of health budget in Pakistan has been observed to be increasing as compared to previous years 2020-21 (10). The health department is divided in two sections; the Specialized Healthcare and Education Department and Primary and Secondary Healthcare Departments.

For the financial year 2021-2022, a total of 154.46 billion of Pakistani rupees was spent by the Primary and Secondary Healthcare Departments to provide most of the primary, secondary, programmatic and community care services (10, 11). However, due to a rise in the disease burden (both communicable and non-communicable) (12) and launch of national health insurance schemes, demand of healthcare service delivery has increased. It resulted in an additional 8 percent increase of budget with 167.503 billion for the year 2023, which is still insufficient to meet the healthcare need of all of its citizens. The department already enhances her focus on treatment and testing with less utilization on preventive healthcare services.

In 2022, the Government announced a health card for the entire population. It covers all the required hospitalizations, which would be related to chronic conditions such as coronary heart disease (angioplasty/coronary artery bypass graft (CABG) procedures), diabetes mellitus, arthritis, certain cancers (hepatocellular carcinoma, breast cancer, colon cancer, leukemia) and chronic infections such as tuberculosis and viral hepatitis.

According to the department data since 2008 (9-12), 7% increase in the number of medical doctors and 38% increase in the number of nurses has been recorded till 2022 against the sanctioned posts, however very little improvement could be observed in terms of population requirements on ground for calculation of population based physicians, nurses and midwives. Data from World Bank is presented in Table 6 that shows significant drop in number of nurses and midwives (12). For the last two years, there have been some efforts to fill the vacant posts as top priority but due to immigration and 'brain-drain' of highly skill professionals from Pakistan increases this vacant gap in an unregulated manner.

In addition to sufficient monetary budget, availability of adequate yet qualified human resource (HR) remains a key challenge for any government to provide quality healthcare to her human population by and large. Several initiatives have already been undertaken in the last decade to improve HR availability, especially in the rural areas, which included providing additional remuneration to serve those who would agree to work in the peripheries (less developed areas) and launching of Postgraduate Rotation Policy. In primary & secondary healthcare facilities, on average 80% of the total 100% sanctioned positions are filled, leaving behind a striking gap.

Table 6. Physicians , nurses and midwives per 10,000 calculation Pakistan

Year	Nurses & Midwives/ 1000	Nurses & Midwives/ 10000	Physicians/ 1000	Physicians/ 10000
2011	0.391	3.91	0.767	7.67
2012	0.406	4.06	0.796	7.96
2013	0.492	4.92	0.817	8.17
2014	0.434	4.34	0.841	8.41
2015	0.449	4.49	0.876	8.76
2016	0.465	4.65	0.917	9.17
2017	0.575	5.75	0.961	9.61
2018	0.925	9.25	0.947	9.47
2019	0.469	4.69	1.12	11.2

Solution to the problem

Taming the healthcare system, it principally requires multi-dimensional approach. Here are a few suggested key solutions that could support practical amelioration of the healthcare system in the country.

Accepting the unpleasant

There might seem to be a dire need to getting over with the phase of psychological denial and accepting the issue along with its humungous extent and complexities. It must be added with an industrious and nationalistic consent of efficiency in implementing the solutions.

The infrastructure and investment

After a clear intention of implementing the solutions at all the pertinent levels, it is imperative to smartly plan, design and develop healthcare infrastructure, which may include medical facilities at primary, secondary and tertiary levels of patient care as per National Action Plan for healthcare. This would exponentially enhance the capacity to provide quality healthcare services, especially to the villages and other remote places of human dwelling.

Medical education and training

Campaigns of health awareness and primary preventive education

Major public health issues by and large must be dealt with by providing health awareness campaigns which cater the most commonly prevalent diseases in different communities of all the towns, cities and provinces of the country. This may also include vaccination drives, education on hygiene and nutrition along with early diagnostic screening programs, which would lead to significantly lesser burden of providing standardized healthcare at tertiary patient care state-of-the-art facilities.

Integration of digital health

In order to augment the process of accurate and fast paced diagnostic services leading to more effective patient care. This may include introducing interconnected Electronic Health Records (EHRs), telemedicine and other digital healthcare solutions, which bear the potential to significantly improve accessibility, minimize physical paperwork and upgrade timely communication between the doctors and patients in a more candid manner.

Partnerships among public and private sectors

There seems to be profoundly effective outcomes in the best interest of patients when there is regular cooperation between private sector and public sector regarding efficient healthcare delivery, improved facilities and expanded access to medical services.

Conclusions

The Ministry of Health Pakistan, in terms of resource allocation and financial allocation for healthcare needs to be a high priority by the policy makers. The situation had been worsened by the devolution, political instability, disasters, and emergencies (Flood and COVID-19), high inflation rate and poverty.

A daily motivation with internationally prevalent educational facilities with focus on the needs discussed and prioritizing primary health care must be provided to undergraduate medical students and post-graduate resident medical doctors who remain busy in their whole-time medical education and training which involve complex scientific concepts along with the art of diagnostics. This would enable them to remain updated with the latest medical advancements, guidelines and best practices in their respective medical specialties along with interdisciplinary harmony to favor the best interest of holistic patient care.

The Ministry is struggling against an uphill and complex task so far. Therefore, appropriate resource management, priority-setting, and a sustainable source of funds from indigenous sources and international agencies are required immediately to address the financial hardships in Pakistan as a country overall. The mentioned indicators are not increasing because of high inflation trend and raised poverty level. There seems to be enormous pressure on the existing workforce to move abroad resulting in gap in health sector quality.

These solutions, when implemented collectively, in a well-coordinated and regulated manner, have the effective potential to significantly enhance the quality of healthcare system in Pakistan, leading to better patient care and improved overall public health.

In conclusion, there is a pressing need for the government to acknowledge the legitimate demands of young doctors, providing them with a congenial learning environment and comprehensive service structure. A holistic approach to the healthcare system issues is essential for the well-being of both healthcare providers and the general population.

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