COMMENTARY

Strengthening Health Systems: A Comparative Analysis of Pakistan and Canada through the WHO Building

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Abstract

The Health System Building Blocks framework guided the holistic approach that has been promoted by the World Health Organization to strengthen the health systems. The framework is composed of six fundamental components: the health workforce, access to essential medicines, information systems, leadership/governance, and financing. These components have been strengthened along with challenges and strategies for indicators like HIV, Nutrition, Child health, and sanitation in Canada, a high-income country compared with a lower-middle-income country such as Pakistan. This commentary identifies certain health system challenges and opportunities for betterment in each country by evaluating the indicators inside the WHO Health System Building Blocks framework that has a health workforce, service delivery, health information systems, access to essential medicines, leadership/governance, and financing.

Keywords: *Health systems, comparative analysis, WHO building, communicable diseases, non-communicable diseases.*

INTRODUCTION

Strengthening the health systems is important for better health outcomes and minimizing inequalities crosswise across different economic statuses.

The Health System Building Blocks framework guided the holistic approach that has been promoted by the World Health Organization to strengthen the health systems. The framework is composed of six fundamental components: the health workforce, access to essential medicines, information systems, leadership/governance, and financing. These components have been strengthened along with challenges and strategies for indicators like HIV, Nutrition, Child health, and sanitation in Canada, a high-income country compared with a lower-middle-income country such as Pakistan.

According to the World Bank, Pakistan's accessibility and quality of essential services, including maternal and child health, HIV prevention, sanitation, and nutrition programs have been affected due to Health expenditure per capita being significantly lower as compared to Canada. Pakistan's health system has been impeded by challenges like financial resource limitations, socio-cultural problems, and political instability. Child mortality due to malnutrition and sanitation and limited access to safe drinking water, endowing preventable diseases like diarrhea have been high in Pakistan [1]. In comparison with Canada, all-embracing sanitation infrastructure, lower child mortality rates, and eminent nutrition standards are covered under strong universal healthcare and public health initiatives. [2]. Nevertheless, some challenges specific to sanitation services child health, and health justice in rural and native communities have still been faced by Canada [3].

Systemic differences have reflected the key health indicators. The most determined challenge is malnutrition resulting in compromised child development and survival [4]. Maternal and infant mortality rates are high in Pakistan as compared to Canada [5]. Canada has been providing wide-ranging access to HIV care and education with good health outcomes and lower transmission rates. In comparison, Pakistan has limited access to HIV treatment and prevention, worsening health conditions, especially in underprivileged communities. However, "to improve health outcomes and quality of life through Health system strengthening initiatives" the same goal has been shared with both countries. A multi-faceted approach is required for addressing these diverse challenges. Canada already doing a lot of work to grapple with gaps associated with health equity, specifically in underprivileged communities. Pakistan should toughen its infrastructure, information system, and health workforce to report nutrition, sanitation, maternal and child health needs. By using the WHO building blocks framework, comparative analysis targets to address strategies for the improvement and fairness in health systems crosswise HICs and LMICs [6].

The purpose of this commentary is to observe key health indicators between Canada, a high-income country, and a lower-middle-income country, Pakistan concentrating on sanitation, nutrition, maternal health, child health, HIV/AIDS, wealth index, demographics, birth and death rates. This commentary identifies certain health system challenges and opportunities for betterment in each country by evaluating the indicators inside the WHO Health System Building Blocks framework that has a health workforce, service delivery, health information

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systems, access to essential medicines, leadership/ governance, and financing.

Health System Capacity and Wealth Index

The health system has directly been influenced by Wealth, shaping the resource availability level for infrastructure and services. Pakistan has limited expenditure per capita, fronting economic restrictions, which limit essential medicines, access to quality services, and workforce training. Canada spends high levels of health spending per capita by supporting the comprehensive health system components like financing, workforce, and service delivery [7, 8]. Pakistan's ability to strengthen its health system has been influenced by this financial limitation 60% of health expenditure has been comprised as seen in its dependence on out-of-pocket healthcare costs [9]. In Canada, health expenditure per capita is higher at $6,207.18 than in Pakistan, which is $43.09 Correspondingly, Canada allocates 11.15% of its GDP to healthcare, however Pakistan's health expenditure accounts for only 2.19% of its GDP. Moreover, Pakistan's out-of-pocket expenditure remains a major burden of 57.50%, at the same time in Canada it is lower at 14.89% (**Table 1**).

Table 1: Health system capacity and wealth index.

Indicator	Pakistan	Canada
Health Expenditure per Capita (USD)	$43.09	$6,207.18
Health Expenditure as % of GDP	2.91%	11.15%
Out-of-Pocket expenditure (%)	57.50%	14.89%

Population Dynamics and Demographics

Health service demands are shaped by the demographic structure. Canada has increased demand for long-term care facilities and financing because the aging population needs funds for elderly services and chronic care. Pakistan's youth strengthen the importance of maternal and child health services, emphasizing expanded workforce capacity and improved service delivery. [10, 11]. In Pakistan, the elderly population over 65 comprises 4%, then in Canada it is 19%. Nevertheless, in Canada, the population under the age of 15 is 15%, whereas in Pakistan this figure is significantly higher which is 37%, it is shown drastic difference between the two countries (**Table 2**).

Table 2: Population dynamics and demographics.

Indicator	Pakistan	Canada
Population Under 15 (%)	37%	15%
Population Over 65 (%)	4%	19%

Birth and Death Rates

Socio-economic conditions and healthcare access are reflected by birth and death rates. Socio-cultural norms and limited family planning services influence Pakistan's high birth rate emphasizing the accessibility to family planning and expanded service delivery. Canada highlights the priority related to the needs associated with an aging population because it has lower birth and death rates because of preventive care and comprehensive healthcare access [12-14]. In Canada, the birth rate is knowingly lower at 9 per 1000 people compared to Pakistan, which has a birth rate of 27 per 1000 people, whereas Pakistan has a slightly lower death rate of 7 per 1000 people (**Table 3**).

Table 3: Birth and death rates.

Indicator	Pakistan	Canada
Birth Rate (per 1,000 people)	27	9
Death Rate (per 1,000 people)	7	9

Child Health

Pakistan's rural areas have been facing high child mortality rates because of the shortages in essential medicines and the limited service delivery. The reasons are high rates of preventable illnesses like diarrhea and low immunization rates. The health system must be strengthened in rural health workforce expansion, financing, and supply chain management. Canada's comprehensive immunization programs investments in workforce training and accessible child health services have reflected Canada's low child mortality. [15].

In Pakistan, the Under-5 Mortality Rate is significantly high which is 61 per 1,000 live births, whereas in Canada it is considerably low at 5 per 1,000 live births. Similarly, the Infant Mortality Rate in Pakistan stands at 51 per 1000 live births, which is higher than Canada's Infant Mortality Rate (**Table 4**).

Table 4: Child health.

Indicator	Pakistan	Canada
Infant Mortality Rate (per 1,000 live births)	51	4
Under-5 Mortality Rate (per 1,000 live births)	61	5

Maternal Health

Pakistan's high maternal mortality rate is due to effective health governance, limited access to antenatal care, and skilled birth attendants. Improvements in workforce training, leadership, and service delivery focused on maternal and reproductive health are required for the strengthening of Pakistan's health system. In Canada, low maternal mortality due to accessible maternal health services and financing mechanisms. [16]. Pakistan has serious maternal health issues in comparison with Canada. The Maternal Mortality Ratio in Canada is only 11 per 100,000 live births whereas in Pakistan it is 154. Likewise, in Pakistan, access to skilled birth attendants is much lower 64%. In Canada, it is 98%. Moreover, in Pakistan, 91% of pregnant women receive prenatal care, and in Canada, it grasps 100% showing that both the countries have discrepancies in maternal healthcare coverage (**Table 5**).

Table 5: Maternal health.

Indicator	Pakistan	Canada
Maternal Mortality Ratio (per 100,000 live births)	154	11
Skilled Birth Attendant Coverage (%)	64%	98%
Pregnant women receiving prenatal care (%)	91%	100%

HIV/AIDS

In Pakistan HIV incidence cases are high and the reason is limited awareness, restricted access to antiretroviral therapy, and stigma. However, HIV prevalence is low in both countries. Pakistan should focus on essential medicines access for HIV treatment and significant improvements in health workforce training. Canada's health information systems and financing are benefiting the comprehensive HIV programs [17]. The HIV prevalence rate in both countries Pakistan and Canada is the same which is 0.2%. Nevertheless, in Pakistan, access to antiretroviral therapy along with HIV awareness programs is limited. Antiretroviral therapy is widely available in Canada and they are implementing comprehensive initiatives as well (**Table 6**).

Table 6: HIV/AIDS.

Indicator	Pakistan	Canada
HIV Prevalence (%)	0.2%	0.2%
Access to ART (Antiretroviral Therapy)	Limited	Widespread
HIV Awareness Programs	Limited	Comprehensive

Malnutrition and Nutrition

Malnutrition is a critical challenge with high rates of child wasting and stunting is being faced by Pakistan because of limited healthcare financing and food insecurity. Pakistan needs to strengthen workforce capacity in nutrition and financing and child health services. Canada's malnutrition has been prevented by comprehensive health and nutrition policies nevertheless increasing obesity rates need to move in public health strategies [18]. Canada reports no cases of stunting whereas Pakistan's stunting is high at 37.6%. Also, Canada reports zero cases of severe wasting in comparison to Pakistan where severe wasting affects 2.4% of children under five. In disparity in Canada, the prevalence of overweight children under five is significantly higher at 10.4%, contrasted with Pakistan's 2.5% (**Table 7**).

Table 7: Malnutrition and nutrition.

Indicator	Pakistan	Canada
Stunting, height for age (% of children under 5)	37.6	0
Severe wasting, weight for height (% of children under 5)	2.4	0
Overweight, weight for height (% of children under 5)	2.5	10.4

Sanitation and Access to Clean Water

In Pakistan, there is a high prevalence of waterborne diseases due to limited access to clean water and sanitation infrastructure highlighting the need for health information systems and investments in governance to improve water safety and sanitation. Canada has significantly reduced disease risks due to universal access to clean water and sanitation [19]. In Canada, access to clean water is 99% whereas it is significantly low which is 51%. In Pakistan, access to basic sanitation is also low at 71%, Canada is higher at 99%. In Canada the prevalence of waterborne disease is low. Whereas in Pakistan it is high (**Table 8**).

Table 8: Sanitation and access to clean water.

Indicator	Pakistan	Canada
Access to Basic Sanitation (%)	71%	99%
Access to Clean Water (%)	51%	99%
Prevalence of Waterborne Diseases	High	Low

CONCLUSION

Significant inequalities in health outcomes between Canada and Pakistan have been shown by this comparative analysis, formed by the health system infrastructure, wealth index, and demographic factors. For Pakistan's economic development and social progress, a robust healthcare system is required that focuses on population needs and closing health outcome gaps in maternal and child health, essential medicines, sanitation, and health information systems. For better community outreach, Pakistan should strengthen its basic health and rural health units. Pakistan must reduce health inequalities by targeting interventions that benefit marginalized groups. Canada is supporting universal health access through the vigorous venture crosswise WHO Health System Building Blocks.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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