REVIEW ARTICLE

CONFUSION AND DENIAL: NEED FOR SYSTEMS THINKING TO UNDERSTAND THE HIV EPIDEMIC IN PAKISTAN

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The first case of HIV appeared in Pakistan more than 25 years ago, and since then the prevalence of the disease is creeping up apparently at a dawdling pace, with only 3,983, cases registered till November 2010, of which 1,725 are undergoing treatment. The National AIDS Control Program is responsible for managing the epidemic. Pakistan has moved from a 'low prevalence-high risk' to a 'concentrated epidemic' state, yet the forcefulness required for managing this silent escalation of HIV infected numbers is not being highlighted, as it should be. A more holistic focus is the need of the hour, and for this purpose the WHO's Health Systems Building blocks have been used to discuss the state of affairs in Pakistan, with reference to the HIV/AIDS concentrated epidemic. This paper attempts to present a narrative, based on extensive literature review, with a focus on the six building blocks of health systems strengthening. No doubt, the service delivery has to be responsive; but skilled human resources, a robust information system, an uninterrupted supplies and use of latest technology, adequate financing, and above all good governance at operational level are essential ingredients, which call for re-orienting the national programme today. Lack of coordination, capacity and interventions with questionable sustainability pave a perilous path. Hitherto the issue can be addressed by involving stakeholders from all levels of the society and managing the void between policy and implementation. Furthermore, interventions that focus on the long term future are imperative to combat the menace threatening the human lives.

Keywords: HIV/AIDS; Pakistan; Health system; Building blocks

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INTRODUCTION

The first case of HIV emerged in Pakistan more than 25 years ago in 1987[1], and since then the prevalence of the disease is creeping up apparently at a dawdling pace, with only 3,983, cases registered till November 2010, of which 1,725 are undergoing treatment. Yet, this leisurely escalation has the complete capacity of being a false perception based on the limited data and denial of the problem by the state in specific and the population in general. According to UNAIDS estimates, the actual numbers of People living with HIV in Pakistan may be as high as 83,468.[2]

The outlook of the Pakistani society is generally a conservative one[3], but the large numbers of injecting drug users[4], unregulated sex industry[5], poorly screened blood products[6], malpractice by unregistered medical practitioners and the incapacity of the health system to provide sustainable preventive programmes[7], often eclipse this delusion of innate social defence, against the deadly viral transmission. The spread of the Hepatitis B and C viruses in Pakistan's general population provide clear indication of an imminent generalized HIV epidemic in the country; based on the similar modes of transmission of these viruses.[8]

Another important phenomenon to be considered, are the complex social networks, which exist between the high risk groups and the general population.[9] In this context the recently discovered pockets of HIV cases in Jalalpur Jattan (Gujrat district)[10], Kot Mubarak (Dera Ghazi Khan district), Adiyala Jail (Rawalpindi) and Attock Jail[11] are pertinent examples, for the purpose of developing a more generalizable explanation. Commercial sex workers, migrant workers, barbers and injection drug users pose a serious threat to escalate the incidence with their unsafe practices.[4–7,12]

In 2011, Pakistan's government decided to devolve the powers of the federal administrative structure to their provincial counterparts. Though spirit was to transfer the authority to sub-national level; yet this step created a substantial operational void and grey areas regarding the role, capacity and authority of the newly designated offices, especially in the smaller provinces.[13]

The present manuscript purports to discuss evidence based solutions for controlling the transmission of HIV in Pakistan. The issues and challenges require a more holistic and long term approach. The WHO Health systems Building blocks approach[14] was hence put to use for elaborating the current scenario regarding the state of the HIV epidemic in Pakistan, and responsiveness of the health system in this regard.

The current scenario of the HIV epidemic in Pakistan has been discussed keeping in mind the six building blocks of the health system, based on the information collected through an extensive review of literature.

METHODS

For building our arguments, we have chosen the World Health Organization's Health systems Building Blocks[14] to elaborate the present situation with the regards to the response to the HIV epidemic in Pakistan. Each building block is discussed separately in this article based on the information available in the existent literature. For explaining the situation according to each building block, a literature search was conducted over the internet. The online library of Pakistan's National AIDS Control Program provided us with a major portion of our literature. In addition, websites of The Global Fund to Combat AIDS, Tuberculosis and Malaria and the World Health Organization were also used for literature search. We also searched the web using Google Scholar, for the MeSH terms HIV/AIDS, Pakistan, health systems. Full texts were obtained from Medline/PubMed, where available. The findings have been discussed in the form of a narrative review of literature with the core purpose of compartmentalizing and organizing the existent literature to provide a more futuristic and holistic way forward, by promoting health systems thinking for controlling the HIV epidemic in Pakistan.

OVERVIEW OF PAKISTAN'S HEALTH SYSTEM

Pakistan has a mixed health system, where the public and private sectors share unclear borders.[15] The delivery of health services is constitutionally a provincial subject. First level care is mostly sought in the private sector, followed by the public sector, while a few organizations like the armed forces provide health cover to their employees, which account for almost 10% of services delivered.[13,16] Simultaneously, there is a shortage of health workforce, made worse by the inequitable distribution of healthcare providers, while the quality of training and skills remain minimal priority areas.[17] The timely flow of appropriate information is essential for the smooth functioning of all types of health systems. Nonetheless, Pakistan like so many other developing countries is facing the strategic conundrum of intuition based policies using garbage can model, instead of formulating evidence based policies. Around 0.6% of GDP and a minimal developmental expenditure on health have been incurred persistently over the last two decades in Pakistan. Most of the proportion in the allocation has gone to recurring costs mainly of few big hospitals, serving hardly 15% of the urban population. Out of total health expenditures in Pakistan, government spent only US$4 out of US$17 per head per year, and US$13 was out of pocket private expenditure.[18] Direct taxation and out of pocket payments are the predominant modes of healthcare financing in the county. Other modes of financing in the country are private insurance, Employees Social Security Institution, social protection funds such as Zakat and Bait-ul-Maal, which cover only small segments of the population.[19]

1. Service Delivery

Service delivery in Pakistan for HIV cases and high risk groups lacks the required forcefulness. HIV treatment, care and support facilities are available to HIV infected people, in Pakistan, through 18 ART centres, 16 Voluntary Counselling and Testing (VCT) Centres and 7 PPTCT sites for pregnant women. Under Global Fund Round 9, till now 11 Community and Home Based Care (CHBC) sites have been established but most of the treatment, care and support facilities are confined to key cities. In the cities too, few people wish to register themselves and among the registered also very few turn up for treatment.[20] According to latest estimates, Pakistan has around 90,000PLWHIV out of which 7819 registered with the NACP. ART coverage is only 9.8% while ART coverage of IDUs with HIV is less than 1%. There is no authenticated data on deaths available but according to registered patients with ART centers about 5800 died with HIV so far.[Error! Bookmark not defined.]

Despite an existing nationwide harm reduction program, mounting rates of HIV infection among Injecting Drug Users accentuate the need to identify gaps in the existing prevention approach. Data available on coverage shows that effective harm reduction activities are unable to reach a significant number of IDUs to actually forestall or interrupt the emerging epidemic. There is an urgent need to enhance coverage and to incorporate harm reduction in the mainstream of public health.[4] Furthermore, the lack centrally governed sustainable and long term programs for the control and management of the HIV epidemic, are imperative. The intricate social ties between the high risk, bridge groups and the general population need to be addressed through a more sensitive and contextually appropriate approach. Another important aspect to consider are the health services provided by unregistered medical practitioners and the unsafe injection practices prevalent on multiple levels of healthcare delivery in Pakistan, which give rise to the iatrogenic spread of various blood borne diseases, including HIV.[21]

2. Health Workforce

The health workforce in Pakistan is generally insufficient to cater for the needs of the population, this scarcity when added on by the constant out migration of human resources in health and an inequitable distribution of health workers within the country, poses a serious threat.[22] The health workforce is not only deficient in numbers but also in training, as a study from Karachi showed that a majority of specialists and general practitioners were inappropriately trained in managing STIs and HIV, which was evident from their knowledge, attitudes and practices, where around 50%

knew about the recommended drugs for STIs while only 46% knew about the appropriate dosage.[23]

In another study regarding the HIV related knowledge of medical students from Karachi, it was found out that only 7% participants had correct knowledge about modes of transmission and only 6% knew about the symptoms.[24] Medical students are not presently a part of the health workforce in Pakistan, however their knowledge, motivation and possibilities of future incentives paint a vivid picture of things to come. The need for future planning regarding an improved health workforce is strong; because the arsenal needs to be upgraded with the changing patterns of the war against HIV in Pakistan.

3. Information

The fluent flow of information is essential for evidence based decision making; however Pakistan faces the grave issue of incomplete, poor quality and irregularly collected information. With a partially working HMIS system in place, lack of motivation on all levels and limited capacity of the health workforce; the availability of trustworthy information becomes a major hurdle in the path of evidence guided decisions.[25]

From 2003 to 2012, Canada and Pakistan collaborated to build a system and capacity for second generation surveillance of HIV in Pakistan. Second generation surveillance systematically collected, analysed and interpreted information for tracking and describing changes in an HIV epidemic over time. Information about trends in the spread of HIV- if and by how much the HIV infections are increasing or decreasing, and which populations are affected, help to monitor the epidemic and provide information to improve prevention. The HIV/AIDS Surveillance Project or HASP piloted a system for and conducted four surveillance rounds among key populations at risk of HIV in Pakistan. Surveillance rounds began with in-depth mapping to estimate the sizes and locations of the key populations. Surveillance included in-depth behavioural questionnaires with biological testing for HIV.[26] The surveillance program and other such activities have immense significance, for providing evidence for decision making, yet their incorporation in the mainstream HMIS is imperative, so that strategic insights can be further strengthened with knowledge powered operational plans for the grass root service delivery level. However, on the health care delivery level, the lack of constant and accurate information transfer has both operational and strategic implications; a clear indicator of this fact is the huge gap between the registered and estimated cases.

4. Medical products, vaccines and technologies

Diagnostic and therapeutic services are free of cost for all individuals coming in for HIV testing and for registered cases seeking treatment, from public facilities. However, due to the scarcity of resources and dependence on international donor funding, the service utilization is less than 10 percent. These services mostly target high risk and bridge groups and are rarely meant for the general population; which obviously shudders at the thought of attending an HIV/STI clinic because of the immense societal stigma attached with the disease. A major issue, however, to watch out is the sale of ARV drugs without prescriptions, which is giving rise to drug resistance.[27]

The NACP is responsible for the procurement of services for SDPs (Service Delivery Platforms) and all kind of lab supplies: kits, chemicals, consumables, medicines, equipment and other items for NACP all surveillance centres, labs, hospitals and treatments centres across the country. As the major funding partner of the project is World Bank, hence its guidelines are followed for the procurements of goods and consultant's services. For small grants, purchase of stationery and consumables; government procurement rules are followed. By 2010, around 3200 people were registered with HIV/AIDS and among them 1381 were under treatment. Besides World Bank, procurement of supplies and drugs largely depend on Global Fund, UNICEF and DfID.

5. Financing

In Pakistan, bilateral and multilateral donors and other development partners have been key collaborators in developing a concerted national response to HIV menace. In the past, the major partners included the One UN Joint Programme Component on HIV/AIDS (implemented through the Joint UN Team on AIDS), GIZ, USAID, World Bank, GFATM, DfID, CIDA and others. In 2012–2013, GFATM, One UN, the World Bank, USAID and the Dutch and Norwegian Governments were the principal donors for Pakistan. However, in all times, it has been evident that NACP lacks the capacity to coordinate, which has diminished even more after the 2011 devolution. Besides, these major donors, almost fifty odd NGOs have been working on the cause with their own defined goals and objectives.[2Error! Bookmark not defined.]

6. Leadership and Governance

Leadership of the NACP has been facing challenges due to political transition, administrative decentralization and donor dependency. The Ministry of National Health Services failed to deliver medicines to thousands of patients in 2013 despite US$22 million (PkRs2.3 billion) funding by the Global Fund. Massive irregularities in the use of funds and violation of rules in high-level appointments to the NACP have scuttled Pakistan's efforts to meet the global target for the reversal of HIV/AIDS epidemic. The program was aimed at establishing 18 AIDS rehabilitation centres across the country, providing free medication to patients and financial grants to their families. It was reported that, out of 97,400 cases of HIV/AIDS in Pakistan

around 3,000 patients were getting medication by 2013, while the Global Fund had set a target of treating 6,500 patients by 2013, which clearly has not been achieved. Dearth of technical personnel to be appointed against the vacancies has aggravated the situation. There have been issues with medicines expiry, miscalculated procurements, stock outs, etc. reported at various centres.[28]

WAY FORWARD AND CONCLUSION

HIV is not just an epidemiological catastrophe but it also has its socio-cultural implications. Pakistan is the second most populous Muslim country and by default has the cultural and religious capacity to tackle the HIV epidemic. Islam places a high value on chaste behaviour and prohibits sexual intercourse outside of marriage. It specifically prohibits adultery, homosexuality, and the use of intoxicants. The concept of universal circumcision is also prevalent in the country, hence providing the population a window of opportunity of controlling the HIV epidemic. Health system in Pakistan has been lagging behind in terms of key health indicators of maternal and child health as well as of Tuberculosis, Malaria and HIV/AIDS. To accelerate the pace toward achieving or at least nearing the millennium development goals and targets concerned, it would be imperative to take some radical and rational steps for improving the performance of our health system. There is a hope with the on-going reforms to look into deficiencies of all building blocks of the health system.[29] The WHO Health systems building blocks framework focuses on all stakeholders and system based levels that are directly and indirectly related to the process of systems thinking, gap identification and strengthening. Models based on health systems approach have been advocated, with success stories ranging from financial benefit[30], to service delivery achievements.[31]

Applying systems thinking for combating HIV menace could be valid for any setting globally. The approach targets interventions to be made in order to protect the general population from a full throttle HIV epidemic. In order to protect the general population, other sectors besides health need to be mobilized. Mass media has an important role in altering the behaviours and attitudes of the general public; in addition media can disseminate the appropriate information to the general public. Eventually, the utmost responsibility for curbing the threat of HIV lies with the State and the relevant government authorities. Making legislative efforts in the right directions, coordinating the actions of multiple sectors, applying all the resources in the appropriate places and developing evidence based policy are all functions that the state must undertake in order to protect its citizens from not only an imminent HIV epidemic but from other health related events as well.

Table-1: Problems and solutions identified

Building blocks	Problems identified	Solutions proposed
Service Delivery	• Lack of HIV specific healthcare facilities • Stigma attached with care seeking • Social exclusion of high risk groups • Dependence of international donations • Iatrogenic spread of disease • Poor coordination between public and private sectors • No regular and large scale periodic screening programs	• Increase service delivery campaign • Employee a predominantly preventive model • Periodic screening mandatory for all high risk and bridge groups • Partner notification and contact tracing program • Registration of high risk individuals • Strict monitoring and accountability to avoid iatrogenic spread • Enhanced inter and intra sectoral collaboration • Health education through mass media campaigns
Health Workforce	• Lack of workforce • Inequitable distribution • Unregistered medical practitioners • Inadequately trained staff • Limited incentives • Lack of motivation	• CME programs for existent workforce • Increasing HRH, including nursing and paramedic staff • Crack down on unregistered practitioners • Improving incentives for healthy workers • Compulsory rural health training for all HRH, to avoid inequitable distribution
Information	• No effective central database • Lack of evidence based policy • Poor inter-sectoral information sharing • Poor quality of information • Not enough information collection • Disuse of already collected information	• Strengthening of the existent HMIS in place • Training of health workers on data management • Ensuring quality of data • Multiple levels of checks for data reliability • Use of good quality data for decision making
Medical products, vaccines and technologies	• Misuse of funds • No evidence based future planning • Unclear roles after 2011, devolution • Dependence on international donors	• Enhanced accountability of all procurement stakeholders • Self sustained procurement mechanisms • Research based supply chain decisions
Financing	• Corruption • Reduced trickling down of resources • Poor interprovincial coordination • Reduced role of NACP • Below average achievement of targets	• Strict accountability • Involvement of operational and strategic components in financing process • Financial risk sharing by the public and private sectors • Robust target achievements, for securing future investments
Leadership and governance	• Unstable leadership • Variable political expediency • Absence of systems thinking • Ineligible leadership in the past • Poor coordination	• Strong, competent leadership selection based strictly on merit • Enhanced authority for national and provincial leaders • Improved coordination between working tiers • Reduction of political influence in health

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