

HIV/AIDS in Pakistan: the context and magnitude of an emerging threat

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Abstract

Study objective—The objectives of this review were to: (1) assess the nature and comprehensiveness of information regarding HIV/AIDS in Pakistan; (2) to evaluate the extent of HIV/AIDS in Pakistan by epidemiological estimates; (3) to indicate the implications of the results for health policy in Pakistan and other regions at a similar stage in the epidemic.

Design—A structured review of published, unpublished, and government literature was undertaken to collate all available information and present a descriptive epidemiological profile of HIV/AIDS in the country.

Setting—Pakistan, a developing country in the South Asian region. National and regional information and analysis are presented in so far as the data allowed. Sample sizes varied from 1.35 million people screened at the national level to smaller studies of fewer than 100 screened.

Results—Data pertaining to HIV/AIDS in Pakistan showed the best national estimates of HIV prevalence as 64 per 100 000 (0.064%). Within patients with sexually transmitted diseases the seroprevalence was as high as 6100 per 100 000 (6.1%); in men with extramarital contacts, 5400 per 100 000 (5.4%) and was as low as zero in some studied populations as well. The average age of onset was reported as 30 years. It is estimated that if all incident cases of AIDS were to die, there would be at least 5000 deaths annually attributable to HIV/AIDS.

Conclusion—Coupled with the extremely low awareness of HIV/AIDS in Pakistan, as well as growing number of cases, the AIDS epidemic is poised to take a hold in Pakistan. The presence of additional risk factors such as untested blood, and low condom use rates make the situation fertile for AIDS to become a major public health issue. Pakistan's health policy must be proactive in tackling this emerging health threat.

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Acquired immune deficiency syndrome (AIDS) has quickly become a disease of global importance since its recognition in 1981.¹ HIV/AIDS has been reported from virtually every country, although precise data on HIV seroprevalence, the number of people infected with AIDS, and a quantified measure of the burden of disease from AIDS are still incom-

plete. The majority of infected persons reside in Sub-Saharan Africa, although significant foci of the pandemic exist in Asian countries such as Thailand and India as well.²

In many areas of the world, AIDS has already emerged as a deadly infectious disease; recently in the US the first major decline of AIDS cases was noted. A few countries are, however, in the beginning stages of the AIDS epidemic. For these regions it is imperative to learn from lessons elsewhere and to institute preventive measures at an early stage to minimise the morbidity and mortality caused by the disease.

Developing countries have been particularly affected by the HIV/AIDS pandemic. The combination of low education, high fertility, and low contraceptive prevalence rates were the primary reasons for the rapid spread of HIV through Sub-Saharan Africa, where prevalence rates in high risk populations have been found to be in excess of 40%.³ Seroprevalence rates for HIV/AIDS also vary widely between developing countries because the distribution of risk factors such as awareness of transmission modes, urbanisation, and use of modern contraception differs between and within nations and regions. Secondary factors such as inadequate nutrition, poor access to health care, and the presence of opportunistic infections have added unwanted impetus to the growing problem. In Pakistan for example, the task of assessing the AIDS situation is hampered by inadequate data and social stigmas attached to AIDS in the country.⁴ Even with an AIDS vaccine possibly in sight,⁵ it is estimated that the cost of providing it at an affordable price to developing countries would be prohibitive.⁶ As such, the best hope for controlling this epidemic still lies in prevention.

The Pakistan situation

HIV was first detected in Pakistan in 1987^{7, 8} and since then the number of cases has increased as reported by the Pakistan National AIDS Control Program (NACP).⁴ Pakistan is a developing country located in South Asia with an estimated population of 125 million in 1995. It shares the geographical region with India and Thailand, has a literacy rate of only 30%, an income per capita of \$440,⁹ and faces problems of rapid urbanisation, modernisation, and a health profile typical of countries in epidemiological transition. These and other factors¹⁰ make it critical for the nation to track the burden of HIV/AIDS and institute preventive measures at this early stage.

No prior work to our knowledge has either comprehensively reviewed data from Pakistan or estimated the potential for loss of life caused

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Table 1 Results of literature review on HIV/AIDS in Pakistan

Source and year	Type of sample	Subjects	Location
<i>Quantitative seroprevalence studies</i>			
Khanani <i>et al</i> 1988 ²³	Serum samples from blood banks and hospitals	General population	Karachi
Mujeeb and Hashmi 1988 ⁸	Serum samples tested from 1986 to 1987	General population	Karachi
Khanani <i>et al</i> 1990 ²²	Screening of individuals	General population	Karachi
NACP 1992 ¹⁸	National screening	General population	Pakistan
NACP 1995 ⁴	National screening	General population	Pakistan
Mujeeb and Hafeez 1993 ¹²	Patients at clinics, labs, and blood banks	High and low risk groups	Karachi
Raziq <i>et al</i> 1993 ¹⁶	Screening of individuals	High and low risk groups	Peshawar
Tariq <i>et al</i> 1993 ¹⁷	Serum samples tested since 1989	High and low risk groups	Northern regions
Kayani <i>et al</i> 1994 ¹⁵	Serum samples and individual screening	General population	Karachi
Shrestha (WHO) 1994, 1995 ²⁴	Government reported	Patients with STD	Pakistan
Iqbal and Rehan 1996 ¹³	Serum samples tested from 1987 to 1994	Patients referred to hospital/lab	Lahore
Baqi <i>et al</i> 1996 ³¹	Targeted screening	Commercial sex workers	Karachi
Ahmed <i>et al</i> 1996 ³²	STD clinic patients	Long distance truck drivers	Karachi
<i>Qualitative research papers</i>			
Ali <i>et al</i> 1995 ¹⁰	Evaluation of contextual factors	Review	Pakistan
Ali and Khanani 1996 ¹¹	Interview survey and focus groups	Commercial sex workers	Karachi
Delawala <i>et al</i> 1996 ³³	Interview survey of needle use	General practitioners	Karachi
Khan <i>et al</i> 1996 ²⁶	Interview survey	Prisoners	Sind

by HIV/AIDS in the country. Given the lack of preventive measures, indigenous HIV positive persons and subsequent AIDS cases will increase. By quantifying the potential loss of life from HIV/AIDS, it is hoped that a greater appreciation of the problem at the policy level will be achieved. The objectives for this study are: (1) to assess the type and nature of information regarding HIV/AIDS in Pakistan; (2) to evaluate the impact of HIV/AIDS in Pakistan using epidemiological estimates (based on available data) and compare the situation with other developing regions; (3) to indicate the implications of the results for health and social policy in Pakistan.

Methods

A systematic review of published and unpublished literature was undertaken to obtain available data. Searches of the electronic databases Popline (Johns Hopkins Center for Communication Programs) and Medline, regional indices (WHO), local journals within Pakistan, government publications and institutional reports released by non-governmental organisations and academic centres were conducted. Comparative data were obtained from the HIV/AIDS Database of the United States Census Bureau, Population Reference Bureau, relevant WHO publications, and various sites on the internet. Communications were sent to agencies involved in HIV/AIDS in Pakistan seeking more information on the current situation, programmatic direction, and control measures. Discussions with experts in infectious diseases especially sexually transmitted diseases and HIV/AIDS and those involved in national health planning in Pakistan helped steer the analysis.

For the purposes of this study only HIV data have been carefully analysed although the reported numbers of AIDS cases have been presented. Only those cases HIV positive by confirmation with western blot have been included in the numbers presented in this paper. Variations in the criteria for diagnosing AIDS in the country, expertise of clinicians, lack of data, and potential under reporting have precluded a detailed analysis of AIDS cases. A listing of the sources, the available data and estimates have been presented and an epide-

miological assessment of the current impact of HIV/AIDS in Pakistan has been generated with estimates of prevalence and mortality. The information was collected and analysed using Microsoft Excel (Version 7.0).

Results

THE STATE OF INFORMATION ON HIV/AIDS IN PAKISTAN

Table 1 gives the sources that provided information on HIV/AIDS in Pakistan. National information was obtained from WHO/EMRO and reports of the NACP. Local journals revealed mostly anecdotal reports, a small sample focus group and opinions of hospital based clinicians. Institutional reports reported very small numbers of patients seen or tested for HIV. Non-governmental organisations had qualitative rather than quantitative information on education and communication activities.¹¹

Most of the sources are from urban areas especially Karachi, which is the largest city, main port and business centre of Pakistan. In addition it is highly urbanised with a high population density. Thus it could be expected to both serve as an entry point for non-indigenous HIV cases and also have one of the highest prevalence of HIV in the country. Special high risk groups have been studied in Karachi apart from the general population and blood donors or recipients.¹²⁻¹⁴ The documentation of these groups represent a major change in accepting both their existence and susceptibility in the Pakistani sociopolitical context. This paper will focus on the quantitative information obtained, while briefly reviewing the qualitative information.

THE CURRENT STATE OF AWARENESS

Table 1 gives further details of these qualitative studies. A recent study¹¹ of commercial sex workers in Karachi, revealed that only 60% had ever heard of AIDS, and of these only 44% knew it could be transmitted by sexual contact. The fact that this high risk group in the most urbanised area in the nation had such low awareness is an alarming finding. Other work also supports this finding.^{10 26}

Table 2 Data on HIV/AIDS in Pakistan

Data type	Number screened	*Number HIV+	HIV seroprevalence (per 100 000)	Source/year
National data				
	1 350 000	869	64	NACP 1995 ⁴
	250 000	129	52	NACP 1992 ¹⁸
Regional data				
Lahore	16 170	10	60	Iqbal and Rehan 1996 ¹³
Karachi	15 000	35	230	Kayani <i>et al</i> 1994 ¹⁵
Peshawar	34 553	35	100	Raziq <i>et al</i> 1993 ¹⁶
Northern Pakistan	54 170	30	50	Tariq <i>et al</i> 1993 ¹⁷
Karachi	413	3	730	Khanani <i>et al</i> 1990 ²²
Karachi	1 363	2	147	Mujeeb and Hashmi 1988 ⁸
Special populations				
Sexually transmitted disease patients	215	0	0	Iqbal and Rehan 1996 ¹³
	1 457	4	300	Shrestha (WHO) 1995 ²⁴
	82	5	6100	Shrestha (WHO) 1994 ²⁴
	39	0	0	Mujeeb and Hafeez 1993 ¹²
Blood donors	12 400	0	0	Iqbal and Rehan 1996 ¹³
	32 000	1	3	Kayani <i>et al</i> 1994 ¹⁵
Men with extramarital contacts	37	2	5400	Mujeeb and Hafeez 1993 ¹²
Prisoners	183	3	1640	Mujeeb and Hafeez 1993 ¹²
Seafarers	302	2	660	Mujeeb and Hafeez 1993 ¹²
Multi-transfused patients	103	1	980	Mujeeb and Hafeez 1993 ¹²
Injection drug users	77	0	0	Iqbal and Rehan 1996 ¹³
Commercial sex workers	21	0	0	Iqbal and Rehan 1996 ¹³
	81	0	0	Baqi <i>et al</i> 1996 ³¹
Truck drivers	77	0	0	Ahmed <i>et al</i> 1996 ³²

*Only those HIV+ by confirmatory western blot after positive ELISA.

PREVALENCE OF HIV IN PAKISTAN

Table 2 presents HIV seroprevalence data extracted from various sources. Divisions have been made for national and regional information and other population subgroups, such as truck drivers, commercial sex workers, and patients with sexually transmitted diseases. The only country level data have been reported from the National AIDS Control Program, which had screened more than 1.35 million blood samples until 1995. Two sequential reports indicate an HIV prevalence rate of 52 (in 1992) and 64 (in 1995) per 100 000 population in those tested (table 2). Based on the latter figure and an estimated population of Pakistan in 1995 of 125 million,⁹ there would be 80 000 HIV positive persons in the country.

The earliest studies reporting HIV in Karachi documented two and three cases respectively.^{7, 8} Assuming representativeness, this gives an estimated prevalence of 147 to 730 per 100 000 in Karachi. In 1993, a prevalence of 230 per 100 000 was reported for this city.¹⁵ These estimates are two to four times higher than those reported above for Pakistan as a whole (table 2). Based on an estimated population of Karachi of 10 million for 1995, and

using the last study, there would be 23 000 HIV positive cases in the city.⁹ Data from other urban centres in Pakistan^{13, 16, 17} reveal seroprevalence rates of 50 to 100 per 100 000 population. These are equal to or higher than the national level, and far lower than Karachi. It is to be noted that the type and size of samples vary widely in these studies.

The NACP has reported the geographical distribution of AIDS cases with 35% in the federal capital area and 22% in Punjab (most populated province). Only 10% of the cases have been allocated to the province of Sind (the location of Karachi) while the HIV data above predicts 29% of HIV (and subsequent AIDS) cases to be in Karachi.

WHO data reveal that Pakistan has reported an HIV prevalence of 6100 per 100 000 (1994) and 300 per 100 000 (1995) among patients of sexually transmitted diseases (STDs) (table 2). The two numbers are widely different and other studies with smaller samples of STD patients were not able to detect any cases. The HIV prevalence estimate among blood donors from Karachi is 3 per 100 000.¹⁵ Among other subgroups, married men with extramarital contacts reveal the highest seroprevalence while prisoners, seafarers, and those receiving multiple transfusions are also high and several times the national estimates. Smaller samples within other high risk groups were unable to detect any cases.

INCIDENCE OF HIV IN PAKISTAN

Using data from the NACP it is estimated that the average incidence of HIV for the 1993–1995 period was 4 per 100 000 per year. This would yield 5000 new cases of the disease in 1995. Alternate methods of estimating incidence may yield higher figures (9 per 100 000) but for the present the more conservative end of the estimate range has been used. In this situation, if the incidence was to remain constant, there were no interventions to affect the natural history of the disease, and there was

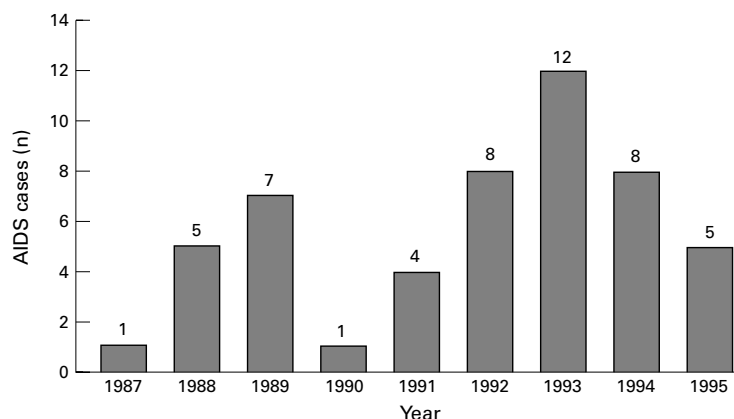


Figure 1 Profile of AIDS cases in Pakistan, by year. (Source: National AIDS control programme, 1995.)

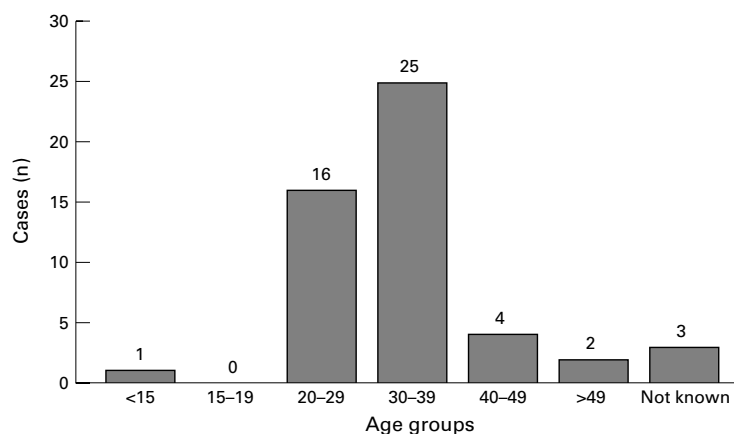


Figure 2 Distribution of AIDS cases in Pakistan, by age. (Source: Kayani *et al*, 1994¹⁵.)

no population growth (replacement fertility) then an epidemiological steady state would exist and the same number of new cases would arise every year. However, even if the HIV incidence did not increase, population momentum in Pakistan would cause an increasing number of cases to arise every year. It is probable that the incidence is increasing¹⁵ making the situation fertile for a potential HIV epidemic in Pakistan.

A look at the reported AIDS cases in the country^{4 18} reveals very small numbers with great annual variation (fig 1). These variations are reflective of irregularities and delays in the reporting of AIDS cases from various regions in the country. Overall there is a rising trend, and the drop in 1990 and 1995 probably reflects reporting intensity more than real changes. This is supported by the increase in both the number and prevalence of HIV positive cases in the same time period, and that the other reviewed studies indicate no decrease in those particular years. As a result, the total number of AIDS cases is also reflective of better reporting over the years, although the proportion of cases not diagnosed or reported is unclear.

AGE AND SEX DISTRIBUTION OF HIV/AIDS

The average reported age range for HIV positive patients at the time of testing is 20–50

Table 3 The impact of HIV in Pakistan, 1995

Parameter	Value	Unit	Note
Estimated annual incidence	0.04	per 1000	for 1995
Case fatality ratio	1.00	—	All HIV cases die from the disease
Average age of onset	30	years	Average of all cases at time of HIV+
Average age of AIDS patient	35	years	Average age at time of AIDS diagnosis
Estimated deaths from AIDS	5000	cases	All death attributable to incident cases in 1995

Table 4 HIV, contraceptive prevalence, and fertility rates in selected regions

Region	HIV seroprevalence (per 100 000)	Contraceptive prevalence rate (%) [*]	Total fertility rate (per woman)
Sub-Saharan Africa	2500	11	6.1
Latin America	500	53	3.1
India	270	36	3.4
Western Europe	200	69	1.4
Middle East Crescent	14.9	—	—
Pakistan	64	9	5.6

^{*}Modern methods (pill and condom) only. (Source: data from references 9 and 34).

KEY POINTS

- HIV/AIDS was discovered in Pakistan in 1987 and has been increasing in the past decade.
- There are an estimated 80 000 persons infected with HIV in Pakistan while the number of AIDS cases is uncertain.
- The low levels of awareness of the disease and lack of preventive methods makes the potential for rapid spread significant.
- Government initiatives to record and prevent the spread of HIV/AIDS need firm commitment, a fertile social context, adequate data, and better coordination among all partners.
- The current low prevalence of HIV presents a golden opportunity to curb a potential epidemic at an early stage in Pakistan.

years.¹⁵ Figure 2 shows the distribution of AIDS cases by age, which depicts a median age for AIDS cases to be approximately 35 years. Kayani *et al* report a 5:1 sex ratio (M:F) in those found positive for HIV while a more recent study reports a 2:1 ratio.¹³ Both patients positive for HIV in one of the earliest reports were married women.⁸ AIDS cases reported by the NACP show a sex ratio of 5:1. Sex ratios of the screened populations were not available. It should be noted that the small numbers of HIV positive people make authoritative sex ratios difficult to determine for the time being.

POTENTIAL LOSS OF LIFE FROM HIV

Using the above information, the potential loss of life from HIV can be estimated for Pakistan (table 3). This represents the premature deaths of the incident cases in one year (1995) as the case fatality ratio or the number of cases who have the disease and die from it is 1.0 (100%). This means that within five to seven years (after 1995) at least 5000 people would be expected to die in Pakistan from HIV/AIDS annually. This number would increase with population growth, an increasing incidence or a shorter HIV to death time frame.

Table 4 presents comparative data from other regions, in which traditional demographic indicators relevant to HIV/AIDS have also been included to describe the regional population profile.^{9 34} The seroprevalence rates in India and Africa are 5 to 40 times higher and constitute epidemic stages, especially in high risk groups. Pakistan is included in the Middle Eastern Crescent region where the reported overall seroprevalence rate is still very low.

Discussion

The data reviewed here vary widely in terms of quality. The country level data from the NACP have not been verified by other national surveys and errors have not been studied. The numbers of HIV cases and especially AIDS cases depend on diagnosis and reporting to the NACP and the types of errors and delays have not been documented. The absence of a recent census

makes the task of data analysis more challenging because all population numbers are extrapolation estimates based on either the 1981 census or other, smaller surveys. Some of the other studies are smaller samples principally from urban areas, and there are questions of reliability and representativeness that they have not resolved. For this study it has been assumed that the data used are the best available reflection of the HIV profile in the country, and have subsequently been used for the analysis. It is probable that they represent some degree of under-reporting, and thus the problem is greater than it appears, making the case for prevention as well as proactive policy measures a compelling one.

Surveys on HIV/AIDS in other countries are generally conducted with representative samples of subgroups to be studied, with results generalisable to those populations.³ This does not hold true for the HIV/AIDS studies on special populations and regions within Pakistan. The sample sizes reported by some of these studies are unlikely to capture the expected prevalence of 0.5% to 1.0%. This is especially true for studies on commercial sex workers, truck drivers, and blood donors, with samples of below one hundred. The study samples need to be expanded and randomisation introduced in their selection for the results to be meaningful in assessing the extent of HIV/AIDS in these groups.

The 64 per 100 000 (0.064%) figure for prevalence reported by the NACP has been taken as the national prevalence for HIV. This is further validated by three regional studies that report seroprevalence rates of 50 to 100 per 100 000 (table 2). The debate regarding the exact source of entry of HIV into the country, the number of purely indigenous cases, and other issues needs to be overshadowed by the fact that HIV/AIDS is demonstrably present and has the potential to spread.

In comparison with seroprevalence in other regions, Pakistan is fairly low in rank (as shown in table 4) but that may change with time unless interventions are implemented. The total fertility rate and the contraceptive prevalence rate (for modern methods) are commonly used indicators of the potential spread of HIV infection.¹⁹ These show that despite current data, the high fertility and low contraceptive rate in Pakistan reflect a situation where there is substantial potential for further and rapid spread of HIV.

As described above, greater Karachi is the largest metropolitan area in Pakistan. It is the largest port, with the country's major international airport and has ground transportation connections to the rest of the country. The population is multi-ethnic, multi-religious, and varied in terms of professions and work habits. Like other developing cities it has a large number of shanty towns (squatter settlements) that are densely populated, devoid of basic civic services, and often rampant with disease and poverty.²⁰ The figures reported in the literature indicate that the prevalence of HIV positivity in Karachi is four times higher than the national average. In view of the factors described above

this is not unrealistic, and the actual figures as well as the proportion may indeed be higher. The need for a concentrated focus in Karachi to deal with the HIV situation becomes imperative as it may represent a very important portal of entry (and re-entry) of cases in the country. In addition, rapid transmission of the virus within the population through multiple routes would be expected especially in the absence of preventive practices at the institutional and individual level. At the same time Karachi has a high number of university affiliated hospitals, large tertiary care public centres, and a great number of specialist and qualified physicians; thus both the index of suspicion and the ability to perform a diagnostic procedure would be higher here. This may have contributed to the a higher reporting as well as the fact that the first HIV (and AIDS) cases in Pakistan were reported from this city.⁷

Reports from other cities, are also indicative of some basic clinical recognition of HIV/AIDS and efforts to document its extent. One would expect the HIV prevalence figures from these urban areas to be higher than those for the country as a whole. Instead, they are similar to the national average and this discrepancy can be attributed to the lack of standardisation across studies, variety in sampling procedures, types of patients referred to the testing facilities, and the capacity of the testing site itself.

The documentation of HIV in four different regions of the country is important to demonstrate the spread of HIV. Domestic air travel, good highways and roads, heavy tourism, and considerable trading make even remote areas less isolated than some would expect. This should act as a signal to other parts of the country and isolated populations that they are not immune to the spread of HIV. As has been previously suggested, long distance truck drivers may be a potential source of HIV infection and transmission over long distances.

The distribution of AIDS cases as reported by the NACP reflects that one third reside in the federal capital area of Islamabad. The province of Sind (which includes Karachi) reports only 10% of AIDS cases, although the greatest number of HIV cases were diagnosed there. This discrepancy is important and may be because of a number of factors. The NACP is based in Islamabad and may have better control of reporting from that area. The western blot confirmatory test is only done in Islamabad as well. This means that a greater proportion of patients seeking confirmation and treatment for AIDS will go there and often register their residence in that city as well. These may have contributed to the discrepancy as there is regional variation in the diagnosis and reporting of cases. The availability of physicians as well as diagnostic tests may translate into a higher probability of HIV/AIDS diagnosis in either Karachi or Islamabad. It is also expected that reporting from these cities would be better and more timely than from other remote regions. Further work is underway to investigate these regional variations by specific

analysis of provincial and district HIV/AIDS data in Pakistan by the authors.

The estimates reported for high risk populations, though based on small samples, are higher than the national estimate of 0.064% or the Karachi HIV prevalence estimate of 0.23%.¹² This makes them plausible and in need of further study to establish the extent of HIV/AIDS in these groups. The very low prevalence among blood donors reported by Kayani *et al* could relate to the type of donors studied and their risk factors. In the authors' experience, the donor population at this private university hospital in Karachi is voluntary, more likely to be family of patients or motivated friends and acquaintances, financially better off, and possibly more educated than the donors at free public facilities. Thus they may be more likely not to be HIV positive. However, this needs to be further studied to better establish paid and unpaid blood donor characteristics.

Patients with sexually transmitted diseases, prisoners, those with multiple sexual partners, drug users, and those receiving blood are other high risk populations. They have not been amply studied in Pakistan and much work needs to be done in documenting their current status of HIV, their risk of acquiring and transmitting HIV, and their behaviour patterns. The low level of knowledge regarding HIV is a product of a larger society that also knows little about the disease. It is creditable that the first step in accepting that these high risk groups exist in the country has been taken comparatively early by the scientific community.²¹

The current picture of HIV and AIDS cases shows a 5 to 1 ratio of men to women.¹⁵ This is important for several reasons. Firstly, it documents HIV positive women in Pakistan regardless of the route of transmission and opens to public discourse that women are at risk. This then leads to the possibility of perinatal transmission, and the need for monitoring newborns for HIV,⁷ which is not currently practised. The numeric value of the ratio itself may simply reflect a higher number of men being screened. This could be because of the type of population referred for testing¹⁵ or the various sociocultural factors that may make women less likely to be tested in a sample of the general population.

A number of studies reviewed contained anecdotal information, opinions of clinicians, and qualitative data on Knowledge, Attitudes and Practices (KAP).¹⁰⁻¹¹ The conclusions presented by them were generally, low awareness regarding AIDS in Pakistan and very low practice of preventive methods such as condom use. Contextual factors that may have contributed to the current state include rapid urbanisation, migration and influx of infected expatriates, exploitation of women, prevalence of injection drug use, and the legal framework surrounding marriage and sexuality.¹⁰ These are, individually and as a whole, complex factors worthy of study to better define the sociopolitical context of HIV/AIDS in Pakistan.

Policy overview and recommendations

Pakistan, like many other developing nations, has generally attached a stigma to sexually transmitted diseases as well as sex education. A conservative interpretation of religion, political pressure from religious parties, traditional practices and norms are some of the contributing factors.¹⁰ As a result, until recently, diseases of a sexual nature or where sexual transmission would be involved were seldom discussed in society and the media. Consequently, there is low awareness regarding HIV/AIDS and especially sexual routes of transmission.

The current government policy as regards HIV/AIDS prevention and surveillance incorporates the National AIDS Control Program (NACP) that was established in 1987, and is funded by donor agencies as well as the Pakistan government.^{4 10 18} The NACP has established nearly 30 screening centres, screened over a million samples, initiated a media campaign to increase awareness, set up a hotline for questions, hosted workshops and seminars, and invited inquiries by mail.²³ Pakistan also reports HIV/AIDS cases to the World Health Organisation Eastern Mediterranean Region Centre. This reporting has been sporadic, however, and limited to those with sexually transmitted diseases, and the numbers have been questioned.²⁴

Although the NACP efforts as regards educating the public regarding HIV/AIDS are creditable, seventy per cent of the population lives in rural areas, and a similar percentage of the populace is illiterate. It is critical for these groups to be reached, if a national strategy to combat HIV/AIDS is to have any significant measure of success. Moreover targeting of interventions to high risk groups, as separate from education efforts for the general populace, is both efficient and critical for AIDS prevention.²⁵

HIV/AIDS prevention programmes in Pakistan should avoid the pitfalls of other national health programs with their inability to be effective or efficient.²⁶⁻²⁸ The policy making process in Pakistan, as in other countries, is influenced by much more than data. The type of regime, role of religion,²⁹ influence of donor agencies, and the shifting ideology regarding development are among those factors.²⁶ All of these need consideration for a successful HIV/AIDS control programme.

Pakistan must accept the fact that continuing population growth and emerging pockets of HIV infectivity portend negatively for the future. It is important to note that HIV/AIDS deaths would occur in the productive age groups and the working population, both paid and unpaid. The effect of these deaths on the families and dependents involved would be great as well as difficult to measure.

Conclusion

Representing a society with low awareness of HIV/AIDS, Pakistan is fortunate to have avoided a major epidemic of the disease, thus far. However, with increased travel to high risk areas and the presence of vulnerable groups within the country, HIV/AIDS represents an

emerging threat in the country. Intravenous drug use, commercial sex workers, very low modern contraceptive prevalence rate, absence of universal blood product screening and professional blood donors all make it necessary for this disease to be tackled at an early stage.³⁰

AIDS is currently not a major disease entity in Pakistan. However, with the existence of several risk factors and absence of interventions, the proportional morbidity and mortality are expected to increase. It is imperative that the government and public health community begin a formal and systematic evaluation of this disease in the country and institute control measures. The establishment of the NACP was a step in the right direction but it must be sustained both financially and policy wise. Screening of high risk populations across the country, universal screening of blood products and donors, screening of the general population, and establishment of appropriate treatment centres are necessary measures.

Pakistani society must be better informed about HIV/AIDS, regardless of the level of education or place of residence. This disease knows no boundaries and no measure of hope is sufficient to control its spread. Preventive strategies need to be implemented, even before a more precise epidemiological profile is available. Pakistan is in a unique position to curb the further spread of this disease in the country and avoid a deadly epidemic.

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