

# Missed opportunities for HIV testing and counselling in Asia

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## Introduction

The US Centers for Disease Control and Prevention recently estimated that persons living with HIV/AIDS (PLHA) in the United States unaware of their serostatus may account for 54–70% of new infections [1]. Increasing awareness from the current 75 to 100% could reduce sexual transmission by 40% [2]. In Asia, where fewer than half of PLHA are aware of their serostatus (see Table 1) [3–17], the contribution to the epidemic made by people unaware of their serostatus is likely to be much higher. Thus, testing is a key component of HIV prevention strategies. This paper reviews the current situation and discusses strategies to increase HIV testing in Asia.

## The need for testing in HIV prevention and control

Irrespective of the result, testing provides an important opportunity to counsel clients on ways to increase their protective behaviours; many of those who test positive will subsequently reduce their risk behaviours [18,19]. Counselling also provides a gateway to accessing antiretroviral treatment and care, which reduces viral load and, therefore, the infectivity of treated PLHA – theoretically, universal treatment could eliminate HIV [20]. Moreover, treatment extends the lives of AIDS patients and reduces AIDS mortality.

Table 1 shows the number of reported HIV infections versus the estimated total infections for several Asian

countries. The large differences in these numbers suggests that most PLHA are unaware of their serostatus. Many of those testing positive are presenting with AIDS; in China, 66% of new AIDS cases in 2009 were newly identified infections (National Center for AIDS/STD Control and Prevention, unpublished study) and in Japan, roughly, 30% of those testing positive for the first time had AIDS [21]. This trend is worrying because late presenters have a worse prognosis [22] and may have inadvertently exposed their contacts for more than 8 years [23].

## Barriers to HIV testing in Asia

Many Asian countries simply lack the infrastructure to support wide-scale testing of their populations, including convenient testing facilities, competent laboratories, and staff. Governments necessarily locate clinics in areas of greatest need, leaving some low prevalence areas without services. Establishing these facilities can consume much of the total HIV budget; for example, 20% of Thailand's 2007 AIDS budget was spent on voluntary counselling and testing (VCT) [24]. Moreover, governments need to factor in the costs of providing antiretroviral drugs to discovered AIDS patients. For clients, the costs of testing may be prohibitive – ostensibly-free tests may in practice come with service fees and the time and costs of getting to clinics and the consequent loss of pay may be unaffordable [25]. Travel subsidies could alleviate this problem, as has worked for antiretroviral therapy (ART) programmes in India [26].

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**Table 1. Estimated and reported HIV infections for selected countries, 2009.**

Country	Cumulative number of reported HIV cases	Cumulative reported deaths	Estimated total PLHA	Source
Bangladesh	1745	204	7500	[3]
China	326 000	54 000	740 000	[4]
Indonesia	19 973 <sup>b</sup>	3846	333 200	[5]
Japan <sup>a</sup>	8344	NR	9600	[6]
RO Korea <sup>a</sup>	4581	NR	13 000	[7]
Lao PDR	3659	1038	8000	[8]
Malaysia	87 710	13 394	105 439	[9]
Maldives	14	10	<100	[10]
Mongolia	62	9	438	[11]
Nepal	14 320	NR	70 000	[12]
Pakistan	2917	NR	97 400	[13]
Philippines <sup>a</sup>	3061	307	8300	[14]
Singapore	4159	1250	4200	[15]
Sri Lanka	1196	202	3000	[16]
Vietnam	160 019	44 050	254 000	[17]

The table provides a rough indication of the disparity between known and estimated infections for selected Asian countries. Data for the 'cumulative reported number of HIV cases' include both people who returned for their test result and those who did not, cases found at anonymous testing sites or sentinel surveillance sites (who may have been counted twice), and those who have died or emigrated. Thus, the number of persons living with HIV/AIDS (PLHA) who know they are infected is likely to be lower than the number reported in the first column, even after accounting for deaths. The 'estimated total PLHA' is the official 2009 estimate for PLHA made by each country. Although these figures cannot be used to glean a precise estimation of the proportion of PLHA aware of their status, the number of reported infections is consistently lower than the estimated number of PLHA, thereby stressing the urgent need to scale up flexible HIV testing strategies in Asia. NR: not reported.

<sup>a</sup>Data not updated since 2008 report.

<sup>b</sup>Figure is for AIDS cases.

Without adequately informed campaigns, people may simply be unaware of testing locations or their personal risk [27]. Even highly targeted campaigns may fail. For example, some of the AIDS patients testing for the first time in China last year were former plasma donors from provinces that have experienced years of testing campaigns, have ample facilities to provide testing, and have already tested thousands among this group [28].

Stigma and discrimination may have deterred many former plasma donors from seeking earlier testing [29]. Fearing a positive test result could lead to lost employment, education, and other social services as well as neglect, abandonment, or abuse [30]. Many are reluctant to visit testing clinics [27,29]. For cost-effectiveness, HIV prevention programmes are primarily targeted at high-risk groups (Table 2) [3–5,8–14,24,31–36], but enhanced stigma towards these groups may contribute to low testing and low rates of return. Health systems may inherently discriminate; for example, sex workers in Thailand seeking health services are given differently coloured outpatient cards from those given to other types of patients, which could discourage them from seeking testing [24]. Healthcare workers may have negative attitudes, which can deter them from working in the field [37] (further exacerbating human resource limitations) and influences the quality of their services, particularly counselling [37–40]. Poor pretest counselling can dis-incline patients from accepting testing and may contribute to low rates of return for results [41]. Even when clients do return, results may be received in silence (for example, Vietnam [29], China [39]), without any posttest counselling, which is extremely important for connecting

clients with treatment, support, and prevention services and has been associated with greater reductions in subsequent risk behaviours [42,43]. Although countries ostensibly agree to uphold the World Health Organization (WHO) standards for testing and counselling [44], noncompliance, especially disrespect for patient confidentiality, happens (for example, India [45]). Several countries, including Bangladesh [46], Cambodia [47], China [48], and the Philippines [49], have introduced legislation or policies to protect the rights of people living with HIV/AIDS (PLHA) and require healthcare staff to maintain confidentiality. Governments should hold their hospitals, clinics, and healthcare staff accountable to such regulations.

## HIV testing strategies

The traditional approach to testing – which requires clients to request testing – has failed to adequately identify the majority of PLHA. Thus, strategies that relieve clients of the burden of initiating awkward conversations with often judgemental healthcare providers are needed.

Recently, UNAIDS/WHO have promoted provider-initiated testing and counselling (PITC) to avoid missed opportunities for testing [50]. In PITC, clients with signs, symptoms, or risk behaviours are recommended for testing by their healthcare providers, who will carry out the test unless the patient declines. For the low-level-to-concentrated epidemic in Asia, PITC is recommended for sexually transmitted infection (STI) clinics, clinics for

**Table 2. UNGASS indicator 8: percentage of most at-risk populations who received an HIV test in the past 12 months and who know their results (2010 Country Progress Reports).**

Country	Sex workers		Men who have sex with men	Injecting drug users	Source
	Female	Male			
Afghanistan	4.0%	–	–	22%	[31]
Bangladesh	4.1%	HSW: 4.1%	14.3%	2.5%	[3]
Cambodia	68.1%	–	58.0%	35.3%	[32]
China	36.9%	–	44.9%	37.3%	[4]
India	31.8%	–	17.0%	20.7%	[33]
Indonesia	27.8%	57.2%	33.7%	44.2%	[5]
Iran <sup>a</sup>	20.4%	–	–	22.9%	[34]
Lao PDR	14.0%	–	14.0%	–	[8]
Malaysia	20.0%	–	–	33.0%	[9]
Maldives	14/102	–	13/126	21/129	[10]
Mongolia	52.5%	–	77.6%	–	[11]
Nepal (Kathmandu)	32.4%	65.2%	42.0%	21.5%	[12]
Pakistan					
<25 years	15.5%	M/HSWs: 1.5%	–	12.4%	[13]
≥25 years	14.1%	M/HSW: 14.3%	–	11.7%	
Philippines <sup>a</sup>	12.0%	–	16.0%	4.0%	[14]
Sri Lanka <sup>a</sup>	42.6%	–	13.6%	–	[35]
Thailand	36.0%	35.2%	21.3% <sup>a</sup>	59.7%	[24]
Vietnam	34.8%	–	17.9%	19.1%	[36]

Recognizing the importance of high testing rates among those most-at-risk and the need for clients to know their results, UNGASS (United Nations General Assembly Special Session on HIV/AIDS) has included this among their key indicators for HIV control. Rates vary widely, within and between populations; however, none is sufficiently high to stop the epidemic. Moreover, reported figures do not reflect linkages to care, which is a crucial part of the process. HSW, hijra sex worker; MSW, male sex worker.

<sup>a</sup>Data not updated since 2008 report.

other at-risk populations, antenatal clinics, and tuberculosis services. Many countries have begun implementing PITC (for example, India [51], Mongolia [52], Nepal [53], Singapore [54], Malaysia [55]), with promising results; for example, PITC among Vietnamese tuberculosis patients more than doubled the number of patients known to be HIV-positive [56].

Routine testing is also practised, typically for drug users sent for detoxification or entering methadone programmes (for example, China [28]), and sex workers sent to re-education/labour camps (for example, China [28], Vietnam [17]). Routine testing in principle follows the opt-out model used in PITC, but in practice may border on mandatory testing as those tested may not know what the test is for or that they can refuse, and results may not be communicated well, if at all. Mandatory testing is not recommended because it typically includes no counselling and may be insufficiently linked with support and preventive services. However, some countries require it for military recruits (for example, Indonesia [57], Malaysia [55], Thailand [58]; troops sent on UN peacekeeping missions) and foreigners on a work visa (for example, Malaysia [55], Maldives [10]).

Routine testing or referral of partners of PLHA is practised in some countries (for example, Malaysia [55], the Philippines [49]), but adoption has been slow [59]. For example, a decade ago in Japan, routine partner screening was recommended as a cost-effective control strategy [60], yet it still is not standard practice. The strategy is controversial because while it recognizes a

person's right to know their risks, disclosure can be risky for some [61]. However, one review suggested that partner notification could increase HIV testing among high-risk individuals and identified no significant harms [62].

Of course, no test is useful if clients do not return for their results, and the low frequency of return is a significant problem in Asia. The data in Tables 1 and 2 do not distinguish between total numbers tested and the numbers who received their result and these discrepancies may be large. Rapid tests can increase the proportion of those tested who know their result [63]. They are faster, less invasive, easier for healthcare workers to use, and alleviate the need for sophisticated laboratory support, making them suitable for rural and remote areas [64,65]. Although more expensive than the traditional ELISA, rapid tests may be more cost-effective if return rates are factored in. Rapid testing has been introduced in several Asian countries, including Bangladesh [66], Cambodia [67], and Singapore [54], though it is not necessarily free. Home self-testing could also increase awareness but poses several risks (discussed in [25,68–70]) and to our knowledge has not been endorsed by any of Asia's governments.

## Conclusion

HIV testing and counselling is not by itself able to control the HIV epidemic. However, as stated by UNAIDS 'Among the interventions which play a pivotal role both in treatment and in prevention, HIV testing and

counselling stands out as paramount' [44]. Asian governments are expanding the availability of testing services. Their utilization could be increased if PITC, partner referral, and rapid testing were the norm and were free. Governments should ensure through policy that these services are delivered with respect, confidentiality, and counselling that puts clients in contact with prevention, treatment, and care services. Although governments can introduce legislation to protect the rights of PLHA, shifting the attitudes of the populace to eliminate stigma and the fear of a positive test result will be far harder and slower to achieve than structural or policy changes. However, efforts to make testing and counselling available and accessible should continue so that a majority of PLHA can learn about and manage their disease and protect their partners and so that those putting themselves at risk can have access to prevention services. Without greater awareness, it will be difficult to control this epidemic.

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