

# Asia-Pacific

## Country Reviews June 2011

### SINGAPORE AT A GLANCE

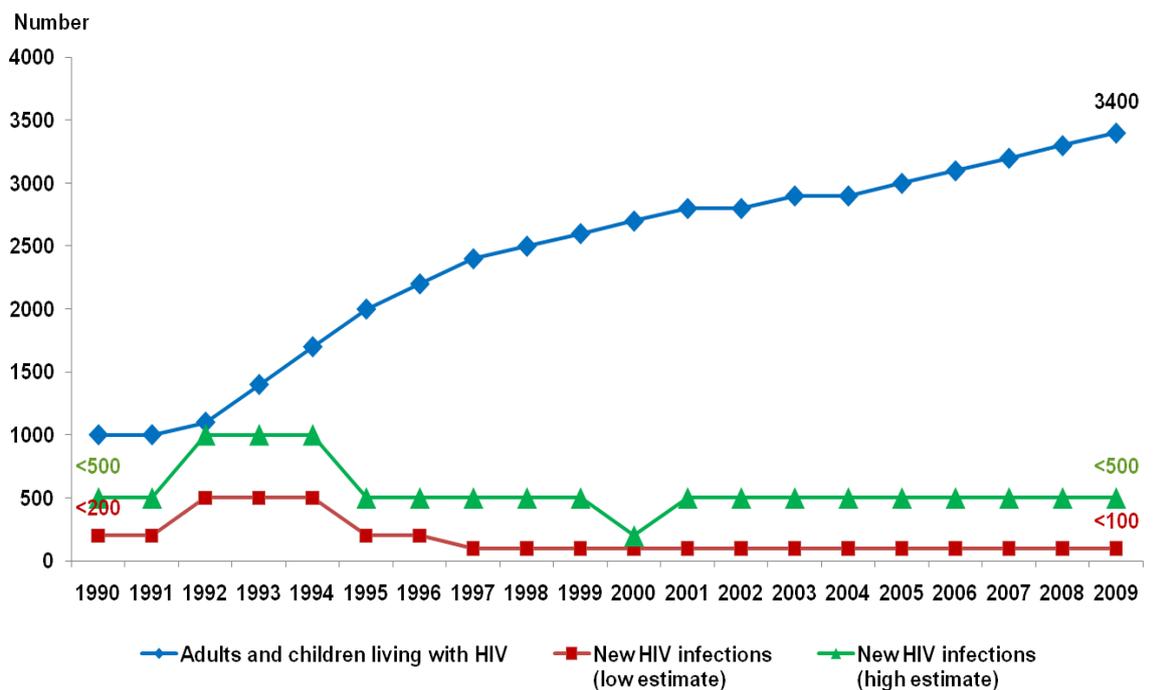
Total population (in thousands)	4,837 (2010) <sup>1</sup>
Annual population growth rate	0.9 (2010-2015) <sup>1</sup>
Population aged 15-49 (thousands)	2,732 (2010) <sup>2</sup>
Percentage of population in urban areas	100 (2010) <sup>3</sup>
Crude birth rate (births per 1,000 population)	10.2 (2008) <sup>4</sup>
Under-5 mortality rate (per 1,000 live births)	3 (2008) <sup>5</sup>
Human development index (HDI) - Rank/Value	27/0.846 (2010) <sup>6</sup>
Life expectancy at birth (years)	80.7 (2010) <sup>6</sup>
Adult literacy rate	94.5% (2005-2008) <sup>6</sup>
Ratio of girls to boys in primary and secondary education (%)	N/A
GDP per capita (PPP, \$US)	50,632 (2009) <sup>4</sup>
Per capita total health expenditure (Int.\$)	1,643 (2007) <sup>4</sup>



## HIV EPIDEMIOLOGY AND TRENDS

The first case of HIV in Singapore was diagnosed in 1985. Since then, the number of HIV cases has continued to grow – although still a low-level HIV epidemic – and by end 2009, the estimated number of people living with HIV was around 3,400 [2,500-4,000], up from 2,800 estimated in 2001 – or about a 21% increase (Fig. 1).<sup>7</sup> In 2009, HIV prevalence among adults aged 15-49 was estimated at 0.1%, with no change from 2001.<sup>7</sup>

**Figure 1. Estimated number of adults and children living with HIV vs estimated new HIV infections, 1990-2009**

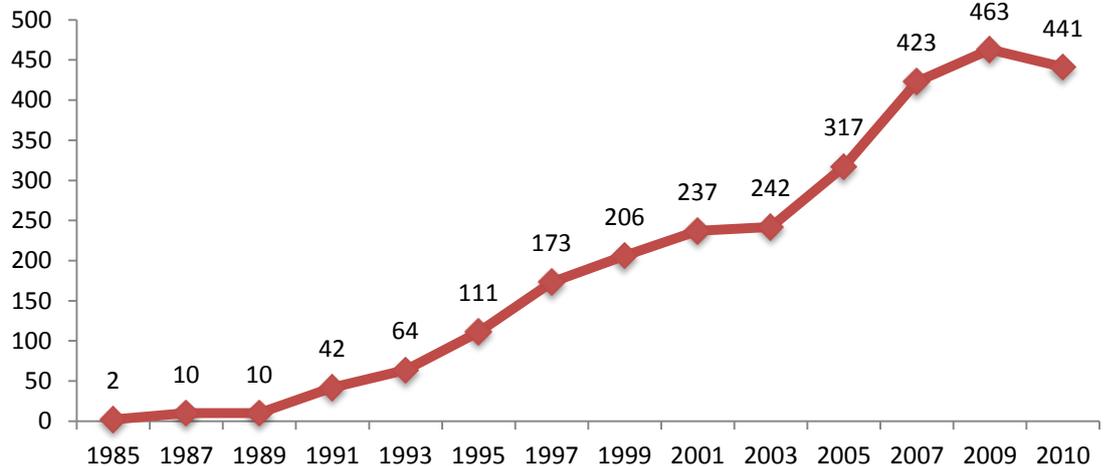


Source: Prepared by [www.aidsdatahub.org](http://www.aidsdatahub.org) based on UNAIDS, Report on the Global AIDS Epidemic, 2010

As of end 2010, there was a cumulative total of 4,845 reported HIV cases – 486 among females and 4,359 among males (Fig. 2).<sup>8</sup> During same period, 2,319 persons were asymptomatic carriers, 1,137 had AIDS-related illnesses and 1,389 had died.<sup>8</sup>

In 2010, HIV was detected mainly through HIV testing in the course of medical care (56%), followed by routine health screening (17%), voluntary HIV screening (12%), and screening in prisons and drug rehabilitation centers (5%). The rest were detected through contact tracing and other forms of screening.<sup>8</sup>

**Figure 2: Reported number of HIV infections per year, including cases of AIDS at diagnosis, 1985-2010**



Source: Prepared by [www.aidsdatahub.org](http://www.aidsdatahub.org) based on Ministry of Health, Singapore (2010) Update on HIV/AIDS Situation in Singapore. Retrieved from [www.moh.gov.sg/mohcorp/statistics.aspx?id=246](http://www.moh.gov.sg/mohcorp/statistics.aspx?id=246)

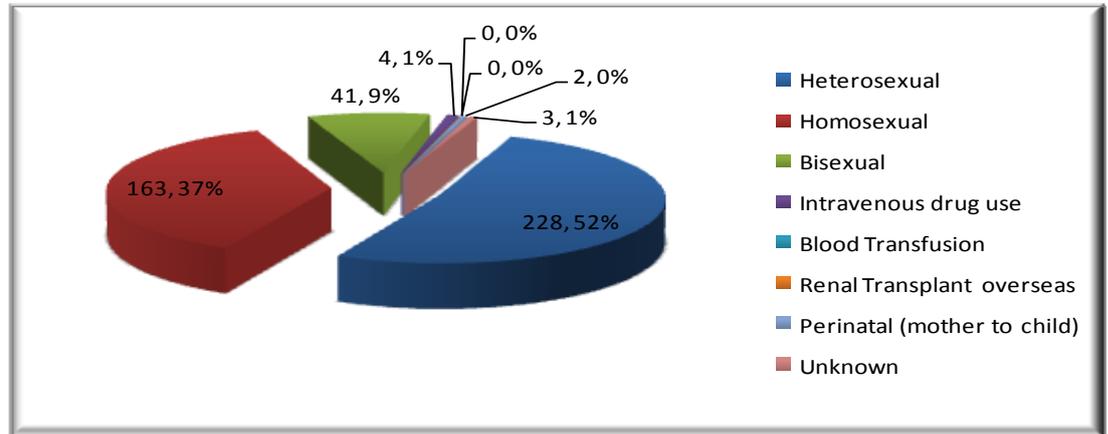
### Surveillance systems<sup>9</sup>

- As of 2009, there was a total of 7 anonymous HIV test sites and, during 2008-2009, a total of 18,711 anonymous HIV tests were carried out.
- A National Public Health Unit was established by the Ministry of Health in September 2008, which maintains the National HIV Registry and carries out contact tracing and partner notification for newly-diagnosed HIV patients, and conducts HIV-related public health research.
- Biological and behavioural HIV surveillance is carried out by the Ministry of Health, the National Public Health Unit and the Health Promotion Board with healthcare, community and academic partners. These include case surveillance, unlinked surveillance in target sentinel groups, and surveys of population groups on HIV-related risk behaviours.
- The National HIV Registry receives HIV and AIDS notifications from clinicians and laboratories.

### WHO IS AT RISK OF HIV IN SINGAPORE?

Of the cumulative number of reported HIV cases in 2010, many of those reported were among those aged 40-49 years ( 29%) and 30-39 years ( 26.3%).<sup>8</sup> Of note, however, is that more than half ( 54%) of all new HIV cases in 2010 already had late-stage HIV infection when they were diagnosed,<sup>8</sup> suggesting a need for more HIV testing among those who engage in high-risk behaviour such as unprotected casual sex. Of the 441 cases reported in 2010, the majority were transmitted via heterosexual ( 52%) or homosexual (37%) mode (Fig. 3).

**Figure 3: Number and Percent distribution of reported new HIV cases by mode of transmission, 2010**



Source: Prepared by [www.aidsdatahub.org](http://www.aidsdatahub.org) based on Ministry of Health, Singapore (2010) Update on HIV/AIDS Situation in Singapore. Retrieved from [www.moh.gov.sg/mohcorp/statistics.aspx?id=246](http://www.moh.gov.sg/mohcorp/statistics.aspx?id=246)

### Men who have sex with men

Given the strong stigma and discrimination towards people living with HIV (PLHIV) and laws that criminalise homosexuals in Singapore, it is suspected that HIV among MSM is underreported. As noted earlier, homosexual transmission accounted for 37% of all reported HIV cases in 2010.<sup>8</sup> According to the 2010 UNAIDS Report on the Global AIDS Epidemic, HIV prevalence among MSM was 2.6% in 2009.<sup>7</sup>

Based on a survey carried out among MSM in 2006, almost 50% of respondents (n=1,479) reported having 2-5 partners during the last three months.<sup>10</sup> In terms of condom use in the three months preceding the survey, many respondents reported that they did not regularly use a condom with casual partners (33%) and with regular partners/boyfriends (51%).<sup>10</sup> The same survey found that 57% of MSM received HIV testing in the last 12 months (in 2006) and knew the result.<sup>10</sup>

### Injecting drug users

Although injecting drug users (IDUs) only accounted for 2% in 2009<sup>9</sup> and 0.9% in 2010<sup>8</sup> of the cumulative number of the reported HIV infections, strict drug laws could result in the underreporting of IDU cases as in the situation of MSM. Another cause for concern is the steady rise in reported HIV prevalence among IDUs, from 0.2% in 1993 to 1.6% in 1998 and 1.9% in 2005.<sup>11</sup>

## Female Sex Workers and their Clients

There is substantial information available on female sex workers (FSWs) in Singapore with published documents on FSWs dating back to late 1990s. According to the 2010 Report on the Global AIDS Epidemic, 99% of brothel-based sex workers used a condom with their most recent client in 2007.<sup>7</sup>

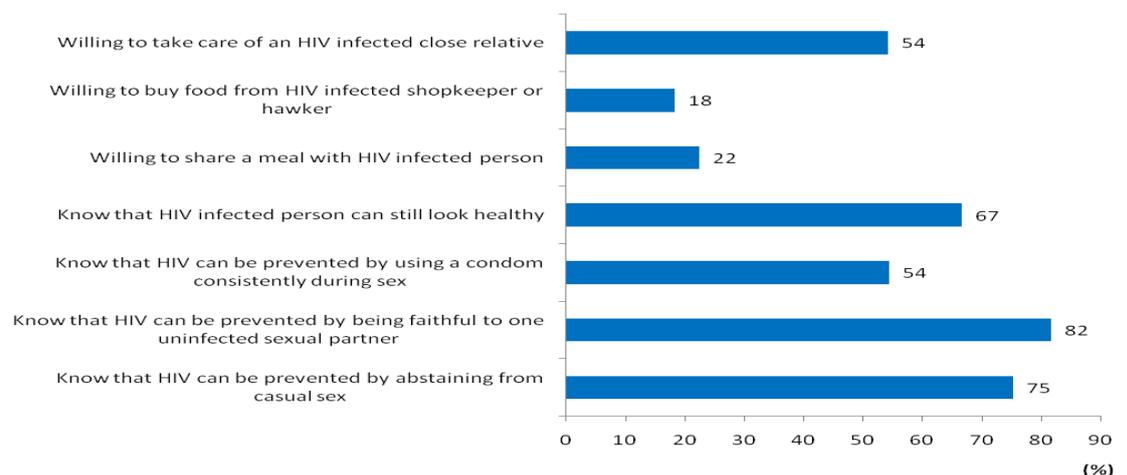
A study on socio-demographic, behavioural, and psychological factors associated with inconsistent condom use among clients of sex workers was undertaken in 2004 among 229 male patients attending the STD clinic in Singapore who reported paying for sex in the previous six months.<sup>12</sup> The study found that, overall, 45% of the clients used condoms inconsistently. As compared to consistent condom users, these individuals were more likely to have poor STD knowledge, had lower self efficacy, had less favourable social norms for condom use, and were more likely to forget condom use when intoxicated. Clients reported visiting sex workers five or more times in the past six months.

## KNOWLEDGE ABOUT HIV

A study in 2007 revealed that only 17% young people aged 15-24 had comprehensive knowledge about HIV – that is, who were able to both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV.<sup>11</sup> This figure was slightly higher among young females (20%) than males (16%).

The National Behavioural Surveillance Survey of 2007 found that adults aged 18-69 had a wide range of knowledge about HIV.<sup>13</sup> As shown in Figure 4, knowledge about abstinence and being faithful to one partner were better known means of prevention than consistent condom use. Less than a quarter of respondents were willing to share a meal with HIV infected person or to buy food from HIV infected shopkeeper or hawker.

**Figure 4: Knowledge, attitudes and beliefs about HIV among adults (18-69 years), 2007**



Source: Prepared by [www.aidsdatahub.org](http://www.aidsdatahub.org) based on Singapore, National Behavioural Surveillance Survey, 2007

## NATIONAL RESPONSE

### Law and policy related issues

The following are legal issues relating to HIV and AIDS in Singapore:

- Narcotics laws established by the *Misuse of Drugs Act* under the Penal Code are very strict. The Act provides that “Anyone caught with more than or equal to 15 g (0.5 ounces) of heroin, 28 g (1 ounce) of morphine or 480 g (17 ounces) of cannabis faces mandatory capital punishment, as they are deemed to be trafficking in these substances.”
- Male-to-male sex is criminalized by Section 377A of the Penal Code which make “unnatural sex” illegal. The associated penalty is imprisonment for a term that can extend to two years.
- Sex work is not illegal *per se*, but most related activities are illegal, such as public solicitation, living on the earnings of a prostitute, and maintaining a brothel are illegal.
- WHO guidelines confirm that substitution therapies, such as methadone and/or buprenorphine maintenance, are still the most promising method of reducing drug dependence.<sup>14</sup> Moreover, both methadone and buprenorphine have been added to the WHO List of Essential Drugs.<sup>15</sup> Neither of these substitution drugs is legal in Singapore.<sup>16</sup>
- The *Infectious Diseases Act* was amended in 2008 to require that a person who has reason to believe that they are HIV-infected, or have been exposed to a significant risk of contracting HIV, must take reasonable precautions to protect his sexual partner.<sup>9</sup> Alternatively, they can go for a HIV test to confirm their HIV status.

### Governance

The National AIDS Control Programme comes under the central control of the Ministry of Health, Singapore, with active involvement from other relevant government agencies as well as community groups. Between 2005 and 2009, national efforts for HIV and AIDS control included the formation of a National HIV/AIDS Policy Committee, and HIV prevention and education to equip both the general population and key affected populations.<sup>9</sup>

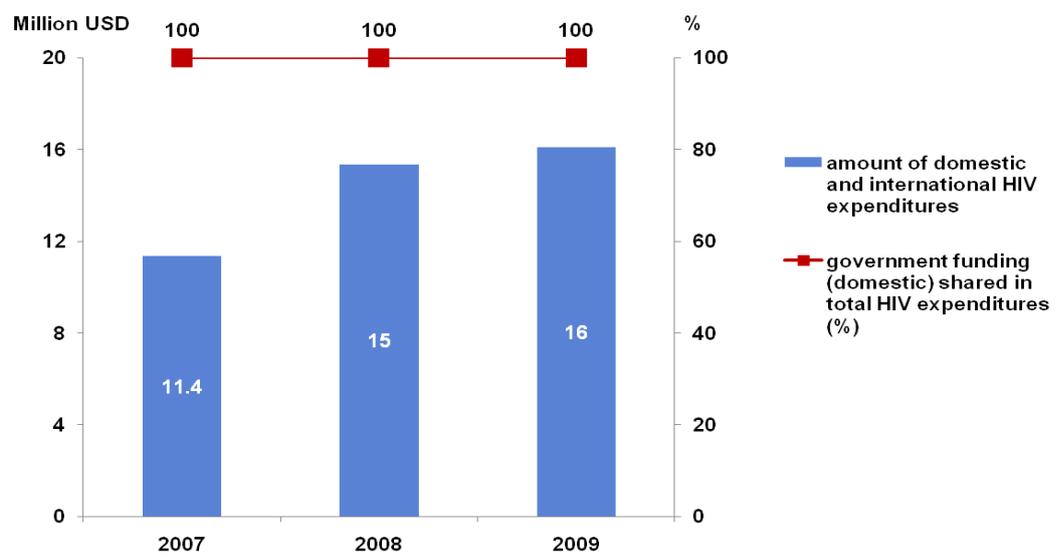
### HIV Prevention Programmes

HIV prevention programmes are largely focused on education. A sexually transmitted infection (STI) and HIV education programme entitled “Breaking Down Barriers” has been implemented in all secondary schools and aims to increase students’ awareness of STIs and HIV, including the correct way to use condoms, sexual negotiation, decision-making.<sup>9</sup> Education programmes are carried out for sex workers to educate them on STIs and HIV, modes of transmission and to strongly promote the use of condoms.<sup>9</sup> Similarly, specific educational programmes are in place targeting high-risk heterosexual men and MSM in collaboration with community-based organizations.<sup>9</sup>

## ECONOMICS OF AIDS

Overall spending for AIDS has increased in recent years, from US\$ 11.4 million in 2007 to US\$ 15.3 million in 2008 and again to USD\$ 16 million 2009 (Fig 5).<sup>7</sup> All AIDS spending is financed by domestic sources.<sup>7</sup>

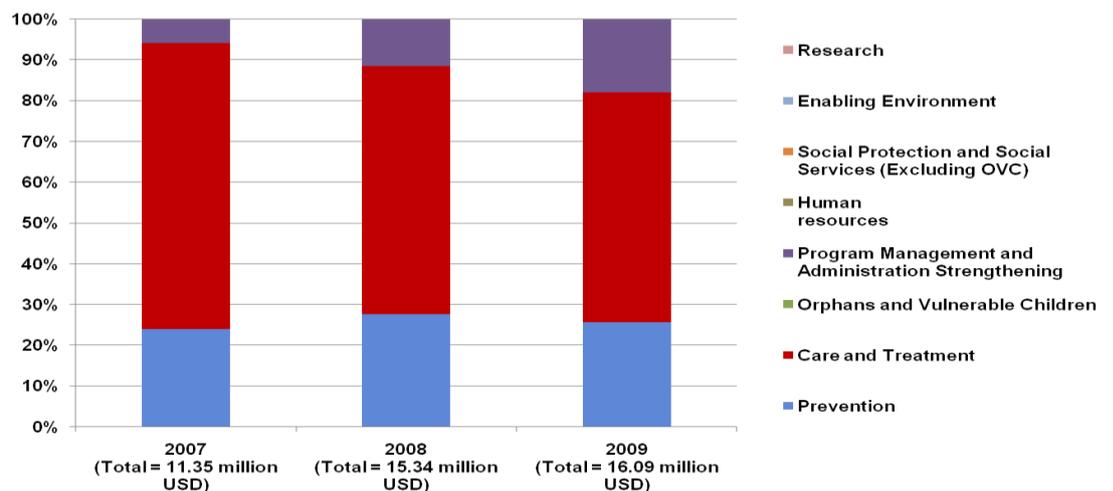
**Figure 5: Amount of domestic and international HIV expenditures and % shared by government, 2007 – 2009**



Source: Prepared by [www.aidsdatahub.org](http://www.aidsdatahub.org) based on UNAIDS, Report on the Global AIDS Epidemic, 2010

In terms of spending by activity, care and treatment activities remained the highest followed by prevention initiatives and program support costs (Fig. 6).<sup>9</sup>

**Figure 6: Percent distribution of AIDS spending by category, 2007- 2009**



Source: Prepared by [www.aidsdatahub.org](http://www.aidsdatahub.org) based on UNAIDS, Report on the Global AIDS Epidemic, 2010

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