I. Status at a glance

In summary:

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of newly diagnosed HIV cases</td>
<td>456</td>
<td>455</td>
<td>408</td>
<td>434</td>
</tr>
<tr>
<td>Number of PLHIV</td>
<td>4948</td>
<td>5324</td>
<td>5660</td>
<td>6022</td>
</tr>
<tr>
<td>Known HIV Prevalence in resident population aged 15 and above</td>
<td>0.15%</td>
<td>0.16%</td>
<td>0.17%</td>
<td>0.18%</td>
</tr>
</tbody>
</table>

II. Overview of the HIV/AIDS epidemic

The first case of HIV was diagnosed in Singapore in 1985. Since then, the number of HIV notifications among Singapore residents has increased from 2 in 1985 to a cumulative total of 7,982 as of 31 Dec 2017. Of these, 1,960 (25%) have died.

The prevalence of known PLHIV among the resident population aged 15 years and above was 0.18% in 2017.

The number of newly-diagnosed cases in 2017 was 434, compared to 408 cases in 2016.

HIV cases in Singapore are predominantly male. As at end Dec 2017, there were 7,287 males and 695 females, which is a ratio of ten males to one female.

Sexual intercourse is the main mode of transmission of HIV in Singapore. In 2017, 36% of the 434 new HIV cases acquired the infection through sexual
intercourse with heterosexual contacts, and 60% through intercourse with homosexual and bisexual contacts.

The following table summarises the figures over the past three years:

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of diagnosed cases</strong></td>
<td>455</td>
<td>408</td>
<td>434</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Male</td>
<td>423</td>
<td>380</td>
<td>408</td>
</tr>
<tr>
<td>- Female</td>
<td>32</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td><strong>Mode of transmission</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Heterosexual</td>
<td>173</td>
<td>148</td>
<td>155</td>
</tr>
<tr>
<td>- Homosexual</td>
<td>232</td>
<td>213</td>
<td>218</td>
</tr>
<tr>
<td>- Bisexual</td>
<td>35</td>
<td>28</td>
<td>44</td>
</tr>
<tr>
<td>- Intravenous drug use</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>- Perinatal</td>
<td>0</td>
<td>2*</td>
<td>1*</td>
</tr>
<tr>
<td>- Uncertain/Others</td>
<td>11</td>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

*Transmission occurred overseas.

45% of the newly diagnosed cases were detected in the course of medical care provision. Such cases are typically at the late stage of their HIV infection\(^1\). Another 27% were detected during routine programmatic HIV screening, and 23% were detected through voluntary HIV testing. Cases detected via voluntary screening are more likely to be at the early stage of their infection. When differentiated by mode of sexual transmission, a higher proportion of homosexuals/bisexuals cases (33%) were detected via voluntary screening compared to heterosexual cases (8%).

**III. National response to the HIV/AIDS epidemic**

The Ministry of Health (MOH), Singapore, retains oversight of the HIV/AIDS prevention and control programme, with active involvement from other relevant government agencies as well as community and private sector groups in Singapore. The programme focuses on HIV education and prevention for the general population as well as specific at-risk groups, reducing the pool of undiagnosed HIV-infected individuals, and providing care and support to those living with HIV/AIDS. To further enhance the surveillance and control of HIV, MOH set up a National Public Health Unit in September 2008. This unit is responsible for maintaining and enhancing the National HIV Registry, carrying out contact tracing and partner notification for newly-diagnosed HIV patients, and conducting HIV-related public health research.

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\(^1\) Defined by CD4+ cell count of less than 200 per cu mm OR AIDS-defining opportunistic infections OR both.
There are ongoing national efforts to increase access to HIV prevention, education, testing, care and support.

(a) HIV/AIDS Education

General Population

HIV/AIDS prevention and education is the mainstay of the national HIV/AIDS control programme in Singapore. Education is targeted at both the general population and those at high risk of infection. Educational messages for the general population are focused on the avoidance of pre-marital and casual sex, and sex with commercial sex workers. The use of condoms is emphasised to those at risk. Campaigns are also conducted to promote protective behaviours, such as consistent condom use and regular / early testing for those at-risk.

Youth

Information on Sexually Transmitted Infections (STIs) and HIV/AIDS is taught to youths through curriculum and co-curriculum programmes in schools. In the curriculum, students learn about STIs and HIV/AIDS through lower-secondary (13-14 years old) Science as well as upper-secondary (15-16 years old) Biology lessons.

Leveraging on a multi-agency approach, the Ministry of Education, Ministry of Health and Health Promotion Board (HPB) developed and implemented a co-curriculum programme titled “Empowered Teens” (eTeens). eTeens is a staple sexuality education programme targeting students aged 15 to 17 years. Students learn about the different STIs including HIV, the consequences of infection, and the effective modes of protection from a health perspective. Life skills, such as the ability to be assertive and make sound decisions in order to say "no" to casual sex, are also taught. Apart from developing programmes for mainstream students, HPB has also developed and implemented a programme for vulnerable youths.

High-Risk groups

Key Risk Groups include
(a) Men who have sex with Men
(b) Men who buy sex from commercial sex workers
(c) Commercial sex workers

Special education programmes are carried out for commercial sex workers to educate them on STIs and HIV, modes of transmission and to promote the use of condoms and regular HIV testing.
Specific educational programmes targeting men who purchase sex from commercial sex workers, and men who have sex with men (MSM) have also been implemented, in collaboration with community-based organizations.

**Workplace**

HPB has partnered the Singapore National Employers Federation (SNEF) to leverage their business affinity in the rolling out of the Workplace Infectious Disease Education (WIDE) programme to companies. WIDE comprises talks, workshops and roadshows, all of which provide information on the prevention and management of infectious diseases and covers other infectious diseases, such as tuberculosis and influenza, in addition to HIV/AIDS.

**(b) Increased HIV testing efforts**

*(i) Anonymous Testing*

Anonymous HIV Testing is available to encourage those at risk to come forward for testing without needing to identify themselves to medical personnel. There are a total of ten anonymous HIV test sites in Singapore. The number of anonymous HIV tests has been increasing since the anonymous testing was first introduced in Singapore. The number of anonymous tests increased nearly 54% (from 11,243 in 2012 to 17,363 in 2017). During the period of 2012 to 2017, more than 90,000 anonymous HIV tests were carried out, of which (1 – 1.6%) were HIV-positive.

*(ii) Voluntary opt-out HIV testing among hospital inpatients*

In view of the US CDC recommendations that voluntary opt-out screening for HIV infection be performed routinely for all patients aged 13-64 years in all healthcare settings, as a normal part of medical practice, voluntary opt-out HIV screening is implemented in all other acute public sector hospitals for hospital inpatients aged 21 years and above. The objective of this programme is to give inpatients an opportunity to have HIV screening done as part of the routine medical care they receive during their stay in hospitals, and so facilitate earlier detection of HIV infection. During the period of 2012 – 2017, nearly 190,000 HIV screening tests were done under this programme, of which 0.11 - 0.20% were HIV-positive.

**(c) Care, Support and Treatment of the HIV-infected**

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The majority of cases are managed in public hospitals by teams that provide medical, nursing, social, counselling and other support. Contact tracing and partner notification for sexual partners of HIV-infected persons are carried out jointly by the National Public Health Unit and the treating clinic.

HIV/AIDS patients have access to subsidised inpatient and outpatient care. This includes hospital, radiological and laboratory charges, treatment of complications with standard drugs and consultation fees. Patients are allowed to withdraw up to S$550 per month from their Medisave\(^3\) account for anti-retroviral drugs. From 1 February 2010, Medifund\(^4\) assistance was extended to HIV treatment. From 2014, ARV drugs for HIV treatment have also been subsidised for lower to middle-income patients at public hospitals and institutions, if the drugs have been assessed to be clinically necessary and appropriate for treatment.

**(d) Legislation**

Under the Infectious Diseases Act (IDA), a person who has reason to believe that he has, or has been exposed to a significant risk of contracting HIV/AIDS, must take reasonable precautions to protect his sexual partner, such as by using condoms, even if he is ignorant of his HIV-positive status. Alternatively, he can go for a HIV test to confirm that he is HIV-negative. Otherwise, he must inform his partner of the risk of contracting HIV infection from him prior to engaging in sexual intercourse, leaving the partner to voluntarily accept the risk, if he or she so wishes.

It is also an offence for a HIV-infected person to:
- a) knowingly donate blood or commit any act likely to spread disease; and
- b) have sex with another person unless the partner has been informed of the risk of infection prior to intercourse AND voluntarily accepts the risk.

**IV. Best practices**

Recognising prevention and control of HIV requires a multi-agency effort involving stakeholders; a National HIV/AIDS Policy Committee was formed in 2006. The current chairperson is Dr Amy Khor, Senior Minister of State for Health and the committee comprises the stakeholders from other relevant ministries and institutions.

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\(^3\) Medisave is a national medical savings scheme which helps individuals put aside part of their income into their Medisave Accounts to meet their future personal or immediate family’s hospitalization, day surgery and certain outpatient expenses. [https://www.moh.gov.sg/content/moh_web/home/costs_and_financing/schemes_subsidies/medisave.html](https://www.moh.gov.sg/content/moh_web/home/costs_and_financing/schemes_subsidies/medisave.html)

\(^4\) Medifund is an endowment fund set up by the Government to help needy Singaporeans. [https://www.moh.gov.sg/content/moh_web/home/costs_and_financing/schemes_subsidies/Medifund.html](https://www.moh.gov.sg/content/moh_web/home/costs_and_financing/schemes_subsidies/Medifund.html)
government agencies, healthcare institutions, and civil society. The Committee formulates national policies and provide strategic direction to prevent and control the disease.

V. Major challenges and remedial actions

After more than 20 years of the HIV/AIDS epidemic in Singapore, HIV-related stigma and discrimination remains a significant challenge. MOH, HPB, and community partners have stepped up efforts to address stigma and discrimination towards people living with AIDS, for example, through the broadcast of a television drama serial, workplace education programmes, and experiential roving exhibitions that reached out to the general public.

Another challenge is to reduce the proportion of HIV-infected individuals who are unaware of their infection. The government and community partners have been working together to promote the HIV testing message to the general community, as well as those at higher risk of infection, particularly among high-risk heterosexual men and MSM. Furthermore, accessibility to testing has been enhanced by the initiatives described in Section III(b).

VI. Support from the country’s development partners (if applicable)

Not applicable.

VII. Monitoring and evaluation environment

Biological and behavioural HIV surveillance is carried out by MOH, the National Public Health Unit and the Health Promotion Board (HPB) in conjunction 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.

HIV is a legally notifiable disease in Singapore. The National HIV Registry receives HIV notifications from clinicians and laboratories. The national HIV data is supplemented by unlinked anonymous surveillance in various sentinel groups such as patients with sexually transmitted infections.

Behavioural surveillance is also carried out through surveys in the general population, as well as in specific population groups (e.g. youths and MSM). Furthermore, periodic research and surveys are carried out to assess the situation in order to better inform policy making and programme implementation.