

FACTS & FIGURES

HIV EPIDEMIOLOGICAL PROFILE 2016



MINISTRY OF HEALTH, JAMAICA

In this surveillance report, *HIV* cases include persons reported with HIV infection (non-AIDS), advanced HIV (non-AIDS) and AIDS within a given year. Persons reported as Advanced HIV, AIDS or even AIDS deaths in 2016, in previous years, may have been reported at an earlier disease stage but now 2016 data has captured a deterioration in their clinical state. This report does not include undiagnosed HIV-infected persons or those diagnosed with no report of their positives status to the Ministry of Health (MOH).

OVERVIEW OF HIV-INFECTED POPULATION INCLUDING REPORTED HIV INFECTIONS, AIDS CASES AND DEATHS RELATED TO HIV

- Modelled estimates and case based surveillance data estimate that there are 30,000 persons living with HIV in Jamaica of whom, 12% are unaware of their status. In Jamaica's general population, HIV prevalence is estimated to be 1.7%. Since January of 1982 to December of 2016, the Ministry of Health has received reports of 35,904 diagnosed cases of HIV Infection of which, 9,821 (27.4%) are known to be deceased.
- Monitoring of advanced HIV began in July of 2005. Advanced HIV refers to persons with a CD4 count from 201-350. In 2015, 686 cases were classified at the advanced stage and in 2016 this number increased to 916 (522 males and 394 females).

Figure 1: Total Number of HIV, Advanced HIV Cases, AIDS and Deaths Reported, 1982 - 2016

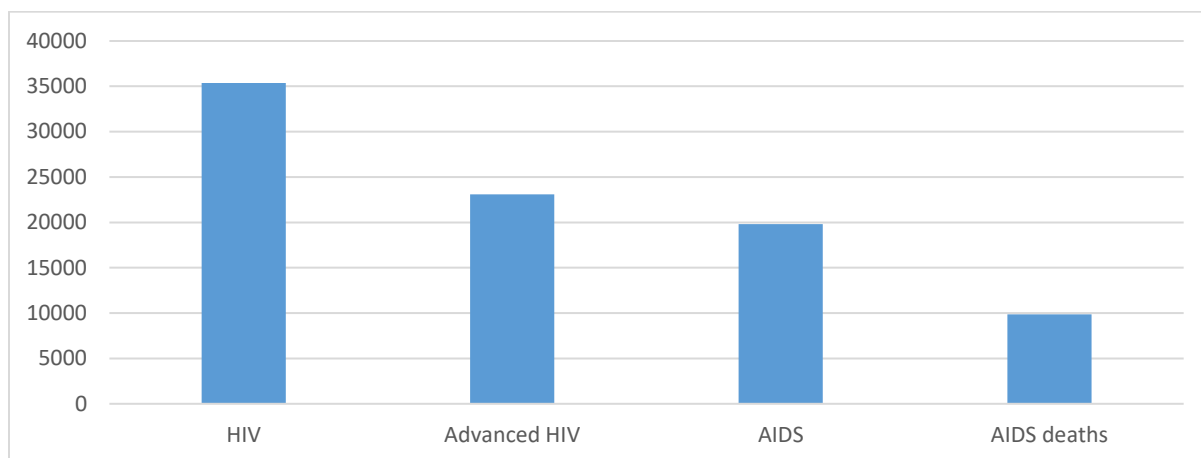
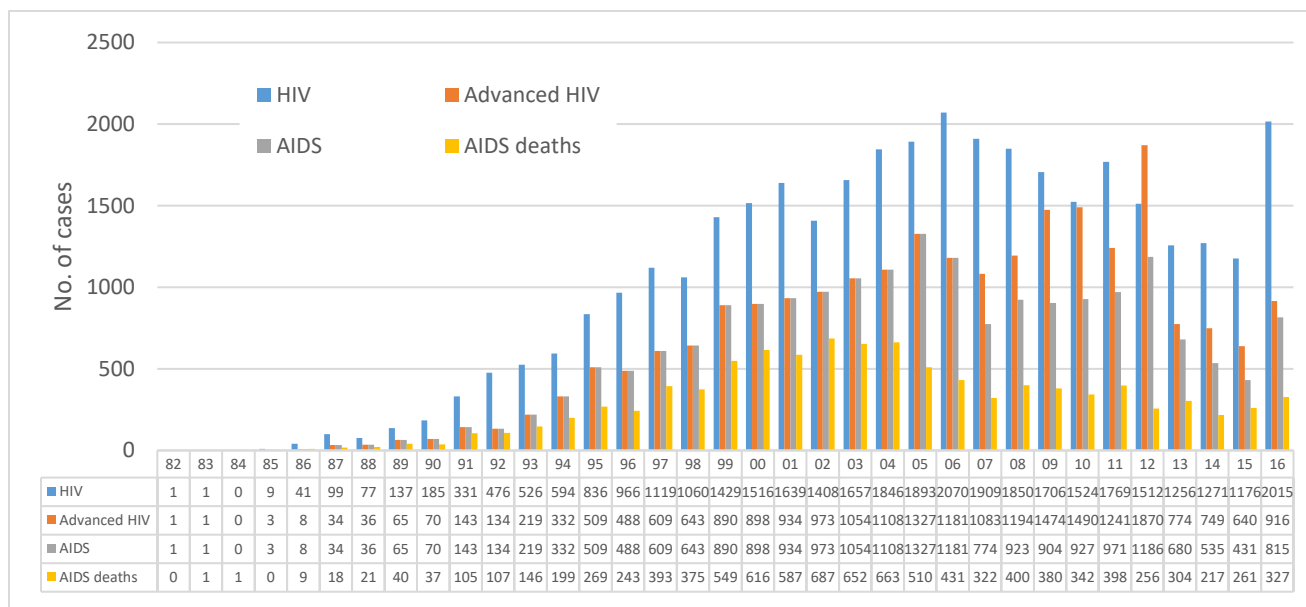


Figure 2: Annual reported cases of HIV, Advanced HIV, AIDS and AIDS Deaths

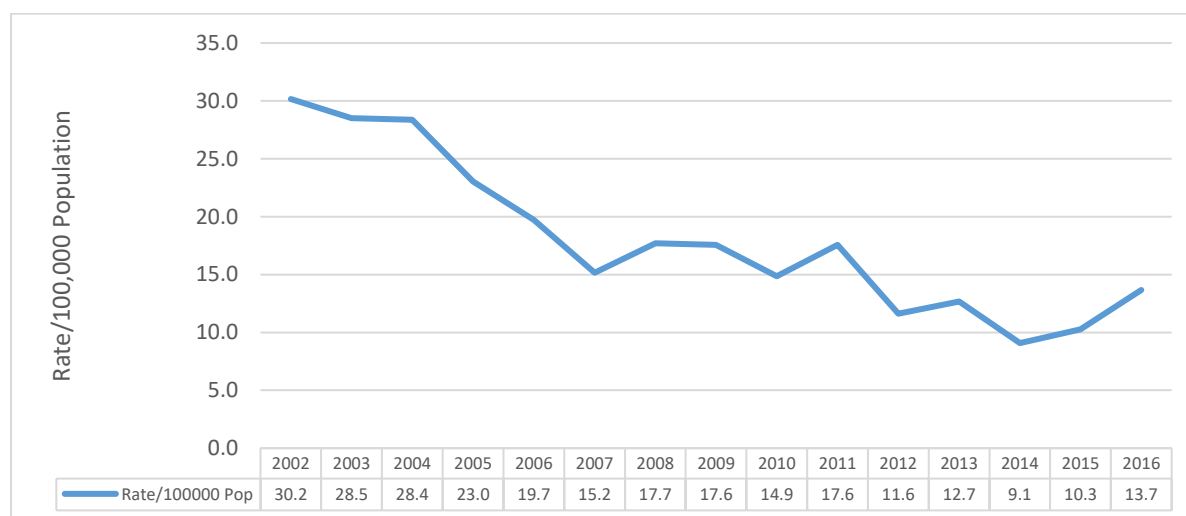


- AIDS mortality rate has declined from 25 deaths/100,000 population in 2004 to 13 deaths/100,000 population in 2016 which represents a 48% decrease since the inception of universal access to ARVs in 2004. This is shown in Figure 3.
- The declining trajectory of AIDS death as reported, is also confirmed by the Spectrum modelling estimates. Spectrum, however, suggests that deaths are under reported since the number reported in Jamaica for 2016 is only 21% of the estimated number of deaths. The contributors to this decline can be summarized as the advances in diagnosis,

treatment improvement and clinical monitoring of PLHIV. The main individual contributors are the scaling up of the national VCT programme with the use of rapid test kits allowing for earlier diagnosis, public access to antiretroviral treatment since 2004, availability of prophylaxis against opportunistic infections and improved laboratory capacity to conduct investigations such as CD4 counts, viral load and PCR tests.

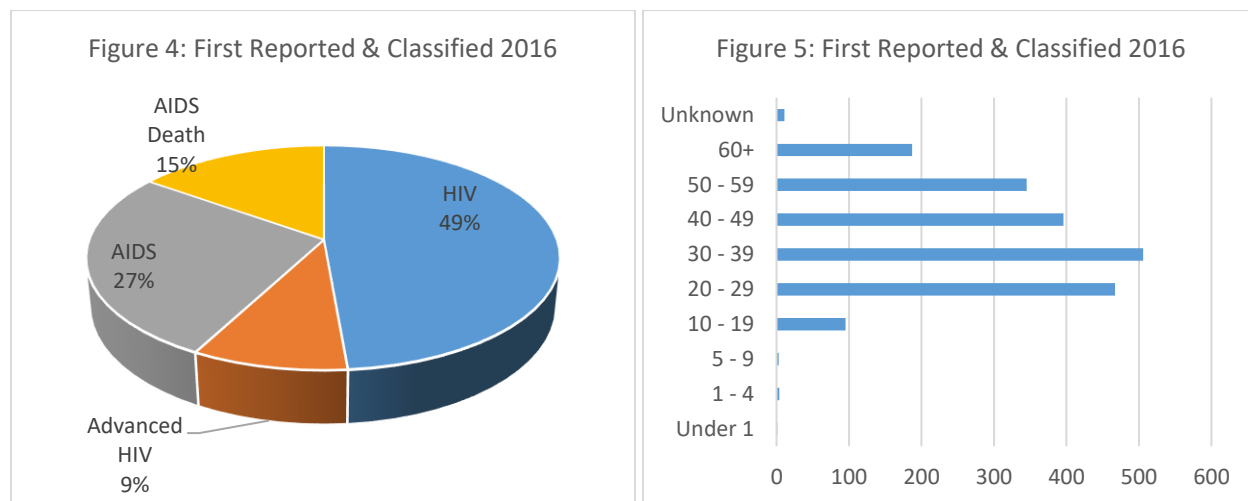
- Despite these advances, retention in care and poor adherence to treatment are ongoing challenges hampering the reduction of AIDS morbidity and mortality.

Figure 3 AIDS Mortality Rate/100,000 Population, Jamaica 2002 -2016



NEWLY DIAGNOSED CASES 2016

- There were 2,015 newly diagnosed cases in 2016. Approximately half (49%) of these had a CD4 \geq 350. This may be attributed to the scaled-up HIV testing and counselling through Provider Initiated Testing and Counselling (PITC), in order to facilitate early diagnosis. The scope of testing needs to be widened since of the new cases 305 (15%) were notified to the National Epidemiology Unit for the first time as deaths.
- The plurality (25%) of the newly diagnosed cases were between ages 30 – 39 year-olds and 23% were between ages 20-29 as depicted in figure 5 below.



ANALYSIS BY GEOGRAPHIC AREA

- Sixty-five percent (65%) of reported HIV cases in 2015 were from the most urbanized parishes (KSA, St. Catherine, and St. James). This proportion is slightly higher than it was last year (63%) (Table 1).
- The cumulative AIDS case rate is highest among the most urbanized parishes: Kingston & St. Andrew –1,097.1 cases per 100,000 persons, and St. James –1,531.8 HIV cases per 100,000 persons. In fact, KSA and St. James have cumulative case rates that exceed the national case rate (725.2 cases/100,000 population).
- Since the start of the epidemic, urbanized parishes are followed by parishes with significant tourism-based economies in terms of cumulative AIDS case rates: 796.0 cases per 100,000 persons in Westmoreland, 710.9 cases per 100,000 persons in Trelawny, 696.3 cases per 100,000 persons in St. Ann, and 697.7 cases per 100,000 persons in Hanover. Of note, all parishes in the Western Region are counted among those with the highest cumulative number of HIV cases.

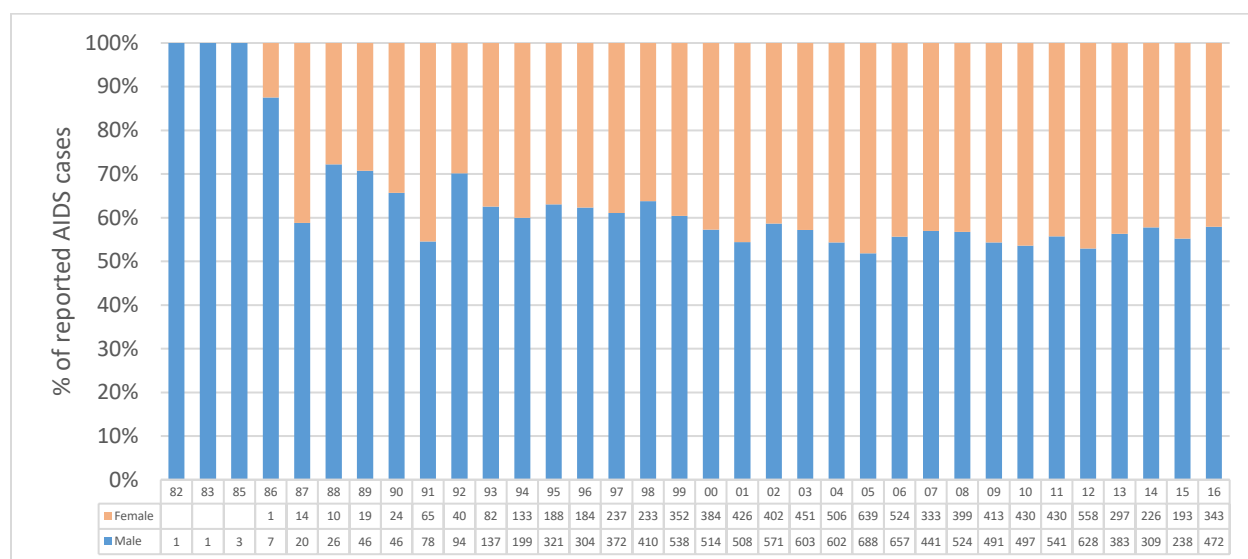
Table 1: Annual HIV cases reported by parish 2011 – 2016, Jamaica

PARISH	2012	2013	2014	2015	2016
Kingston & St Andrew	508	349	356	275	682
St Thomas	12	8	27	21	68
Portland	28	34	26	39	68
St Mary	50	64	55	36	59
St Ann	149	61	104	108	111
Trelawny	40	78	32	37	67
St James	168	211	195	149	168
Hanover	34	46	29	52	71
Westmoreland	87	96	106	109	140
St Elizabeth	37	36	53	41	59
Manchester	67	64	38	38	104
Clarendon	95	62	108	95	114
St Catherine	233	146	136	164	217
Parish Unknown	2	0	6	11	47
Overseas Address	2	1	0	1	36
Total	1512	1256	1271	1176	2015

ANALYSIS BY SEX AND AGE GROUP

- In 2016, the cumulative male: female ratio for persons reported with AIDS was 1.32:1, comparable to the 2015 reported ratio of male: female 1.31:1. The cumulative AIDS case rate for male is (27.8 cases per 100,000) and this is higher when compared to the female rate of (21.6 cases per 100,000). This indicates that the epidemic affects more males than females, however there is an increasing proportion of AIDS cases reported for females when compared to the beginning of the outbreak as seen in figure 7 below.

Figure 7: Annual Female: Male distribution of reported AIDS cases, 1982 –2016



- The 20-49 year old age group accounts for majority (75%) of all AIDS cases reported for the years 1982 -2016.
- In the graph below depicting the cumulative AIDS cases reported by age group and sex 1982-2016, the 10-14 age group accounts for 103 cases but the contribution from the 30-34 age group is significantly higher being approximately 30 times higher (3,041). Moving up one age band from 15-19 to 20-24 showed the cases reported quadrupling from 279 to 1,206. This may be due to increased HIV knowledge, better grasp and acceptance of sexual practices and better uptake of testing services available in that age group.
- Variations existed in the gender distribution of reported AIDS cases.

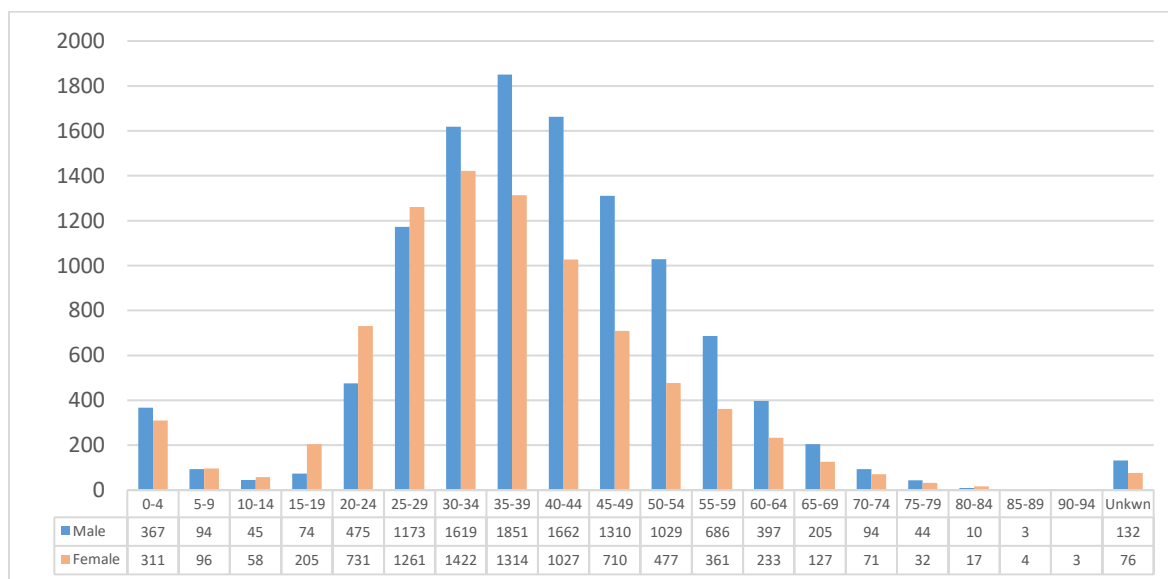
In the earlier decades of life there were more reported AIDS cases in the female gender when compared to the male gender. This trend changes however in the fourth decade of life and onwards where males now account for 1.5 times more cases than females.

The HIV prevalence among young adolescent girls and boys aged 10-14 is similar (females slightly higher) and is estimated to be 0.1%, predominantly the result of mother-to-child transmission of HIV (UNAIDS, 2014). The HIV prevalence in later adolescence (15 – 19 years) is estimated to increase, corresponding with the onset of sexual initiation; and a further increase by the age of 24, corresponding with increased sexual behaviour as well as survival and transition of HIV- infected adolescents into the early adult years.

Consequently, the estimated HIV prevalence rises to 1% in young women aged 20 – 24 and to 1.4% in young men in the same the group.

- The UNAIDS 2014 estimates, gave a HIV prevalence of 0.4 and 0.5 in adolescent girls and boys respectively, however the estimated HIV prevalence among gay and bisexual adolescent boys is 14% and 27% among transgender adolescents (National HIV/STI Programme, 2014). This highlights the urgent need for accessible sexual reproductive health (including HIV) education, treatment and support for this key population.

Figure 8 Cumulative AIDS Cases Reported by Age Group and Sex, 1982 -2016



RISK BEHAVIOUR AND TRANSMISSION OF HIV

- In Jamaica, HIV is primarily transmitted through sexual intercourse. During the period 1982- 2016, the sexual practice of 23% of men ever reported with HIV (and 22% of men reported with AIDS) was unknown. The reasons for this include an unwillingness among men who engage in sex with other men to disclose their sexual practices as well as poor investigation and reporting of cases. Of the cumulative total number of males reported with HIV, 2% (735) were identified as bisexual and 2% (726) identified as homosexual.

- In 2016, the sexual practice of 33% of males ever reported with HIV (and 18% of male reported with AIDS) was unknown. Of the total number of male reported with HIV in 2016, 3.6% (53) were identified as homosexual and 1.8% (28) identified as bisexual.
- Cumulatively, 818 (1.4%) of PLHIV reported being commercial sex workers with the greater proportion being females (82%) 670 and 18% males (148). In 2016, a total of 43 PLHIV (1.5%) reported being a commercial sex worker, with the sex breakdown among them showing 60% (26) females to 40% (17) males.
- Among previously reported HIV cases on whom risk data are available, the main risk factors were multiple sex partners, history of STIs, crack/cocaine use, and sex with sex workers. ‘No high risk behaviour’ was reported for a notable proportion of HIV cases and this may represent persons who have one sex partner who was HIV infected by another partner (Table 2). In 2016 specifically, the pattern remained the same with multiple sex partners and STI history being the most reported high risk behaviours.

Table 2: Annual Reported risk behaviours among adults with HIV (1982 – Dec 2015 cumulative)

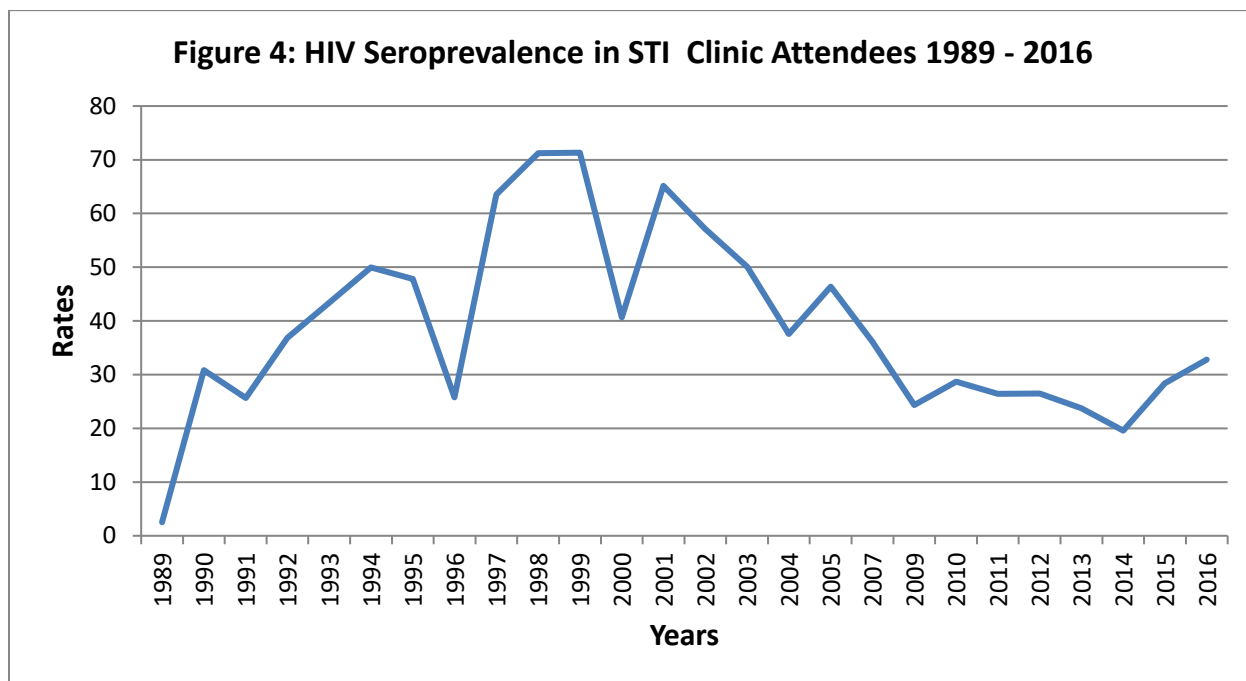
Risk	No. of persons (%) 2016	No. of persons (%) 1982-2016
History of STI	438 (16%)	11691 (19%)
Multiple Sexual Partners/ contacts	509 (18%)	5500 (9%)
Sex With Sex workers	186 (7%)	4492 (7%)
No high risk behaviour	1 (0.04%)	4939 (8%)
Crack, Cocaine User	28 (1%)	1396 (2%)
IV Drug Use	7 (0.3%)	206 (0.3%)

MOST AT RISK POPULATIONS

- Jamaica has features of both a generalized and concentrated HIV epidemic. The prevalence in the general population is estimated at 1.7%, however surveys show higher HIV prevalence in at-risk groups.
- Data retrieved from surveillance of STI clinic attendees in 2016 indicated that for every 1,000 persons with a sexually transmitted infection, approximately 32 were infected with HIV. Further, 67% of STI attendees tested in the sentinel surveillance were females – 2.24% of these females tested positive for HIV compared to 5.39% of male STI attendees.

Table 3: HIV seropositive prevalence among STI clinic attendees by parish - 2016

PARISH	Total Tested	Total Positive	% Positive	(95% CI) Exact
Kingston & St Andrew	1291	63	4.88	3.77 – 6.20
St Catherine	332	9	2.71	1.25 – 5.08
St Ann	617	7	1.13	0.46 – 2.32
Clarendon	245	2	0.82	0.10 – 2.92
St James	283	10	3.53	1.93 – 6.38
Westmoreland	38	1	2.63	0.07 - 13.81
TOTAL	2806	92	3.28	2.65 – 4.01



ANNUAL ANTENATAL SURVEILLANCE

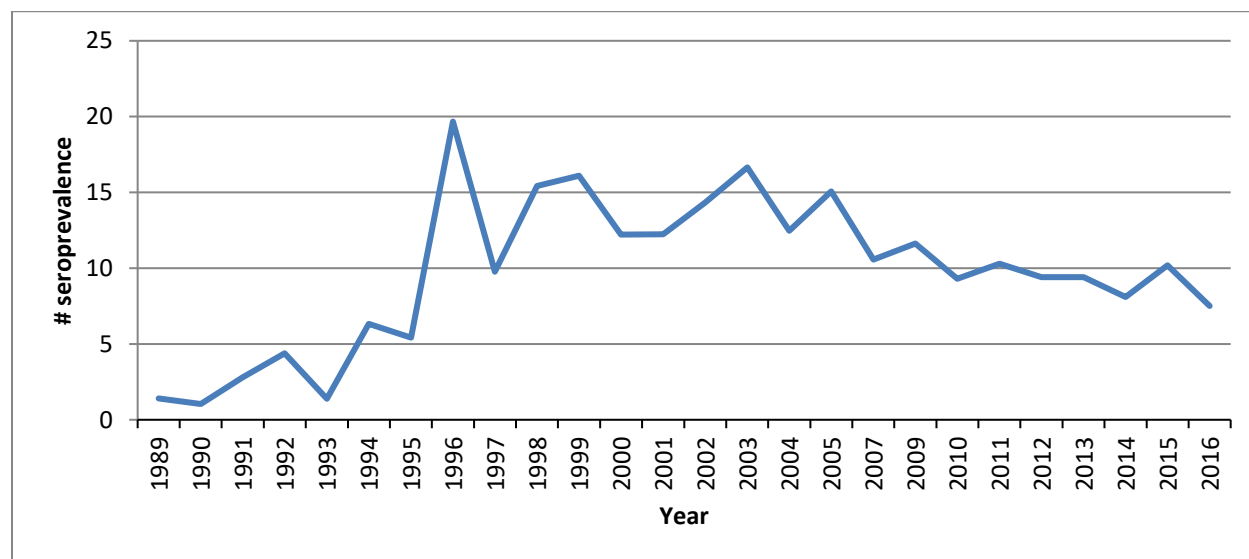
- In 2016, for every one thousand pregnant women attending public antenatal clinics, approximately 7 were HIV infected.

Between 1989 and 1996 the HIV prevalence among antenatal women increased from 0.14% to 1.96%. The prevalence has declined over the last 15 years, and the 2016 prevalence is once again below 1%. This overall decline likely reflects the success of Behaviour Change strategies among the general population.

Table 9: HIV seroprevalence (percentage) among ANC attendees by parish 2016

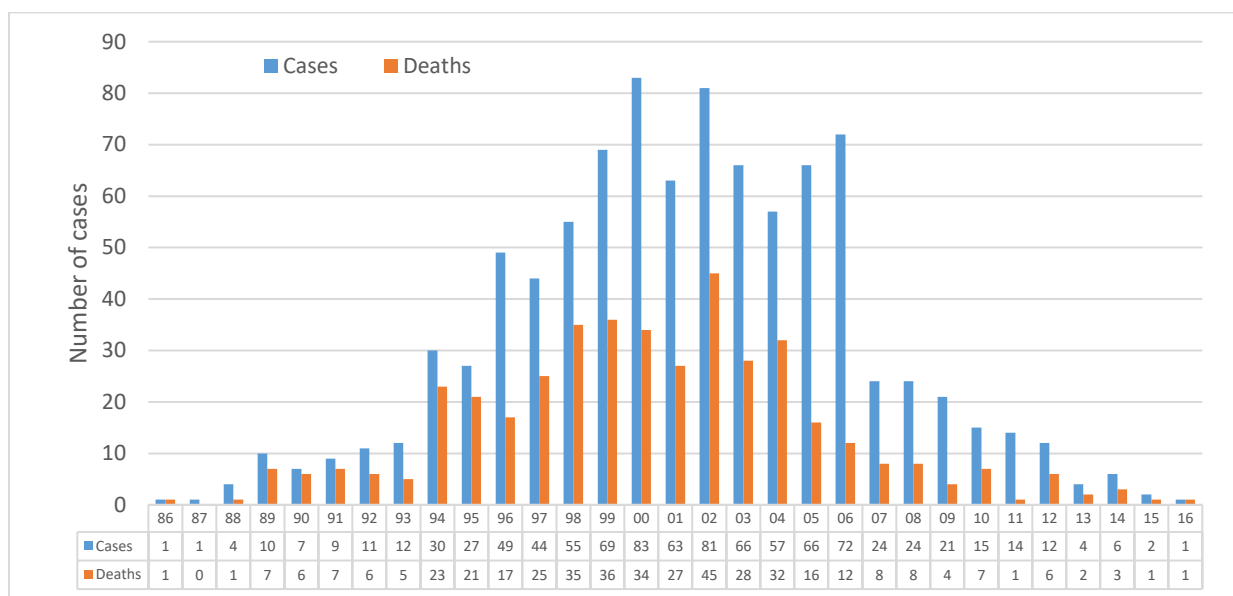
PARISH	Total Tested	Total Positive	% Positive	(95% CI) Exact
Kingston & St Andrew	1547	12	0.78	0.40 – 1.35
St Catherine	1161	8	0.69	0.30 – 1.35
St Ann	569	5	0.88	0.29 – 2.04
Clarendon	781	6	0.77	0.28 – 1.66
St James	464	4	0.86	0.24 – 2.19
Westmoreland	695	4	0.58	0.16 – 1.47
TOTAL	5217	39	0.75	0.53 – 1.02

Figure 10: HIV Seroprevalence in ANC attendees, 1989–2016



- In 2016, a total of 2 paediatric AIDS cases (children 0 to 9 years old) were reported compared to 84 paediatric AIDS cases in 2006. This significant decrease reflects the success of the pMTCT programme in reaching HIV-infected women.

Figure 11: Number of Paediatric AIDS Cases and Deaths reported annually, 1986 – 2016



One (1) paediatric AIDS death was reported in 2016, compared to 16 in 2005. This represents a 93% decrease in the number of paediatric AIDS deaths over this period.

FACTS AND FIGURES 2016

DATA TABLES

TABLE 1: SUMMARY OF HIV CASES REPORTED BY YEAR AND SEX, 1982 TO 2016

Year	Male (%)	Female (%)	Unknown (%)	Total
1982 to 1995	2114 (63.8)	1166 (35.2)	33 (0.1)	3313
Jan - Dec 1996	574	388	4	966
Jan - Dec 1997	690	427	2	1119
Jan - Dec 1998	633	426	1	1060
Jan - Dec 1999	801	626	2	1429
Jan - Dec 2000	820	696		1516
Jan - Dec 2001	827	807	5	1639
Jan - Dec 2002	728	679	1	1408
Jan - Dec 2003	833	823	1	1657
Jan - Dec 2004	852	994		1846
Jan - Dec 2005	874	1019		1893
Jan - Dec 2006	986	1083	1	2070
Jan - Dec 2007	915	992	2	1909
Jan - Dec 2008	865	985		1850
Jan - Dec 2009	819	887		1706
Jan - Dec 2010	788	736		1524
Jan - Dec 2011	890	879		1769
Jan - Dec 2012	785	727		1512
Jan - Dec 2013	670	586		1256
Jan - Dec 2014	649	622		1271
Jan - Dec 2015	597	579		1176
Jan - Dec 2016	1056	958		2015
Total	18766	17058	52	35904

TABLE 2: SUMMARY OF PERSONS WITH ADVANCED HIV* IN JAMAICA, 2005 to 2016

Year	Total	Male (%)	Female (%)
Cumulative 1982-2016	23091	12613	10478
Jan - Dec 2005	1327	688	639
Jan - Dec 2006	1181	657	524
Jan - Dec 2007	1083	585	498
Jan - Dec 2008	1194	616	578
Jan - Dec 2009	1474	697	777
Jan - Dec 2010	1490	708	782
Jan - Dec 2011	1241	658	583
Jan - Dec 2012	1870	934	936
Jan - Dec 2013	774	422	352
Jan - Dec 2014	749	397	352
Jan - Dec 2015	640	328	312
Jan - Dec 2016	916	522	394

*In July 2005, the national programme began monitoring cases of advanced HIV (i.e. persons with CD4 counts < 350). Figures reported for AIDS cases between July 2005 and December 2007 included persons with advanced HIV.

TABLE 3: SUMMARY OF AIDS CASES IN JAMAICA, 1982 to 2016

Year	Male (%)	Female (%)	Total
1982 to 1995	979	576	1555
Jan - Dec 1996	304	184	488
Jan - Dec 1997	372	237	609
Jan - Dec 1998	410	233	643
Jan - Dec 1999	538	352	890
Jan - Dec 2000	514	384	898
Jan - Dec 2001	508	426	934
Jan - Dec 2002	571	402	973
Jan - Dec 2003	603	451	1054
Jan - Dec 2004	602	506	1108
Jan - Dec 2005	688	639	1327
Jan - Dec 2006	657	524	1181
Jan - Dec 2007	441	333	774
Jan - Dec 2008	524	399	923
Jan - Dec 2009	491	413	904
Jan - Dec 2010	497	430	927
Jan - Dec 2011	541	430	971
Jan - Dec 2012	628	558	1186
Jan - Dec 2013	383	297	680
Jan - Dec 2014	309	226	535
Jan - Dec 2015	238	193	431
Jan - Dec 2016	472	343	815
Total	11270	8536	19806

TABLE 4: SUMMARY OF HIV CASES BY PARISH IN JAMAICA, 1982 – DEC 2016 (BY DATE OF REPORTING)

PARISH	Jan - Dec 2016	1982 - Dec 2016 Cumulative Total	RATE PER 100,000 POPULATION 2016
Kingston & St Andrew	682	12590	96.45056
St Thomas	68	615	34.70506
Portland	68	820	39.86904
St Mary	59	1206	20.8614
St Ann	111	2547	43.55975
Trelawny	67	1002	42.05049
St James	168	4708	71.51114
Hanover	71	948	51.15526
Westmoreland	140	2049	71.9898
St Elizabeth	59	969	15.78179
Manchester	104	1282	35.90421
Clarendon	114	1887	31.84367
St Catherine	217	4869	34.86209
Parish Unknown	47	340	n/a
Overseas address	36	68	n/a

TABLE 5: SUMMARY OF AIDS CASES BY PARISH IN JAMAICA, 1982 -2015 (BY DATE OF REPORTING)

PARISH	Jan - Dec 2016	1982 - Dec 2016 Cumulative Total	RATE PER 100,000 POPULATION 2016
Kingston & St Andrew	457	7360	68.12659
St Thomas	15	317	15.77503
Portland	19	409	22.9549
St Mary	22	631	19.12295
St Ann	26	1215	14.90202
Trelawny	12	541	15.76893
St James	41	2849	22.04479
Hanover	16	491	22.73567
Westmoreland	38	1161	26.05345
St Elizabeth	10	515	6.575746
Manchester	28	680	14.56983
Clarendon	31	912	12.49562
St Catherine	93	2686	17.81415
Parish Unknown	7	26	n/a
Overseas address		13	n/a
Total	815	19806	29.84371

TABLE 6: SUMMARY OF AIDS DEATHS IN JAMAICA, 1982 – DEC 2016

Year	Total	Male (%)	Female (%)
1982 to 1999	2513	1591	922
Jan - Dec 2000	616	359	257
Jan - Dec 2001	587	329	258
Jan - Dec 2002	687	402	285
Jan - Dec 2003	649	380	269
Jan - Dec 2004	663	378	285
Jan - Dec 2005	510	307	203
Jan - Dec 2006	431	263	168
Jan - Dec 2007	319	202	117
Jan - Dec 2008	400	236	164
Jan - Dec 2009	377	234	143
Jan - Dec 2010	333	198	135
Jan - Dec 2011	392	234	158
Jan - Dec 2012	256	155	101
Jan - Dec 2013	298	169	129
Jan - Dec 2014	217	121	96
Jan - Dec 2015	255	137	118
Jan - Dec 2016	327	190	137

TABLE 7: SUMMARY OF AIDS DEATH BY PARISH IN JAMAICA, 1982 – DEC 2016 (BY DATE OF REPORTING)

Parish	Jan- Dec 2016	1982 - Dec 2016 Cumulative Total
Kingston & St Andrew	139	3661
St Thomas	1	120
Portland	12	214
St Mary	14	371
St Ann	25	438
Trelawny	7	303
St James	18	1613
Hanover	13	304
Westmoreland	16	666
St Elizabeth	13	281
Manchester	25	334
Clarendon	9	277
St Catherine	35	1220
Parish Unknown		12
Overseas address		7
Total	318	9821

TABLE 8: SUMMARY OF PAEDIATRIC AIDS CASES (AGE 0 - 9 YEARS), 1986 – 2016

Year	Male (%)	Female (%)	Total
1986- Dec 2016	500	440	940
Jan - Dec 2000	49	34	83
Jan - Dec 2001	37	26	63
Jan - Dec 2002	37	44	81
Jan - Dec 2003	36	30	66
Jan - Dec 2004	27	30	57
Jan - Dec 2005	37	29	66
Jan - Dec 2006	36	36	72
Jan - Dec 2007	13	11	24
Jan - Dec 2008	13	11	24
Jan - Dec 2009	13	8	21
Jan - Dec 2010	7	8	15
Jan - Dec 2011	11	3	14
Jan - Dec 2012	7	5	12
Jan - Dec 2013		4	4
Jan - Dec 2014	4	2	6
Jan - Dec 2015	1	1	2
Jan - Dec 2016	1		1

TABLE 9: SUMMARY OF PAEDIATRIC AIDS CASES BY PARISH IN JAMAICA (BY DATE OF REPORTING), 1986 – 2016

PARISH	Cumulative Total	RATE PER 100,000 POPULATION Cumulative Total
Kingston & St Andrew	384	289.2655
St Thomas	25	118.957
Portland	16	89.65595
St Mary	29	115.9073
St Ann	35	94.10879
Trelawny	16	97.91922
St James	123	313.6635
Hanover	17	113.9563
Westmoreland	38	121.1194
St Elizabeth	22	70.99293
Manchester	37	93.41783
Clarendon	52	92.63878
St Catherine	143	135.8115
Parish Unknown	2	n/a
Overseas address	1	n/a
Total	940	165.5833

TABLE 10: SUMMARY OF PAEDIATRIC AIDS DEATHS, 1986 -2016

Year	Total	Male (%)	Female (%)
1986 to Dec 2016	425	219	206
Jan - Dec 2000	34	20	14
Jan - Dec 2001	27	14	13
Jan - Dec 2002	45	22	23
Jan - Dec 2003	28	17	11
Jan - Dec 2004	32	16	16
Jan - Dec 2005	16	11	5
Jan - Dec 2006	12	10	2
Jan - Dec 2007	8	4	4
Jan - Dec 2008	8	3	5
Jan - Dec 2009	4	3	1
Jan - Dec 2010	7	6	1
Jan - Dec 2011	1	1	
Jan - Dec 2012	6	4	2
Jan - Dec 2013	2		2
Jan - Dec 2014	3	2	1
Jan - Dec 2015	1		1
Jan - Dec 2016	1		1

TABLE 11: SUMMARY OF AIDS CASES BY 5-YEAR AGE GROUPS, 1986 – DEC. 2016, JAMAICA

Age Group	Male	Female	Total
00 to 4	367	311	678
05 to 9	94	96	190
10 to 14	45	58	103
15 to 19	74	205	279
20 to 24	475	731	1206
25 to 29	1173	1261	2434
30 to 34	1619	1422	3041
35 to 39	1851	1314	3165
40 to 44	1662	1027	2689
45 to 49	1310	710	2020
50 to 54	1029	477	1506
55 to 59	686	361	1047
60 to 64	397	233	630
65 to 69	205	127	332
70 to 74	94	71	165
75 to 79	44	32	76
80 to 84	10	17	27
85 to 89	3	4	7
90 to 94		3	3
Unknown	132	76	208
Total	11270	8536	19806

TABLE 12: ADULT HIV CASES BY SEXUAL PRACTICES (1982 – DEC 2016 CUMULATIVE)

Sex Practice Category	Male	Female	Unknown	Total
Bisexual Males	735			735
Heterosexual	8595	16059		24654
Homosexual	726			726
Not Stated	7615		29	7644
Total	17671	16059	29	33759

Child	831	762	23	1616
Total	18502	16821	52	35375

TABLE 13: REPORTED RISK BEHAVIOURS AMONG ADULTS WITH HIV (1982 – DEC 2016 CUMULATIVE)

Risk	No. of persons (%)
Crack, Cocaine User	1,396
History of STI	11691
IV Drug Use	206
Multiple Sexual Partners/ contacts	5500
No high risk behaviour	4939
Sex With Sex workers	4497

TABLE 14: HIV STATUS OF PREGNANT WOMEN BY PARISH 2016*, JAMAICA

PARISH	Total Tested	Total Positive	% Positive	(95% CI) Exact
Kingston & St Andrew	1547	12	0.78	0.40 – 1.35
St Catherine	1161	8	0.69	0.30 – 1.35
St Ann	569	5	0.88	0.29 – 2.04
Clarendon	781	6	0.77	0.28 – 1.66
St James	464	4	0.86	0.24 – 2.19
Westmoreland	695	4	0.58	0.16 – 1.47
TOTAL	5217	39	0.75	0.53 – 1.02

*Survey conducted between September 2016 and May 2017

TABLE 15: HIV STATUS OF STI CLINIC ATTENDEES BY PARISH 2016*, JAMAICA

PARISH	Total Tested	Total Positive	% Positive	(95% CI) Exact
Kingston & St Andrew	1291	63	4.88	3.77 – 6.20
St Catherine	332	9	2.71	1.25 – 5.08
St Ann	617	7	1.13	0.46 – 2.32
Clarendon	245	2	0.82	0.10 – 2.92
St James	283	10	3.53	1.93 – 6.38
Westmoreland	38	1	2.63	0.07 - 13.81
TOTAL	2806	92	3.28	2.65 – 4.01

*Survey conducted between September 2016 and May 2017