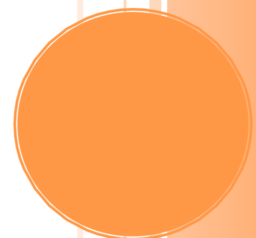
HIV and AIDS in Northern Inter-Tribal Health Authority

Summary report 2005 - 2015

Human immunodeficiency virus (HIV) is transmitted primarily high risk sexual behaviour, contaminated blood and body fluids, sharing needles/syringes, and from mother to child during pregnancy, birth or breastfeeding. There is no cure or vaccine.

Northern Saskatchewan has been found to have the greatest burden in HIV/AIDS infections in Canada. The rates in the First Nation population remain higher than those of the non-Aboriginal Canadian.

This report shows the HIV/AIDS infections in Northern Inter-Tribal Health Authority (NITHA) from January 1, 2005 to December 31, 2015.



NITHA Public Health Unit

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EXECUTIVE SUMMARY

This report provides an epidemiological review of reported HIV and AIDS surveillance data and patient charts in NITHA from January 1, 2005 to December 31, 2015. A combined review of iPHIS and patient charts shows that there were 104 newly diagnosed HIV/AIDS cases in NITHA from 2005 to 2015.

- The number of newly diagnosed HIV cases has decreased notably since 2013 but increased in 2015. This increase is due in part to significant increase in testing across Partner communities.
- HIV testing performed by Saskatchewan Disease Control Laboratory and Cadham Provincial Laboratory, Winnipeg has increased 51% from 2011 to 2015.
- There was a sharp drop in both male and female newly diagnosed HIV cases in 2013 and 2014. The number of cases began to increase from 2015.
- The incidence rate of HIV in NITHA is higher than provincial and national rates.
- The burden of HIV infection has been highest in the 30-39 age group for males and females.
- Injecting drugs remains the highest self-reported risk for acquiring HIV infection.
- About 35.6% HIV cases were infected with hepatitis C.
- One baby was born infected with HIV since 2005.

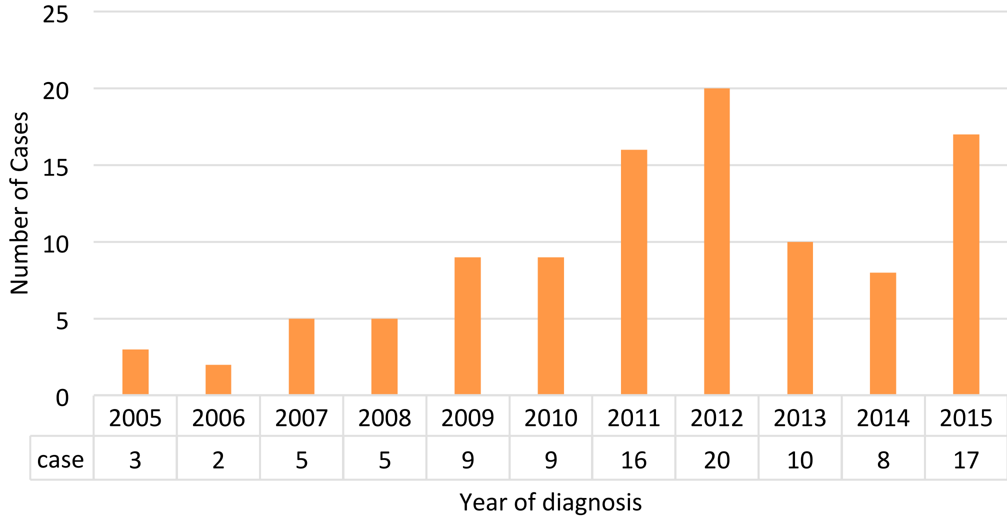
Purpose

This report is prepared for NITHA and Partners for program planning, decision making and evaluation of the impact of public health interventions on the burden of HIV/AIDS.

1. THE PROFILE OF PEOPLE LIVING WITH HIV IN NITHA

From 2005 to 2015, there were 104 newly diagnosed cases of HIV in NITHA. There was a steady increase in the annual number of HIV diagnoses with 3 cases in 2005 to a peak of 20 cases in 2012 (Figure 1). The peak in 2012 related, in part, to enhanced efforts to find new HIV cases that had not been tested before. In 2013, 10 cases were reported in NITHA, a 37.5% decrease compared to 2011 and 50% decrease compared to 2012 (Figure 1). In 2014, 8 new cases were reported in NITHA, a 60% decrease from 2012. In 2015, 17 cases were reported in NITHA, a 113% increase from 2014. The number of newly diagnosed HIV cases decreased notably since 2013, but increased sharply in 2015 (Figure 1).

Figure 1: Number of newly diagnosed HIV cases by year, NITHA, 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
case	3	2	5	5	9	9	16	20	10	8	17

2. CASE DISTRIBUTION BY GENDER

Male cases outnumber female cases from 2007 to 2012, and 2014 to 2015

Over the past decade, male cases (61%) accounted for majority of newly diagnosed HIV cases in NITHA compared to female cases (39%) (Figure 2). However, in 2013, there were more female cases than male's (Figure 3). In 2013 and 2014, the number of newly diagnosed cases has dropped in both genders compared to 2012 (Figure 3).

Figure 2: **Number and percentage of newly diagnosed HIV cases by gender, NITHA, 2005-2015**

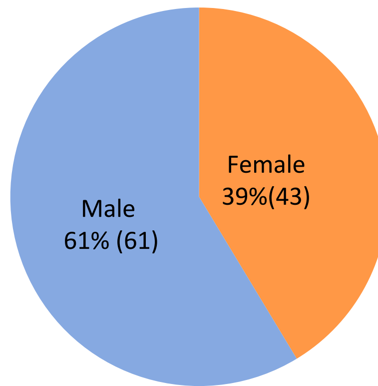
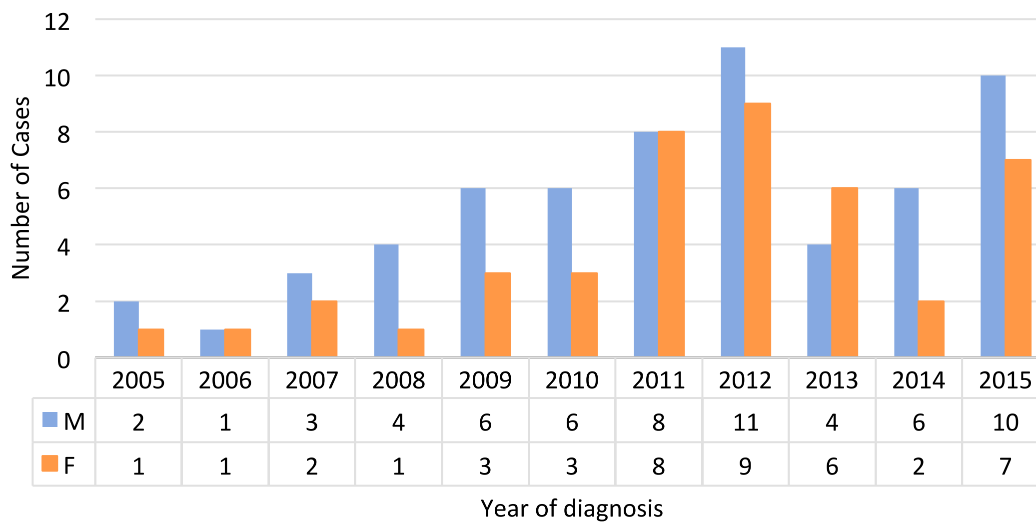


Figure 3: **Number of newly diagnosed HIV cases by year and gender, NITHA, 2005-2015**



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
M	2	1	3	4	6	6	8	11	4	6	10
F	1	1	2	1	3	3	8	9	6	2	7

3. HIV INCIDENCE RATES NITHA, SASKATCHEWAN AND CANADA

The rate of HIV in NITHA is far higher than that in Saskatchewan and Canada.

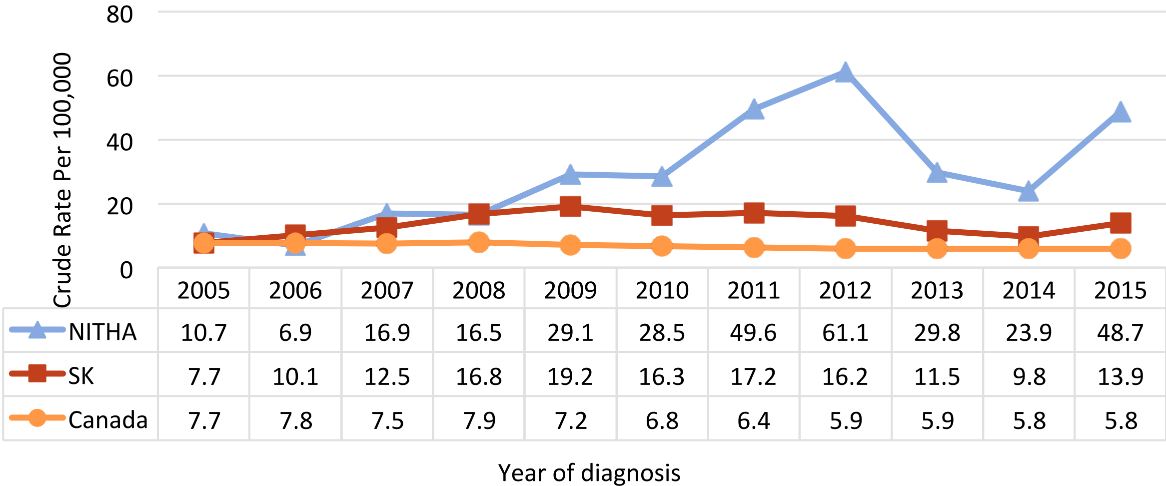
Beginning in 2005, a steady upward trend occurred in the rates of HIV cases reported to NITHA from 10.7 cases per 100,000 population in 2005 to a peak of 61.1 per 100,000 in 2012 (Figure 4). The rate fell dramatically to 23.9 per 100, 000 population in 2014 and it increased to 48.7 per 100,000 population in 2015 (Figure 4).

The Saskatchewan HIV rate showed a different pattern. In Saskatchewan, a steady upward trend occurred from 7.7 cases per 100, 000 population in 2005 to a peak of 19.2 per 100,000 population in 2009. The rate stabilized somewhat in the following three years. In 2014, the rate fell dramatically to 9.8 per 100, 000 population (Figure 4).

The national HIV rate remained fairly stable between 2005 and 2009 then slightly decreased to 5.8 per 100,000 population in 2014 and 2015 (Figure 4).

HIV rates in NITHA, is still higher than that in Saskatchewan and Canada. By comparison, the NITHA HIV rates are 3.5 times higher than the provincial rates and 8 times the national rates in 2015 (Figure 4).

Figure 4: HIV rates by year, NITHA, Saskatchewan and Canada, 2005-2015



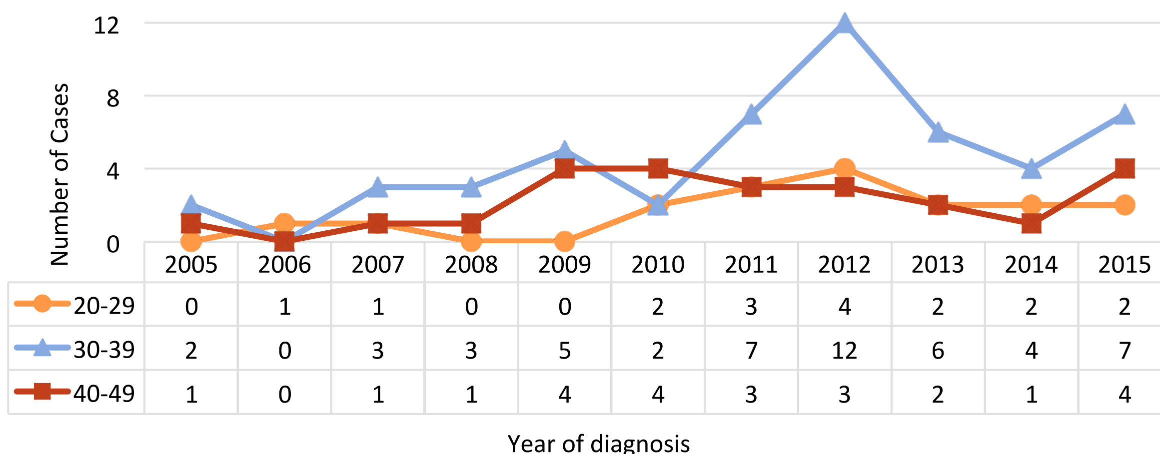
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
NITHA	10.7	6.9	16.9	16.5	29.1	28.5	49.6	61.1	29.8	23.9	48.7
SK	7.7	10.1	12.5	16.8	19.2	16.3	17.2	16.2	11.5	9.8	13.9
Canada	7.7	7.8	7.5	7.9	7.2	6.8	6.4	5.9	5.9	5.8	5.8

4. HIV CASES BY AGE GROUP AND GENDER

The burden of HIV infection has been the highest in the 30-39 age group for males and females in NITHA

From 2005 to 2015, the majority (49%) of newly diagnosed HIV cases was reported in 30-39 age group (51 cases) (Figure 5).

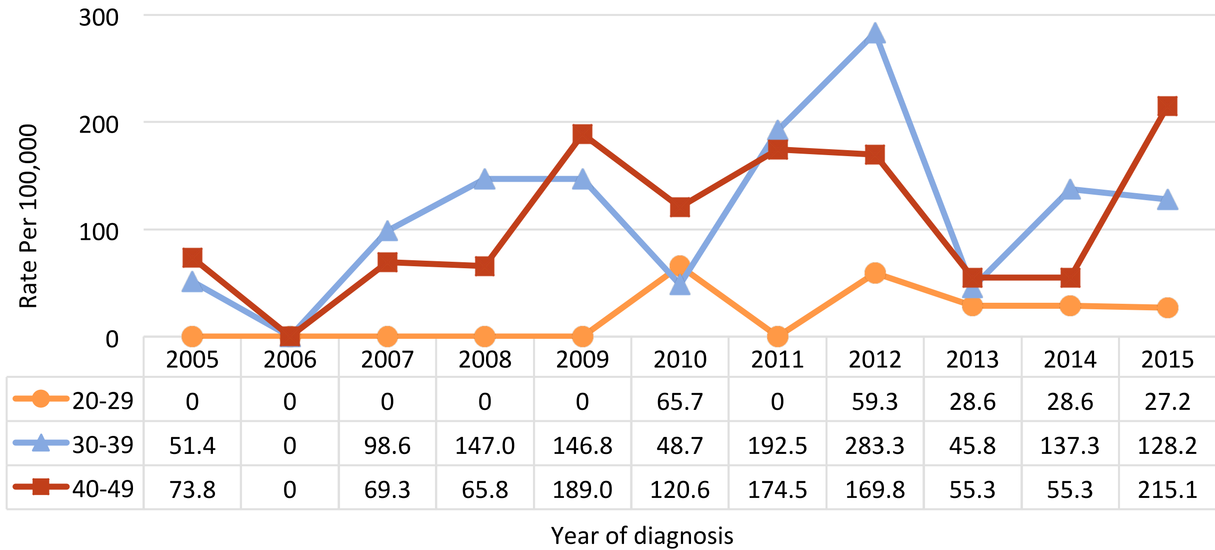
Figure 5: Number of newly diagnosed HIV cases by selected age groups, NITHA, 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
20-29	0	1	1	0	0	2	3	4	2	2	2
30-39	2	0	3	3	5	2	7	12	6	4	7
40-49	1	0	1	1	4	4	3	3	2	1	4

Between 2006 and 2012, the burden of HIV infection among males fluctuated between 30-39 and 40-49 age groups (Figure 6). The HIV rate in males in 30-39 age group steadily declined from 283.3 per 100,000 population in 2012 to 45.8 per 100,000 population in 2013 (Figure 6). In 2015, the highest rate of HIV infection in males was observed in the 40-49 age group (215.1 per 100,000 population) (Figure 6).

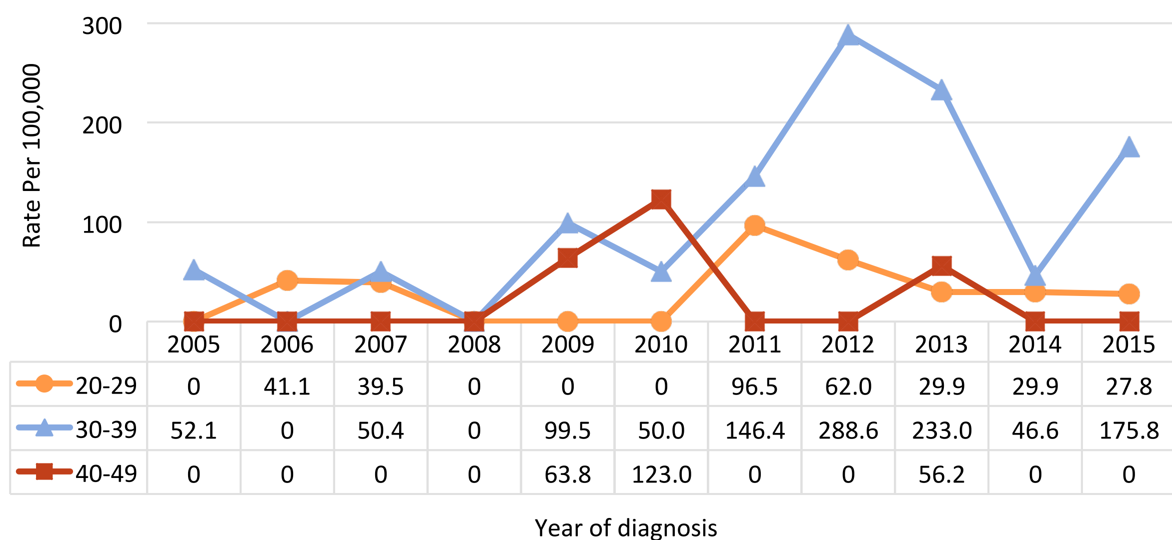
Figure 6: HIV rates among newly diagnosed males by selected age groups, NITHA, 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
20-29	0	0	0	0	0	65.7	0	59.3	28.6	28.6	27.2
30-39	51.4	0	98.6	147.0	146.8	48.7	192.5	283.3	45.8	137.3	128.2
40-49	73.8	0	69.3	65.8	189.0	120.6	174.5	169.8	55.3	55.3	215.1

The burden of HIV infection in females fluctuated between the 30-39 and 40-49 age group from 2005 to 2010 (Figure 7). Similar to the HIV rates in males, the highest female HIV rates was noted in 2012 in the 30-39 age group (288.6 per 100 000 population) (Figure 7). There was a noticeable drop in female HIV rates among all age groups except for the 30-39 age group. This age group had the highest HIV rate since 2011 (Figure 7). In 2015, the highest rate of HIV infection in females was observed in the 30-39 age group (175.8 per 100,000 population) (Figure 7).

Figure 7: HIV rates among newly diagnosed females by selected age groups, NITHA, 2005-2015

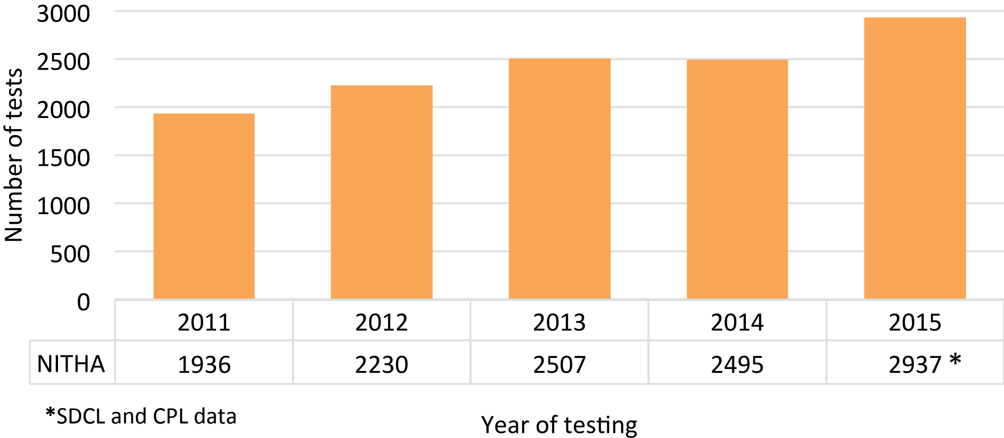


	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
20-29	0	41.1	39.5	0	0	0	96.5	62.0	29.9	29.9	27.8
30-39	52.1	0	50.4	0	99.5	50.0	146.4	288.6	233.0	46.6	175.8
40-49	0	0	0	0	63.8	123.0	0	0	56.2	0	0

5. Laboratory Testing for HIV

The number of HIV test performed by the Saskatchewan Disease Control Laboratory (SDCL) increased steadily each year. In 2015, HIV testing increased by 18% compared to 2014. (Figure 8). In addition to SDCL testing, NITHA also tracks the HIV testing performed at the CADHAM Provincial Laboratory (CPL) in Winnipeg. Overall, the testing performed by SDCL and CPL has increased 51% from 2011 to 2015 (Figure 8).

Figure 8: HIV tests performed at SDCL and CPL, NITHA, 2011-2015



	2011	2012	2013	2014	2015
NITHA	1936	2230	2507	2495	2937 *

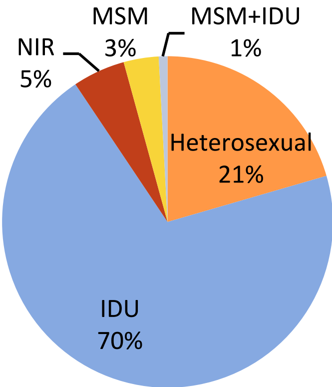
*SDCL and CPL data

6. Risk Factors

Injecting drugs remained the highest self-reported risk for acquiring HIV infection

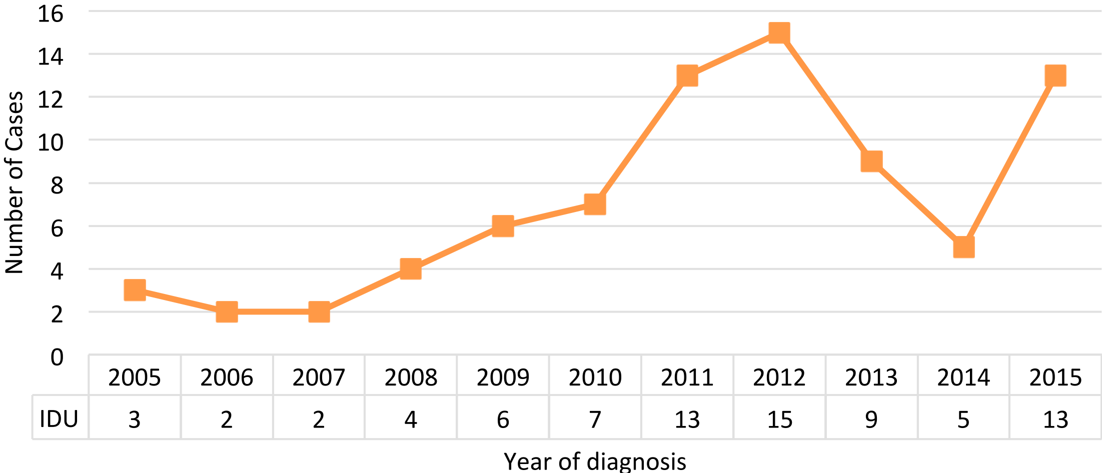
In Saskatchewan, information about risk exposure to HIV infection is self-reported when individuals are tested for HIV. Injection drug use is the most commonly reported risk exposure (70%) (Figure 9). Individuals who reported MSM risk factors comprised 3% of all the cases (Figure 9).

Figure 9: Percentage of newly diagnosed HIV cases by risk factors, NITHA, 2005-2015



Injection drug use is the most commonly reported risk exposure. The number of people who acquired HIV infection through injection drug use in 2005 was 3 cases (Figure 10). The number of newly diagnosed HIV cases attributed to IDU increased from 2 cases in 2007 to 6 cases in 2009 (Figure 10). From 2009 to 2012, the rate of HIV infection by IDU increased by 160% from 6 cases to 15 cases (Figure 10). Following a peak in 2012, which was 15 cases, number of cases attributed to IDU decreased to 5 in 2014. The number cases increased to 13 (77%) in 2015 (Figure 10).

Figure 10: IDU risk factors by year, NITHA, 2005-2015



7. Survival

One baby was born infected with HIV since 2005.

The majority of people diagnosed with HIV in the past decade are still alive. From 2005 to 2015, of the 104 people diagnosed with HIV, 99 (95.2%) are presumed to be alive. Five AIDS-related deaths were reported during the period under review, 3 died the same year they were diagnosed with HIV.

8. People with AIDS defining illness

There were 6 cases having AIDS in NITHA from 2005 to 2015. These were diagnosed in 2011, 2013, and 2014. There were 3 cases reported in 2015. Additional data on the AIDS patients was not available at the time of this report.

9. HIV and Hepatitis C Co-Infection

There were 37 newly diagnosed HIV cases infected with hepatitis C from 2005 to 2015 in NITHA, 14 (38%) were females and 23 (62%) were males (Figure 11).

Most of the co-infection cases were infected through injection drug uses (48.6%). Most cases with HIV and hepatitis C co-infection were in the 30-39 age group (24 cases) (Figure 12). This is not surprising as the burden of HIV infections has been highest in the 30-39 age group in males and females in NITHA.

Figure 11: **HIV and Hepatitis C co-infection cases by gender, NITHA, 2005-2015**

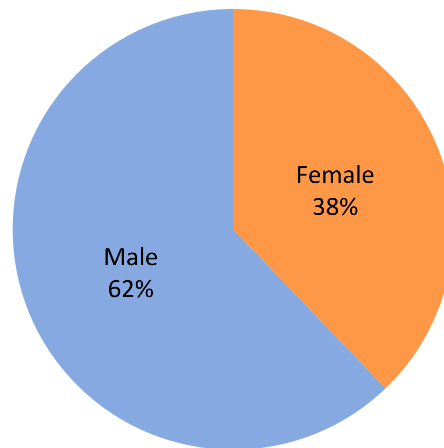
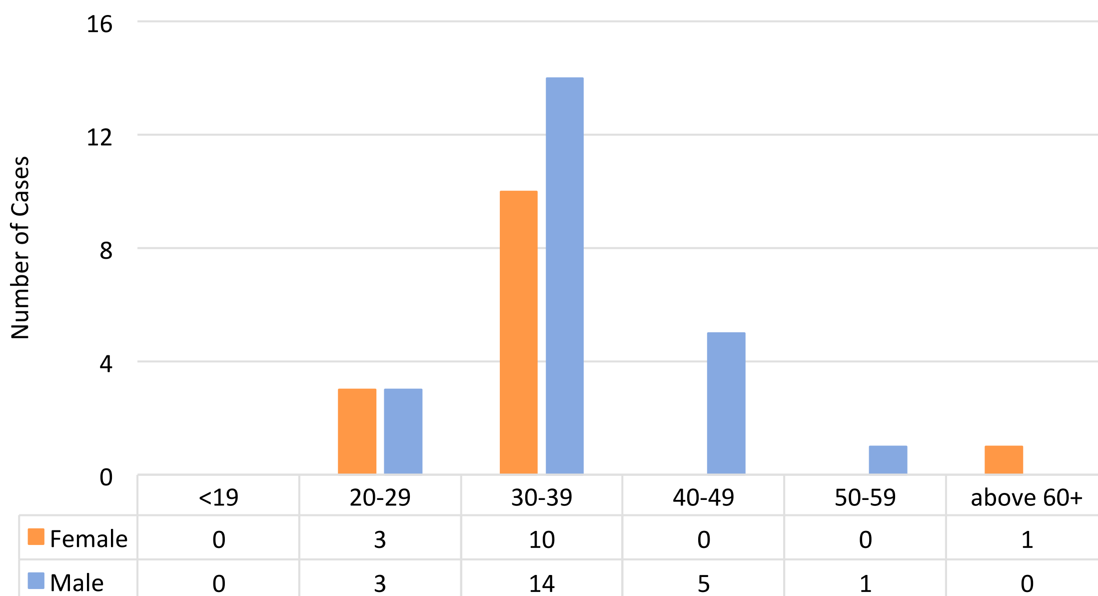


Figure 12: **HIV and Hepatitis C co-infection Cases by gender and age group in NITHA, 2005-2015**



	<19	20-29	30-39	40-49	50-59	above 60+
Female	0	3	10	0	0	1
Male	0	3	14	5	1	0

10. TECHNICAL NOTES AND DATA LIMITATIONS

Delays occur in the reporting of HIV and AIDS data, especially for risk exposure categories. As such, numbers may differ from previous reports or at the time of release of the 2015 report.

Data on this report is based on information extracted from the EpiData database and the patient charts at NITHA. Because some of the patients moved to other health clinics or did not disclose their addresses, their information is not kept in NITHA.

Risk exposure information is self-reported, thus limiting the accuracy and completeness of the data.

All NITHA HIV rates are reported as crude rates. Rates were calculated by dividing the total number of HIV cases by the NITHA partnership population (based on INAC population data), expressed as the number of cases or events per 100,000 population.

List of acronyms:

MSM - Men having sex with men

IDU - Injection Drug Use

NIR - No Identifiable Risks

INAC - Indigenous and Northern Affairs Canada

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