



BC Centre for Disease Control  
An Agency of the Provincial Health Services Authority

# Provincial update on HIV surveillance and testing trends

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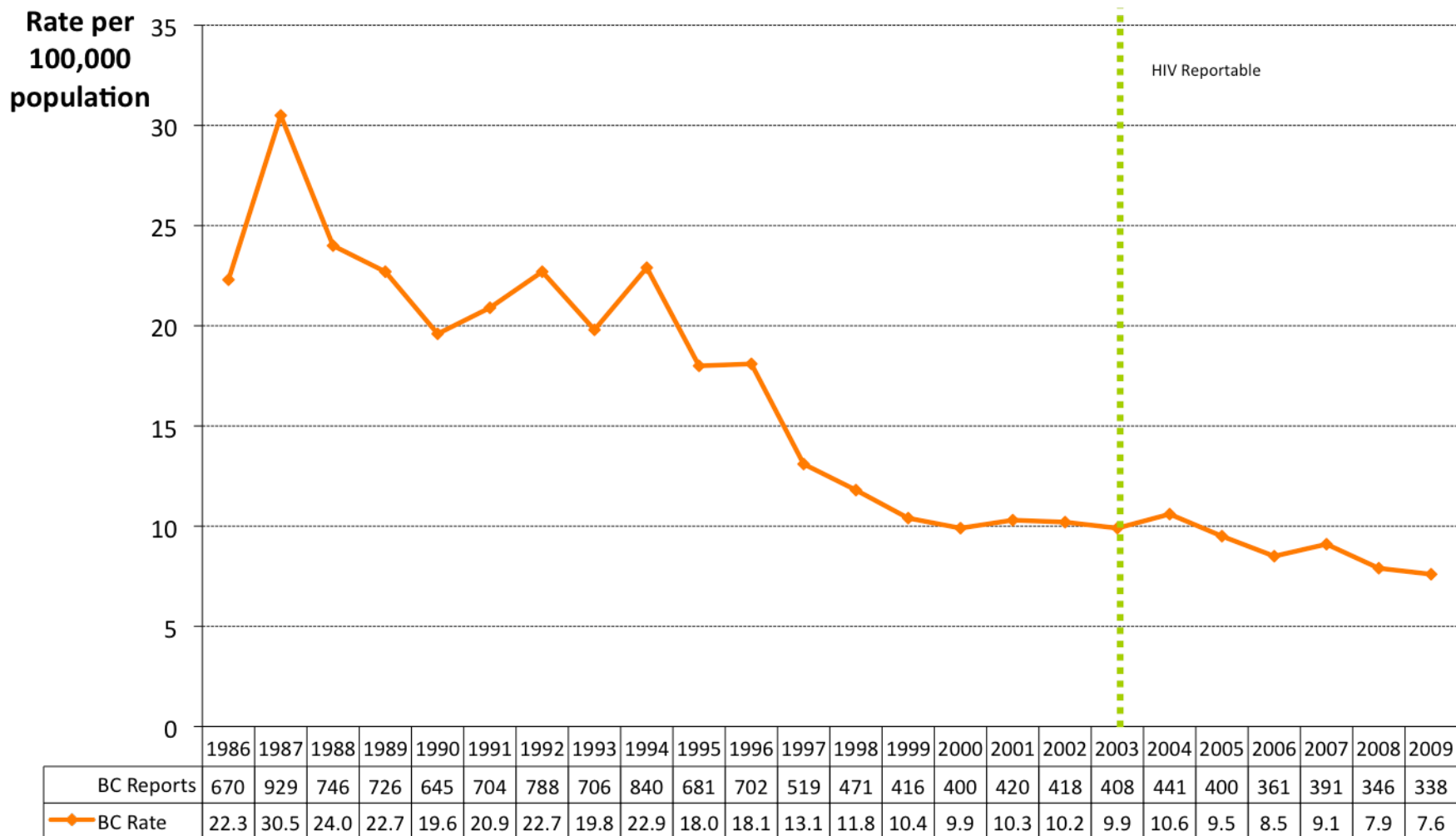
# Objectives

- To review current provincial trends:
  - HIV surveillance data, including:
    - Provincial estimates of HIV incidence, prevalence
    - Stage of infection at diagnosis
  - AIDS surveillance data
  - HIV testing data
- To review work in progress

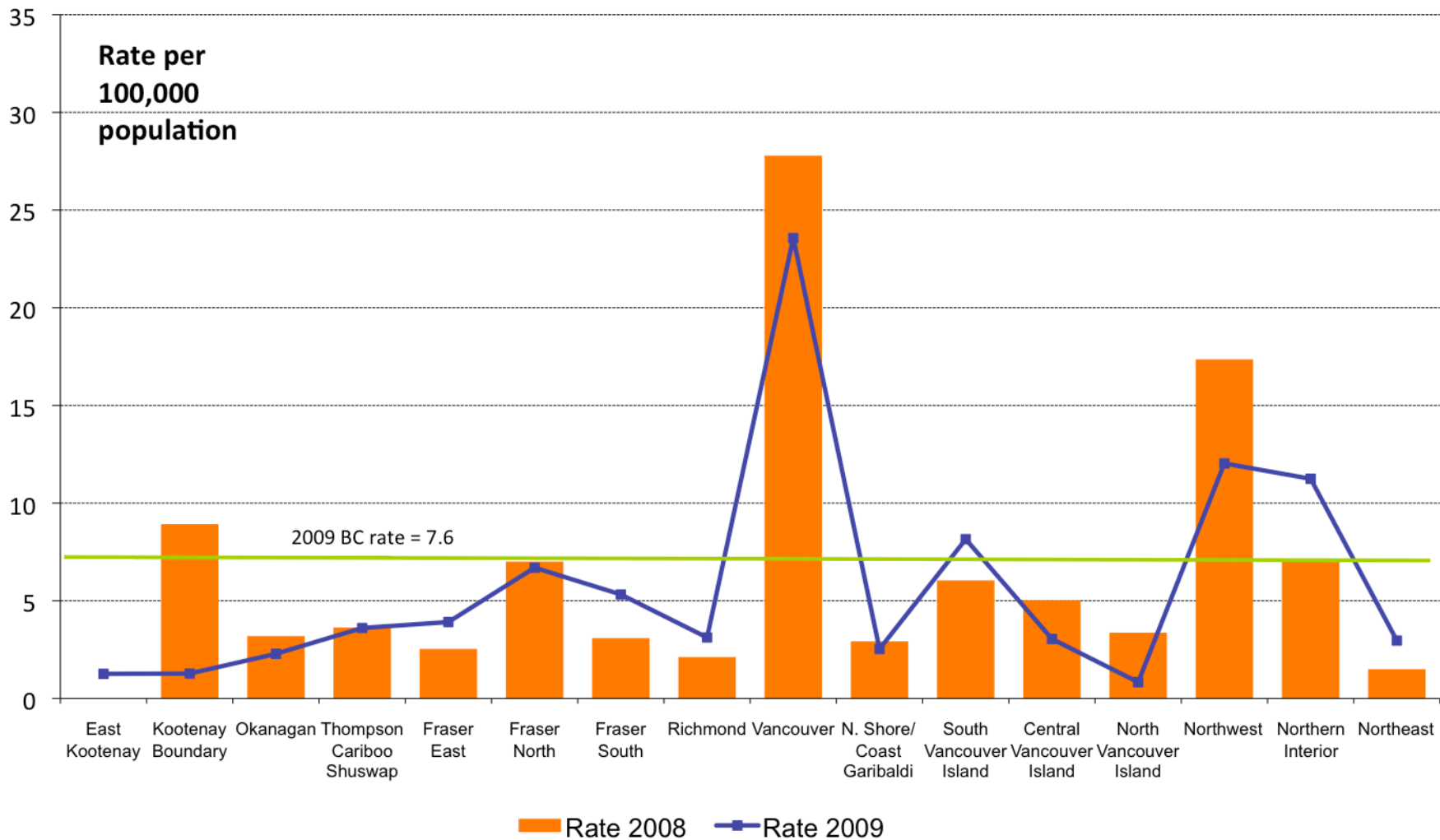
# 1. HIV Surveillance Data

- For individuals with a “new positive HIV test”
  - New *diagnosis* of HIV, does not mean new *infection*
- Provincial HIV/AIDS Surveillance System
- Information comes from demographic information on test requisition, and information collected by Public Health Nurses during follow-up
- Improved data quality after HIV became reportable in 2003 (for ethnicity, exposure category)

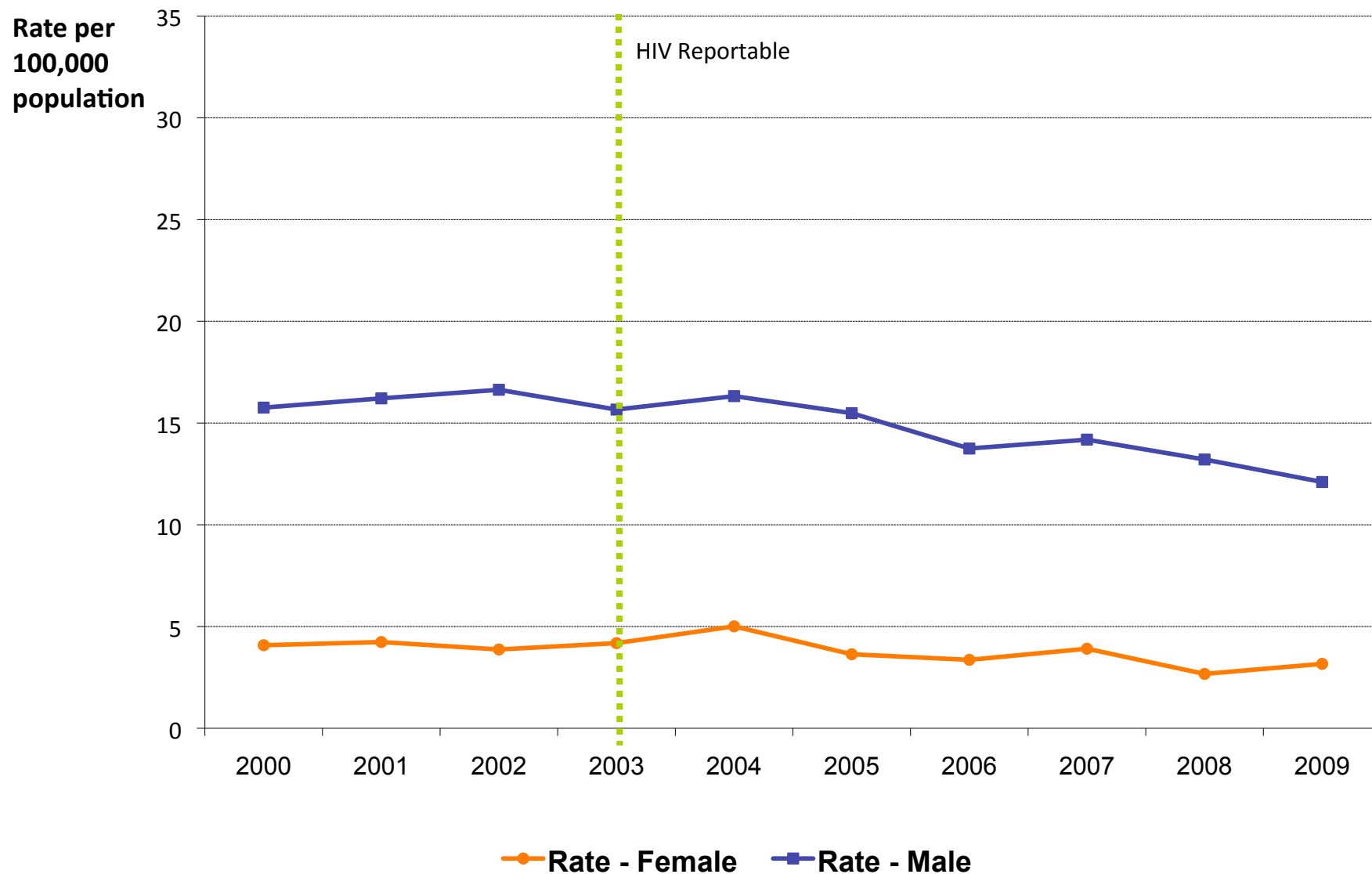
# Persons testing newly positive for HIV, historical trend BC, 1986 to 2009



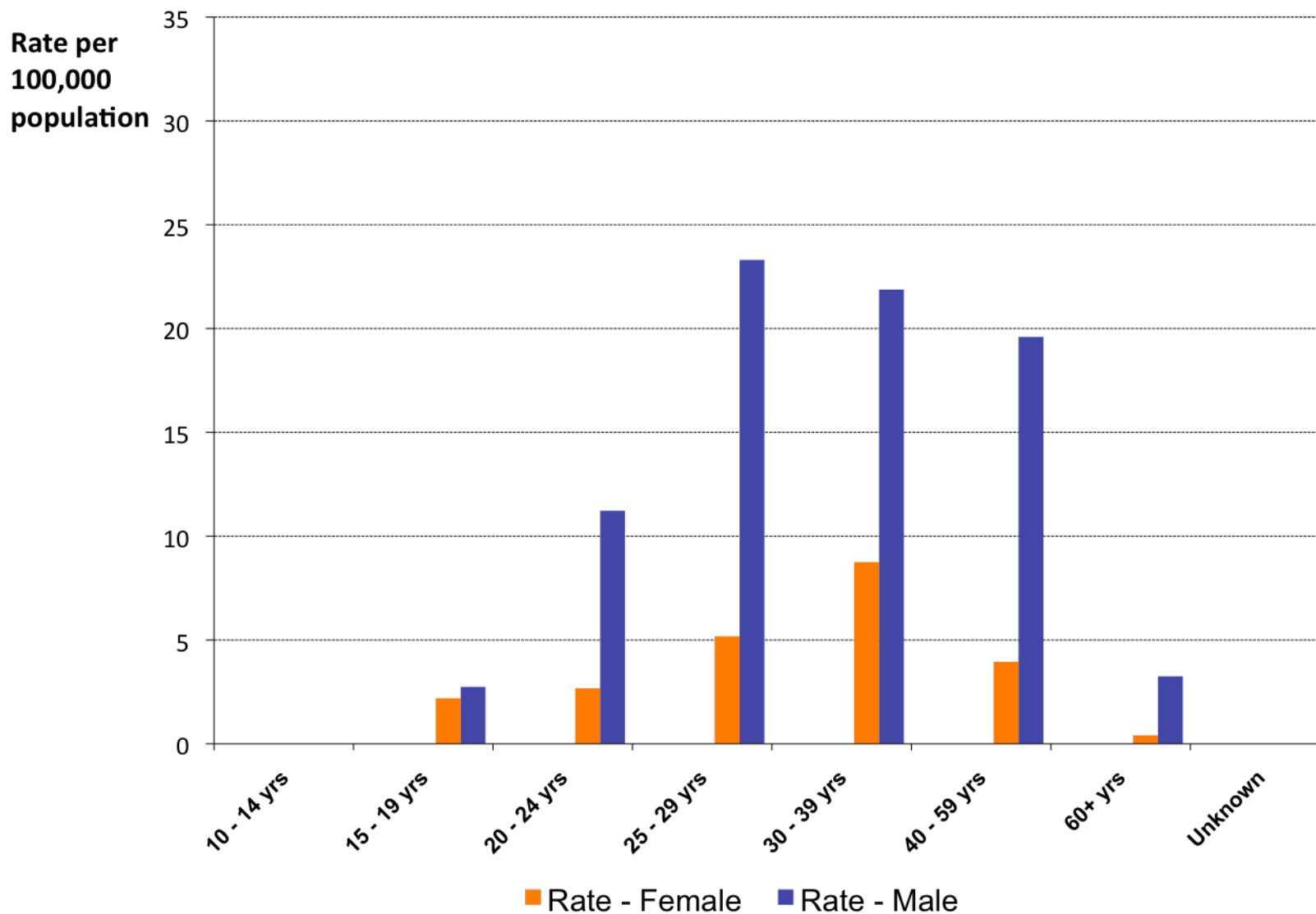
# Persons testing newly positive for HIV by HSDA BC, 2008 & 2009



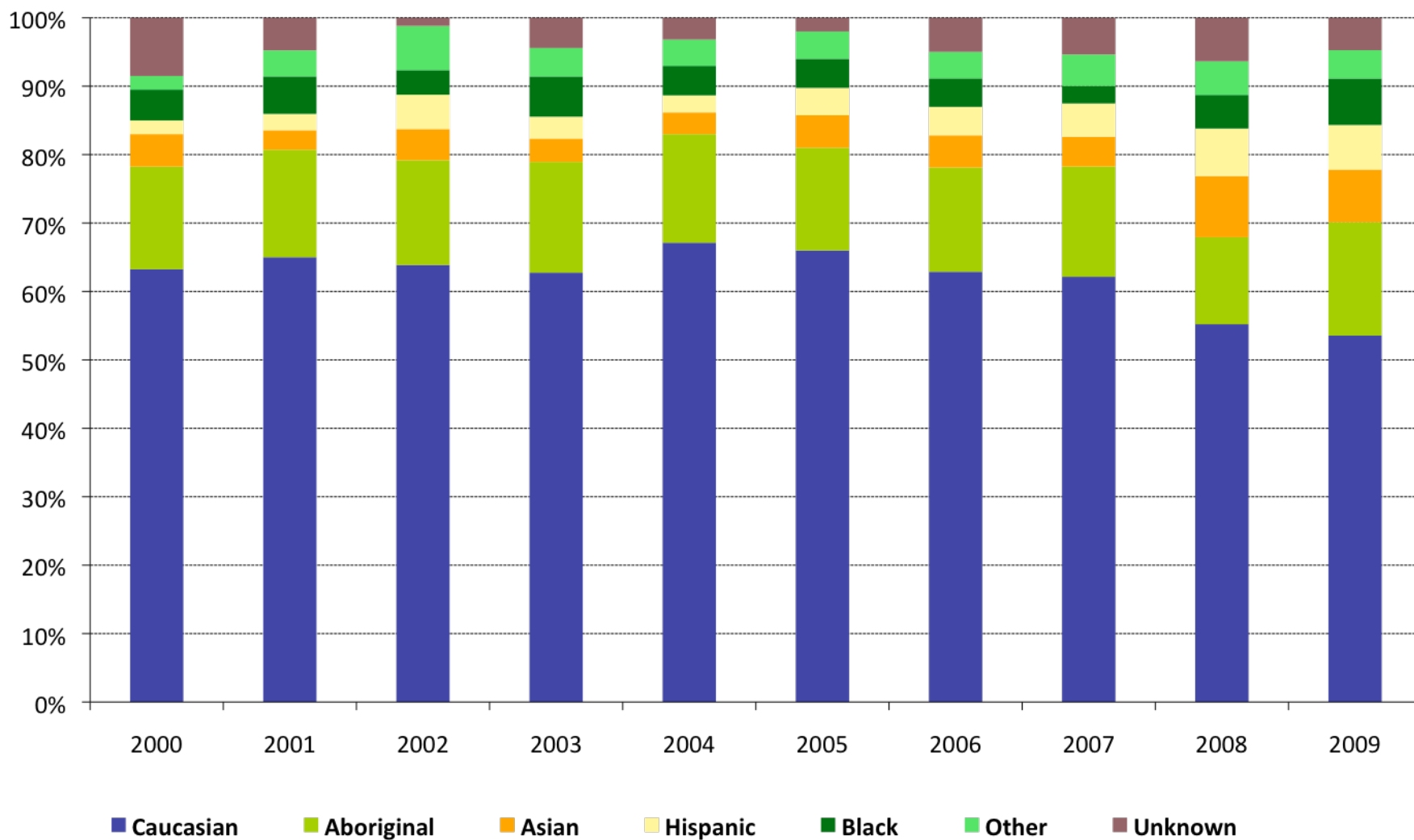
# Persons testing newly positive for HIV by sex BC, 2000 to 2009



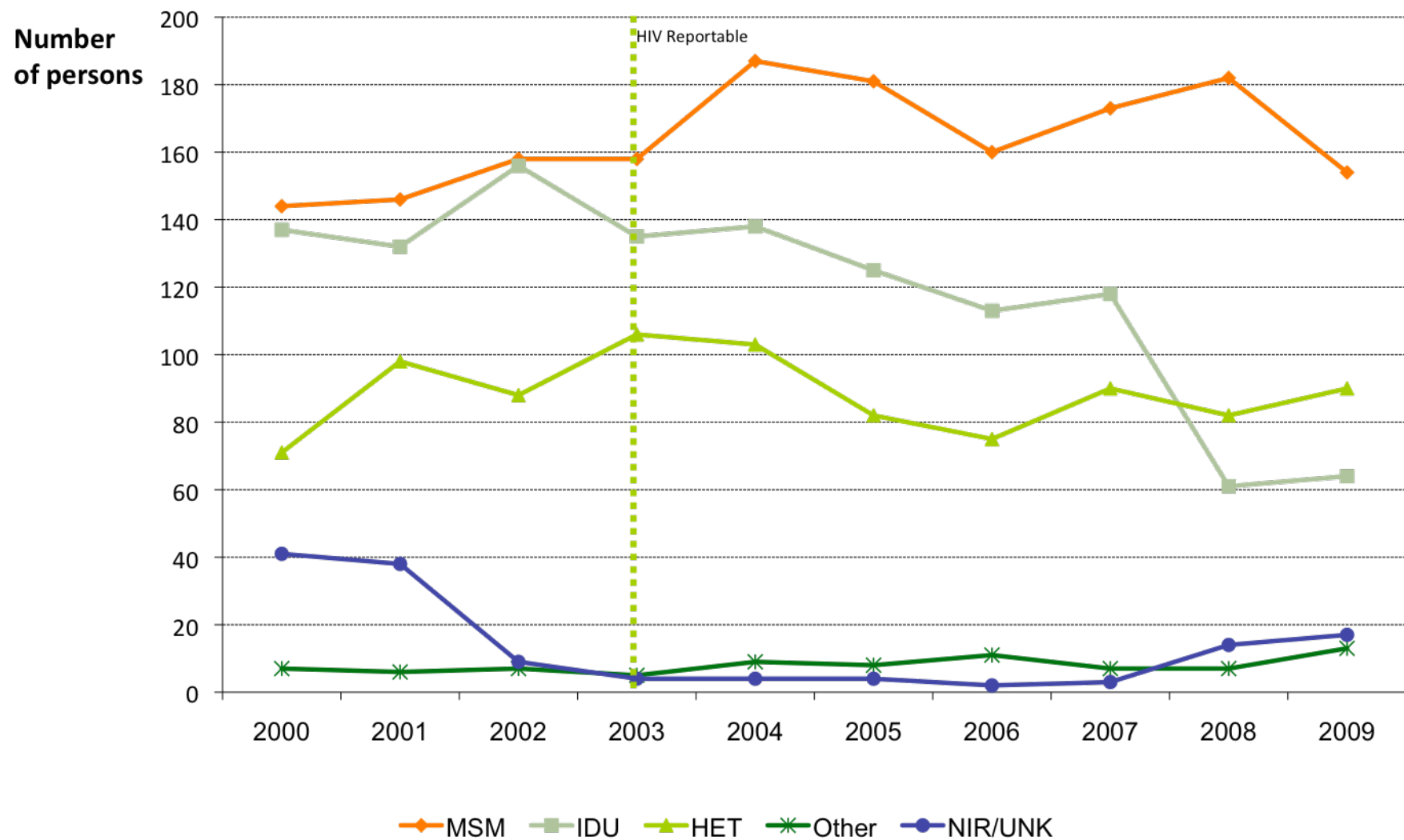
# Persons testing newly positive by age group and sex BC, 2009



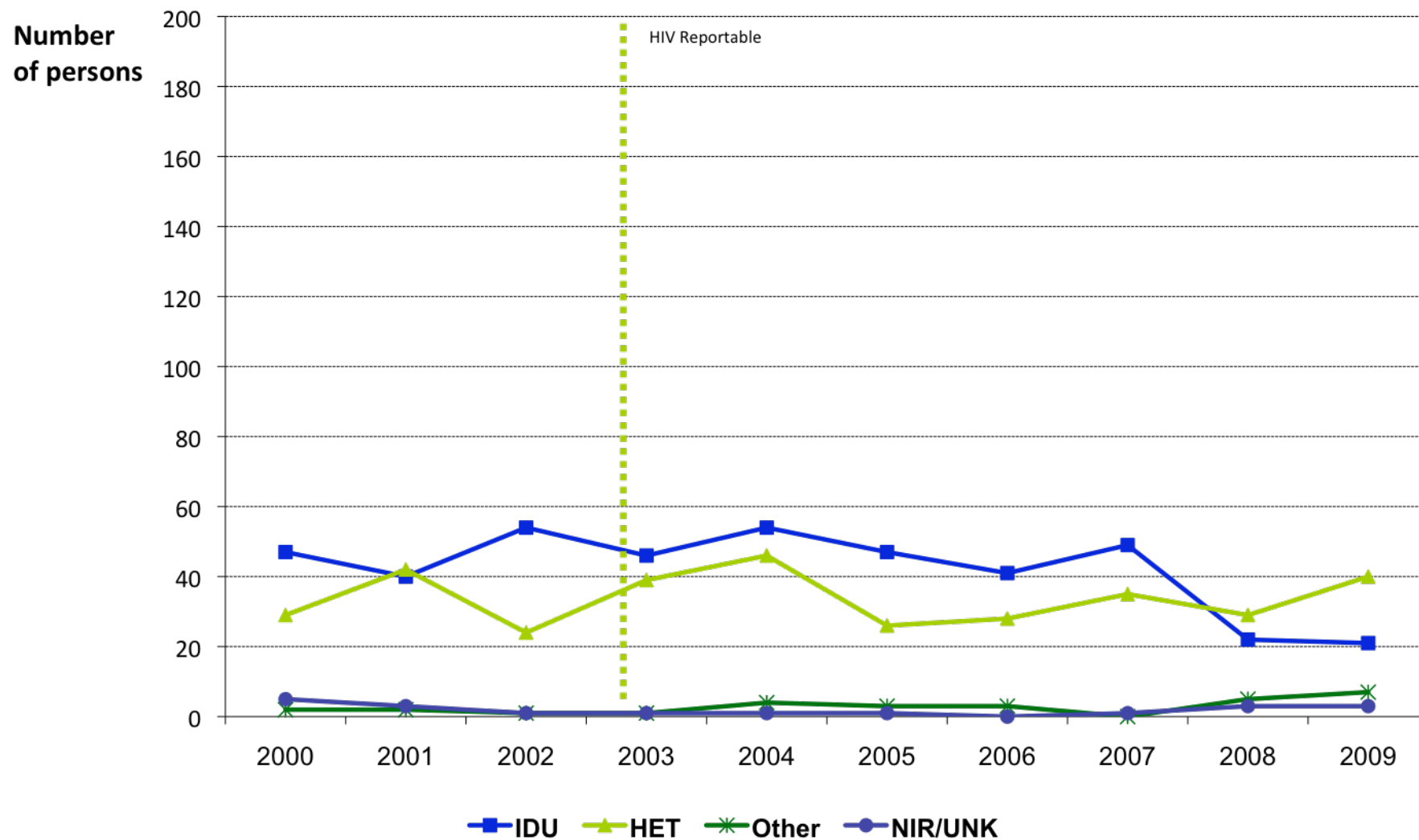
## Persons testing newly positive for HIV by ethnicity BC, 2000 to 2009



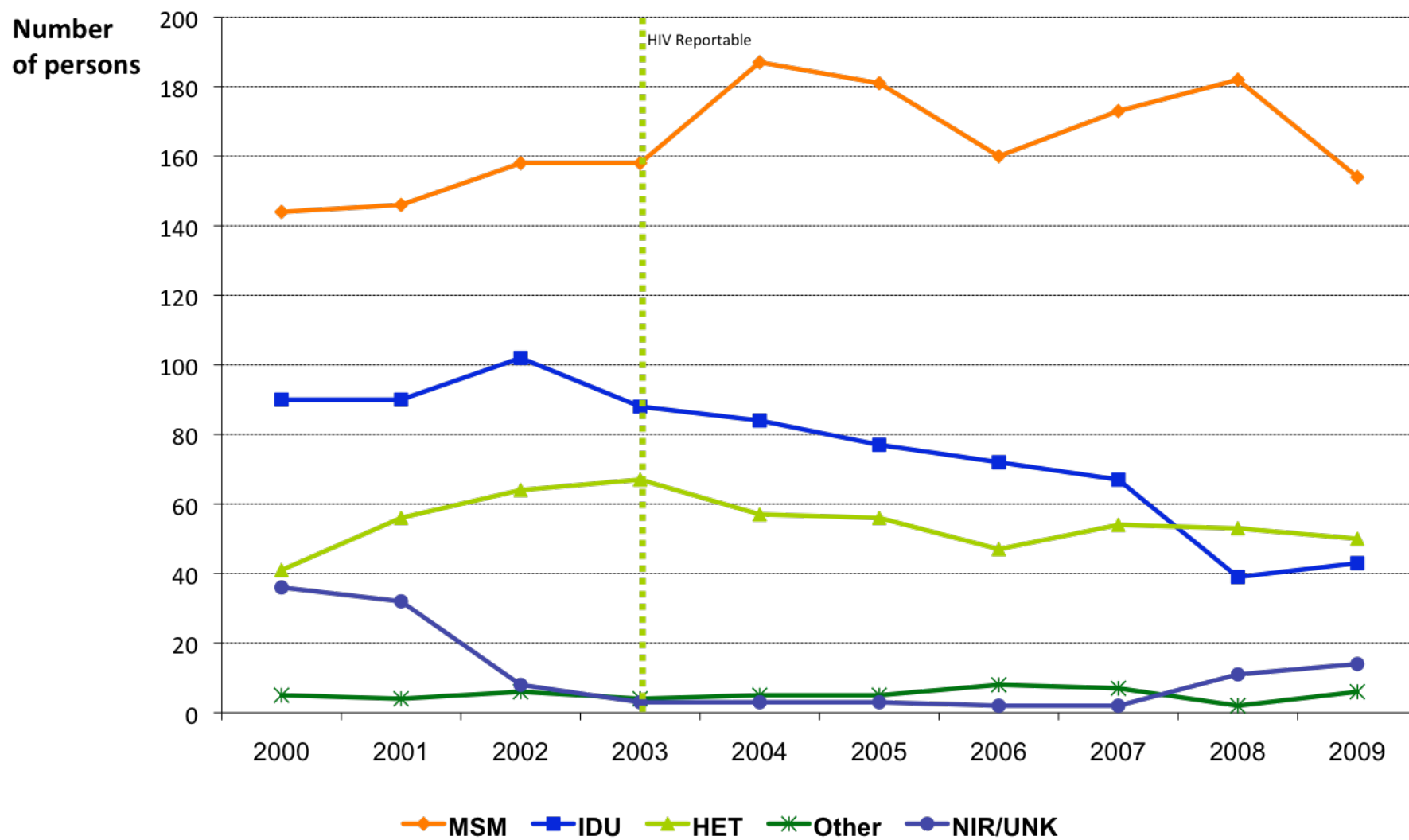
# Persons testing newly positive for HIV by exposure category BC, 2000 to 2009



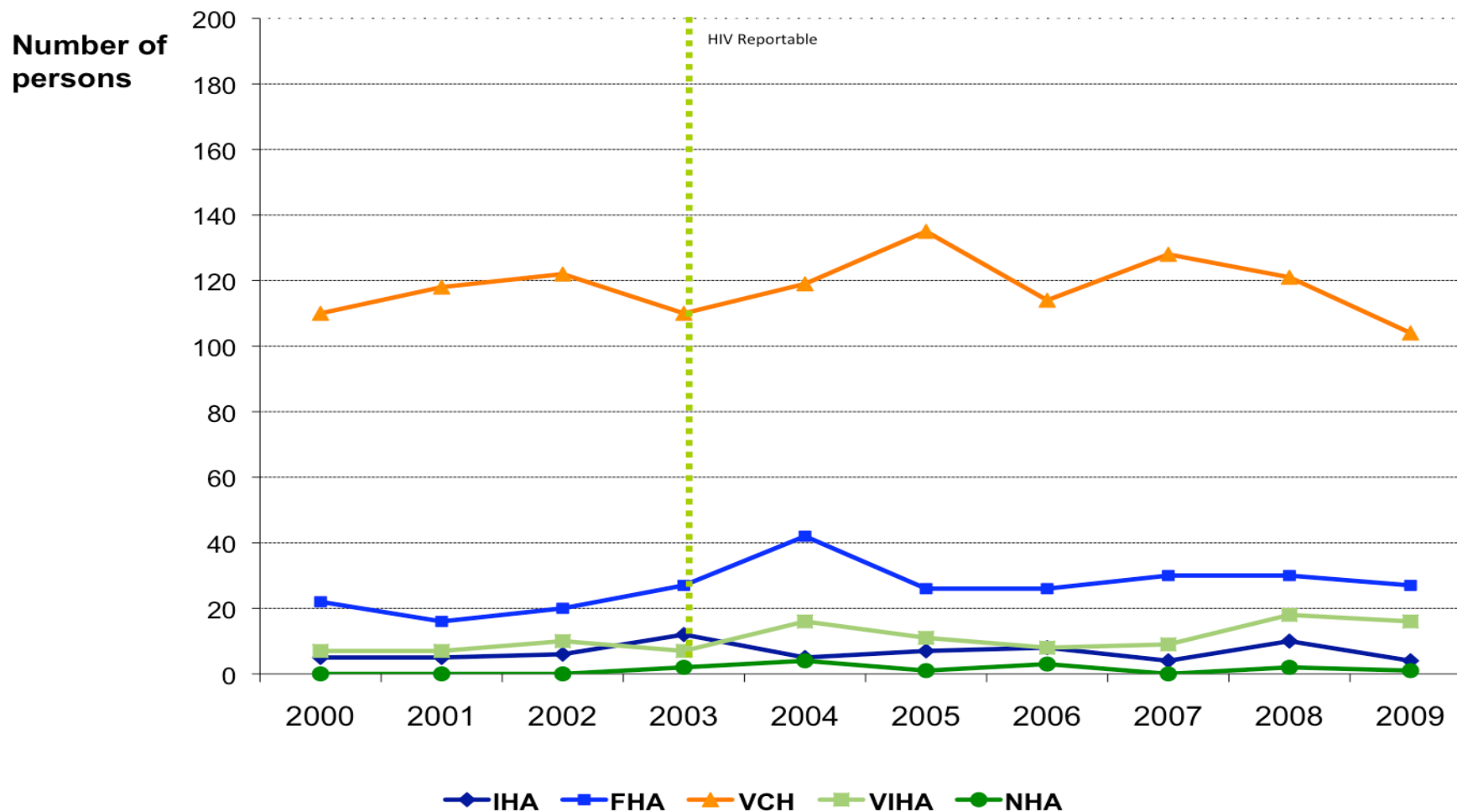
# Females testing newly positive for HIV by exposure category BC, 2000 to 2009



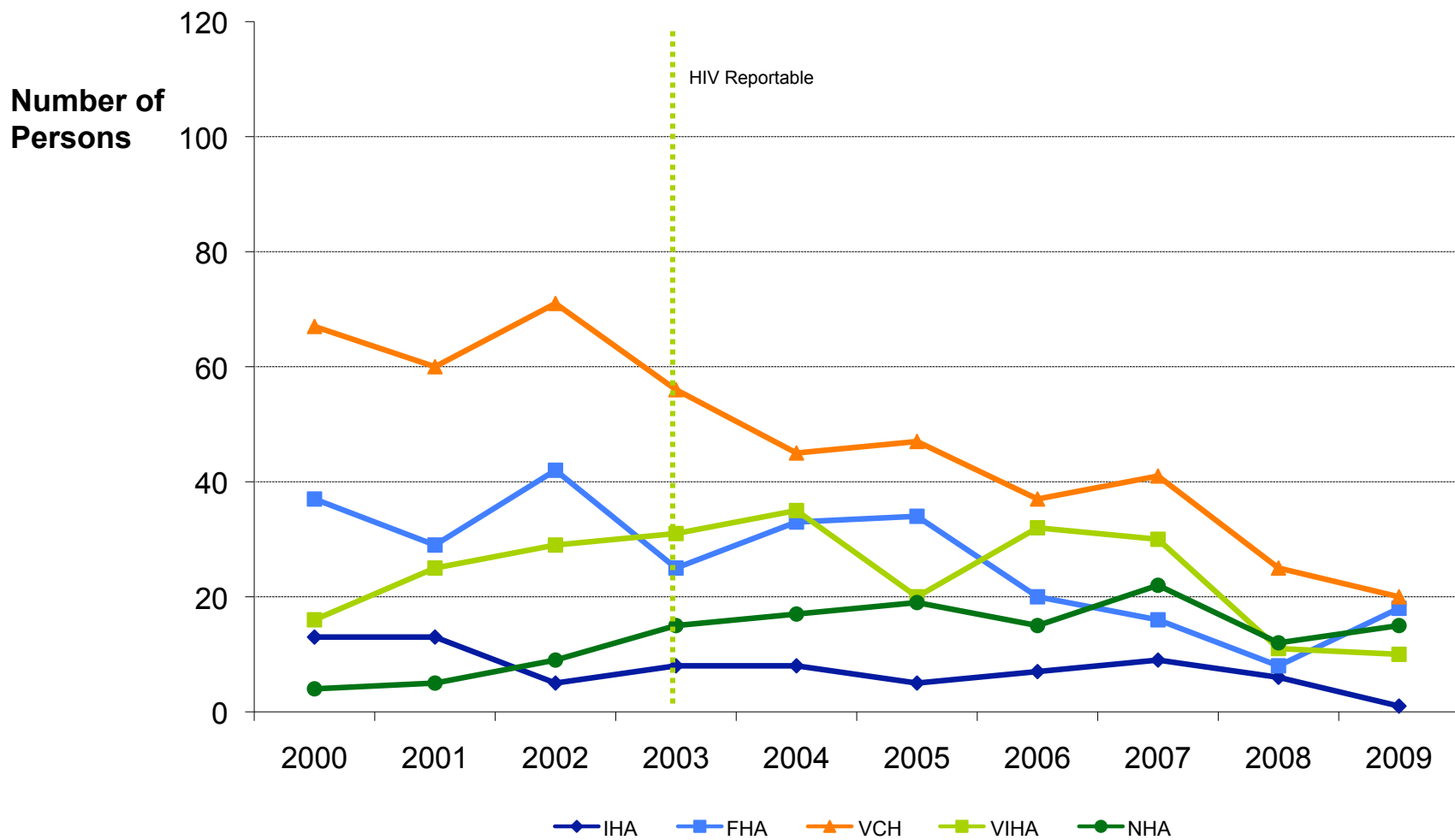
# Males testing newly positive for HIV by exposure category BC, 2000 to 2009



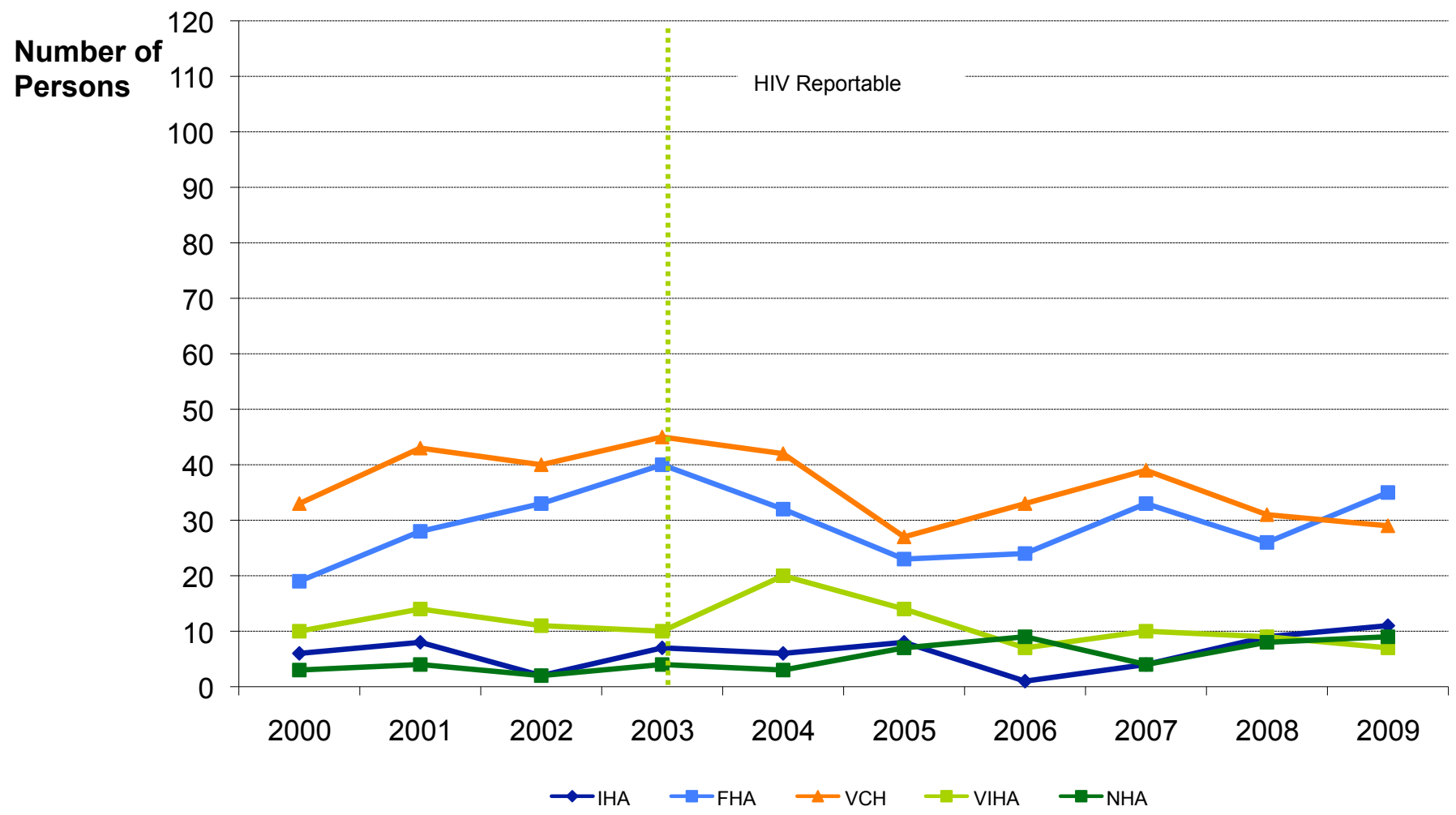
# MSM newly positive for HIV by Health Authority BC, 2000 to 2009



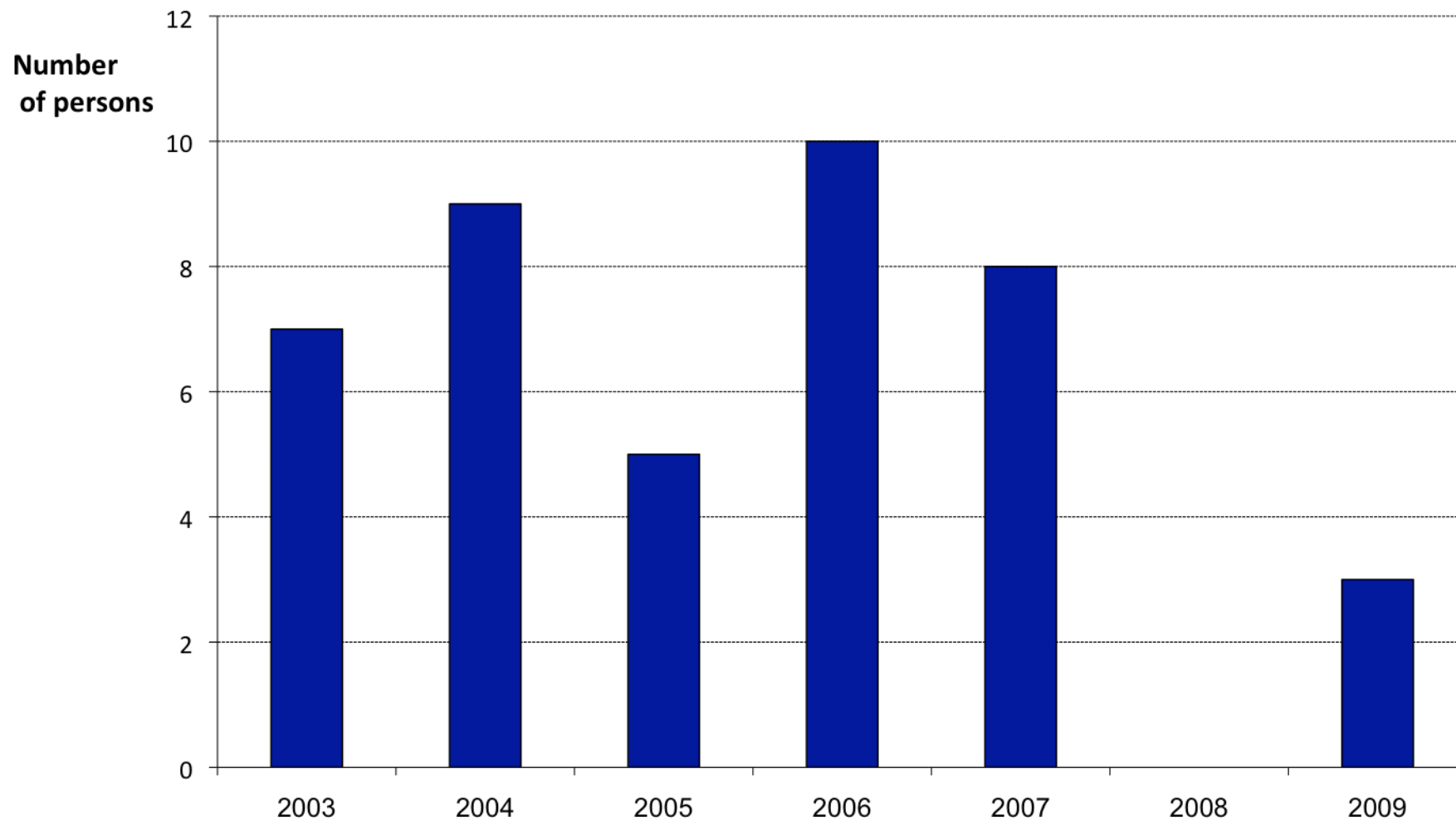
# IDU newly positive HIV by Health Authority BC, 2000 to 2009



# HET newly positive HIV by Health Authority BC, 2000 to 2009



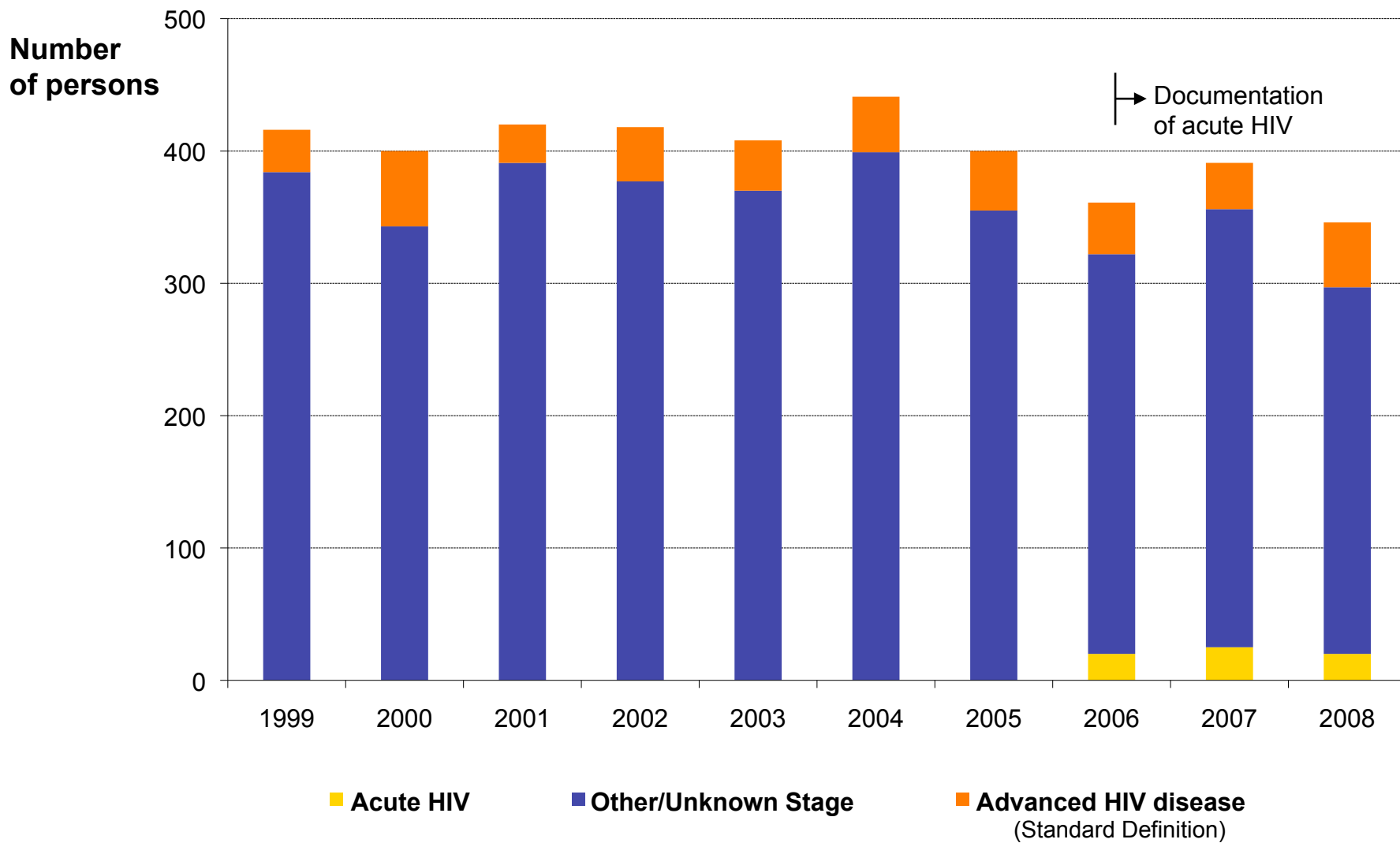
## Women newly diagnosed HIV positive through a prenatal test BC, 2003 to 2009



# Stage of Infection

- Acute HIV infection at diagnosis
  - Up to 6-8 weeks after HIV infection
  - Period of high viral load
  - Identified on the basis of a characteristic pattern of HIV laboratory test results
- Advanced HIV disease at diagnosis
  - Testing when at an advanced phase of HIV disease
  - Based on AIDS case report within one year of diagnosis (standard definition)
  - Plus definition based on  $CD4^+ < 200$  cell/mm<sup>3</sup> at diagnosis (enhanced definition)

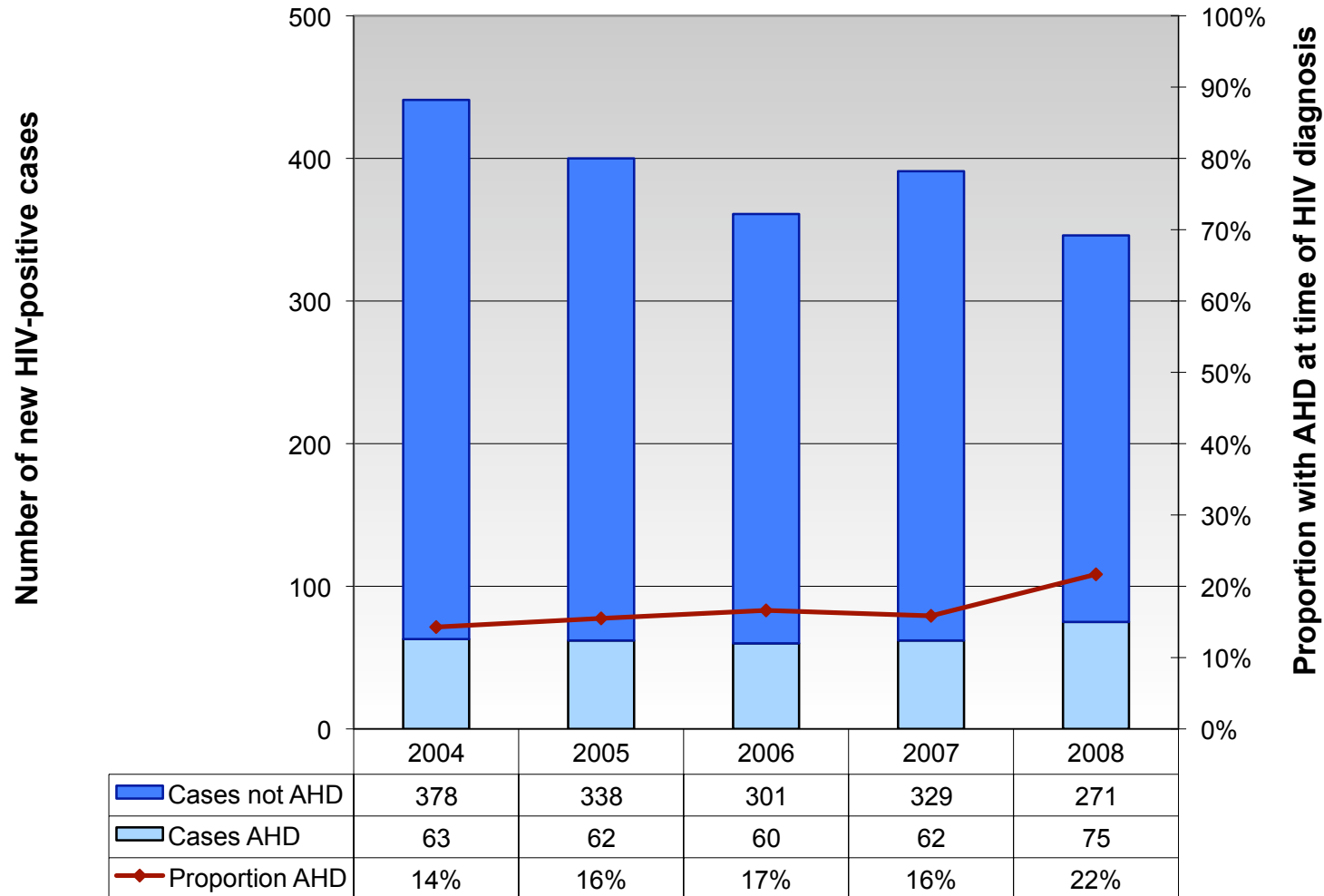
# Persons testing newly positive for HIV by stage of infection BC, 1999 to 2008



# Comparison of acute to other HIV cases BC, Feb 2006-October 2008

- Acute HIV: 6.2%
- Individuals with Acute HIV infection were more likely to be:
  - MSM
  - Have a documented previous negative HIV test
  - To have tested due to seroconversion symptoms

# Persons with Advanced HIV Disease\* at HIV diagnosis, BC, 2004-2008



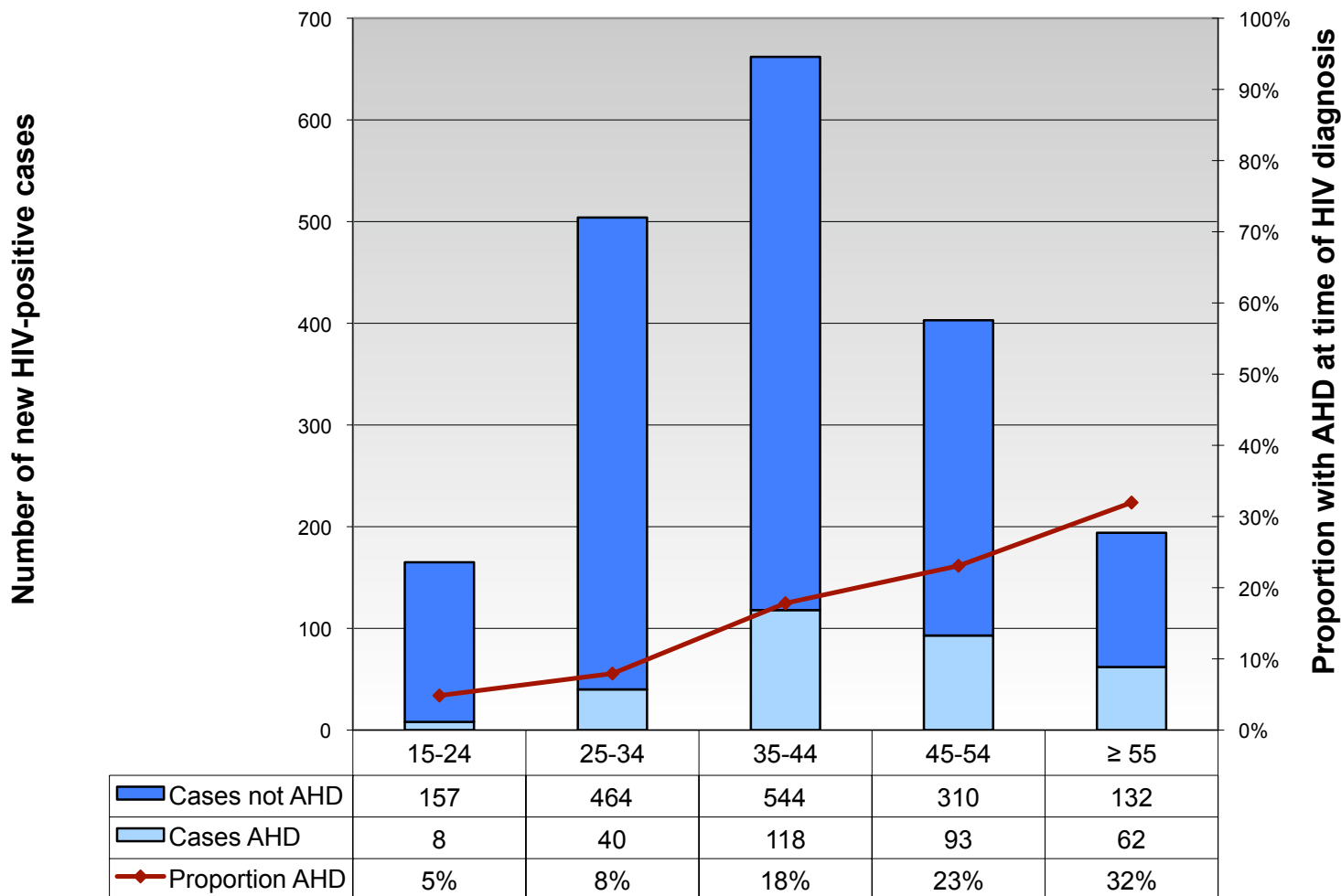
\*AIDS case report within one year of HIV diagnosis and/or CD4+ <200 at HIV diagnosis (enhanced definition)

## Persons with Advanced HIV Disease\* at HIV diagnosis, BC, 2004 - 2008

	AHD cases	Total HIV cases	% AHD
<b>Sex</b>			
Male	277	1537	18%
Female	45	398	11%
<b>Exposure category</b>			
MSM	129	882	15%
IDU	66	552	12%
Het – Known risk	51	252	20%
Het – NIR	52	159	33%
Other	21	64	33%
Unknown/NIR	3	30	10%

\*AIDS case report within one year of HIV diagnosis and/or CD4+ <200 at HIV diagnosis (enhanced definition)

# Persons with Advanced HIV Disease\* at HIV diagnosis by age, BC, 2004 - 2008



\*AIDS case report within one year of HIV diagnosis and/or CD4+ <200 at HIV diagnosis (enhanced definition)

# Provincial estimates HIV incidence

- BC and National estimates produced by Surveillance and Risk Assessment Division, PHAC
- Estimated through multiple methods

Exposure Category	2005 N	2005 %	2008 N	2008 %
MSM	150-260	44%	140-250	47%
MSM-IDU	10-20	3%	10-20	3%
IDU	90-190	30%	70-140	25%
Hetero (non-endemic)	50-130	19%	50-120	21%
Hetero (endemic)	10-30	4%	<20	4%
Other	<10	---	<10	---
All	320-620		280-540	

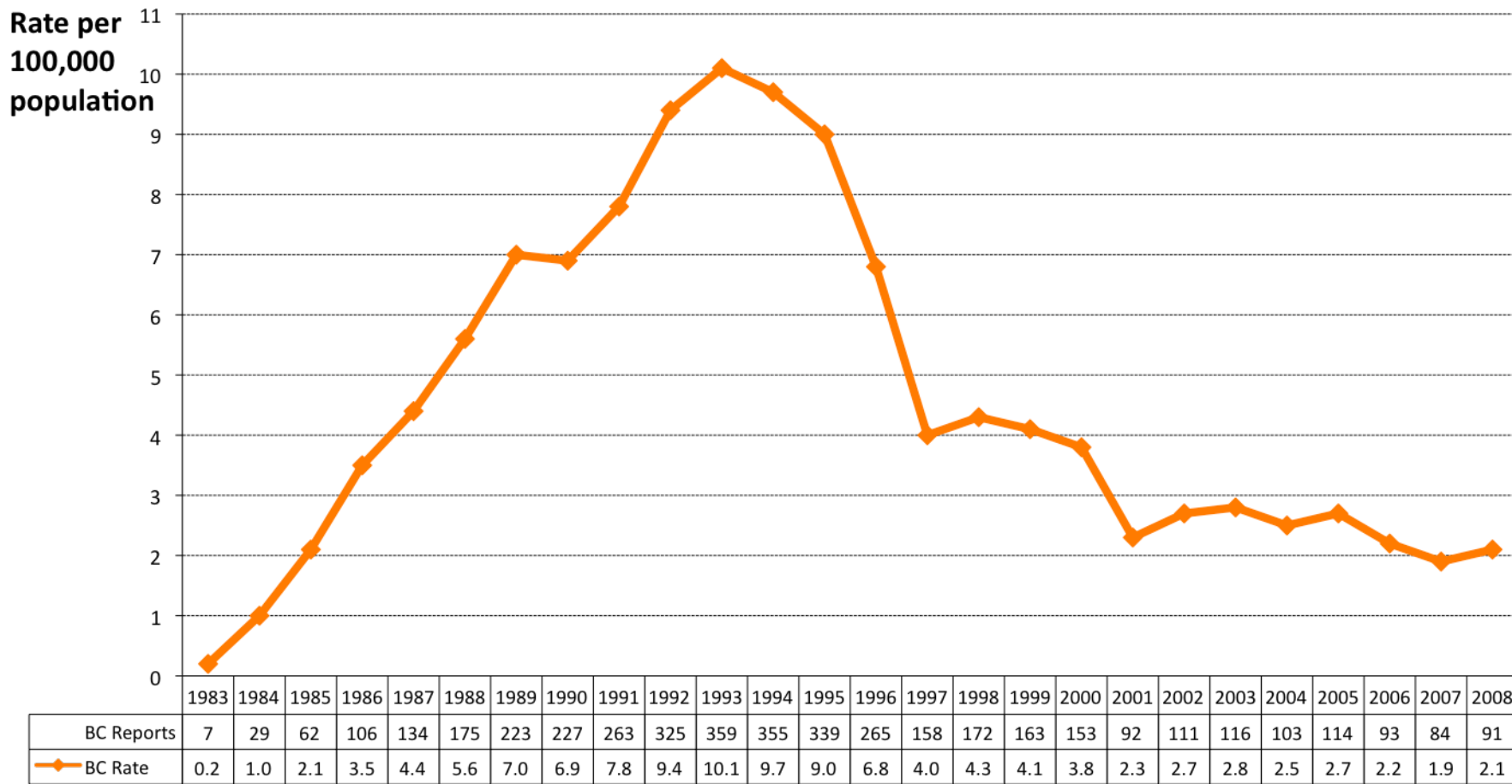
# Provincial estimates HIV prevalence

<b>Exposure Category</b>	<b>2005 N</b>	<b>2005 %</b>	<b>2008 N</b>	<b>2008 %</b>
MSM	4,260	41%	4,770	42%
MSM-IDU	340	3%	360	3%
IDU	3,580	35%	3,760	33%
Hetero (non-endemic)	1,750	17%	2,030	18%
Hetero (endemic)	300	3%	350	3%
Other	120	1%	130	1%
All	10,350		11,400	

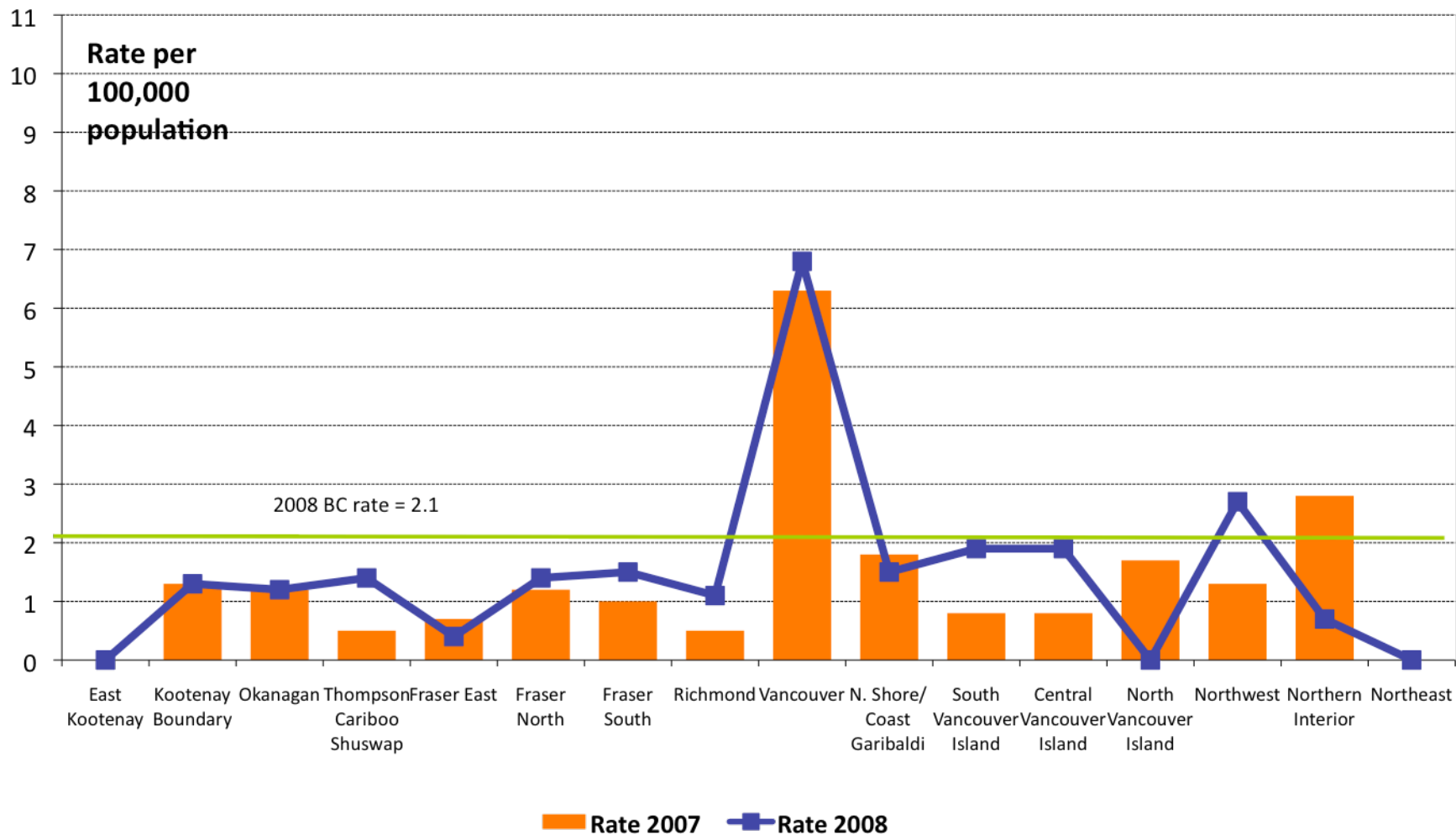
## 2. AIDS Surveillance Data

- Reports of HIV positive individuals who have a first report of an AIDS defining illness
- Provincial HIV/AIDS Surveillance System
- Passive reporting (under-reporting is likely)

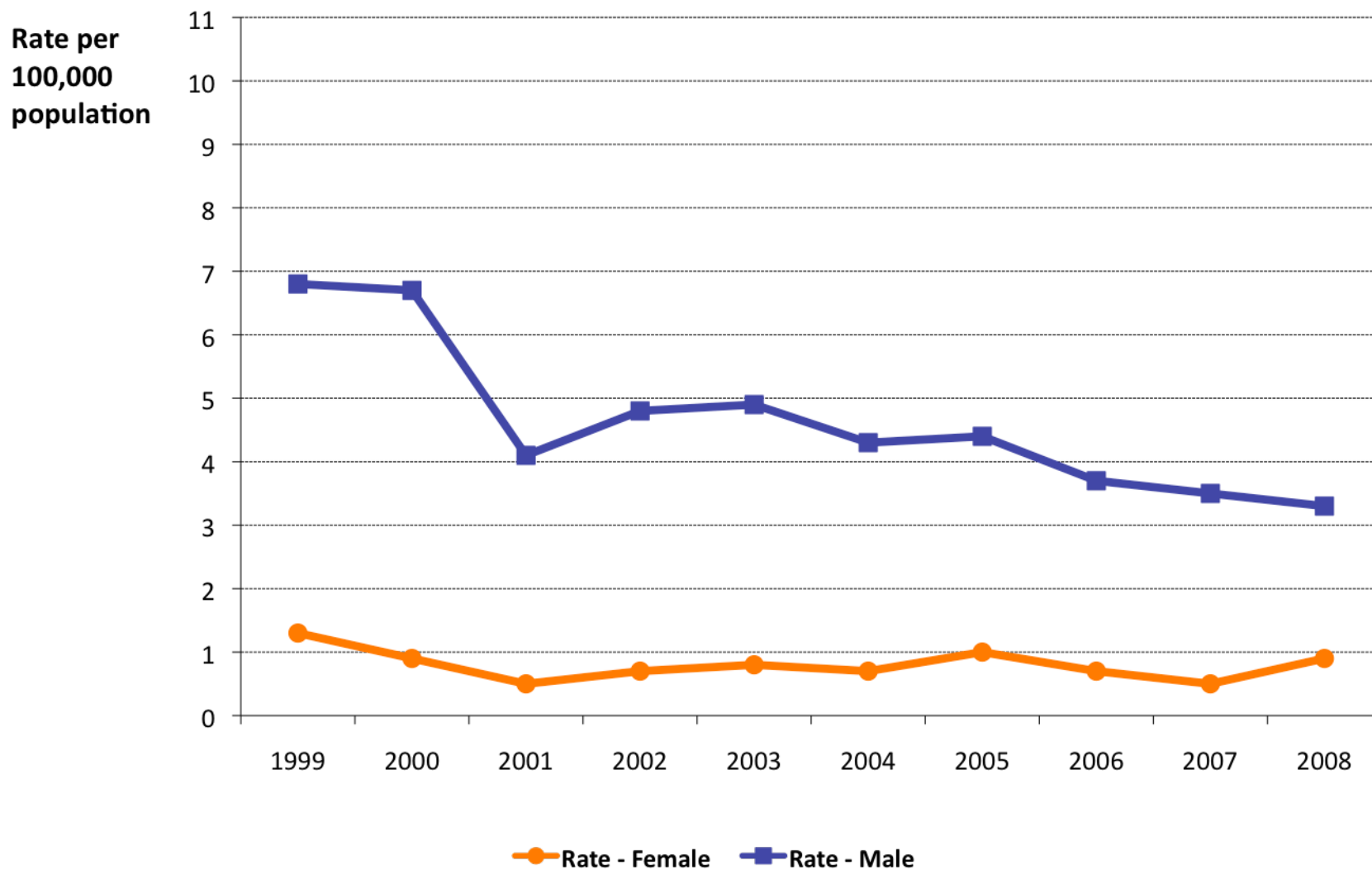
# AIDS case reports and rates in BC by historical trend, 1983 to 2008



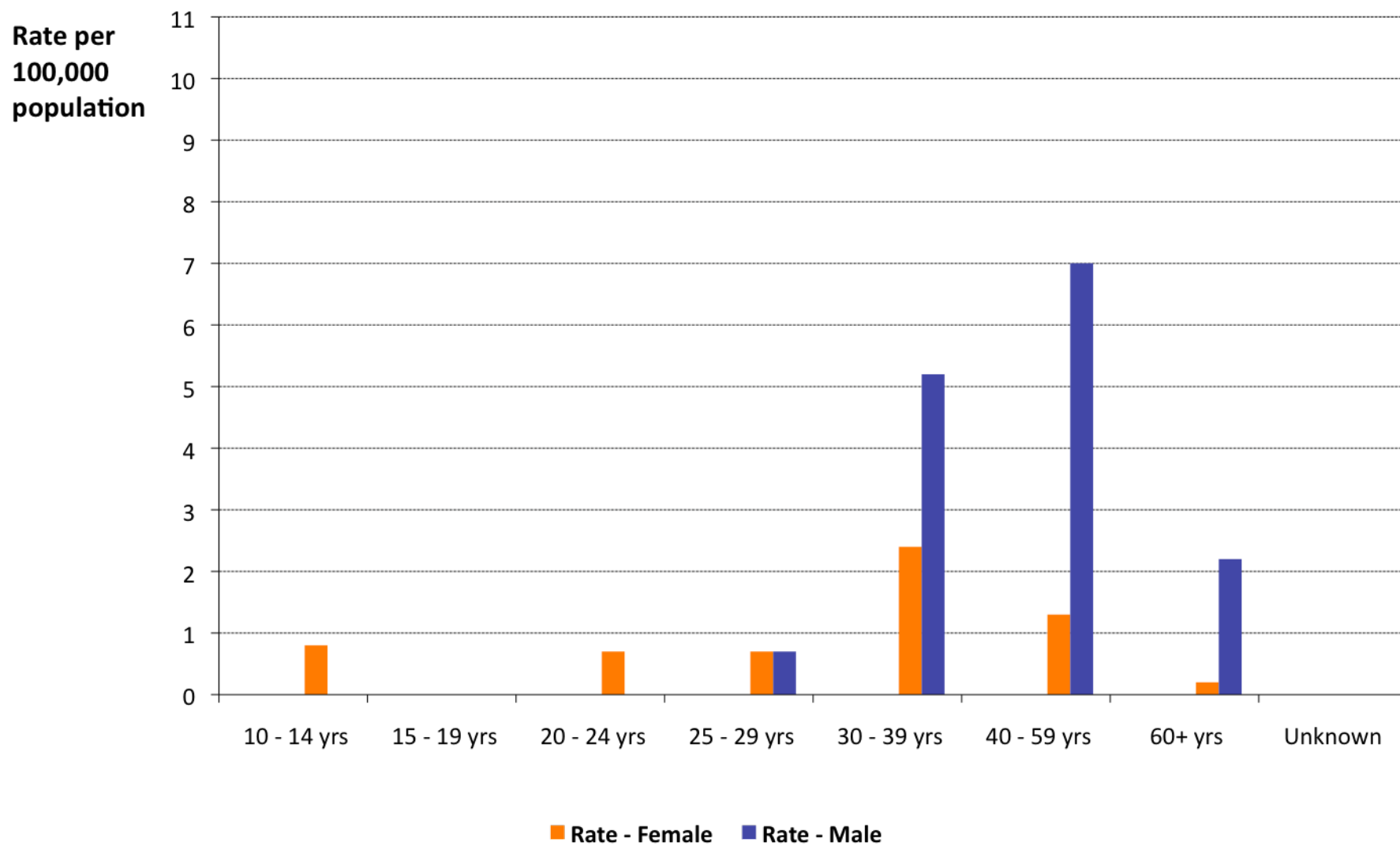
# AIDS case rates by health service delivery area BC 2007 to 2008



# AIDS case rates by sex BC, 1999 to 2008



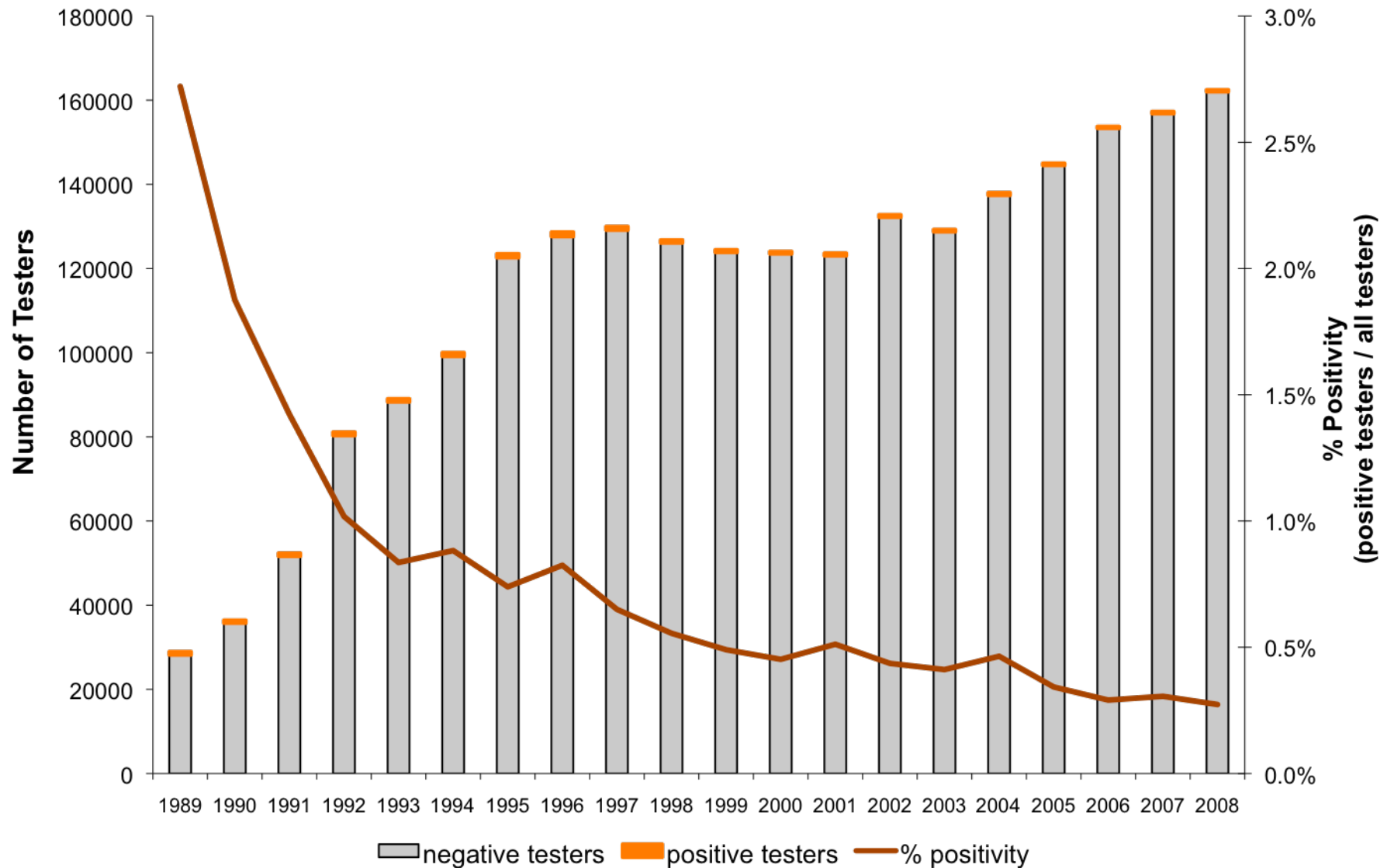
# AIDS case reports by age group and sex BC, 2008



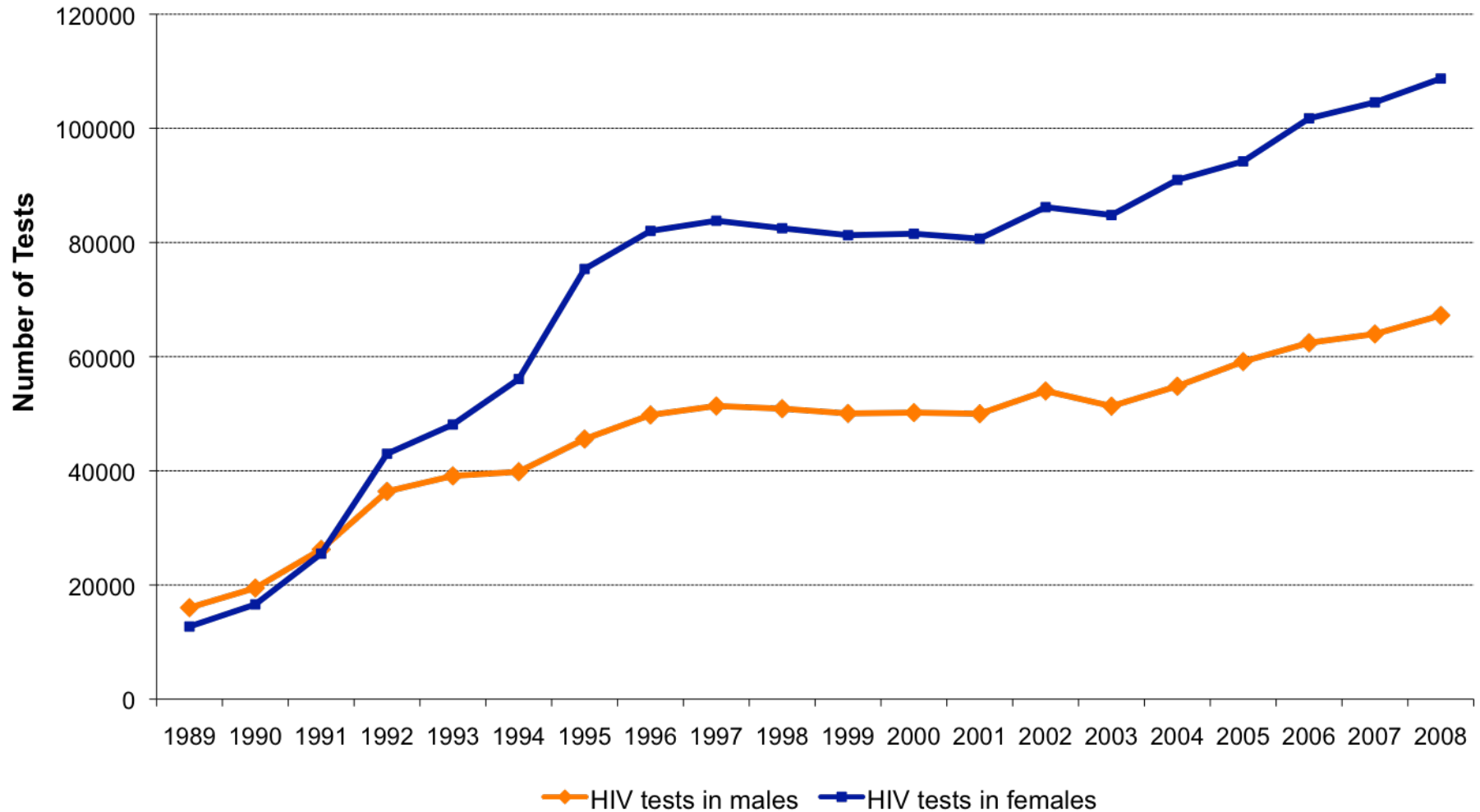
### 3. HIV Testing Data

- HIV test data from the PHSA Laboratories (BCCDC Site)
- >95% of all HIV tests in BC, does not include:
  - Tests conducted at St. Paul's Hospital, Victoria General Hospital
  - Point of Care HIV tests
- For analysis, test records are linked over time to construct testing histories (i.e., to identify first time and repeat testers, examine inter-test intervals)

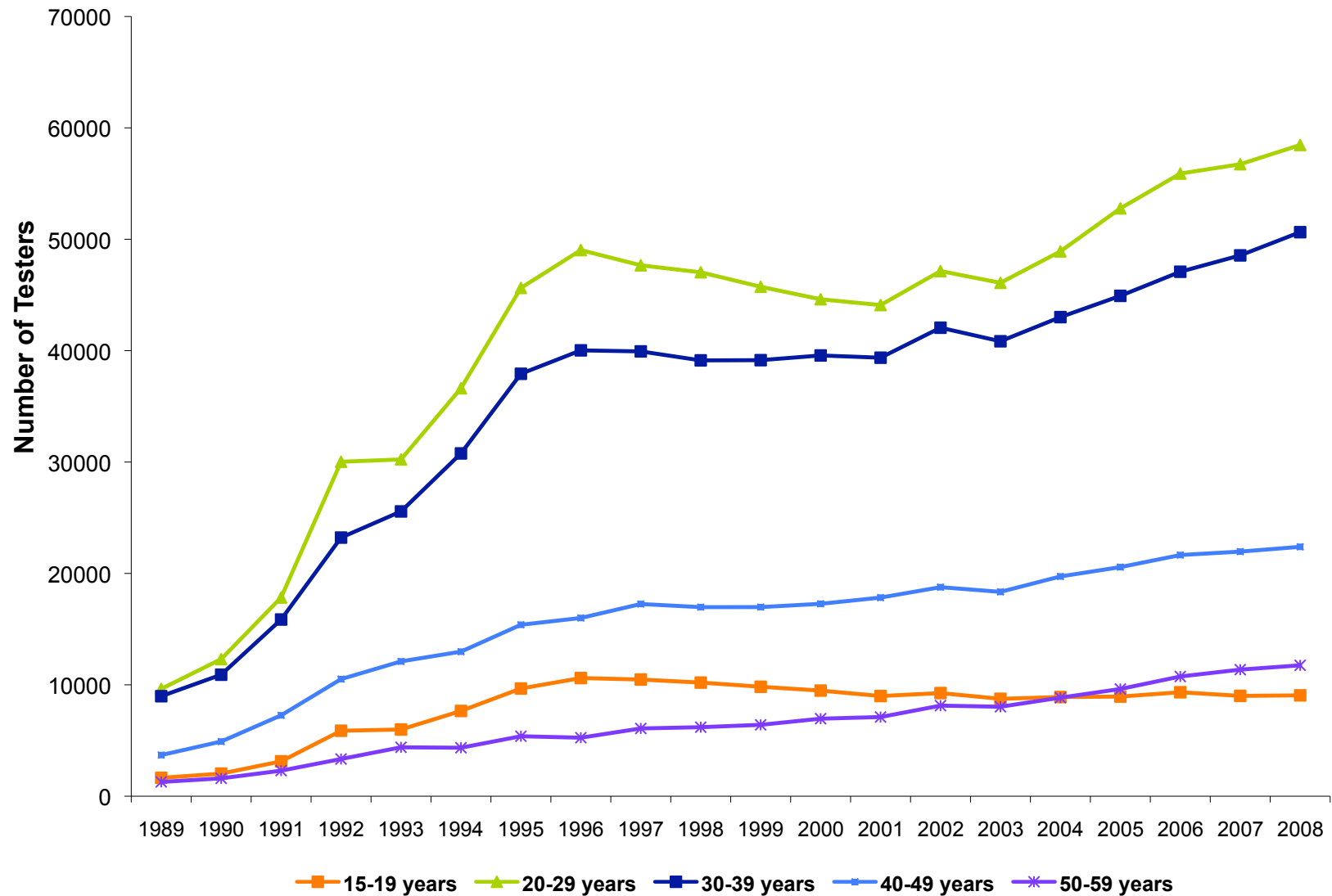
# HIV Testers, by result BC, 1989-2008



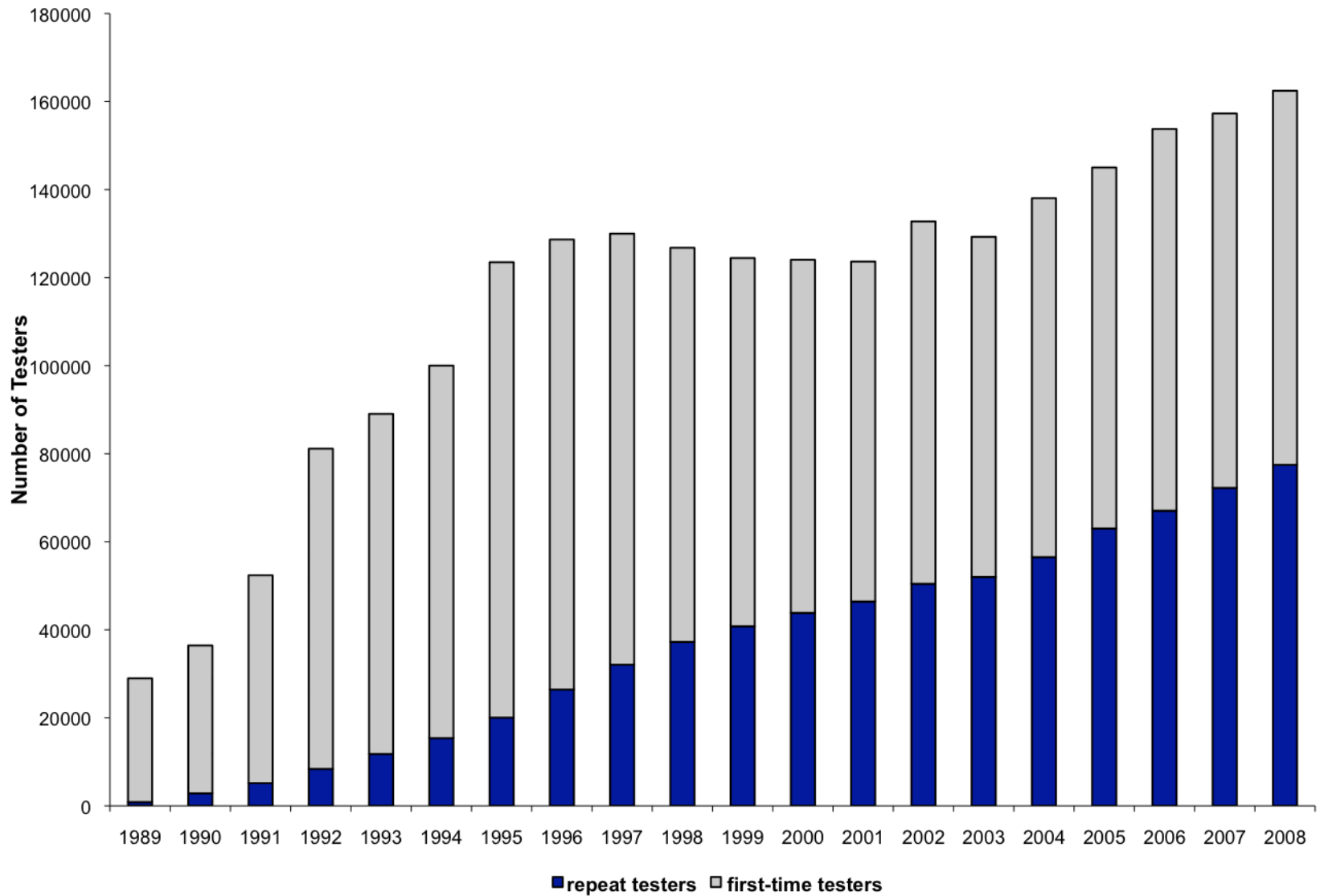
# HIV Tests Ordered, by Sex BC, 1989-2008



# HIV Testers by Select Age Groups BC, 1989-2009



# First-Time versus Repeat Testers BC, 1989-2008



# In Progress

- Revised estimates of prenatal HIV testing
- Analysis of HIV surveillance and testing data for STOP HIV/AIDS pilot project
  - Program indicators
  - Data to guide expansion of testing
- Merging Annual HIV/AIDS Supplemental Report with Annual Report

# Thank you

- Feedback is always welcome
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