

# Trends in HIV diagnoses by age and ethnicity among men who have sex with men (MSM) in British Columbia, Ontario, and Quebec: 2006-2015

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## Conflict of Interest Disclosure

In the past 2 years I have been an employee of: **N/A**

In the past 2 years I have been a consultant for: **N/A**

In the past 2 years I have held investments in the following pharmaceutical organizations, medical devices companies or communications firms: **N/A**

In the past 2 years I have been a member of the Scientific advisory board for: **N/A**

In the past 2 years I have been a speaker for: **N/A**

In the past 2 years I have received research support (grants) from: **N/A**

In the past 2 years I have received honoraria from: **N/A**

I agree to disclose approved and non-approved indications for medications in this presentation: **YES**

I agree to use generic names of medications in this presentation: **YES**

There are relationships to disclose: **NO**

# Background & Aim

- Key population of interest:
  - MSM in BC, Ontario, and Quebec
- Among Canadians newly diagnosed with HIV,
  - 48% are MSM (including 3% MSM-IDU)\*
  - 74% reside in BC, Ontario, or Quebec\*

\*HIV/AIDS in Canada: Surveillance Report 2015, The Public Health Agency of Canada

# Background & Aim

- The Engage Study of HIV and MSM  
— in Vancouver, Toronto, and Montreal
- Aim: To examine the trends in HIV diagnoses among MSM across BC, Ontario, and Quebec to help with the interpretation of Engage Study results.

# Research Question

- What are the similarities and differences in trends in HIV diagnoses among MSM across BC, Ontario, and Quebec over the past 10 years?

## Methods: HIV Data Sources

- BC Centre for Disease Control
- Ontario HIV Treatment Network
  - data from Public Health Ontario
- Institut national de santé publique du Québec

\*MSM includes MSM-intravenous drug users

## Methods: Incidence & Age

- New HIV diagnoses and age breakdown among MSM from 2006-2015
- Calculated three-year running averages with the percentage change for the number of diagnoses and age breakdown.

## Methods: Ethnicity

- Ethnicity data was available for all three provinces only from 2010-2015
- Grouped them into 2-year increments
- Calculated the percentage change for each ethnicity
- Compared with 2016 provincial general population census from Statistics Canada
  - \*based on the ethnic proportions of males reporting a single ethnicity

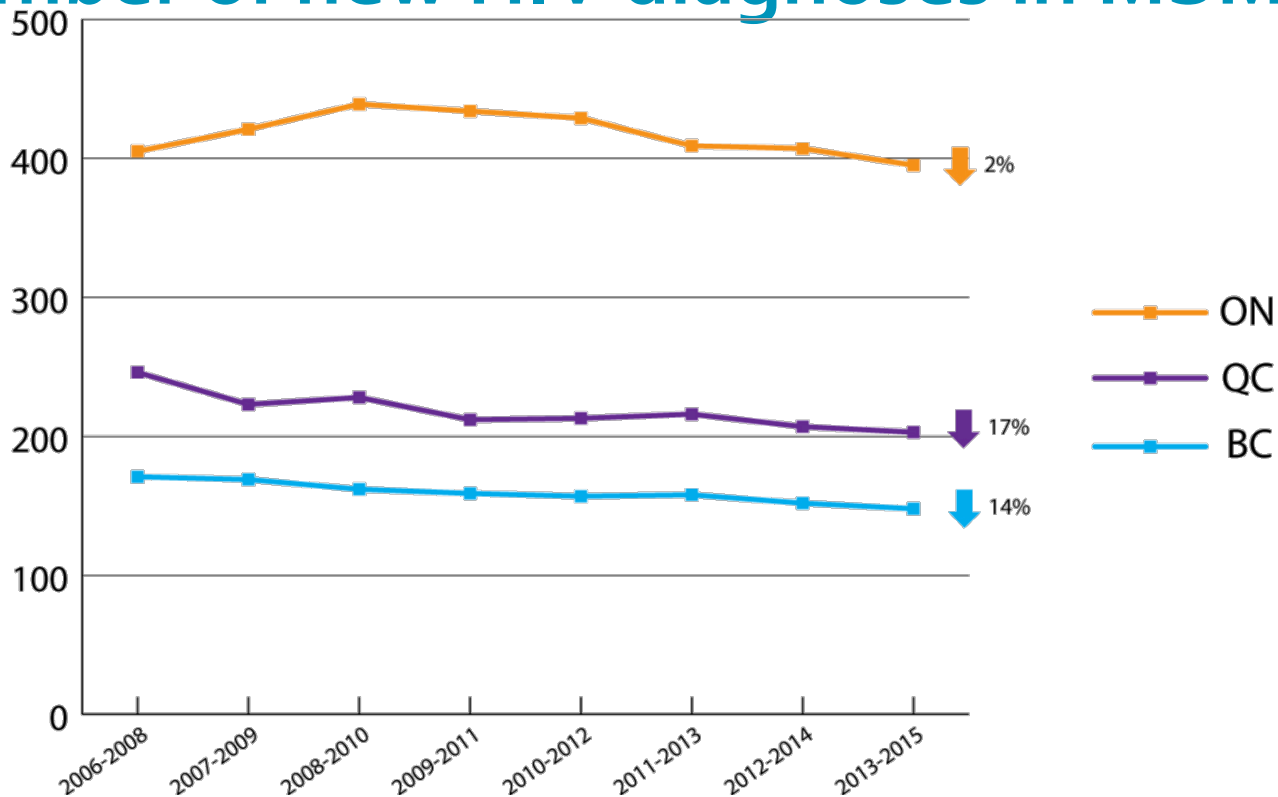


# Summary of Parameters

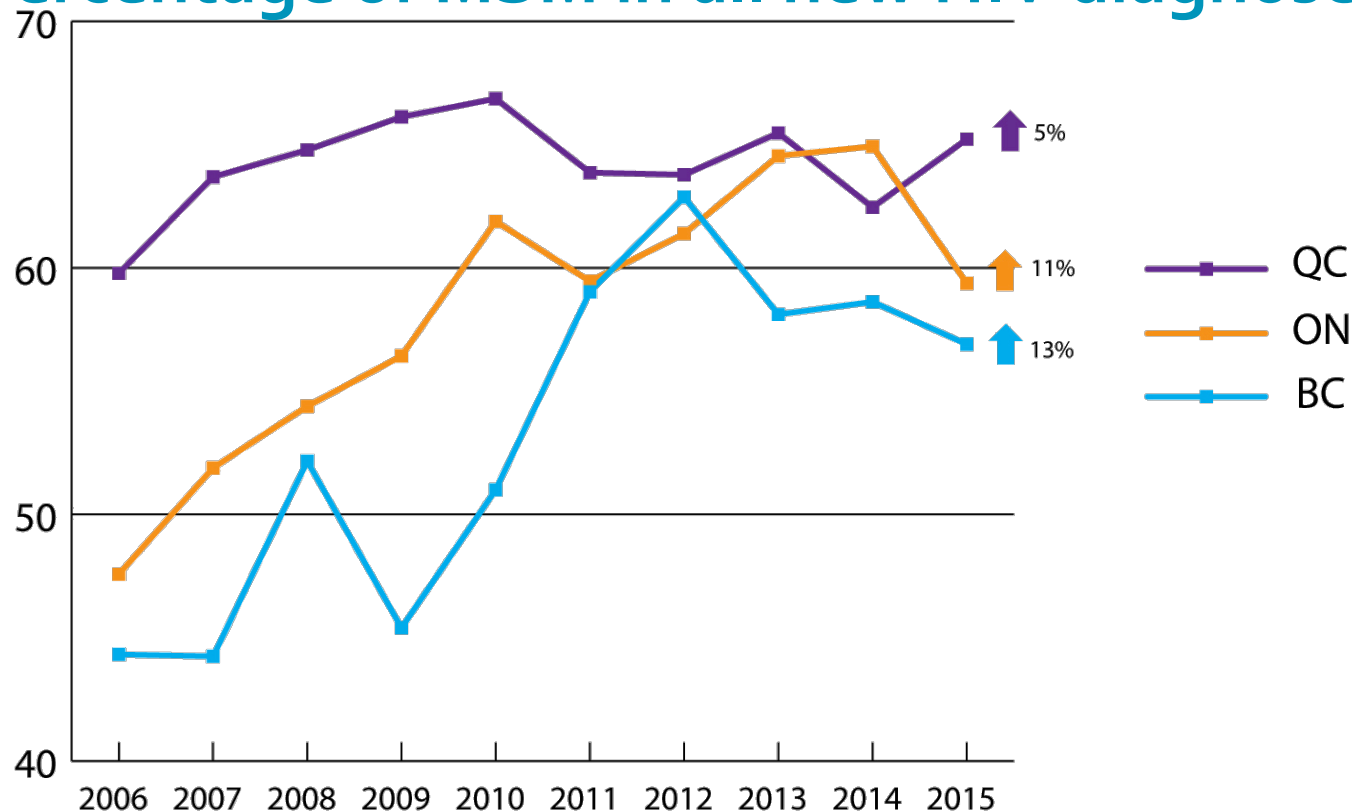
- Number of new HIV diagnoses in MSM
- Proportion of MSM  
(among all new HIV diagnoses)
- Age breakdown
- Ethnicity breakdown

# Results

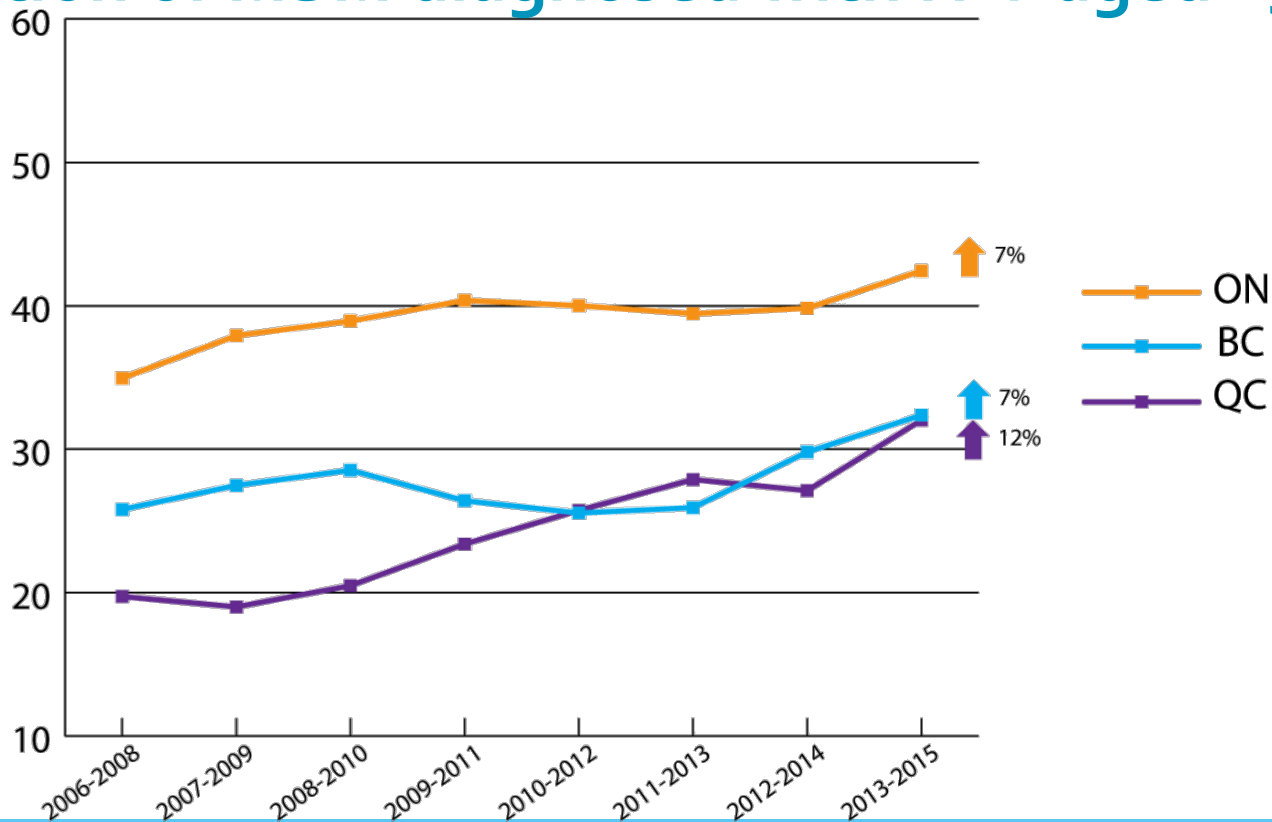
# Number of new HIV diagnoses in MSM



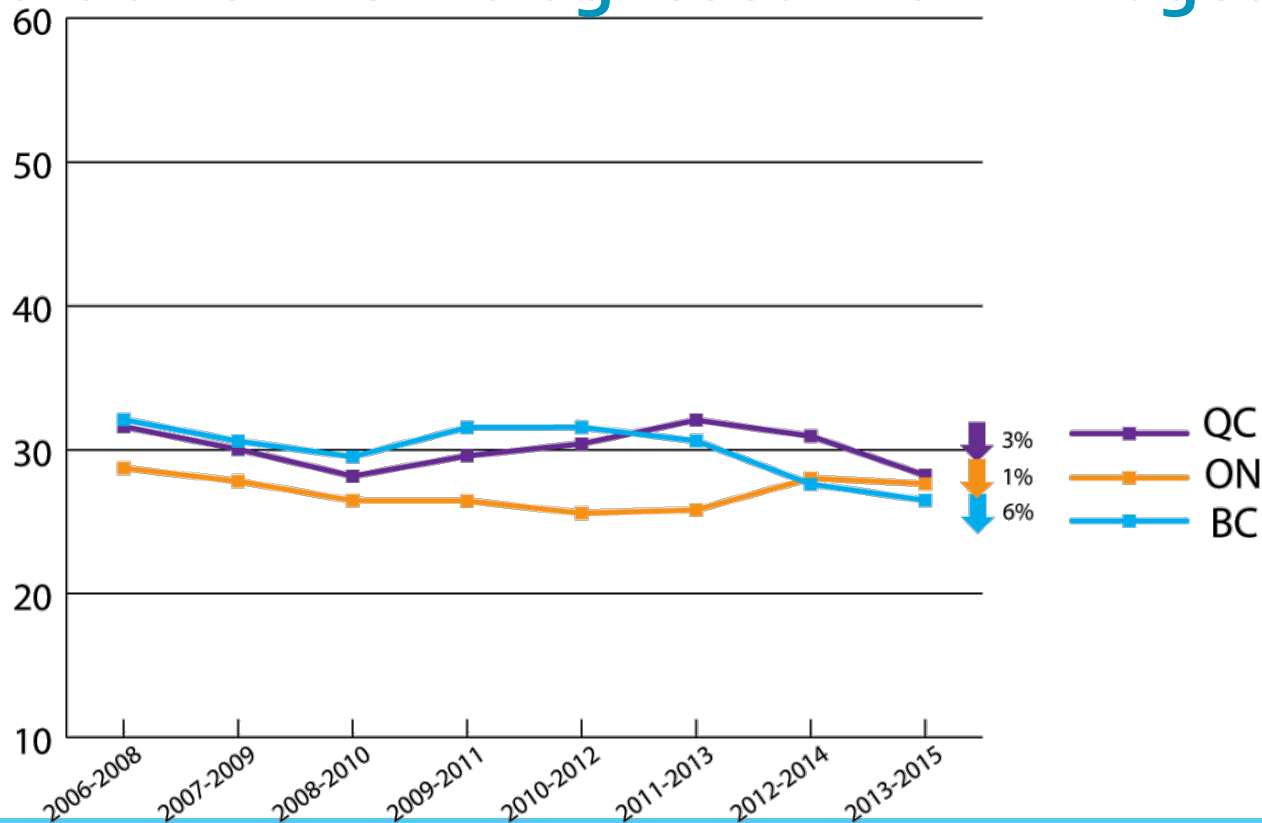
# Percentage of MSM in all new HIV diagnoses



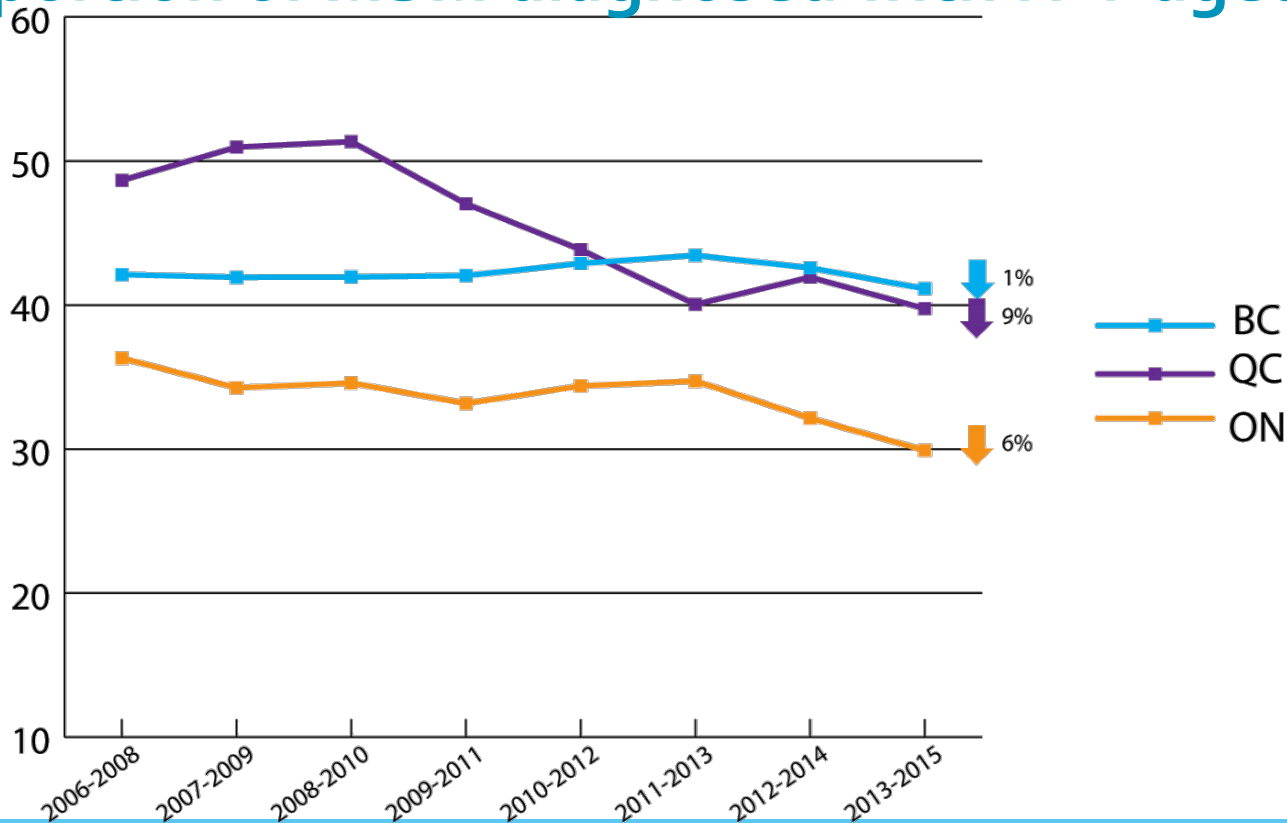
# Proportion of MSM diagnosed with HIV aged <30 years



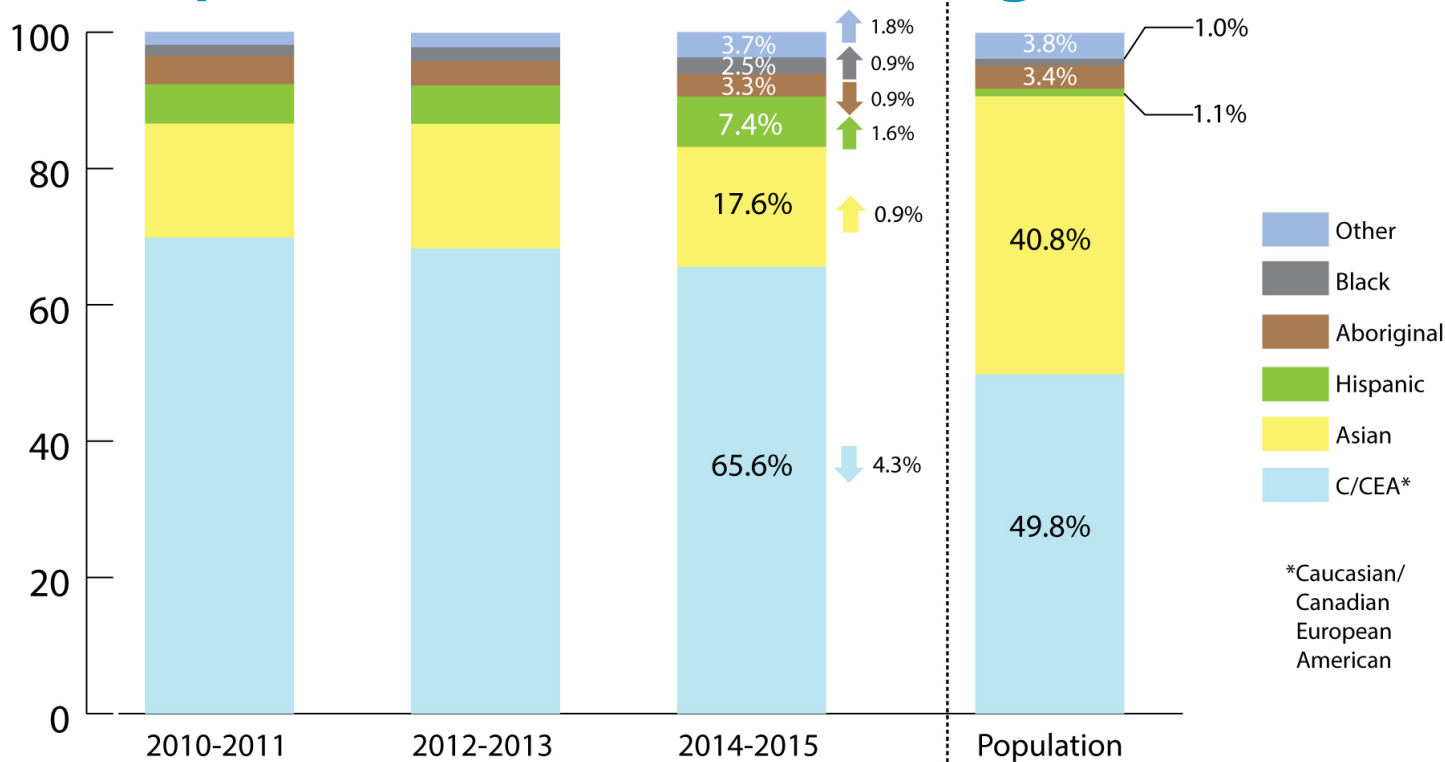
# Proportion of MSM diagnosed with HIV aged 30-39



# Proportion of MSM diagnosed with HIV aged 40+

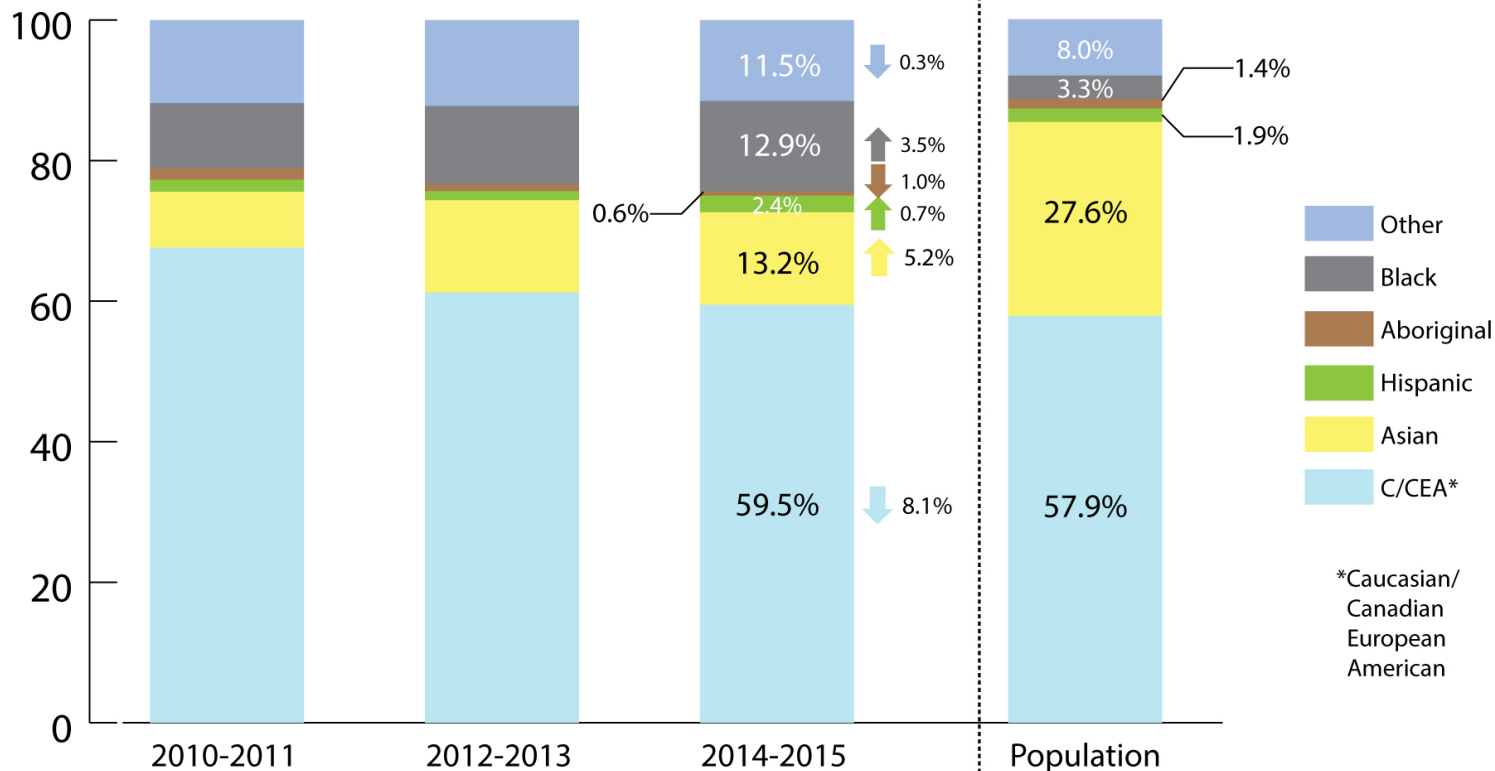


# Ethnicity distribution of MSM diagnosed with HIV: BC

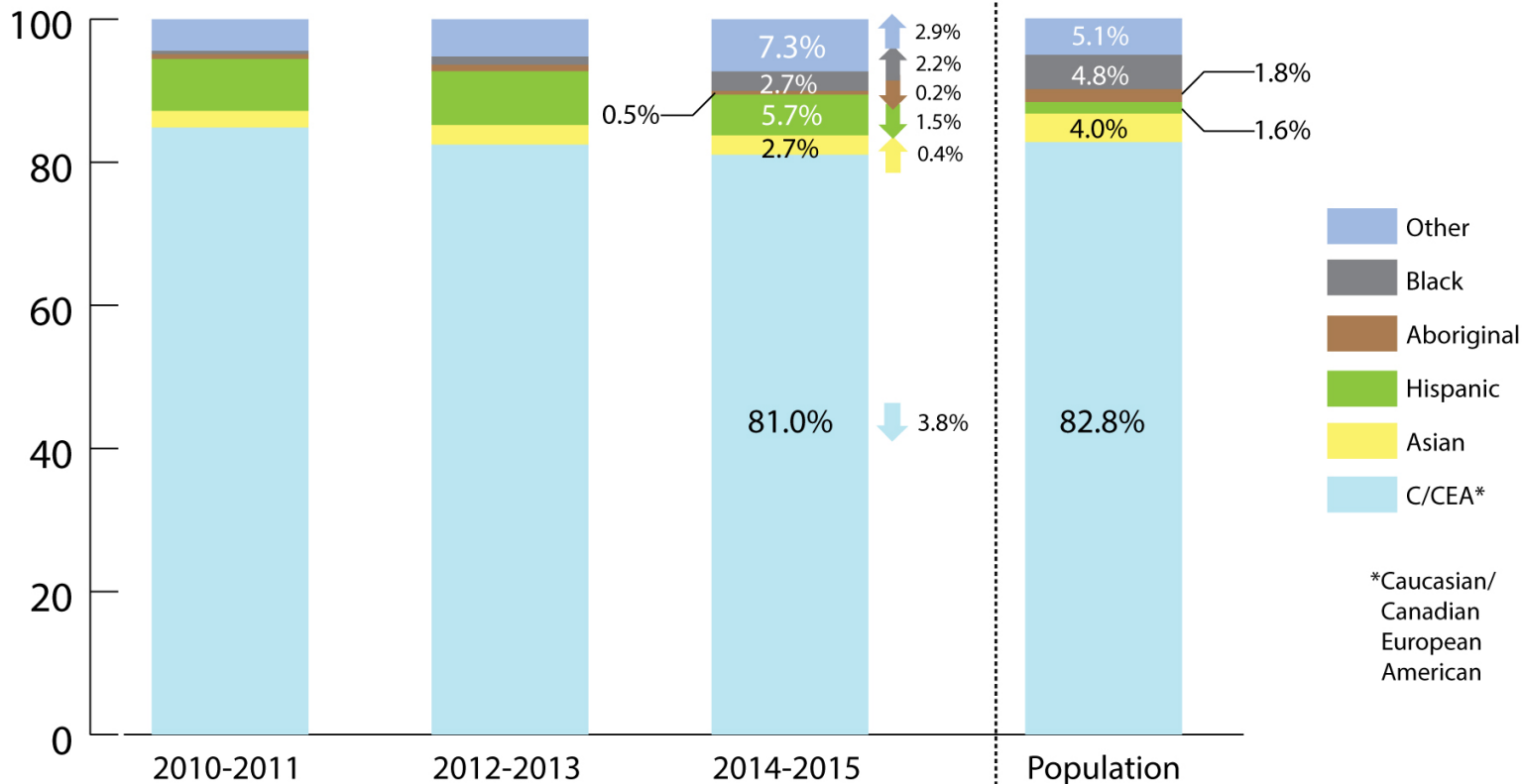




# Ethnicity distribution of MSM diagnosed with HIV: ON



# Ethnicity distribution of MSM diagnosed with HIV: QC



## Ethnicity distribution of MSM diagnosed with HIV

	BC	Ontario	Quebec
C/CEA	Over (▽)	(▽)	(▽)
Asian	Under (▲)	Under (▲)	Under (▲)
Hispanic	Over (▲)	(▲)	Over (▽)
Aboriginal	(▽)	Under (▽)	Under (▽)
Black	Over (▲)	Over (▲)	Under (▲)

# Conclusions

- **Trends in number of diagnoses**
  - All three provinces show decline in new HIV diagnoses among MSM
- **Trends in age breakdown**
  - All three provinces show shift towards younger age of diagnosis
  - Earlier detection of HIV positivity vs. increasing incidence among younger MSM

# Conclusions

- **Trends in ethnicity distribution**
  - All three provinces show
    - decline in proportions of C/CEA and aboriginal ethnicities
    - increase in proportions of Asian and Black ethnicities
    - under-representation of Asian ethnicity
  - Over-/under-representation of other ethnicities vary across the provinces:
    - example: over-representation of C/CEA only in BC

# Limitations

- Diagnoses with unknown exposure category:  
0.6-6.3% in BC, **21-29% in ON**, 0.0-1.2% in QC.
- Single vs. multiple ethnicity:
  - Used single ethnicity data from the census
  - HIV diagnoses among MSM include those that reported multiple ethnicities: classified as “other” (a small proportion)
- Use of endpoints for percentage change calculations
  - Used multi-year averages to minimize yearly fluctuations
  - Overall data showed gradual change

# Acknowledgements



BC Centre for Disease Control



ONTARIO  
HIV TREATMENT  
NETWORK



Statistics  
Canada

*Institut national  
de santé publique*

Québec



Public  
Health  
Ontario

PARTNERS FOR HEALTH



BRITISH COLUMBIA  
CENTRE *for* EXCELLENCE  
*in* HIV/AIDS

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- Asian Community AIDS Service
- Black Coalition for AIDS Prevention
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- Centre hospitalier de l'Université de Montréal
- CIUSSS – Quebec
- Community Based Research Centre for Gay Men's Health
- Gay Men's Sexual Health Alliance
- Hassle Free Clinic - Toronto
- Health Initiative for Men
- HIV Prevention Lab - Toronto

- Maison Plein Coeur
- McGill University Health Centre
- Positive Living Society of British Columbia
- REZO – Montreal
- Vancouver Coastal Health
- YouthCO HIV and Hep C Society

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- University of Toronto
- Simon Fraser University
- University of Victoria
- University of British Columbia
- University of Windsor
- St. Michael's Hospital

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- Ontario HIV Treatment Network
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# Questions?