

The Cascade of Care: A Promising Tool in HIV Surveillance

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TUPE338

BACKGROUND

TasP and its implementation

One of the biggest public health benefits of TasP is to stop HIV transmission.

However, there are important issues that can challenge the optimal implementation of TasP, including:

HIV does not affect every subgroup of the population homogeneously;

HIV does not affect every region in the world similarly;

There are still a great number of individuals undiagnosed and off treatment;
There are financial barriers to treatment access;

Treatment requires a life-long commitment to adherence and to retention into care;

There is no consensus on the most efficient measure to assess the effect of TasP.

The cascade of care

In a perfect world, all individuals infected with HIV should follow the same pathway in the spectrum of engagement into care:



- In the real world, there is attrition between each of these steps and individuals are often lost-to-follow-up.
- The leakage in the cascade, between each of its steps, can be informative for assessing the effectiveness of TasP programs.
- This process is even more informative if heterogeneity (due to socio-demographic risk factors for HIV) is taken into consideration.

OBJECTIVE

To evaluate the evolution of the engagement in the cascade of care and assess heterogeneity in the leakage within the cascade by stratifying the data according to:

- Sex (male, female);
- Risk group (MSM, IDU);
- Geographic health region (place of patient's residence)
- Age (<30, 30-39, 40-49, ≥50 years)

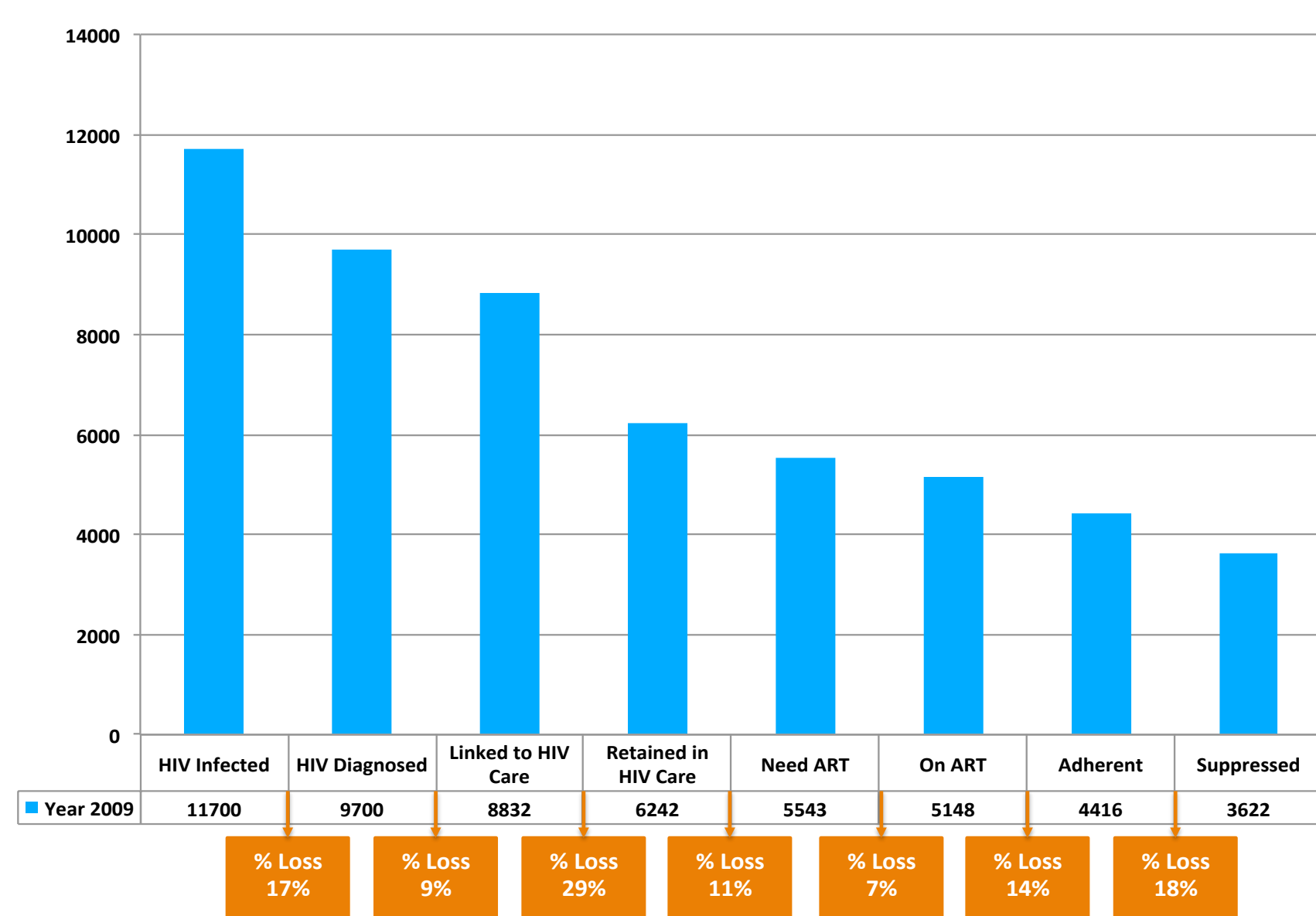
Setting: British Columbia (BC), Canada.

Time Period: Year 2009

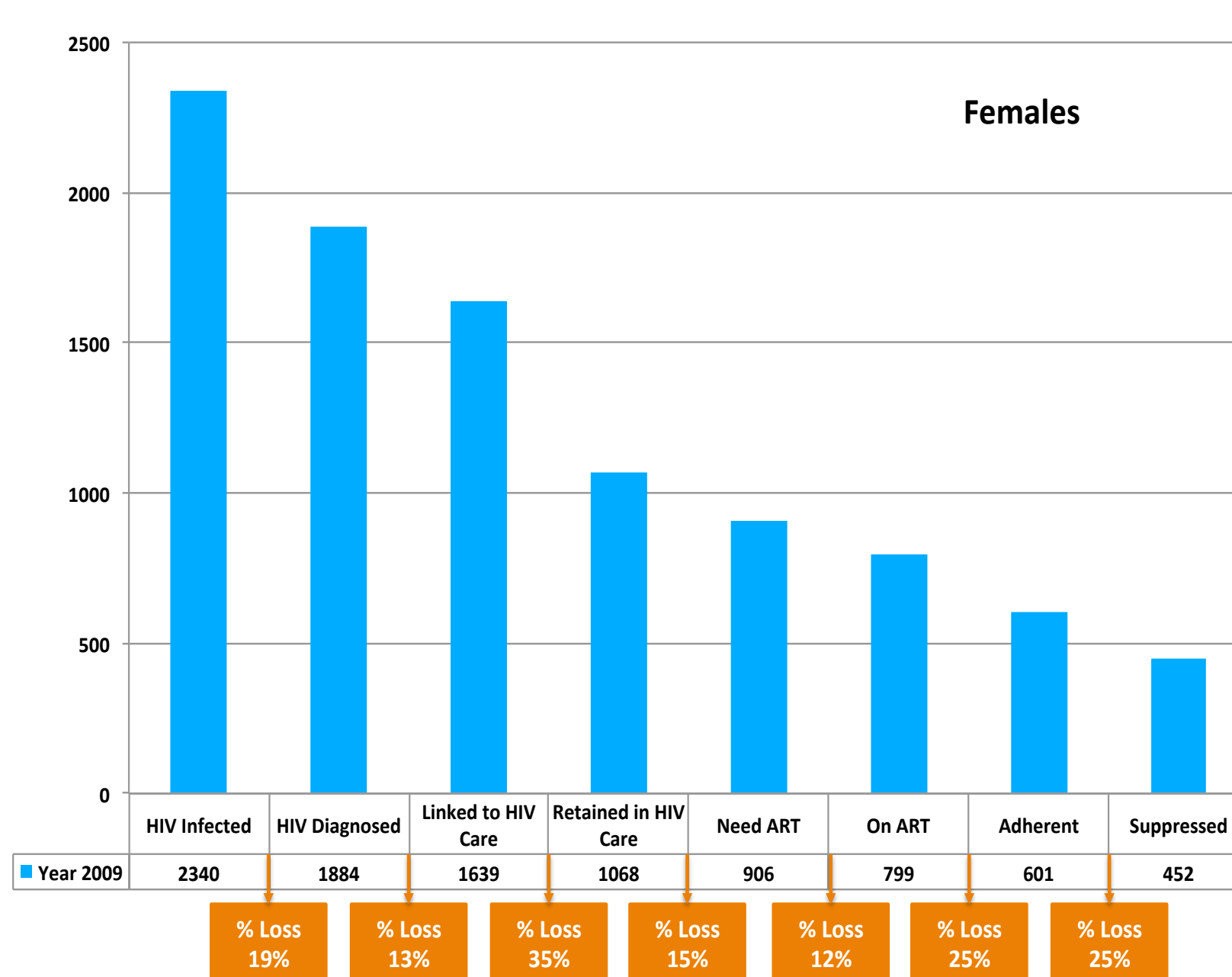
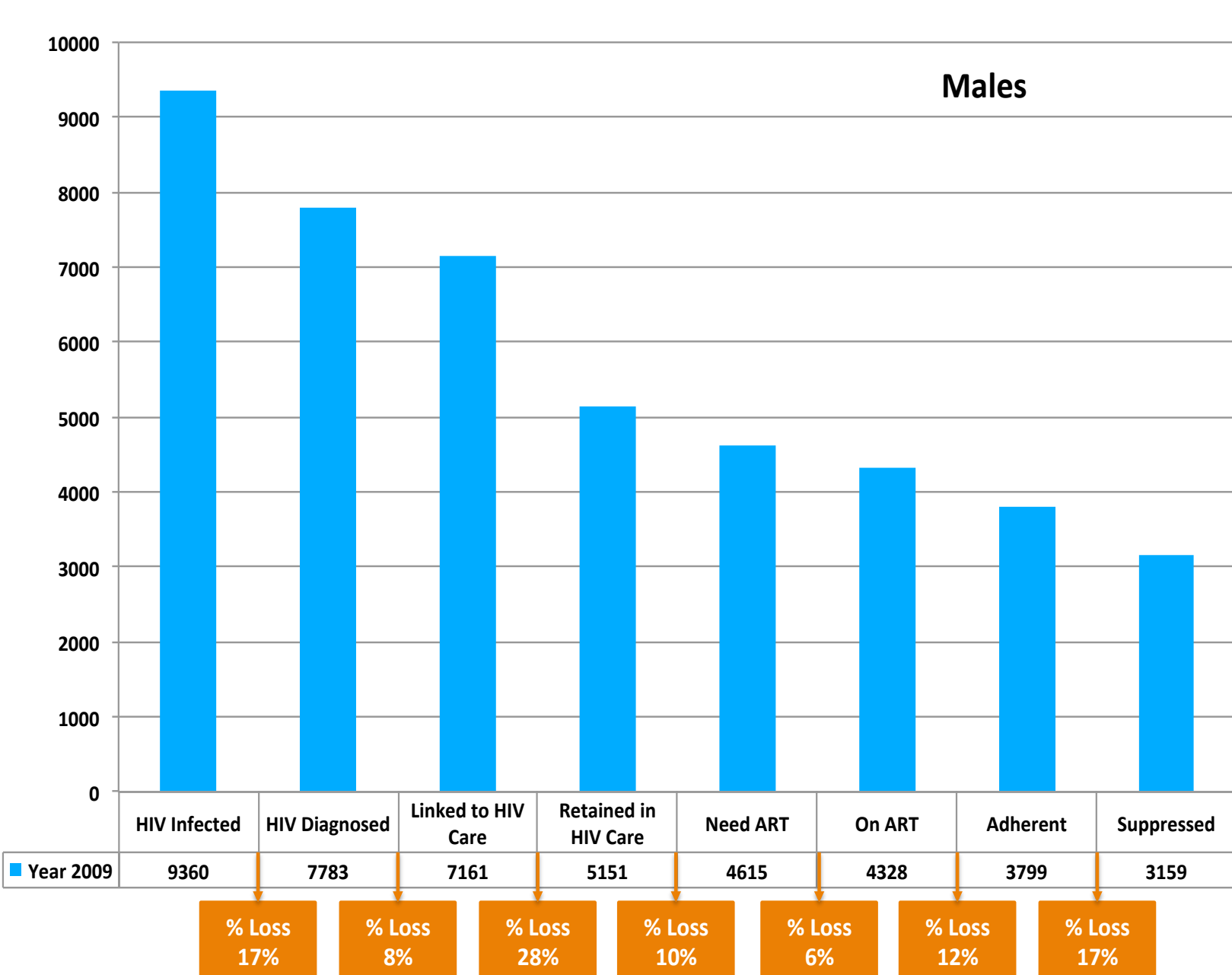
Population Size: 9700

RESULTS

Non-Stratified Cascade

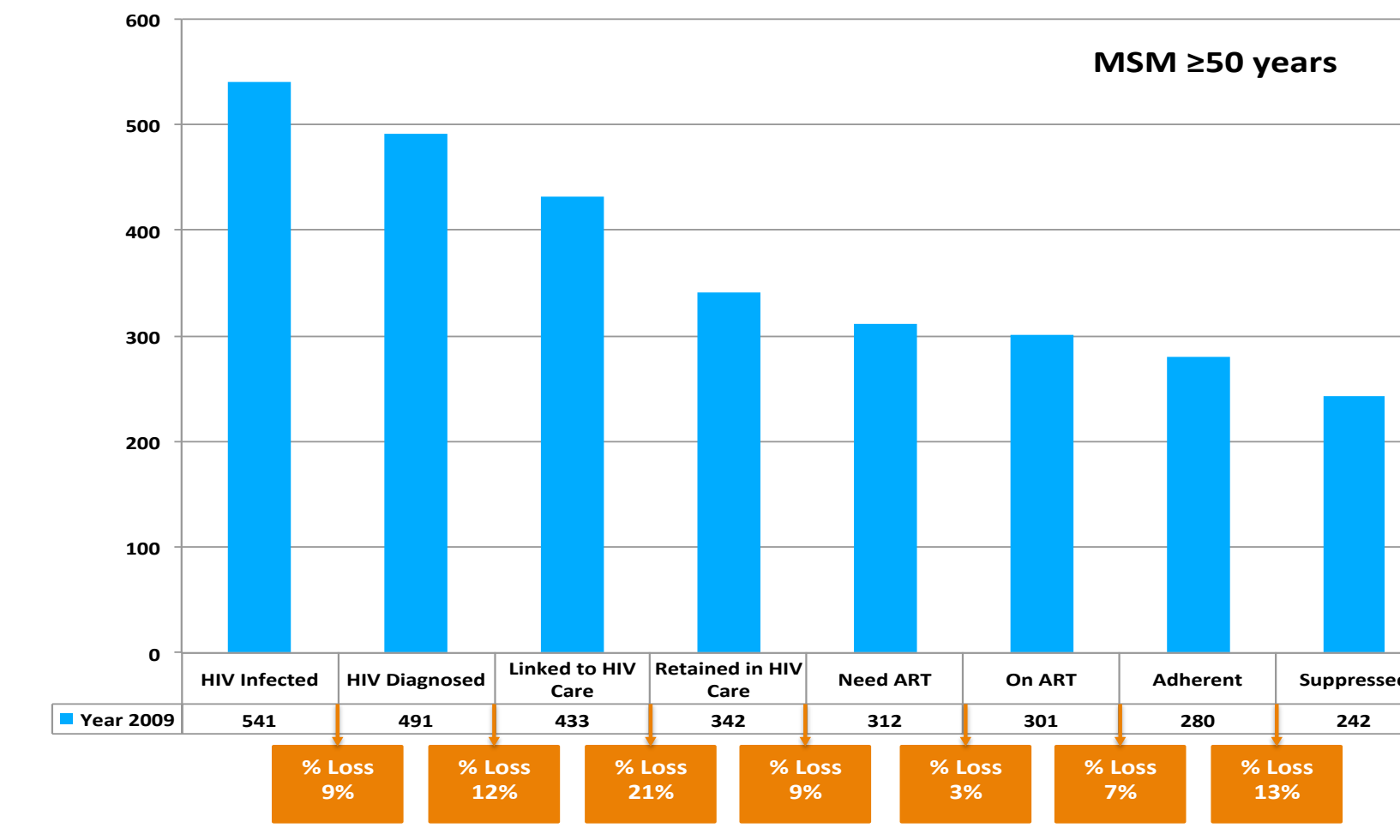
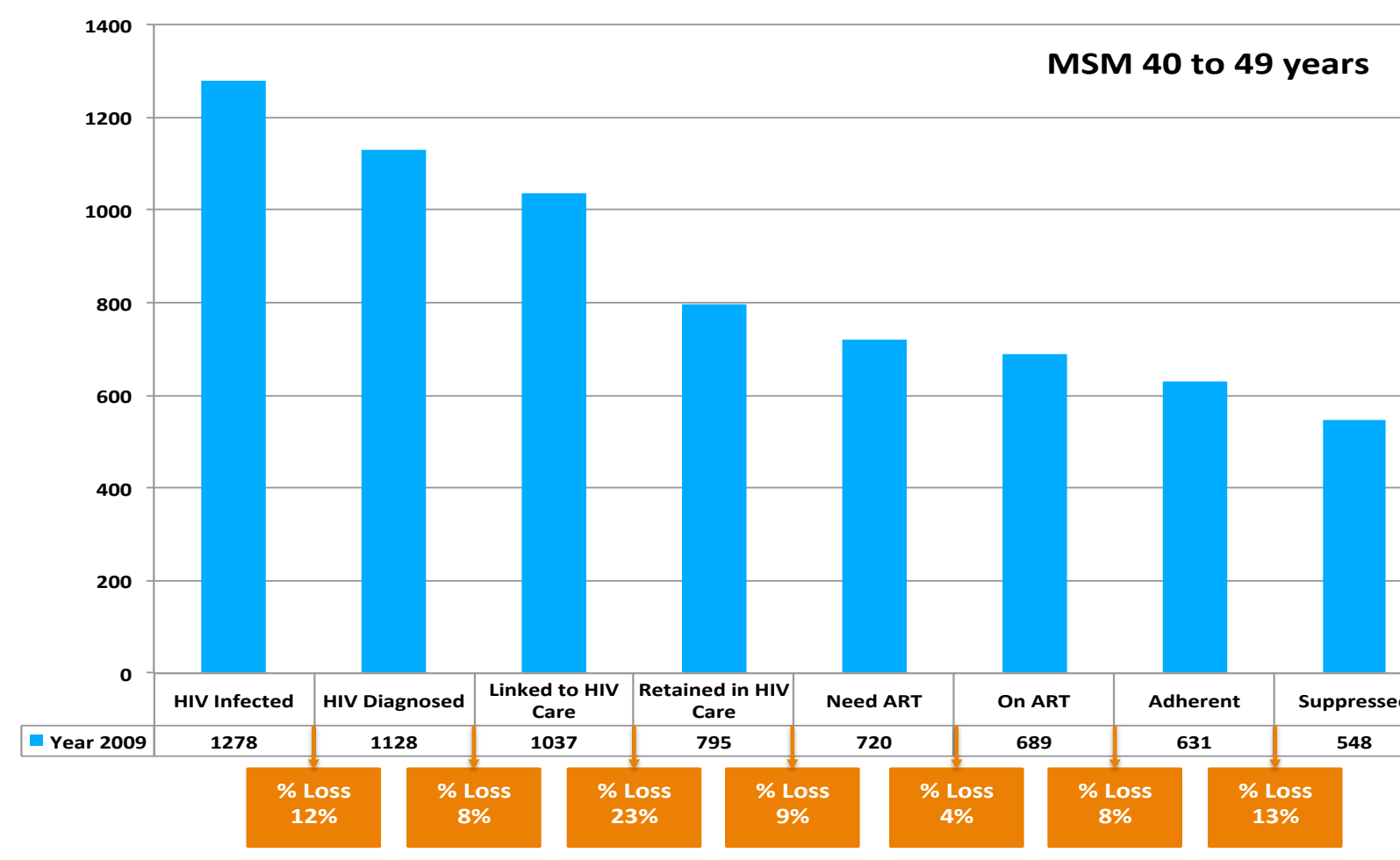
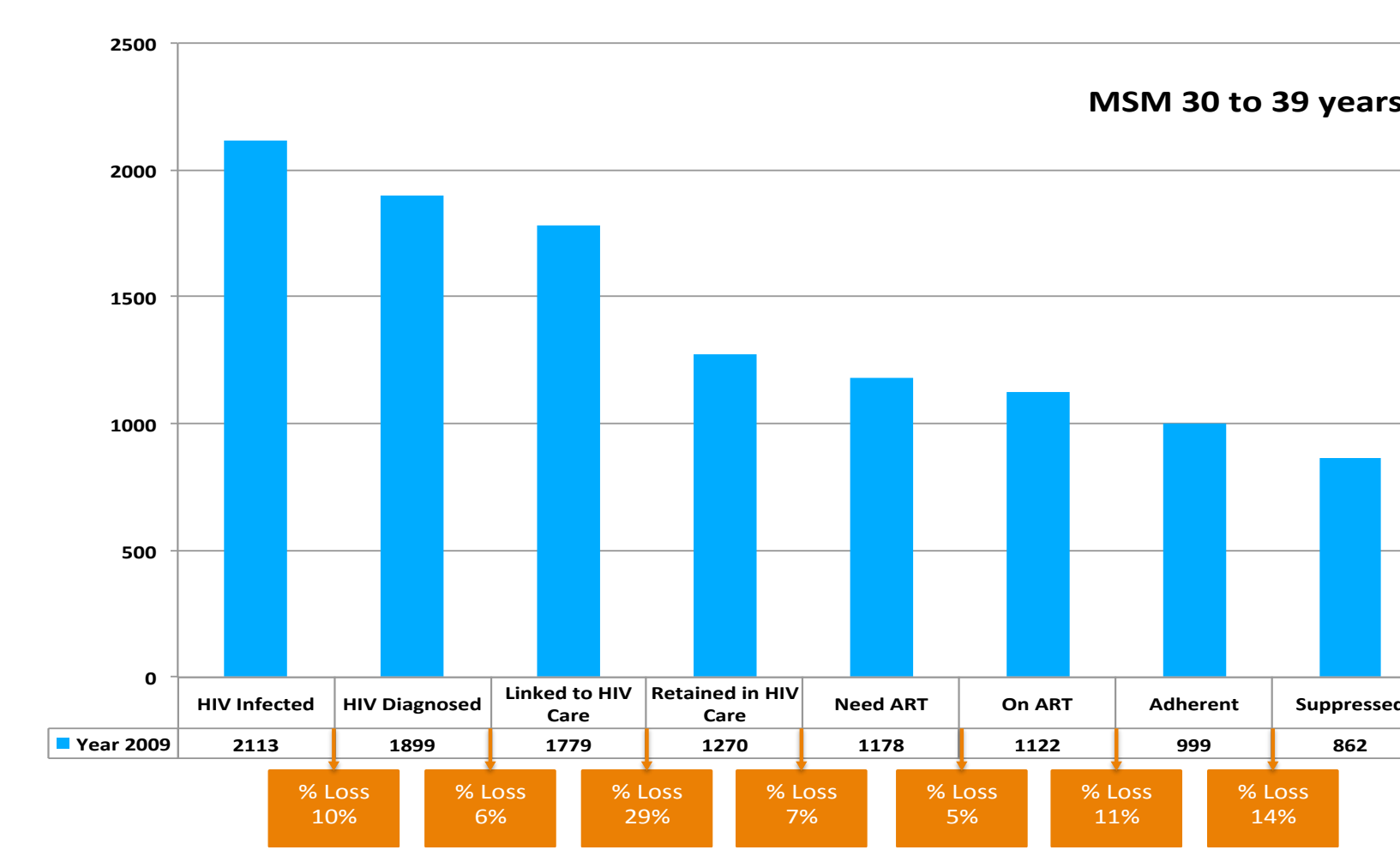
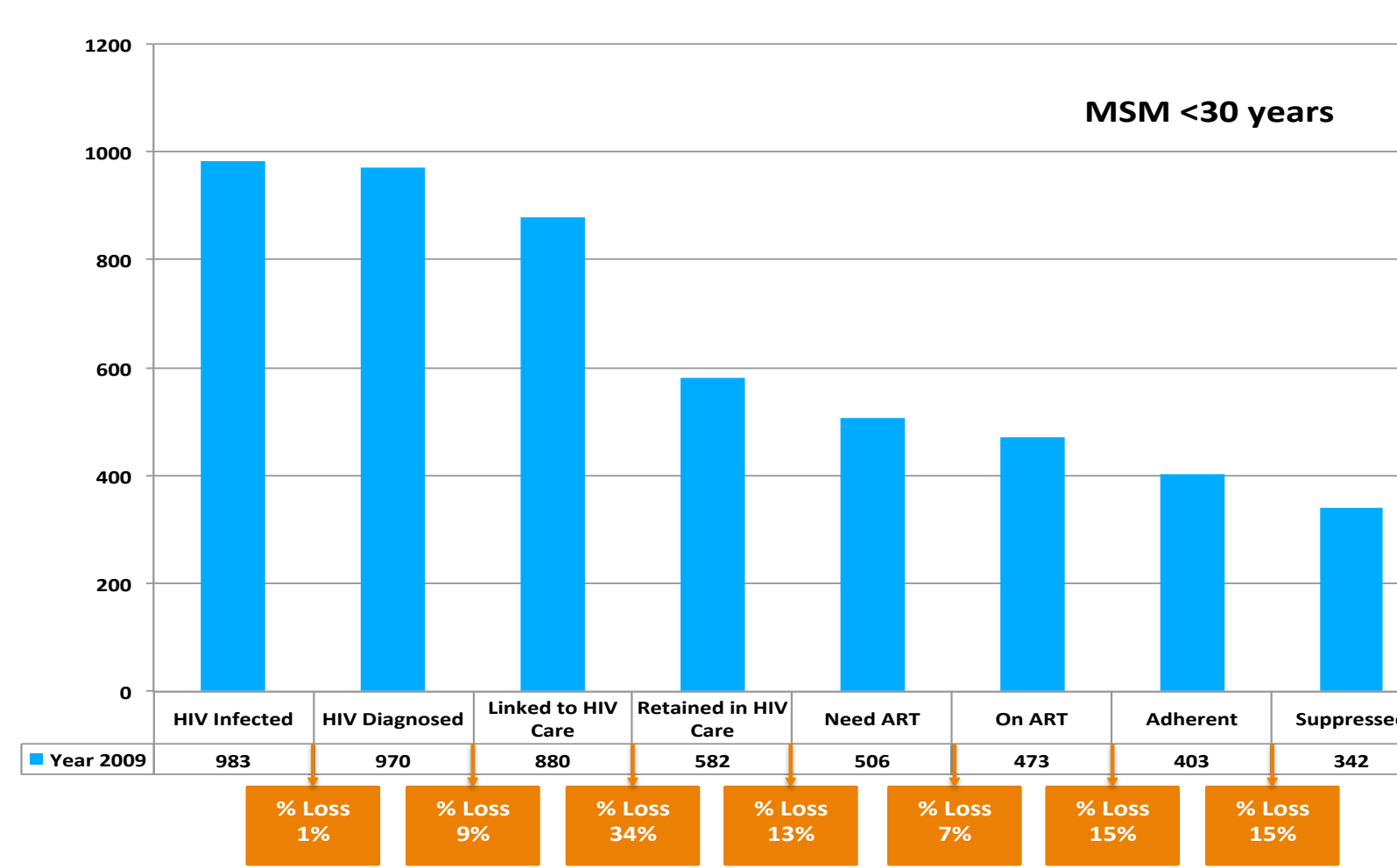
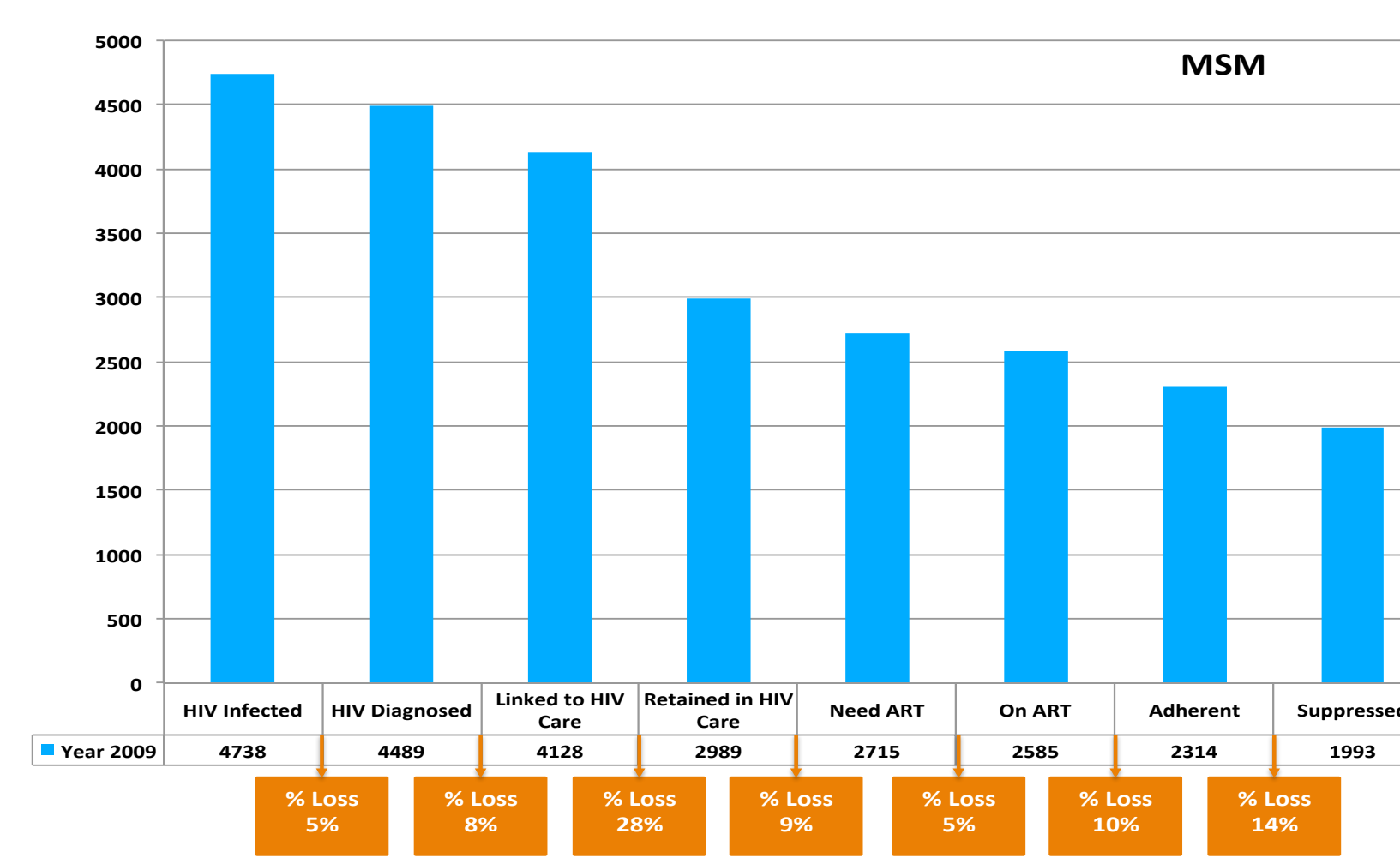
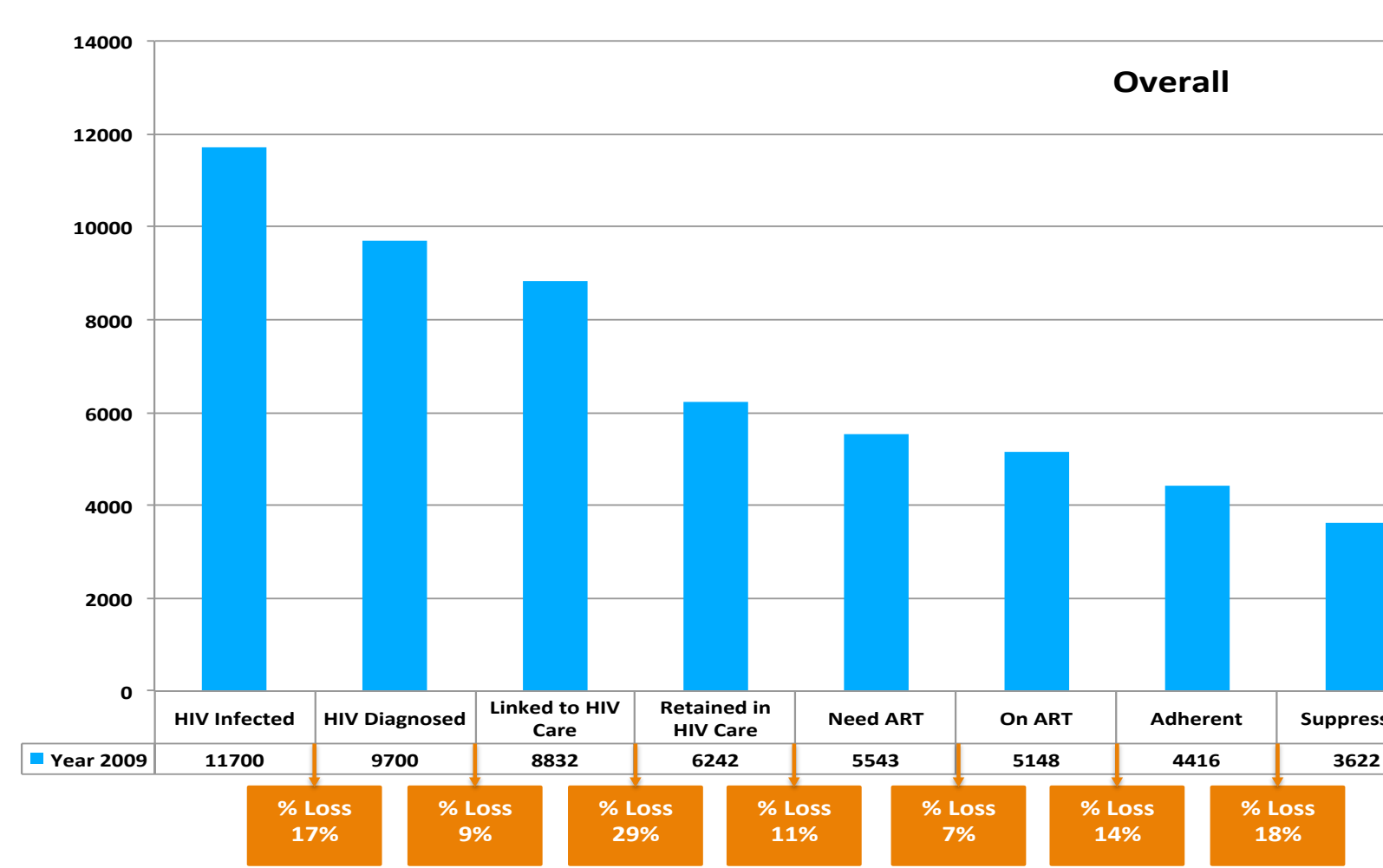


Cascade by Sex

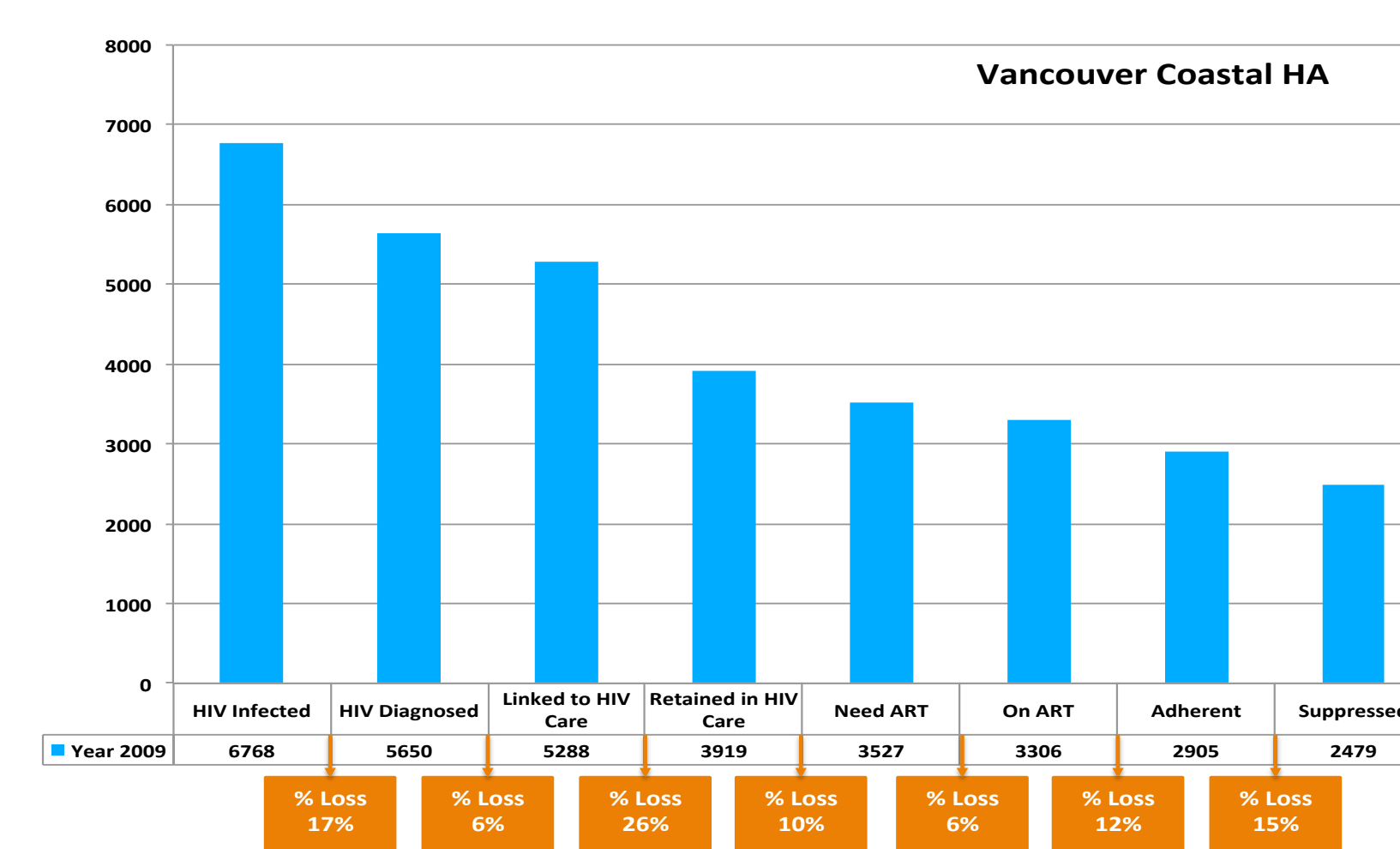
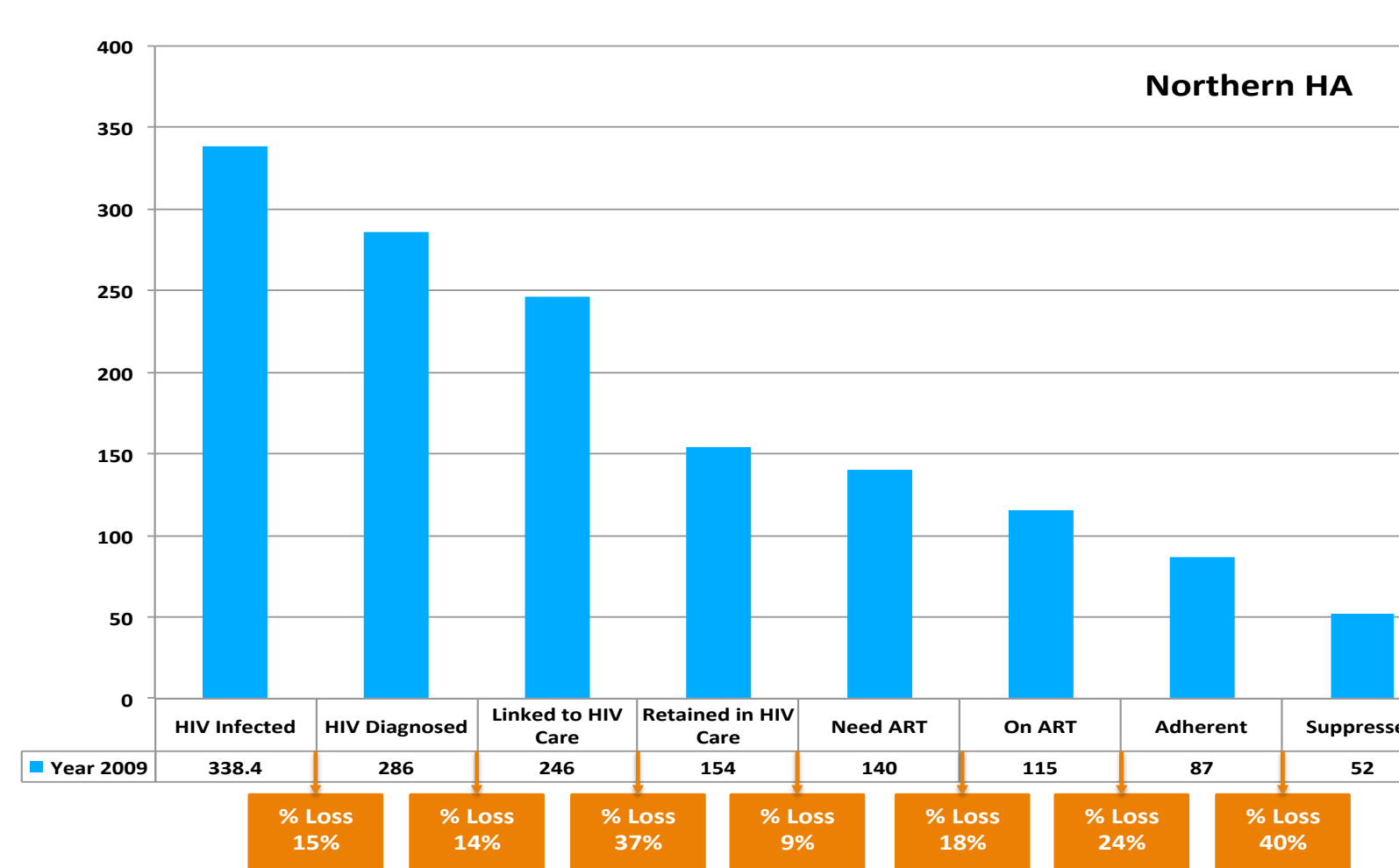


RESULTS

Cascade by Risk



Cascade by Geographic Region



LIMITATIONS

- Some individuals with unknown risk group.
 - Missing data were replaced with the assumption that 42% of unknowns were MSM (PHAC).
- Latest data linkage available for the year 2009.
 - More recent data will be available soon.
- Prevalence estimations based on a model from PHAC.
- Data quality from administrative datasets.

For other limitations, please refer to:

Nosyk B, et al. (2013) Application and Validation of Case-Finding Algorithms for Identifying Individuals with Human Immunodeficiency Virus from Administrative Data in British Columbia, Canada. PLoS ONE 8(1): e54416.

CONCLUSIONS

- Looking at the cascade of care across different population subgroups and geographic regions allowed us to identify previously unrecognized heterogeneities.
- Transitions most vulnerable to leakage were:
 - The Linked → Retained
 - On ARV → Adherent
 - Adherent → Suppressed
- Looking at the cascade by population subgroups helps:
 - Identify vulnerable subgroups;
 - Generate etiological hypothesis as to why the HIV epidemic continues to increase in some population subgroups;
 - Identify the best interventions to maximize the effect of TasP.