**Washington State Undiagnosed Fraction Project: Adding data on recent infection**

The primary goal of this project is to extend the current “testing history” method for estimating quarterly incidence and undiagnosed cases of HIV to incorporate data on recent infection that comes from the HIV incidence surveillance project in WA State. The proposed work will include descriptive analysis of the incidence surveillance data, statistical development of the estimation methodology, and application of the new method to the data to produce estimates for 2014.

*Timeframe: 3 months (Jan-Mar 2016)*

This will include 80 hrs of Dr. Jeanette Kurian’s time, and 5% FTE/mo for Professor Morris

*Deliverables*

1. Descriptive analysis of recent infection data by MSM vs non-MSM subgroups, 2014
   * If there are existing analyses we will not duplicate these. We will focus on the distribution of cases by positive, negative and missing recent infection results, crosstabulated by the presence/absence/missingness of testing histories.
2. Comparison of the undiagnosed fraction estimates from the original and extended methods for 2014. Estimates will be broken down by MSM vs non-MSM.
   * The extended estimates will incorporate the recent infection data, using a set of assumptions that are jointly agreed on regarding the handling of cases with missing data on recent infection.
   * We will focus on the most recent year to avoid additional complications that would arise from having to address changes over time in the patterns of reporting for recent infection data
3. A final report with the results of the descriptive analysis and estimates, with a discussion that highlights the key assumptions that must be addressed when incorporating recent infection data
   * There are both explicit assumptions (e.g., how to handle missing recent infection data) and implicit ones (e.g.,possible biases associated with the disproportionate contribution of public labs to the sera collected for recent infection testing)