**Appendix A**

*Estimated proportions of the United States Population Classified as MSM, PWID, and Heterosexuals*

For MSM, we used the estimated proportion of persons reporting same-sex behavior in the past 5 years (i.e., 3.9%),which is generally considered more indicative of the gay and bisexual male population that is the target for many HIV prevention activities in the United States [1]. We also used the same overall past-5-year estimate (i.e., 3.9%) to all race/ethnicity and age-specific groups because the race/ethnicity and age-specific proportion estimates of MSM are not available in the literature.

For PWID, we used the estimated proportion of persons who ever injected drugs in their lifetime, excluding MSM who injected drugs [2]. The proportion estimate for lifetime injection drug use for males is 3.6%, for females is 1.6%, and for males and females combined is 2.6% [2].The estimated proportions of PWID by race/ethnicity and age for each sex are available from Lansky et al, 2014 [2]. Those race/ethnicity and age-specific proportion estimates were used in the analyses of this paper.

For heterosexuals, we used the estimated proportions of males and females who ever had sex with a member of the opposite sex [3]. Following the hierarchy used for transmission category, the proportion heterosexual with no other HIV risk behaviors was calculated by excluding those who reported never having had sex, males who reported sex with another male, males and females who ever injected drugs, and females who only reported sex with female partners.3 The proportion estimate for lifetime heterosexuals for males is 84.1%, for females is 89.4%, and for males and females combined is 86.7% [3].The estimated proportions of PWID by race/ethnicity and age for each sex are available from Lansky et al, 2015 [3]. Those race/ethnicity and age-specific proportion estimates were used in the analyses of this paper.

**Reference**:

1. Purcell DW, Johnson CH, Lansky A, Prejean J, Stein R, Denning P, Gau Z, Weinstock H, Su J, Crepaz N. **Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates**. *Open AIDS J* 2012; **6**:98e107.
2. Lansky A, Finlayson T, Johnson C, Holtzman D, Wejnert C, Mitsch A, Gust D, Chen R, Mizuno Y, Crepaz N.  **Estimating the number of persons who inject drugs in the United States by meta-analysis to calculate national rates of HIV and hepatitis C virus infections**.  *PLoS One* 2014; **9**(5): e97596.
3. Lansky A, Johnson C, Oraka E, Sionean C, Joyce MP, DiNenno E, Crepaz N. **Estimating the number of heterosexual persons in the United States to calculate national rates of HIV infection**.  *PLoS One* 2015;**10**(7):e0133543.