

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Rosenberg ES, Millett GA, Sullivan PS, del Rio C, Curran JW. Understanding the HIV disparities between black and white men who have sex with men in the USA using the HIV care continuum: a modelling study. *Lancet HIV* 2014; published online Nov 18. [http://dx.doi.org/10.1016/S2352-3018\(14\)00011-3](http://dx.doi.org/10.1016/S2352-3018(14)00011-3).

Appendix, Table 1.
United States population parameters for incidence estimation

Published quantities	Value	Reference
A. Men who have sex with men (MSM) ages ≥ 13 years, 2008	4,791,262	Purcell et al., 2012 ¹
B. Male residents ages ≥ 13 years, 2008	122,656,982	United States Census Bureau ²
C. Male residents ages ≥ 13 years, 2010	124,732,856	United States Census Bureau ²
D. Male non-Hispanic black/African-American residents ages ≥ 13 years, 2010	14,400,083	United States Census Bureau ²
E. Male non-Hispanic white residents ages ≥ 13 years, 2010	82,715,604	United States Census Bureau ²
Derived quantities	Value	Formula
F. Black/African-American MSM ages ≥ 13 years, 2010	562,500	$A \times (C/B) \times (D/C)$
G. Black/African-American MSM ages ≥ 13 years living with an HIV infection, 2010	180,477	From Figure 1: Hall et al, 2013 ³ ; CDC, 2013 ⁴
H. Black/African-American MSM ages ≥ 13 years living without an HIV infection, 2010	382,024	$F - G$
I. White MSM ages ≥ 13 years, 2010	3,231,061	$A \times (C/B) \times (E/C)$
J. White MSM ages ≥ 13 years living with an HIV infection, 2010	243,174	From Figure 1: Hall et al, 2013 ³ ; CDC, 2013 ⁴
K. White MSM ages ≥ 13 years living without an HIV infection, 2010	2,987,886	$I - J$

Appendix, Table 2.
Scenarios for sensitivity analyses of racial/ethnic mixing in serodiscordant relationships of MSM

Scenario	Race/ethnicity of HIV-infected person	Race/ethnicity of HIV-uninfected partner			Notes
		White non-Hispanic (row %)	Black non-Hispanic (row %)	Hispanic/Other (row %)	
A. 100% racial concordance (assortativity) – base analysis	White non-Hispanic	100%	0%	0%	
	Black non-Hispanic	0%	100%	0%	
	Hispanic/Other	0%	0%	100%	
B. 90% racial concordance	White non-Hispanic	90%	5%	5%	
	Black non-Hispanic	5%	90%	5%	
	Hispanic/Other	5%	5%	90%	
C. 80% racial concordance	White non-Hispanic	80%	10%	10%	
	Black non-Hispanic	10%	80%	10%	
	Hispanic/Other	10%	10%	80%	
D. 80% black and white non-Hispanic, 60% Hispanic/Other concordance	White non-Hispanic	80%	10%	10%	
	Black non-Hispanic	10%	80%	10%	
	Hispanic/Other	20%	20%	60%	
E. Serodiscordant anal intercourse partnerships in the Involvement, MAN Project, and Checking In studies	White non-Hispanic	77%	6%	17%	Involvement and MAN Project studies (2010-2014) included HIV testing and conducted among white and black MSM only. ^{5,6} Checking In (2009-2010) was a national online study that did not include HIV testing and contributes estimates for only Hispanic/Other HIV-infected MSM. ^{7,8}
	Black non-Hispanic	6%	87%	7%	
	Hispanic/Other	30%	40%	29%	
F. All anal intercourse partnerships in the Checking In study	White non-Hispanic	64%	12%	24%	
	Black non-Hispanic	16%	68%	16%	
	Hispanic/Other	38%	19%	43%	

Appendix, Table 3.
Results of sensitivity analyses of racial/ethnic mixing in serodiscordant relationships of MSM

	Scenario 1: Observed Continuum	Scenario 2: Racially-equivalent care		Scenario 3: Black MSM have 95% diagnosis		Scenario 4: Black MSM have 95% retention		Scenario 5: Black MSM have concurrent 95% diagnosis and 95% retention	
	Incidence rate ratio	Incidence rate ratio	Change from Scenario 1	Incidence rate ratio	Change from Scenario 1	Incidence rate ratio	Change from Scenario 1	Incidence rate ratio	Change from Scenario 1
Racial/ethnic mixing scenario									
A. 100% racial concordance	7.92	5.80	-27%	5.81	-27%	5.93	-25%	3.28	-59%
B. 90% racial concordance	7.91	6.07	-23%	6.07	-23%	6.18	-22%	3.81	-52%
C. 80% racial concordance	7.89	6.35	-20%	6.35	-20%	6.44	-18%	4.39	-44%
D. 80% black and white non-Hispanic, 60% Hispanic/Other concordance	7.89	6.47	-18%	6.47	-18%	6.14	-17%	4.68	-41%
E. Serodiscordant anal intercourse partnerships in the Involvement, MAN Project, and Checking In studies	9.20	7.62	-17%	7.62	-17%	7.71	-16%	5.66	-38%
F. All anal intercourse partnerships in the Checking In study	9.22	8.08	-12%	8.09	-12%	8.15	-12%	4.24	-37%

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