

BACKGROUND

Changing the trajectory of HIV incidence among gay men and other men who have sex with men (MSM) in the US will necessitate novel engagement strategies to deliver HIV testing, prevention, and treatment strategies to reach those not in care. HPTN 078 evaluated the utility of deep chain respondent driven sampling (DC-RDS) to enroll people disconnected from HIV prevention, treatment, care services in four urban centers in the US.

METHODS

Adult MSM reporting anal sex were enrolled in Birmingham, Boston, Baltimore, and Atlanta. Recruitment diagnostics analysis and creation of the wave number variable was conducted using RDS Analyst. The wave variable was further grouped into five groups consisting of waves 0 (seeds), 1, 2, 3-6 and 7-17. The grouping of the waves was data driven.

The assessment of statistically significant differences in the composition of the screened participants by wave was conducted with a non-parametric test for trend (Wilcoxon-type test) using Stata’s `nptrend` package.

RESULTS

TABLE 1. Number of seeds and recruits by site

Site	# of waves	Recruits	Seeds	Total N	% seeds
UAB – Birmingham, AL	14	191	17	208	8.2%
Fenway – Boston, MA	17	193	47	240	19.6%
JHU- Baltimore, MD	15	182	95	277	34.3%
Ponce – Atlanta, GA	8	135	109	244	44.8%
Total		701	268	969	27.7%

Seeds contributed 27.6% of the overall screening data. The seed contribution varied significantly by site from 8.2% (Alabama) to 44.8%(Ponce de Leon), see table above. In the combined data from all sites, there were no statistically significant differences between seeds and recruits except for race.

FIGURE 1. Recruitment trees by race



RESULTS

TABLE 2. Proportion (%) distribution of social demographics characteristics by wave

Variable (n)*	Wave number					Trend test
	0 (Seeds)	1	2	3-6	7-17	
<b>Race</b>						
Hispanic (n=85)	7.9	10.9	13.6	7.2	6.9	<0.001
Asian (n=9)	0.8	0.5	1.7	1.4	0.5	
Black (n=641)	77.4	63	64.4	63.8	59.3	
White (n=211)	12.8	22.8	18.6	25.1	32.3	
Other (n=17)	1.1	2.7	1.7	2.4	1.1	
<b>Sexual orientation</b>						
Other (n=74)	7.5	4.9	6.7	9.6	9.0	0.003
Bisexual (n=230)	20.3	22.3	22.7	23.1	31.7	
Gay/Homosexual (n=662)	72.2	72.8	70.6	67.3	59.3	
<b>Health coverage/insurance</b>						
No (n=137)	13.5	14.1	5.9	12	22.8	0.052
Yes (n=829)	86.5	85.9	94.1	88	77.2	
<b>Hides sexual orientation from other people</b>						
Not at all (n=460)	52.1	54.1	48.3	40.4	42.6	0.004
Other response (n=422)	39.0	38.4	44.9	52.9	44.7	
Very much (n=84)	9.0	7.6	6.8	6.7	12.8	
<b>Participating in LGBT community is a positive thing to do</b>						
Agree(n=518)	55.4	56.8	58.0	51.9	46.8	0.029
Neutral(n=179)	18.0	22.2	23.5	20.2	24.5	
Disagree(n=205)	19.1	17.8	15.1	20.2	18.6	
Prefer not to answer (n=65)	7.5	3.2	3.4	7.7	10.11	
<b>Self reported HIV status</b>						
Negative(n=318)	25.3	39.3	45.5	46.4	44.8	<0.001
Positive (n=499)	74.8	60.7	54.5	53.6	55.2	
<b>HIV status</b>						
Negative (n=343)	20.6	38.92	42.9	39.8	44.4	<0.001
Positive (n=621)	79.4	61.1	57.1	60.2	55.6	

\* Sum of n may not equal to 969 due to variable specific missing data

969 MSM were available for these analyses. Among other differences, those enrolled in later waves were less likely to identify as gay, less likely to report health care coverage, less likely to have heard of post-exposure prophylaxis after sex (36.9% vs 31.3%, p<0.05, not shown in table 2), more likely to hide sexual orientation from other people, and were less likely to agree with a statement that participation in LGBT community positive. Changes in race/ethnicity across waves were driven by the RDS outcomes in Boston and Atlanta

CONCLUSION

MSM enrolled in earlier waves included those more known to community partners of clinical research sites . While there are city-specific network dynamics, these data highlight that MSM enrolled later were less connected to the LGBT community, less likely to disclose sexual orientation, and less likely to report health care coverage. Taken together these results suggest that DC-RDS is an effective recruitment strategy to find and recruit MSM marginalized from health care and from community and family support networks.