TRANSWOMAN POPULATION SIZE

he recent findings of Crissman et al.¹ on trans people in the United States provide much-needed insight on the makeup of the population and help reconcile dilemmas we have encountered in our research with transwomen over many years. In particular, our estimates of the number of transwomen in San Francisco, California $(1528 \text{ in } 2011, \text{ for example})^2$ and our characterization of their socioeconomic status (SES)³ have struck us as too low (i.e., our estimates of income and education are lower than in reality). The authors found that 53.8% of trans people nationally are transwomen, and 50% live under 200% of the poverty level. In addition, Flores et al. found that 0.76% of adults in California are trans.⁴ Assuming that these parameters apply to San Francisco, there should be 2977 transwomen in the city (728059 adults \times 0.0076 \times 0.538). Crissman et al. and Flores et al. validate our concerns and offer a calibration to correct our projections.

We believe that the discrepancy arises from how transwomen access or are reached for services and are sampled in research. Recruitment methods relying on peer

Letters to the editor referring to a recent *AJPH* article are encouraged up to 3 months after the article's appearance. By submitting a letter to the editor, the author gives permission for its publication in *AJPH*. Letters should not duplicate material being published or submitted elsewhere. The editors reserve the right to edit and abridge letters and to publish responses.

Text is limited to 400 words and 7 references. Submit online at www. editorialmanager.com/ajph. Queries should be addressed to the Editor-in-Chief, Alfredo Morabia, MD, PhD, at editorajph@qc.cuny.edu. referrals incentivized with cash, such as the respondent-driven sampling used in our surveys,³ tend to lead to recruitment from social networks of lower SES.⁵ Recruitment from publicly funded services may also tend to reach those of lower SES. Population size estimation methods based on such surveys and client registers (e.g., capture– recapture and multiplier methods) will underestimate population sizes because of the positive correlation between the two sources.⁶ They will also overstate the lower SES of the overall transwoman population.

When we reapportion our local estimates to the SES data described by Crissman et al., on the assumption that we undersampled higher SES transwomen, our new estimate for San Francisco would be 3107 transwomen, more than twice the 2011 estimate and very near the number predicted by Flores et al. We conclude that much of the research among transwomen in San Francisco and likely elsewhere, including population size estimates, measures of HIV prevalence, and other health issues, may be overly focused on lower income transwomen. This may also be true for other research on trans people relying on similar methods. Meanwhile, the health needs of higher income transwomen may be less well understood than those of lower income transwomen, and members of this population are deserving of efforts to include them in health research. APH

> H. Fisher Raymond, DrPH Erin C. Wilson, DrPH Willi McFarland, MD, PhD, MPH&TM

ABOUT THE AUTHORS

All of the authors are with the Center for Public Health Research, San Francisco Department of Public Health, San Francisco, CA.

Correspondence should be sent to H. Fisher Raymond, DrPH, Center for Public Health Research, San Francisco Department of Public Health, 25 Van Ness, Suite 500, San Francisco, CA 94102 (e-mail: Hfisher.raymond@sfdph.org). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

This letter was accepted June 12, 2017. doi: 10.2105/AJPH.2017.303964

CONTRIBUTORS

All of the authors contributed equally to this letter.

REFERENCES

1. Crissman HP, Berger MB, Graham LF, Dalton VK. Transgender demographics: a household probability sample of US adults, 2014. *Am J Public Health*. 2017; 107(2):213–215.

2. San Francisco Department of Public Health. HIV/ AIDS epidemiology annual report, 2010. Available at: https://www.sfdph.org/dph/files/reports/ RptsHIVAIDS/HIVAIDAnnlRpt2010.pdf. Accessed June 20, 2017.

3. Santos GM, Wilson EC, Rapues J, Macias O, Packer T, Raymond HF. HIV treatment cascade among transgender women in a San Francisco respondent driven sampling study. *Sex Transm Infect.* 2014;90(5):430–433.

4. Flores AR, Herman JL, Gates GJ, Brown TNT. *How Many Adults Identify as Transgender in the United States*? Los Angeles, CA: Williams Institute; 2016.

5. Kendall C, Kerr L, Gondim RC, et al. An empirical comparison of respondent-driven sampling, time location sampling and snowball sampling for behavioral surveil-lance in men who have sex with men, Forteleza, Brazil. *AIDS Behav.* 2008;12(suppl 4):S97–S104.

6. Wesson P, Reingold A, McFarland W. Methodological and empirical comparisons of methods to estimate the size of hard-to-reach populations: a systematic review. *AIDS Behav.* 2017;Epub ahead of print.

EDITOR'S NOTE

Crissman et al. declined to respond.