

# Field implementation

# Population estimate worksheets



**UCSF GLOBAL HEALTH SCIENCES**

Improving health and reducing inequities worldwide



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This chapter provides

- Population size estimate summary tool
- Census and enumeration example spreadsheet

GSI provides technical assistance (TA) in implementing IBBS. Please [visit our website and contact us](#) for trainings and TA.



# Population size estimation summary tool

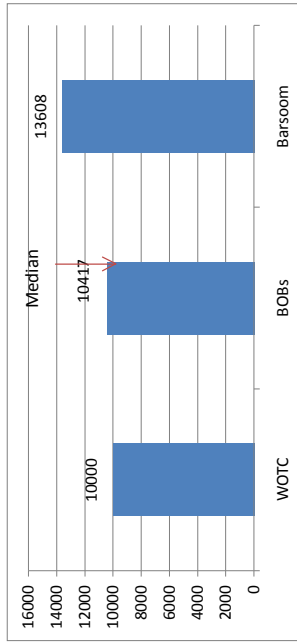
This tool is designed to summarize multiple approaches to size estimation implemented in an IBSS. It is NOT the size estimation method itself! It does allow you to enter the data collected elsewhere and use those data to calculate the individual size estimates.

This tool can be downloaded as an Excel file here: [globalhealthsciences.ucsf.edu/pphg/gsi/epidemiologic-surveillance/ibbs-toolbox](http://globalhealthsciences.ucsf.edu/pphg/gsi/epidemiologic-surveillance/ibbs-toolbox)

Multipliers <sup>1</sup>		Proportion in study		Service counts		Estimates		95% Cis *	
Source of count data	Crude	Adjusted	SE					LB	UB
Bob's HIV Testing Service	0.053	0.024	0.006	250		10,417		5153	15,682
Literature based <sup>2</sup>		Source demographic estimates of population size		Prevalence estimates from literature		Population size estimates based on above prevalence estimates		95 % Cis	
				0.012	0.015	0.02	0.03	0.05	0.06
Barsroom census, adult men				1,133,998	17,010	22,680	34,020	56,700	68,040
									Not Applicable

Estimate summary	
<b>Literature</b>	
Barsroom census denominator	13,608
<b>Multipliers</b>	
Bob's HIV Testing Service	10,417
<b>WOTC<sup>3,4</sup></b>	
	10,000
	<b>Median</b>
	<b>Mean</b>
	10,417
	11,342

Arrange estimates in rank order here to make figure



**NOTES**

1. Calculated as: service count / proportion in sample
2. Denominator of adult men / prevalence estimate in literature.
3. Median value of reported opinions: SECOND time question was asked. Cis not applicable
4. Surowiki

\* See next sheet to calculate Cis



E(M)	250	250 M	Number of visited individuals at the service providers listed in the survey
E(P)	0.024	0.024 P (between 0 and 1)	Proportion of samples mentioned in the RDS that they have visited (from RDSAT output)
Var(M)	250	0.006 SE	Standard Error of P (from RDSAT output)
Var(P)	0.000036		
N	10417		
Var(N)	7215711.806		
SE(N)	2686.2077		
Alpha	0.05		
CI95% for N			
	Lower limit	5153	
	Upper limit	15682	

$$Var(N) = \frac{Var(M)}{[E(P)]^2} + \frac{[E(M)]^2}{[E(P)]^4} Var(P)$$



