

Global HIV Strategic Information Working Group

Biobehavioural Survey Guidelines

For Populations At Risk For HIV



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Authorship and acknowledgements

Authors

Abu Abdul-Quader, Mark Berry, Trista Bingham, Janet Burnett, Maxia Dong, Amy Drake, Avi Hakim, Wolfgang Hladik, Angele Marandet, Anne McIntyre, Chris Murrill, Joyce Neal and Nita Patel of the US Centers for Disease Control and Prevention (CDC); Rajatashuvra Adhikary (formerly of FHI 360); Tobi Sidel of Partnership for Epidemic Analysis (PEMA) Partners; Angela Kelly-Hanku of the University of New South Wales and of the Papua New Guinea Institute of Medical Research; and Katherine Lew of FHI 360.

Editors

Abu Abdul-Quader, Mark Berry, Trista Bingham, Janet Burnett, Dana Dolan, Maxia Dong, Amy Drake, Avi Hakim, Wolfgang Hladik, Angele Marandet, Anne McIntyre, Chris Murrill, Joyce Neal and Nita Patel of CDC; Rajatashuvra Adhikary (formerly of FHI 360), Johannes van Dam and Steve Mills of FHI 360; staff of the Joint United Nations Programme on HIV/AIDS (UNAIDS); Jesus Garcia Calleja of WHO; Thomas Rehle of the Human Sciences Research Council (HSRC); Tobi Sidel of PEMA Partners; and Ted Alcorn of the Bill & Melinda Gates Foundation.

Reviewers

Maxia Dong, Shahul Ebrahim, Avi Hakim, Wolfgang Hladik, Amy Herman-Roloff, Andrea Kim, Rachel Kwezi, Sheryl Lyss, John Macom, Chris Murrill, Patrick Nadol, Sanny Chen Northbrook, Bharat Parekh, Nita Patel, Dimitri Prybylski, Ray Shiraishi and Peter Young of CDC; Rajatashuvra Adhikary (formerly of FHI 360), Timothy Mastro, Mike Merrigan, Steve Mills and Johannes van Dam of FHI 360; staff of UNAIDS; Jesus Garcia Calleja of WHO; Thomas Rehle: HSRC and University of Cape Town; Tobi Sidel of PEMA Partners; and Angela Kelly-Hanku of the Kirby Institute, University of New South Wales, and Sexual and Reproductive Health Unit, Papua New Guinea Institute of Medical Research.

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Ashley Burson and Laura Porter of CDC; Helen Coelho, Amanda Geller, Seseni Nu, Betty Treschitta and Almeta West of ICF International, Vanessa Brown of the Office of the US Global AIDS Coordinator; Maria Au, and Tisha Wheeler of the United States Agency for International Development (USAID), and Emily Crawford (formerly with USAID)

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Foreword

To address a public health problem, you first have to measure it accurately. Biobehavioural surveys have proven to be invaluable tools for measuring and addressing HIV, which remains the world's biggest public health challenge. This current iteration of the *Biobehavioural survey guidelines* is a welcome addition to the list of useful documents targeting those who plan to conduct biobehavioural surveys of HIV and HIV-risk behaviours in their countries. The guidelines can be applied across different countries, and to this end the document provides questionnaire modules that can be adapted to various contexts. The guidelines are presented in a logical and coherent manner, covering all survey aspects, from conceptualization of the survey to dissemination of the report and data use.

The major focus is on key populations, which are often hidden and difficult to measure as part of general population-based surveys. This is particularly important because key populations are at high risk for HIV, and for exclusion from HIV and other health services. Estimating the size of these populations and their burden of HIV disease is extremely challenging, and these guidelines are a valuable resource for survey specialists as they undertake the surveys.

The guidelines fill a gap in providing tools for surveying HIV prevalence in key populations, and the included questionnaires may also inform general population surveys. The 2000 Behavioural Surveillance Survey guidelines, while still useful, needed to be updated with newer survey methodology techniques and to incorporate biomarker testing. The guidelines will also serve as a textbook for students interested in working for research institutions that embark on epidemiological surveys.

Currently, many researchers undertake surveys using country-specific indicators. These guidelines standardize the conduct of biobehavioural surveys to permit comparisons between as well as within countries over time. The use of common indicators allows for uniformity in the measurement of items and production of data that can be used by various global, regional, national and local actors in planning prevention and treatment services, tracking progress in the provision of HIV prevention and treatment services, and identifying gaps in access to services. The appendix on indicators will help scientists and data specialists to harmonize data management with a view to collaborating across countries using common yardsticks.

The authors of these guidelines considered key aspects of surveys, from survey planning, design, data collection, analysis, presentation of results and dissemination of reports to data use. These guidelines are a must-have for anyone planning to conduct surveillance, whether experienced or not. It is our hope that the guidelines will help to refine measurement of HIV and help countries to address the unmet needs of their communities, to further reduce the toll of the epidemic.

Olive Shisana

*Hon Professor, University of Cape Town
President and CEO, Evidence Based Solutions*

and

Chris Beyrer

*Desmond M. Tutu Professor of Public
Health and Human Rights,
Johns Hopkins University,
Bloomberg School of Public Health*

Preface

Biobehavioural surveys (BBS) provide specific population-level estimates for the burden of HIV disease and HIV-related risk factors, and estimates for the coverage of prevention and treatment services for populations at increased risk for HIV. These key populations include men who have sex with men, sex workers, people who inject drugs, transgender individuals, prisoners and other vulnerable populations at increased risk for HIV infection. For many of these stigmatized and socially marginalized populations, there are no conventional sampling frames, meaning that complex sampling designs are needed for these populations. The most frequently used survey guidelines and tools to date are the *Behavioral surveillance surveys*, issued in 2000. However, new HIV prevention, care and treatment policies – coupled with the emergence of new data needs, methods and technologies – warranted a thorough update of the 2000 publication. Thus, the US Centers for Disease Control and Prevention, FHI 360, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) are publishing these new *Biobehavioural survey guidelines for populations at risk for HIV*. This revised publication outlines the latest approaches and methodologies, and includes updated questionnaires for planning and conducting BBS.

The new BBS guidelines are a comprehensive resource that covers all survey aspects, from conceptualization, planning, undertaking and costing of the survey to dissemination of a report and use of data. The ultimate goal of these guidelines is to facilitate the collection of high-quality survey data for informed public health action.

The new guidelines:

- update the overall approach and methodology of BBS in light of advances made during the past two decades;
- improve the quality of BBS by providing comprehensive guidance, particularly for sampling methods and the collection of interview and biomarker data;
- increase the relevance of survey data for public health programming by ensuring the collection of representative and actionable data; and
- promote the use of survey findings to improve service delivery, monitoring and evaluation, and policy development.

This document includes several new topics and features:

- **formative assessment** covers the initial collection of information about a population, to inform how best to prepare and conduct a BBS.

- **respondent driven sampling** covers this peer-driven chain-referral sampling method, which is particularly useful for hard-to-sample populations, and is currently viewed as the most suitable probability-based sampling design.
- **biomarker considerations** covers the entire range of biological measurements, from HIV serology to viral load, HIV recency, and biomarkers of other sexually transmitted infections. The document emphasizes the potential of population-level, aggregate viral-load metrics, such as prevalence of unsuppressed viral load.
- **population size estimation** provides guidance on using integrated methods to estimate the number of members of a population.
- **questionnaire modules** are included for collecting data on a wide range of topics, including exposure to and uptake of HIV-related services. Accompanying this publication will be electronic ready-to-use questionnaires, with the aim of keeping the questionnaires up-to-date as standards and indicators change.
- **indicators appendix** lists standard and newly proposed indicators for both data and biomarker-related metrics.

These guidelines, built on the lessons learned by experts and implementers from around the world, are intended to serve as a one-stop resource for survey planning and implementation, and dissemination of findings. They are expected to improve the quality of survey data through better survey design and implementation, and to promote the standardization of data measures to improve the comparability of survey data. Most of all, the guidelines should make it easier to plan and conduct BBS. By providing sample documents and guidance on every step of the process, we hope that these guidelines strengthen the capacity of public health workers to collect the information they need in a timely manner, allowing for an effective and strategic response to stop the HIV epidemic among key populations.

Dr Shannon Hader

*Director, Division of Global HIV and TB,
Center for Global Health/CDC*

Dr Gottfried Hirschall

*Director, Department of HIV/AIDS and Global
Hepatitis Programme, WHO*

Dr Luiz Loures

*Deputy Executive Director,
Programme Branch, UNAIDS.*

Dr Timothy Mastro

Chief Science Officer, FHI 360

Abbreviations and Acronyms

ACASI	audio computer-assisted self-interview	QDS	Questionnaire Development System
ART	antiretroviral therapy	REC	research ethics committee
ARV	antiretroviral	RDS	respondent-driven sampling
BBS	biobehavioural survey	RNA	ribonucleic acid
CAB	community advisory board	RPR	rapid plasma reagin
CAPI	computer-assisted personal interview	RS	random start
CASI	computer-assisted self-interview	RT	rapid test
CCS	conventional cluster sampling	SOP	standard operating procedure
CDC	Centers for Disease Control and Prevention	SI	sampling interval
CI	confidence interval	SRS	simple random sampling
CRC	capture-recapture method	STD/STI	sexually transmitted disease/sexually transmitted infection
CT	<i>Chlamydia trachomatis</i>	SW	sex worker
DBS	dried blood spot	TB	tuberculosis
DEFF	design effect	TG	transgender person
DFA	direct fluorescent antibody	TLS	time-location sampling
DNA	deoxyribonucleic acid	UN	United Nations
EIA	enzyme immunoassay	UNAIDS	Joint United Nations Programme on HIV/AIDS
EMoS	estimated measure of size	UPC	unique participant code
EPS	equal probability sampling	VDRL	venereal disease research laboratory
FSW	female sex worker	VL	viral load
FP	family planning	WB	western blot
GoC	game of contacts	YCS	Y chromosomal sequences
HBV	hepatitis B virus		
HCV	hepatitis C virus		
HIV	human immunodeficiency virus		
HPV	human papillomavirus		
HSRC	Human Sciences Research Council		
HSV-2	herpes simplex virus-2		
ID	identification number		
IEC	information, education and communication		
IRB	institutional review board		
MoS	measure of size		
MSM	men who have sex with men		
NAAT	nucleic acid amplification test		
NG	<i>Neisseria gonorrhoeae</i>		
NGO	nongovernmental organization		
PCR	polymerase chain reaction		
PEP	post-exposure prophylaxis		
PMTCT	prevention of mother-to-child transmission		
PPS	probability proportional to size		
PrEP	pre-exposure prophylaxis		
PSU	primary sampling unit		
PWID	people who inject drugs		
QA	quality assurance		

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