

# Workshop on Respondent-driven Sampling Analyst Software

by the  
Hard-to-Reach Population Methods Research Group

*we are:*

Ian E. Fellows, Fellows Statistics  
Lisa G. Johnston, Tulane University, UCSF  
Krista J. Gile, University of Massachusetts - Amherst  
Cori M. Mar, University of Washington  
Mark S. Handcock, UCLA

The project has been supported by the Presidents Emergency Plan  
for AIDS Relief (PEFPAR)  
through the US Centers for Disease Control and Prevention (CDC)  
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*Information available at*

<http://www.hpmsg.org/>

<http://www.hpmsg.org/Workshop>

# Purpose of the Workshop

- Introduce a new comprehensive, user friendly and open-source software package for the analysis of RDS Data.
  - under a continuous-improvement process that you can influence and mold
- To introduce RDS-A to researchers already experienced in RDS methodology and statistics.
- Introduce state-of-the-art analysis and graphics abilities
- Consult with stake-holders in the interest of improving the software prior to more widespread distribution among users of RDS.

# Purpose of the Workshop

- RDS-A includes a user friendly point-and-click graphical user interface
  - allowing for the computation of new and existing estimators and standard errors
  - visualization of recruitment chains
  - diagnostic analysis
  - allows for the analysis of multiple variables at once
  - the saving and re-use of syntax
  - For advanced use, the package may also be accessed through a command line interface to the open-source R programming language (<http://www.r-project.org/>).
- On Wednesday participants will have the opportunity to analyze their own data, and evaluate them using RDS-A.

# The Hard-to-Reach Population Methods Research Group

The Hard-to-Reach Population Methods Research Group (HPMRG) focuses on developing statistical methodology to help improve understanding of hard-to-reach or otherwise "hidden" populations.

See

<http://hpmrg.org/>

and

<http://hpmrg.org/workshop>

Username: rdsanalyst  
password: rds

# Genesis of the Program and Workshop

- HPMRG developing statistical methods for hard-to-reach population sampling and analysis
- Commercial software creators lag research by 10-15 years
- Result: Most researchers that need to use the methods do not have access to state-of-the-art methods.
- Support from PEPFAR and the CDC helps form this missing link!

## Structure of the RDS Analyst program

RDS-A takes advantage of a hierarchy of software:

- R: a programming language for statistical computations
  - very powerful and very flexible
  - the standard environment used by statisticians and biostatisticians
  - open-source
  - has almost all state-of-art and cutting-edge statistical methods

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  - Core statistical and numerical functions
  - Text command driven: command-line and batch file focused (e.g., SAS, STATA, SPSS)

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- RDS Analyst: point-and-click interface to all of the above
  - the RDS Analyst Application
  - much functionality added for analysis

# Finding your way around the program

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- Supplemental help on some data analysis menu items
  - In the *Help* menu, choose *Deducer Help*
- Help on the details of the statistical routines
  - In the *Help* menu, choose *R Help*
  - Search for help on any routine, concept or function
  - Details, arguments, references
  - E.g., “wave”, “RDS-II”