From:	Hudes, Estie
To:	Biostat Listserv
Subject:	In Plain Text; RESCHEDULED CAPS Methods Core and TAPS & CTCRE Fellows presentation: "Handling Missing Data" Part 2, Jan. 14, 2014
Date:	Friday, December 27, 2013 2:44:00 PM

Dear Methods Core seminar participants & TAPS & CTCRE fellows,

Back by popular demand! Our December/January presentations will be covering the topic "Handling Missing Data" in two sessions sponsored jointly by the Center for AIDS Prevention Studies (CAPS) Methods Core, the Traineeship in AIDS Prevention Studies (TAPS), and the Center for Tobacco Control Research and Education (CTCRE). All interested persons are welcome to attend.

Please note, that although the topic is a repeat of presentations from last December & January, these coming seminars have several newly-worked examples as well as demonstrations of various software packages (Stata, Mplus, AMOS). Additionally, they will go into some more detail since we have two hours rather than our usual 1.5 hour time slots. New additions include: Part 2:

• Update on multiple imputation decision points, including how to handle interaction terms, what to do when the dependent variable is missing in a regression analysis involving imputed data, and the minimum number of recommended imputations

• Discussion of convergence issues in MI with an emphasis on multiple imputation through chained equations (MICE). A second worked example featuring customized Stata -mi impute chained- syntax to aid convergence will be discussed

Topic: "Handling Missing Data, Part 2"

Presenters: Tor Neilands, PhD Professor of Medicine Director, Methods Core UCSF / CAPS & Estie Hudes, PhD MPH Specialist / Statistician UCSF/CAPS

Time & Place: Tuesday, January 14, 2014, 2-4 [Part 2] McKusick Conference room 50 Beale Street, 13th floor San Francisco, CA 94105

Abstract: Missing data are ubiquitous in HIV/AIDS and tobacco prevention research. In the first session we presented a general introduction to the handling of missing data using a variety of methods and several software packages, with an emphasis on Stata. We introduced the problem of missing data values, how to prevent them in applied research, missing data mechanisms, and ad hoc methods that have been traditionally used to address missing data values when they are unavoidable. We then discussed a more modern approach based on maximum likelihood (ML), and demonstrate how to perform several ML-based regression analyses using Stata's -sem- command.

In Part 2 of the presentation, offered Tuesday, January 14 from 2-4 at the McCusick conference room at CAPS, we will address how to deal with missing data situations that cannot (yet) easily be handled via ML in most commonly-used software programs, including Stata. Methods discussed include the EM algorithm and, primarily, multiple imputation (MI) based on the concepts developed in Rubin (1987), Schafer (1997) and van Buuren et. al. [1997].

Please note: if you'd like to get a head start on methods for handling missing data, please read ahead of time the following 3 articles and book chapter. The articles can be downloaded from the links via UCSF My Access or similar connection. The book chapter can be obtained by anyone.

For Part 1:

Graham, J. W. 2009. Missing data analysis: making it work in the real world. Annual Reviews Psychology

60:549-576. <u>http://www.annualreviews.org/toc/psych/60/1</u>

Buhi ER, Goodson P, Neilands TB, 2008. Out of Sight, Not Out of Mind: Strategies for Handling Missing Data. Am J Health Behav. 2008;32(1):83-92 https://vpn.ucsf.edu/content/png/aihb/2008/00000032/0000001/,DanaInfo=www.ingentaconnect.com+art00008

For Part 2:

White IR, Royston P, Wood AM, 2011. Multiple imputation using chained equations: Issues and guidance for practice. Statist. Med. 2011, 30 377–399 https://vpn.ucsf.edu/doi/10.1002/sim.4067/,DanaInfo=onlinelibrary.wiley.com+abstract

Acock A. What to do About Missing Values. [Book Chapter] <u>http://psycnet.apa.org/books/13621/002</u> [citation information] <u>http://people.oregonstate.edu/~acock/growth/2010%20Mplus%20Workshop/Stata\_Presentation/acacock.doc</u> [document]

For building entrance at 50 Beale St., please RSVP to Estie Hudes ahead of time. No need to RSVP if you have attended Par 1!

Materials from past Methods Core seminars can be found at <a href="http://caps.ucsf.edu/about/structure-cores/methods-core/methods-core-seminars/">http://caps.ucsf.edu/about/structure-cores/methods-core/methods-core-seminars/</a>

Directions to CAPS: <a href="http://caps.ucsf.edu/about/directions-parking/">http://caps.ucsf.edu/about/directions-parking/</a>

Please note that due to construction the parking information above is incorrect. Check the link below, Parking Information

hope to see many of you at these two presentations, --Estie

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