

**Society for Prevention Research  
27<sup>th</sup> Annual Meeting  
San Francisco, CA**

**Pre-Conference Workshop I**

**Date:** Tuesday, May 28, 2019

**Time:** 8:30 am – 5:30 pm

**Improving the Efficiency of Longitudinal Research Using Responsive and Adaptive Survey Design Techniques** (*To register select: Longitudinal*)

**Underwritten by:** NIH/Office of Disease Prevention

**Organizers and Presenters:**

- Brady T. West, Ph.D., Research Associate Professor, Survey Research Center, Institute for Social Research, University of Michigan-Ann Arbor
- James Wagner, Ph.D., Research Associate Professor, Survey Research Center, Institute for Social Research, University of Michigan-Ann Arbor

**Description:**

This workshop will introduce SPR attendees to the use of responsive and adaptive survey design (RSD/ASD) techniques for improving the efficiency and quality of longitudinal prevention studies. RSD and ASD are state-of-the-art techniques developed by survey methodologists for increasing the efficiency and representativeness of data collections. After introducing the basic concepts of RSD and ASD, along with essential tools for implementing these techniques in practice, the seminar will continue with the presentation of several case studies illustrating how the use of these techniques has increased the efficiency (in terms of cost and quality of estimates) for longitudinal studies employing a variety of data collection modes. Examples will range from major national studies to small local studies, and participants will have the opportunity to participate in three hands-on group exercises aimed at solidifying approaches to making real-time design decisions in this context. The workshop will also instruct participants in how to make meaning of *paradata*, or the rich set of data that arise from the *process* of collecting longitudinal data (e.g., contact attempts, subgroup response rates, etc.), and how these data can be used to inform RSD and ASD.

SPR attendees actively working on the collection of longitudinal data from subgroups of research interest will be able to apply the knowledge gained from this workshop to the improvement of their own data collection efforts. Employing and sharing the knowledge communicated in this workshop widely will enable researchers attending SPR and their collaborators to save money and improve the quality of the results that they produce. The RSD/ASD concepts that will be introduced in this workshop can be applied at any scale, including graduate students planning data collection(s) for their dissertations.

**Target Workshop Audience:**

Prevention Scientists, Prevention Researchers, and Graduate Students studying prevention science who are either designing longitudinal studies aimed at evaluating the effects of prevention strategies on

selected outcomes or currently conducting data collection for these types of longitudinal studies. Having a basic background in research methodology is sufficient but not required.

**Materials to be provided to attendees:**

- Copies of the workshop slides
- A comprehensive bibliography for further reading on RSD/ASD
- An RSD/ASD checklist to guide practical / operational decisions
- Access to the web site for an NIH-funded education program on RSD, containing additional resources and discussion forums

**Presenters:**

**Brady T. West** is a Research Associate Professor in the Survey Research Center at the University of Michigan's Institute for Social Research. He has published widely on the analysis of longitudinal data, specifically in medical and public health contexts, and has first- or co-authored several peer-reviewed journal articles related to this topic (e.g., West and McCabe, 2017, *American Journal of Epidemiology*; West, 2009, *Evaluation and the Health Professions*), in addition to two books presenting appropriate methods for longitudinal data analysis (*Linear Mixed Models: A Practical Guide using Statistical Software* and *Applied Survey Data Analysis*, both now in their second edition). Dr. West is currently the co-PI of an R25 grant from NIH that supports a research education program on Responsive Survey Design at the University of Michigan's Summer Institute in Survey Research Techniques (with Dr. Wagner). More information can be found at the web site for the program: [rsdprogram.si.isr.umich.edu](http://rsdprogram.si.isr.umich.edu). He has also published several papers and book chapters on responsive and adaptive design principles, including a paper with Dr. Wagner in the *Journal of Official Statistics* (2012) on the use of paradata to manage a field data collection based on these principles.

Dr. West has a PhD in survey methodology, and regularly teaches graduate-level courses on survey methodology in the Fall, Spring, and Summer terms at the University of Michigan-Ann Arbor. Together with Dr. Wagner, he has developed 11 short courses on RSD and ASD for the research education program supported by the aforementioned R25 grant, and invited international faculty to Ann Arbor to teach these courses. He is a co-instructor of four of these 11 short courses, and on three different occasions, he has taught a two-day short course with Dr. Wagner on responsive survey design in Washington D.C., targeted to statisticians working in the Federal statistical system. Together, Dr. West and Dr. Wagner are actively trying to disseminate knowledge about these techniques to other fields outside of survey methodology, in hopes of improving data collection efficiency more globally. He feels that they can leverage their experience teaching and researching these topics to effectively communicate these ideas to SPR attendees who are conducting longitudinal research and would stand to benefit substantially from learning more about these ideas and approaches.

**James Wagner** is a Research Associate Professor in the Survey Research Center at the University of Michigan's Institute for Social Research. His current research interests include adaptive survey design to address potential nonresponse biases and indicators of survey data quality. He is the co-author of a recent (2017) book entitled *Adaptive Survey Design* (with Barry Schouten and Andy Peytchev). In addition to having published numerous papers on this topic, he is currently the co-PI of an NIH R25 grant (with Dr. West) that is supporting the development of a research education program on responsive and

adaptive survey design. More information can be found at the web site for the program: [rsdprogram.si.isr.umich.edu](http://rsdprogram.si.isr.umich.edu).

Dr. Wagner's teaching experience is similar to that communicated by Dr. West: he regularly instructs graduate students on topics in survey methodology, and teaches multiple short courses in the RSD program with Dr. West and his other international faculty colleagues. His two-day short course on RSD (co-taught with Dr. West) in Washington D.C. has been very well-received, and he is hoping to further disseminate knowledge about these techniques to a new audience that frequently employs the collection of survey-like data in their work. His collective experience teaching and researching this topic will make for an engaging workshop that will ultimately benefit the research of SPR attendees who are present.

**Outline of Workshop, Including Presenter Roles and Hands-on Aspects:**

I. Introduction - 15 min - J. Wagner

II. Basic Concepts of Responsive and Adaptive Survey Design - 1.5 hours - J. Wagner

III. Hands-On Group Exercise: Going through the RSD Checklist for a Hypothetical Longitudinal Study – 0.5 hours (J. Wagner / B. West)

IV. Morning Break (15 minutes)

V. Essential Tools for Implementing RSD and ASD in Practice: Paradata-Driven Indicators, Dashboards, and Interventions - 2.5 hours (with a break for lunch) - B. West

VI. Hands-On Group Exercise: Defining Interventions in Response to Problems with Attrition – 0.5 hours (B. West / J. Wagner)

VII. Afternoon Break (15 minutes)

VIII. Longitudinal Case Studies: Examples of RSD and ASD in Practice: 1.5 hours - J. Wagner

IX. Hands-On Group Exercise: choosing between RSD and ASD for a Hypothetical Study – 0.5 hours (J. Wagner / B. West)

X. Closing / Q&A – 15 min - J. Wagner / B. West

**Relevance to Conference Themes / TNATF-Identified Themes:**

This workshop is in line with the TNATF's first stated priority for the 2019 preconference workshops ("longitudinal research design and/or data analysis"). The instructors will present examples of the implementation of RSD/ASD in a variety of longitudinal studies (e.g., the Health and Retirement Study, the Relationship Dynamics and Social Life Study, and other small-scale longitudinal studies being performed in clinical settings at the University of Michigan), specifically with a focus on the long-term evaluation of interventions, and illustrate the benefits of implementing these techniques. Hands-on group exercises will also allow participants to think through principled techniques for addressing hypothetical design problems in a real-time fashion, and introduce participants to the practical tools that prevention scientists can use to implement, monitor, and evaluate these types of designs.