WSS

The Washington Statistical Society

SINCE 1926

PRESIDENT'S INVITED TALK AND RECEPTION

TUESDAY, MAY 16, 2023
3:00 – 5:00 PM
MATHEMATICA POLICY RESEARCH CONFERENCE CENTER
1100 FIRST STREET NE, 12TH FLOOR
(near Noma-Gallaudet metro station off red line or PMI Parking Garage on L St.)

**ACCOUNTING FOR BIAS
IN BIG DATA**

SPEAKER: DAVID MARKER, PhD
(Marker Consulting, retired Westat)

DISCUSSANT: JENNIFER PARKER,
PhD (NCHS)

REGISTRATION PROCESS
RSVP BY MAY 12

1. **EVENTBRITE** REGISTRATION

2. FOR REMOTE ATTENDANCE,
   WEBEX REGISTRATION

3. FOR IN-PERSON ATTENDANCE,
   SUBMIT **COVID-19 FORM** TO KWesson@Mathematica-Mpr.com

ACCOUNTING FOR BIAS IN BIG DATA

DAVID MARKER, PhD

ABSTRACT

Government agencies are excited by the prospect of using Big Data sets to supplement and/or replace surveys in the production of official statistics. But Big Data are known to suffer from many sources of potential bias. Do their large sizes overcome these biases so that they can be useful for official data? Recent research by Xiao-Li Meng and others has demonstrated the limitations of Big Data with examples from COVID-19 vaccinations and elections. This talk will summarize some of that research and then look at whether electronic health records can be used to improve on the Behavioral Risk Factor Surveillance System (BRFSS) estimates of diabetes prevalence and control at the state level. This research has wide application to Big Data in general, and the potential usefulness of a wide range of EHR data sets like All of Us and IQVia.

DR. DAVID MARKER has consulted to government offices for over 40 years, retiring from a long career at Westat in 2021. His dissertation topic was on small area estimation, leading to an ongoing interest in improving survey's ability to produce state-level estimates. David continues to do some consulting and this presentation grows from research he has been conducting for the Centers for Disease Control and Prevention (CDC) with staff from the Georgia Tech Research Institute. He is a Past President of the Washington Statistical Society, Fellow of the American Statistical Association (ASA) and American Academy for the Advancement of Science (AAAS), and an Elected Member of the International Statistical Institute. In 2022 he received the ASA's Founders Award for his career of service to the organization.