



Society for Prevention Research
27th Annual Meeting
May 28 – May 31, 2019
Hyatt Regency San Francisco, San Francisco, CA

Prevention Science in a Big Data World

Submission deadline: October 31, 2018

Over the last 27 years, the Society for Prevention Research (SPR) has established itself as the leading scientific organization devoted to the goal of advancing prevention science to promote health and well-being. The cornerstone of SPR's efforts is the Annual Meeting, where the prevention science community, including researchers, practitioners, advocates, administrators, and policy-makers, come together to discuss new directions in prevention science and opportunities for the future.

The SPR Conference Committee invites submissions for the conference that focus on the core areas of interest to SPR, including the general themes of research related to epidemiology and etiology; development and testing of interventions; implementation and dissemination strategies; research, policy, and practice; and innovative methods and statistics (see below). Submissions are encouraged from researchers and policy-makers across the world at all stages of their career and from varied backgrounds including bio-behavioral sciences, communication, computer science, criminal justice, developmental science, education, engineering, genetics, human services, informatics, medicine, public health, social science, and social work. In addition to the general themes we encourage submissions related to the special conference themes described below.

2019 Special Conference Themes

Each year, SPR selects special themes designed to highlight specific areas of research relevant to prevention science. These special themes guide the development of plenary sessions, symposia, and preconference workshops. The SPR Conference Committee encourages basic, applied, and developmental research submissions across the three special themes.

This year's conference theme, *Prevention Science in a Big Data World*, offers the opportunity to consider ways in which the prevention science community can leverage complex data and innovative technologies to open new avenues in prevention research; two of our three special conference themes focus on big data. Recent advances in medical informatics, big data analytics, mobile health (mHealth), smartphone and portable sensor technologies, social media and web generated data, geospatial data, and administrative data from the public health, child welfare, criminal justice, and education fields have laid the groundwork for a rich data environment. Further, data integration, including integrating neurobiological and genetic data, combining data

from multiple studies, and merging data on the same individuals from multiple sources (data linking), presents opportunities to leverage the power of data science in prevention. Complex, transdisciplinary data research opportunities are coming to the forefront at the National Institutes of Health (NIH) with research and grant programs such as the All of Us Initiative, the Big Data to Knowledge (BD2K) Program, the Scientific Data Council and DataScience@NIH initiatives, the Environmental influences on Child Health Outcomes (ECHO) Initiative, and SAMHSA's encouragement of Epidemiological Outcomes Workgroups. In addition, the NIH recently released a new Strategic Plan for Data Science to outline a roadmap for modernizing the NIH-funded data ecosystem in terms of storing, managing, standardizing, sharing, and publishing the vast amounts of data produced by the research community.

Big data hold the promise of advancing prevention science by revealing for scientists and decision makers nuances in existing and emerging public health issues. Also, leveraging such data could guide the design and provision of nimble prevention programs to individuals at precise times of need (e.g., just-in-time adaptive interventions).

Consistent with the conference theme, the SPR Conference Committee encourages special conference theme submissions related to: (1) intensive data capture or provision of intervention content along with related analytics in prevention research and evaluation, and (2) integrating complex data sets to inform prevention science.

Our third special conference theme focuses on understanding how prevention research can address health disparities. SPR's strategic plan highlights this special theme as does the work of SPR's task force on health disparities. The third special conference theme encourages submissions regarding health disparities research, including submissions related to methods and interventions to reduce disparities and increase equity through prevention. Submissions based on this year's third special theme can intersect with the other two special themes or stand alone.

Mobile Health (mHealth) in Prevention Science: Assessment, Intervention, and Analysis

An increasing emphasis on data science and individualized health provides unique opportunities and challenges for prevention science. The rapidly developing field of mHealth is driven in part by the increasing ability to collect intensive longitudinal and real-time data about individuals in their natural environments. Intensive data capture and provision of intervention content offer the promise for prevention and treatment approaches to be implemented, studied, optimized, and tailored based in part on real-time data collected from smartphones, wearable bio sensors, and other sources of frequent reported outcomes. Moreover, data dashboards, predictive analytics, and social network analysis provide just a few examples of analytic methodologies designed to make sense of intensive data. Intensive longitudinal data and data science analytics offer new possibilities for detailed surveillance and epidemiology research, but also for etiological research that can inform intervention development.

The SPR Conference Committee invites submissions under this theme related to (a) the intensive longitudinal assessment of individuals in their natural environments to inform intervention development; (b) modern intervention delivery designed to be intensive, dynamic, and/or responsive to an individual's needs in the moment; and (c) the use of advanced data analysis and visualization tools for intensive longitudinal data.

Big Data Integration

To make the most of big data in prevention science, we need a strong framework to guide the application and dissemination of the best methods to extract, link, and analyze complex datasets. Related data sources include cross-national and state-level administrative and surveillance data, electronic health records, high-dimensional data in genomics, and other biological data. In some cases, we can use existing databases and integrated data registries to access, harmonize, and pool data to assess community needs or test new intervention strategies. In other cases, integrating data from several sources and/or formats requires the establishment of new data repositories, data standards covering usage of common data elements, shared ontologies, and data dictionaries. All efforts at data integration pose ethical and data governance challenges, including those related to privacy, confidentiality, and data security.

Proposals are encouraged that (a) demonstrate the integration of big data from several sources to inform prevention program development, implementation, evaluation, dissemination, and practice, (b) show interdisciplinary collaborations with researchers from fields such as computer science, informatics, and engineering in integrating big data in prevention research and evaluation, (c) illuminate the ethical and other challenges related to big data integration, and (d) demonstrate efforts to communicate big data findings to policymakers and practitioners.

Promoting Health Equity and Decreasing Disparities

Health inequities and disparities adversely affect groups of people who have systematically experienced greater obstacles in accessing health care and prevention interventions based on their economic and/or social status. These include a person's racial or ethnic group, religion, economic status, gender identity, sexual orientation, geographic location, mental health, disability or other characteristics historically linked to stigma, discrimination, or exclusion. The goals of creating health equity and improving health among groups that experience disparities require special efforts. Increased public, government, and private investments in prevention efforts have promise to address these disparities and inequities. One of the challenges these efforts face is the availability of appropriate measures and data to assess prevention needs and prevention program efficacy for the groups facing health disparities.

The SPR Conference Committee seeks proposals that advance understanding of (a) risk and protection across and within different populations, (b) the use of big data to illuminate and help address health disparities, (c) prevention efforts that address health disparities, and (d) policies that promote equity, health, and well-being.

General Conference Themes: Advances in Prevention Research

Epidemiology and Etiology: Submissions under this theme are focused on describing the distribution and patterns of injury and disease (e.g., cancer, cardiovascular disease, substance use disorders, depression, and HIV/AIDS) as well as on identifying risk and protective targets of preventive interventions, especially those with a developmental and/or lifespan approach, or that include neurobiological, genetic, or contextual factors.

Development and Testing of Interventions: Prevention interventions can be tested for efficacy under conditions of high quality assurance and strong research designs ("proof of concept") and tested for effectiveness under real world conditions in settings and systems. Submissions reporting the findings from efficacy or effectiveness trials (including pilot studies with preliminary outcome data) are welcomed, and

those that combine the findings of such trials with one of the special conference themes are particularly encouraged.

Dissemination and Implementation Science: Dissemination, implementation, and operations research bridge the gap between research and everyday practice through a dynamic, transactional process between the public health community and researchers. Submissions under this theme should advance the scientific understanding of dissemination and implementation, including cost-efficient sustainability of preventive interventions into systems. Presentations that focus on program dissemination and implementation outcomes, improve dissemination and implementation processes, or identify individual, provider, organizational, and/or system levels factors that contribute to dissemination, implementation, and effectiveness are encouraged.

Research, Policy, and Practice: Decision makers around the world emphasize evidence-based policy reform. New policy initiatives at the state and national levels require evidence to guide further policy change, such as changes in opioid prescribing practice guidelines and new approaches to improving the educational system. This theme encourages submissions that evaluate or estimate the outcomes of planned, new, or existing policies, that look at the impact of efficacious programs in emerging policy contexts, and that demonstrate how empirical research has been used to inform and guide new policies. In addition, research that describes and evaluates the processes by which policies have been formed, developed, and implemented are encouraged. A wide variety of content areas are welcomed, including emergent areas such as marijuana legalization, along with recurring areas of concern such as cancer screening, HIV antiretroviral therapy compliance, education policy, gun safety, obesity prevention, and anti-bullying laws and policies. Proposals focused on international research or comparative research across policy contexts and proposals that combine the findings of such research with one of the special conference themes are particularly encouraged.

Innovative Methods and Statistics: “Cutting edge” methodological studies and analyses that address measurement, statistical, and design challenges to prevention science are invited. Examples may include systems science approaches to conceptualize prevention at the micro- or macro-levels of analyses; advances in latent variable techniques or longitudinal data analysis techniques; alternative intervention designs for when randomization is not possible; new methods for optimization of interventions; and adaptive interventions and SMART designs. Presentations should highlight the challenges related to prevention science that these innovative design and statistical methods can address along with the additional benefits gained by using these techniques. Submissions in this theme may also fit within one of the special conference themes.

NIDA International SPR Poster Session

The National Institute on Drug Abuse (NIDA) is sponsoring an international poster session. Posters will highlight drug abuse prevention and/or drug-related HIV prevention research completed in international settings by international, domestic, and cross-nation teams of researchers. SPR will issue a separate call for submissions to this international poster session.