Conducting Economic Analyses in Prevention Research: *Methods & Tools for Evaluating the Impact of Prevention*

**Presenters**
Brian T. Yates, PhD, Department of Psychology, American University
Steve Aos, Director, Washington State Institute for Public Policy

**Chairs**
D. Max Crowley, MS, Human Development and Family Studies, The Pennsylvania State University
Laura G. Hill, PhD, Department of Human Development, Washington State University

**Overview & Format**
The workshop is a hands-on introduction to economic analysis of prevention programs. Participants will learn alternative strategies for modeling, evaluating, managing, and systematically improving the cost-effectiveness, cost-benefit, and cost-utility of health and human services. In addition, participants will be introduced to a cutting edge benefit-cost software developed by Steve Aos and the State Institute for Public Policy. The target audience is researchers familiar with social science methods but new to economic analysis.

**Description**
In the first part of the workshop, Dr. Yates will introduce participants to methods of measuring costs and quantifying outcomes at the level of the individual consumer. A quantitative understanding of what occurs between the "costs in" and "outcomes out" is enhanced by a model that distinguishes between implementation of and participation in program procedures, and between desired and actual change in biopsychosocial processes responsible for program outcomes. Examples of each step in understanding and improving relationships between resources used, procedures implemented, biopsychosocial processes altered, and outcomes produced are drawn from the instructor's research in health, mental health, and substance abuse settings. In addition, several studies are reanalyzed to illustrate how resource-activity-process outcome analyses enhance the applicability of basic and applied research for the systematic understanding and management of human service systems. Topics to be covered will include:

- Why conduct cost-inclusive evaluations?
- Approaches to measuring costs and outcomes to improve cost-effectiveness and benefit cost analyses of evidence-based programs
- Describing cost-effectiveness and benefit-cost relationships
- Making good decisions about cost and outcome data
- Ethics of cost-inclusive evaluations

In the second part of the workshop, Steve Aos will (1) present the benefit-cost model developed by the Washington State Institute for Public Policy (WSIPP) and (2) introduce participants to an exciting new software program for conducting benefit-cost analyses. The instructor will walk participants’ though the WSIPP model—a model known to facilitate rigorous benefit-cost analyses that are currently being utilized by policy-makers in Washington State. Then participants will learn about an innovative and flexible software program, developed through a partnership between the WSIPP and MacArthur Foundation, which provides a framework to collect diverse program related fiscal costs as well as participant and social benefits. Of particular interest to the SPR membership will be the capacity of this software package to facilitate monetizing program outcomes using cutting edge analytic methodologies. In the workshop, the instructor will demonstrate how to:

- Decide what costs and benefits are appropriate for economic analyses
• Use the software to estimate the economic costs and benefits of prevention programs
• Estimate benefit-costs ratios from different stakeholder perspectives (e.g., societal, organization, participant) using the software package
• Conduct high-quality sensitivity analyses of economic estimates with the software

In addition to the instruction from Brian Yates & Steve Aos, the participants will receive a variety of materials to facilitate embedding economic analyses within their research programs. In particular, after participating in the workshop participants will have access to multiple cost collection tools that may be used and adapted for conducting rigorous cost analyses. Additionally, participants will leave the pre-conference with a terminology glossary, resource lists and samples of quality economic analyses. Lastly, all participants will be invited to join the Prevention Efficiency Planning and Research working group to continue dialogue around conducting economic analyses within prevention.

Presenters:
**Brian T. Yates** is a tenured Full Professor at American University in Washington, DC. Dr. Yates has published 72 articles, book chapters, and reviews, 5 books, with another publication in press. Most of his work is in applying cost-effectiveness analysis (CEA) or cost-benefit analysis (CBA) to the systematic evaluation and improvement of human services. He is the author of the National Institute on Drug Abuse online manual for guiding substance abuse treatment programs to measure, report, and improve their cost, cost-effectiveness, and cost-benefit. Dr. Yates conducts Cost-Procedure-Process-Outcome Analysis (CPPOA) for human service enterprises and research initiatives in prevention of alcohol, tobacco, and other substance abuse and suicide, and in treatment of opiate, cocaine, and alcohol addictions, residential programs for urban youth and for mentally retarded adults, and consumer-operated services. Dr. Yates consults regularly on a variety of federally funded projects in health, alcohol and drug addiction, media-based substance abuse prevention, mental health services for children and families, and multi-site studies of the costs, benefits, cost-effectiveness, and cost-benefit of adding consumer-operated services to traditional mental health services, and of new accreditation procedures for opioid treatment programs.

**Steve Aos** is the Director of the Washington state institute for public policy, the nonpartisan research arm of the Washington state legislature. He has worked in Washington state's capital for 34 years using cost-benefit analysis for the legislative, executive, and judicial branches. His current work focuses on identifying sound legislative investments in policies to control crime, improve K-12 education, reduce child abuse, reduce substance abuse, and improve other human capital outcomes. He has been at the forefront of national discussions on how to make cost benefit analysis used and useful in applied policy settings.

Chairs
**D. Max Crowley** is a Prevention & Methodology Pre-Doctoral Fellow at Pennsylvania State University. Max’s work focuses on the process of taking prevention and health promotion programs to scale and methodological approaches to studying efficient program diffusion. His work has focused on developing procedures for conducting economic analyses of coordinated systems for prevention diffusion. He currently works on The PROSPER Project, which is a collaboration of university researchers, the Cooperative Extension system, as well as community leaders and schools (PI’s: Mark Greenberg & Dick Spoth). The project seeks to cultivate community partnerships, strengthen families, as well as prevent substance abuse and behavioral problems. Max’s main role on the project is conducting economic analyses focused on assessing the projects' systemic efficiency.

**Laura G. Hill** is an Associate Professor in the Department of Human Development at Washington State University. She conducts research on the translation of evidence-based programs to community disseminations. Her current focus is on causal inference and the development of methodology to enable accurate estimation of program effectiveness and worth in nonexperimental settings. She is joint PI with Robert Rosenman on NIDA grant “Development of Econometric Models for Accurate Estimation of Prevention Program Benefits”.

Outcomes
Participants will come away from this dynamic workshop with:
• Ability to explain why cost-inclusive evaluation is necessary, and why we do it all the time anyway, if not so thoroughly.
• Two or more alternative methods for measuring costs and outcomes, including understanding why measurement should start at the level of the individual participant.
• Two or more alternative methods for understanding relationships between costs and effectiveness, and between costs and benefits (as well as being able to explain a major difference between these two types of relationships).
• Two or more “take home” messages on how to make better, more ethical decisions using cost and well as outcome data.
• Plausible, respectful explanations of why programs and individuals sometimes resist costinclusive evaluation.
• Issues in conducting robust benefit-cost estimates
• Introduction to using a flexible software package for conducting rigorous benefit-cost analyses
• Knowledge of approaches for approaches for increasing the relevancy of their economic evaluations for policy contexts