Please join us for the Center for Technology and Behavioral Health (CTBH) speaker presentation by

Linda M. Collins, Ph.D.
Director of The Methodology Center and Professor of Human Development and Family Studies at Pennsylvania State University

Monday, December 19, 2011
9:00 – 10:30am
Psychiatric Research Center
Training Room, 4th Floor
Rivermill Commercial Center
85 Mechanic Street – Lebanon, NH
This seminar will also be available via WebEx – instructions will be sent via email before the seminar.

The Multiphase Optimization Strategy (MOST) for engineering better behavioral interventions

Today behavioral interventions are used widely for prevention and treatment of health problems and for promotion of health. Behavioral interventions are typically developed and evaluated using a treatment package approach. In this approach the intervention is assembled a priori and evaluated by means of a two-group randomized controlled trial (RCT). Refinement of the intervention is often done by conducting post-hoc analyses on data from the RCT. In this talk I will suggest an alternative framework for building and evaluating behavioral interventions. This new framework, called the Multiphase Optimization Strategy (MOST), is a principled approach to intervention optimization that has been inspired by ideas from engineering. MOST includes the RCT for intervention evaluation, but also includes other steps before the RCT aimed at intervention optimization. Using MOST, behavioral interventions can be optimized using criteria chosen by the intervention scientist. The goal may be to develop a cost-effective intervention; an intervention that achieves a specified level of effectiveness; the briefest intervention that achieves a minimum level of effectiveness; or any other reasonable goal. The MOST framework relies heavily on resource management by strategic choice of highly efficient experimental designs. I propose that MOST offers several benefits, including more rapid long-run improvement of interventions, without requiring a dramatic increase in intervention research resources.

Linda M. Collins, Ph.D., is Director of The Methodology Center and Professor of Human Development and Family Studies at Pennsylvania State University. Dr. Collins is interested in design, measurement, and statistical methodology for prevention and treatment research. Her current interests include phased experimental approaches for optimization of behavioral interventions for prevention and treatment of health disorders; applying ideas from engineering, such as control theory, to intervention optimization; and statistical methods for longitudinal research, particularly Latent Transition Analysis (LTA), a method for fitting models of discrete development. She is Principal Investigator of the Center for Prevention and Treatment Methodology, a P50 Center funded by the National Institute on Drug Abuse since 1996; one of the Investigators of the Tobacco Intervention Laboratory, a P50 funded by the National Cancer Institute; and is co-PI of an NIH Roadmap grant that is exploring how to express
behavioral interventions as dynamical systems. Dr. Collins has received the Cattell Award for outstanding early career contributions to multivariate behavioral research; the Society for Prevention Research’s President’s Award; and two awards from the Pennsylvania State University: the Faculty Scholar Medal in the Social and Behavioral Sciences, and the Pattishall Outstanding Research Achievement Award. She is a Fellow of the American Psychological Association and the Association for Psychological Science, and is a past president of the Society of Multivariate Experimental Psychology and the Society for Prevention Research.

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The Center for Technology and Behavioral Health (CTBH) is a P30 “Center for Excellence”, funded by the National Institute on Drug Abuse (NIDA), composed of an interdisciplinary research group focused on the development, evaluation and dissemination of technology-based therapeutic tools targeting substance use and co-occurring behavioral health issues. The Center, directed by Dr. Lisa Marsch, is housed within the Psychiatric Research Center at Dartmouth College, and includes collaboration with researchers at the National Development and Research Institutes, Inc. (NDRI).

Please contact Kristin Collins, kristin.collins@dartmouth.edu with any questions or to be added to this distribution list.

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