

Department of Population and Quantitative Health Sciences

Weekly Newsletter

SEPTEMBER 28 – OCTOBER 2, 2026



UMass Chan
MEDICAL SCHOOL

NEW AWARD



Dan Amante's proposal for the Summer 2026 Pilot Project Program (PPP), titled "*Optimizing Digital Diabetes Care through a Learning Health System Approach*" has been chosen for funding by the Scientific Review Committee as part of the UMass Clinical and Translational Science Award (UMCCTS) Pilot Project Program.

Award dates: September 1, 2026 – August 31, 2027

Award amount: \$50,000

Congratulations, Dan!

UPCOMING EVENTS

Monday, October 5, 1:00-2:15 PM

Gerontology Speaker Series



Title: Implementation Science and Rehabilitation Research

Sponsored by: UMass Boston, Gerontology and Gerontology Institute and UMass Chan, PQHS

Presenter: Lisa Juckett, PhD, OTR/L, CHT, Associate Professor, Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University

via Zoom: <https://umassboston.zoom.us/j/94175483404>, Password: Boston

For more information contact Whitney Mills: whitney.mills@umb.edu

Wednesday, October 7, 10:00 – 11:00 AM, Zoom

Research Methods Meeting



Presenter: Aditya S. Khanna, PhD, Associate Professor of Behavioral and Social Sciences, Brown University School of Public Health

Title: Systems Science Methods for Public Health Planning: From HIV Transmission on Networks to Substance Use across the Lifecourse

Abstract: Systems science approaches are a useful tool for public health planning where purely empirical data are difficult to collect due to ethical, logistical, or financial barriers. This talk develops that idea across two problems and two modeling traditions. First, we discuss an agent-based network model of HIV transmission among young Black men who have sex with men in Chicago. Dynamic sexual partnerships generated from cohort data are coupled with agent-level demography, HIV biology, antiretroviral treatment and pre-exposure prophylaxis. Calibrated to

observed HIV prevalence and incidence, the model simulates interventions to inform Getting to Zero (GTZ) initiatives. Second, we turn to the association between alcohol use and cancer risk over the lifecourse. A discrete-time microsimulation is developed, linking lifecourse alcohol-use trajectories to cancer hazard. The model quantifies how the timing and magnitude of alcohol use shape cancer risk, motivating a decision-support tool. Throughout both parts, common themes emerge, including multi-source parameterization, calibration to population targets, high performance computing-enabled parameter searching, and counterfactual analysis to inform public health action.

Bio: Trained as a computational social scientist, Dr. Aditya Khanna is currently Associate Professor of Behavioral and Social Sciences at the Brown University School of Public Health. His work focuses on networked communities and systems, and how public health challenges diffuse through them. He develops simulation models to inform equity-focused initiatives for HIV prevention, mitigation of substance use disorders, and cancer disparities, with attention to structural systems such as incarceration, racism and minoritization of sexual or gender identity. Click [here](#) to join.

Friday, October 9, 12:00-1:00 PM

Qualitative Research Office Hours

Discussion: IRB Considerations for Qualitative Studies. Dr. Jes Pagano-Therrien (IRB Chair) will be attending to answer your questions. This is an open online meeting for all interested in qualitative research methods, where participants may choose to present to other qualitative researchers their research project, proposal, manuscript, or idea for discussion and feedback. A short

basic methods presentation will also be planned, such as using conceptual models, immersion/crystallization, or developing a coding structure. Click [here](#) to join.

Wednesday, October 14, 12:00 - 1:00 AM, Zoom

Title: Do You Speak Teen? Communicating Effectively with Adolescents Through Structured Psychosocial Assessment

Sponsored by: [New England ATTC - Addiction Technology Transfer Center \(ATTC\) Network](#)

Description: Adolescents often present unique communication challenges for healthcare, behavioral health, and youth-serving professionals. Building trust, maintaining confidentiality, and conducting developmentally appropriate assessments are essential skills for identifying strengths, risk behaviors, and opportunities for early intervention. This webinar will introduce participants to the HEADSSS/SSHADESS psychosocial assessment framework and demonstrate practical strategies for engaging adolescents in conversations about home life, school, substance use, mental health, sexuality, safety, and overall well-being. Participants will learn techniques for conducting strength-based interviews, screening for substance use and other high-risk behaviors, and implementing brief interventions that support healthy adolescent development and informed clinical decision-making. Click [here](#) to register.

Wednesday, October 21, 10:00 – 11:00 AM, Zoom

Research Methods Meeting



Presenter: Troy Wixson, PhD

Title: A three-groups non-local model for combining heterogeneous data sources to identify genes associated with Parkinson's Disease

Abstract: We seek to identify genes involved in Parkinson's Disease (PD) by combining information across different experiment types. Each experiment, taken individually, may contain too little information to distinguish some important genes from incidental ones. However, when experiments are combined using the proposed statistical framework, additional power emerges. The fundamental building block of the family of statistical models that we propose is a hierarchical three-groups mixture of distributions. Each gene is modeled probabilistically as

belonging to either a null group that is unassociated with PD, a deleterious group, or a beneficial group. This three-groups formalism has two key features. By apportioning prior probability of group assignments with a Dirichlet distribution, the resultant posterior group probabilities automatically account for the multiplicity inherent in analyzing many genes simultaneously. By building models for experimental outcomes conditionally on the group labels, any number of data modalities may be combined in a single coherent probability model, allowing information sharing across experiment types. These two features result in parsimonious inference with few false positives, while simultaneously enhancing power to detect signals. Simulations show that our three-groups approach performs at least as well as commonly-used tools for GWAS and RNA-seq, and in some cases it performs better. We apply our proposed approach to publicly-available GWAS and RNA-seq datasets, discovering novel genes that are potential therapeutic targets.

Bio: Troy Wixson joined the UMass Department of Mathematics and Statistics as a Visiting Assistant Professor after completing his PhD in statistics at Colorado State University in 2025. Troy has research interests related to modeling tail dependence in multivariate extremes with environmental applications and Bayesian modeling of heterogeneous data to probabilistically identify genes associated with disease. Click [here](#) to join.

Thursday, October 29, 12:00 - 1:15 AM, Zoom

Title: Cannabis Use among Youth and Young Adults: Prevalence, Assessment, Dependence, and Comorbidities

Sponsored by: [New England ATTC - Addiction Technology Transfer Center \(ATTC\) Network](#)

Description: This webinar will explore cannabis use among youth and young adults, including prevalence, effects on the developing brain, cannabis potency and methods of use, and associated health and behavioral concerns. Participants will gain practical, evidence-informed approaches for assessing cannabis use and engaging youth, young adults, and families in nonjudgmental conversations about screening, communication, and risk reduction. Click [here](#) to register.

UMass Chan Farmers' Market



**Every Tuesday through October 27
10 AM - 1 PM**

[Click here](#) for more details and to view the list of attending food trucks and vendors

Two Locations:

- Market Vendors will be set up in the Albert Sherman Center, MPR - East, First Floor.
- Food Trucks and Food Vendors will set up outside on the Medical School Building Terrace.



✚ Indigenous Peoples' Day – Monday, October 12th

✚ Veterans Day – Wednesday, November 11th

✚ Thanksgiving Day – Thursday, November 26th

✚ Day After Thanksgiving – Friday, November 27th

✚ Christmas Eve – Thursday, December 24th

✚ Christmas Day – Friday, December 25th

PQHS Weekly will be sent to all members of PQHS on Monday mornings. The intent is to provide a snapshot of what is going on that week in PQHS and to share our faculty and staff activities with the department. We depend on you to provide the items we need to share. Please send suggestions of events, faculty invited seminars & talks, honors, student thesis presentations, and news – new babies born! – to Judi (judi.saber@umassmed.edu) & Sarah (sarah.yeboah@umassmed.edu) by Friday each week.