

Department of Population and Quantitative Health Sciences

Weekly Newsletter

DECEMBER 15-19, 2025



UMass Chan
MEDICAL SCHOOL

CONGRATULATIONS

Congratulations Josh! – Josh Rumbut successfully defended his dissertation for his PhD in Computer Science, titled “RAQ-Streams: Real-time Pattern Recognition with Quantization-Aware Training for Substance Use Episodes in Wearable Biosensor Data Streams”. A tea time was held last Thursday to celebrate Josh’s accomplishment.



Pictured left to right:

Alice Min
Josh Rumbut
Bruce Barton
Peter Lazar

UPCOMING EVENTS

Wednesday, December 17, 10:00 – 11:00 AM



Research Methods Meeting

Presenter: Randall P. Ellis, PhD

Title: Pooling Cross Product Matrices to Maintain Confidentiality While Enabling Data Sharing and Enhanced Linear Predictive Models

Abstract: • Sensitive big data is often summarized by frequencies, means, and standard deviations of outcomes by univariate categories of interest. Privacy is maintained by requiring $N > 10$ subjects for each statistic. This univariate approach precludes the use of data for linear multivariate regression models for hypothesis testing, prediction or verification. We

demonstrate how information can instead be summarized in $Z'Z$ matrices of cross products of dependent and independent variables, with the privacy protected trimming the $Z'Z$ matrix diagonal and off-diagonal cell statistics to zero when $N \leq 10$. Sharing $Z'Z$ matrices permits a broad set of multivariate linear models to be estimated, enables external validation, enables pooling or comparison across distinct samples without requiring any sharing at the individual level, speeds up linear model estimation, and can potentially be used within Machine Learning (ML) iterations to speed up estimation. Trimming small cells causes only minor degradation of results in the $N > 60$ million Risk Adjustment models estimated.

Bio: Dr. Randall P. Ellis is a professor in the Department of Economics at Boston University where he focuses on health economics, spanning both US and international economics topics. In 2024 he received the Victor Fuchs “Lifetime Achievement Award in the Field of Health Economics,” the highest award offered by the American Society of Health Economists. He was one of three original architects of the Hierarchical Condition Category (HCC) models currently used to risk-adjust payments to Medicare Advantage (Part C), Part D prescription drug plans, and the ACA (Obamacare) Health Insurance Exchanges. This paper is a spinoff from a recent project building even better predictive models for risk-adjusted plan payments and performance evaluation. Click [here](#) to join.

New England ATTC Presentations

Tuesday, December 16, 2025, 1:00-2:30 PM

Register: [Impact of the Games We Play](#)

Ted Hartwell is back to the impact of the games we play. Digital gaming has become one of the most dominant forms of entertainment worldwide—surpassing the movie and music industries combined. But with growing popularity comes growing concern. This training explores the line between healthy and problematic gaming, highlighting features in video games and social media that can quickly lead to harm, especially among younger users.

Participants will gain insight into how gaming and gambling behaviors intersect, learn to identify warning signs, and discover practical resources to address gaming-related harms.

Please feel free to share this with anyone who may be interested. We hope to see you there! Keep checking our [website](#) and our [LinkedIn](#) page for updates!

The New England ATTC Team

New England ATTC
Population and Quantitative Health Sciences
UMass Chan Medical School
New England ATTC - Addiction Technology Transfer Center (ATTC) Network
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IN THE NEWS



The *Worcester Business Journal* has named Crista Johnson-Agbakwu, MD, professor of obstetrics & gynecology and population & quantitative health sciences and executive director of the UMass Chan Collaborative in Health Equity, its [Physician of the Year](#).

DIVERSITY DIGEST

December is a month that holds many meaningful religious and social observances for members of our community. We honor and respect this diversity and wish everyone a joyful, peaceful, and restorative holiday season.



December 1st

On December 1st, communities around the world come together for World AIDS Day. This serves as a moment to honor those we've lost, uplift those living with HIV, and recommit to a future where HIV is no longer a public health threat.

Did you know?

- HIV is now a manageable condition with early testing and treatment.
- People living with HIV who achieve an undetectable viral load cannot transmit the virus (U=U – Undetectable = Untransmittable!).
- Prevention tools like PrEP, condoms, harm-reduction services, and education keep communities healthier than ever.

This year's theme, "Let Communities Lead," reminds us that progress happens when we listen to and invest in the people most affected—advocates, youth leaders, caregivers, researchers, and everyday community members.

💡 Together, we can spark conversations, reduce stigma, and champion a future where everyone thrives. Happy World AIDS Day!

International Day of Persons with Disabilities -December 3rd

Each year, this day highlights the rights, contributions, and lived experiences of more than one billion people with disabilities worldwide. Established by the UN in 1992, it reminds us how far we've come—and how much work remains—to advance accessibility, equity, and inclusion.

Why It Matters in the Workplace

Recognizing this day is more than awareness—it's about action:

- Challenges ableism and honors disability as part of human diversity.
- Encourages a check-in on physical, digital, and cultural accessibility.
- Elevates the leadership and expertise of employees with disabilities.
- Supports accountability toward a more inclusive workplace.

Making space for IDPD helps turn inclusion from an idea into everyday practice.



The Gold-Silver-Bronze flag declared on this day in 2017 as a symbol of all people with disabilities.

International Human Rights Day — December 10 marks the anniversary of the Universal Declaration of Human Rights (UDHR), adopted in 1948 in the aftermath of World War II. The UDHR was created in response to the atrocities, upheaval, and widespread human suffering experienced during the war, and it established a global commitment to dignity, equality, and fundamental freedoms for all people. Its signing represented a turning point in international cooperation, affirming that protecting human rights is essential to preventing injustice and promoting peace and stability. The themes of Human Rights Day resonate strongly with work across the health and academic communities. Many of today's public health efforts seek to address the same core challenges identified after the war: reducing inequities, protecting vulnerable populations, and ensuring that everyone has the opportunity to live a healthy and fulfilling life. The day serves as a reminder that advancing human rights is an ongoing responsibility and that progress in health, equity, and justice remains deeply interconnected.

The winter solstice, arriving this year on **December 21, 2025**, marks the shortest day and longest night of the year in the Northern Hemisphere. Communities around the world have recognized this moment for thousands of years, seeing it as a turning point when the long stretch of darkness begins to give way to increasing light. From ancient monuments aligned with the sunrise to seasonal gatherings that celebrate reflection and renewal, the solstice has long carried a sense of hope and transition. Today, it offers a simple reminder to pause, notice the season's quiet, and look ahead to the gradual lengthening of days.

UMASS CHAN REMINDERS

A Reminder from Payroll Services: 2026 Personal Time Schedule

- Employees have until 1/10/2026 to use 2025 personal time
- 2026 personal time will be granted on 1/13/2026
- Employees may begin using 2026 personal time after 1/13/2026 for the week beginning 1/11/2026

Remaining Holiday Schedule for 2025:



- Christmas Eve – Wednesday, December 24th
- Christmas Day – Thursday, 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.