

# CHERISH

Center for Health Economics of Treatment Interventions for Substance Use Disorder, HCV, and HIV



Weill Cornell  
Medicine



EXCEPTIONAL CARE. WITHOUT EXCEPTION.



Penn LDI  
LEONARD DAVIS INSTITUTE  
of HEALTH ECONOMICS

UNIVERSITY OF MIAMI  
MILLER SCHOOL  
of MEDICINE



## Newsletter - May 2018

# Health Economics Training

On March 19, 2018, researchers who represented more than 25 institutions across the country joined CHERISH leaders **Bruce Schackman**, **Kathryn McCollister**, **Benjamin Linas**, and **Sean Murphy** for a daylong CHERISH introductory training to economic evaluations. Dr. Schackman began the day by introducing CHERISH to the attendees; he went on to review costing methods for economic evaluations, identifying which resources should be included in economic evaluations and how to estimate their value.

CHERISH staff then led participants through a Microsoft Excel lab to apply these concepts. The example was based on a recent *Drug and Alcohol Dependence* publication from CHERISH investigators on the cost-effectiveness of HCV linkage strategies in methadone maintenance treatment programs. Dr. Murphy finished the morning by presenting on quality-adjusted life-years (QALYs), including the rationale for including QALYs in economic evaluations, and how to calculate them using health-related quality-of-life surveys.

In the afternoon, Drs. Linas and McCollister used these concepts in their lectures on cost-effectiveness and cost-benefit analyses. CHERISH staff also continued their Microsoft Excel example and helped participants re-create a cost-effectiveness analysis based on the *Drug and Alcohol Dependence* publication.

## In This Newsletter

- ▶ A consultation service success story and information on our consultation services
- ▶ A recent *Journal of General Internal Medicine* publication first-authored by Cycle 2 pilot grant recipient **M. Kit Delgado, MD, MS**
- ▶ The announcement of our Cycle 4 pilot grant recipients
- ▶ Introduction to the CHERISH Research Affiliates and our first webinar with Austin Frakt, PhD
- ▶ Where you can find us at upcoming conferences and talks



More than half of the participants were new investigators or students. Approximately three quarters of the participants had a PhD or were MDs. All reported an increase in knowledge and confidence about the topics.

Participants reported high satisfaction and enthusiasm for learning about cost-effectiveness analysis, writing:

“ I really enjoyed all the speakers and learned a tremendous amount about cost effectiveness and cost analysis!”

“ I thought that the sessions were all comprehensive, but not overwhelming. My intention in attending was to ensure that I had up to date information about the latest tools and techniques that I could take back to my institution. The session accomplished that and more.”

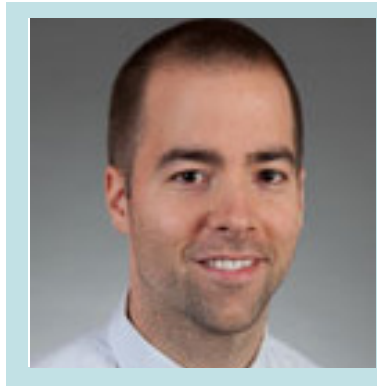
For those attending the National Drug Abuse Treatment Clinical Trials Network Annual Scientific Meeting in North Bethesda, MD, CHERISH held a “Conducting Health Economic Analyses Alongside CTN Trials” half-day workshop on March 20, 2018. Presenters included CHERISH leaders Bruce Schackman, Kathryn McCollister, and Sean Murphy as well as Patricia Novo, MPA, MPH of NYU’s School of Medicine, and Katharine Bradley, MD, MPH of Kaiser Permanente Washington Health Research Institute.



CHERISH presenters with Special Guest Speaker Sarah Duffy, PhD of NIDA, who presented on NIDA’s interest in economic evaluation during the lunch hour.

## Consultation Service Success Story: Marcus Bachhuber

Between 1999 and 2015, the annual sales of opioid analgesics in the US quadrupled to about \$8 billion dollars. In an effort to address over-prescribing of opioid analgesics, Dr. Marcus Bachhuber recently received a career development award (K-award) from the National Institute on Drug Abuse (NIDA) to implement a default opioid prescribing system in the electronic health record that will nudge providers to prescribe fewer opioid pills. Dr. Bachhuber used the CHERISH Methodology Consultation Service to assist him in developing his K-award application.



Dr. Bachhuber is a primary care provider and Assistant Professor in the Department of Medicine at Albert Einstein College of Medicine in the substance use disorder field. His research focuses on health system and policy approaches to reducing harms from opioids. As part of his K award, Dr. Bachhuber is interested in evaluating whether a new default dose system for opioids would affect the subsequent healthcare utilization and associated costs for clients receiving fewer opioids. Previous studies have shown that changing default settings in the electronic health records system can affect prescribing behaviors such as substituting generic medications for those with brand names. Dr. Bachhuber seeks to apply this mechanism to test whether changing the default number of pills for opioid prescriptions can affect prescribing behavior and lower costs of opioid analgesics without a significant increase in patient healthcare utilization.

During his consultation with the CHERISH Methodology Core, Dr. Bachhuber worked with CHERISH Director Bruce Schackman, PhD over a series of phone calls to develop the economic analysis elements of his proposal and identify relevant potential mentors. Dr. Schackman then introduced Dr. Bachhuber to Sean Murphy, PhD, Director of the Consultation Service, who provided additional expert input. Dr. Bacchuber said he

“really enjoyed working with Dr. Schackman and Dr. Murphy. They were extremely generous with their time and helped make the grant application much more impactful and innovative.”

With the benefit of this consultation, Dr. Bachhuber received the K-award that will further his career goal of becoming an independent investigator. Dr. Bachhuber has since joined CHERISH as a Research Affiliate, and recently published an article with Dr. Murphy, CHERISH investigator Dr. Dan Polsky and fellow Research Affiliate Dr. Brendan Saloner describing the physician time burden and costs associated with querying state prescription drug monitoring programs.

### Consultation Service

The consultation service provides guidance to researchers on the design and implementation of observational and interventional studies related to treatment interventions for substance use disorder, HCV, and HIV, to ensure that planned economic analyses are methodologically sound and feasible.

#### We have health economic evaluation expertise in:

- Budget impact and costing
- Cost-effectiveness
- Cost-benefit
- Quality of life
- Qualitative data collection
- Statistical analysis / econometrics

#### We have health economic modeling expertise in:

- Markov modeling
- Monte Carlo simulation
- Discrete event simulation
- Compartmental modeling
- Agent-based modeling
- Longitudinal data

To learn more about CHERISH consultation services for researchers:

[www.cherishresearch.org/consultation](http://www.cherishresearch.org/consultation)

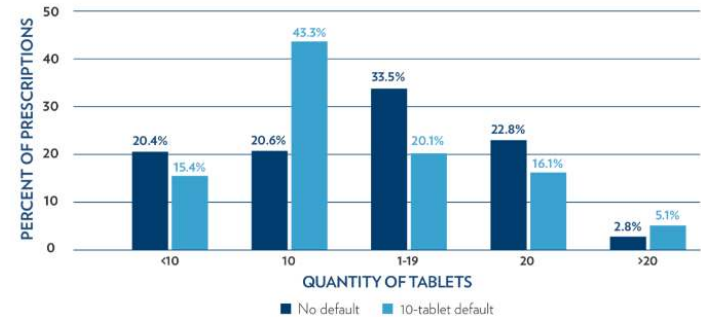
## Former Pilot Grant Recipient on Prescribing Patterns

The epidemic of opioid overdose deaths in the US has its roots in prescription opioids. Patients who receive a prescription for a large quantity of opioids, especially those new to opioids, are at risk for long-term use or for having leftover tablets that are later misused or abused. Patients often receive 30 or more opioid tablets for acute pain, despite current opioid prescribing guidelines recommending only a fraction of that quantity (10-12 tablets). Default options, or pre-set selections, in electronic medical records (EMRs) can influence behavior in other contexts, and may be a way to guide clinicians toward prescribing smaller quantities of opioid tablets.

In 2015, two Penn Medicine emergency departments (EDs) implemented a new electronic medical record (EMR) that featured a default setting of 10 opioid tablets, replacing one that required the clinician to enter the number of tablets manually. The authors of a recent *Journal of General Internal Medicine* publication “Association between Electronic Medical Record Implementation of Default Opioid Prescription Quantities and Prescribing Behavior in Two Emergency Departments,” including Cycle 2 CHERISH pilot grant recipient **M. Kit Delgado, MD**, compared weekly prescribing patterns before and after the 10-tablet default by tracking the quantity of tablets supplied at discharge for the most commonly prescribed opioid, oxycodone with acetaminophen (Oxy/APAP). The proportion of 10-tablet prescriptions written more than doubled over a 41-week period, from 20.6% to 43.3%. Conversely, 20-tablet prescriptions decreased from 22.8% to 16.1%, and prescriptions for 11-19 tablets decreased from 33.5% to 20.1%.

This study suggests that default options in the EMR are a powerful, low-cost tool to nudge clinicians to prescribe fewer opioids. Because baseline prescription quantities were already low in the two EDs, the overall number of opioid tablets prescribed did not change. But the significant shift to the default quantity, consistent with ED prescribing guidelines, suggests that this is a simple and scalable approach to change prescribing behavior while preserving clinician autonomy. This approach could have a significant impact in “right-sizing” post-operative opioid prescriptions for acute pain, for which quantities prescribed are significantly higher and 50-70% of tablets are never taken. Further research is needed to evaluate the effects of implementing an opioid default option in EMRs on a larger scale, in systems with higher baseline prescription quantities, and over a longer timeframe.

FIGURE 1. QUANTITY OF OXY/APAP TABLETS DISPENSED BEFORE AND AFTER IMPLEMENTATION OF ED EMR DISCHARGE ORDER DEFAULT OF 10 TABLETS



## Cycle 4 Pilot Grant Recipients

### Shashi Kapadia, MD, MS

Dr. Shashi Kapadia is an instructor in Medicine and in Healthcare Policy & Research at Weill Cornell Medicine; he previously completed an Infectious Diseases Fellowship, a Public Health and General Preventive Medicine Residency, and his Masters of Science in Clinical Investigation at Weill Cornell. In his pilot grant, he will use a national administrative dataset to characterize changes in the Hepatitis C (HCV) provider landscape, comparing the period before and after direct acting antivirals (DAAs). He will assess the changes in the number and types of providers offering HCV-testing and treatment, examine the HCV testing and treatment volume across providers, and compare the rate of treatment completion for patients treated by providers with different volumes. He will evaluate results for all HCV patients and for HCV patient subgroups with opioid use disorder diagnoses and with HIV co-infection.



### Tyler Bartholomew

Tyler Bartholomew is a doctoral student in the Department of Public Health Sciences at the University of Miami. Prior to entering the doctoral program, he was the project manager for an HIV and HCV testing, linkage to care, and treatment program at five federally-qualified health centers in Philadelphia, Pennsylvania. For his pilot grant, he will conduct an economic analysis of Florida’s Infectious Disease Elimination Act (IDEA) Syringe Exchange Program (SEP) located in Miami. Using clinical data from IDEA Exchange participants, he will estimate the costs of the IDEA fixed SEP and the mobile SEP from the healthcare and societal perspectives. He will also estimate the cost of ancillary services such as naloxone distribution and an onsite wound care clinic. The results of his pilot study will support the evaluation of broader implementation of syringe exchange services across the state Florida.

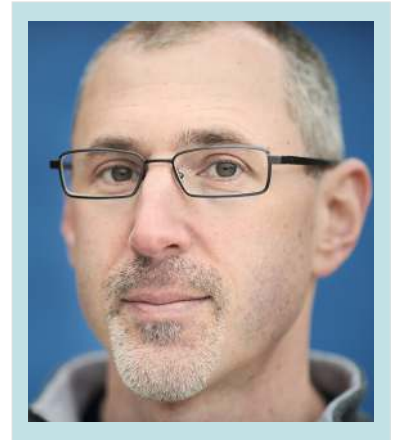


## Research Affiliates Program

Our Research Affiliates program allows us to formalize a relationship with colleagues who share in our mission to develop and disseminate health economic research on healthcare utilization, health outcomes, and health-related behaviors that informs substance use disorder treatment policy and HCV and HIV care of people who use substances. Affiliates have the opportunity to become consultants to other researchers as part of our CHERISH consultation service, to be listed on our website, to receive information on career development opportunities, and to be listed as CHERISH Research Affiliates on their CV, biosketch, etc.

CHERISH currently has 34 hand-picked Research Affiliates representing approximately 30 institutions across the nation, including former pilot grant recipients, colleagues at affiliated institutions, and researchers who are experts in their respective fields.

On April 5, 2018, CHERISH held the first in a series of exclusive webinars for Research Affiliates and Center leadership and staff. Austin Frakt, PhD (Health Economist with the Department of Veterans Affairs, Boston University, and Harvard University; Contributor to the *New York Times*) lead “A Press Release Is Not Enough,” the first webinar in the series. More than 30 people joined and received valuable information on best practices for dissemination and advice on connecting with key policymakers and influencers on the topics of their research.



Some of our Research Affiliates' expertise in areas related to the CHERISH mission include: *opioid use disorder, substance use disorder, addiction health services research and policy, economic evaluations, integrated data analysis, cost-effectiveness analysis, infectious disease modeling, network analysis, organizational interventions, econometrics, resource allocation, and health insurance and access to care.*

To view the profiles of our Research Affiliates:

[www.cherishresearch.org/researchaffiliates](http://www.cherishresearch.org/researchaffiliates)

## Find Us

Center investigators and staff are looking forward to promoting CHERISH at the following upcoming conferences:



Meet Us in Baltimore  
[www.ispor.org](http://www.ispor.org)

**ISPOR 23RD ANNUAL INTERNATIONAL MEETING**  
May 19-23, 2018 | Baltimore, MD, USA  
Baltimore Convention Center



ASHEcon  
EMORY

7<sup>th</sup> Conference of the American Society of Health Economists  
*Economics and Public Health*



**ANNUAL RESEARCH MEETING**  
TODAY'S RESEARCH DRIVING TOMORROW'S OUTCOMES

**June 24-26, 2018**

Washington State Convention Center, Seattle, WA

**EUHEA CONFERENCE 2018**

12<sup>TH</sup> EUROPEAN CONFERENCE ON HEALTH ECONOMICS  
11-14 JULY 2018 MECC MAASTRICHT, THE NETHERLANDS

To stay up-to-date on all things CHERISH, subscribe to our mailing list:

[www.cherishresearch.org/contact](http://www.cherishresearch.org/contact)