

HEALTH POLICY AND MANAGEMENT *Newsletter*



DEPARTMENT FACULTY PARTNER WITH STATE TO TACKLE OPIOID EPIDEMIC

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L to R: Julie Donohue, Marian Jarlenski, and Evan Cole

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In 2015, heroin and opioid overdose was the leading cause of accidental death in Pennsylvania, outnumbering loss of life due to motor vehicle accidents. To help understand and effectively respond to this crisis, a complement of three research faculty in the Department of Health Policy and Management (HPM) has been engaged in research initiatives designed to assist health care providers at the front lines of this epidemic and to develop better treatment options for those struggling with opioid addiction.

Julie Donohue, associate professor and vice chair for research; Marian Jarlenski, assistant professor; and Evan Cole, research assistant professor, are working on numerous studies and projects funded by the federal government and by the Pennsylvania Department of Human Services (DHS)—all targeted toward addressing the opioid crisis.

Studies undertaken by the HPM researchers include efforts to identify individuals at risk for opioid and heroin overdose, studies to examine the rates of opioid use disorder treatment in the population covered by Medicaid, and projects to develop research on new mothers who obtain opioids for pain management. They are also developing research concerning pregnant women with opioid use disorder, as well as a multi-faceted outreach project to improve access to opioid use disorder treatment in rural areas of Pennsylvania.

“Pennsylvania has been particularly hard hit by the opioid and heroin epidemic,” says Donohue. “There are a number of stakeholders involved [in the department’s research], and we’re partnering in a major way with one—the Pennsylvania Department of Human Services, which administers the Medicaid program. Medicaid now covers nearly three million Pennsylvanians. It is a major source of financing for treatment of substance abuse disorders, so it plays a major role in addressing the opioid crisis.

What we've been trying to do is to get a handle on the prevalence of opioid and heroin addiction in Medicaid, the capacity for treatment, and how to expand treatment for this vulnerable population."

The findings thus far are both sobering and potentially promising.

In late 2015, an e-mail from Mitchell West, an emergency room physician and a 2007 graduate of Pitt's Health Policy and Management master's degree program, served as an important reminder to faculty of the need to intensify their research efforts on opioid addiction and treatment. West, who provides addiction medicine services at Gateway Rehabilitation Center and trains first responders on the use of Narcan for opioid overdoses, was encountering first-hand the tragic effects of opioid use disorder and the escalating rates of addiction.

"I've been a doctor for almost 40 years, and I've seen the gun violence," says West. "I have seen crack. I have seen HIV. Nothing that I have ever seen even approaches this. It's everywhere, and it seems to be extremely resistant to treatment."

Encouraged by the commitment of the U.S. Attorney General, along with cooperation by the Drug Enforcement Administration, local law enforcement agencies, and the effectiveness of local drug and alcohol treatment facilities, West recognized an opportunity for Pitt Public Health to play a major role in addressing the epidemic in Pennsylvania. Donohue and Dean Donald Burke agreed and, with the infusion of state and federal funding in 2016, projects began to move forward.

As senior investigator, Donohue undertook several research initiatives. She was among nine researchers who examined Medicaid billing data to identify risk for opioid overdose, with the goal to educate medical providers and to help them identify individuals in need of intervention. In another study of Pennsylvania Medicaid enrollees, she and six other researchers sought to assess the rates of medication-assisted treatment before and after drug overdose. Findings showed that gaps in adequate and consistent systems of care existed across the commonwealth, indicating the need for a more coordinated structure. This finding aligned with the DHS's mid-2016 initiative to open Opioid Use Disorder Centers of Excellence —facilities that provide individuals with quality, cost-effective care under Medicaid across the commonwealth. At present, there are 20 centers in Pennsylvania that are expected to treat thousands of individuals who currently do not have access to treatment. The eventual goal is to open a total of 45 centers.

In further research, Donohue was the senior investigator of a study and co-author of a paper that examined predictors of treatment, patterns of care, and quality of care with an opioid addiction treatment drug, buprenorphine. Analyzing Pennsylvania Medicaid data gathered between 2007 and 2012, Donohue and fellow researchers found that the quality of care patients received in general was poor, and uncovered that patients who leave detoxification treatment without additional medical assistance to reduce drug cravings are at a higher risk of relapse and overdose. The research also highlighted differences in quality of treatment between clinics that accept only cash as payment and other providers that accept other payment varieties. Donohue's work in this area helped to inform recent policy announcements by Governor Tom Wolf.

Again using Pennsylvania Medicaid data, Donohue was one of eight researchers who sought to determine how long after detox Buprenorphine must be administered for optimal results. Results suggested that persistent use of Buprenorphine for 12 months lowered the risk of hospitalizations and emergency room visits for all types of medical incidents.

Access to the Medicaid data was facilitated through the Pennsylvania Department of Human Services. "We worked very closely with [the DHS]," says Donohue, who also serves as executive director of Pitt's Health Policy Institute Medicaid Research Center. "We shared research findings with them early and often, and they actively engaged with us and responded quite quickly to our analyses."

HPM assistant professor Marian Jarlenski has focused recent research efforts on women who used opioids or struggled with opioid use disorder in and around the time of pregnancy. In early 2017, she and five other researchers initiated an investigation into the prevalence of opioid prescriptions for women who had recently undergone vaginal deliveries. Nationally represented data for this study was obtained from the National Survey of Drug Use and Health, and spanned from 2004 through 2014.

"The main finding was that 12 percent of women who had undergone a vaginal delivery filled an outpatient prescription for an opioid after they went home," says Jarlenski. "Vaginal delivery is not something we would typically think of as having a level of pain that would require an outpatient opioid. So that was more about looking at the big picture of opioid prescribing. That is relevant to opioid use disorder because some people begin by taking opioids that are prescribed by a doctor and then later become addicted. Or, some people take home the pills but don't take them, and then someone else in their household who is struggling with addiction takes them." (continued on pg. 15)

NICHOLAS CASTLE: WINNER OF THE GERONTOLOGICAL SOCIETY OF AMERICA'S ELAINE M. BRODY THOUGHT LEADER AWARD

Nicholas Castle, professor and director of the MS and PhD programs, was awarded the Gerontological Society of America (GSA)'s 2016 Elaine M. Brody Thought Leader Award. The society is the nation's most prestigious interdisciplinary organization devoted to the study of aging. The award is granted annually at the discretion of the GSA's Social Research and Practice Section to a member who has made outstanding and meaningful career contribution in social research, policy and practice in the field. Castle has made a highly successful career in the field of gerontological research. He has been first author on more than 150 peer-reviewed publications, and thus has made a substantial impact in the state of gerontological literature.



Currently Castle is focusing his efforts on examining staff turnover within nursing homes, staffing issues in long-term care, and satisfaction scores of family members of those in nursing homes. Additionally, he teaches a class for master's students focused on quality within health care. He is passionate about working with students and has advised numerous individuals on their master's essays. Outside of academia, he enjoys renovating his house.

(continued from pg. 11) A recipient of an institutional career development award funded by the National Institutes of Health's Building Interdisciplinary Research Careers in Women's Health program, Jarlenski also is in the early stages of examining Medicaid data that will measure the variations and quality of treatment received by pregnant and post-partum women with opioid use disorder. The goal of this research is to inform policy makers about opportunities for improving treatment in locations where gaps exist. In the future, Jarlenski anticipates conducting a study to analyze Medicaid data associated with infants who are born to women with opioid use disorder. By following study subjects over a period of years, the study will yield greater understanding of the long-term impact of maternal opioid use on health and health care outcomes.

Evan Cole, research assistant professor in HPM, is engaged in a project that focuses on another critical aspect of the opioid epidemic: facilitating access to medication-assisted treatment in rural areas of Pennsylvania. Funded by a grant from the Agency for Healthcare Research and Quality (AHRQ) to the Pennsylvania Department of Human Services, the project comprises many moving parts. These include working with primary care clinics to help them adopt medication-assisted treatment protocols, an ongoing webinar series to train and educate primary care physicians about treatment for opioid use disorder, case management services through a collaboration with another DHS initiative, and a peer-to-peer tele-consultation service that provides quick answers for primary care physicians. The grant also funds an evaluation that will provide insight into which aspects of the implementation were and were not effective in order to make informed decisions about future steps (<https://ramp.pitt.edu>).

"We're in year one of a three-year grant so far, and are in the process of recruiting primary care clinics to participate," says Cole. "The end goal is to recruit 25 primary care clinics in 23 rural counties over a three-year period. If primary care clinics sign up, they will be supported by an implementation team that is being run by Jan Pringle in the University of Pittsburgh School of Pharmacy."

"Rural primary care providers are very busy," adds Cole. "They own their own practice. So, part of this grant is intended to reduce the burden of time it would take for them to learn and adopt this process [of medication-assisted treatment]. I think there is a lot of concern at first that this would be a whole new ball game for them, but our hope is that they can adopt the process and incorporate it effectively."

HPM's efforts make it clear that the fight to bring the opioid epidemic under control is only beginning in earnest in Pennsylvania, but research and projects leading to easier access for effective treatment, education for medical professionals and the public, and intercepting and preventing further addiction are showing promising results.

Jarlenski, in considering her research to date, underscores the human dimension of the opioid crisis. "One thing that's always striking to me is when you get into the data and start looking at these outcomes," she says. "They are often very bad outcomes and very high-risk patients. It is striking to me how much need there is and how vulnerable these populations are. That's what's compelling from a public health standpoint—we want to make sure the programs and policies are there to support these families and really reduce the health burden they're facing from opioid use disorder."



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