



Department of Population and Public Health Sciences

Annual Report

July 1, 2018 – June 30, 2019

Marietta Orlowski, Ph.D., MCHES, CPH
Interim Chair

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Statement from the Chair

Faculty and staff of the education center offer the Master of Public Health degree along with six certificate programs. Fifty-one students, including six dual degree students (MD/MPH), enrolled during the 2018-2019 academic year. The program generated 1,082 graduate credit hours and graduated 26 MPH students. Drs. Redko and Khalil also offered online undergraduate general education classes in global health and climate change. These classes generated 3,617 credit hours and are part of the department's plan to increase student awareness of public health disciplines and careers. The education center team also prepared for an October 2019 Council on Education for Public Health (CEPH) accreditation site visit; the team updated several courses and submitted a preliminary self-study document in May.

The two department research and evaluation centers conducted work related to substance use, behavioral health, and disabilities. The faculty and staff of these centers operated 19 multi-year grants totaling over \$14.2 million dollars. The Substance Abuse Resources and Disability Issues' (SARDI) funders include Substance Abuse and Mental Health Services Administration (SAMSHA); National Institute on Disability, Independent Living, and Rehabilitation Research; Ohio Department of Mental Health and Addiction Services; and several local service contracts. The work of Center for Interventions, Treatment, and Addictions Research (CITAR) is funded by the National Institutes of Health, National Institute on Drug Abuse. The research teams made 19 national, state, and local presentations. A third independently funded research center, Fels Longitudinal Study, was transferred this year to the University of Texas School of Public Health under the direction of former department faculty Drs. Stefan Czerwinski and Miryoung Lee.

Looking forward, the vision of the department is to be recognized as the leader of population and public health initiatives within the university and across southwest Ohio. To achieve this vision, the department has started to operate in a more collaborative manner, where the expertise across the centers creates opportunities for learners and adds community value. Goals for the upcoming year include recruit and mentor new faculty, expand public health education programs, identify emerging public health career pathways, and expand the amount and type of department research.

2 Divisions/ Programs

Name of Division or Program	Director	Dates
Education Center		
Aerospace Medicine Certificate	Thomas Jarnot M.D., M.S.	2019
Emergency Public Health Certificate	Mark Gebhart M.D.	2016 – Present
Epidemiology Certificate	Sara Paton Ph.D.	2018 – Present
Global Health Certificate	Cristina Redko Ph.D.	2015 – Present
Health Care Management Certificate	John McAlearney Ph.D.	2003 – Present
Master of Public Health Program	Sara Paton Ph.D.	2015 – Present
Public Health Leadership Certificate	John McAlearney Ph.D.	2016 – Present
Center for Interventions, Treatment, and Addictions Research (CITAR)	Robert Carlson Ph.D.	2004 – Present
Reach Out of Montgomery County	Sharon Sherlock D.H.A., M.S.A., B.S.N., RN	1998 - Present
Substance Abuse Resources and Disability Issues (SARDI)	Jo Ann Ford M.R.C.	2018 – Present

3 Fully Affiliated Faculty

Name and Academic Position	Center Affiliation	Research Interests
Robert G. Carlson Ph.D., Professor	CITAR	Ethnographic & mixed methods; the epidemiology of non-medical drug use; natural history research; HIV prevention; substance abuse treatment; social media research related to substance abuse; health services research; political economy of substance use
Timothy N. Crawford Ph.D., M.P.H., Assistant Professor	Education Center	HIV & Aging; HIV engagement in care; multi-morbidity patterns; wellbeing among undergraduate students; analysis of existing data
Raminta Daniulaityte Ph.D., Associate Professor	CITAR	Substance use epidemiology; opioid use disorders and health-related risks; emerging cannabis use practices and trends; social determinants of health; mixed methods research and trans-disciplinary research; web-based research methods; social media data analytics for public health surveillance
Sylvia A. Ellison, M.A., M.P.H., Research Assistant Professor	Education Center	Maternal & child health, infant mortality, community health assessment
Jo Ann Ford M.R.C., Instructor	SARDI	Women with disabilities, including substance abuse, violence issues, & advocacy
Mark E. Gebhart M.D., Associate Professor	Education Center	Emergency public health; disaster medicine; zoonotic disease; Global One Health
Thomas F. Jarnot M.D., M.S.	Education Center	Human factors in aerospace accident investigation; aircrew flight training; enhancing flight surgeon pilot/patient rapport to optimize aviation safety

Name and Academic Position	Center Affiliation	Research Interests
Naila Khalil, M.B.B.S., Ph.D., M.P.H., CPH, Associate Professor	Education Center	Substance use education and treatment; disability; HIV prevention; mindfulness
Nicole Kinzler Ph.D., Assistant Professor	Education Center & SARDI	Substance use education and treatment; disability; HIV prevention; mindfulness
John McAlearney, Ph.D., Assistant Professor	Education Center	Electronic medical record data analysis; international health care system comparisons; health care applications for geographic information systems (GIS); health care costs; provider payment; community health centers & FQHCs; insurance & uninsurance issues; health care quality improvement; provider recruitment/retention; physician education
Marietta Orlowski Ph.D., MCHES, CPH, Associate Professor	Education Center	Risk reduction in children and adolescents; building capacity for community-based program evaluation; theoretical framework of public health programs and policy
Sara J. Paton Ph.D., CPH, Associate Professor	Education Center	Maternal and child health, health assessment, nutrition
Cristina Redko Ph.D., Associate Professor	Education Center	Global mental health
Sharon Sherlock D.H.A., M.S.A., B.S.N., RN, Assistant Professor	Reach Out of Montgomery County	Underserved populations; disparities in health
Sydney Silverstein Ph.D., Research Assistant Professor	CITAR	Cultural anthropology; medical anthropology; visual anthropology & visual research methods; drug cultures; drug abuse treatment; illicit economies; political economy of illicit drugs; material culture; collaborative research
Mary T. White M.Div., Ed.M., Ph.D., Professor	Education Center	Global health humanities, global palliative care, empathy, addictions and ethics

4 Teaching

Baccalaureate Courses - Taught

Bio 4030 Health Care Ethics

PPH 2000 Global Health

PPH 2100 Climate Change and Health

Baccalaureate Courses - Guest Lectures

Bio 1080 Introduction to Public Health

Bio 2100 Orientation Seminar in Biological Sciences

EES 4720 Epidemiology & Community Health

Graduate Courses - Taught

ASM 7370 Aerospace Toxicology

ASM 7571 Aerospace Skills for Healthcare Providers I

ASM 7573 Aerospace Skills for Healthcare Providers III
 ASM 7771 Fundamentals of Aerospace Medicine I
 ASM 7773 Fundamentals of Aerospace Medicine III
 ASM 7871 Space Medicine I
 ASM 7873 Space Medicine III
 ASM 7973 Aerospace Medical Research Project
 FIN 7500 Financial Management of Health Service Organizations
 PPH 6100 Biostatistics for Health Professionals
 PPH 6200 Public Health Epidemiology
 PPH 6300 Environmental Health
 PPH 6400 Social & Behavioral Determinants of Health
 PPH 6500 Health Resource Management & Policy
 PPH 7150 Applied Epidemiology (Chronic Diseases)
 PPH 7310 Public Health Ethics & Policy
 PPH 7410 Community Assessment
 PPH 7420 Health Program Planning & Evaluation
 PPH 7430 Health Awareness and Advocacy Communication
 PPH 7510 Strategic Leadership in Health Care Organizations
 PPH 7520 Problems in Population Health
 PPH 7640 Principles of Emergency Preparedness
 PPH 7650 Public Health Crisis & Consequence Management
 PPH 7660 Public Health Terrorism Preparedness
 PPH 7920 Public Health Epidemiology II
 PPH 7920 Applied Statistics Practicum
 PPH 8110 Public Health Applied Practice Experience
 PPH 8210 Public Health Integrative Learning Experience I
 PPH 8220 Public Health Integrative Learning Experience II
 PPH 8230 Public Health ILE Continued Credit

Thesis Committees

R. Daniulaityte, PhD thesis committee member for Agne Jakavonyte-Akstiniene - PhD Dissertation Title: Cognitive and physical functioning and health care needs among elderly patients in hospice care settings. Lithuanian University of Health Sciences, Kaunas, Lithuania; July 2018.

Undergraduate Medical Education

M1 Electives: Global Health Foundations I and Global Health Foundations II

M4 Electives:

- PPH 806 Literature and Medicine
- PPH 813 Future Directions in Global Health
- SMD 806 IHI Open School Basic Certificate in Quality and Safety)
- SMD 818 Addictions and Pain Management

Upstream Medicine: Capstone Assessments

Continuing Medical Education (grand rounds, seminars)

Paton, S. Infant Mortality and Social Determinants of Health Presentation to Premier Health employees, Dayton, OH. May, 2019.

Paton, S., & Ellison, S. CHA/CHNA (Community Health Assessment/ Community Health Needs Assessment) presentation at Ohio Public Health Combined Conference, Dublin, OH. May, 2018.

Paton, S. Presentation to lactation consultant course at Miami Valley Hospital on infant mortality, Dayton, OH. March, 2019.

Other

Paton, S., & Ellison, S. Collaborated in the development, implementation, and evaluation an Interprofessional Education (IPE) outbreak simulation exercise for students from five disciplines and three universities. The event included 120 students in the master of public health (Wright State), medical (Wright State), nursing (Wright State & Cedarville), pharmacy (Cedarville), and mental health (University of Dayton) programs.

Gebhart, M. Guest speaker for Phi Delta Epsilon (pre-medical society) at Miami University, Oxford, OH. March, 2019.

Paton, S. Guest lecturer on community health assessments via live video for MPH class at University of Haifa, Israel. March, 2019.

5 Scholarly Activity

Funded Contracts

Alcohol Drugs and Mental Health Services (ADAMHS). Paton, S. (Project Save Lead Evaluator), 2017-present, \$6,135.44. The objective of this grant is to increase Narcan distribution to first responders in Montgomery, Darke, and Preble Counties, Ohio.

LHD/WSU CHA Collaboration Project. Paton, S. (Co-I), Ellison, R. (Co-I), 2017-present, \$24,427.86. The primary objective of this project is to develop a regional Community Health Assessment (CHA) that will serve to coordinating local health departments (LHDs) and the hospitals systems.

Public Health - Dayton & Montgomery County. Epidemiology and Office of the Health Commissioner Liaison and Consulting Epidemiology Contract. Paton, S. July-August 2018, \$12,127.32. Responsibilities assigned by health commissioner.

Funded Grants - New

ADAMHS, Kinzeler, N. (PI), (2018-2021) - \$37,500. Warriors supporting wellness program evaluation. The purpose of the project is to provide program evaluation for ADAMHS' SAMHSA Mental Health Awareness Training (MHAT) grant.

Dayton Police Department, Kinzeler, N. (PI), (2018-2021) - \$37,500. CIT training program evaluation. The purpose of the project is to provide program evaluation for the Dayton Police Department's SAMHSA Mental Health Awareness Training (MHAT) grant.

Mount Olive Baptist Church, Kinzeler, N. (PI), (2018-2021) - \$37,500. Program evaluation for the Motivate, Educate, Link and Train (MELT) project. The purpose of the project is to provide program evaluation for Mount Olive's SAMHSA Mental Health Awareness Training (MHAT) grant.

Ohio Department of Higher Education, Crawford, T. (PI), 02/02/19 - 06/30/19, \$32,520. Ohio opioid analytics project.

Ohio Department of Medicaid, Crawford, T. (Co-I), 11/07/18 - 06/30/19, \$10,350. Medicaid equity simulation project. An interactive game for cultural proficiency training featuring virtual reality immersion (IGCPT).

Ohio Department of Health, Gebhart, M., Medical Reserve Corps in collaboration with NCMR/WSRI - \$300,000

OhioMHAS, Kinzeler, N. (PI), (2018-2020) - \$560,199 in Year 1. GPRA training, data collection and reporting for the State Opioid Response (SOR) grant. The purpose of this project is to conduct GPRA training and provide data management for OHMHAS' SAMHSA SOR grant.

OhioMHAS, Kinzeler, N. (PI), (2018-2020) - \$127,735 in Year 1. GPRA training, data collection and reporting for the Ohio Medication Assisted Treatment – Prescription Drug and Opioid Addiction (Ohio MAT PDOA) project. The purpose of this project is to conduct GPRA training and provide data management and reporting for OHMHAS' SAMHSA MAT PDOA grant.

OhioMHAS, Kinzeler, N. (Co-I), (2018-2019) - \$10,000. SBIRT training program evaluation. The purpose of the project is to conduct program evaluation for WSU's SBIRT Training grant with OHMHAS.

R21 DA049304-01, Daniulaityte, R. (PI), Silverstein, S. (Co-I, Ethnographer), 06/15/19 - 05/31/21, NIH/NIDA - \$409,671. Crystal in the Gem City: Characterizing a methamphetamine outbreak in the area of a high prevalence of illicit fentanyl use. The overall purpose of the proposed time sensitive study is to characterize the MA outbreak through mixed methods research that integrates ethnographic/structured interview data, urine toxicology, and forensic data on seized drugs and unintentional overdose deaths in the Dayton area.

SAMHSA-Day-TREE, Ford (PI), 09/30/18 - 09/29/2023, \$2,673,834

Funded Grants - Continuing

NIH/NIDA - R01 DA040811, Daniulaityte, R. (PI), Carlson, R. (Co-I), 07/01/16 - 06/30/20, \$2,196,354. A natural history study of buprenorphine diversion, self-treatment, and use of drug abuse treatment services. The overall purpose of this natural history study is to describe and analyze the nature and consequences of buprenorphine diversion among opioid dependent users. Opioid-dependent people (n=400) who have recently used diverted Suboxone or generic buprenorphine will be recruited and interviewed every 6 months for 2 years to elucidate trajectories of buprenorphine and other opioid use, adverse health consequences associated with illicit buprenorphine use, and substance abuse treatment utilization. Using mixed methods, the study will detail and contextualize an emerging phenomenon of public health concern.

NIH/NIDA - R21 DA044518, Daniulaityte, R. (Co PI), Carlson, R. & Silverstein, S. (Co-I), 06/01/17 - 05/31/20, \$408,373 (no cost extension). eDarkTrends: Monitoring darknet markets to track illicit synthetic opioid trends. The overall goals of this time-sensitive R21 are to harness cryptomarket data to conduct surveillance of the illicit synthetic opioid markets availability trends over time, and identify new substances as they emerge on cryptomarkets.

NIH/NIDA - R21 DA042757, Daniulaityte, R. (PI), Carlson, R. (Co-I), 08/01/16 - 07/31/19, \$407,814. Characterizing fentanyl outbreaks: Ethnographic and forensic perspectives. The overall purpose of this time sensitive R21 study is to characterize non-pharmaceutical fentanyl (NPF) outbreaks through the integration of ethnographic/qualitative assessment of active user knowledge and experiences of NPF use, and the results from forensic analyses conducted by the postmortem toxicology and crime laboratories at MCCO/MVRC.

NIH/NIDA - R01 CA192281, Daniulaityte, R. (Co PI), Carlson, R. (Co-I), 08/15/14 - 07/31/18, \$1,428,809. Trending: Social media analysis to monitor cannabis and synthetic cannabinoid use. The major goals of the project are to: (1) Develop a comprehensive software platform, eDrugTrends, for semi-automated processing and visualization of thematic, sentiment, spatio-temporal, and social network dimensions of social media data (Twitter and Web forums) on cannabis and synthetic cannabinoid use; and (2) Deploy eDrugTrends to: a) Identify and

compare trends in knowledge, attitudes, and behaviors related to cannabis and synthetic cannabinoid use across U.S. regions with different cannabis legalization policies using Twitter and Web forum data, and b) Analyze social network characteristics and identify key influencers (opinions leaders) in cannabis and synthetic cannabinoid-related discussions on Twitter.

Ohio Department of Youth Services (DYS), Montgomery County Juvenile Court, Kinzeler, N. (PI), (2017-2020) - \$69,930. This grant provides program evaluation for 14 of the Court's Juvenile programs.

SAMHSA, Kinzeler, N. (PI), (2016-2021) - \$1,146,675. Peer Movement Project (PMP). This project provides substance abuse and HIV education and testing to African American college students ages 18-24.

SAMHSA, Ford, J. A. (PI), 09/30/14 - 09/29/2019, \$917,200. Integrated Continuum-of-Care Services Project CMHS (mental health).

SAMHSA, Ford, J. A. (PI), 09/30/2014 - 09/29/2019, \$298,200. Integrated Continuum-of-Care Services Project CSAT (substance abuse treatment).

SAMHSA, Ford, J. A. (PI), 09/30/2014 - 09/29/2019, \$784,600. Integrated Continuum-of-Care Services Project CSAP (substance abuse prevention).

SAMHSA, Ford, J. A. (PI as of 1/1/18), 09/30/2016 - 09/29/2019, \$1,505,064. Minority Women Sisterline Project.

SAMHSA, Ford, J. A. (PI), 09/30/2015 - 09/29/2019, \$1,199,984. Montgomery County Offender Reentry Program.

TOBHHP30029, Crawford, T. (Co-I), 07/01/16 - 06/30/21, \$13,800. Health Resources & Services Administration. Accelerating Primary Care Transformation at Wright State (ACT-Wright).

Published Papers

Abusalem, S., Polivka, B., Coty, M., **Crawford, T. N.**, Furman, C. D., & Alaradi, M. (2019). The relationship between culture of safety and rate of adverse events in long-term care facilities. *Journal of Patient Safety*, 1. doi:10.1097/pts.0000000000000587

Crawford, T. N., & Thornton, A. C. (2018). Alcohol use and multimorbidity among individuals living with HIV. *AIDS and Behavior*, 23(1), 152-160. doi:10.1007/s10461-018-2242-y

Crawford, T. N., Harris, L. M., & Peyrani, P. (2019). Examining age as a moderating effect on the relationship between alcohol use and viral suppression among women living with HIV. *Women & Health*, 1-12. doi:10.1080/03630242.2018.1553817

Daniulaityte, R., Zatreh, M. Y., Lamy, F. R., Nahhas, R. W., Martins, S. S., Sheth, A., & **Carlson, R. G.** (2018). A Twitter-based survey on marijuana concentrate use. *Drug and Alcohol Dependence*, 187, 155-159. doi:10.1016/j.drugalcdep.2018.02.033

Daniulaityte, R., **Carlson, R. R.**, Juhascik, M. P., Strayer, K. E., & Sizemore, I. E. (2019). Street fentanyl use: Experiences, preferences, and concordance between self-reports and urine toxicology. *International Journal of Drug Policy*, 71, 3-9. doi:10.1016/j.drugpo.2019.05.020

Daniulaityte, R., Juhascik, M. P., Strayer, K. E., Sizemore, I. E., Zatreh, M., Nahhas, R. W., & **Carlson, R. G.** (2019). Trends in fentanyl and fentanyl analogue-related overdose deaths – Montgomery County, Ohio, 2015–2017. *Drug and Alcohol Dependence*, 198, 116-120. doi:10.1016/j.drugalcdep.2019.01.045

Embree, J. A., **Crawford, T. N.**, & **Paton, S. J.** (2018). Suicide rates in rural Ohio: The role of population density, social association, and healthcare access. *Ohio Journal of Public Health*, 1(1), 8-13.

