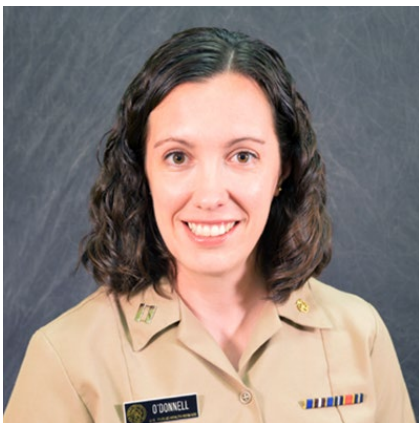

Below is a subset of publications from 2021 for which Scientist Officers served as the first author, as evaluated and selected by the Publications Team for their novelty, impact, and significant scientific contributions. These works provide a brief glimpse into how the Scientist Category is at the forefront of conducting and disseminating research of regional, national, and international public health importance. PHS Scientist Officers are bolded for emphasis.



Razzaghi H, Meghani M, Pingali C, Crane B, Naleway A, Weintraub E, Kenigsberg TA, Lamias MJ, Irving SA, Kauffman TL, Vesco KK, Daley MF, DeSilva M, Donahue J, Getahun D, Glenn S, Hambidge SJ, Jackson L, Lipkind HS, Nelson J, Zerbo O, Oduyebo T, Singleton JA, Patel SA. COVID-19 Vaccination Coverage Among Pregnant Women During Pregnancy - Eight Integrated Health Care Organizations, United States, December 14, 2020-May 8, 2021. *MMWR Morb Mortal Wkly Rep.* 2021; 70 (24): 895-899. DOI:10.15585/mmwr.mm7024e2

CDR Razzaghi and colleagues assessed receipt of COVID-19 vaccines among pregnant women and noted that within the first few months of vaccine availability, 16.3% of pregnant women had received ≥ 1 dose of a vaccine. Receipt of ≥ 1 dose was lowest among racial/ethnic minorities. LCDR Razzaghi noted the need for improved outreach to and engagement with pregnant women, especially those from racial/ethnic minority groups who might be at higher risk for severe health outcomes because of COVID-19.



O'Donnell J, Tanz LJ, Gladden RM, Davis NL, Bitting J. Trends in and Characteristics of Drug Overdose Deaths Involving Illicitly Manufactured Fentanyls - United States, 2019-2020. *MMWR Morb Mortal Wkly Rep.* 2021;70(50):1740-1746. DOI:10.15585/mmwr.mm7050e3

LCDR O'Donnell and colleagues described trends of overdose deaths involving illicitly manufactured fentanyls (IMFs) using data from CDC's State Unintentional Drug Overdose Reporting System. The study found that IMF-involved deaths increased sharply in midwestern, southern, and western jurisdictions of the US during 2019-2020. Authors concluded that adapting and expanding overdose prevention, harm reduction, and response efforts is urgently needed to address the high potency, and various routes of use for IMFs.



Salvatore PP, Dawson P, Wadhwa A, Rabold EM, Buono S, Dietrich EA, Reses HE, Vuong J, Pawloski L, Dasu T, Bhattacharyya S, **Pevzner E**, Hall AJ, **Tate JE**, Kirking HL. Epidemiological Correlates of Polymerase Chain Reaction Cycle Threshold Values in the Detection of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). *Clin Infect Dis.* 2021;72(11):e761-e767. DOI:10.1093/cid/ciaa1469

LT Salvatore and colleagues examined the relationship between cycle threshold (Ct) values of viral RNA and key epidemiologic characteristics of SARS-CoV-2 infections. Authors found that Ct values were lowest (indicating more viral RNA) within the first 7 days after symptom onset compared with 21 days after onset, and among participants with respiratory symptoms compared to those without respiratory symptoms. Their findings underscored the need for early SARS-CoV-2 testing and isolation among persons with symptoms of respiratory illness when viral shedding is at its highest levels.



Parks SE, Erck Lambert AB, Hauck FR, Cottengim CR, Faulkner M, Shapiro-Mendoza CK. Explaining Sudden Unexpected Infant Deaths, 2011-2017. *Pediatrics*. 2021;147(5):e2020035873. DOI:10.1542/peds.2020-035873

CDR Parks Brown et al. found that although $\geq 72\%$ of sudden unexplained infant deaths (SUID) occurred in unsafe sleep circumstances, only 18% could be explained as suffocation deaths. Furthermore, 75% of airway obstruction deaths were attributable to soft bedding. Continued analyses and improvements to infant death investigation and documentation can advance our understanding of infant at highest risk of SUID.



Yard E, Radhakrishnan L, Ballesteros MF, Sheppard M, Gates A, Stein Z, **Hartnett K**, Kite-Powell A, **Rodgers L**, **Adjemian J**, Ehlman DC, Holland K, Idaikkadar N, **Ivey-Stephenson A**, Martinez P, Law R, Stone DM. Emergency Department Visits for Suspected Suicide Attempts Among Persons Aged 12-25 Years Before and During the COVID-19 Pandemic - United States, January 2019-May 2021. *MMWR Morb Mortal Wkly Rep*. 2021; 70 (24): 888-894. DOI:10.15585/mmwr.mm7024e1

CDR Yard et al. analyzed national syndromic surveillance data to determine that emergency visits for attempted suicide among girls aged 12-17 were 51% higher in early 2021 during the COVID-19 pandemic compared to the same period in 2019. The authors recommend a comprehensive approach to suicide prevention that can be adapted during times of disruption to prevent suicide among youth.



Boehmer TK, Kompaniyets L, Lavery AM, Hsu J, **Ko JY**, Yusuf H, Romano SD, Gundlapalli AV, Oster ME, Harris AM. Association Between COVID-19 and Myocarditis Using Hospital-Based Administrative Data - United States, March 2020-January 2021. *MMWR Morb Mortal Wkly Rep*. 2021;70(35):1228-1232. DOI:10.15585/mmwr.mm7035e5

CDR Boehmer et al., demonstrated that patients with COVID-19 had nearly 16 times the risk for myocarditis compared to patients without COVID-19. This study provided valuable context for interpreting myocarditis risk after COVID-19 vaccination and highlighted the importance of COVID-19 prevention strategies, including vaccination, to reduce the public health impact of COVID-19 and its complications.



Deputy NP, Lowry R, Clayton HB, **Demissie Z**, Bohm MK, Conklin S. Initiation of Nonmedical Use of Prescription Opioids among High School Students. *Subst Abus*. 2021;42(4):460-465. DOI:10.1080/08897077.2021.1892013

LT Deputy and colleagues studied the link between the age when youth start misusing prescription opioids and later misuse. He found more than 6% of students first misused prescription opioids at age 14 or younger, and younger age at first misuse increased likelihood of recent misuse. His results underscore the importance of age-appropriate substance use prevention programs during early adolescence.



Zapata LB, Pazol K, Curtis KM, Kane DJ, Jatlaoui TC, Folger SG, Okoroh EM, Cox S, Whiteman MK. Need for Contraceptive Services Among Women of Reproductive Age - 45 Jurisdictions, United States, 2017-2019. *MMWR Morb Mortal Wkly Rep.* 2021;70(25):910-915. DOI:10.15585/mmwr.mm7025a2

CDR Zapata and colleagues examined unintended pregnancy risk and contraceptive services need among women aged 18-49, finding 76.2% of women to be at risk for unintended pregnancy. Although 60.7 % of women needed contraceptive services, 30.3% were not using any contraception method. These findings inform jurisdictional planning to deliver contraceptive services, reduce unintended pregnancies, and evaluate efforts to increase access to contraception.



Toblin RL, Hagan LM. COVID-19 Case and Mortality Rates in the Federal Bureau of Prisons. *Am J Prev Med.* 2021;61(1):120-123. DOI:10.1016/j.amepre.2021.01.019

CAPT Toblin and colleagues compared Federal Bureau of Prison (BOP) inmate testing, case, and mortality rates for COVID-19 to those of the US. They found that BOP tested approximately half of inmates and that COVID-19 case rates and standard mortality ratio among inmates were approximately 5 and 2.5 times those in U.S. adults, respectively. Testing and other mitigation strategies have likely prevented further transmission and mortality in BOP.



Hollis ND, Li W, Van Dyke ME, Njie GJ, **Scobie HM**, **Parker EM**, Penman-Aguilar A, Clarke KEN. Racial and Ethnic Disparities in Incidence of SARS-CoV-2 Infection, 22 US States and DC, January 1-October 1, 2020. *Emerg Infect Dis.* 2021;27(5):1477-1481. DOI:10.3201/eid2705.204523

CDR Hollis and colleagues examined disparities in U.S. SARS-CoV-2 incidence by race/ethnicity, age, and sex, between January 1–October 1, 2020. Authors found that Hispanic/Latino and non-Hispanic Black, American Indian/Alaskan Native, and Native Hawaiian/other Pacific Islander persons had a substantially higher incidence of infection than non-Hispanic White persons. Monitoring these disparities is critical for guiding action to reduce health inequities.