

2023 Charles C. Shepard Science Awards

Tuesday, November 7, 2023

2:00PM to 4:00PM



Unleashing Hidden Potential

Keynote Fireside Chat with

Dr. Mandy Cohen

Director, Centers for Disease Control
and Prevention

Dr. Adam Grant

Saul P. Steinberg Professor of Management and
Professor of Psychology at The Wharton School,
The University of Pennsylvania



Charles C. Shepard - Biography

The preeminent science awards of the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR), inaugurated in 1986, are named in honor of Charles C. Shepard, MD, the internationally recognized microbiologist who was chief of the Leprosy and Rickettsia Branch at CDC for more than 30 years, until his death on February 18, 1985. Charles Carter Shepard was born in Ord, Nebraska, on December 18, 1914. He attended Stanford University (1932–1935) and then transferred to Northwestern University, where he received BS, MS, and MD degrees. In 1941, he joined the Commissioned Corps of the Public Health Service. From 1942 through 1948, he worked at the National Institutes of Health (NIH) in Bethesda, Maryland.



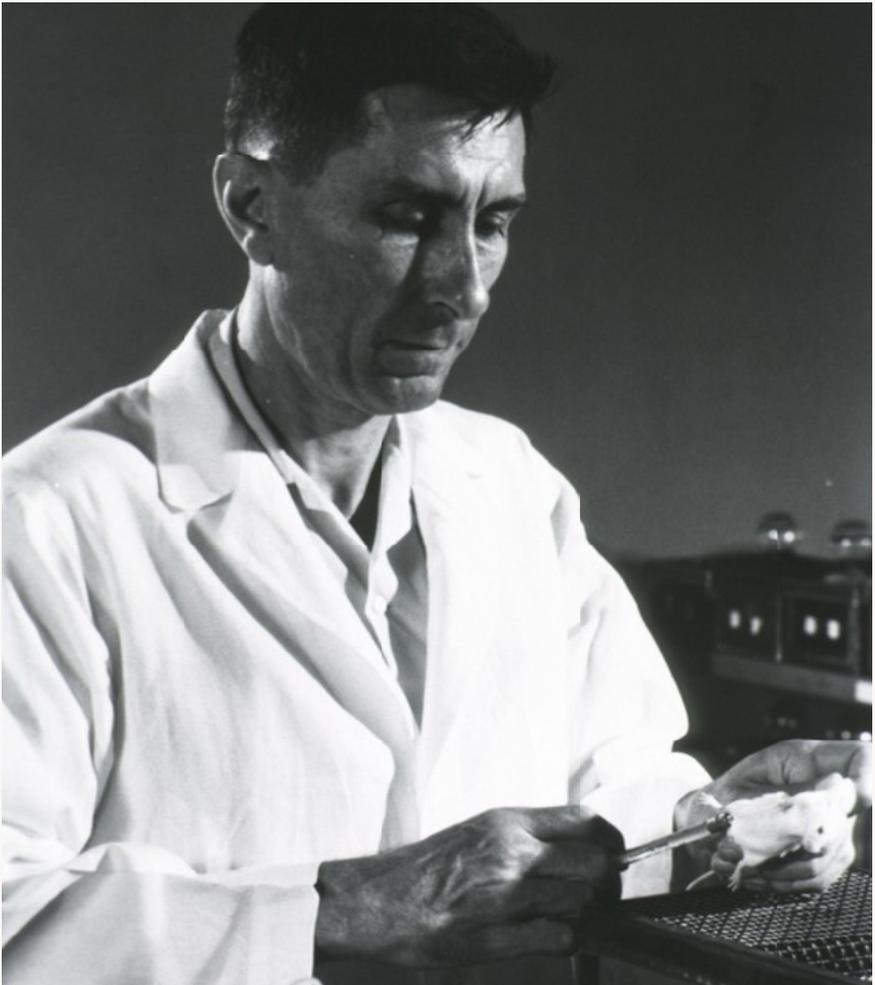
While on sabbatical during 1948 through 1949, he worked in the laboratory of Arne Tiselius in Uppsala, Sweden, and learned the new physical separation techniques that would revolutionize immunology and biochemistry. He returned to Bethesda for a year before moving to the Rocky Mountain Laboratory, National Institute of Allergy and Infectious Diseases, NIH, in Hamilton, Montana, to study various pathogenic bacteria and their phages at the biochemical and ultrastructural levels. In 1953, he came to CDC, where he continued his outstanding work with rickettsiae and began his distinguished and definitive experiments with mycobacteria, culminating in the cultivation of the leprosy bacillus, *Mycobacterium leprae*, in mice. His landmark article, "The Experimental Disease that Follows the Injection of Human Leprosy Bacilli into Foot-Pads of Mice" (*Journal of Experimental Medicine* 1960;112:445–454), is still considered a classic in microbiology. His achievement made possible the large-scale evaluation of antibiotic efficacy and reduced testing time from several years to only months. It also paved the way for leprosy vaccine studies.

Dr. Shepard made significant early contributions to the diagnosis, natural history, and epidemiology of Rocky Mountain spotted fever; Q fever; and scrub, murine, and epidemic typhus. He was also codiscoverer (with Joseph McDade) of the Legionnaires' disease bacterium (*Legionella pneumophila*) after the now famous outbreak of virulent pneumonia in Philadelphia in 1976.

Dr. Shepard received numerous awards, among them the Gorgas Medal (1962), the Kimble Methodology Award (1962), the Philip R. Edwards Award (1964), the World Leprosy Day Award (1970), and the first CDC Medal of Excellence (1977). He also received the HEW Distinguished Service Medal (1978), the Raol Folleraux Award (1978), and the Richard and Hinda Rosenthal

Award (1979). He was active in multiple professional organizations, including the Armed Forces Epidemiologic Board Commission on Rickettsial Diseases, the WHO Immunology of Leprosy Program, the WHO Advisory Panel on Leprosy, the Heiser Program for Research in Leprosy, and the Leprosy Research Council, which he chaired. He was also involved in many editorial activities, having served on the board of directors of the *International Journal of Leprosy* and as a frequent reviewer for numerous prestigious journals.

Although Dr. Shepard's contributions to science and public health were prodigious, perhaps his greatest legacy is the influence he has had on the CDC scientists who have followed in his footsteps and have continued to find inspiration in the scientific integrity and excellence he has come to represent.



Awards Program

NOVEMBER 7, 2023 • 2:00 P.M.

Charles C. Shepard Science Awards Zoom Ceremony

Passcode: Shepard23!

[Closed Captioning](#)

International numbers available: <https://cdc.zoomgov.com/j/afRcJLPIF>

Point of Contact: ODOADSSHEP@cdc.gov

Welcome

Paul Munter, PhD, MHS

CDC Director Welcome

Mandy K. Cohen, MD, MPH

Introduction of Keynote Speaker

Paul Munter, PhD, MHS

Fireside Chat: “Unleashing Hidden Potential”

Adam Grant, PhD, MS and Mandy K. Cohen, MD, MPH

Presentation of the 2023 Charles C. Shepard Science Awards

Assessment

Data Methods and Study Design

Health Equity Science

Laboratory Science

Prevention and Control

Lifetime Scientific Achievement

2023 Lifetime Scientific Achievement Award Winner — Acceptance

Closing

Debra Houry, MD, MPH

Keynote Speaker

Adam Grant, PhD, MS

Adam Grant has been recognized as Wharton's top-rated professor for seven straight years. As an organizational psychologist, he is a leading expert on how we can find motivation and meaning and live more generous and creative lives. He has been recognized as one of the world's 10 most influential management thinkers and *Fortune* magazine's 40 under 40.



Adam is the #1 New York Times bestselling author of five books that have sold millions of copies and been translated into 35 languages: *Think Again*, *Give and Take*, *Originals*, *Option B*, and *Power Moves*. His books have been named among the year's best by Amazon, Apple, the *Financial Times*, and *The Wall Street Journal*.

He hosts *WorkLife*, a chart-topping Technology, Entertainment, and Design (TED) original podcast. His TED talks on original thinkers and givers and takers have been viewed more than 25 million times. He received a standing ovation at TED in 2016 and was voted the audience's favorite speaker at The Nantucket Project. His speaking and consulting clients include Google, National Basketball Association (NBA), Bridgewater, and the Gates Foundation. He writes on work and psychology for *The New York Times*, has served on the Defense Innovation Board at the Pentagon, and has been honored as a Young Global Leader by the World Economic Forum. He has more than 4 million followers on social media and features new insights in his free monthly newsletter, *GRANTED*.

Adam received his Ph.D. from the University of Michigan and his B.A. from Harvard University. He has received awards for distinguished scholarly achievement from the Academy of Management, the American Psychological Association, and the National Science Foundation, and been recognized as one of the world's most-cited, most prolific, and most influential researchers in business and economics. He is a former magician and Junior Olympic springboard diver. For more details, see www.adamgrant.net.

PUBLICATION AWARD NOMINEES

Nominated by the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry (CDC/ATSDR) for the 2023 Charles C. Shepard Science Awards. The nominated articles were judged on scientific merit and the significance of their effect on the CDC/ATSDR mission. The following is a complete citation and brief description of each article, listed by category and in alphabetical order by the first author's last name.

Assessment

Kristina M. Angelo, Teresa Smith, Daniel Camprubí-Ferrer, Leire Balerdi-Sarasola, Marta Díaz Menéndez, Guillermo Servera-Negre, Sapha Barkati, Alexandre Duvignaud, Kristina L. B. Huber, Arpita Chakravarti, Emmanuel Bottieau, Christina Greenaway, Martin P. Grobusch, Diogo Mendes Pedro, Hilmir Asgeirsson, Corneliu Petru Popescu, Charlotte Martin, Carmelo Licitra, Albie de Frey, Eli Schwartz, Michael Beadsworth, Susana Lloveras, Carsten S. Larsen, Sarah Anne J. Guagliardo, Florence Whitehill, Ralph Huits, Davidson H. Hamer, Phyllis Kozarsky, and Michael Libman

Epidemiological and Clinical Characteristics of Patients with Monkeypox in the GeoSentinel Network: A Cross-sectional Study

The Lancet Infectious Diseases 2023;23(2)196–206

(Published online October 7, 2022)

At the time of publication, little had been published about the epidemiology of the 2022–2023 mpox epidemic. The authors obtained data from patients presenting at travel medicine clinical sites in GeoSentinel, which includes 71 clinical sites, in 29 countries on six continents. Findings suggested transmission associated with this epidemic was predominantly person-to-person through close, sexual, or close intimate contact among men who have sex with men.

Francis B. Annor, Laura F. Chiang, Patricia R. Oluoch, Vivienne Mang'oli, Marygorret Mogaka, Mary Mwangi, Anne Ngunjiri, Francis Obare, Thomas Achia, Pragna Patel, Greta M. Massetti, Linda L. Dahlberg, Thomas R. Simon, and James A. Mercy

Changes in Prevalence of Violence and Risk Factors for Violence and HIV Among Children and Young People in Kenya: A Comparison of the 2010 and 2019 Kenya Violence Against Children and Youth Surveys

The Lancet Global Health 2022;10(1)e124–e133

Violence against youth is a public health threat affecting more than a billion children annually. It is associated with negative mental and physical health, including chronic and infectious diseases such as HIV, but most countries lack prevalence data to inform prevention efforts and monitor trends. The authors used population-based methods to find sharp declines in violence and improvements in multiple risk factors for HIV such as condom use and testing behavior.

Brie Hawley Blackley, Caroline P. Groth, Jean M. Cox-Ganser, Alyson R. Fortner, Ryan F. LeBouf, Xiaoming Liang, and Mohammed Abbas Virji

Determinants of Task-based Exposures to Alpha-diketones in Coffee Roasting and Packaging Facilities Using a Bayesian Model Averaging Approach

Frontiers in Public Health 2022;10:878907

Coffee production is a global industry, but coffee production workers can be exposed to inhalational hazards such as alpha-diketones, diacetyl, and 2,3-pentanedione, which are associated with respiratory issues, including bronchiolitis obliterans, a rare and irreversible lung disease. The authors examined production task-based exposures at 17 production facilities between 2015 and 2017. They identified tasks and processes that could be targeted with additional exposure controls to reduce risks for lung disease among coffee production workers.

**Sophia K. Chiu, Jennifer Hornsby-Myers, Christopher Iverson,
and Douglas Trout**

**A Cluster of Health Symptoms After a Law Enforcement Operation:
A Case Study**

Safety and Health at Work 2022;13(4):507–511

The authors investigated influenza-like illnesses (ILI) among officers in a law enforcement agency. Agency leaders were concerned the illnesses were related to work exposures to substances such as illicit drugs or explosives. Investigators identified an ILI cluster as more likely resulting from health effects rather than substances. Their evaluation also found that receipt of seasonal influenza vaccination was associated with a lower prevalence of ILI, but being a member of the investigative squad was associated with a higher prevalence.

**Kristie E. N. Clarke, Yun Kim, Jefferson Jones, Adam Lee, Yangyang Deng,
Elise Nycz, Ronaldo Iachan, Adi V. Gundlapalli, Adam MacNeil, and Aron Hall**

**Pediatric Infection-induced SARS-CoV-2 Seroprevalence Increases and
Seroprevalence by Type of Clinical Care—September 2021–February 2022**

The Journal of Infectious Diseases 2023;227(3):364–370

(Published online October 25, 2022)

The authors examine data on pediatric infection-induced SARS-CoV-2 antibodies from 52 U.S. jurisdictions. Findings showed that seroprevalence, or the widespread use of blood testing for routine disease surveillance, can improve our understanding of the proportion of a population with a history of infection. Seroprevalence also shows a new way to use associated diagnostic codes to assess for bias based on the clinical context under which blood specimens are drawn.

Melissa L. Danielson, Joseph R. Holbrook, Rebecca H. Bitsko, Kimberly Newsome, Sana N. Charania, Russell F. McCord, Michael D. Kogan, and Stephen J. Blumberg

State-level Estimates of the Prevalence of Parent-reported ADHD Diagnosis and Treatment Among U.S. Children and Adolescents, 2016 to 2019

Journal of Attention Disorders 2022;26(13):1685–1697

(Published online May 22, 2022)

This paper gives state-level information on the diagnosis and treatment of attention-deficit/hyperactivity disorder (ADHD) among children and adolescents, which is not available in standard national surveillance reports. Previous work has shown variation by state in the prevalence of diagnosed ADHD and the associated use of medication treatment. Findings suggest that monitoring the prevalence and treatment of childhood neurodevelopmental disorders, such as ADHD, is essential to understanding their impact on the population.

Jay E. Gee, William A. Bower, Amber Kunke, Julia Petras, Jenna Gettings, Maria Bye, Melanie Firestone, Mindy G. Elrod, Lindy Liu, David D. Blaney, Allison Zaldivar, Chelsea Raybern, Farah S. Ahmed, Heidi Honza, Shelley Stonecipher, Briana J. O’Sullivan, Ruth Lynfield, Melissa Hunter, Skyler Brennan, Jessica Pavlick, Julie Gabel, Cherie Drenzek, Rachel Geller, Crystal Lee, Jana M. Ritter, Sherif R. Zaki, Christopher A. Gulvik, W. Wyatt Wilson, Elizabeth Beshearse, Bart J. Currie, Jessica R. Webb, Zachary P. Weiner, María E. Negrón, and Alex R. Hoffmaster

Multistate Outbreak of Melioidosis Associated with Imported Aromatherapy Spray

The New England Journal of Medicine 2022;386(9):861–868

Melioidosis is a primarily tropical disease that causes about 89,000 deaths annually, about 12 in the United States. Even though some patients have never traveled to melioidosis-endemic countries, whole genome sequencing has indicated the infecting strains of the causative bacteria, *Burkholderia pseudomallei*, probably originated from endemic areas in Asia. The authors identify a new exposure risk that has been hypothesized but never confirmed: *B. pseudomallei* may have been imported into the United States in commercially available products.

Fiona P. Havers, Huong Pham, Christopher A. Taylor, Michael Whitaker, Kadam Patel, Onika Anglin, Anita K. Kambhampati, Jennifer Milucky, Elizabeth Zell, Heidi L. Moline, Shua J. Chai, Pam Daily Kirley, Nisha B. Alden, Isaac Armistead, Kimberly Yousey-Hindes, James Meek, Kyle P. Openo, Evan J. Anderson, Libby Reeg, Alexander Kohrman, Ruth Lynfield, Kathryn Como-Sabetti, Elizabeth M. Davis, Cory Cline, Alison Muse, Grant Barney, Sophrena Bushey, Christina B. Felsen, Laurie M. Billing, Eli Shiltz, Melissa Sutton, Nasreen Abdullah, H. Keipp Talbot, William Schaffner, Mary Hill, Andrea George, Aron J. Hall, Stephanie R. Bialek, Neil C. Murthy, Bhavini Patel Murthy, and Meredith McMorrow

COVID-19-associated Hospitalizations Among Vaccinated and Unvaccinated Adults 18 Years or Older in 13 U.S. States, January 2021 to April 2022

JAMA Internal Medicine 2022;182(10):1071–1081

This study used data from the powerful COVID-19-Associated Hospitalization Surveillance Network (a population-based surveillance system that obtains high-quality data from over 300 hospitals in 13 states and covers about 10 percent of the U.S. population) along with state immunization data to compile risk factors for hospitalization by COVID-19 vaccination status. Findings highlighted the effect of vaccines on hospitalization rates over time and showed the importance of staying up to date on COVID-19 vaccinations.

Ya-Lin A. Huang, Weiming Zhu, Jeffrey Wiener, Athena P. Kourtis, H. Irene Hall, and Karen W. Hoover

Impact of COVID-19 on HIV Preexposure Prophylaxis Prescriptions in the United States—A Time-series Analysis

Clinical Infectious Diseases 2022;75(1):e1020–1027

This study describes the effect of the COVID-19 pandemic on the HIV prevention service of preexposure prophylaxis (PrEP) in the United States between March 2020 and March 2021. The study employed a time-series model to predict the trend in the number of PrEP prescriptions had the pandemic not occurred and estimated the effect by comparing the predicted and observed trends. The assessment provides insights into the impact of the pandemic on PrEP uptake in different populations and by state.

Gilbert J. Kersh, Johanna Salzer, Emma S. Jones, Alison M. Binder, Paige A. Armstrong, Shailesh K. Choudhary, Grace K. Commins, Claire L. Amelio, Cecilia Y. Kato, Joseph Singleton, Brad J. Biggerstaff, Charles B. Beard, Lyle R. Petersen, and Scott P. Commins

Tick Bite as a Risk Factor for Alpha-gal Specific IgE Antibodies and Development of Alpha-gal Syndrome

Annals of Allergy, Asthma & Immunology 2023;130(4)472–478
(Published online November 26, 2022)

Anecdotal evidence suggests tick bites may increase the risk of acquiring alpha-gal syndrome (AGS), but data linking tick bites to this emerging allergic condition has been lacking. In this case-control study the authors examine whether tick bites and linked behaviors are associated with AGS. The study used not only self-reported tick bite but also more objective parameters to determine the association between AGS and ticks.

Alain K. Koyama, Yiling J. Cheng, Ralph Brinks, Hui Xie, Edward W. Gregg, Annika Hoyer, Meda E. Pavkov, and Giuseppina Imperatore

Trends in Lifetime Risk and Years of Potential Life Lost from Diabetes in the United States, 1997–2018

PLOS One 2022;17(5):e0268805

Although there have been modest declines in diabetes incidence, it continues to affect more than 10 percent of the U.S. population. In lieu of more traditional metrics such as prevalence and incidence, the authors measured trends over a 20-year period in three primary metrics: lifetime risk, years of potential life lost, and years spent with diabetes. Findings suggest most American adults face a one in three chance of developing the disease, and two to six years of life lost.

Roxana Loayza Mafayle, María E. Morales-Betoulle, Carla Romero, Caitlin M. Cossaboom, Shannon Whitmer, Carlos E. Alvarez Aguilera, Cinthia Avila Ardaya, Mirian Cruz Zambrana, Andrés Dávalos Anajia, Nelly Mendoza Loayza, Ana-María Montaña, Fernando L. Morales Alvis, Jimmy Revollo Guzmán, Sebastián Sasías Martínez, Grisel Alarcón De La Vega, Armando Medina Ramírez, Jhemis T. Molina Gutiérrez, Alex J. Cornejo Pinto, Renata Salas Bacci, Julia Brignone, Jorge García, Arletta Añez, Jairo Mendez-Rico, Kleber Luz, Ariel Segales, Karen M. Torrez Cruz, Adolfo Valdivia-Cayojá, Brian R. Amman, Mary J. Choi, Bobbie-Rae Erickson, Cynthia Goldsmith, James C. Graziano, Allison Joyce, John D. Klena, Austin Leach, Jason H. Malenfant, Stuart T. Nichol, Ketan Patel, Tara Sealy, Trevor Shoemaker, Christina F. Spiropoulou, Alison Todres, Jonathan S. Towner, and Joel M. Montgomery

Chapare Hemorrhagic Fever and Virus Detection in Rodents in Bolivia in 2019
The New England Journal of Medicine 2022;386(24):2283–2294

Chapare virus (CHAPV) an arenavirus that infects rodents and occasionally humans, causes Chapare hemorrhagic fever (CHHF). This paper describes the detection of CHAPV in Bolivia after 16 years without a documented case. Described in the study are nine CHHF health care workers who likely developed hospital-acquired infections. The authors developed a new test to detect CHAPV, identified a potential rodent host for the virus, and wrote guidelines for surveillance, detection, and prevention of CHAPV and similar viruses in the region.

Crescent B. Martin, Bryan Stierman, Jack A. Yanovski, Craig M. Hales, Neda Sarafrazi, and Cynthia L. Ogden

Body Fat Differences Among U.S. Youth Aged 8–19 by Race and Hispanic Origin, 2011–2018
Pediatric Obesity 2022;17:e12898

Body mass index (BMI) is often used as a stand-in measure of adiposity—a risk factor for metabolic and cardiovascular diseases. However, BMI does not perform well in approximating fat mass among people with lower body fat mass nor those with different fat distributions. This inaccuracy also differs by population subgroup. Findings show how the distribution of BMI differs from those of direct adiposity measures among U.S. youth 8–19 years by race and Hispanic origin.

R. Paul McClung, Alexandra M. Oster, M. Cheryl Bañez Ocfemia, Neeraja Saduvala, Walid Heneine, Jeffrey A. Johnson, and Angela L. Hernandez

Transmitted Drug Resistance Among HIV-1 Diagnoses in the United States, 2014–2018

Clinical Infectious Diseases 2022;74(6):1055–1062

Prevention and treatment of HIV has been effective for more than a decade, and the federal government has expanded resources dedicated to these efforts. However, transmitted HIV drug resistance threatens the efficacy of HIV antiretroviral therapy and preexposure prophylaxis. The authors used data from the National HIV Surveillance System to characterize transmitted HIV-1 drug resistance, including resistance to specific drug regimens. Findings suggest transmitted drug resistance mutations increased between 2006 and 2014 but remained stable during 2014–2018.

Nisha Nataraj, Andrea E. Strahan, Gery P. Guy Jr., Jan L. Losby, and Deborah Dowell

Dose Tapering, Increases, and Discontinuity Among Patients on Long-term High-dose Opioid Therapy in the United States, 2017–2019

Drug and Alcohol Dependence 2022;234:109392

In 2020, nearly 75 percent of 91,799 drug overdose deaths involved an opioid. Reducing exposure to prescription opioids can decrease associated risks, including for overdose and opioid use disorder. However, abrupt tapering or discontinuation among physically dependent patients can increase their risk factors. This study examines tapering and discontinuation of patients on stable high-dose long-term opioid therapy during 2017–2018. Findings can serve as a framework for examining changes in unsafe dosage tapering and discontinuation.

Maria Ospina, Andre Schütze, Pilar Morales-Agudelo, Meghan Vidal, Lee-Yang Wong, and Antonia M. Calafat

Exposure to Glyphosate in the United States: Data from the 2013–2014 National Health and Nutrition Examination Survey

Environment International 2022;170:107620

Glyphosate, a likely human carcinogen, is the most used agricultural herbicide and second most used home and garden pesticide in the United States. Despite its use on many crops, the degree of glyphosate exposure in the U.S. population has been unknown. This U.S. nationally representative assessment of urinary levels of glyphosate in the population 6 years and older shows that about 80 percent of Americans are regularly exposed to the chemical and that food is an important exposure source.

Matthew E. Oster, David K. Shay, John R. Su, Julianne Gee, C. Buddy Creech, Karen R. Broder, Kathryn Edwards, Jonathan H. Soslow, Jeffrey M. Dendy, Elizabeth Schlaudecker, Sean M. Lang, Elizabeth D. Barnett, Frederick L. Ruberg, Michael J. Smith, M. Jay Campbell, Renato D. Lopes, Laurence S. Sperling, Jane A. Baumblatt, Deborah L. Thompson, Paige L. Marquez, Penelope Strid, Jared Woo, River Pugsley, Sarah Reagan-Steiner, Frank DeStefano, and Tom T. Shimabukuro

Myocarditis Cases Reported After mRNA-based COVID-19 Vaccination in the U.S. from December 2020 to August 2021

JAMA 2022;327(4):331–340

Created to identify risks associated with vaccines, the Vaccine Adverse Event Reporting System (VAERS) has primarily compiled reports of these adverse events. Clinical trials of COVID-19 vaccines failed to identify myocarditis as a frequently occurring significant adverse event. The authors assessed the frequency and clinical course of myocarditis following COVID-19 vaccination using VAERS in two ways: to estimate the occurrence of myocarditis based on reporting rates, and by examining the clinical management and outcomes of these occurrences.

Amanda E. Paluch, Shivangi Bajpai, David R. Bassett, Mercedes R. Carnethon, Ulf Ekelund, Kelly R. Evenson, Deborah A. Galuska, Barbara J. Jefferis, William E. Kraus, I-Min Lee, Charles E. Matthews, John D. Omura, Alpa V. Patel, Carl F. Pieper, Erika Rees-Punia, Dhayana Dallmeier, Jochen Klenk, Peter H. Whincup, Erin E. Dooley, Kelley Pettee Gabriel, Priya Palta, Lisa A. Pompeii, Ariel Chernofsky, Martin G. Larson, Ramachandran S. Vasan, Nicole Spartano, Marcel Ballin, Peter Nordström, Anna Nordström, Sigmund A. Anderssen, Børge H. Hansen, Jennifer A. Cochrane, Terence Dwyer, Jing Wang, Luigi Ferrucci, Fangyu Liu, Jennifer Schrack, Jacek Urbanek, Pedro F. Saint-Maurice, Naofumi Yamamoto, Yutaka Yoshitake, Robert L. Newton Jr., Shengping Yang, Eric J. Shiroma, and Janet E. Fulton

Daily Steps and All-cause Mortality: A Meta-analysis of 15 International Cohorts

The Lancet Public Health 2022;7(3):e219–e228

The number of steps taken per day is a simple measure of physical activity. Monitoring daily steps is more feasible than ever with fitness trackers and mobile devices. But there are no evidence-based health guidelines recommending the number of steps per day for health benefits. Including analyses of more than 47,000 people's daily activity obtained for this meta-analysis, the authors describe the association between steps and mortality. Findings can be used to inform step guidelines for public health promotion.

Ju-Hyeong Park, Elizabeth Bigman, and Ping Zhang

Productivity Loss and Medical Costs Associated with Type 2 Diabetes Among Employees Aged 18–64 Years with Large Employer-sponsored Insurance

Diabetes Care 2022;45(11):2553–2560

Preventing type 2 diabetes (T2D) is a public health priority. Helping employees prevent and manage T2D can not only improve their health and productivity, but it can also lower health care costs. Employers need information on the overall costs of T2D. The authors used claims data from employers to examine the productivity loss attributable to T2D and associated financial costs. They also examined costs by age-group and sex to yield a more comprehensive picture.

Ju-Hyeong Park, Eungul Lee, Ethan D. Fechter-Leggett, Ellie Williams, Shobha Yada, Arundhati Bakshi, Stefanie Ebel, Jesse E. Bell, Heather Strosnider, and Ginger L. Chew

Associations of Emergency Department Visits for Asthma with Precipitation and Temperature on Thunderstorm Days: A Time-series Analysis of Data from Louisiana, USA, 2010–2012

Environmental Health Perspectives 2022;130(8):87003

This study examines the effects of thunderstorm-associated climate factors on asthma-related daily emergency department (ED) visits in Louisiana from 2010 through 2012. The authors identify climate risk factors associated with asthma-related ED visits during thunderstorm events and quantify the proportion of asthma ED visits attributable to the climate factors on days that had thunderstorms. Findings suggest on days with thunderstorms, higher asthma-related ED visits were associated with higher daily mean precipitation and lower daily mean temperature.

Amanda B. Payne, Alys Adamski, Karon Abe, Nimia L. Reyes, Lisa C. Richardson, William Craig Hooper, and Laura A. Schieve

Epidemiology of Cerebral Venous Sinus Thrombosis and Cerebral Venous Sinus Thrombosis with Thrombocytopenia in the United States, 2018 and 2019

Research and Practice in Thrombosis and Haemostasis 2022;6(2):e12682

This paper describes a population-based analysis of cerebral venous sinus thrombosis (CVST) epidemiology and identified three large data sets to estimate the incidence of CVST overall and CVST with thrombocytopenia, identifying medical risk factors for these conditions in U.S. populations. The authors reported more detailed incidence rates of CVST than previously reported and provided population-based incidence estimates for an important subset of cases: CVST with thrombocytopenia.

**Samantha Lange Pierce, Lyudmyla Kompaniyets, David S. Freedman,
Alyson B. Goodman, and Heidi M. Blanck**

**Children's Rates of BMI Change Prepandemic and During Two COVID-19
Pandemic Periods, IQVIA AEMR, January 2018–November 2021**

Obesity (Silver Spring, Md.) 2023;31(3):693–698

(Published online November 9, 2022)

Several studies have found that American children gained weight faster during 2020. The authors explored longitudinal changes in children's weight, BMI, and obesity prevalence after the first year of the COVID-19 pandemic. In the absence of nationally representative data, they examined electronic health record data, finding that rates of BMI increase slowed during 2021. However, a high proportion of U.S. youth remain obese, raising concerns about long-term health consequences and underscoring the need to prioritize evidence-based obesity prevention and care.

**Jin Qin, Hunter K. Holt, Thomas B. Richards, Mona Saraiya,
and George F. Sawaya**

**Use Trends and Recent Expenditures for Cervical Cancer
Screening-associated Services in Medicare Fee-for-
service Beneficiaries Older Than 65 Years**

JAMA Internal Medicine 2023;183(1):11–20

(Published online November 21, 2022)

Medical guidelines recommend ending cervical cancer screening in average-risk women at age 65. But previous studies have found most women do not meet criteria to end cervical cancer screening by that age. It has been difficult to obtain such information due to the absence of screening registries in the United States and lack of shared medical records. This study provided utilization rates and trends of cervical cancer screening-associated services and more detailed analyses by screening modes, age group, race, and ethnicity.

**Kaitlin Kelly-Reif, Stephen Bertke, Robert D. Daniels, David B. Richardson,
and Mary K. Schubauer-Berigan**

**Nonmalignant Respiratory Disease Mortality in Male
Colorado Plateau Uranium Miners, 1960–2016**

American Journal of Industrial Medicine 2022;65(10):773–782

For decades, millions of tons of Uranium ore were mined to make nuclear weapons. Many workers got sick or died of diseases related to mining hazards like silica dust and radiation. This study describes the nature of respiratory diseases in uranium miners and models these changes over time to show that uranium miners continue to suffer from federally compensable diseases related to their work. The study also identified determinants of non-malignant respiratory disease associated with radon exposure.

Isaac See, Allison Lale, Paige Marquez, Michael B. Streiff, Allison P. Wheeler, Naomi K. Tepper, Emily Jane Woo, Karen R. Broder, Kathryn M. Edwards, Ruth Gallego, Andrew I. Geller, Kelly A. Jackson, Shashi Sharma, Kawsar R. Talaat, Emmanuel B. Walter, Imo J. Akpan, Thomas L. Ortel, Victor C. Urrutia, Shannon C. Walker, Jennifer C. Yui, Tom T. Shimabukuro, Adamma Mba-Jonas, John R. Su, and David K. Shay

Case Series of Thrombosis with Thrombocytopenia Syndrome After COVID-19 Vaccination—United States, December 2020 to August 2021

Annals of Internal Medicine 2022;175(4):513–522

When thrombosis with thrombocytopenia syndrome (TTS), a potentially fatal and newly described condition occurring after COVID-19 vaccination, was first recognized in the United States, the risk was believed to be confined to females of childbearing age. These data showed that males of several age groups also had elevated risk of TTS following Janssen COVID-19 vaccination. The paper assesses reporting rates, deaths, and epidemiologic characteristics of TTS. Results caused a change in COVID-19 vaccine policy.

Kelly A. Shaw, Dedria McArthur, Michelle M. Hughes, Amanda V. Bakian, Li-Ching Lee, Sydney Pettygrove, and Matthew J. Maenner

Progress and Disparities in Early Identification of Autism Spectrum Disorder: Autism and Developmental Disabilities Monitoring Network, 2002–2016

Journal of the American Academy of Child and Adolescent Psychiatry 2022;61(7):905–914

Early identification makes a difference in the lives of children with autism. The earlier children are identified with autism, the earlier they can access services and supports. The authors compared the traditional autism metric to two alternates, finding the traditional metric masked progress in early detection of autism and missed disparities by race and intellectual ability. Findings reinforced calls from public health campaigns to improve early detection and enabled reporting of COVID-19-related disruptions to health services.

David C. Shih, Rachel Silver, Olga L. Henao, Aynalem Alemu, Allan Audi, Godfrey Bigogo, Josh M. Colston, Elijah P. Edu-Quansah, Timothy A. Erickson, Andargachew Gashu, G. Burgess Gbelee Jr., Sarah M. Gunter, Margaret N. Kosek, Gorbee G. Logan, Joy M. Mackey, Adrianna Maliga, Russell Manzanero, Gerhaldine Morazan, Francis Morey, Flor M. Munoz, Kristy O. Murray, Thelma V. Nelson, Maribel Paredes Olortegui, Pablo Penataro Yori, Shannon E. Ronca, Francesca Schiaffino, Adamu Tayachew, Musse Tedasse, Mesfin Wossen, Denise R. Allen, Pawan Angra, Amanda Balish, Madeline Farron, Marta Guerra, Amy Herman-Roloff, Victoria J. Hicks, Elizabeth Hunsperger, Lilit Kazazian, Matt Mikoleit, Peninah Munyua, Patrick K. Munywoki, Angella Sandra Namwase, Clayton O. Onyango, Michael Park, Leonard F. Peruski, David E. Sugerman, Emily Zielinski Gutierrez, and Adam L. Cohen

Incorporating COVID-19 into Acute Febrile Illness Surveillance Systems, Belize, Kenya, Ethiopia, Peru, and Liberia, 2020–2021

Emerging Infectious Diseases 2022;28(13):S34–S41

Developing a new surveillance system, particularly in a low- or middle-income country takes a significant amount of time, planning, resources, and personnel. This paper reports on a mixed-methods, survey-based study to describe successful integration of SARS-CoV-2 testing into existing acute febrile illness surveillance systems in Belize, Ethiopia, Kenya, Liberia, and Peru. Findings may help other countries adapt similar surveillance methods to meet their own disease detection needs.

Jorge Verlenden, Wojciech Kaczkowski, Jingjing Li, Marci Hertz, Kayla N. Anderson, Sarah Bacon, and Patricia Dittus

Associations Between Adverse Childhood Experiences and Pandemic-related Stress and the Impact on Adolescent Mental Health During the COVID-19 Pandemic

Journal of Child & Adolescent Trauma 2022;Dec 14:1–15

This paper examines associations of pandemic-related stress, adverse childhood experiences (ACEs), and depression symptoms among a nationwide cohort of adolescents. The authors developed a Pandemic Related Stress Index to assess the impact of pandemic-related stressors. Findings revealed a relationship between pandemic-related stress and symptoms of depression, as well as an indirect effect of ACEs on depression symptoms via pandemic-related stress. Findings can help health professionals understand cumulative effects of stress exposures.

Data Methods and Study Design

Aziza Arifkhanova, José Tomás Prieto, Arthur J. Davidson, Alia Al-Tayyib, Ethan Hawkins, Emily Kraus, Dean McEwen, Laura Jean Podewils, Seth Foldy, Elizabeth Gillespie,, Julie Taub, and Judith C. Shlay

Defining Opioid-related Problems Using a Health Care Safety Net Institution's Inpatient Electronic Health Records: Limitations of Diagnosis-based Definitions

Journal of Addiction Medicine 2023;17(1):79–84
(Published online August 2, 2022)

Measuring the prevalence of opioid-related health problems (ORHPs) among hospitalized patients is challenging due to a lack of standardized definitions, coding rules, and documentation practices. This study identified the number of hospitalized patients with ORHPs, which included opioid use disorder, opioid misuse, and opioid poisoning. The paper details a new way to identify patients with ORHPs using electronic health record markers. They further estimate the burden health care systems face in providing services to populations with ORHPs.

Alexia Couture, A. Danielle Iuliano, Howard H. Chang, Neha N. Patel, Matthew Gilmer, Molly Steele, Fiona P. Havers, Michael Whitaker, and Carrie Reed

Estimating COVID-19 Hospitalizations in the United States with Surveillance Data Using a Bayesian Hierarchical Model: A Modeling Study

JMIR Public Health Surveillance 2022;8(6):e34296

The authors used sentinel surveillance data and a Bayesian hierarchical model to estimate monthly hospitalization rates by state and age group for COVID-19 from May 2020 through April 2021. The Bayesian model accommodates complex data structures and estimation at multiple levels. Findings detailed the burden of COVID-19 hospitalization and highlighted variations in disease burden by age, state, and time. This approach yielded sustainable estimates and a flexible framework applicable to other diseases and geographies.

**Zhaohui Cui, Elyn P. Marder, Eleanor S. Click, Robert M. Hoekstra,
and Beau B. Bruce**

**Nearest-neighbors Matching for Case-control Study
Analyses: Better Risk Factor Identification from a Study of
Sporadic Campylobacteriosis in the United States**

Epidemiology 2022;33(5):633–641

Case-control studies are essential to epidemiologic research as they can provide actionable results in less time and with fewer subjects than cohort studies. This paper describes a new approach for matching cases and controls to better identify from case-control studies the underlying causes of disease. The new method, which can be used with all case-control studies, has several important benefits over traditional approaches and promises to help researchers unlock the underlying causes of a variety of diseases.

**Mariss B. Esser, Adam Sherk, Meenakshi Sabina Subbaraman, Priscilla
Martinez, Katherine J. Karriker-Jaffe, Jeffrey J. Sacks, and Timothy S. Naimi**

**Improving Estimates of Alcohol-attributable Deaths in the United States:
Impact of Adjusting for the Underreporting of Alcohol Consumption**

Journal of Studies on Alcohol and Drugs 2022;83(1):134–144

Excessive alcohol use is a leading preventable cause of death in the United States, but it is underrecognized as a public health problem. This study compared six ways to adjust self-reported alcohol consumption estimates from the Behavioral Risk Factor Surveillance System to account for underreporting. By adjusting use estimates to account for a portion of per capita alcohol sales, estimates more closely reflect consumption and better accounts for the public health effects of excessive alcohol use, including death.

**Stephen A. Gurley, Paul W. Stupp, Ian E. Fellows, Bharat S. Parekh,
Peter W. Young, Ray W. Shiraishi, Patrick S. Sullivan, and Andrew C. Voetsch**

**Estimation of HIV-1 Incidence Using a Testing History-based
Method; Analysis from the Population-based HIV Impact
Assessment Survey Data in 12 African Countries**

Journal of Acquired Immune Deficiency Syndrome 2023;92(3):189–196

(Published online November 2, 2022)

Accurate detection of recent HIV infections in cross-sectional surveys is helpful for yielding reliable estimates of HIV rates and to describe the burden and causes of new HIV infections globally. This paper describes a new way to estimate incidence based on a statistical model developed by Fellows et al. using data from the Kenya AIDS Indicator Survey. The authors applied this method to data from 12 African nations to generate more accurate estimates of HIV incidence compared with standard methods.

Anna A. Ivanova, Jon C. Rees, Bryan A. Parks, Michael Andrews, Michael Gardner, Eunice Grigorutsa, Zsuzsanna Kuklenyik, James L. Pirkle, and John R. Barr

Integrated Quantitative Targeted Lipidomics and Proteomics Reveal Unique Fingerprints of Multiple Metabolic Conditions

Biomolecules 2022;12(10):1439

Traditional measures of cardiovascular disease risk assessment such as age, gender, blood pressure, smoking status, cholesterol and glucose levels, leave too many people undiagnosed. Poor clinical outcomes highlight the need for better diagnostic tools. The authors defined a set of molecular features to categorize each metabolic condition investigated in this paper. Together, the application of this new approach may improve molecular classification of lipid metabolism-related chronic diseases to inform individualized interventions and diagnostic strategies.

Amalia Mendes, Ari Whiteman, Benjamin Nygren, Brian Kaplan, Intiaz Hussain, Sajid Soofi, Maureen Martinez, and Noha H. Farag

Immunity to Poliovirus in Afghanistan: A Household Sampling Method for Serological Assessment Based on Geographical Information Systems

Geospatial Health 2022;17(2)

This paper describes using geographic information systems and satellite imagery to randomly select children living in a densely populated part of Afghanistan for enrollment in a poliovirus serosurvey. This serosurvey assessed the effectiveness of vaccination campaigns in two polio high-risk areas in 2020 that present challenges to conduct public health field work due to insecurity and workforce capacity limitations. Findings will guide future vaccination efforts in those areas.

Lisa B. Mirel, Dean M. Resnick, Jonathan Aram, and Christine S. Cox

A Methodological Assessment of Privacy Preserving Record Linkage Using Survey and Administrative Data

Statistical Journal of the IAOS 2022;38(2):413–421

Data linkage can make the best use of the scientific value of population-based surveys. The authors assessed a new privacy preserving record linkage, or PPRL, as a data linkage method using de-identified data. The authors assessed their PPRL techniques by comparing linkage results obtained from PPRL-encrypting algorithms with previously linked data using direct identifiers. Findings show their PPRL approaches yield a way to maintain scientific integrity and credibility while maintaining privacy.

Molly K. Steele, Alexia Couture, Carrie Reed, Danielle Iuliano, Michael Whitaker, Hannah Fast, Aron J. Hall, Adam MacNeil, Betsy Cadwell, Kristin J. Marks, and Benjamin J. Silk

Estimated Number of COVID-19 Infections, Hospitalizations, and Deaths Prevented Among Vaccinated Persons in the U.S., December 2020 to September 2021

JAMA Network Open 2022;5(7):e2220385

To estimate the effectiveness of COVID-19 vaccination in the United States, the authors layered multiple models together to estimate the burden of COVID-19 infections, hospitalizations, and deaths. They then estimated the burden averted by vaccines. The authors used data on COVID-19 disease severity, vaccine coverage, and vaccine efficacy to develop several scenarios describing vaccine effectiveness and their effectiveness stratified by time, region, and age group. Findings suggest the initial vaccine rollout prevented a substantial number of infections, hospitalizations, and deaths.

Yu Wang, Ping Zhang, Hui Shao, Linda J. Andes, and Giuseppina Imperatore

Medical Costs Associated with Diabetes Complications in Medicare Beneficiaries Aged 65 years or Older with Type 1 Diabetes

Diabetes Care 2022;45(11):2570–2576

More than half of medical costs associated with diabetes are for people 65 and older, much of which is covered by Medicare. This paper estimated the direct medical cost of all 17 diabetes-related complications simultaneously in the elderly population with type 2 diabetes. Estimates can be used to measure the potential financial benefits of programs, policies, and interventions to prevent type 2 diabetes and its complications. Findings also yielded input parameters needed by the type 2 diabetes cost-effectiveness simulation model.

Quanhe Yang, Xin Tong, Mary G. George, Anping Chang, and Robert K. Merritt

COVID-19 and Risk of Acute Ischemic Stroke Among Medicare Beneficiaries Aged 65 years or older: Self-controlled Case Series Study

Neurology 2022;98(8):e778–e789

The association between COVID-19 diagnosis and stroke remains inconsistent, with previous studies finding causal, protective, and null associations. These inconsistent findings may stem from confounding that remained unrecognized in previous studies. This study used a new way (the self-controlled case series) to examine the association between COVID-19 and acute ischemic stroke risk among Medicare fee-for-service beneficiaries aged 65 or older.

**Kristin Yeoman, Alyssa Weakley, Weston DuBose, Kimberly Honn,
Timothy McMurry, Brianna Eiter, Brent Baker, and Gerald Poplin**

Effects of Heat Strain on Cognitive Function Among a Sample of Miners
Applied Ergonomics 2022;102:103743

Studies across occupations and industries have found associations between heat exposure and occupational injuries. While the underlying mechanism remains unclear, it likely involves a combination of fatigue, discomfort, and reduced cognitive and psychomotor function. This paper aimed to identify which cognitive tests were most affected by heat stress and determine the methods needed for a multiyear study to evaluate heat exposure on cognitive performance. The authors identified one of two cognitive tests that could potentially be employed in occupational settings.

**Casey M. Zipfel, Prabasaj Paul, Camden D. Gowler, Sujan C. Reddy,
Nimalie D. Stone, Kara Jacobs Slifka, and Rachel B. Slayton**

**Modeling the Effectiveness of Healthcare Personnel Reactive Testing and
Screening for the SARS-CoV-2 Omicron Variant Within Nursing Homes**
Clinical Infectious Diseases 2022;75(Suppl 2):S225–S230

This paper describes the use of a mathematical modeling approach to assess the effect of COVID-19 testing and isolation strategies in health care workers to reduce transmission of COVID-19 in nursing homes. The authors developed a modeling tool to estimate the effects of testing and isolation strategies to aid in rapid policy decision making in settings where time and data are limited. This work directly informed national procurement decisions for SARS-CoV-2 antigen tests and infection prevention guidance in nursing homes.

Health Equity Science

Taylor D. Ellington, Jane Henley, Reda J. Wilson, Jacqueline W. Miller, Manxia Wu, and Lisa C. Richardson

Trends in Breast Cancer Mortality by Race/Ethnicity, Age, and U.S. Census Region, United States—1999–2020

Cancer 2023;129(1):32–38 (Published online October 30, 2022)

Breast cancer is the leading cause of cancer death among African American women, Hispanic women, and young women aged 30–54 years. This study examines breast cancer mortality by race/ethnicity, age, and U.S. Census region, giving the authors the chance to highlight disparities in mortality among these groups. Findings may also allow health practitioners to tailor screening and diagnostic interventions to decrease these disparities and contribute to the ongoing effort of promoting health equity.

Janet E. Farmer, Lee Walker Falk, Mary J. Clark, Wayne A. Mayfield, and Katie K. Green

Developmental Monitoring and Referral for Low-income Children Served by WIC: Program Development and Implementation Outcomes

Maternal and Child Health Journal 2022;26(2):230–241

One in six children aged 3–17 years have developmental disabilities that affect the way they play, learn, speak, act, or move. Many of these children are not identified until after starting school. Earlier intervention can improve children's ability to acquire new skills and also reduce costly interventions over time. This paper builds an evidence base for an approach to advancing equity related to earlier identification and intervention for developmental delays and disabilities among children in low-income households.

Bonnie Harvey, Warren Dalal, Farah Amin, Elvira McIntyre, Sarah Ward, Rebecca D. Merrill, Abdinoor Mohamed, and Christopher H. Hsu

Planning and Implementing a Targeted Polio Vaccination Campaign for Somali Mobile Populations in Northeastern Kenya Based on Migration and Settlement Patterns

Ethnicity & Health 2022;27(4):817–832

Somali pastoralists and other migrants have been linked to polio outbreaks that originated in Somalia but affected ethnic Somalis in Northeast Kenya. Children in these groups have endured frequent measles outbreaks because they were not well included in vaccination campaigns. The authors of this paper evaluated later health campaigns aimed at vaccinating in these and other hard-to-reach Somali communities in Kenya with polio and measles vaccines and also offering nutritional supplements.

Eric W. Hall, Prabhu Gounder, John Angles, Noele P. Nelson, Eli S. Rosenberg, and Mark K. Weng

Evaluating the Cost-effectiveness of Hepatitis B Vaccination Strategies in High-impact Settings for Adults

Journal of Viral Hepatitis 2022;29(12):1115–1126

Efforts to reduce hepatitis B cases have stalled during the past decade due to historically complex risk-based vaccination recommendations and the stigmatizing of risk factors people often feel uncomfortable disclosing. This cost-effectiveness study informed the development of a universal adult hepatitis B vaccination ACIP recommendation. It also evaluated approaches for increasing vaccination rates among populations at high risk for hepatitis B who often interact with primary health systems where most vaccination takes place.

Zheng Li, Brian Lewis, Kevin Berney, Elaine Hallisey, Austin M. Williams, Ari Whiteman, Luis O. Rivera-González, Kristie E. N. Clarke, Heather Clayton, Terry Tincher, Jean D. Opsomer, Michael P. Busch, Adi Gundlapalli, and Jefferson M. Jones

Social Vulnerability and Rurality Associated with Higher SARS-CoV-2 Infection-induced Seroprevalence: A Nationwide Blood Donor Study, United States, July 2020–June 2021

Clinical Infectious Diseases 2022;75(1):e133–e143

This paper investigated underlying risk factors for SARS-CoV-2 infection in the United States during the COVID-19 pandemic. After adjusting for demographic and geographic factors, the authors found that higher infection-induced seropositivity was significantly associated with race/ethnicity, rurality, social vulnerability, and social economic status. Findings suggest policies and practices aimed at reducing poverty, improving access to healthcare and testing, and targeted outreach may reduce health inequities and better prepare for future outbreaks.

Benjamin Metcalf, Srinivas Nanduri, Sopio Chochua, Yuan Li, Katherine Fleming-Dutra, Lesley McGee, and Bernard Beall

Cluster Transmission Drives Invasive Group A Streptococcus Disease Within the U.S. and Is Focused on Communities Experiencing Disadvantage

The Journal of Infectious Diseases 2022;226(3):546–553

The authors identify and characterize the disproportionate association between invasive Group A streptococcus (iGAS) clusters in people experiencing homelessness and those who inject drugs. Findings suggest a large proportion of iGAS is cluster-associated, and the propensity to cluster is driven in part by disease among people at higher risk for iGAS such as those experiencing homelessness and people who inject drugs. The authors show that a reduction of iGAS can be informed by cluster analysis, especially among underserved populations.

Elizabeth C. Ohlsen, David Yankey, Clelia Pezzi, Jennifer L. Kriss, Peng-Jun Lu, Mei-Chuan Hung, Maria I. Dionicio Bernabe, Gayathri S. Kumar, Emily Jentes, Laurie D. Elam-Evans, Hannah Jackson, Carla L. Black, James A. Singleton, Chandresh N. Ladva, Neetu Abad, and Alfonso Rodriguez Lainz

COVID-19 Vaccination Coverage, Intentions, Attitudes and Barriers by Race/Ethnicity, Language of Interview, and Nativity, National Immunization Survey Adult COVID Module, April 22, 2021–January 29, 2022

Clinical Infectious Diseases 2022;75(Suppl 2):S182–S192

People born outside the United States and those with limited English proficiency experience inequities in health services access and disease burden compared to the general U.S. population. The authors analyzed a nationally representative survey disaggregating populations speaking languages other than English, people born outside of the United States, and people with origin or heritage in specific countries or regions. Findings suggest tailoring culturally and linguistically appropriate vaccination promotion efforts focused on specific populations.

Ian W. Pray, Barbara Grajewski, Collin Morris, Komi Modji, Peter DeJonge, Katherine McCoy, Carrie Tomasallo, Traci DeSalvo, Ryan P. Westergaard, and Jonathan Meiman

Measuring Work-related Risk of COVID-19: Comparison of COVID-19 Incidence by Occupation and Industry—Wisconsin, September 2020–May 2021

Clinical Infectious Diseases 2023;76(3):e163–e171

(Published online August 19, 2022)

This paper reports on disparities in COVID-19 incidence by occupation. Workers in certain high-risk occupations were disproportionately harmed by the COVID-19 pandemic, and information about workplace risks was not readily available to workers or public health leaders because of lacking occupational data. The authors report on worker disparities in COVID-19 incidence and propose a model for surveillance systems that adequately capture worker information during public health investigations, which will promote health equity among occupational groups.

Lauren M. Rossen, Katherine A. Ahrens, Lindsay S. Womack, Sayeedha F.G. Uddin, and Amy M. Branum

Rural–Urban Differences in Maternal Mortality Trends in the U.S., 1999–2017: Accounting for the Impact of the Pregnancy Status Checkbox

American Journal of Epidemiology 2022;191(6):1030–1039

Maternal mortality is a key indicator of population health. Monitoring trends in maternal mortality helps to evaluate progress in improving maternal health, make international comparisons, and track inequities by demographic subgroups. Significant disparities in maternal mortality exist by race/ethnicity and age in the United States, and recent analyses have described rural disparities as well. This paper describes rural–urban differences in maternal mortality during 1999–2017 while accounting for incremental adoption of the pregnancy status checkbox on death certificates.

Christina Scherrer, Shillpa Naavaal, Mei Lin, Susan O. Griffin

COVID-19 Pandemic Impact on U.S. Childhood Caries and Potential Mitigation

Journal of Dental Research 2022;101(10):1147–1154

Untreated tooth decay is the most common disease in the United States and affects children's well-being with effects that spill over into learning. This study examined the effect of the COVID-19 pandemic's widespread closures of dental offices and school sealant programs on racial/ethnic disparities in tooth decay and the associated loss in quality of life among children from low-income families and to estimate mitigation by increasing the provision of dental sealants.

Miriam R. Siegel, Carissa M. Rocheleau, Kendra Broadwater, Albeliz Santiago-Colón, Candice Y. Johnson, Michele L. Herdt, I-Chen Chen, and Christina C. Lawson

Maternal Occupation as a Nail Technician or Hairdresser During Pregnancy and Birth Defects, National Birth Defects Prevention Study, 1997–2011

Occupational and Environmental Medicine 2022;79(1):17–23

Nail technicians and hairdressers handle products that contain chemicals associated with cancer or reproductive harm. This paper describes analytic methods to assess maternal occupation as a nail or hair salon worker as a social determinant of health (SDOH) associated with risk of birth defects in children. Correlations yield evidence that this SDOH might contribute to disparities in exposure to reproductive toxicants or reproductive outcomes for several marginalized communities and that improved workplace training and interventions can help improve health equity.

Shichao Tang, Daniel A. Bowen, Laura Chadwick, Emily Madden, and Robin Ghertner

Are Home Evictions Associated with Child Welfare System Involvement? Empirical Evidence from National Eviction Records and Child Protective Services Data

Child Maltreatment 2022;10775595221125917

About 9 in 1,000 children in the United States suffered abuse or neglect in 2018. Poverty is a significant risk factor for abuse and neglect, and insecure housing associated with poverty poses another threat to children's well-being. This study used three multiyear administrative datasets to examine the link between home evictions and child welfare system involvement—an indicator of abuse, neglect, and other adverse childhood experiences. Stratified analyses further identified disparities in this association among racial and ethnic groups.

Tammy Zulz, Grace Huang, Karen Rudolph,Carolynn DeByle, Raymond Tsang, Shalini Desai, Stephanie Massey, and Michael G. Bruce

Epidemiology of Invasive Haemophilus Influenzae Serotype a Disease in the North American Arctic, 2006–2017

International Journal of Circumpolar Health 2022;81(1):2150382

Indigenous children in the North American Arctic are disproportionately affected by infection with Haemophilus influenzae serotype A (Hia), which causes meningitis, pneumonia, and joint infections. It also has an 11 percent case fatality rate. This paper shows that Hia continues to cause illness and death in Alaska and Northern Canada, particularly among indigenous children. Findings further support the American Academy of Pediatrics Committee on Infectious Diseases recommendation that clinicians consider chemoprophylaxis for household contacts of a person with invasive Hia.

Laboratory Science

Anne E. Boyer, Maribel Gallegos-Candela, Renato C. Lins, Maria I. Solano, Adrian R. Woolfitt, John S. Lee, Daniel C. Sanford, Katherine A. B. Knostman, Conrad P. Quinn, Alex R. Hoffmaster, James L. Pirkle, and John R. Barr

Comprehensive Characterization of Toxins During Progression of Inhalation Anthrax in a Non-human Primate Model

PLOS Pathogens 2022;18(12):e1010735

Inhalation anthrax is highly lethal and has been a result of naturally occurring infections and bioterrorism. The authors used mass-spectrometry-based methods to assess anthrax toxins throughout infection. Combining the toxin measurements with other data yielded a model for anthrax progression that corresponds to the three stages of clinical inhalation anthrax. Findings suggest that progression is toxin- rather than time-dependent. This model can be used to better manage an anthrax event, improve clinical outcomes, and guide medical countermeasures.

Robert A. Cohen, Cecile S. Rose, Leonard H. T. Go, Lauren M. Zell-Baran, Kirsten S. Almberg, Emily A. Sarver, Heather A. Lowers, Cayla Iwaniuk, Sidney M. Clingerman, Diana L. Richardson, Jerrold L. Abraham, Carlyne D. Cool, Angela D. Franko, Ann F. Hubbs, Jill Murray, Marlene S. Orandle, Soma Sanyal, Naseema I. Vorajee, Edward L. Petsonk, Rafia Zulfikar, and Francis H. Y. Green

Pathology and Mineralogy Demonstrate Respirable Crystalline Silica is a Major Cause of Severe Pneumoconiosis in U.S. Coal Miners

Annals of the American Thoracic Society 2022;19(9):1469–1478

Black lung disease historically affected a high percentage of coal miners and eventually led to worker protection laws. The authors used evaluation of pulmonary pathology, mineralogic analysis of particles in lung tissue, and e-pathology to share images among pathologists and show that exposure to respirable crystalline silica is the likely cause of the surge in severe black lung in today's coal miners. It also showed the importance of mineral-dust related alveolar proteinosis as a marker of silica-related disease.

Jayne P. Coyle, Raymond C. Derk, William G. Lindsley, Theresa Boots, Françoise M. Blachere, Jeffrey S. Reynolds, Walter G. McKinney, Erik W. Sinsel, Angela R. Lemons, Donald H. Beezhold, and John D. Noti

Reduction of Exposure to Simulated Respiratory Aerosols Using Ventilation, Physical Distancing, and Universal Masking

Indoor Air 2022;32(2):e12987

To reduce exposure risk to SARS-CoV-2, CDC recommended several ways to limit COVID-19 transmission, including masking, maintaining physical distance, and increasing ventilation. This paper describes research done in CDC/NIOSH laboratories using robot simulators that cough and exhale respiratory aerosols to test the effectiveness of universal masking, physical distancing, and room ventilation in reducing exposure to respiratory aerosols. Findings suggest these measures can reduce exposure to air exhaled by people infected with SARS-CoV-2.

Joshua DeVos, Kimberly McCarthy, Victor Sewe, Grace Akinyi, Muthoni Junghae, Valarie Opollo, Janin Nouhin, Robert Shafer, Clement Zeh, Artur Ramos, Heather Alexander, and Joy Chang

A Partially Multiplexed HIV Drug Resistance (HIVDR) Assay for Monitoring HIVDR Mutations of the Protease, Reverse-transcriptase (PRRT), and Integrase (INT)

Microbiology Spectrum 2022;10(3):e0177621

This paper describes a new laboratory test for HIV drug resistance. The application of this test will be especially useful for monitoring drug resistance among the 10 million people living with HIV who have no access to life-saving treatment in high-burdened countries. Among those are people supported by the U.S. President's Emergency Plan for AIDS Relief. Findings suggest this tool will help achieve the goal of ending the HIV epidemic by 2030.

Charles W. Dobard, M. Melissa Peet, Kenji Nishiura, Angela Holder, Chuong Dinh, James Mitchell, George Khalil, Yi Pan, Onkar N. Singh, Timothy J. McCormick, Vivek Agrahari, Pardeep Gupta, Sriramakamal Jonnalagadda, Walid Heneine, Meredith R. Clark, J. Gerardo García-Lerma, and Gustavo F. Doncel

Single Dose Topical Inserts Containing Tenofovir Alafenamide Fumarate and Elvitegravir Provide Pre- and Post-exposure Protection Against Vaginal SHIV Infection in Macaques

EBioMedicine 2022;86:104361

Pre-exposure prophylaxis with antiretroviral drugs is effective against sexual HIV acquisition. However, poor adherence and early discontinuation of PrEP limit its public health benefit. This paper describes the development of a new topically applied microbicide for HIV PrEP in women. The authors show the effectiveness of vaginal inserts containing two potent anti-retroviral drugs used on macaques. Findings suggest vaginal inserts may be a preferable option for women who prefer not to use daily or long-acting PrEP.

Crystal M. Gigante, Bette Korber, Matthew H. Seabolt, Kimberly Wilkins, Whitney Davidson, Agam K. Rao, Hui Zhao, Todd G. Smith, Christine M. Hughes, Faisal Minhaj, Michelle A. Waltenburg, James Theiler, Sandra Smole, Glen R. Gallagher, David Blythe, Robert Myers, Joann Schulte, Joey Stringer, Philip Lee, Rafael M. Mendoza, LaToya A. Griffin-Thomas, Jenny Crain, Jade Murray, Annette Atkinson, Anthony H. Gonzalez, June Nash, Dhvani Batra, Inger Damon, Jennifer McQuiston, Christina L. Hutson, Andrea M. McCollum, and Yu Li

Multiple Lineages of Monkeypox Virus Detected in the United States, 2021–2022

Science 2022;378(6619):560–565

Mpox is an orthopoxvirus related to smallpox that previously had been reported almost exclusively in West or Central Africa. In 2022, tens of thousands of mpox cases were reported in non-endemic countries, most in patients with no epidemiological link to Africa. Moreover, the 2022 cases were associated with person-to-person transmission, which was atypical for mpox. The authors rapidly analyzed the genomic sequence of monkeypox virus and uncovered new genetic strains that led to the major 2022 outbreak variant.

Zhu-Nan Li, Feng Liu, Stacie Jefferson, Lauren Horner, Paul Carney, Michael D. L. Johnson, Jennifer P. King, Emily T. Martin, Richard K. Zimmerman, Karen Wernli, Manjusha Gaglani, Mark Thompson, Brendan Flannery, James Stevens, Terrence Tumpe, and Min Z. Levine

Multiplex Detection of Antibody Landscapes to SARS-CoV-2/Influenza/Common Human Coronaviruses Following Vaccination or Infection with SARS-CoV-2 and Influenza

Clinical Infectious Diseases 2022;75(Suppl 2):S271–S284

The COVID-19 pandemic has led to millions of deaths since 2020. Influenza viruses have caused four pandemics during the past century and millions of infections each year. But antibody responses to SARS-CoV-2 and influenza co-infection and vaccine co-administration remain limited. The authors developed an antibody immunity assay and analyzed blood collected from vaccination and infection cases of influenza and SARS-CoV-2. Findings suggest no interaction between the antibody responses to SARS-CoV-2 and influenza, informing vaccination policies and public health strategies.

Mira C. Patel, Daniel Flanigan, Chenchen Feng, Anton Chesnokov, Ha T. Nguyen, Anwar Abd Elal, John Steel, Rebecca J. Kondor, David E. Wentworth, Larisa V. Gubareva, and Vasilii P. Mishin

An Optimized Cell-based Assay to Assess Influenza Virus Replication by Measuring Neuraminidase Activity and Its Applications for Virological Surveillance

Antiviral Research 2022;208:105457

Influenza virus characterization is an important task constantly conducted by surveillance laboratories. The authors developed a new way to characterize influenza viruses in cell culture. The authors demonstrated an array of possible applications for this new method, including antigenic characterization and detection of resistance to antivirals with different mechanisms of action. The new method can become a preferred choice to characterize seasonal and zoonotic influenza viruses that continue to pose threats to human health.

Krishnan Sriram, Gary X. Lin, Amy M. Jefferson, Walter McKinney, Mark C. Jackson, Jared L. Cumpston, James B. Cumpston, Howard D. Leonard, Michael L. Kashon, and Jeffrey S. Fedan

Biological Effects of Inhaled Crude Oil Vapor V. Altered Biogenic Amine Neurotransmitters and Neural Protein Expression

Toxicology and Applied Pharmacology 2022;449:116137

The cost of neurological disorders in the United States is estimated at \$800 billion annually. Occupational exposures account for about 10 percent of these outcomes. Workers in the oil and gas extraction industry are exposed to a number of physical and chemical hazards. The authors modelled human exposure conditions to crude oil to characterize the hazards and neurological effects. Findings inform a major public health problem and provide information developing safer work practices, exposure controls, and biomonitoring strategies.

Charles M. Thurlow, Sandeep J. Joseph, Lilia Ganova-Raeva, Samantha S. Katz, Lara Pereira, Cheng Chen, Alyssa Debra, Kendra Vilfort, Kimberly Workowski, Stephanie E. Cohen, Hilary Reno, Yongcheng Sun, Mark Burroughs, Mili Sheth, Kai-Hua Chi, Damien Danavall, Susan S. Philip, Weiping Cao, Ellen N. Kersh, and Allan Pillay

Selective Whole-Genome Amplification as a Tool to Enrich Specimens with Low *Treponema Pallidum* Genomic DNA Copies for Whole-genome Sequencing

mSphere 2022;7(3):e0000922

Left untreated, syphilis can progress through multiple stages with severe clinical manifestations. Molecular studies on syphilis spirochete *Treponema pallidum* (*T. pallidum*) strains are limited due to few sequenced whole genomes from clinical specimens. This paper describes a new genome sequencing method and the associated bioinformatics pipeline for sequencing of *T. pallidum*. The method allows clinical specimens with as low as 35 genomic DNA copies of *T. pallidum* to be sequenced, which is significantly lower than previously published methods.

Ernest L. Yufenyuy, Shanmugam Vedapuri, Amy Zheng, Gretchen Cooley, Damien Danavall, Shukla Mayur, Maja Kodani, Cheng Chen, Ye Tun, Yetunde F. Fakile, Diana Martin, Saleem Kamili, Kevin Kareem, and Bharat S. Parekh

Development of a Bead-based Multiplex Assay for Use in Multianalyte Screening and Surveillance of HIV, Viral Hepatitis, Syphilis, and Herpes

Journal of Clinical Microbiology 2022;60(5):e0234821

Patients typically present with generalized and nonspecific symptoms that make diagnosis difficult. Clinicians order tests to help them reach a definitive diagnosis. This paper describes the development of a single test to diagnose several pathogens known to spread from mother to child, including HIV, syphilis, herpes, and hepatitis. The test can diagnose multiple pathogens simultaneously with high accuracy, eliminating time constraints and reducing cost associated with running multiple assays for different pathogens.

Prevention and Control

Winston E. Abara, Kyle T. Bernstein, Felicia M. T. Lewis, Julia A. Schillinger, Kristen Feemster, Preeti Pathela, Susan Hariri, Aras Islam, Michael Eberhart, Iris Cheng, Alexandra Ternier, Jennifer Sanderson Slutsker, Sarah Mbaeyi, Robbie Madera, and Robert D. Kirkcaldy

Effectiveness of a Serogroup B Outer Membrane Vesicle Meningococcal Vaccine Against Gonorrhoea: A Retrospective Observational Study

The Lancet Infectious Diseases 2022;22(7):1021–1029

CDC has designated antimicrobial-resistant gonorrhoea an urgent public health threat. Declining gonococcal susceptibility to ceftriaxone has raised concern about the emergence of untreatable gonorrhoea, and there is no vaccine licensed to prevent gonorrhoea. The authors conducted a retrospective observational study using sexually transmitted infection (gonorrhoea and chlamydia) surveillance and MenB-4C immunization data from New York City and Philadelphia to determine whether MenB-4C is effective against gonorrhoea and to estimate MenB-4C vaccine effectiveness. Findings suggest MenB-4C vaccination offers cross-protection against gonorrhoea.

Emma K. Accorsi, Amadea Britton, Katherine E. Fleming-Dutra, Zachary R. Smith, Nong Shang, Gordana Derado, Joseph Miller, Stephanie J. Schrag, and Jennifer R. Verani

Association Between 3 Doses of mRNA COVID-19 Vaccine and Symptomatic Infection Caused by the SARS-CoV-2 Omicron and Delta Variants

JAMA 2022;327(7):639–651

The COVID-19 Omicron variant greatly accelerated case counts. The authors used a national, no-cost COVID-19 testing platform to estimate vaccine effectiveness and identified best practices for analyzing testing data. Along with biostatistical tools, their approach improved the response to the Omicron variant. Findings suggest vaccine protection against Omicron was lower than for the Delta variant. Booster doses were needed as the effectiveness of two mRNA vaccine doses waned to almost zero percent six months after the second dose.

Joseph Burzynski, Joan M. Mangan, Chee Kin Lam, Michelle Macaraig, Marco M. Salerno, Rey deCastro, Neela D. Goswami, Carol Y. Lin, Neil W. Schluger, and Andrew Vernon

In-person vs. Electronic Directly Observed Therapy for Tuberculosis Treatment Adherence: A Randomized Noninferiority Trial

JAMA Network Open 2022;5(1):e2144210

Inconsistent adherence to tuberculosis (TB) treatment increases the risk for acquired drug resistance, treatment failure, disease recurrence, and further transmission. U.S. clinical practice guidelines recommend directly observed therapy (DOT) as the standard of care for TB treatment. This randomized, crossover noninferiority trial yielded evidence to support using video-enabled phones, tablets, or computers to directly observe people taking tuberculosis treatment. Findings support electronic observation as an evidence-based equivalent alternative to in-person DOT.

Amanda R. Conrad, Sheri Tubach, Venessa Cantu, Lindsey Martin Webb, Steven Stroika, Steve Moris, Megan Davis, D. Charles Hunt, Kristy K. Bradley, Zuzana Kucerova, Errol Strain, Matthew Doyle, Angela Fields, Karen P. Neil, L. Hannah Gould, Kelly A. Jackson, Matthew E. Wise, Patricia M. Griffin, and Brendan R. Jackson

Listeria Monocytogenes Illness and Deaths Associated with Ongoing Contamination of a Multi-regional Brand of Ice Cream Products, United States, 2010–2015

Clinical Infectious Diseases 2023;76(1):89–95 (Published online July 7, 2022)

The outbreak investigation reported in this paper linked listeriosis, a deadly foodborne infection, to contaminated ice cream served to cancer and other patients. It was part of one of the earliest CDC projects to apply whole genome sequencing (WGS) and the clearest example of how combining WGS with epidemiologic data could identify sources of foodborne illness. This innovation generated actionable information for CDC and its partners to remove contaminated ice cream from store shelves, preventing additional illnesses and deaths.

Peter M. DeJonge, Ian W. Pray, Ronald Gangnon, Katherine McCoy, Carrie Tomasallo, and Jonathan Meiman

School District Prevention Policies and Risk of COVID-19 Among In-person K-12 Educators, Wisconsin, 2021

American Journal of Public Health Dec 2022;112(12):1791–1799

The COVID-19 response generated uncertainty about the extent to which student masking policies made a difference to transmission. This study compared the risks of COVID-19 illness among Wisconsin educators and the risks' association with three mitigation policies—masking, physical distancing, and the use of quarantine after exposure. Findings revealed that educators working in school districts with student and staff masking policies experienced 19 percent lower risk of COVID-19 compared with educators working in districts without masking policies.

Meredith G. Dixon, Milagritos D. Tapia, Kathleen Wannemuehler, Richard Luce, Mark Papania, Samba Sow, Myron M. Levine, and Marcela F. Pasetti

Measles Susceptibility in Maternal–Infant Dyads—Bamako, Mali

Vaccine 2022;40(9):1316–1322

Before this study the assumption was that infants sustain maternal immunity against measles until age six months. This paper examined measles susceptibility in mother–infant pairs in the context of vaccine- and infection-induced immunity. Findings suggest 10 percent of infants were susceptible to measles infection from birth, the majority by three months—six months before infants are eligible for measles vaccination in the region. Increased susceptibility represents a significant risk for illness and death among infants where measles remains endemic.

Sandra L. Jackson, Jason P. Block, Deborah B. Rolka, Meda E. Pavkov, Jennifer R. Chevinsky, Akaki Lekiachvili, Thomas W. Carton, Deepika Thacker, Joshua L. Denson, Anuradha Paranjape, Michael D. Kappelman, Tegan K. Boehmer, and Evelyn Twentyman

COVID-19 Outcomes Stratified by Control Status of Hypertension and Diabetes: Preliminary Findings from PCORnet, U.S.

AJPM Focus 2022;1(1):100012

While diabetes and hypertension were known early on to worsen COVID-19 outcomes, little was known about the role of blood pressure and glycated hemoglobin (or HbA1c) level in these associations. This study examined COVID-19 outcomes (hospitalization, ventilation, critical care, and 60-day mortality) across strata of disease control for diabetes and hypertension in a multisite cohort of more than 650,000 U.S. adults. Findings suggest that worse COVID-19 outcomes were more common among those with the highest blood pressure and HbA1C.

Christopher M. Jones, Carla Shoff, Kevin Hodges, Carlos Blanco, Jan L. Losby, Shari M. Ling, and Wilson M. Compton

Receipt of Telehealth Services, Receipt and Retention of Medications for Opioid Use Disorder, and Medically Treated Overdose Among Medicare Beneficiaries Before and During the COVID-19 Pandemic

JAMA Psychiatry 2022;79(10):981–992

Drug overdose deaths increased 30 percent from 2019 and 2020 and another 15 percent between 2020 and 2021. Underlying many of these deaths is opioid use disorder (OUD). Further, COVID-19 pandemic mitigation measures raised concerns about increasing overdose risk among those with OUD due to disruptions in care. This study examined the effect of telehealth to provide medications for opioid use disorder to prevent overdose. Findings suggest people receiving telehealth services were more likely to be retained in care.

Szu-Yu Zoe Kao, J. Danielle Sharpe, Rashon I. Lane, Rashid Njai, Russell F. McCord, Aderonke S. Ajiboye, Chandresh N. Ladva, Linda Vo, and Donatus U. Ekwueme

Duration of Behavioral Policy Interventions and Incidence of COVID-19 by Social Vulnerability of U.S. Counties, April–December 2020

Public Health Reports 2023;138(1):190–199

(Published online October 6, 2022)

From the introduction of SARS-CoV-2 in early 2020, the U.S. population was susceptible with no vaccine and behavioral policy interventions such as mask mandates, stay-at-home orders, and gathering bans as the primary way to control the spread of the virus. COVID-19 surveillance found that minority and economically disadvantaged communities had higher rates of disease compared to White and affluent communities. The authors suggest that longer behavioral policy interventions reduce COVID-19 transmission, especially in communities with higher levels of social vulnerability.

Cara T. Mai, Jane Evans, Clinton J. Alverson, Xin Yue, Timothy Flood, Kathryn Arnold, Eirini Nestoridi, Lindsay Denson, Olufunmilola Adisa, Cynthia A. Moore, Amy Nance, Katherine Zielke, Sydney Rice, Xiaoyi Shan, Jane H. Dean, Mary Ethen, Brenda Hansen, Jennifer Isenburg, and Russell S. Kirby

Changes in Spina Bifida Lesion Level After Folic Acid Fortification in the United States

The Journal of Pediatrics 2022;249:59–66.e1

Mandatory addition of folic acid in staple foods has prevented more than 1,300 neural tube defects annually in the United States. This study showed that mandatory fortification changed not only the prevalence but also the nature of the most common neural tube defect, spina bifida. Using data from multistate, population-based surveillance systems, this cohort study of 7.8 million births showed a steep reduction in prevalence of severe upper-level lesion spina bifida following mandatory folic acid fortification in the United States.

Mona Marin, Adriana S. Lopez, Michael Melgar, Kathleen Dooling, Aaron T. Curns, and Jessica Leung

Decline in Severe Varicella Disease During the United States Varicella Vaccination Program: Hospitalizations and Deaths, 1990–2019

The Journal of Infectious Diseases 2022;226(Suppl 4):S407–S415

During the first 25 years of use in the United States, the varicella vaccine has prevented more than 91 million cases of varicella, 238,000 hospitalizations, and 1,900 deaths. In addition to the direct benefits of reducing illness and death, the varicella vaccination program has also reduced herpes zoster incidence among children and adolescents born in the vaccine era. This reduction should likely extend to the broader population over time, preventing this common cause of illness and suffering among older adults.

Martha P. Montgomery, Yuna Zhong, Emma Roberts, Alice Asher, Danae Bixler, Mona Doshani, Aleta Christensen, Maribeth Eckert, Mark K. Weng, Monique Carry, Christina R. Samuel, and Eyasu H. Teshale

Vaccination Barriers and Opportunities at Syringe Services Programs in the United States, June–August 2021—A Cross-sectional Survey

Drug and Alcohol Dependence 2022;237:109540

People who inject drugs are disproportionately affected by vaccine-preventable diseases, including hepatitis A and COVID-19, and experience barriers to accessing health services in traditional settings. Syringe services programs (SSPs) provide many public health services for people who inject drugs, but not all SSPs offer vaccinations. The findings from this paper give strategic direction on how to expend resources most efficiently to improve SSP vaccination services and reduce health disparities for people who inject drugs.

Warren Myers, Segun Ajewole, Susan Xu, Patrick Yorio, Adam Hornbeck, and Ziqing Zhuang

Laboratory Assessment of Bacterial Contamination of a Sterile Environment When Using Respirators not Traditionally Used in a Sterile Field Environment
Infection Control and Hospital Epidemiology 2022;43(12):1867–1872

The Food and Drug Administration requires the use of surgical masks or surgical N95s in health care settings where a sterile field must be maintained. This study assessed the effectiveness of other NIOSH-approved respirators at reducing bacterial contamination of a sterile environment. Findings support recommendations for using other respirators during times of respirator shortages. They also support the effectiveness of wearing tight-fitting respirators due to religious or medical reasons that do not allow health workers to be clean shaven.

Shilpa N. Patel, Brian P. Emerson, Marc A. Pitasi, Natalie E. Tripp, Ruthanne Marcus, Kevin P. Delaney, and Pollyanna R. Chavez

HIV Testing Preferences and Characteristics of Those Who Have Never Tested for HIV in the United States

Sexually Transmitted Diseases 2023;50(3):175–179
(Published online December 2, 2022)

Nearly three-quarters of U.S. adults have never been tested for HIV. Among those, getting tested at routine visits with their regular health care provider was most preferred (41 percent). Previous research has shown the persistence of missed opportunities for testing at routine visits, and U.S. adults' preference for testing during routine visits shows the importance of taking advantage of these opportunities. Findings suggest routine HIV testing could lead to more early diagnoses and treatment, resulting in less HIV transmission.

Xiaoting Qin, Hatice S. Zahran, Michelle Leon -Nguyen, Greta Kilmer, Pamela Collins, Paige Welch, and Josephine Malilay

Trends in Asthma-related School Health Policies and Practices in the U.S. States

The Journal of School Health 2022;92(3):252–260

Research has established the effectiveness of asthma-friendly schools in promoting healthy environments, enhancing student well-being, and improving academic performance. However, trends in asthma-related school health practices have not been well documented. The authors evaluated the effect of six asthma-related school health practices across 36 states. Findings suggest mixed trends show a need for further improvement in referring students with asthma to healthcare professionals and promoting professional development for lead health education teachers on asthma management.

Aaron M. Samuels, Daniel Ansong, Simon K. Kariuki, Samuel Adjei, Anne Bollaerts, Christian Ockenhouse, Nelli Westercamp, Cynthia K. Lee, Lode Schuerman, Dennis K. Bii, Lawrence Osei-Tutu, Martina Oneko, Marc Lievens, Maame Anima Attobrah Sarfo, Cecilia Atieno, Danielle Morelle, Ashura Bakari, Tony Sang, Erik Jongert, Maame Fremah Kotoh-Mortty, Kephass Otieno, François Roman, Patrick Boakye Yiadom Buabeng, Yaw Ntiamoah, Opokua Ofori-Anyinam, and Tsiri Agbenyega

Efficacy of RTS,S/AS01(E) Malaria Vaccine Administered According to Different Full, Fractional, and Delayed Third or Early Fourth Dose Regimens in Children Aged 5–17 Months in Ghana and Kenya: An Open-label, Phase 2b, Randomised Controlled Trial

The Lancet Infectious Diseases 2022;22(9):1329–1342

This paper details the results of using a partial dose of a certain malaria vaccine for doses three and four in comparison to four full doses. They found similar protection against clinical malaria, suggesting the potential to expand the number of children covered with the limited vaccine supply. They also found flexibility in the timing of the doses, allowing for health ministries to offer the vaccine at times beyond those tested in the clinical trials, which will increase their use.

Sundar S. Shrestha, Ramesh Ghimire, Xu Wang, Katrina F. Trivers, David M. Homa, and Brian S. Armour

Cost of Cigarette Smoking-attributable Productivity Losses, U.S., 2018

American Journal of Preventive Medicine 2022;63(4):478–485

In 2018, total U.S. productivity losses from smoking-related illnesses amounted \$184.9 billion, with vast disparities between states, ranging from \$16.9 billion in California to \$291 million in Wyoming, with a median U.S. state cost of \$2.7 billion. These findings, combined with other components of productivity losses, are essential to understand the health burden of cigarette smoking in the United States and can guide governments in assessing the benefit of interventions designed to alleviate the health burden associated with cigarette smoking.

**Kevin B. Spicer, Connor Glick, Alyson M. Cavanaugh,
and Douglas Thoroughman**

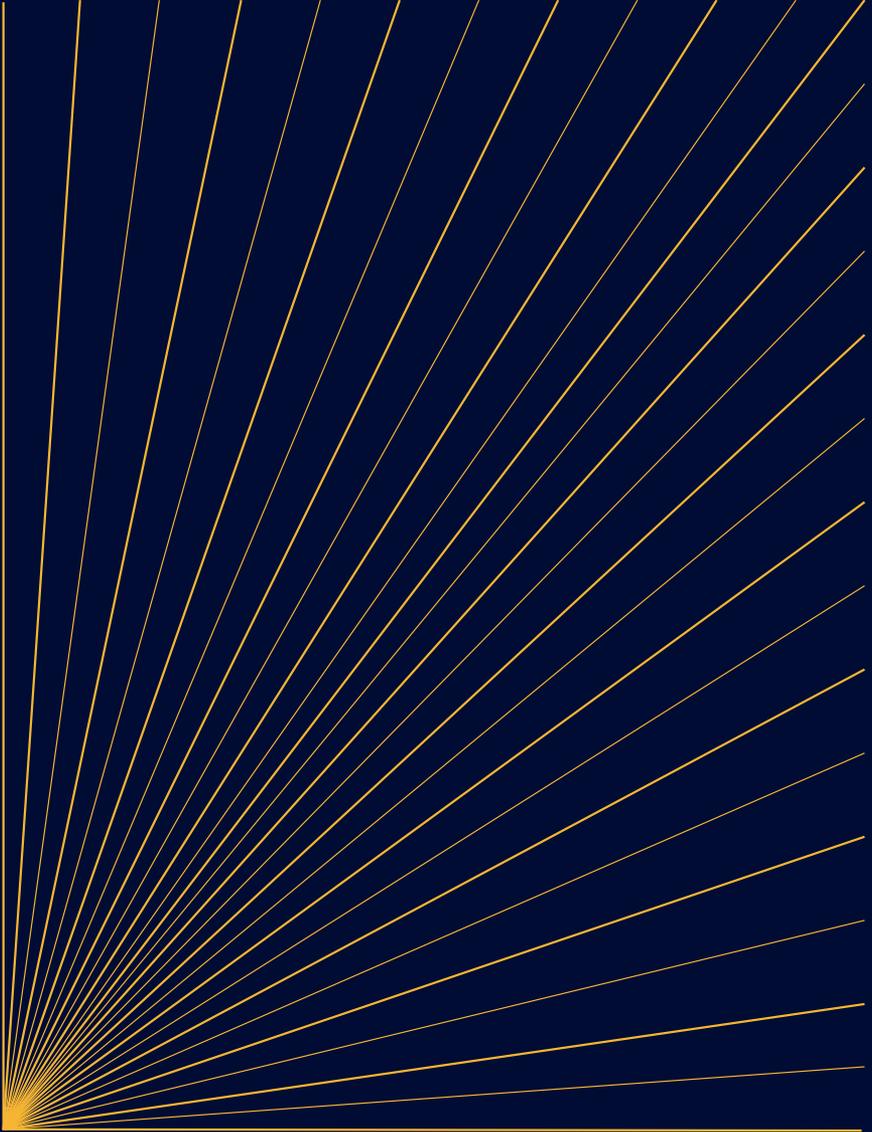
**Protective Immunity After Natural Infection with Severe Acute Respiratory
Syndrome Coronavirus-2 (SARS-CoV-2)—Kentucky, USA, 2020**

International Journal of Infectious Diseases 2022;114:21–28

Early in the COVID-19 pandemic there was little information about the immunity derived from natural infection and how it might be affected by age and other factors. This study determined that natural infection yielded several months of immunity, with more than 75 percent protection in those aged 20–59 years and 65 percent in those 60 and older. Findings also suggest certain subgroups were more likely to have repeated positive tests for COVID-19, putting them in a higher-risk category.

LIFETIME SCIENTIFIC ACHIEVEMENT

The following current or former CDC/ATSDR employees were nominated for the Lifetime Scientific Achievement Award, which recognizes individuals for a body of work contributing to public health. Nominees are judged on their work's scientific merit, its effect on public health and the CDC/ATSDR mission, and on their leadership and recognition by peers.



Andy Cecala, MBA

National Institute for Occupational Safety and Health

Andy Cecala has 43 years of experience working for the federal government in mining health and safety research, beginning under the U.S. Bureau of Mines. When the Bureau of Mines was defunded in 1996, the mining health and safety research programs were incorporated into the National Institute for Occupational Safety and Health (NIOSH), and Andy has been with NIOSH since then. During this time, Andy has authored 160 publications, including 44 peer-reviewed papers, with 107 primary authorships. A consistent focus of his research has been in the area of health hazards prevention—specifically on reducing exposure to respirable dust for workers in the mining industry. Andy is a globally recognized expert in dust monitoring and engineering control, and his contributions to the research in this area have dramatically reduced workers' exposure to respirable dust.

Throughout his career, Andy Cecala has shown outstanding vision by opening new areas of applied research to solve occupational health problems. His groundbreaking research on the enclosed cab filtration and pressurization systems is just one example. He led a team of researchers in several complex tasks in both field and lab studies to determine the causes of workers' overexposure when operating mobile mining equipment outfitted with enclosed cabs. These research findings influenced the creation of the International Society of Environmental Enclosure Engineers and the creation of an ISO standard for enclosed cab systems. His research led to additional work focused on the adoption of sensor technologies for use inside enclosed cabs and environmental enclosures, greatly improving the industry's ability to monitor and control acceptable air quality for workers in these areas.

Another example of Andy's vision is the development of two editions of the Dust Control Handbook for Industrial Minerals Mining and Processing. These NIOSH publications, each around 250 pages in length, were the result of monumental multiyear efforts to produce a seminal work on dust control that gathered a diverse committee representing industry, manufacturing, and government. This handbook details and illustrates the most effective scientifically proven control technologies for lowering workers' exposure to dust during all stages of mining and mineral processing in the industrial minerals mining sector, and it is largely the fruit of Andy's decades of world-class research in this area.

Terence Chorba, MD, DSc, MPH, LLM, MPA, MA

National Center for HIV, Viral Hepatitis, STD, and TB Prevention

Dr. Terry Chorba's body of scientific work has principally advanced the relationship of clinical and translational research to public health practice. Early on, he worked on epidemiology and clinical aspects of infectious diseases of hematologic interest and served on the AIDS Task Force. Most recently, he has served as chief of the Field Services Branch in the Division of Tuberculosis Elimination, overseeing a staff of public health advisors and medical officers and CDC's TB cooperative agreements with U.S. states, territories, and affiliated Pacific Islands, and with federally funded regional centers of excellence in TB training and medical consultation.

Dr. Chorba's work has taken him across North America, Asia, and Africa, and the variety of his posts has given him influence on public health practice here and abroad as applied to combating numerous pathogens using a variety of creative methods. His landmark investigation as an EIS officer showed that parvovirus B19 was both the cause of aplastic crisis (acquired red cell aplasia in chronic hemolytic anemias, e.g., sickle cell disease) and of *erythema infectiosum* (fifth disease, a childhood rash), and explained its rates of transmission. His work assisted in developing guidelines for potential B19 exposure in pregnancy. As an EIS officer, he also conducted retroviral investigations that had major impact on HIV research because of immediate relevancy to therapy and management of hemophilia. These investigations helped establish procedures to reduce risks of HIV infection for people with hemophilia and their sexual partners.

In each of the positions that he has held, Dr. Chorba's scientific work has focused on health protection and health systems strengthening, both of which should be key goals of federal policy. His research has had a very programmatic focus, striving to make contributions to local understanding and infrastructure wherever possible. For example, while initiating CDC's work in Central Asia, he used short-term consultants from CDC to assist host country authorities with hepatitis, TB, diphtheria, and polio expertise, and published assessments of general burden of disease and cost-effectiveness of different public health interventions. He assisted health ministries in rewriting the directives that govern diagnosis, treatment, and prevention of viral hepatitis and TB. In all the republics, he also coordinated with CDC consultants to provide important instruction in surveillance and assist in computerization of the disease surveillance systems.

Janet Fulton, PhD

National Center for Chronic Disease Prevention and Health Promotion

Regular physical activity is associated with a reduced risk of more than 20 diseases or conditions. Consequently, increasing physical activity has been a national health objective as part of the Healthy People campaign for more than 50 years and is a priority area for public health action. For 26 years as an epidemiologist, team lead, branch chief, and senior advisor for science at CDC, Dr. Janet Fulton has devoted her career to building a body of scientific work investigating important scientific problems in the field of physical activity research. She has published approximately 200 peer-reviewed papers, MMWRs, and book chapters, nearly half as lead or senior author. These papers have covered a breadth of topics on physical activity, including surveillance, epidemiology, and health and economic effects.

Dr. Fulton has identified new approaches to tackle public health problems by examining new areas of research, reimagining the way public health problems are viewed, and developing strategies for success. Early on, she recognized the need to develop a strategy for physical activity that appealed to those who were the least physically active. Dr. Fulton identified walking as the ideal physical activity for most people, including those least physically active. To bring attention to walking as a key public health strategy to increase physical activity population-wide, she led the development of a *Vital Signs* report and its accompanying *MMWR* on walking, which led to *Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities*. Her branch served as the scientific lead for the report.

Dr. Fulton's work effectively bridges science and action. For example, she recognized that community decision makers needed economic information to justify their physical activity programs. She began a cross-agency project to examine the evidence for cost-effectiveness, identify indicators, and develop practical economic tools for public health practitioners. To discuss the economic issues associated with community design interventions, the cross-agency group used the Delphi method to identify the top 10 economic indicators communities can use to gain support from decision makers. The economic indicators were translated from a research publication into ready-to-use tools practitioners can use to make the economic case when speaking with decision makers.

Barbara Mahon, MD, MPH

National Center for Immunization and Respiratory Diseases

Dr. Barbara Mahon has dedicated her life to understanding and reducing the harm caused by some of the most challenging and important vaccine-preventable, respiratory, and enteric infectious diseases through innovative science and globally recognized public health leadership. Her efforts have helped almost 270 million people to receive at least one COVID-19 vaccine dose in the United States currently—an incredible feat as the COVID-19 pandemic has resulted in more than 103 million cases and 1.1 million deaths in the United States alone. Her current responsibilities are dedicated to not just COVID-19 but to any viruses that cause severe outbreaks with potential for significant global impact. As such, her work supports efforts against respiratory viruses that cause a tremendous annual burden of illness and death.

Dr. Mahon combines scientific expertise with visionary and compassionate leadership to help CDC, the World Health Organization, and partners around the world through historic challenges to better understand and reduce the burden of COVID-19, other vaccine-preventable, respiratory, and enteric infectious diseases. Her contributions span from vaccine policy evaluation, community mitigation measures, surveillance of pathogens through innovative laboratory methods, and outbreak investigations.

Dr. Mahon is respected by her peers. She has served in several leadership roles in the past few years. As evidenced by her roles in the Ebola response, as the incident manager for the COVID-19 response, and then to stand up the new Coronavirus and Other Respiratory Viruses Division. She is respected as a leader among NCIRD division directors and others around the agency. She is consistently sought for advice on critical public health problems, navigating political relationships, and working with HHS and the White House.

She has been instrumental in guiding surveillance strategies, development of laboratory assays, biostatistics and economic modeling, efficient use of vaccine effectiveness data, and antiviral resistance testing. She serves as a primary COVID-19 expert for CDC and the world. The information she has helped generate directly affected U.S. government policy decisions on pathogens such as SARS-COV-2 and Ebola.

Most importantly, Dr. Mahon's leadership at CDC, with the WHO, Gavi the vaccine alliance, and several health ministries is reflected in each life saved by vaccination. Any vaccinated person, or any parent of a vaccinated child whose illness, hospitalization, or death was prevented through vaccination, has benefited from Dr. Mahon's scientific and public health work.

Cindy A. Moore, MD, PhD

National Center on Birth Defects and Developmental Disabilities

Dr. Cindy Moore has provided extraordinary leadership and made critical contributions in the area of birth defects and developmental disabilities epidemiology and mechanisms of morphogenesis, classification of birth defects and genetic syndromes, prevention strategies for exposure to teratogens, genetic and environmental risk factors for birth defects and developmental disabilities, infectious disease teratogenicity, and public health issues related to children with special healthcare needs. She continues to practice clinical genetics on a part-time basis as an adjunct associate professor of human genetics at Emory University School of Medicine. She also served in a key leadership role in the groundbreaking National Birth Defects Prevention Study, including her contributions to the design of the clinical and scientific aspects of the study, and the primary intention of the study to improve understanding of environmental factors, genetics, and gene-environment interactions in the etiology of major birth defects.

Birth defects affect one in 33 pregnancies, and their impact can last a lifetime. But beyond that, more than 6 million people per year in the United States are pregnant, and each of these pregnancies is accompanied by concerns for the mother's and the infant's health. The majority of Dr. Moore's nearly 170 peer-reviewed publications aim to reduce not only the risk of birth defects, but also the concern couples feel about their pregnancies.

Dr. Moore's contributions have been vital to fulfilling the National Center on Birth Defects and Developmental Disabilities' goal to advance the health and wellbeing of our nation's most vulnerable populations. Dr. Moore's over 30 years of work has directly affected the health of infants and reduced the risks of birth defects in the United States and around the world. Just a few of her most significant accomplishments include the following: (1) Establishing the public health recommendation that 400 ug of folic acid alone prevents neural tube defects, (2) leading CDC's collaboration with the FDA to design a closed distribution system to prevent inadvertent exposure to thalidomide in pregnancy, (3) leading CDC's delineation of the clinical phenotype of congenital Zika syndrome, (4) investigating the possible teratogenicity of the antiretroviral medication dolutegravir for the treatment of HIV, and (5) leading the review of data from thousands of births related to COVID-19 infection or vaccination during pregnancy.

Evan Secor, PhD

National Center for Emerging and Zoonotic Infectious Diseases

Dr. Evan Secor's scientific work has focused parasitic diseases of public health importance around the world. He is acknowledged as a global expert in schistosomiasis, a disease resulting from infection with parasites of the genus *Schistosoma* that can kill tens of thousands of people annually. He has published more than 100 scientific papers on this parasite alone. His early work focused on immune response associations with severe illness, an important consideration since only 20–30 percent of infected people develop severe illness. He led seminal work in immune-mediated resistance to reinfection published in *The Lancet* in 2001, in which a cohort of car washers working in Lake Victoria were followed for almost two years with weekly testing for *Schistosoma* infection. He has since made major intellectual contributions to evidence-based targets for schistosomiasis elimination programs. Beyond schistosomiasis, his work on resistance of *Trichomonas vaginalis*—the most common parasitic infection in the United States—to the antibiotic metronidazole has been essential for guiding case management. He has published almost 50 manuscripts and book chapters on this topic.

Dr. Secor's critical work on schistosomiasis has heavily influenced the global schistosomiasis agenda. Early in his career, he investigated illness mechanisms using experimental mouse models, identifying anti-idiotypic antibodies as a potential factor leading to liver fibrosis, a hallmark of certain forms of the disease. As global programs for elimination of neglected diseases such as schistosomiasis were undertaken, he began investigating best approaches to schistosomiasis control under the Bill and Melinda Gates-funded SCORE (Schistosomiasis Consortium for Operational Research and Evaluation) project, a multi-country randomized controlled trial comparing school vs. community-based treatment to inform WHO guidelines. More recently, he has led efforts to define more accurate elimination thresholds determined by infection prevalence rather than prevalence of heavy-intensity infection.

The breadth of Dr. Secor's publications at CDC is eye-opening considering he has worked in the same division for his entire 30-year CDC career. He has published on basic research looking at mechanisms of disease in mouse models of schistosomiasis and population-based mass treatment campaigns. He has published several dozen papers on antimicrobial testing, which is patient-based care. He has further published on a variety of other parasitic diseases as well, including leishmaniasis and soil-transmitted helminths.

Previous Winners

2022

ASSESSMENT

Michael A. Johansson, Talia M. Quandelacy, Sarah Kada, Pragati Venkata Prasad, Molly Steele, John T. Brooks, Rachel B. Slayton, Matthew Biggerstaff, and Jacy C. Butler

SARS-CoV-2 Transmission from People Without COVID-19 Symptoms

JAMA Network Open 2021;4(1):32035057

DATA METHODS AND STUDY DESIGN

Zuguo Mei, O. Yaw Addo, Maria Elena Jefferds, Andrea J. Sharma, Rafael C. Flores-Ayala, and Gary M. Brittenham

Physiologically Based Serum Ferritin Thresholds for Iron Deficiency in Children and Non-Pregnant Women: A U.S. National Health and Nutrition Examination Surveys (NHANES) Serial Cross-sectional Study

The Lancet Hematology 2021;8(8):e572–e582

HEALTH EQUITY SCIENCE

Austin M. Williams, Heather B. Clayton, and James A. Singleton

Racial and Ethnic Disparities in COVID-19 Vaccination Coverage: The Contribution of Socioeconomic and Demographic Factors

American Journal of Preventive Medicine 2022;62(4):473–482

(Published online November 18, 2021)

LABORATORY SCIENCE

Bin Zhou, Tran Thi Nhu Thao, Donata Hoffmann, Adriano Taddeo, Nadine Ebert, Fabien Labrousseau, Anne Pohlmann, Jacqueline King, Silvio Steiner, Jenna N. Kelly, Jasmine Portmann, Nico Joel Halwe, Lorenz Ulrich, Bettina Salome Trueb, Xiaoyu Fan, Bernd Hoffmann, Li Wang, Lisa Thomann, Xudong Lin, Hanspeter Stalder, Berta Pozzi, Simone de Brot, Nannan Jiang, Dan Cui, Jaber Hossain, Malania M. Wilson, Matthew W. Keller, Thomas J. Stark, John R. Barnes, Ronald Dijkman, Joerg Jores, Charaf Benarafa, David E. Wentworth, Volker Thiel, and Martin Beer

SARS-CoV-2 Spike D614G Change Enhances Replication and Transmission

Nature 2021;592(7852):122–127

PREVENTION AND CONTROL

Mary Beth F. Son, Nancy Murray, Kevin Friedman, Cameron C. Young, Margaret M. Newhams, Leora R. Feldstein, Lara L. Loftis, Keiko M. Tarquinio, Aalok R. Singh, Sabrina M. Heidemann, Vijaya L. Soma, Becky J. Riggs, Julie C. Fitzgerald, Michele Kong, Sule Doymaz, John S. Giuliano, Jr., Michael A. Keenaghan, Janet R. Hume, Charlotte V. Hobbs, Jennifer E. Schuster, Katharine N. Clouser, Mark W. Hall, Lincoln S. Smith, Steven M. Horwitz, Stephanie P. Schwartz, Katherine Irby, Tamara T. Bradford, Aline B. Maddux, Christopher J. Babbitt, Courtney M. Rowan, Gwenn E. McLaughlin, Phoebe H. Yager, Mia Maamari, Elizabeth H. Mack, Christopher L. Carroll, Vicki L. Montgomery, Natasha B. Halasa, Natalie Z. Cvijanovich, Bria M. Coates, Charles E. Rose, Jane W. Newburger, Manish M. Patel, Adrienne G. R. Randolph, and the Overcoming COVID-19 Investigators
Multisystem Inflammatory Syndrome in Children—Initial Therapy Outcomes
BMC Medicine 2020;18(1):19

LIFETIME SCIENTIFIC ACHIEVEMENT

Inger Damon, MD, PhD

Dr. Damon was recognized for her exceptional leadership in agencywide responses to outbreaks caused by some of the world's deadliest high-consequence pathogens.

2021

ASSESSMENT

Adam S. Vaughan, Linda Schieb, and Michele Casper

Historic and Recent Trends in County-level Coronary Heart Disease Death Rates by Race, Gender, and Age Group, United States, 1979–2017
PLOS One 2020;15(7):e0235839

DATA METHODS AND STUDY DESIGN

Andrew F. Auld, Katherine Fielding, Tefera Agizew, Alice Maida, Anikie Mathoma, Rosanna Boyd, Anand Date, Sherri L. Pals, George Bicego, Yuliang Liu, Ray W. Shiraishi, Peter Ehrenkranz, Christopher Serumola, Unami Mathebula, Heather Alexander, Salome Charalambous, Courtney Emerson, Goabaone Rankgoane-Pono, Pontsho Pono, Alyssa Finlay, James C. Shepherd, Charles Holmes, Tedd V. Ellerbrock, and Alison D. Grant
Risk Scores for Predicting Early Antiretroviral Therapy Mortality in SubSaharan Africa to Inform Who Needs Intensification of Care: A Derivation and External Validation Cohort Study
BMC Medicine 2020;18(1):311

HEALTH EQUITY SCIENCE

Xu Ji, Shanna Cox, Scott D. Grosse, Wanda D. Barfield, Brian S. Armour, Elizabeth A. Courtney-Long, and Rui Li

Association of Smoke-free Laws with Preterm or Low Birth Weight Deliveries—A Multistate Analysis Health Services Research

Research 2021;56(1):61–72

LABORATORY SCIENCE

Jennifer L. Konopka-Anstadt, Ray Campagnoli, Annelet Vincent, Jing Shaw, Ling Wei, Nhien T. Wynn, Shane E. Smithee, Erika Bujaki, Ming Te Yeh, Majid Laassri, Tatiana Zagorodnyaya, Amy J. Weiner, Konstantin Chumakov, Raul Andino, Andrew Macadam, Olen Kew, and Cara C. Burns

Development of a New Oral Poliovirus Vaccine for the Eradication End Game Using Codon Deoptimization

NPJ Vaccines 2020;5(1):26

PREVENTION AND CONTROL

Andrew F. Auld, Tefera Agizew, Anikie Mathoma, Rosanna Boyd, Anand Date, Sherri L. Pals, Christopher Serumola, Unami Mathebula, Heather Alexander, Tedd V. Ellerbrock, Goabaone Rankgoane-Pono, Pontsho Pono, James C. Shepherd, Katherine Fielding, Alison D. Grant, and Alyssa Finlay

Effect of Tuberculosis Screening and Retention Interventions on Early Antiretroviral Therapy Mortality in Botswana: A Stepped-wedge Cluster Randomized Trial

BMC Medicine 2020;18(1):19

LIFETIME SCIENTIFIC ACHIEVEMENT

Stuart Nichol, PhD

Dr. Nichol was recognized for his expertise in the study of high-consequence RNA viruses and his research and leadership in high-containment laboratory work.

2020

ASSESSMENT

Kathleen P. Hartnett, Aaron Kite-Powell, Megan T. Patel, Brittani L. Haag, Michael J. Sheppard, Taylor P. Dias, Brian A. King, Paul C. Melstrom, Matthew D. Ritchey, Zachary Stein, Nimi Idaikkadar, Alana M. Vivolo-Kantor, Dale A. Rose, Peter A. Briss, Jennifer E. Layden, Loren Rodgers, and Jennifer Adjemian

Syndromic Surveillance for E-Cigarette, or Vaping, Product Use-associated Lung Injury

The New England Journal of Medicine 2020;69(9):236–240

Lyna Z. Schieber, Gery P. Guy, Jr., Puja Seth, Randall Young, Christine L. Mattson, Christina A. Mikosz, and Richard A. Schieber

Trends and Patterns of Geographic Variation in Opioid Prescribing Practices by State, United States, 2006–2017

JAMA Network Open 2019;2(3):e190665

DATA METHODS AND STUDY DESIGN

David S. Campo, Vishal Nayak, Ganesh Srinivasamoorthy, and Yury Khudyakov

Entropy of Mitochondrial DNA Circulating in Blood is Associated with Hepatocellular Carcinoma

BMC Medical Genomics 2019;12(Suppl 4):74

LABORATORY SCIENCE

Patricia A. Jorquera, Vasilii P. Mishin, Anton Chesnokov, Ha T. Nguyen, Brian Mann, Rebecca Garten, John Barnes, Erin Hodges, Juan De La Cruz, Xiyan Xu, Jackie Katz, David E. Wentworth, and Larisa V. Gubareva

Insights into the Antigenic Advancement of Influenza A(H3N2) Viruses, 2011–2018

Scientific Reports 2019;9(1):2676

PREVENTION AND CONTROL

Meng-Yu Chen, Charles E. Rose, Yan Ping Qi, Jennifer L. Williams, Lorraine F. Yeung, Robert J. Berry, Ling Hao, Michael J. Cannon, and Krista S. Crider

Defining the Plasma Folate Concentration Associated with the Red Blood Cell Folate Concentration Threshold for Optimal Neural Tube Defects Prevention: A Population-based, Randomized Trial of Folic Acid Supplementation

The American Journal of Clinical Nutrition 2019;109(5):1452–1461

LIFETIME SCIENTIFIC ACHIEVEMENT

Jim Pirkle, MD, PhD

Dr. Pirkle was recognized for improving the understanding of human exposure to harmful chemicals and helping to establish biomonitoring as an integral part of evidence-based decision making in public policy.

2019

ASSESSMENT

Samir K. Saha, Stephanie J. Schrag, Shams El Arifeen, Luke C. Mullany, Mohammad Shahidul Islam, Nong Shang, Shamim A. Qazi, Anita K. M. Zaidi, Zulfiqar A. Bhutta, Anuradha Bose, Pinaki Panigrahi, Sajid B. Soofi, Nicholas E. Connor, Dipak K. Mitra, Rita Isaac, Jonas M. Winchell, Melissa

L. Arvay, Maksuda Islam, Yasir Shafiq, Imran Nisar, Benazir Baloch, Furqan Kabir, Murtaza Ali, Maureen H. Diaz, Radhanath Satpathy, Pritish Nanda, Bijaya K. Padhi, Sailajanandan Parida, Aneeta Hotwani, M. Hasanzaman, Sheraz Ahmed, Mohammad Belal Hossain, Shabina Ariff, Imran Ahmed, Syed Mamun Ibne Moin, Arif Mahmud, Jessica L. Waller, Iftexhar Rafiqullah, Mohammad A. Quaiyum, Nazma Begum, Veeraraghavan Balaji, Jasmin Halen, A. S. M. Nawshad Uddin Ahmed, Martin W. Weber, Davidson H. Hamer, Patricia L. Hibberd, Qazi Sadeq-Ur Rahman, Venkat Raghava Mogan, Tanvir Hossain, Lesley McGee, Shalini Anandan, Anran Liu, Kalpana Panigrahi, Asha Mary Abraham, and Abdullah H. Baqui

Causes and Incidence of Community-acquired Serious Infections Among Young Children in South Asia (ANISA): An Observational Cohort Study

The Lancet 2018;392(10142):145–159

DATA METHODS AND STUDY DESIGN

Diba Khana, Lauren M. Rossen, Holly Hedegaard, and Margaret Warner

A Bayesian Spatial and Temporal Modeling Approach to Mapping Geographic Variation in Mortality Rates for Subnational Areas with R-INLA

Journal of Data Science 2018;16(1):147–182

LABORATORY SCIENCE

Markus H. Kainulainen, Jessica R. Spengler, Stephen R. Welch, JoAnn D. Coleman-McCray, Jessica R. Harmon, John D. Klena, Stuart T. Nichol, César G. Albariño, and Christina F. Spiropoulou

Use of a Scalable Replicon-particle Vaccine to Protect Against Lethal Lassa Virus Infection in the Guinea Pig Model

The Journal of Infectious Diseases 2018;217(12):1957–1966

PREVENTION AND CONTROL

Khalequ Zaman Concepción F. Estívariz, Michelle Morales, Mohammad Yunus, Cynthia J. Snider, Howard E. Gary, Jr., William C. Weldon, M. Steven Oberste, Steven G. Wassilak, Mark A. Pallansch, and Abhijeet Anand

Immunogenicity of Type 2 Monovalent Oral and Inactivated Poliovirus Vaccines for Type 2 Poliovirus Outbreak Response: An Open-label, Randomised Controlled Trial

The Lancet Infectious Diseases 2018;18(6):657–665

LIFETIME SCIENTIFIC ACHIEVEMENT

Rima Khabbaz, MD

Dr. Khabbaz was recognized for her leadership at the forefront of public health efforts to prevent and control emerging infectious diseases.

2018

ASSESSMENT

A. Danielle Iuliano, Katherine M. Roguski, Howard H. Chang, David J. Muscatello, Rakhee Palekar, Stefano Tempia, Cheryl Cohen, Jon Michael Gran, Dena Schanzer, Benjamin J. Cowling, Peng Wu, Jan Kyncl, Li Wei Ang, Minah Park, Monika Redlberger-Fritz, Hongjie Yu, Laura Espenhain, Anand Krishnan, Gideon Emukule, Liselotte van Asten, Susana Pereira da Silva, Suchunya Aungkulanon, Udo Buchholz, Marc-Alain Widdowson, and Joseph S. Bresee, for the Global Seasonal Influenza-associated Mortality Collaborator Network

Estimates of Global Seasonal Influenza-associated Respiratory Mortality: A Modelling Study

The Lancet 2018;391:1285–1300

DATA METHODS AND STUDY DESIGN

Ellsworth M. Campbell, Hongwei Jia, Anupama Shankar, Debra Hanson, Wei Luo, Silvina Masciotra, S. Michele Owen, Alexandra M. Oster, Romeo R. Galang, Michael W. Spiller, Sara J. Blosser, Erika Chapman, Jeremy C. Roseberry, Jessica Gentry, Pamela Pontones, Joan Duwve, Paula Peyrani, Ron M. Kagan, Jeannette M. Whitcomb, Philip J. Peters, Walid Heneine, John T. Brooks, and William M. Switzer

Detailed Transmission Network Analysis of a Large Opiate-driven Outbreak of HIV Infection in the United States

The Journal of Infectious Diseases 2017;216(9):1053–1062

LABORATORY SCIENCE

Amrita Kumar, Jin Hyang Kim, Priya Ranjan, Maureen G. Metcalfe, Weiping Cao, Margarita Mishina, Shivaprakash Gangappa, Zhu Guo, Edward S. Boyden, Sherif Zaki, Ian York, Adolfo García-Sastre, Michael Shaw, and Suryaprakash Sambhara

Influenza Virus Exploits Tunneling Nanotubes for Cell-to-Cell Spread

Scientific Reports 2017; doi: 10.1038/srep40360

PREVENTION AND CONTROL

Rahi Abouk, Scott D. Grosse, Elizabeth C. Ailes, and Matthew E. Oster
Association of U.S. State Implementation of Newborn Screening Policies for Critical Congenital Heart Disease with Early Infant Cardiac Deaths

JAMA 2017;318(21):2111–2118

LIFETIME SCIENTIFIC ACHIEVEMENT

Steven L. Cochi, MD, MPH

Dr. Cochi was recognized for helping to shape national and international immunization policy and strategies to reduce the burden of vaccine-preventable diseases and helping to develop the Global Polio Eradication Initiative.

2017

ASSESSMENT

Katherine E. Fleming-Dutra, Adam L. Hersh, Daniel J. Shapiro, Monina Bartoces, Eva A. Enns, Thomas M. File, Jr., Jonathan A. Finkelstein, Jeffrey S. Gerber, David Y. Hyun, Jeffrey A. Linder, Ruth Lynfield, David J. Margolis, Larissa S. May, Daniel Merenstein, Joshua P. Metlay, Jason G. Newland, Jay F. Piccirillo, Rebecca M. Roberts, Guillermo V. Sanchez, Katie J. Suda, Ann Thomas, Teri Moser Woo, Rachel M. Zetts, and Lauri A. Hicks

Prevalence of Inappropriate Antibiotic Prescriptions Among U.S. Ambulatory Care Visits,

JAMA 2016;315(17):1864–1873

DATA METHODS AND STUDY DESIGN

Samuel S. Shepard, Sarah Meno, Justin Bahl, Malania M. Wilson, John Barnes, and Elizabeth Neuhaus

Viral Deep Sequencing Needs an Adaptive Approach: IRMA, the Iterative Refinement Meta-assembler

BMC Genomics 2016;17:801

LABORATORY SCIENCE

Sabine M. G. van der Sanden, Weilin Wu, Naomi Dybdahl-Sissoko, William C. Weldon, Paula Brooks, Jason O'Donnell, Les P. Jones, Cedric Brown, S. Mark Tompkins, M. Steven Oberste, Jon Karpilow, and Ralph A. Tripp

Engineering Enhanced Vaccine Cell Lines to Eradicate Vaccine-preventable Diseases: The Polio End Game

Journal of Virology 2016;90(4):1694–1704

PREVENTION AND CONTROL

Philip J. Peters, Pamela Pontones, Karen W. Hoover, Monita R. Patel, Romeo R. Galang, Jessica Shields, Sara J. Blosser, Michael W. Spiller, Brittany Combs, William M. Switzer, Caitlin Conrad, Jessica Gentry, Yury Khudyakov, Dorothy Waterhouse, S. Michele Owen, Erika Chapman, Jeremy C. Roseberry, Veronica McCants, Paul J. Weidle, Dita Broz, Taraz Samandari, Jonathan Mermin, Jennifer Walthall, John T. Brooks, and Joan M. Duwve, for the Indiana HIV Outbreak Investigation Team

HIV Infection Linked to Injection Use of Oxymorphone in Indiana, 2014–2015

The New England Journal of Medicine 2016;375(3):229–2394

LIFETIME SCIENTIFIC ACHIEVEMENT

Patrick J. Lammie, PhD

Dr. Lammie was recognized for his wide-ranging research and work to control and eliminate neglected parasitic diseases, particularly lymphatic filariasis.

2016

ASSESSMENT

Alexandra M. Oster, Joel O. Wertheim, Angela L. Hernandez, Marie Cheryl Bañez Ocfemia, Neeraja Saduvala, and H. Irene Hall

Using Molecular HIV Surveillance Data to Understand Transmission Between Subpopulations in the United States

Journal of Acquired Immune Deficiency Syndromes 2015;70:444–451

DATA METHODS AND STUDY DESIGN

Jacek Skarbinski, Eli Rosenberg, Gabriela Paz-Bailey, H. Irene Hall, Charles E. Rose, Abigail H. Viall, Jennifer L. Fagan, Amy Lansky, Jonathan H. Mermin

Human Immunodeficiency Virus Transmission at Each Step of the Care Continuum in the United States

JAMA Internal Medicine 2015;175(4):588–596

LABORATORY SCIENCE

David S. Campo, Guo-Liang Xia, Zoya Dimitrova, Yulin Lin, Joseph C. Forbi, Lilia Ganova-Raeva, Lili Punkova, Sumathi Ramachandran, Hong Thai, Pavel Skums, Seth Sims, Inna Rytsareva, Gilberto Vaughan, Ha-Jung Roh, Michael A. Purdy, Amanda Sue, and Yury Khudyakovs

Accurate Genetic Detection of Hepatitis C Virus Transmissions in Outbreak Settings

The Journal of Infectious Diseases 2015;213(6):957–965

PREVENTION AND CONTROL

Concepción F. Estívariz, Abhijeet Anand, Howard E. Gary Jr., Mahmudur Rahman, Jannatul Islam, Tajul I. Bari, Steven G.F. Wassilak, Susan Y. Chu, William C. Weldon, Mark A. Pallansch, James D. Heffelfinger, Stephen P. Luby, Khalequ Zaman

Immunogenicity of Three Doses of Bivalent, Trivalent, or Type 1 Monovalent Oral Poliovirus Vaccines with a 2-Week Interval Between Doses in Bangladesh: An Open-label, Non-inferiority, Randomised, Controlled Trial

The Lancet Infectious Diseases 2015;15:898–904

LIFETIME SCIENTIFIC ACHIEVEMENT

Rear Admiral Kenneth G. Castro, MD

Dr. Castro was recognized for his leadership, expertise, and pioneering body of scientific work in HIV/AIDS and tuberculosis.

2015

ASSESSMENT

Shelley S. Magill, Jonathan R. Edwards, Wendy Bamberg, Zintars G. Beldavs, Ghinwa Dumyati, Marion A. Kainer, Ruth Lynfield, Meghan Maloney, Laura McAllister-Hollod, Joelle Nadle, Susan M. Ray, Deborah L. Thompson, Lucy E. Wilson, and Scott K. Fridkin, for the Emerging Infections Program Healthcare-Associated Infections and Antimicrobial Use Prevalence Survey Team
Multistate Point-prevalence Survey of Health Care-associated Infections
The New England Journal of Medicine 2014;370(13):1198–1208

DATA METHODS AND STUDY DESIGN

Krista S. Crider, Owen Devine, Ling Hao, Nicole F. Dowling, Song Li, Anne M. Molloy, Zhu Li, Jianghui Zhu, and Robert J. Berry
Population Red Blood Cell Folate Concentrations for Prevention of Neural Tube Defects: Bayesian Model
The BMJ (clinical research edition) 2014;349:g4554

LABORATORY SCIENCE

Hua Yang, Jessie C. Chang, Zhu Guo, Paul J. Carney, David A. Shore, Ruben O. Donis, Nancy J. Cox, Julie M. Villanueva, Alexander I. Klimov, and James Stevens
Structural Stability of Influenza A(H1N1)pdm09 Virus Hemagglutinins
Journal of Virology 2014;88(9):4828–4838

PREVENTION AND CONTROL

The RTS,S Clinical Trials Partnership
Efficacy and Safety of the RTS,S/AS01 Malaria Vaccine During 18 Months After Vaccination: A Phase 3 Randomized, Controlled Trial in Children and Young Infants at 11 African Sites
PLoS Medicine 2014;11(7):e1001685

LIFETIME SCIENTIFIC ACHIEVEMENT

Patricia M. Griffin, MD

Dr. Griffin was recognized for her expertise in foodborne and enteric infections and her contributions to the science of food safety.

2014

ASSESSMENT

Nadira K. Sultana, Samir K. Saha, Hassan M. Al-Emran, Joyanta K. Modak, M. A. Yushuf Sharker, Shams El-Arifeen, Adam L. Cohen, Abdullah H. Baqui, and Stephen P. Luby

Impact of Introduction of the *Haemophilus Influenzae* Type b Conjugate Vaccine into Childhood Immunization on Meningitis in Bangladeshi Infants

JAMA 2013;315(17):1864–1873

DATA METHODS AND STUDY DESIGN

Matthew W. Wheeler and A. John Bailer

An Empirical Comparison of Low-dose Extrapolation from Points of Departure (PoD) Compared to Extrapolations Based upon Methods that Account for Model Uncertainty

Regulatory Toxicology and Pharmacology 2013;67:75–82

LABORATORY SCIENCE

James M. Smith, Rachna Rastogi, Ryan S. Teller, Priya Srinivasan, Pedro M. M. Mesquita, Umadevi Nagaraja, Janet M. McNicholl, R. Michael Hendry, Chuong T. Dinh, Amy Martin, Betsy C. Herold, and Patrick F. Kiser

Intravaginal Ring Eluting Tenofovir Disoproxil Fumarate Completely Protects Macaques from Multiple Vaginal Simian-HIV Challenges

Proceedings of the National Academy of Sciences of the United States of America 2013;110(40):16145–16150

PREVENTION AND CONTROL

Tim McAfee, Kevin C. Davis, Robert L. Alexander Jr., Terry F. Pechacek, and Rebecca Bunnell

Effect of the First Federally Funded U.S. Antismoking National Media Campaign

The Lancet 2013;382(9909):2003–2011

LIFETIME SCIENTIFIC ACHIEVEMENT

Nancy J. Cox, PhD

Dr. Cox was recognized for her global leadership, expertise, mentorship, and scientific innovation in the epidemiology of influenza viruses and immunization.

2013

ASSESSMENT

Rachel M. Smith, Melissa K. Schaefer, Marion A. Kainer, Matthew Wise, Jennie Finks, Joan Duwve, Elizabeth Fontaine, Alvina Chu, Barbara Carothers, Amy Reilly, Jay Fiedler, Andrew D. Wiese, Christine Feaster, Lex Gibson, Stephanie Griese, Anne Purfield, Angela A. Cleveland, Kaitlin Benedict, Julie R. Harris, Mary E. Brandt, Dianna Blau, John Jernigan, J. Todd Weber, and Benjamin J. Park, for the Multistate Fungal Infection Outbreak Response Team

Fungal Infections Associated with Contaminated Methylprednisolone Injections—Preliminary Report

The New England Journal of Medicine 2012; doi: 10.1056/NEJMoa1213978

DATA METHODS AND STUDY DESIGN

Joseph Y. Abrams, John R. Copeland, Robert V. Tauxe, Kashmira A. Date, Ermias D. Belay, Rajal K. Mody, and Eric D. Mintz

Real-Time Modeling Used for Outbreak Management During a Cholera Epidemic, Haiti, 2010–2011

Epidemiology and Infection 2012; doi: 10.1017/S0950268812001793

LABORATORY SCIENCE

Yen T. Duong, Maofeng Qiu, Anindya K. De, Keisha Jackson, Trudy Dobbs, Andrea A. Kim, John N. Nkengasong, and Bharat S. Parekh

Detection of Recent HIV-1 Infection Using a New Infection Limiting–Antigen Avidity Assay: Potential for HIV-1 Incidence Estimates and Avidity Maturation Studies

PLoS ONE 2012;7(3):e33328

PREVENTION AND CONTROL

Yan T. Novak, Jean Ludovic Kambou, Fabien V. K. Diomandé, Tiga F. Tarbangdo, Rasmata Ouédraogo-Traoré, Lassana Sangaré, Clement Lingani, Stacey W Martin, Cynthia Hatcher, Leonard W. Mayer, F. Marc LaForce, Fenella Avokey, Mamoudou H. Djingarey, Nancy E. Messonnier, Sylvestre R. Tiendrébéogo, and Thomas A. Clark

Serogroup A Meningococcal Conjugate Vaccination in Burkina Faso: Analysis of National Surveillance Data

The Lancet Infectious Diseases 2012;12(1):757–764

LIFETIME SCIENTIFIC ACHIEVEMENT

Larry J. Anderson, MD

Dr. Anderson was recognized for his innovative research on respiratory syncytial virus and its disease burden in the United States.

2012

ASSESSMENT

Concepción F. Estívariz, Hamid Jafari, Roland W. Sutter, T. Jacob John, Vibhor Jain, Ashutosh Agarwal, Harish Verma, Mark A. Pallansch, Ajit P. Singh, Sherine Guirguis, Jitendra Awale, Anthony Burton, Sunil Bahl, Arani Chatterjee, and R. Bruce Aylward

Immunogenicity of Supplemental Doses of Poliovirus Vaccine for Children Aged 6–9 Months in Moradabad, India: A Community-based Randomized Controlled Trial

The Lancet Infectious Diseases 2012;12(2):128–135 (published online 2011)

DATA METHODS AND STUDY DESIGN

Alula Hadgu, Nandini Dendukuri, and Liangliang Wang

Evaluation of Screening Tests for Detecting *Chlamydia trachomatis* Bias Associated with the Patient-infected-status Algorithm Epidemiology

Epidemiology 2012;23(1):72–82 (published online 2011)

LABORATORY SCIENCE

Brian H. Bird, Louis H. Maartens, Shelley Campbell, Baltus J. Erasmus, Bobbie R. Erickson, Kimberly A. Dodd, Christina F. Spiropoulou, Deborah Cannon, Clifton P. Drew, Barbara Knust, Anita K. McElroy, Marina L. Khristova, César G. Albariño, and Stuart T. Nichol

Rift Valley Fever Virus Vaccine Lacking the NSs and NSm Genes Is Safe, Nonteratogenic, and Confers Protection from Viremia, Pyrexia, and Abortion

Journal of Virology 2011;85(24):12901–1290949

PREVENTION AND CONTROL

Timothy R. Sterling, M. Elsa Villarino, Andrey S. Borisov, Nong Shang, Fred Gordin, Erin Bliven-Sizemore, Judith Hackman, Carol Dukes Hamilton, Dick Menzies, Amy Kerrigan, Stephen E. Weis, Marc Weiner, Diane Wing, Marcus B. Conde, Lorna Bozeman, C. Robert Horsburgh, and Richard E. Chaisson, for the TB Trials Consortium PREVENT TB Study Team

Three Months of Rifapentine and Isoniazid for Latent Tuberculosis Infection

The New England Journal of Medicine 2011;365(23):2155–2166

LIFETIME SCIENTIFIC ACHIEVEMENT

Henry Falk, MD, MPH

Dr. Falk was recognized for his expertise and global leadership in environmental health science and public health policy and practice.

2011

ASSESSMENT AND EPIDEMIOLOGY

Stacy M. Holzbauer, Aaron S. DeVries, James J. Sejvar, Christine H. Lees, Jennifer Adjemian, Jennifer H. McQuiston, Carlota Medus, Catherine A. Lexau, Julie R. Harris, Sergio E. Recuenco, Ermias D. Belay, James F. Howell, Bryan F. Buss, Mady Hornig, John D. Gibbins, Scott E. Brueck, Kirk E. Smith, Richard N. Danila, W. Ian Lipkin, Daniel H. Lachance, P. James B. Dyck, and Ruth Lynfield

Abattoir Workers Exposed to Porcine Brain

PLoS One 2010;5(3):e9782

LABORATORY AND METHODS

Robert D. Gilmore, Jr., Rebekah R. Howison, Gabrielle Dietrich, Toni G. Patton, Dawn R. Clifton, and James A. Carroll

The bba64 Gene of *Borrelia burgdorferi*, the Lyme Disease Agent, Is Critical for Mammalian Infection via Tick Bite Transmission

The Proceedings of the National Academy of Sciences of the United States of America 2010;107(16):7515–7520

PREVENTION AND CONTROL

Charles S. Chasela, Michael G. Hudgens, Denise J. Jamieson, Dumbani Kayira, Mina C. Hosseinipour, Athena P. Kourtis, Francis Martinson, Gerald Tegha, Rodney J. Knight, Yusuf I. Ahmed, Deborah D. Kamwendo, Irving F. Hoffman, Sascha R. Ellington, Zebrone Kacheche, Alice Soko, Jeffrey B. Wiener, Susan A. Fiscus, Peter Kazembe, Innocent A. Mofolo, Maggie Chigwenembe, Dorothy S. Sichali, and Charles M. van der Horst, for the Breastfeeding, Antiretroviral, and Nutrition Study Group

Maternal or Infant Antiretroviral Drugs to Reduce HIV-1 Transmission

The New England Journal of Medicine 2010;362(24):2271–2281

LIFETIME SCIENTIFIC ACHIEVEMENT

Kathleen Kreiss, MD

Dr. Kreiss was recognized as a world-renowned expert in occupational respiratory disease. She has improved workplace safety by encouraging the use of safer materials and better work practices and controls.

2010

ASSESSMENT AND EPIDEMIOLOGY

Fatimah S. Dawood, Seema Jain, Lyn Finelli, Michael W. Shaw, Stephen Lindstrom, Rebecca J. Garten, Larisa V. Gubareva, Xiyun Xu, Carolyn B. Bridges, and Timothy M. Uyeki

Emergence of a Novel Swine-origin Influenza A (H1N1) Virus in Humans

The New England Journal of Medicine 2009;360:2605–2615

LABORATORY AND METHODS

Joseph U. Igietseme, Qing He, Kahaliah Joseph, Francis O. Eko, Deborah Lyn, Godwin Ananaba, Angela Campbell, Claudiu Bandea, and Carolyn M. Black

Role of T Lymphocytes in the Pathogenesis of Chlamydia Disease

The Journal of Infectious Diseases 2009;200:926–934 51

PREVENTION AND CONTROL

Sandra L. Decker

Changes in Medicaid Physician Fees and Patterns of Ambulatory Care

Inquiry 2009;46(3)291–304

Manish Patel, Cristina Pedreira, Lucia Helena De Oliveira, Jacqueline Tate, Maribel Orozco, Juan Mercado, Alcides Gonzalez, Omar Alespin, Juan José Amador, Jazmina Umaña, Angel Balmaseda, Maria Celina Perez, Jon Gentsch, Tara Kerin, Jennifer Hull, Slavica Mijatovic, Jon Andrus, and Umesh Parashar

Association Between Pentavalent Rotavirus Vaccine and Severe Rotavirus Diarrhea Among Children in Nicaragua

JAMA 2009;301(21):2243–2251

LIFETIME SCIENTIFIC ACHIEVEMENT

Polly Marchbanks, PhD, MSN

Dr. Marchbanks was recognized for her global leadership and research, particularly in the area of contraception.

2009

ASSESSMENT AND EPIDEMIOLOGY

H. Irene Hall, Ruiguang Song, Philip Rhodes, Joseph Prejean, Qian An, Lisa M. Lee, John Karon, Ron Brookmeyer, Edward H. Kaplan, Matthew T. McKenna, and Robert S. Janssen, for the HIV Incidence Surveillance Group

Estimation of HIV Incidence in the United States

JAMA 2008;300:520–529

LABORATORY AND METHODS

Tracie L. Williams, Leah Luna, Zhu Guo, Nancy J. Cox, James L. Pirkle, Ruben O. Donis, and John R. Barr

Quantification of Influenza Virus Hemagglutinins in Complex Mixtures Using Isotope Dilution Tandem Mass Spectrometry

Vaccine 2008;26:2510–2520

PREVENTION AND CONTROL

Larissa Roux, Michael Pratt, Tammy O. Tengs, Michelle M. Yore, Teri L. Yanagawa, Jill Van Den Bos, Candace Rutt, Ross C. Brownson, Kenneth E. Powell, Gregory Heath, Harold W. Kohl III, Steven Teutsch, John Cawley, I-Min Lee, Linda West, and David M. Buchner

Cost Effectiveness of Community-based Physical Activity Interventions

American Journal of Preventive Medicine 2008;35:578–588

LIFETIME SCIENTIFIC ACHIEVEMENT

Stephen B. Thacker, MD, MSc

Dr. Thacker was recognized for his leadership and his work in fostering scientific communication and training of future leaders in public health. He has overseen the Epidemic Intelligence Service program since 1989, and under his direction, the first CDC plan for surveillance was completed in 1985.

2008

ASSESSMENT AND EPIDEMIOLOGY

Earl S. Ford, Umed A. Ajani, Janet B. Croft, Julia A. Critchley, Darwin R. Labarthe, Thomas E. Kottke, Wayne H. Giles, and Simon Capewell

Explaining the Decrease in U.S. Deaths from Coronary Disease, 1980–2000

The New England Journal of Medicine 2007;356:2388–2398

LABORATORY AND METHODS

Terrence M. Tumpey, Christopher F. Basler, Patricia V. Aguilar, Hui Zeng, Alicia Solórzano, David E. Swayne, Nancy J. Cox, Jacqueline M. Katz, Jeffery K. Taubenberger, Peter Palese, and Adolfo García-Sastre

A Two-amino Acid Change in the Hemagglutinin of the 1918 Influenza Virus Abolishes Transmission

Science 2007;315:655–659

PREVENTION AND CONTROL

R. Louise Floyd, Mark Sobell, Mary M. Velasquez, Karen Ingersoll, Mary Nettleman, Linda Sobell, Patricia Dolan Mullen, Sherry Ceperich, Kirk von Sternberg, Burt Bolton, Bradley Skarpness, and Jyothi Nagaraja, for the Project CHOICES Efficacy Study Group

Preventing Alcohol-exposed Pregnancies: A Randomized Controlled Trial

American Journal of Preventive Medicine 2007;32:1–10

LIFETIME SCIENTIFIC ACHIEVEMENT

Vincent Castranova, PhD

Dr. Castranova was recognized for his leadership in laboratory-based occupational health research. His contributions to the understanding of the biology of lung cells have been translated into the practical study of lung diseases and development of prevention programs.

2007

ASSESSMENT AND EPIDEMIOLOGY

Wolfgang Hladik, Shelia C. Dollard, Jonathan Mermin, Ashley L. Fowlkes, Robert Downing, Minal M. Amin, Flora Banage, Esau Nzaro, Peter Kataaha, Timothy J. Dondero, Philip E. Pellett, and Eve M. Lackritz

Transmission of Human Herpesvirus 8 by Blood Transfusion

The New England Journal of Medicine 2006;355:1331–1338

LABORATORY AND METHODS

Mary A. Hoelscher, Sanjay Garg, Dinesh S. Bangari, Jessica A. Belser, Xiuhua Lu, Iain Stephenson, Rick A. Bright, Jacqueline M. Katz, Suresh K. Mittal, and Suryaprakash Sambhara

Development of Adenoviral-vector-based Pandemic Influenza Vaccine against Antigenically Distinct Human H5N1 Strains in Mice

The Lancet 2006;368:1495–1502

PREVENTION AND CONTROL

Cynthia G. Whitney, Tamar Pilishvili, Monica M. Farley, William Schaffner, Allen S. Craig, Ruth Lynfield, Ann-Christine Nyquist, Kenneth A. Gershman, Marietta Vazquez, Nancy M. Bennett, Arthur Reingold, Ann Thomas, Mary P. Glode, Elizabeth R. Zell, James H. Jorgensen, Bernard Beall, and Anne Schuchat

Effectiveness of Seven-valent Pneumococcal Conjugate Vaccine Against Invasive Pneumococcal Disease: A Matched Case-control Study

The Lancet 2006;368:1495–1502

LIFETIME SCIENTIFIC ACHIEVEMENT

Roger I. Glass, MD, PhD, MPH

Dr. Glass was recognized for his leadership and accomplishments in viral gastroenteritis. His work led to the recognition of rotavirus as a problem in the United States and to development of a rotavirus vaccine to be used worldwide.

2006

ASSESSMENT AND EPIDEMIOLOGY

Lee Warner, Maurizio Macaluso, Harland D. Austin, David K. Kleinbaum, Lynn Artz, Michael E. Fleenor, Ilene Brill, Daniel R. Newman, and Edward W. Hook III

Application of the Case-crossover Design to Reduce Unmeasured Confounding in Studies of Condom Effectiveness

American Journal of Epidemiology 2005;161:765–773

Katherine M. Flegal, Barry I. Graubard, David F. Williamson, and Mitchell H. Gai

Excess Deaths Associated With Underweight, Overweight, and Obesity

JAMA 2005;293:1861–1867

LABORATORY AND METHODS

Terrence M. Tumpey, Christopher F. Basler, Patricia V. Aguilar, Hui Zeng, Alicia Solórzano, David E. Swayne, Nancy J. Cox, Jacqueline M. Katz, Jeffery K.

Taubenberger, Peter Palese, and Adolfo García-Sastre

Characterization of the Reconstructed 1918 Spanish Influenza Pandemic Virus

Science 2005;310(5745):77–80

PREVENTION AND CONTROL

Stephen P. Luby, Mubina Agboatwalla, Daniel R. Feikin, John Painter, Ward Billhimer, Arshad Altaf, and Robert M. Hoekstra

Effect of Handwashing on Child Health: A Randomised Controlled Trial

The Lancet 2005;366:225–233

LIFETIME SCIENTIFIC ACHIEVEMENT

Robert V. Tauxe, MD, MPH

Dr. Tauxe was recognized for his leadership in the prevention and control of foodborne diseases in the United States and internationally. His work and that of his colleagues have resulted in dramatic changes in foodborne disease surveillance, outbreak detection, practices, and policies.

2005

ASSESSMENT AND EPIDEMIOLOGY

Barbara Lopes Cardozo, Oleg O. Bilukha, Carol A. Gotway Crawford, Irshad Shaikh, Mitchell I. Wolfe, Michael L. Gerber, and Mark Anderson

Mental Health, Social Functioning, and Disability in Postwar Afghanistan

JAMA 2004;292:575–584

LABORATORY AND METHODS

Justin M. Hettick, Michael L. Kashon, Janet P. Simpson, Paul D. Siegel, Gerald H. Mazurek, and David N. Weissman

Proteomic Profiling of Intact Mycobacteria by Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry

Analytical Chemistry 2004;76:5769–5776

PREVENTION AND CONTROL

Marc Bulterys, Denise J. Jamieson, Mary Jo O'Sullivan, Mardge H. Cohen, Robert Maupin, Steven Nesheim, Mayris P. Webber, Russell Van Dyke, Jeffrey Wiener, and Bernard M. Branson, for the Mother-Infant Rapid Intervention at Delivery (MIRIAD) Study Group

Rapid HIV-1 Testing During Labor: A Multicenter Study

JAMA 2004;292:219–223

OUTSTANDING SCIENTIFIC CONTRIBUTION TO PUBLIC HEALTH

William H. Hannon, Barbara W. Adams, and Robert F. Vogt

National Center for Environmental Health/Agency for Toxic Substances and Disease Registry

Newborn Screening Quality Assurance Program

LIFETIME SCIENTIFIC ACHIEVEMENT

James M. Hughes, MD

Dr. Hughes was recognized for his expertise in infectious diseases and bioterrorism and response. His leadership in addressing emerging and reemerging global threats has brought global prominence to CDC and improved public health infrastructures nationwide.

2004

ASSESSMENT AND EPIDEMIOLOGY

Jennita Reefhuis, Margaret A. Honein, Cynthia G. Whitney, Shadi Chamany, Eric A. Mann, Krista R. Biernath, Karen Broder, Susan Manning, Swati Avashia, Marcia Victor, Pamela Costa, Owen Devine, Ann Graham, and Coleen Boyle

Risk of Bacterial Meningitis in Children with Cochlear Implants

The New England Journal of Medicine 2003;349:435–445

LABORATORY AND METHODS

Thomas G. Ksiazek, Dean Erdman, Cynthia S. Goldsmith, Sherif R. Zaki, Teresa Peret, Shannon Emery, Suxiang Tong, Carlo Urbani, James A. Comer, Wilina Lim, Pierre E. Rollin, Scott F. Dowell, Ai-Ee Ling, Charles D. Humphrey, Wun-Ju Shieh, Jeannette Guarner, Christopher D. Paddock, Paul Rota, Barry Fields, Joseph DeRisi, Jyh-Yuan Yang, Nancy Cox, James M. Hughes, James W. LeDuc, William J. Bellini, Larry J. Anderson, and the SARS Working Group

A Novel Coronavirus Associated with Severe Acute Respiratory Syndrome

The New England Journal of Medicine 2003;348:1953–1966

PREVENTION AND CONTROL

Cynthia G. Whitney, Monica M. Farley, James Hadler, Lee H. Harrison, Nancy M. Bennett, Ruth Lynfield, Arthur Reingold, Paul R. Cieslak, Tamara Pilishvili, Delois Jackson, Richard R. Facklam, James H. Jorgensen, and Anne Schuchat, for the Active Bacterial Core Surveillance of the Emerging Infections Program Network

Decline in Invasive Pneumococcal Disease After the Introduction of Protein-polysaccharide Conjugate Vaccine

The New England Journal of Medicine 2003;348:1737–1746

LIFETIME SCIENTIFIC ACHIEVEMENT

Harold W. Jaffe, MD

Dr. Jaffe was recognized as a national and international leader in the disease investigation of HIV/AIDS, which has increased scientific knowledge about HIV/AIDS and improved national and international approaches to prevention and control.

Walter A. Orenstein, MD

Dr. Orenstein was recognized for his leadership in reducing the occurrence of vaccine-preventable diseases in children. His work has been critical to the development of national vaccine policy and global immunization strategies.

2003

ASSESSMENT AND EPIDEMIOLOGY

Polly A. Marchbanks, Jill A. McDonald, Hoyt G. Wilson, Suzanne G. Folger, Michele G. Mandel, Janet R. Daling, Leslie Bernstein, Kathleen E. Malone, Giske Ursin, Brian L. Strom, Sandra A. Norman, Linda K. Weiss, Phyllis Wingo, Michael S. Simon, Ronald T. Burkman, Jesse A. Berlin, and Robert Spirtas

Oral Contraceptives and the Risk of Breast Cancer

The New England Journal of Medicine 2002;346:2025–2032

LABORATORY AND METHODS

Bharat S. Parekh, M. Susan Kennedy, Trudy Dobbs, Chou-Pong Pau, Robert Byers, Timothy Green, Dale J. Hu, Suphak Vanichseni, Nancy L. Young, Kachit Choopanya, Timothy D. Mastro, and J. Steven McDougal

Quantitative Detection of Increasing HIV Type 1 Antibodies After Seroconversion: A Simple Assay for Detecting Recent HIV Infection and Estimating Incidence

AIDS Research and Human Retroviruses 2002;18:295–307

PREVENTION AND CONTROL

Robert E. Quick, Akiko C. Kimura, Angelica Thevos, Mathias Tembo, Isidore Shamputa, Lori Hutwagner, and Eric Mintz

Diarrhea Prevention Through Household-level Water Disinfection and Safe Storage in Zambia

The American Journal of Tropical Medicine and Hygiene 2002;66:584–589

OUTSTANDING SCIENTIFIC CONTRIBUTION TO PUBLIC HEALTH

Barbara Lopes Cardozo, Bradley A. Woodruff, Muireann Brennan, and Paul B. Spiegel

National Center for Environmental Health International Emergency and Refugee Health Branch

LIFETIME SCIENTIFIC ACHIEVEMENT

William R. Jarvis, MD

Dr. Jarvis was recognized as a leader in the study of nosocomial infections and other threats to the safety of patients and healthcare workers. His research has led to interventions to reduce these risks and to the development of prevention guidelines.

2002

ASSESSMENT AND EPIDEMIOLOGY

Trudy V. Murphy, Paul M. Gargiulio, Mehran S. Massoudi, David B. Nelson, Aisha O. Jumaan, Catherine A. Okoro, Lynn R. Zanardi, Sabeena Setia, Elizabeth Fair, Charles W. LeBaron, Melinda Wharton, John R. Livengood, and Benjamin Schwartz, for the Rotavirus Intussusception Inspection Team

Intussusception Among Infants Given an Oral Rotavirus Vaccine

The New England Journal of Medicine 2001;344:564–572

LABORATORY AND METHODS

Brent S. Davis, Gwong-Jen J. Chang, Bruce Cropp, John T. Roehrig, Denise A. Martin, Carl J. Mitchell, Richard Bowen, and Michel L. Bunning

West Nile Virus Recombinant DNA Vaccine Protects Mouse and Horse from Virus Challenge and Expresses in vitro a Noninfectious Recombinant Antigen that Can Be Used in Enzyme-linked Immunosorbent Assays

Journal of Virology 2001;75:4040–4047

PREVENTION AND CONTROL

Belinda E. Ostrowsky, William E. Trick, Annette H. Sohn, Stephen B. Quirk, Stacey Holt, Loretta A. Carson, Bertha C. Hill, Matthew J. Arduino, Matthew J. Kuehnert, and William R. Jarvis

Control of Vancomycin-resistant Enterococcus in Health Care Facilities in a Region

The New England Journal of Medicine 2001;344:1427–1433

OUTSTANDING SCIENTIFIC CONTRIBUTION TO PUBLIC HEALTH

Ronald M. Davis, Gary A. Giovino, Michael D. Erikson, and the Office on Smoking and Health

National Center for Chronic Disease Prevention and Health Promotion

LIFETIME SCIENTIFIC ACHIEVEMENT

Gerald R. Cooper, MD, PhD

Dr. Cooper was recognized for his leadership in improving laboratory measures of lipids that led to the establishment of the CDC Lipid Standardization Program.

2001

ASSESSMENT AND EPIDEMIOLOGY

Paul B. Spiegel and Peter Salama

War and Mortality in Kosovo, 1998–99: An Epidemiological Testimony

The Lancet 2000;335:2204–2209

LABORATORY AND METHODS

K.B. Chua, William J. Bellini, Paul A. Rota, Brian H. Harcourt, Azaibi Tamin, S.K. Lam, Thomas G. Ksiazek, Pierre E. Rollin, Sherif R. Zaki, Wun-Ju Shieh, Cynthia S. Goldsmith, Duane J. Gubler, John T. Roehrig, B. Eaton, A.R. Gould, Jim Olson, H. Field, P. Daniels, A.E. Ling, Clarence J. Peters, Larry J. Anderson, and Brian W.J. Mahy

Nipah Virus: A Recently Emergent Deadly Paramyxovirus

Science 2000;288:1432–1435

PREVENTION AND CONTROL

Carolyn Buxton Bridges, William W. Thompson, Martin I. Meltzer, Gordon R. Reeve, Walter J. Talamonti, Nancy J. Cox, Heather A. Lilac, Henrietta Hall, Alexander Klimov, and Keiji Fukuda

Effectiveness and Cost–benefit of Influenza Vaccination of Healthy Working Adults: A Randomized Controlled Trial

JAMA 2000;284:1655–1662

OUTSTANDING SCIENTIFIC CONTRIBUTION TO PUBLIC HEALTH

National Center for Chronic Disease Prevention and Health Promotion

Behavioral Risk Factor Surveillance System

LIFETIME SCIENTIFIC ACHIEVEMENT

Joseph Edward McDade, PhD

Dr. McDade was the first to identify the bacterium *Legionella pneumophila* as the cause of the well-known outbreak of Legionnaires' disease. In the 1980s, he identified the cause of a previously unknown tickborne disease, ehrlichiosis.

2000

ASSESSMENT AND EPIDEMIOLOGY

Nathan Shaffer, Rutt Chuachoowong, Philip A. Mock, Chaiporn Bhadrakom, Wimol Siriwasin, Nancy L. Young, Tawee Chotpitayasunondh, Sanay Chearskul, Anuvant Roongpisuthipong, Pratharn Chinayon, John Karon, Timothy D. Mastro, and R.J. Simonds

Short-course Zidovudine for Perinatal HIV-1 Transmission in Bangkok, Thailand: A Randomised Controlled Trial

The Lancet 1999;353:773–780

1999

Robert S. Janssen, Glen A. Satten, Susan L. Stramer, Bhupat D. Rawal, Thomas R. O'Brien, Barbara J. Weiblen, Frederick M. Hecht, Noreen Jack, Farley R. Cleghorn, James O. Kahn, Margaret A. Chesney, and Michael P. Busch

New Testing Strategy to Detect Early HIV-1 Infection for Use in Incidence Estimates and for Clinical and Prevention Purposes

JAMA 1998;280:42–48

1998

Denise M. Cardo, David H. Culver, Carol A. Ciesielski, Pamela U. Srivastava, Ruthanne Marcus, Dominique Abiteboul, Julia Heptonstall, Giuseppe Ippolito, Florence Lot, Penny S. McKibben, and David M. Bell, for the Centers for Disease Control and Prevention Needlestick Surveillance Group

A Case-control Study of HIV Seroconversion in Health Care Workers after Percutaneous Exposure

The New England Journal of Medicine 1997;337:1485–1490

1997

Jennifer S. Rota, Janet L. Heath, Paul A. Rota, Gail E. King, María L. Celma, Juan Carabaña, Rafael Fernandez-Muñoz, David Brown, Li Jin, and William J. Bellini

Molecular Epidemiology of Measles Virus: Identification of Pathways of Transmission and Implications for Measles Elimination

The Journal of Infectious Diseases 1996;173:32–37

Diana E. Schendel, Cynthia J. Berg, Marshalyn Yeargin-Allsopp, Coleen A. Boyle, and Pierre Decoufle

Prenatal Magnesium Sulfate Exposure and the Risk for Cerebral Palsy or Mental Retardation Among Very Low-birth-weight Children Aged 3 to 5 Years

JAMA 1996;276:1805–1810

1996

Peter M. Strebel, Nicolae Ion-Nedelcu, Andrew L. Baughman, Roland W. Sutter, and Stephen L. Cochi

Intramuscular Injections Within 30 Days of Immunization with Oral Poliovirus Vaccine—A Risk Factor for Vaccine-associated Paralytic Poliomyelitis

The New England Journal of Medicine 1995;332:500–506

1995

Robert D. Brewer, Peter D. Morris, Thomas B. Cole, Stephanie Watkins, Michael J. Patetta, and Carol Popkin

The Risk of Dying in Alcohol-related Automobile Crashes Among Habitual Drunk Drivers

The New England Journal of Medicine 1994;331:513–517

1994

Michael E. St. Louis, Munkolenkole Kamenga, Christopher Brown, Ann Marie Nelson, Tarande Manzila, Veronique Batter, Frieda Behets, Uwa Kabagabo, Robert W. Ryder, Margaret Oxtoby, Thomas C. Quinn, and William L. Heyward

Risk for Perinatal HIV-1 Transmission According to Maternal Immunologic, Virologic, and Placental Factors

JAMA 1993;269:2853–2859

1993

Brian R. Edlin, Jerome I. Tokars, Michael H. Grieco, Jack T. Crawford, Julie Williams, Emelia M. Sordillo, Kenneth R. Ong, James O. Kilburn, Samuel W. Dooley, Kenneth G. Castro, William R. Jarvis, and Scott D. Holmberg

An Outbreak of Multidrug-resistant Tuberculosis Among Hospitalized Patients with the Acquired Immunodeficiency Syndrome

The New England Journal of Medicine 1992;326:1514–1521

1992

Marta Gwinn, Marguerite Pappaioanou, J. Richard George, W. Harry Hannon, Shari C. Wasser, Martha A. Redus, Rodney Hoff, George F. Grady, Anne Willoughby, Antonia C. Novello, Lyle R. Petersen, Timothy J. Dondero, and James W. Curran

Prevalence of HIV Infection in Childbearing Women in the United States

JAMA 1991;265:1704–1708

1991

Edward A. Belongia, Craig W. Hedberg, Gerald J. Gleich, Karen E. White, Arthur N. Mayeno, David A. Loegering, Sandra L. Dunnette, Phyllis L. Pirie, Kristine L. MacDonald, and Michael T. Osterholm

An Investigation of the Cause of the Eosinophilia-myalgia Syndrome Associated with Tryptophan Use

The New England Journal of Medicine 1990;323:357–365

1990

Patricia M. Griffin, Robert V. Tauxe, Stephen C. Redd, Nancy D. Puhr, Nancy Hargrett-Bean, and Paul A. Blake

Emergence of Highly Trimethoprim-sulfamethoxazole-resistant Shigella in a Native American Population: An Epidemiologic Study

American Journal of Epidemiology 1989;129:1042–1051

1989

Chin-Yih Ou, Shirley Kwok, Sheila W. Mitchell, David H. Mack, John J. Sninsky, John W. Krebs, Paul Feorino, Donna Warfield, and Gerald Schochetman

DNA Amplification for Direct Detection of HIV-1 in DNA of Peripheral Blood Mononuclear Cells

Science 1988;239:295–297

1988

Rebeca Rico-Hesse, Mark A. Pallansch, Baldev K. Nottay, and Olen M. Kew

Geographic Distribution of Wild Poliovirus Type 1 Genotypes

Virology 1987;160:311–322

1987

J. Steven McDougal, M. Susan Kennedy, Julie M. Sligh, Sheila P. Cort, Alison C. Mawle, and Janet K. A. Nicholson

Binding of HTLV-III/LAV to T4+ T Cells by a Complex of the 100K Viral Protein and the T4 Molecule

Science 1986(4736);231:382–385

1986

Arthur L. Reingold, Claire V. Broome, Allen W. Hightower, Gloria W. Ajello, Gail A. Bolan, Catherine Adamsbaum, Ellen E. Jones, Catherine Phillips, Hilaire Tiendrebeogo, and Adamou Yada

Age-specific Differences in Duration of Clinical Protection After Vaccination with Meningococcal Polysaccharide A Vaccine

The Lancet 1985;2:114–118

Previous Keynote Speakers

Following is a list of colleagues who have made keynote speeches at the Charles C. Shepard Science Awards ceremony since the ceremony was first held in 1986.

2022

Kathleen Hall Jamieson, PhD

University of Pennsylvania,
Annenberg School of
Communication

*"Communicating Science for
Action in 2022 and Beyond"*

2021

Robert D. Bullard, PhD, MA

Texas Southern University Barbara
Jordan-Mickey Leland School of
Public Affairs

*"Climate Change as a Public Health
Threat: Why Equity Matters"*

2020

Michelle Ann Williams, SM, ScD

Harvard University T.H. Chan School
of Public Health

"Racism as a Public Health Crisis"

2019

Jon D. Duke, MD, MS

Georgia Tech College of Computing

*"Unlocking Big Data and
Analytics for Public Health"*

2018

Roberta Ness, MD, MPH

The University of Texas

*"Innovation and Creativity
in Modern Public Health"*

2017

John Cacioppo, PhD

University of Chicago Center for
Cognitive & Social Neuroscience

*"Loneliness: Public
Health Implications and
Potential Mechanisms"*

2016

Zulfiqar A. Bhutta, PhD, MBBS

The Hospital for Sick Children

*"Global Child Survival: Challenges
and Opportunities"*

2015

Anthony S. Fauci, MD

National Institute of Allergy and
Infectious Diseases

*"Advances to Public
Health Implementation"*

2014

John E. Wennberg, MD, MPH

The Dartmouth Institute for Health
Policy and Clinical Practice

*"Unwarranted Variation
in Health Care"*

2013

No Keynote Speech

2012

James S. Marks, MD, MPH

Robert Wood Johnson Foundation
Health Group

*"Making Science and
Health Matter"*

2011

Brian Greenwood, MD, CBE

London School of Hygiene & Tropical
Medicine, University of London

"Vaccines for Global Health"

2010

John Holdren, PhD

White House Office of Science and
Technology Policy

*"Science and Technology Policy
for Ensuring the Public's Health"*

2009

Paul Krugman, PhD

Princeton University
Columnist, *The New York Times*

"Health and the Economic Future"

2008

Neal Nathanson, MD

University of Pennsylvania School
of Medicine

"AIDS Vaccine at the Crossroads"

2007

Michael Marmot, PhD, MPH

Institute for Society and Health,
University College, London

"Health in an Unequal World"

2006

Donald M. Berwick, MD, MPP

Institute for Healthcare Improvement
"The 100,000 Lives

*Campaign: Lessons from a
National Mobilization"*

2005

Harvey V. Fineberg, MD, PhD

National Academy of Medicine

"Science, Policy, and Public Trust"

2004

Shiriki Kumanyika, PhD, MPH

University of Pennsylvania School
of Medicine

*"Obesity, Health Disparities,
and Prevention Paradigms: Hard
Questions and Hard Choices"*

2003

Jo Ivey Boufford, MD

New York University School
of Medicine

*"Assuring the Public's Health in the
21st Century: A Research Agenda"*

2002

Marc L. Miringoff, PhD

Fordham Institute for Innovation in
Social Policy

"The Social Determinants of Health"

2001

Jeffrey D. Sachs, PhD

Harvard University

*"Reinvigorating the Fight Against
Disease in the Developing World"*

2000

Lynn R. Goldman, MD, MPH, MS

Johns Hopkins University Bloomberg
School of Public Health

"Health of the World"

1999

Steven N. Blair, PED

The Cooper Institute

Columnist, *The New York Times*

*"Physical Inactivity as a
Public Health Problem"*

1998

Frederick P. Rivara, MD, MPH

Harborview Injury Prevention and
Research Center

*"Injury Control—The Uses of
Science for Prevention"*

1997

David R. Cox, MD, PhD

Stanford University School
of Medicine

*"The Human Genome Project
and Human Disease"*

1996

Walter E. Massey, PhD

Morehouse College

*"Science—The (Ever-Expanding)
Endless Frontier"*

1995

Nancy S. Wexler, PhD

Columbia University

*"Uncongenial Genealogies:
Prediction and Protection
in the Public Interest"*

1994

Thomas J. Coates, PhD

University of California at San
Francisco

*"HIV Prevention Programs
in Research: What Have We
Accomplished, and Where
Do We Need to Go?"*

1993

W. French Anderson, MD

University of Southern California
School of Medicine

*"The Scientific, Ethical, and
Regulatory Issues of Gene Therapy"*

1992

Barry R. Bloom, PhD

Howard Hughes Medical Institute

"Revisiting Mycobacteria"

1991

Lawrence K. Altman, MD

The New York Times

"Science and the Media"

1990

Purnell W. Choppin, MD

Howard Hughes Medical Institute

*"The Role of a Private Medical
Research Organization
in Biomedical Research
and Education"*

1989

Joseph L. Goldstein, MD

University of Texas Health
Sciences Center

*"Lipoprotein Receptors: A
Genetic Defense Against
and Atherosclerosis"*

1988

David Baltimore, PhD

Hospital Whitehead Institute
Massachusetts Institute of
Technology

"Genetics and Modern Disease"

1987

Frank Press, PhD

National Academy of Sciences

"DNA in Washington"

1986

James O. Mason, MD

Centers for Disease Control

"CDC, Science, and the Future"

Committee Members

of the Charles C. Shepard Science Awards

Full Committee

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Matthew Hogben, PhD

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Eldin Talundzic, PhD

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Statistician: Xin Yue, MS, MPS

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Susan Hariri, PhD

Kathleen MacMahon, DVM, MS

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Gail Stennies, MD

April Summers, MPH

Amra Uzicanin, MD, MPH

Ambarish Vaidyanathan, PhD

Anne G. Wheaton, PhD

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