

IDWeek 2023



Review of IDWeek 2023

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This year's IDWeek, the joint annual meeting of the Infectious Diseases Society of America (IDSA), the Society for Healthcare Epidemiology of America (SHEA), the HIV Medicine Association (HIVMA), the Pediatric Infectious Diseases Society (PIDS), and the Society of Infectious Diseases Pharmacists (SIDP), took place in the capital of Massachusetts, USA.

Boston is well known as a hub for art, history, culture, and education, famously housing the globally renowned institution of Harvard University. With this strong background in learning and education, Boston provided a fantastic setting for the wealth of basic, translational, and clinical science presented over the course of IDWeek 2023.

This year's event, which surpassed previous records for attendance, saw 3,019 speakers from across the globe deliver a total of 285 sessions, including 39 oral abstract sessions, and over 2,000 poster abstracts.

Whilst artificial intelligence and climate change emerged as key themes throughout the sessions, the program covered a plethora of topics, including adult and pediatric infectious diseases, COVID-19, epidemiology and infection control, global infectious diseases, HIV, sexually transmitted diseases, tuberculosis, and investigative infectious diseases.

IDWeek Program Chair, Heather Yun, Brooke Army Medical Center, San Antonio, Texas, USA, opened the event by reflecting on the very first IDSA meeting she attended and presented at, which, by happenstance, also took place in Boston. Yun discussed the pride she felt in being part of a team who helped advance science to solve a critical problem for patients, and the awe she felt at both the prospective possibilities the future held, and the support amongst the infectious diseases community. Referring to the present, Yun stated: "IDWeek connects our science with our humanity as we come together from across the world to better our own communities of practice, and solve real challenges for our patients." Yun further emphasized the importance of community and collaboration, commenting: "The stories we share, the research we present, and the new connections we make will shape the field of ID in the years ahead."

Multiple awards were presented during the opening session, including the IDWeek Program Committee Choice Awards. Benjamin Johnson, Johns Hopkins School of Medicine, Baltimore, Maryland, USA, was recipient of this award from the IDSA, for research called 'Reporting of SARS-CoV-2 testing results among PEPFAR and non-PEPFAR countries in Sub-Saharan Africa during the first year of the COVID-19 pandemic'; Jennie H. Kwon, Washington University School of Medicine, Saint Louis, Missouri, USA, received this award from the SHEA, her research on 'The Impact of





Race and Ruralty on Healthcare-Associated Infections and Downstream Adverse Outcomes'; Lewis Musoke, Veterans Affairs Northeast Ohio Healthcare System, Cleveland, Ohio, USA, received this award from the HIVMA for research called 'PrEP Inequity Across Geographic, Racial and Sex Groups in a Nationwide US Veteran Cohort'; and Anne-Marie Rick, University of Pittsburgh, Pennsylvania, USA, received this award from PIDS for her research into 'Protective Effects of Maternal Influenza Vaccine during Pregnancy and Breastfeeding on Risk of Infant Influenza'.

Additionally, five prestigious awards were bestowed by the five societies of IDWeek to colleagues who have "transformed the frontiers of infectious diseases in research, patient care, and education." The IDSA Alexander Fleming award for lifetime achievement was presented by Carlos del Rio, Emory University School of Medicine, Decatur, Georgia, USA, to Susan Swindells, University of Nebraska Medical Center, Omaha, USA, in recognition of her contributions to the acquisition and dissemination of knowledge in infectious diseases. Del Rio highlighted Swindells as a "trailblazer in HIV research," whose groundbreaking research has influenced clinical practice, with work spanning optimal antiretroviral treatment

strategies, treatment for opportunistic infections, and HIV prevention through antiretroviral therapy.

The HIVMA Transformative Leader Award was presented to Judith Feinberg, West Virginia University, Morgantown, USA, by the HIVMA Chair, Michelle Cespedes. The award recognizes HIVMA members who have transformed the field through significant achievement in HIV clinical care, provider education, research, or advocacy.

The SHEA Senior Scholar Award was presented to Victoria Fraser, Washington University School of Medicine, by SHEA President, Deborah Yokoe, in recognition of her work in improving patient safety through infection prevention.

The PIDS Walter T. Hughes Distinguished Physician Award was delivered to Patricia M. Flynn, St. Jude Children's Research Hospital, Memphis, Tennessee, USA, by PIDS President Buddy Creech, for her globally-recognized contributions to pediatric and adolescent HIV care.

The SIDP Outstanding Clinician Award was given to Julie Ann Justo, University of South Carolina College of Pharmacy, Columbia, USA, by SIDP President, Melissa Johnson, for exemplary skills as

a practitioner with expertise in infectious diseases pharmacy practice.

The session then saw del Rio rejoin the stage, where he spotlighted the President's Emergency Plan for AIDS relief (PEPFAR), a flagship US Global Health Program that has saved more than 25 million lives, as the topic for IDWeek 2023's closing plenary.

In recognition of the work involved in delivering the IDWeek program, del Rio gave thanks to the event's four female co-chairs for putting together a superb meeting. He also gave recognition to IDWeek Meeting Secretariat, Sandra Vura Harwood, for her contributions to IDSA and IDWeek, stating that her work has helped grow IDWeek into a leading infectious diseases meeting in the world through innovative thinking and fostering international collaboration.

A special video message saw Mandy Cohen, Director of the Centers for Disease Control and Prevention (CDC) give thanks to the delegates for their work in protecting the public from health threats, including their efforts during the COVID-19 pandemic, and collaboration on the Mpox response. Cohen emphasized that the collaborative approaches should be continued

and prioritized in the future, and concluded her message with a poignant statement: "I look forward to working together to support healthy people, healthy families, a healthy nation, and a healthy world."

Following this address, del Rio introduced the opening session's keynote speaker, Isaac Kohane, Harvard Medical School, Boston, Massachusetts, USA, who delivered a fascinating plenary on the intersection between infectious diseases and artificial intelligence. At the end of this insightful presentation, Yun invited attendees to join the Bug Bash reception, and wished everyone a great IDWeek.

EMJ was thrilled to attend this fantastic and engaging meeting for the first time, and we look forward to participating in IDWeek 2024, which will take place in Los Angeles, California, USA, between October 16th–20th. For now, we hope you enjoy reading the scientific highlights from IDWeek 2023. ●



Role of Healthcare System Barriers in Inappropriate Antibiotic Use

RESEARCH presented at IDWeek 2023 suggests that personal beliefs and healthcare system barriers are two of the primary reasons for which patients report using antibiotics without a prescription. The overuse and misuse of antibiotics is a contributing factor in antimicrobial resistance; however, many patients find it a cheaper and more convenient option. Therefore, the researchers emphasized the need for antibiotic stewardship education, and increased access efforts.

This study, presented by Lindsey Laytner, Department of Family and Community Medicine, Baylor College of Medicine, Houston, Texas, USA, involved in-depth, semi-structured interviews with patients who had reported non-prescription antibiotic use on a previous survey in public and private healthcare systems. The interviews were carried out from May 2020–October 2021. Non-prescription antibiotic use includes using antibiotics leftover from a previously prescribed course, obtained from social networks, and purchased over the counter in other countries or illegally in USA-based stores.

Of the 86 patients interviewed, over 70% were female, Hispanic, or African American, educated (high school or above), and attended publicly funded clinics.

The interviewees reported using antibiotics primarily for symptoms of COVID-19, the flu, and the common cold, in addition to pain management, allergies, and wound treatment. Patients stated that they used antibiotics because they understood their illness and what medications would treat it, or because they perceived over-the-counter medications as ineffective. These participants commented that they faced barriers to healthcare and treatment access, struggling with long wait times to schedule appointments, as well as difficulties getting transportation to and from appointments, and the costs associated with seeing a doctor. They then choose to use non-prescription antibiotics, as they are more convenient and more affordable.

Laytner highlighted the need for increased education efforts in safe antibiotic use and alternative treatment options for common symptoms, as well as improved access to healthcare, in order to combat antimicrobial resistance. "Improper use of antibiotics contributes to the growing threat of antimicrobial resistance, where bacteria and viruses evolve genetically to counter drugs," Laytner concluded, adding that a patient-provider communication tool is already in development at the Baylor College of Medicine, aiming to increase safe antibiotic use. ●

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Wastewater-Based Surveillance Reveals Seasonal Respiratory Viral Infections

WASTEWATER-based surveillance of severe acute respiratory syndrome coronavirus 2 is an established method for monitoring the COVID-19 pandemic, and for providing an indicator of cases and hospitalizations. However, its potential application to monitoring endemic respiratory viruses has not been elucidated. Therefore, a research team based at the University of Calgary, Canada, sought to assess the occurrence of Influenza A, Influenza B, and respiratory syncytial virus (RSV) RNA in wastewater treatment plants in Calgary, and its correlation with clinical disease. They reported their research at IDWeek 2023.

Twenty-four-hour composite wastewater samples were collected weekly from three wastewater treatment plants in Calgary between March 2022–April 2023. RNA was extracted from concentrated wastewater and then quantified. The wastewater values were compared with clinical data reported by Alberta Health Services (AHS).

Analysis showed that viral signals of Calgary's wastewater correlated with confirmed weekly cases for all three included viruses. Specifically, Influenza A peaked between November–December

2022, Influenza B peaked between February–April 2023, and RSV peaked between November 2022–February 2023. Importantly, the composite signals for Influenza A and Influenza B correlated with clinical cases across the entire province ($p < 0.0001$), while composite signals of RSV correlated with clinical cases and test positivity rates across Alberta ($p = 0.0070$).

The researchers suggest the results provide a novel surveillance approach that can exist independently of, and complementary to, clinical testing. Overall, it could enable the detection of common seasonal respiratory viruses, with an understanding of community level viral trends permitting the identification of hotspots. This, in turn, could inform local public health decision-making, and prepare clinicians for potential outbreaks. "Just one flush can hold a lot of information. Wastewater surveillance equips public health experts, clinicians, policymakers, and the public with community-based, objective data to inform health and safety decisions against the flu and RSV," said Kristine Du, Cumming School of Medicine, University of Calgary. ●

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