Sepsis Detection using Artificial Intelligence
UNITED STATES | July 2022

Johns Hopkins University has recently developed an analytical system guided by artificial intelligence (AI) to detect early signs of sepsis. Sepsis is a condition that can develop from bacterial infections. Progression may result in septic shock, a drastic drop in blood pressure, which has a mortality rate of around 50%. Based on clinical data, this AI model may reduce mortality rates by up to 20%. The model was first used to retrospectively screen 173,931 patients and subsequently deployed for 469,419 patients. During the deployment phase, 82% of patients were flagged, of which 40% were confirmed sepsis cases, a significant increase compared to the 2-5% accuracy of existing diagnostic tools. This development has the potential to save thousands of lives in clinical settings.

A Potential Cause of Childhood Allergies
CANADA | August 2023

A new study led by researchers at the University of British Columbia and the British Columbia Children's Hospital has found that delayed maturation of gut bacteria within the first year of life may be a key indicator of pediatric allergic disease diagnoses by the age of five. The researchers observed that common allergic diagnoses were consistently associated with depletions in the bacteria A. hadrus, F. saccharivorans, E. hallii, and B. wexlerae in infants' stool samples. Additionally, the researchers observed that enrichments in the bacteria E. lenta, C. innocuum, E. faecalis, E. coli, and T. nexilis were correlated with allergic diagnoses. These imbalances in the gut microbiota resulted in a weakened intestinal lining and increased inflammatory response and can be a significant factor to predisposing children to allergies within the first five years of life.

Reports on HIV and Sexual Reproductive Health Services in Zimbabwe
ZIMBABWE | September 2023

There are significant socioeconomic and political barriers to accessing sexual and reproductive health (SRH) related care in Zimbabwe. In 2020, various initiatives were undertaken to improve services and care related to SRH. These interventions include counseling in general health and risk reduction, increased HIV screening, and delivery of antiretroviral therapy. Screening for STIs has increased from around 2,730 screens per year to 16,298 screens between 2020 and 2022. Additionally, treatment was made available for those who tested positive. For those who tested negative, 2,114 qualified for pre-exposure prophylaxis, and a total of 2,010 HIV self-testing kits were distributed. To continually observe these improvements, the Government of Zimbabwe plans to open more sites and increase the capacity for care to improve the SRH of its people.
Avian Influenza in South American Countries

BRAZIL | MARCH 2023

In May 2022, bird flu (H5N1) started to spread in North and South America. The virus was found to infect birds and mammals across 16 countries. Human cases of H5N1 were first identified in Ecuador in January 2023. As a response to the outbreak, the Pan American Health Organization gathered in Rio de Janeiro and discussed methods to halt the spread of H5N1. One suggested precaution was to improve biosecurity in animal facilities, where the virus can circulate easily. In addition, veterinary authorities were advised to educate those working near sources of infection.

Paper Straws May be More Harmful than Plastic Straws

BELGIUM | August 2023

A new study conducted at the University of Antwerp tested for the presence of perfluoroalkyl substances (PFAS) in straws made from paper, bamboo, stainless steel, plastic, and glass. Thirty-nine straw brands were examined, and PFAS were found in almost all types, with plant-based materials containing higher concentrations. PFAS may be consumed by drinking through such straws and bioaccumulate. In high concentrations, PFAS may cause liver damage, thyroid disease, fertility issues, and cancer. Despite the eco-friendly appeal and recent social movements to adopt sustainable single-use food products, the high concentrations of PFAS raise concerns about increased exposure to harmful pollutants.