23 March 2018

Army Public Health Weekly Update

Army Public Health Center

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The Army Public Health Update is a collection of articles taken verbatim from public sources to offer awareness of current health issues and the media coverage given to them. The articles do not necessarily represent US Army Medical Department opinions, views, policy, or guidance, and should not be construed or interpreted as being endorsed by the US Army Medical Command.
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Health of the Force

The third annual edition of the Health of the Force report was recently released. The report improves awareness and understanding of the health status of the Army and subpopulations in the Army. It reports key indicators of health such as injury, behavioral health, tobacco use, and obesity that impact readiness and Soldier wellbeing.

U.S. MILITARY

Colorado residents head home after fire ignites on Fort Carson

18 March - Firefighters contained a blaze near Fort Carson Sunday after it destroyed three homes and several vehicles, though they still had not determined how the fire started at the Army post during a training exercise, officials said. The 5-square-mile (13-square-kilometer) fire that spread from Fort Carson to the rural community of Midway Ranch on Friday was under control except for a burning pile of tires that a hazardous materials team was battling, according to the El Paso County Sheriff’s Office. ... Hundreds of people left their homes as the fire raced through the area, but the evacuation was lifted for all but a few homes as of Sunday, the sheriff’s office said. Though the cause of the fire was still unknown, some residents criticized Fort Carson for not taking more precautions or delaying the training activity that may have included firing live ammunition. Army Times

Concurrent Technologies Corporation chosen to develop black water treatment process for U.S. Air Force

20 March - The U.S. Air Force Research Laboratory – Advanced Power Technology Office, has chosen Concurrent Technologies Corporation (CTC) to develop an Expeditionary Black Water Processing System (EBWPS) that will reduce environmental impacts of wastewater on host nations and enhance the security of deployed personnel. ... “The EBWPS will complement and work holistically with the Expeditionary Wastewater Reuse System that CTC developed several years ago to recycle grey water at Basic Expeditionary Airfield Resource (BEAR) sites,” said Thomas J. Piro, Project Manager. ... “Because the new grey water system will reclaim all but 10 percent of grey water at BEAR sites, the black water (sewage) at BEAR sites will no longer be liquid enough, making disposal problematic. Our Air Force client returned to CTC engineers to develop a black water system that will complement the grey water system,” Piro said. Nasdaq GlobeNewswire

Contaminated drinking water found outside a N.C. military base: It could be just the start

17 March - The tiny Eastern North Carolina community of Atlantic has joined a growing list of military areas across the country affected by contaminated drinking water. The Navy is
Brochure: Dementia in Pets
The latest addition to the APHC Pet Behavior series of brochures created by Veterinary Services address changes in pet behavior that may occur once they reach the age of 12 years.

Diagnostic evaluation of military blood donors screening positive for Trypanosoma cruzi infection

February 2018 - Routine blood donor screening for Trypanosoma cruzi, the causative parasitic agent of Chagas disease, began in the U.S. in 2007. ... Among first-time donors at the Joint Base San Antonio–Lackland Blood Donor Center between January 2014 and December 2016 (N=43,402), a total of 23 (0.05%) screened positive for T. cruzi. ... Members who screened positive received 13 different combinations of confirmatory testing (mean: 2.7 tests per person). In select cases, clinical evaluation included electrocardiogram (n=15) and 30-second rhythm strip (n=5). Two patients met criteria for Chagas disease; 11 patients were considered negative; and nine patients were indeterminate. Among a small cohort of active duty service members who screened positive for T. cruzi infection on blood donation, diagnostic evaluation varied considerably. Opportunities exist to decrease heterogeneity of clinical workup and improve evaluation of persons who screen positive.

High levels of Legionella close some shower areas at Landstuhl Regional Medical Center

16 March - Showers have been closed in two areas at Landstuhl Regional Medical Center in Germany after inspectors informed the hospital on Tuesday that they found high levels of the bacteria that causes Legionnaires’ disease. ... The hospital’s water system ... will be decontaminated beginning Friday afternoon. ... The Legionella bacteria is transmitted through inhaling water vapor. The testing was in response to a new requirement from the German government for U.S. military installations in that country to test annually for Legionella bacteria.

MS surprisingly prevalent in U.S., dropping among Servicemembers

March 2018 - The prevalence of multiple sclerosis in the United States population appears to be nearly double previous estimates. Among Servicemembers, however, the rate of new
MS diagnoses has dropped significantly in recent years. Mitchell Wallin, MD ... presented results of a groundbreaking MS prevalence study. ... Using a new method to estimate the number of individuals affected by the disease, the research team calculated that about 727,000 Americans have multiple sclerosis, Wallin said. Previous estimates had put the number at 400,000. ... From 2007 to 2016, the unadjusted incidence rates of MS declined 25.4% among active component Servicemembers. Active duty females had a much higher rate of new diagnoses than men throughout the study period but also experienced a significantly sharper decline in incidence rates. U.S. Medicine

Navy considers scrapping a hospital ship in cost-cutting move

20 March - A hospital ship could become a casualty as the Navy seeks to free more money to spend on warships, submarines and aircraft. The Navy proposes mothballing one of its two floating hospitals -- the USNS Mercy or the USNS Comfort -- to make budgetary room to expand its fighting capabilities. These 1,000-bed ships have provided medical care during wars and disasters since they were converted from oilers in the late 1980s. Most recently, the Comfort went to Puerto Rico in the aftermath of hurricanes Irma and Maria. ... Some lawmakers have questioned the Navy's plan to retire one of the hospital ships, saying they both are needed to treat mass casualties when no hospitals ashore are available.

New online resource helps military families deal with child mental health issues

17 March - A new online resource provides free help to military families dealing with child mental health issues, courtesy of a grant from insurance giant USAA. Created by the One in Five Minds advocacy campaign, the online site contains a wealth of information for parents, including articles, videos and handbooks online at http://www.1in5minds.org/. ... The site covers subjects specific to military families, such as how to help a child cope with a parent’s deployment or post-traumatic stress syndrome. San Antonio Express-News

GLOBAL

Afghanistan notes more WPV1 cases; DRC has 2 vaccine-derived polio cases

19 March - Afghanistan has reported two more wild poliovirus 1 (WPV1) cases, and the Democratic Republic of the Congo (DRC) has reported two more cases of vaccine-derived poliovirus type 2 (cVDPV2) in its ongoing outbreak, the Global Polio Eradication Initiative
How a Tick Digs its Hooks into You

Spring is here. Unfortunately for hikers and picnickers enjoying the warmer weather, the new season is prime time for ticks, which can transmit bacteria that cause Lyme disease. How they latch on — and stay on — is a feat of engineering that scientists have been piecing together. Once you know how a tick's mouth works, you understand why it's impossible to simply flick a tick. NPR

BARDA to tackle development of diagnostics, sepsis countermeasures

21 March - The US Biomedical Advanced Research and Development Authority (BARDA) is launching a new initiative to accelerate the development of innovative medical countermeasures against natural and man-made threats, with sepsis and pre-exposure, presymptomatic diagnostics as its initial targets. BARDA's Tyler Merkeley said the Division for Research, Innovation and Ventures (DRIVE) will "accelerate the research, development, and availability of transformative countermeasures to protect Americans from natural and international health security threats." Those threats include biological, chemical, radiological, and nuclear agents, as well as emerging infectious diseases. CIDRAP Stewardship/Resistance Scan (second item)

Modeling smallpox in 2018: The role of the immunosuppressed population

Although smallpox is the only human infectious disease that has been eradicated from the planet, it remains one of the most feared infectious diseases because of its virulence and transmissibility, coupled with the existence of a largely immunologically naïve population. A new modeling study, published in Emerging Infectious Diseases, attempts to understand what a smallpox outbreak would look like in 2 major cities in the modern context of waning immunity, immunosuppressed individuals, and people who have never been vaccinated. Running the model, it was shown that those aged 5 to 19 were at the highest risk of infection, with death rates peaking in the 65- to 69-year age group, and peaking 60 days after the start of the outbreak. Death peaks reflected the age demographics in which immunocompromised individuals cluster, while transmission was driven by higher contact rates of younger demographics. Clinicians' Biosecurity News

New assay diagnoses sepsis from a drop of blood

21 March - Scientists with Massachusetts General Hospital report that a test that can quickly detect sepsis from a single drop of blood showed high sensitivity and specificity in a small observational study. In a study published yesterday … the researchers describe the microfluidic assay, which uses a droplet of diluted blood to measure the spontaneous motility of neutrophils in the presence of plasma. Neutrophils are a type of white blood cell
that lead the immune system’s response to infection, and neutrophil dysfunction has long been thought to play a role in septic responses.

CIDRAP Stewardship/Resistance Scan (second item)

New e-book provides global primer on antimicrobial stewardship

21 March - The British Society for Antimicrobial Chemotherapy (BSAC) today released a free e-book on global antimicrobial stewardship. Antimicrobial Stewardship: From Principles to Practice, published in collaboration with the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) and the ESCMID Study Group for Antimicrobial Stewardship, provides an overview of antimicrobial resistance and the challenges it poses in healthcare settings around the world, a synopsis of antibiotic use and misuse, and examples of antimicrobial stewardship in various settings. In addition, it provides tools for setting up stewardship programs, resources to apply stewardship principles to a wide range of populations and clinical/care settings, and guidance on how to make the most of existing stewardship programs. CIDRAP Stewardship/Resistance Scan (first item)

Newly described human antibody prevents malaria in mice

19 March - Scientists have discovered a human antibody that protected mice from infection with the deadliest malaria parasite, *Plasmodium falciparum*. The research findings provide the basis for future testing in humans to determine if the antibody can provide short-term protection against malaria, and also may aid in vaccine design. The research team isolated the antibody, called CIS43, from the blood of a volunteer who had received an experimental vaccine made from whole, weakened malaria parasites (PfSPZ Vaccine-Sanaria). The volunteer was later exposed to infectious malaria-carrying mosquitoes under carefully controlled conditions and did not become infected. In two different models of malaria infection in mice, CIS43 was highly effective at preventing malaria infection. If confirmed through additional studies in people, CIS43 could be developed as a prophylactic measure to prevent infection for several months after administration, the researchers say. NIH

NIH-supported international team confirms new genetic mutation link to ALS

21 March - Kinesin family member 5A (KIF5A), a gene previously linked to two rare neurodegenerative disorders, has been definitively connected to amyotrophic lateral sclerosis (ALS) by an international team from several of the world’s top ALS research labs. The findings identify how mutations in KIF5A disrupt transport of key proteins up and down long, threadlike axons that connect nerve cells between the brain and the spine, eventually...
leading to the neuromuscular symptoms of ALS. ... "Axons extend from the brain to the bottom of the spine, forming some of the longest single cellular pathways in the body," said [Brian] Traynor. "KIF5A helps to move key proteins and organelles -- specialized parts of cells -- up and down that axonal transport system, controlling the engines for the nervous system's long-range cargo trucks. This mutation disrupts that system, causing the symptoms we see with ALS." NIH

Scientists develop brain scanner in a helmet

21 March - British scientists have developed a lightweight and highly sensitive brain imaging device that can be worn as a helmet, allowing the patient to move about naturally. Results from tests of the scanner showed that patients were able to stretch, nod and even drink tea or play table tennis while their brain activity was being recorded, millisecond by millisecond, by the magnetoencephalography (MEG) system. Researchers who developed the device ... said they hoped the new scanner would improve research and treatment for patients who can’t use traditional fixed MEG scanners, such as children with epilepsy, babies, or patients with disorders like Parkinson’s disease. Reuters

Study: Non-antibiotic drugs affect gut bacteria, could promote resistance

19 March - New research by a team of German scientists indicates that antibiotics aren't the only drugs that affect the gut microbiome. ... [R]esearchers with the European Molecular Biology Laboratory (EMBL) report that more than a quarter (250 out of 923) of non-antibiotic drugs—including antivirals, antipsychotics, acid-reducing medications, chemotherapy drugs, and blood-pressure medications—inhibited the growth of at least one strain of bacteria commonly found in the gut of healthy humans. The researchers also found that consumption of some non-antibiotics may promote antibiotic resistance. CIDRAP

Tougher climate policies could save a stunning 150 million lives, researchers find

20 March - There is an overlooked benefit to greatly lowering carbon emissions worldwide, a new study says. In addition to preserving Arctic sea ice, reducing sea-level rise and alleviating other effects of global warming, it would probably save more than 150 million human lives. According to the study, premature deaths would fall on nearly every continent if the world’s governments agree to cut emissions of carbon and other harmful gases enough to limit global temperature rise to less than 3 degrees Fahrenheit by the end of the century. That is about a degree lower than the target set by the Paris climate agreement. The benefit would be felt mostly in Asian countries with dirty air — 13 million lives would be saved in large cities in India alone, including the metropolitan areas of Kolkata, Delhi, Patna and Kanpur. Greater Dhaka in Bangladesh would have 3.6 million fewer deaths, and Jakarta
When towns lose their newspapers, disease detectives are left flying blind

20 March - ... Local newspapers are critical to identifying outbreaks and forecasting their trajectories. ... Every county without a local newspaper is a community where health officials and disease researchers could be flying blind. ... Maia Majumder is a computational epidemiology research fellow at HealthMap, a 12-year-old disease detection project. ... The website uses nontraditional data sources — reports from local news outlets and social media platforms among them — to track global infectious disease activity in real time. ... Social media cannot fill the gap created by the declining local news coverage, Majumder and others involved in this type of research argued. “With Twitter ... you are picking up a signal, but that signal might not be precise,” said Alessandro Vespignani, a professor at Northeastern University whose research focuses on modeling of epidemics. And social media reports can be simply wrong, he said — either by accident or design. STAT

INFLUENZA

APHC: U.S. Army Influenza Activity Report

For the week ending 10 March 2018 (week 10):
In week 10, 278 influenza A-positive specimens were reported by Army medical treatment facilities, which is a 27% decrease from the 380 positive specimens reported in surveillance week 9. Fourteen influenza-associated hospitalizations were reported in DRSi in week 10, 2 AD (Active Duty) and 12 non-AD. Eight (67%) were reported as not vaccinated and four (33%) were vaccinated. The two AD Service Members (SMs) were vaccinated. So far this season, 169 cases have been reported in DRSi. During surveillance week 10, 13% of clinical specimens from Active Duty SMs and non-AD beneficiaries tested positive for respiratory pathogens; 32% were reported as influenza A. APHC

CDC: Flu View - Weekly U.S. Influenza Surveillance Report

During week 10 (March 4-10, 2018), influenza activity decreased in the United States.
- Viral Surveillance: Overall, influenza A(H3) viruses have predominated this season. However, in recent weeks the proportion of influenza A viruses has declined, and during week 10, the numbers of influenza A and influenza B viruses reported were similar. The percentage of respiratory specimens testing positive for influenza in
clinical laboratories decreased.

- Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- Influenza-associated Pediatric Deaths: Nine influenza-associated pediatric deaths were reported. CDC

ECDC: Flu News Europe

Week 10/2018 (5-11 March 2018)

- Influenza viruses continue to circulate widely in the Region, apart from some eastern European countries that have only recently reported increased activity.
- Similar to the previous week, 50% of the individuals sampled from primary healthcare settings tested positive for influenza virus, despite the peak rate for the Region occurring in week 05/2018.
- Both influenza virus types A and B were co-circulating with a higher proportion of type B viruses and with B/Yamagata continuing to be the dominant lineage.
- Similar proportions of influenza type A and B viruses were reported in patients admitted to ICU, while the majority of severe cases reported this season have been due to influenza type B and occur in persons above the age of 15 years.

European Center for Disease Prevention and Control/WHO

NHRC: Operational Infectious Diseases - Weekly Surveillance Report

15 March - Febrile respiratory illness cases:
- Military Recruits - 62 positive of 99 tested
- CDC Border Infectious Disease Surveillance and Zika Surveillance - 82 positive of 112 tested
- DoD Beneficiaries – 23 positive of 43 tested. Naval Health Research Center

USAFSAM & DHA: DoD Global Respiratory Pathogen Surveillance Program

During 25 February - 10 March 2018 (Surveillance Weeks 9 & 10), a total of 835 specimens were collected and received from 64 locations. Results were finalized for 815 specimens from 63 locations. The percent influenza positive for Weeks 9 and 10 were 35% and 31%, respectively. The influenza percent positive for the season is approximately 37%.

U.S. Air Force School of Aerospace Medicine & Defense Health Agency
WHO: Influenza Update

19 March - Influenza activity remained high but appeared to have peaked in some countries in the temperate zone of the northern hemisphere. In the temperate zone of the southern hemisphere activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections. WHO

VETERINARY/FOOD SAFETY

Do service dogs really help with PTSD? A new study has answers

17 March - ... A study by Purdue University researchers ... shows veterans who had service dogs to help with their diagnosed cases of PTSD were much better off psychologically than their peers who were on a waiting list to receive an animal. Vets with service dogs reported a 22 percent higher rate of life satisfaction, as well as similarly increased rates of mental health, resilience and ability to participate in social activities. At the same time, they indicated having fewer PTSD symptoms and lower levels of depression, according to researchers. ... [The] study uses the largest sample size of any published research on this topic. Military Times

Dried coconut from 2 firms tied to Salmonella cases in 8 states

21 March - The US Centers for Disease Control and Prevention (CDC) today said that 13 people from eight states have been sickened in a Salmonella Typhimurium outbreak linked to dried coconut and that products from a second company have been implicated in the event and have been recalled. Earlier reports had said the source of the outbreak was Natural Grocers Coconut Smiles Organic dried coconut, which is sold at Natural Grocers stores. Today's announcement from the CDC said International Harvest, Inc., has recalled bags of Organic Go Smile! Raw Coconut and bulk packages of Go Smiles Dried Coconut Raw. CIDRAP

European listeriosis outbreak blamed on frozen corn: 6 dead

22 March - Week-old speculation about frozen corn being responsible for a three-year listeriosis outbreak in Europe, which has had an 18.75 percent fatality rate, is probably
correct. The European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC) jointly published a rapid outbreak assessment today that says frozen corn is the “likely source of an outbreak of *Listeria monocytogenes*” involving Austria, Denmark, Finland, Sweden, and the United Kingdom since 2015. The five European Union (EU) countries have reported 32 confirmed listeriosis cases with six deaths between December 2015 and March 8 this year. Food Safety News

**Military family pets could be temporarily stranded on Guam**

21 March - After United Airlines announced a plan Tuesday to suspend transporting large pets, military families on Guam are wondering how they will ship large pets off the island. ... United temporarily suspended the Petsafe Pet Transport and Shipping program after several incidents, including the death of a small dog and two mix-ups that sent dogs to the wrong destinations. According to the airline’s website, they will be conducting a “systematic review” of the program that should be completed by May 1. ... [T]he 7,000 U.S. troops stationed at the two U.S. military bases on the territory rely on United as the only airline that flies in or out of Guam. Military.com

**Preliminary incidence and trends of infections with pathogens transmitted commonly through food — foodborne diseases active surveillance network**

23 March – The incidence of infections transmitted commonly through food has remained largely unchanged for many years. Culture-independent diagnostic tests (CIDTs) are increasingly used by clinical laboratories to detect enteric infections. CIDTs benefit public health surveillance by identifying illnesses caused by pathogens not captured routinely by previous laboratory methods. Decreases in incidence of infection of Shiga toxin–producing *Escherichia coli* (STEC) O157 and *Salmonella* serotypes Typhimurium and Heidelberg have been observed over the past 10 years. These declines parallel findings of decreased *Salmonella* contamination of poultry meat and decreased STEC O157 contamination of ground beef. As use of CIDTs continues to increase, higher, more accurate incidence rates might be observed. Morbidity and Mortality Weekly Report

**South Africa's Tiger Brands closes Pretoria plant after listeria found**

19 March - Tiger Brands has closed its factory in Pretoria where listeria was detected as South Africa faces the worst outbreak of the disease, which has killed 180 people since January 2017. The government, which has been criticized for taking too long to find the cause, linked the outbreak to a meat product known as “polony” made by Tiger’s Enterprise
Food in the northern city of Polokwane. Health authorities are also examining a second Tiger Brands factory in the town of Germiston, near Johannesburg. Reuters

VA promises full review of all medical testing on dogs, with a goal of ending the practice

13 March - Veterans Affairs officials on Tuesday launched an internal review of all canine testing within the department with the goal of future reductions in the research, a reversal of the administration’s strong stance defending the practice last fall. The “rapid, in-depth” review will look at the practices of and justification for existing medical research on dogs, which has come under fire from advocates and lawmakers in the past year. ... Late last year, officials mandated that no new canine research begin without approval of both the VA’s top research officer and [VA Secretary David Shulkin.] Since then, no new canine studies have been started. Military Times

WELLNESS

E-cig harms outweigh benefits, study finds

16 March - The harms that electronic cigarettes currently pose to non-smoking teens and young adults far outweigh the potential benefits to adult smokers who want to give up conventional cigarettes, according to findings from a newly published risk analysis. The risk model ... found that in a single year, 2,070 adult smokers would successfully kick the habit using e-cigarettes (albeit with a wide 95% confidence interval). But the model also estimated that e-cigarette use among non-smoking teens and young adults would lead to 168,000 new smokers. The study, published in PLOS ONE, concluded that e-cigarette use currently represents more harm than benefit at the population level. MedPage Today

FDA moves ahead with ‘historic’ plan to reduce nicotine in cigarettes

15 March - The Food and Drug Administration on Thursday took the first concrete action to reduce nicotine in cigarettes to make them much less addictive, opening a regulatory process described as a “historic first step” by the agency’s top official. Commissioner Scott Gottlieb unveiled an “advance notice of proposed rulemaking,” the earliest step in what promises to be a long, complicated regulatory effort to lower nicotine levels to be minimally addictive or nonaddictive. The notice, to be published Friday in the Federal Register, includes new data published in the New England Journal of Medicine on Thursday based on a possible policy scenario. That FDA-funded analysis found that slashing nicotine levels could push the smoking rate down to 1.4 percent from the current 15 percent of adults. The Washington Post
How the White House is tackling the opioid epidemic

21 March - After declaring the nation’s opioid epidemic a public health emergency in October, President Trump revealed his plans to crack down on the health crisis. His plan, which he discussed in March, includes harsher penalties for drug traffickers and lowering the amount of drugs needed to trigger mandatory minimum sentences for dealers. ... Attorney Gen. Jeff Sessions issued guidance to all U.S. attorneys, urging them to “hold opioid manufacturers and distributors accountable for unlawful practices.” ... Part of Trump’s plan to attack the nationwide crisis is to increase research and development through public-private partnerships between the federal National Institutes of Health and pharmaceutical companies. ... Trump’s plan includes broadening education and awareness as well – something he called for last fall when he declared the opioid epidemic a public health emergency. Fox News

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Omissions on death certificates lead to undercounting of opioid overdoses

22 March - In a refrigerator in the coroner’s office in Marion County, Indiana, rows of vials await testing. They contain blood, urine and vitreous, the fluid collected from inside a human eye. In overdose cases, the fluids may contain clues for investigators. “We send that off to a toxicology lab to be tested for what we call drugs of abuse,” said Alfie Ballew, deputy coroner. The results often include drugs such as cocaine, heroin, fentanyl or prescription pharmaceuticals. After testing, coroners typically write the drugs involved in an overdose on the death certificate — but not always. Standards for how to investigate and report on overdoses vary widely across states and counties. As a result, opioid overdose deaths aren’t always captured in the data reported to the federal government. The country is undercounting opioid-related overdoses by 20 to 35 percent. NPR

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Taste buds dull as people gain weight. Now scientists think they know why

20 March - In Robin Dando's lab, several mice chowed down on a specialized diet designed to make them as fat as possible. ... Dando's work ... attacks a curious effect of being obese: why people's sense of taste seems to dull as they gain weight. ... Under the fatty diet, he found the taste buds were withering. "The obese ones have about 25 percent fewer taste buds," he says. ... Dando looked at [another] group of mice – a bunch of mutants that can't produce a molecule called TNF alpha, a compound that creates inflammation in the body. TNF alpha and other compounds that create inflammation are naturally higher in obese individuals – both humans and mice — and cause them to have a higher background levels
of inflammation. Even when these mice became very fat, they also didn’t lose any taste buds. "[It means] taste bud loss is really related to that inflammatory state," Dando says.

NPR

Update: Multistate outbreak of *Salmonella* infections linked to kratom

15 March - The investigation has expanded to include outbreak strains from three additional serotypes of *Salmonella*: *Salmonella Javiana*, *Salmonella Okatie*, and *Salmonella Thompson*. The same strains of *Salmonella Okatie* and *Salmonella Thompson* were found in samples collected from kratom and from ill people. 47 more ill people from 25 states were added to this investigation since the last update on March 2, 2018. Eight additional states have reported ill people: Alaska, Illinois, Indiana, Maryland, Mississippi, Nevada, Texas, and West Virginia. CDC

U.S. Army overhauls fitness culture, seeks collaboration with health club industry

15 March - The mission of the Army’s new Holistic Health and Fitness program is to overhaul the branch’s health and wellness culture—and it will require the help of those in the health club industry. … Michael McGurk, director of Research & Analysis at the U.S. Army Center for Initial Military Training … said a comprehensive approach is required to best address the health and wellness needs of applicants, recruits and enlisted members. In early March, he told Club Industry the Army’s newly introduced Occupational Physical Assessment Test (OPAT) is only the first part of a two- to three-year Holistic Health and Fitness strategy that will dramatically overhaul the culture of health and wellness within the branch. This includes the forthcoming Army Combat Readiness Test (ACRT), weekly training requirements for members, the construction of specialized wellness facilities on Army bases and special affiliations with public health clubs that will allow applicants to train for and take the OPAT on the premises. Club Industry

Why an imperfect HIV vaccine could be better than none at all

21 March - … Public health officials still say that a vaccine is essential to vanquishing HIV and AIDS. "Development of an effective HIV vaccine will likely be necessary to achieve a durable end to the HIV pandemic," [says] Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases. … And Fauci is optimistic that it can happen because the vaccines don't need to be perfect to
be helpful. An incremental improvement over the one tested in the Thai trial could have a major effect on spread of HIV, he says. ... There are two HIV vaccine trials underway today that Fauci says are the most promising efforts since 2009. ... There has been progress on other fronts. Robust HIV testing, treatment, and prevention programs ... have led to significant reductions in the rate of new HIV cases over the past decade. Two of the most effective HIV prevention tools today were discovered in the past decade: PrEP, short for pre-exposure prophylaxis, and TasP, short for treatment as prevention. Both involve taking HIV medication daily and both dramatically reduce the risk of transmitting or contracting the virus. ... Washington is at the point where so few people are becoming HIV positive that [the District of Columbia health department] can analyze each case and ask hard questions. "Where did the system fail that person?" NPR

USAFRICOM

Nigeria: More Nigerian Lassa cases reported as local officials say to avoid rat meat

20 March - Last week brought nine new confirmed cases of Lassa fever in Nigeria, including three deaths, according to the latest outbreak report published by the Nigeria Centre for Disease Control (NCDC). From Jan 1 to Mar 18, officials have recorded 1,495 suspected cases (376 confirmed) in Nigeria, including 119 deaths. The case-fatality rate among confirmed and probable cases is 24.7%. Though Lassa fever is endemic in Nigeria, the current outbreak is one of the largest in recent history. ... Yesterday, the government of the Ebonyi state urged people in rural areas, where rat consumption is common, to refrain from eating rat meat in an effort to curb Lassa transmission. CIDRAP News Scan (second item)

South Africa: South African authorities ordered to pay $15 million over death of 144 patients

19 March - A judge ordered a provincial government in South Africa to pay $15 million in damages to families of at least 144 psychiatric patients who he said died of negligence after being moved to unregistered facilities in early 2016. About 1,300 psychiatric patients were shifted from a unit of the Life Healthcare Group to charities as part of cost-cutting measures by Gauteng’s health department, sparking public outrage. Retired Deputy Chief Justice Dikgang Moseneke, who headed an inquiry into the deaths, ruled on Monday that the Gauteng provincial government - which oversees the capital Pretoria and economic hub Johannesburg - had violated the constitutional rights of the patients who died under its custody. Reuters
South Sudan: 'Amazing' news about the awful Guinea worm

21 March - Scratch another Guinea worm hot spot off the list. One of the countries hardest hit with the parasite — South Sudan — has finally stopped transmission, the Carter Center announced Wednesday. The country reported zero cases in 2017 and hasn't had a case in 15 months. There are also no signs Guinea worm is circulating in dogs in South Sudan, as it is in Chad and Mali. ... The international effort to eradicate Guinea worm has been a huge success. Back in the mid-'80s, more than 3 million people were catching the parasite each year. Now Guinea worm is circulating in only three countries: Ethiopia, Mali and Chad. Last year, there were only 30 human cases worldwide. NPR

Pakistan: Pakistan is racing to combat the world’s first extensively drug-resistant typhoid outbreak

14 March - ... Infectious disease experts say Pakistan is in the grip of the world's first outbreak of XDR [extensively drug-resistant] typhoid, and they suspect the country's abysmal sewage and water systems are the root cause for its spread. ... Open sewage pools in areas throughout Hyderabad, even in the poshest neighborhoods in this sprawling city of six million people. The XDR typhoid outbreak has crept across southern Pakistan and reached its largest city, Karachi. At first, government officials hoped it would remain small and burn out on its own. But it soon became clear they would need to launch an extensive vaccination campaign to battle the spread of the mutated strain. A new typhoid vaccine ... is more effective than its earlier counterparts and only requires a single dose. Health care workers have rushed to bring it to Hyderabad. Last month they kicked off a long-awaited campaign to vaccinate all children under age five in the city’s hardest-hit neighborhoods. Scientific American

Qatar: Qatar's healthcare ranks first in the Middle East

18 March - Qatar's health system has been ranked first in the Middle East and 13th best in the world by the 2017 Legatum Prosperity Index. The annual index measures and ranks the health of people living in 149 countries. Qatar's health ranking within the Legatum Prosperity Index has risen in the past 10 years, advancing from 27th in the world in 2008 to 13th place at present. A comprehensive review process assessed three key measures of the quality of each country's healthcare system, including basic mental and physical health,
health infrastructure, and the availability of preventive care. ... In 2016, HMC became the first healthcare system across the globe to have all of its hospitals accredited by the JCI under its Academic Medical Center programme. It also holds prestigious accreditations for nursing, education and training, and laboratory and pathology, among others. Al Jazeera

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Syria: Polio and measles vaccination campaigns begin in Syria

21 March - The World Health Organization (WHO) announced today the beginning of a polio vaccination campaign targeting 764,550 children under the age of 5 in Syria. Last year, the WHO declared an outbreak of 74 cases of circulating vaccine-derived poliovirus type 2 in Syria, with the most recently diagnosed case in September of 2017. ... The WHO also said Syrian displacement camps will be the site of a measles vaccination campaign. There have been 364 measles cases reported in camps since January. CIDRAP News Scan (third item)

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Europe: TB incidence falling in Europe, but drug-resistant cases rising

20 March - A new surveillance report from the European Centre for Disease Prevention and Control (ECDC) shows that the tuberculosis (TB) incidence rate in Europe is declining by an average of 4.3% a year, the fastest decline in the world compared with other regions. But officials warn that it's not falling fast enough to achieve the World Health Organization (WHO) goal of TB elimination in Europe by 2050. The report, based on data from 2016, shows that 58,994 cases of TB were reported in 30 European Union/European Economic Area countries in 2016, with decreasing notification rates observed in most countries. ... Multidrug-resistant (MDR) TB was reported for 3.7% of 36,071 cases, and extensively drug-resistant TB was reported for 20.1% of 984 MDR-TB cases tested for second-line drug susceptibility. CIDRAP Stewardship/Resistance Scan (first item)

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Russia: Russia’s involuntary organ donors

21 March - Russia is battling at least 2 lawsuits in the European Court of Human Rights over its system of harvesting the organs of the dead without their relatives’ knowledge. Raising an issue that divides ethicists, the lawsuits allege Russia’s presumed consent system is out of step with fundamental human rights guaranteed in Europe. Other European countries are trending towards presumed consent, but often with stipulations for family preferences. Russia claimed it would be inhumane to ask families’ permission for organ donation as they learn of a loved one’s death, and argued that their approach protects the country’s
transplantation system. Global Health Now

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Russia: Spy poisoning - Russia stockpiling nerve agent, says Johnson

18 March - Russia has been stockpiling the nerve agent used in the attack on an ex-spy and his daughter over the last decade, Foreign Secretary Boris Johnson says. He also dismissed a suggestion by Russia's EU ambassador that the agent might have come from a UK laboratory. Vladimir Chizhov had said the Porton Down lab in Wiltshire may have been the source of the substance. ... UK Prime Minister Theresa May told MPs that Porton Down - Britain's military research base - identified the substance used as being part of a group of military-grade nerve agents known as Novichok developed by the Soviet Union. BBC News

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U.S.: CDC - Loud workplaces associated with heart disease

22 March - A CDC study published in the American Journal of Industrial Medicine links high blood pressure and high cholesterol to workers who are exposed to loud noise at work. Researchers at CDC's National Institute for Occupational Safety and Health (NIOSH) also found that a quarter of U.S. workers – an estimated 41 million people – reported a history of noise exposure at work. ... In addition, 12 percent of workers experienced difficulty hearing, 24 percent had high blood pressure and 28 percent had high cholesterol. Of these cases 58 percent, 14 percent, and 9 percent, respectively, can be attributed to occupational noise exposure, according to researchers. EHS Today

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U.S.: Kansas measles outbreak sickens 10 people in 3 counties

21 March - Following an initial report of a case of measles at a daycare in Johnson County on Mar 8, the Kansas Department of Health and Environment (KDHE) said today that 10 cases in three counties have now been identified, including one not associated with the daycare center. ... Investigators from the three counties have identified when and where each patient was infected and are working to identify other possible contacts. Secondary cases are now appearing outside the daycare, the KDHE said. CIDRAP News Scan (first item)

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U.S.: Mumps is on the rise. A waning vaccine response may be why.

21 March - Mumps is resurging. And it may be because the immune response provoked by the mumps vaccine weakens significantly over time, and not because people are avoiding vaccination or because the virus has evolved to develop immunity to the vaccine. ... The mumps resurgence has been largely in people 18 to 29, most of whom received the recommended two shots in early childhood, and not in older people who gained immunity through natural infection. ... Using data from epidemiological studies and mathematical models, researchers found that the ongoing resurgence, which began in 2006, has left about a third of children 10 to 14 at risk. The researchers estimate that about 25 percent of vaccinated people will lose their immunity in 8 years, 50 percent in 19 years, and 75 percent in 38 years. ... A third shot for mumps is currently recommended during outbreaks, Dr. [Joseph] Lewnard said. The New York Times

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U.S.: New NIOSH/OSHA guidance on ototoxicity posted

20 March - A document posted by NIOSH on March 15 ... offers guidance for preventing hearing loss that is caused by ototoxic chemicals and noise exposure. DHHS (NIOSH) Publication Number 2018-124 lists five examples of substance classes of ototoxic chemicals:

- pharmaceuticals
- solvents
- asphyxiants
- nitriles
- metals and compounds ...

"There is growing concern among occupational health and safety professionals that ototoxicant-induced hearing loss may go unrecognized since the measure for hearing loss does not indicate the cause," the five-page document states. "For example, audiometric tests are powerful tools that show hearing impairments (i.e., threshold shifts); however, they do not differentiate between noise and ototoxic causes." Occupational Health and Safety top of page...

U.S.: N.I.H. to investigate outreach to alcohol companies

20 March - The National Institutes of Health will examine whether health officials violated federal policy against soliciting donations when they met with alcohol companies to discuss funding a study of the benefits of moderate drinking, Dr. Francis Collins, the institute's director, said on Tuesday. ... The New York Times reported that scientists and officials with the National Institute on Alcohol Abuse and Alcoholism, part of the N.I.H., met with industry groups on several occasions in 2013 and 2014. Scientists suggested the proposed study might reflect favorably on moderate drinking, while institute officials pressed for funding, according to documents obtained by The Times. ... "I believe the scientific goals of the Moderate Alcohol and Cardiovascular Health Trial are worth pursuing," Dr. Collins said in a
prepared statement, adding that several mechanisms are in place to ensure the integrity of
the study. The New York Times
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U.S.: Racial gap in heart health down due to declining health of white Americans

19 March - A new study out of UCLA has shown that health disparities between black and
white Americans have decreased because overall heart health for white Americans has
declined. ... Between 2011 and 2014, only 10.6 percent of white Americans and 3.8 percent
of black Americans had their heart health rated “optimal.” ... [O]ver almost 30 years, no
more than 15 percent of black Americans or 40 percent of white Americans were ever in
"optimal" cardiovascular health. ... [N]o more than 25 percent [of Mexican-Americans] were
considered to be in "optimal" cardiovascular health at any time. ABC News
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U.S.: Research misconduct allegations shadow new CDC director

21 March - The Trump administration named HIV expert Dr. Robert Redfield to lead the
Centers for Disease Control and Prevention, ignoring complaints that he botched high-
profile vaccine research more than 20 years ago. The Army in 1994 acknowledged accuracy
issues with HIV vaccine clinical trials led by Redfield, but concluded at the time that the data
errors did not constitute misconduct. ... Redfield was principal investigator over clinical trials
of a treatment vaccine at the Walter Reed Army Institute of Research. ... "Either he was
egregiously sloppy with data or it was fabricated," said former Air Force Lt. Col. Craig
Hendrix, a doctor who is now director of the division of clinical pharmacology at Johns
Hopkins University School of Medicine. NPR
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U.S.: The struggle to build a massive ‘biobank’ of patient data

19 March - This spring, the National Institutes of Health will start recruiting participants for
one of the most ambitious medical projects ever envisioned. The goal is to find one million
people in the United States, from all walks of life and all racial and ethnic groups, who are
willing to have their genomes sequenced, and to provide their medical records and regular
blood samples. ... The project, called the All of Us Research Program, should provide new
insights into who gets sick and why, and how to prevent and treat chronic diseases. The All
of Us program joins a wave of similar efforts to construct gigantic “biobanks” by, among
others, the Department of Veterans Affairs, a British collaboration and private companies ... 
[b]ut All of Us is the only one that attempts to capture a huge sample that is representative
of the United States population. The New York Times
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**U.S.: U.S. infant mortality high even for full-term babies**

21 March - Infant mortality rates for full-term babies vary across the U.S., but all states are worse than many European countries, a new study suggests. Previous research has found babies more likely to die in the U.S. than in other developed and affluent nations, but the current study offers fresh evidence that this is true even for infants born at the very end of pregnancy when they should have excellent survival odds. Across the U.S., infant mortality rates for full-term babies were 50 percent to 200 percent higher than in Austria, Denmark, Finland, Norway, Sweden and Switzerland, the study found. The two main reasons for the higher U.S. mortality were “congenital malformations, which patients cannot really do much about other than ensuring adequate screening during pregnancy, and high risk of sudden unexpected deaths in infancy, which should largely be preventable through appropriate sleeping arrangements,” said study co-author Neha Bairoliya. Reuters

**USPACOM**

India: India allocates $1.5 billion for 'Modicare' health insurance

22 March - India has allocated $1.54 billion for its ambitious health program aimed at providing insurance cover for about half the population, the health minister said on Thursday, labeling it the largest such scheme in the world. Prime Minister Narendra Modi’s government, which has dubbed the scheme “Modicare”, announced in February the program would provide 100 million families, or about 500 million poor people, with health cover of 500,000 rupees per year for treatment of serious ailments. … The measures are Modi’s latest attempt to reform a public health system that faces a shortage of hospitals and doctors. The government has also in recent years capped prices of critical drugs and medical devices and increased health funding. Still, India spends only about 1 percent of its GDP on public health, among the world’s lowest, and the health ministry estimates such funding leads to “catastrophic” expenses that push 7 percent of the population into poverty each year. Reuters

**Micronesia: USNS Mercy delivers medical supplies to Ulithi Atoll**

21 March - Servicemembers assigned to the hospital ship USNS Mercy made a brief mission stop March 20, near Ulithi Atoll, which is part of the Caroline Islands in the Federated States of Micronesia. This is the first official engagement of Pacific Partnership 2018, where the Mercy will be sailing near Ulithi Atoll and using helicopters to deliver medical supplies to an advanced echelon team of PP 18 medical professionals embarked on USNS Brunswick, the secondary mission platform, which will conducting a mission in FSM. PP18 medical
professionals plan to work alongside Ulithi Atoll public health professionals, assisting in treating local citizens at a clinic. Health.mil

USOUTHCOM

Brazil: Brazil calls for entire nation to get yellow fever vaccine

21 March - Brazil announced yesterday that all citizens should be vaccinated against yellow fever. The country is currently experiencing a spike in cases in what has shaped up to become the largest yellow fever outbreak to hit the country since the 1940s. ... Ricardo Barros, Brazil's health minister, said all 27 of Brazil's states will be targeted in a vaccination campaign that will aim to reach 78 million people by 2019. ... According to Barros, there have been 920 cases of yellow fever reported nationwide since July 2017, including 300 deaths. The same period in 2016-17 saw 610 cases and 196 deaths. Many of these cases are occurring near Brazil's most populated urban regions along the country's eastern seaboard. ... As of last week, 8 million people in Sao Paulo, 6.9 million in Rio de Janeiro, and 1.8 million in Bahia state were vaccinated, representing a vaccination coverage rate of 95.0%, 68.5%, and 54.4% per respective state. CIDRAP

Venezuela: Venezuelan health system decays further, opposition-led survey says

19 March - Venezuela's health system is sinking into further disarray, a survey led by the opposition-dominated Congress showed on Monday, with most hospitals plagued by water outages, unable to feed patients and lacking even basic devices like catheters. In the midst of a crushing economic crisis that has caused medicine shortages and emigration of doctors, President Nicolas Maduro's socialist government has stopped issuing weekly bulletins on health. To fill the gap, Venezuela's Congress and a health group have for five years asked doctors and hospital workers to report the situation in their institutions. Those in government-run hospitals have usually been ordered to keep quiet, and so communicate surreptitiously with the pollsters. ... All indicators worsened in 2018 and the private sector is increasingly hit, the survey said. Some 94 percent of x-ray units are out of service or only partially functional. Around 79 percent of hospitals have poor or nonexistent water service. Only 7 percent of emergency services are fully operative. Reuters
Venezuela: ‘We’re losing the fight’: Tuberculosis batters a Venezuela in crisis

20 March - ... Tuberculosis, a disease that until recently seemed to be under control in Venezuela, is making an aggressive comeback, overwhelming a broken health care system ill equipped for its return, doctors and infectious disease specialists say. The illness — like malaria, diphtheria and measles — has surged in Venezuela. ... Declining nutrition from food shortages and rising stress throughout the country may be weakening immune systems, doctors say, leaving people more susceptible to illness. ... And with more families sinking into poverty, people have been forced to double up in increasingly crowded homes, accelerating transmission of the disease. ... At two vital tuberculosis centers in Caracas, the capital, the share of new patients who tested positive for the disease increased 40 percent or more in the last year alone. The New York Times