20 April 2018

Army Public Health Weekly Update

Army Public Health Center

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- APHC: U.S. Army Influenza Activity Report
- ECDC: Flu News Europe
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Subscription or Comments

If you wish to be added to the APH Weekly Update mailing list, removed from the mailing list, or if you have comments or questions about the update, please contact us. We welcome your comments. Please feel free to share this update with others who may be interested.
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- Saudi Arabia: New MERS cases, deaths reported in Saudi Arabia
- Syria’s health care system is in crisis
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**USEUCOM**

- Europe: Impact of infectious diseases on population health using incidence-based disability-adjusted life years ... European Union and European Economic countries, 2009 to 2013
- Europe: Monthly measles and rubella monitoring report, April 2018
- Ukraine: Ukraine reports more than 9,000 measles cases in first three months of 2018

**USNORTHCOM**

- Canada: A 4-year-old had been growling at preschool — so this naturopath says she gave him rabid dog saliva
- Canada: Canada to return diplomat families from Cuba over health concerns
- U.S.: Almost three fourths of Americans support increased biosecurity spending
- U.S.: Miami among cities at risk from yellow fever spread: study
- U.S.: New York mice are crawling with dangerous bacteria and viruses
- U.S.: NIOSH publishes updated NORA public safety agenda
- U.S.: Preparedness index reflects overall gains but some regional gaps
- U.S.: Study finds malaria parasites prevalent in North American fawns
- U.S.: U.S. drug agency proposes rules to rein in opioid manufacturing

**USPACOM**

- China: China cuts smog but health damage already done
- East Asia: East Asia braces for surge in deadly tick-borne virus
The next scheduled Epi-Tech Training via DCS will be held Tuesday, 24 April 2018. Our topic for discussion will be “Heat Illness Reporting”.

USSOUTHCOM

- The Americas: Diphtheria in the Americas - Brazil, Colombia, Haiti and Venezuela

U.S. MILITARY

Fort Detrick-based lab investigating after tuberculosis found among lab animals, caretaker

12 April - The U.S. Army Medical Research Institute of Infectious Diseases — a tenant agency at Fort Detrick in Frederick — is investigating after five laboratory primates tested positive for the bacteria that cause tuberculosis. ... The disease was found among a group of cynomolgus macaques. ... One monkey was identified as a suspect for tuberculosis in late February and tested positive for the disease in March. ... Further testing identified five other macaques with latent tuberculosis, meaning they tested positive for the disease but did not show outward symptoms. ... A human caretaker who works closely with the macaques tested positive for tuberculosis bacteria. ... The agency has identified 115 other people who worked in areas where the animals were housed. They will be contacted by the Frederick County Health Department, which is working with USAMRIID to track potential exposures. (The Frederick News-Post)

General accused of calling harassment allegations 'fake news' is fired

16 April - Days after announcing that the one-star director of Marine and Family Programs had been placed on administrative leave an investigation into comments he made at a town hall-style meeting, the Marine Corps said Monday that he was removed from his post and reassigned. Brig. Gen. Kurt Stein was placed on leave April 11 after an anonymous complainant alleged he had made inappropriate remarks at an all-hands meeting at Quantico, Virginia, five days before. According to an exclusive report by USA Today, Stein allegedly called allegations of sexual harassment against a Marine officer "fake news" and dismissed them using other crude language. (Military.com)

Judge: Trump’s ban on transgender troops on hold until trial

16 April - A U.S. judge in Seattle has ordered President Donald Trump not to ban transgender troops from serving in the military, saying it’s unclear whether recent changes to his administration's policy are constitutional. ... "Because transgender people have long been subjected to systemic oppression and forced to live in silence, they are a protected
Global Infections by the Numbers

Outbreaks of infectious diseases are rising around the world, although deaths are dropping.

Recently in the U.S., the number of people getting sick from certain ailments has risen. Worldwide, the number of people killed from many types of infections has decreased over the long term, although the trend varies at different economic levels.

Overall, disease outbreaks, a measure that includes both sickness and death, have become more frequent, with more varied causes.

Pentagon wants to spot illnesses by monitoring soldiers' smartphones

15 April - ... The Defense Advanced Research Projects Agency announced Thursday that it has awarded a $5.1 million contract to the Fairfax, Virginia-based cybersecurity company Kryptowire to develop what DARPA calls the "Warfighter Analytics using Smartphones for Health" program, or WASH for short. The app would be used to spot diseases based on data that it collects from a person’s smartphone. Tom Karygiannis, Kryptowire's vice president of product, said he hopes the technology can one day broaden access to health care by spotting health problems before a person visits a doctor or nurse. "Ultimately, this could mean better treatment, cost savings and making treatment available to more people," he said. But the idea has privacy advocates spooked. "If you're activating a microphone on someone's phone, that is going to raise a lot of alarms," said Jay Stanley, a senior policy analyst with the American Civil Liberties Union. "People don't want to feel like someone is listening in on their private life. That's going to have to be subject to tight controls." Stars and Stripes

GLOBAL

Bathroom hand dryers may leave your hands dirtier than before, gross new study says

12 April - Hand dryers may leave your hands significantly more dirty than before, according to a new study. The study ... found that plates exposed to 30 seconds of a bathroom hand dryer gained at least 18 to 60 colonies of bacteria, while plates exposed to bathroom air for two minutes had fewer than one. The authors concluded that the “results indicate that many kinds of bacteria, including potential pathogens and spores, can be deposited on hands exposed to bathroom hand dryers, and that spores could be dispersed throughout buildings and deposited on hands by hand dryers.” Still the study’s authors, who found that the nozzle of the dryers had minimal bacterial levels, said that more evidence was needed to determine if the dryers were bacteria harbors themselves or just blew large amounts of contaminated air. The Washington Post
### Concussion raises Parkinson's disease risk in large U.S. study

19 April - A new study of hundreds of thousands of U.S. armed forces veterans concludes that banging your head severely enough to lose consciousness can dramatically increase the risk of Parkinson’s, the brain disease marked by tremors, slow movements, balance problems and difficulty walking. While the overall numbers are relatively small, former members of the military who had received a concussion at some point in their lives were 56 percent more likely to develop Parkinson’s than veterans who had not been knocked out, who had not experienced an altered state of consciousness or who had not had amnesia for as long as 24 hours. When the brain trauma was more severe, the risk was even higher. [Reuters](https://www.reuters.com/article/us-usa-veterans-parkinsons/concussion-raises-parkinsons-disease-risk-in-large-u-s-study-idUSKBN17Q0ZL20170419)

### Epstein-Barr virus protein can “switch on” risk genes for autoimmune diseases

16 April - Infection with Epstein-Barr virus (EBV), the cause of infectious mononucleosis, has been associated with subsequent development of systemic lupus erythematosus and other chronic autoimmune illnesses, but the mechanisms behind this association have been unclear. Now, a novel computational method shows that a viral protein found in EBV-infected human cells may activate genes associated with increased risk for autoimmunity. ... [NIH](https://www.nih.gov/news-events/news-releases/epstein-barr-virus-protein-can-switch-on-risk-genes-autoimmune-diseases)

### FDA finalizes guidances to accelerate the development of reliable, beneficial next generation sequencing-based tests

12 April - The U.S. Food and Drug Administration today finalized two guidances to drive the efficient development of a novel technology that scans a person’s DNA to diagnose genetic diseases, which are usually hereditary, and guide medical treatments. The guidances provide recommendations for designing, developing, and validating tests that use the technology, called next generation sequencing (NGS), and will play an important role in the continued advancement of individualized, genetic-based medicine. ... [FDA](https://www.fda.gov/news-events/news-releases/fda-finalizes-guidances-accelerate-development-reliable-beneficial-next-generation-sequencing-based-tests)
In encouraging sign, Ebola vaccine appears to provide long-lasting protection

16 April - An international consortium of researchers has reported that an Ebola vaccine appears to provide volunteers protection against the virus two years after they were injected — encouraging findings both for the public health community and the vaccine’s manufacturer. An earlier study, conducted in Guinea near the end of the devastating West African Ebola outbreak, showed the vaccine from Merck, which is given in a single shot, rapidly generated protection against the virus. But how long that protection lasts remained an open question. ... The new study, published in Lancet Infectious Diseases, shows that two years after getting the vaccine, volunteers had high and stable levels of antibodies to the Ebola Zaire virus. STAT

Insect farms gear up to feed soaring global protein demand

13 April - ... The small but growing insect farming sector has captured attention and investments from some heavyweights in the $400 billion-a-year animal feed business. ... Fast food giant McDonald’s is studying using insects for chicken feed to reduce reliance on soy protein. ... The fact that such global food production giants are turning to insects illustrates the lengths they will go to find alternative sources of protein that are profitable and sustainable as animal feed or additives to human food. Bugs are just one many alternatives being studied or developed by major agricultural firms. Others include peas, canola, algae and bacterial proteins. Reuters

Lung cancer patients live longer with immune therapy

16 April - Odds of survival can greatly improve for people with the most common type of lung cancer if they are given a new drug that activates the immune system along with chemotherapy, a major new study has shown. ... Immunotherapy has been making steady gains against a number of cancers. Four such drugs, called checkpoint inhibitors, which unleash the patient’s own immune system to kill malignant cells, have been approved so far. They cost more than $100,000 a year, can have serious side effects and help only some patients, generally fewer than half. But when the drugs work, responses can be long-lasting, and researchers are rushing to find ways to combine treatments to improve their effects and to determine which formulation is best for each patient. The New York Times
Marijuana-based drug gets positive review from FDA
17 April - A closely watched medicine made from the marijuana plant reduces seizures in children with severe forms of epilepsy and warrants approval in the United States, health officials said Tuesday. British drug maker GW Pharmaceuticals is seeking permission to sell its purified form of an ingredient found in cannabis — one that doesn’t get users high — as a medication for rare, hard-to-treat seizures in children. If successful, the company’s liquid formula would be the first government-approved drug derived from the cannabis plant in the U.S. STAT

Middle East respiratory syndrome coronavirus: risk factors and determinants of primary, household, and nosocomial transmission
18 April - Middle East respiratory syndrome coronavirus (MERS-CoV) is a lethal zoonosis that causes death in 35.7% of cases. As of Feb 28, 2018, 2182 cases of MERS-CoV infection (with 779 deaths) in 27 countries were reported to WHO worldwide, with most being reported in Saudi Arabia (1807 cases with 705 deaths). ... Although primary transmission of MERS-CoV to human beings is linked to exposure to dromedary camels ... the exact mode by which MERS-CoV infection is acquired remains undefined. Up to 50% of MERS-CoV cases in Saudi Arabia have been classified as secondary, occurring from human-to-human transmission through contact with asymptomatic or symptomatic individuals infected with MERS-CoV. Hospital outbreaks of MERS-CoV are a hallmark of MERS-CoV infection. The Lancet

NIH scientists watch the brain’s lining heal after a head injury
16 April - Following head injury, the protective lining that surrounds the brain may get a little help from its friends: immune cells that spring into action to assist with repairs. In a new study, scientists from the National Institutes of Health watched in real-time as different immune cells took on carefully timed jobs to fix the damaged lining of the brain, also known as meninges, in mice. These results may help provide clues to the discovery that the meninges in humans may heal following mild traumatic brain injury (mTBI) and why additional hits to the head can be so devastating. ... Dr. [Dorian] McGavern’s team found that while most patients had repaired their leaky blood vessels within 20 days, 17 percent of patients still showed leakage on their MRI scans three months after injury. ... A second injury experienced within one day of the first TBI led to additional inflammation and the wound healing phase of repair, during which blood vessels are fixed, did not occur. However, if the re-injury occurred after a few days, once the wound healing phase had already begun, there was no effect on the meningeal repair process and blood vessels were rebuilt normally. NIH
Novo Nordisk, Red Cross team up to tackle chronic diseases in conflict zones

18 April - Danish drugmaker Novo Nordisk and aid agency Red Cross have teamed up to try to improve the treatment of chronic diseases among the millions affected by conflicts and humanitarian crises in countries such as Syria and Yemen. Non-communicable diseases (NCD) such as diabetes and hypertension, also known as chronic diseases, kill 40 million people per year, equivalent to 70 percent of all deaths globally, according to the World Health Organization (WHO). "Non-communicable diseases are a silent killer and often overlooked during times of armed conflict," said Peter Maurer, president of the International Committee of the Red Cross. "If you look at Yemen, Syria, Iraq and beyond, thousands will remain with life-threatening illnesses if they are not able to receive essential medical supplies such as insulin to treat diabetes," he said. Novo Nordisk … said it would contribute 21.5 million Danish crowns ($3.58 million) and adapt its ordering and production procedures to better serve the needs of humanitarian organizations. Reuters

Safety measures could save 250,000 lives a year in low- and middle-income countries

18 April - Interventions such as speeding enforcement and formal swimming lessons for young children could potentially save more than 250,000 lives a year if they were implemented across populations living in extreme poverty in low- and middle-income countries, according to a new study. ...The review found the most successful safety measures involved road safety, with speed enforcement saving more than 80,000 lives per year and drunk-driving enforcement, saving more than 60,000 lives a year. The next category was child safety, with formal swimming lessons for children younger than 14 years saving more than 25,000 lives and the use of crèches, or playpens, to supervise children younger than 5 years, saving more than 10,000 lives.

Status and drivers of maternal, newborn, child and adolescent health in the Islamic world: A comparative analysis

14 April - ... Despite notable reductions between 1990 and 2015, [Muslim majority countries (MMCs)] compared with a global estimate of all countries including MMCs had higher mortality rates, and MMCs relative to non-MMCs within [Millennial] Countdown countries also performed worse. Coverage of essential interventions across the continuum of care was on average lower among MMCs, especially for indicators of reproductive health, prenatal care, delivery, and labour, and childhood vaccines. Outcomes within MMCs for mortality and many reproductive, maternal, newborn, child, and adolescent health indicators varied
considerably. ... The best performing MMCs were Azerbaijan, Bangladesh, Egypt, Indonesia, Kyrgyzstan, Morocco, Niger, and Senegal, which had higher coverage of family planning interventions and newborn or child vaccinations, and excelled in many ... contextual determinants when compared with moderate or poorly performing MMCs. The Lancet

Trillions upon trillions of viruses fall from the sky each day

13 April - High in the Sierra Nevada mountains of Spain, an international team of researchers set out four buckets to gather a shower of viruses falling from the sky. Scientists have surmised there is a stream of viruses circling the planet, above the planet's weather systems but below the level of airline travel. Very little is known about this realm, and that's why the number of deposited viruses stunned the team in Spain. Each day, they calculated, some 800 million viruses cascade onto every square meter of the planet. Most of the globe-trotting viruses are swept into the air by sea spray, and lesser numbers arrive in dust storms. "Unimpeded by friction with the surface of the Earth, you can travel great distances, and so intercontinental travel is quite easy" for viruses, said Curtis Suttle, a marine virologist at the University of British Columbia. ... Generally it's assumed these viruses originate on the planet and are swept upward, but some researchers theorize that viruses actually may originate in the atmosphere. The New York Times

What you learn when you put smelly socks in front of mosquitoes

17 April – [Scientists conducted a] ... study to learn why female mosquitoes (males don't bite) are more likely to feed on people with malaria than non-infected people. ... "What we didn't know was which chemicals in body odor were responsible," says Logan. Body odor is complex, and "the tricky bit is picking out which ones are important for mosquitoes." ... It turns out that mosquitoes respond to certain chemicals — including heptanal, octanal and nonanal — that are part of a group called aldehydes. These aldehydes are normally present in all people but were given off in greater quantities by malaria-infected children involved in the study. "It's a great first step," says Christopher Potter, a neuroscientist at Johns Hopkins University School of Medicine who studies mosquito olfaction and was not part of the study. "The fact that they've identified some odorants is pretty exciting." NPR

You share everything with your bestie. Even brain waves.

16 April - ... Researchers have long known that people choose friends who are much like themselves in a wide array of characteristics: of a similar age, race, religion, socioeconomic
status, educational level, political leaning, pulchritude rating, even handgrip strength. The impulse toward homophily, toward bonding with others who are the least other possible, is found among traditional hunter-gatherer groups and advanced capitalist societies alike. New research suggests the roots of friendship extend even deeper than previously suspected. Scientists have found that the brains of close friends respond in remarkably similar ways as they view a series of short videos: the same ebbs and swells of attention and distraction, the same peaking of reward processing here, boredom alerts there.

The New York Times

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**INFLUENZA**

**APHC: U.S. Army Influenza Activity Report**

For the week ending 7 April 2018 (week 14):

The number of positive influenza A specimens submitted overall to APHC has plateaued around 11% since week 11 across the Army population. In week 14, the number decreased to 6%. Of all specimens submitted, 9% were positive for a respiratory illness; 35% influenza A and 52% influenza B. Five non-AD influenza-associated hospitalizations were reported to DRSi; none were vaccinated. Three were positive for influenza type A and two were type B. The majority of positive influenza A specimens received in surveillance week 14 came from RHC-Atlantic (40%), followed by RHC-Central (28%), RHC-Pacific (22%), and RHC-Europe (10%).

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

During week 14 (April 1-7, 2018), influenza activity decreased in the United States.

- **Viral Surveillance:** Overall, influenza A(H3) viruses have predominated this season. Since early March, influenza B viruses have been more frequently reported than influenza A viruses. 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 below 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.

**ECDC: Flu News Europe**

Week 14/2018 (2 - 8 April 2018)

- Influenza viruses continued to circulate in the Region with 28% of the individuals sampled from primary healthcare settings testing positive, while all countries...
reported low or medium intensity of activity of respiratory infections.

- Both influenza virus types A and B were co-circulating with the majority being type A viruses. European Center for Disease Prevention and Control/WHO

**NHRC: Operational Infectious Diseases - Weekly Surveillance Report**

12 April - Febrile respiratory illness cases:

- Military Recruits - 35 positive of 83 tested
- CDC Border Infectious Disease Surveillance and Zika Surveillance - 49 positive of 110 tested
- DoD Beneficiaries – 13 positive of 31 tested. Naval Health Research Center

**WHO: Influenza Update**

16 April - Influenza activity decreased in most of the countries in the temperate zone of the northern hemisphere, with exception of Eastern Europe where activity continued to increase. In the temperate zone of the southern hemisphere, influenza activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections. WHO

**VETERINARY/FOOD SAFETY**

Chlorine may help foodborne pathogens evade detection

17 April - The use of chlorine for deterring foodborne pathogen growth might not only be ineffective, its use could help the pathogens avoid detection, a study today in *mBio* found. ... UK researchers assessed the effects of chlorine, a sanitizer commonly used for fresh produce, on *Listeria monocytogenes* and *Salmonella enterica* serovar Thompson, two key foodborne bacteria. They found that *L monocytogenes* became viable-but-nonculturable (VBNC) at 50 parts per million (ppm) chloride, while *Salmonella* Thompson did so at 100 ppm. When these VBNC bacteria were ingested by roundworms called nematodes, the nematodes had statistically significant higher death rates, demonstrating the pathogenicity of the bacteria. CIDRAP Food Safety Scan (second item)

FDA finds rodent infestation at Rose Acre Farms, where eggs caused *Salmonella* Braenderup outbreak

19 April - The FDA has released a report about inspections at Rose Acre Farms – Hyde County Egg, the facility that has had to recall more than 200 million eggs after a *Salmonella*
Braenderup outbreak sickened 23 people in 8 states. The facility was inspected several times from March 26 to April 11, 2018. The report said that the “corrective actions taken by your firm have not been effective at reducing the rodent levels within your poultry houses to an acceptable level.” The threshold for “acceptable rodent activity” is established in the company’s Salmonella prevention plan. Inspectors observed many live rodents: in the inspection on March 26, 2018, they were seen in the manure pit, running across the upper level floor, multiple live rodents running around the staging area in the pit, and burrowing in and out of manure piles. Food Poisoning Bulletin

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Multistate outbreak of *E. coli* O157:H7 infections linked to chopped romaine lettuce

18 April - Information collected to date indicates that chopped romaine lettuce from the Yuma, Arizona growing region could be contaminated with *E. coli* O157:H7 and could make people sick. At this time, no common grower, supplier, distributor, or brand has been identified. ... Consumers anywhere in the United States who have store-bought chopped romaine lettuce at home, including salads and salad mixes containing chopped romaine lettuce, should not eat it and should throw it away. ... 53 people infected with the outbreak strain of *E. coli* O157:H7 have been reported from 16 states. 31 people have been hospitalized, including five people who have developed a type of kidney failure called hemolytic uremic syndrome. No deaths have been reported. CDC

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Norovirus outbreak linked to raw oysters rises to 126 cases

16 April - In a follow-up on the norovirus outbreak linked to the consumption of British Columbia raw oysters, The Public Health Agency of Canada reported today that a total of 126 cases of gastrointestinal illness linked to oyster consumption have been reported in three provinces: British Columbia (92), Alberta (9), and Ontario (25). No deaths have been reported. Individuals became sick between mid-March and early April 2018. Outbreak News Today

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USDA study finds several factors fueling rise in food recalls

17 April - The average yearly number of food recalls increased from 2004 to 2013, probably because of several factors, including an increase in food volume sold and improvements in pathogen detection technology, the U.S. Department of Agriculture (USDA) Economic Research Service reported yesterday. Food recalls averaged 304 per year from 2004 to 2008 but rose to an average of 676 from 2009 to 2013, according to the report. Other factors that might partially explain the significant increase in food recalls include an increase in
regulatory oversight and enforcement in the wake of two major food policy laws. ... The analysis of six food categories found that, except for nut products, the most common reason that triggered recalls was failure to declare major food allergens.

**WELLNESS**

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**Chasing a new way to prevent HIV: Passive immunization**

18 April - After decades of intense effort, an effective vaccine against HIV is not on the horizon — and, some say, may never be possible. So some AIDS researchers are going passive. As in passive immunization. Active immunization is what an effective vaccine does. It stimulates the recipient to make antibodies that protect against a disease. Passive immunization involves the direct injection of antibodies extracted from survivors of a particular infection. It's an old method of preventing infection when a vaccine isn't available — once used, for instance, to protect at-risk people from hepatitis before vaccines were developed. Instead of the lifelong protection from a really good vaccine, passive immunization is a temporary bulwark against infection. A new report in *Nature Medicine* gives reason to believe it can work against HIV — at least, so far, in monkeys. [NPR](http://www.npr.org)

**Cigarette smoking raises heart failure risk in African Americans**

16 April - Cigarette smoking sharply increases the risk of heart failure in black men and women in the U.S., according to a new study. "These findings suggest if you have heart failure or you have risk factors for heart failure such as early markers for heart damage like a thicker heart or a weak heart, you should specifically be targeted for smoking cessation strategies," said the study's senior author, Dr. Michael E. Hall, an associate professor of medicine at the University of Mississippi Medical Center in Jackson. ... Blacks in the U.S. have double the incidence of heart failure as other groups, the researchers note. While smoking in this community has declined, it is still at 18 percent of adults, they add. [Reuters](http://www.reuters.com)

**FDA head vows to keep e-cigs away from kids ... or else**

18 April - E-cigarettes may pose less risks than combustible tobacco, and may provide a "viable alternative," for adults, but adult access to such products will be reined in if the number of kids using e-cigarettes continues to climb, according to FDA Commissioner Scott Gottlieb, MD. "We're going to have to step in ... We can't just addict a whole generation of young people on nicotine with e-cigarettes and consider that a public health advance,"
Gottlieb said Tuesday to a subcommittee of the House Committee on Appropriations. "We'll be taking some very vigorous enforcement steps ... starting in the coming weeks." ... On Wednesday, six leading public health and medical organizations, including the American Academy of Pediatrics, sent a letter to the FDA urging the agency to take action against JUUL, which has a boxy-sleek design that resembles a flash drive. MedPage Today

Genetically altered broadly neutralizing antibodies protect monkeys from HIV-like virus

16 April - Two genetically modified broadly neutralizing antibodies (bNAbs) protected rhesus macaques from an HIV-like virus, report scientists at the National Institute of Allergy and Infectious Diseases (NIAID). ... After introducing genetic mutations into two potent HIV bNAbs, researchers prepared intravenous infusions of two bNAbs known as 3BNC117-LS and 10-1074-LS. Single infusions of each modified bNAb protected two groups of six monkeys each against weekly exposures to simian-human immunodeficiency virus (SHIV) for up to 37 weeks, compared with a median of three weeks in 12 monkeys receiving no antibody. SHIV is a manmade virus commonly used in HIV nonhuman primate studies. NIH

How healthy is too healthy? EU warns about green tea supplements

18 April - Taking high doses of supplements containing green tea extracts may be associated with liver damage, according to new research from the European Food Safety Authority (EFSA). Tea infusions, as used for brewed tea, are still considered safe. Instant tea drinks are also fine as they contain lower levels of the antioxidants naturally present in green tea, Parma-based EFSA said. ... Most supplements provide an intake of 5-1000 mg, while tea infusions typically only contain 90-300 mg, EFSA, which oversees food safety in the European Union, said. Researchers determined that consuming over 800 mg per day led to higher health risks, but the EFSA said experts could not yet determine a supplement dosage that would be entirely safe. Fox News

Ketamine has 'fast-acting benefits' for depression

16 April - Ketamine has "shown promise" in the rapid treatment of major depression and suicidal thoughts, a US study says. Ketamine has a reputation as a party drug but is licensed as an anaesthetic. The study found use of the drug via a nasal spray led to "significant" improvements in depressive symptoms in the first 24 hours. ... The trial looked at 68 people at imminent risk of suicide. All patients were treated with a stay in hospital and antidepressants. In addition, half were given ketamine in the form of esketamine (part of the ketamine molecule) in a nasal spray and half were given a placebo. The study found those using esketamine had a much greater improvement in depression symptoms at all points over the first four weeks of treatment. However, at 25 days the effects had levelled out. The
study's authors suggest it could offer an effective rapid treatment for people severely depressed and at imminent risk of suicide and could help in the initial stages of treatment, as most anti-depressants take four to six weeks to become fully effective. BBC News

**PrEP prescriptions are on the rise**

13 April - The CDC estimates that > 1.2 million people in the US could benefit from pre-exposure prophylaxis (PrEP). The National HIV/AIDS Strategy (NHAS) aims to increase the number of adults prescribed PrEP by at least 500% by 2020, or about 47,832 people. So far, prescriptions for PrEP increased by > 300% between 2014 and 2015. In 2015, 33,273 people had been prescribed PrEP, triple the NHAS target for that year, says Richard Wolitski, PhD, director, Office of HIV/AIDS and Infectious Disease Policy. But according to 1 study, only 10% of the new prescriptions were for African Americans and 12% for Latinos, even though in 2016 African Americans accounted for 44% of new HIV diagnoses and Latinos for 25%. By contrast, 74% of new prescriptions were written for whites who made up only 26% of new diagnoses in 2016. Federal Practitioner

**Risk thresholds for alcohol consumption: combined analysis of individual-participant data for 599,912 current drinkers in 83 prospective studies**

14 April - ... In the 599,912 current drinkers included in the analysis, we recorded 40,310 deaths and 39,018 incident cardiovascular disease events during 5.4 million person-years of follow-up. For all-cause mortality, we recorded a positive and curvilinear association with the level of alcohol consumption, with the minimum mortality risk around or below 100 g per week. Alcohol consumption was roughly linearly associated with a higher risk of stroke, coronary disease excluding myocardial infarction, heart failure, fatal hypertensive disease; and fatal aortic aneurysm. By contrast, increased alcohol consumption was log-linearly associated with a lower risk of myocardial infarction. In comparison to those who reported drinking >0–≤100 g per week, those who reported drinking >100–≤200 g per week, >200–≤350 g per week, or >350 g per week had lower life expectancy at age 40 years of approximately 6 months, 1–2 years, or 4–5 years, respectively. The Lancet

**USAFRICOM**

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**Algeria: Prion disease in dromedary camels, Algeria**

June 2018 - Prions cause fatal and transmissible neurodegenerative diseases, including Creutzfeldt-Jakob disease in humans, scrapie in small ruminants, and bovine spongiform encephalopathy (BSE). ... We detected a prion disease in dromedary camels (Camelus
**dromedarius** in Algeria. Symptoms suggesting prion disease occurred in 3.1% of dromedaries brought for slaughter to Ouargla abattoir in 2015–2016. ... [The] biochemical characterization showed differences with BSE and scrapie. Our identification of this prion disease in a geographically widespread livestock species requires urgent enforcement of surveillance and assessment of the potential risks to human and animal health.

**Emerging Infectious Diseases**

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**Malawi: Malawi can eradicate HIV infections says U.S. doctor who discovered AIDS virus**

18 April - Malawi, which has one of the highest rates of the deadly HIV/AIDS infections, is on course to eradicate the virus, Jay Levy who co-discovered the AIDS virus 35 years ago said. Most of the AIDS cases globally are in poorer countries, where access to testing, prevention and treatment is limited. More than one million people in Malawi have the human immunodeficiency virus that causes AIDS, the U.N. AIDS agency (UNAIDS) says. However, according to official figures, Malawi’s national HIV/AIDS prevalence dropped to 8.8 percent in 2016 from 30 percent in 1985 when the first HIV/AIDS case was registered in Malawi. Levy cited the Malawian government’s efforts in increasing access to treatment, mother to child transmission interventions, and awareness on prevention and treatment as some of the steps that are helping to fight the disease. Reuters

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**Réunion: Rapid risk assessment - Dengue outbreak in Réunion, France**

16 April - A dengue outbreak of unusual magnitude is currently taking place in the French Outermost Region of Réunion. ... The current epidemic could continue and intensify in the coming weeks. Based on previous *Aedes* mosquito-borne outbreaks on the island, further transmission is expected up to the beginning of the southern hemisphere winter (which lasts from July to September). The risk of onward transmission of dengue fever in Europe is linked to the importation of virus by viraemic travellers into receptive areas with established and active competent vectors, i.e. *Aedes albopictus* in mainland Europe, primarily around the Mediterranean, and *Aedes aegypti* on Madeira. Environmental conditions in Europe are expected to become more favourable to the growth of mosquito populations in the coming weeks, reaching a high vector abundance in summer and early autumn.

**European Centre for Disease Prevention and Control**
Pakistan: ‘We’re out of options’: Doctors battle drug-resistant typhoid outbreak
13 April - The first known epidemic of extensively drug-resistant typhoid is spreading through Pakistan, infecting at least 850 people in 14 districts since 2016, according to the National Institute of Health Islamabad. The typhoid strain, resistant to five types of antibiotics, is expected to disseminate globally, replacing weaker strains where they are endemic. Experts have identified only one remaining oral antibiotic — azithromycin — to combat it; one more genetic mutation could make typhoid untreatable in some areas. Researchers consider the epidemic an international clarion call for comprehensive prevention efforts. If vaccination campaigns and modern sanitation systems don’t outpace the pathogen, they anticipate a return to the pre-antibiotic era when mortality rates soared. The New York Times

Saudi Arabia: New MERS cases, deaths reported in Saudi Arabia
17 April - After several days without updates, the Saudi Arabian Ministry of Health (MOH) confirmed three new cases of MERS-CoV today and one death. ... Saudi Arabia’s MERS-CoV total cases since 2012 have now reached 1,834, including 741 deaths. Six people are still being treated for their infections. CIDRAP News Scan (first item)

Syria's health care system is in crisis
18 April - The Syrian civil war has taken a devastating toll on the country’s health care system. More than half of its public hospitals are closed or operating at a diminished capacity, and 75% of Syrian health care workers have fled the country, per a Wall Street Journal video filmed on the ground in Raqqa. "No doctors, no hospitals, no nothing. No water, no electricity, nothing. It's the wilderness, like living in the forest," says one father who traveled over two hours to seek treatment for his son. The people who have died from a lack of health care aren’t included in official death tallies, and those effects could last for years after the fighting ends (if it ever does). Watch the video. Axios

Yemen: Will the next superbug come from Yemen?
14 April -... The conflict [in Yemen] is taking on aspects of warfare once found only in history books, when the real toll of a military campaign is not the immediate damage from
weapons, but the long-term and far greater impact of disease that spread in the chaos of armed conflict. “It’s a huge burden on the health system that can barely take care of primary health care,” said Ana Leticia Nery, the medical coordinator for Doctors Without Borders in Yemen, which has long been the poorest country in the Middle East. More than 60 percent of the patients admitted to the medical organization’s hospital in Aden have antibiotic-resistant bacteria in their systems. The widespread prevalence of multidrug-resistant infections has nearly quadrupled the amount of time patients must spend in a field hospital to recover from war wounds. This extra time, plus the specialized antibiotics a patient requires to overcome a drug-resistant infection, means far fewer patients can be treated than the norm, and the care is much more expensive and difficult. Similar problems are reported to be occurring through the war-torn regions of the Middle East, including Iraq and Syria, and countries with extensive refugee populations, like Jordan.

The New York Times

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Europe: Impact of infectious diseases on population health using incidence-based disability-adjusted life years ... European Union and European Economic countries, 2009 to 2013

19 April - ... We estimated that between 2009 and 2013, the selected 31 infectious diseases accounted for 7,577 cases per 100,000 population per year and there were 9.67 deaths per 100,000 population annually. Considering the EU/EEA population in 2011, these numbers would correspond to 37,784,603 cases and 48,222 deaths. The annual burden of the infectious diseases included in our study was 275 DALYs per 100,000 population. The disease with the highest burden was influenza, with 81.8 DALYs per 100,000 population, followed by tuberculosis (TB), human immunodeficiency virus (HIV) infection/AIDS and invasive pneumococcal disease (IPD) with 53.5, 48.2 and 30.1 DALYs per 100,000 population respectively. These four top-ranking infections accounted for 78% of the total burden of communicable diseases in EU/EEA countries. Eurosurveillance

Europe: Monthly measles and rubella monitoring report, April 2018

13 April - Measles cases continue to increase in a number of EU/EEA countries. The highest number of cases to date in 2018 were in Romania (1 709), Greece (1 463) France (1 346) and Italy (411) respectively. Thirteen deaths have also been reported by these countries in 2018. Although cases in Romania and Greece remain high, of particular concern is the situation in France and Italy, with cases almost tripling in France since the previous update in March,
and more than doubling in Italy. ... In the 12-month period between 1 March 2017 and 28 February 2018, 14,813 cases of measles were reported to ECDC through the European Surveillance System. ... Of these cases where age was known, 35% were in children under five and 47% were in those 15 and older. Where vaccination status was known, 86% were unvaccinated. European Centre for Disease Prevention and Control

Ukraine: Ukraine reports more than 9,000 measles cases in first three months of 2018

16 April - In a follow-up on the measles outbreak in Ukraine, the Center for Public Health of the Ministry of Health of Ukraine (computer translated) has reported 9,091 measles cases – 3,270 adults and 5,821 children since the beginning of 2018. In addition, seven fatalities due to complications of measles have been reported this year – five children and two adults.

Canada: A 4-year-old had been growling at preschool — so this naturopath says she gave him rabid dog saliva

18 April - A Canadian naturopath claims she treated a 4-year-old boy’s behavioral problems with a controversial homeopathic remedy — this is, saliva from a rabid dog. The recent claims have caused concern in the medical community and prompted questions about why the saliva — known as lyssinum, lyssin or hydrophobinum — has been approved by the Canadian government as a legitimate homeopathic product. Anke Zimmermann, from Victoria, wrote on her blog in February that she used the saliva last year to treat a preschooler who had been having trouble sleeping and behaving in the classroom. "His preschool is complaining that he hides under tables and growls at people," she wrote in the post. Zimmermann said the young child ... had been bitten by a dog in the past, and she suspected that may have led to his problems.

Canada: Canada to return diplomat families from Cuba over health concerns

17 April - The families of Canadian diplomats in Cuba will return home permanently due to unexplained health concerns, Canada’s government announced Monday. Cuba will now be designated an "unaccompanied post" meaning that the families of diplomatic staff will not be able to live with them while they are assigned to the country. "The Government of Canada continues to investigate the potential causes of unusual health symptoms reported in 2017 by some Canadian diplomatic staff and dependents posted to Havana, Cuba,”
Global Affairs Canada wrote in a statement. "The symptoms include dizziness, headaches and lack of ability to concentrate, amongst others." The U.S. State Department evacuated non-essential personnel and families from Cuba in 2017. ... State Department and federal investigators were unable to attribute the source or cause of the ailments, apart from that they "were most likely related to trauma from a non-natural source." CNN

U.S.: Almost three fourths of Americans support increased biosecurity spending

17 April - According to a new survey, 73% of Americans said they would support congressional budget increases in developing preventive measures for biological and chemical threats. The Alliance for Biosecurity conducted the survey, which included 1,612 participants. The survey also revealed that Americans' confidence in the government's ability to handle biosecurity threats has dropped significantly in the past 2 years. In March of 2016, 50% of those surveyed said they were confident in America's preparedness to handle biosecurity threats. Today that percentage has dropped to 31%. CIDRAP News Scan (second item)

U.S.: Miami among cities at risk from yellow fever spread: study

18 April - Miami is at risk of a deadly yellow fever outbreak because the disease could thrive there but the city has no checks on travelers arriving from endemic zones, a study to be published by the World Health Organization showed. Yellow fever is spread by the same mosquito that causes Zika virus, which spread through the Americas after being detected in Brazil in 2015 and has been reported in southern Florida and southern Texas. The U.S. Centres for Disease Control advises that yellow fever is found in tropical and subtropical areas of Africa and South America, and is a very rare cause of illness in U.S. travelers. But the study, "International travel and the urban spread of yellow fever", showed that almost 2.8 million people flew to the United States from endemic yellow fever areas in 2016. Unlike some countries, the United States does not require travelers from such places to show proof of yellow fever vaccination. "At a time when global yellow fever vaccine supplies are diminished, an epidemic in a densely populated city could have substantial health and economic consequences," the researchers based in Canada, the United States and Britain wrote in the study. Reuters

U.S.: New York mice are crawling with dangerous bacteria and viruses

17 April - Mice that live in the basements of New York City apartment buildings — even at the most exclusive addresses — carry disease-causing bacteria, antibiotic-resistant bugs and
viruses that have never been seen before, a new study from Columbia University finds. Researchers collected feces from more than 400 mice captured over a year in eight buildings in Manhattan, Brooklyn, Queens and the Bronx. The team then analyzed the droppings for bacteria and viruses. The viruses included nine species that had never been seen before and others that have not been known to cause human disease, according to the study. ... [A] second study focused on bacteria, the researchers found some of the most recognizable disease-causing pathogens, including *Shigella*, *Salmonella*, *Clostridium difficile* and *E. coli*. The scientists also found antibiotic-resistant bacteria like those that have become nearly untreatable at area hospitals. *The New York Times*

**U.S.: NIOSH publishes updated NORA public safety agenda**

13 April - NIOSH published a newly updated National Occupational Research Agenda for Public Safety in the Federal Register on April 12, asking for public and stakeholder comments on it by June 11. ... This NORA Public Safety Agenda lists eight recommendations:

- Reduce cardiovascular disease, cancer, and other chronic diseases
- Reduce infectious disease transmission
- Reduce musculoskeletal disorders
- Reduce motor vehicle injuries
- Reduce workplace violence
- Promote healthy work design and well-being
- Increase surveillance
- Increase resilience and preparedness

The agenda explains why each of these is important. For musculoskeletal disorders, for example, it explains that they are often the most commonly reported work-related injuries among public safety workers. ... Cardiovascular disease, cancer, and chronic diseases are the first recommendation because stress is such a big factor affecting public safety workers’ health. *Occupational Health & Safety*

**U.S.: Preparedness index reflects overall gains but some regional gaps**

17 April - A national snapshot used to gauge the health of the nation’s health security and emergency preparedness found that readiness has improved significantly over the past 5 years, but earlier identified gaps remain, with some parts of the country lagging. The nation made strides in a year when it was tested by record disasters and emergencies, which included two Gulf Coast hurricanes—Harvey and Irma—Puerto Rico’s Hurricane Maria, and California’s wildfires, according to the report. ... On a 10-point scale, the United States as a whole had a score of 7.1 for 2017 [on the National Health Security Preparedness Index] nearly a 3% improvement over 2016 and nearly an 11% improvement since the index was
U.S.: Study finds malaria parasites prevalent in North American fawns

18 April - Researchers who analyzed blood samples from 33 farm-raised, white-tailed fawns in Florida report that about 21 percent — 7 of 33 — were infected by malaria parasites at some point during the first eight months of life. This research was published in *mSphere*, an open-access journal of the American Society for Microbiology. Blood samples were collected at three months, six months, and eight months of age. The researchers also found that infected baby deer were more likely to die during the first year than uninfected animals, and that correlation suggests the parasites may contribute to that increased risk. \[American Society for Microbiology\]

U.S.: U.S. drug agency proposes rules to rein in opioid manufacturing

17 April - The U.S. Drug Enforcement Administration on Tuesday unveiled plans to rein in the amount of opioids that can be manufactured by drugmakers in a given year in an effort to combat the deadly opioid epidemic in the United States. "Under this proposed new rule, if DEA believes that a company’s opioids are being diverted for misuse, then they will reduce the amount of opioids that company can make," [Attorney General Jeff] Sessions said in prepared remarks. The new regulatory plan comes after the state of West Virginia sued the DEA in December over its drug quota rules, arguing the agency’s policy wrongfully sets manufacturing quotas based on the amounts of pills that drugmakers expect to sell, not on legitimate medical needs. \[Reuters\]

China: China cuts smog but health damage already done

17 April - While China has made progress cutting smog, the damage to the health of millions of people may already have been done, especially as the population ages, the head of a U.S.-based research agency said. China faces about 1.6 million premature deaths a year as a result of air pollution, the U.S.-based Health Effects Institute (HEI) said in a report, based on data going back to 1990, published on Tuesday. China cut concentrations of hazardous particles known as PM2.5 by 6.5 percent in 338 cities last year. Smog-prone northern regions also met 2013-2017 air quality targets after a winter campaign to cut...
industrial output, coal consumption and traffic. Nevertheless, deaths could still rise as China ages and overall air quality remains below the country’s own standards, the study showed.

**East Asia: East Asia braces for surge in deadly tick-borne virus**

13 April - Infectious-disease experts in East Asia are preparing for this year’s wave of a lethal tick-borne virus. The virus causes a disease called severe fever with thrombocytopenia syndrome (SFTS), which has affected a rapidly growing number of people since it emerged nearly a decade ago. Scientists in the region say they are worried by the rising incidence of the disease, and by signs that the virus can spread more easily than previously thought. ... The virus killed 30% of those infected in China [in 2009]. It was even more lethal when the first cases appeared in Japan and South Korea in 2013. More than one-third of those infected in Japan and nearly half of those infected in South Korea died that year. And the number of cases in each country has risen sharply. In 2013, there were 36 reported cases in South Korea, but by 2017 the number had jumped to 270. In 2010, China reported 71 cases; in 2016, there were around 2,600. Japan experienced a 50% increase between 2016 and 2017. **Nature**

**Malaysia: Rare human outbreak of monkey malaria detected in Malaysia**

16 April - Several people in Malaysia have become infected with a species of monkey malaria parasite that, until recently, had been recorded in just one person outside of the lab. Although only a few cases have been detected, researchers are worried that the ongoing destruction of monkeys’ forest habitat is increasing the amount of contact between people and primates, providing more opportunities for infections to jump to people. In January, researchers identified the parasite *Plasmodium cynomolgi* in five people being treated for malaria in hospitals and clinics around Kapit, a heavily forested area in the centre of the island of Borneo. **Nature**

**Malaysia: USNS Mercy arrives in Malaysia for Pacific Partnership**

16 April - U.S. and partner nation personnel participating in Pacific Partnership 2018 aboard the U.S. Navy hospital ship USNS Mercy (T-AH 19), arrived in Port Kelang, Malaysia, April 16. The Pacific Partnership mission in Malaysia will feature medical exchanges, civil engineering projects, humanitarian assistance and disaster relief (HA/DR) preparedness seminars, and community outreach engagements in the greater Kuala Lumpur area. The secondary mission platform for Pacific Partnership, the expeditionary fast transport ship USNS
Brunswick (T-EPF 6) will arrive in Tawau, Malaysia April 21 for a series of civil engineering, medical and outreach engagements with the local community and Royal Malaysian Armed Forces. Navy.mil

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The Americas: Diphtheria in the Americas - Brazil, Colombia, Haiti and Venezuela

18 April - In 2017, four countries in the Region of the Americas—Brazil, the Dominican Republic, Haiti, and the Bolivarian Republic of Venezuela—reported confirmed diphtheria cases. In 2018 as of epidemiological week (EW) 14 of 2018, four countries in the Region—Brazil, Colombia, Haiti, and Venezuela—have reported suspected and confirmed diphtheria cases. Outbreak News Today

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