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Army Public Health Weekly Update

Army Public Health Center

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- Another slight rise noted in Americas chikungunya outbreak
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Fact Sheet: Installation Injury Summaries for Army Civilians

The APHC Installation Civilian Injury Summary is an annual analysis of the injury-related workers’ compensation data for all Department of Defense and Department of Army Civilians working on Army or Joint Base installations.1 Civilian data provides an important part of the overall “injury picture” for each installation. Each installation’s summary is presented in briefing slide-deck format and includes:

- Civilian lost time rates for 5 years, by fiscal quarter
- Top causes of civilian lost time (prior fiscal year (FY))
- Top occupations with civilian lost time (prior FY)
- Top units with civilian lost time (previous FY)
- Costs for compensation claims (prior calendar year)
- Comparisons of installation data to all Army civilian and Joint Base civilian data.

U.S. MILITARY

Bills would require Defense Dept. to study health effects of PFC exposure

18 July - Massive defense spending bills in Congress would require the federal government to study the health effects of perfluorinated chemicals (PFCs). ... Both the House and Senate versions of the National Defense Authorization Act (NDAA) for fiscal year 2018 would require the Centers for Disease Control and Prevention’s Agency for Toxic Substances and Disease Registry to conduct the study. An amendment in the House version of the bill would require the Pentagon to develop an alternatives to using PFCs. Michigan Radio

Counter-hemorrhaging medical device saves service members’ lives

17 July - Born out of necessity on the battlefield, a new medical device is buying vital time for critically wounded patients in combat and in emergency care environments worldwide. The device, known as a resuscitative endovascular balloon occlusion of the aorta, or ER-REBOA, was developed by Air Force Col. (Dr.) Todd Rasmussen, the associate dean for clinical research at the Uniformed Services University of the Health Sciences here, and Dr. Jonathan Eliason, associate professor of Vascular Surgery at the University of Michigan. During their deployments, they both frequently saw combat trauma patients with critical injuries to the abdomen and pelvis -- areas where it can be nearly impossible to control hemorrhaging to save a patient’s life. ... The two surgeons contrived a catheter with a small balloon at the end, which is inserted through a two- to three-millimeter incision near the groin and guided up through the femoral artery into the aorta. The balloon is then positioned to the desired level of the aorta and inflated with saline, blocking the aorta and cutting off circulation to the legs and pelvis, while still allowing blood to flow normally to the brain, heart, lungs and other vital organs. Department of Defense

Heat illness remains 'significant threat' to troops, despite warnings and guidance

19 July - Despite guidance that’s been in place, relatively unchanged, for decades, and warnings ranging from PowerPoint presentations to charts breaking down urine color, more than 2,500 active-duty service members suffered some form of heat-related ailment in 2016. That figure, slightly up from 2015’s total, included 401 cases of heat stroke and 2,153 reports of “other heat illnesses,” according to March’s Medical Surveillance Monthly Report from the Defense Health Agency. ... DoD also tracks exertional hyponatremia, a condition where sodium levels in the bloodstream drop to dangerous levels as a result of physical
Epi-Tech Training
Our next scheduled Epi-Tech Training will discuss “Foodborne Illness from a Veterinary Perspective.”
Class registration through Continuing Medical Education is required for ALL attendees.

Registration
Tuesday, 25 July 2017
0900 EDT, 1500 EDT, and 1700 EDT
COMM: (210) 249-4234
DSN: 421-3272
Overseas DSN:
(312) 421-3272
Conference Access Code: 78031#
DCS Link
More information

activity. This can be caused by severe sodium losses to sweat, but also by drinking more water (or other fluids, including sports drinks) than the body can process. More than 1,500 active-duty troops were diagnosed with exertional hyponatremia from 2001-2016, DoD figures show, with 85 cases in last year. Military Times

House rejects attempt to ban transgender surgery for troops
13 July - The Republican-led House narrowly rejected a measure on Thursday that sought to strike an Obama-era practice of requiring the Pentagon to pay for gender transition surgeries and hormone therapy. Democrats described the proposal as bigoted, unconstitutional and cowardly and they won support from 24 GOP lawmakers to scuttle the amendment to the annual defense policy bill, 214-209. The Washington Post

June 2017 - During 2007–2016, there were 1,536 incident cases of nontyphoidal Salmonella infection among active component service members, with an overall crude incidence rate of 12.4 cases per 100,000 person-years (p-yrs). The overall rate for the period was higher among female service members than males. Service members aged 50 years or older and those aged 25–29 years had the highest rates of nontyphoidal Salmonella infection. Compared to their respective counterparts, overall rates were highest among non-Hispanic white service members, members of the Air Force, junior officers, recruits, and service members in healthcare occupations. Annual incidence rates were relatively stable during the first 9 years of the surveillance period. Rates peaked in 2016 at 15.9 cases per 100,000 p-yrs. The [cases] showed a pattern of seasonality with a summer peak and the largest number of infections in July. Medical Surveillance Monthly Report

Open burns, ill winds
20 July - Shortly after dawn most weekdays, a warning siren rips across the flat, swift water of the New River running alongside the Radford Army Ammunition Plant. Red lights warning away boaters and fishermen flash from the plant. … Along the southern Virginia riverbank, piles of discarded contents from bullets, chemical makings from bombs, and raw explosives … are doused with fuel and lit on fire, igniting infernos that can be seen more than a half mile away. The burning waste is rich in lead, mercury, chromium and compounds like nitroglycerin and perchlorate, all known health hazards. The residue from the burning piles rises in a spindle of hazardous smoke, twists into the wind and, depending on the weather, sweeps toward the tens of thousands of residents in the surrounding towns. … Other Western countries have figured out how to destroy aging armaments without toxic emissions. … In the United States, outdoor burning and detonation is still the military’s leading method for dealing with munitions and the associated hazardous waste. … It has continued in the face of a growing consensus among Pentagon officials and
An estimated 30.3 million people of all ages—or 9.4% of the U.S. population—had diabetes in 2015. This total included 30.2 million adults aged 18 years or older (12.2% of all U.S. adults), of which 7.2 million (23.8%) were not aware of or did not report having diabetes. The percentage of adults with diabetes increased with age, reaching a high of 25.2% among those aged 65 years or older.

Compared to non-Hispanic whites, the age-adjusted prevalence of diagnosed and undiagnosed diabetes was higher among Asians, non-Hispanic blacks, and Hispanics during 2011–2014.

ProPublica

Severe cybersecurity issues found at Army medical facilities

12 July - A report issued by the Defense Department inspector general has found 350 known security vulnerabilities at three Army hospitals and clinics, adding Defense Health Agency and Army officials failed to effectively protect electronic patient health information. The problems were severe enough that the inspector general said the Army should consider disciplinary action against the chief information officers at the three facilities in Maryland, Colorado and Texas, but officials declined to do so. Specifically, the report found the CIOs did not enforce the use of Common Access Cards or comply with the requirement to use two-factor authentications in accessing electronic health records. Federal News Radio

Survey: The Pentagon wants to know if you're satisfied with your boots

16 July - Are your boots too heavy? Is it difficult to find your size? Or do you love your boots? The Defense Department wants to know. If a boot doesn't fit right or isn't available, it can have a huge impact on a service member's performance. The Army’s Program Executive Office Soldier is leading the DoD’s effort to gather feedback on standard-issue footwear to maximize combat effectiveness. The 10-minute survey will give the Defense Department a better idea of footwear satisfaction across all branches of the military. Use your Common Access Card to complete the survey by Aug. 1 - https://surveys2.natick.army.mil/Surveys/siboot.nsf. Capt. Daniel Ferenczy, assistant product manager for extreme weather clothing and footwear at PEO Soldier, said the NDAA language specifically targeted female soldiers. Army Times

Tomorrow Soldier: How the military is altering the limits of human performance

12 July - Imagine a group of volunteers, their chests rigged with biophysical sensors, preparing for a mission in a military office building outfitted with cameras and microphones to capture everything they do. “We want to set up a living laboratory where we can actually pervasively sense people, continuously, for a long period of time.” ... Justin Brooks, a scientist at the Army Research Lab, or ARL, told me last year. ARL was launching the Human Variability Project [that] seeks to turn a wide variety of human biophysical signals into machine-readable data by outfitting humans and their environment with interactive sensors. ... Pentagon-backed researchers are designing an entirely new generation of wearable health monitors that ... detect incredibly slight changes in focus, alertness, health, and stress — and to convey those signals to machines. Defense One
Toxic fires

20 July - Virtually every day, the Department of Defense and its contractors burn and detonate unused munitions and raw explosives in the open air with no environmental emissions controls, often releasing toxins near water sources and schools. The facilities operate under legal permits, but their potentially harmful effects for human health aren’t well researched, and EPA records obtained by ProPublica show that these sites have violated their hazardous waste permits thousands of times. ProPublica

VA to study health effects of Gulf War, Iraq and Afghanistan on vets' families

13 July - The U.S. Department of Veterans Affairs has commissioned its first major study of whether men and women who served in America’s most recent wars passed on any health problems to their children or grandchildren. Researchers with the National Academies of Science, Engineering, and Medicine will hunt for any research that suggests soldiers who fought in the first Gulf War, the post-9/11 Iraq war and Afghanistan might have passed on any medical conditions to their descendants. ... The committee won’t limit itself to examining any particular health outcomes, says Ramos. But it will pay special attention to conditions linked with exposure to solvents, pesticides and certain metals. The results of the two-year study are expected in 2019. 89.3 KPCC

Veterans who say ‘burn pit’ exposure made them sick wait for judge’s decision on lawsuit

12 July - ... [Some] 735 plaintiffs [are] waiting for U.S. District Court Judge Roger W. Titus to decide whether to let a massive lawsuit continue against Houston-based KBR Inc., a defense contractor and former subsidiary of Halliburton that ran burn pits to dispose of waste on U.S. bases in Iraq and Afghanistan. KBR has asked the judge to dismiss the burn pit case — a collection of more than 60 individual suits filed in multiple jurisdictions by military family members, veterans or former KBR employees — arguing that the federal courts lack jurisdiction to rule on a military decision to use the burn pits, and as a military contractor, it should be shielded from litigation. The company released a statement June 29 saying its employees operated burn pits in Iraq and Afghanistan “safely and effectively at the direction and under control of the U.S. military.” Charlotte Observer

Will VA doctors finally be able to recommend marijuana for vets?

17 July - In a 24-7 vote on July 13, lawmakers on the Senate Appropriations Committee passed an amendment that would give Department of Veterans Affairs authority to recommend medical marijuana in states where it is legal for medicinal use. The Senate amendment, part of the VA’s budget request for fiscal year 2018, would work by removing funding from the VA portion of the budget that is used to police VA doctors from
recommending marijuana as a type of treatment and prevent veterans from participating in state-run medical marijuana treatments. The legislation represents a marked change from current policy, which for years has prevented the VA from being able to recommend the use of marijuana for veterans with physical and mental health problems, despite increasing bipartisan support in Washington. Task & Purpose

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GLOBAL

Absent dads tied to stress-related cellular changes in kids

18 July - The loss of a father due to death, divorce or jail is associated with children having shorter caps on the ends of their chromosomes, according to a study that points to a possible biological explanation for health problems often encountered by kids with absent dads. The protective caps known as telomeres shrink with age, and are also thought to erode with extreme stress. At age 9, kids who had lost a father had 14 percent shorter telomeres than children whose dad was still involved in their lives, researchers report in Pediatrics. Death had the biggest impact, and the association was stronger for boys than for girls. Reuters

Ebola persistence documented in monkeys

17 July - ... Many Ebola survivors have suffered from joint aches, vision problems, hearing loss, headaches, and other symptoms, a phenomenon dubbed “post-Ebola syndrome.” Researchers studying macaques have a better understanding of why that might be: they’ve tracked the progression of Ebola virus through various tissues of monkeys who have survived acute infections and found evidence of long-term viral persistence and possible replication. “[T]hey essentially found that the Ebola virus can persist in a number of sites that we consider immune privileged, including the eye, the brain, and the reproductive organs, or the testes,” Emory University ophthalmologist Steven Yeh. The Scientist

Exercise packs a punch against inflammation

19 July - Physical activity has strong anti-inflammatory properties, according to a recent review. The findings are significant because persistent inflammation is involved in the development and progression of chronic diseases such as type 2 diabetes and cardiovascular disease. The European Journal of Clinical Investigation review notes that studies have revealed the mechanisms and molecules behind exercise’s ability to block inflammation. Specifically, exercise boosts levels of the cytokines IL-6 and IL-10, which exert anti-inflammatory effects by inhibiting TNF-α and by stimulating IL-1ra, thereby limiting IL-1β signalling. In addition, IL-6 has direct impacts on sugar and fat metabolism. EurekAlert!
Global health price tag could be $371 billion a year by 2030, WHO says

17 July - Meeting life-saving global health targets by 2030 could require investments by donors and national governments of up to $58 per person per year, or $371 billion annually, the World Health Organization (WHO) said on Monday. In a best case scenario of increasing investment to meet the goals, some 97 million premature deaths could be prevented between now and 2030, and up to 8.4 years of life expectancy could be added in some countries, the WHO said in report. While most countries can afford the funds needed, the poorest nations will need donor help, it added. The Sustainable Development Goals were adopted by the United Nations in 2015 as the world’s to-do list for the next 15 years. They cover 17 goals and 169 targets aimed at creating a healthier, safer and fairer world by 2030.

Reuters

High rates of respiratory problems linked to indoor lifeguard work

18 July - Lifeguards who spend more than 500 hours a year working at indoor pools are two to six times more likely than colleagues who are exposed less often to have coughs, asthma, and throat and eye irritation, according to a small study in Canada. Most of the symptoms improved after the lifeguards left work, suggesting that chemicals used to maintain indoor pools may be triggering the symptoms, the study authors report. ... About 78 percent of the lifeguards reported having at least one respiratory symptom in the previous year and 23 percent reported having physician-diagnosed asthma. Lifeguards exposed to the pool more than 500 hours during the previous year were about two and a half times more likely to have a cough or sore throat than those exposed less than 50 hours. Reuters

Infant case series suggests Zika eye problems can occur apart from brain defects

17 July - A case series of 112 babies born to Brazilian mothers who had confirmed Zika infections found that 21.4% had eye abnormalities with the potential to impair sight, with the condition sometimes seen on its own without microcephaly or other central nervous system (CNS) problems. Researchers ... followed 112 babies who were seen at a referral center for high-risk pregnancies and infectious diseases in Rio de Janeiro until the youngsters were 1 year old. Among the group, 20 had microcephaly and 31 had other CNS abnormalities. Of the mothers, 32 had been sick with Zika virus in the first trimester, 55 in the second, and 25 in the third. Twenty four (21.4%) of the infants had sight-threatening eye problems; optic nerve and retinal abnormalities were the most common conditions. Ten of the babies who had eye issues did not have microcephaly and eight didn't have any CNS findings. CIDRAP Vector-borne Disease Scan (first item)
New highly sensitive, specific Zika test highlighted

18 July - An international research team yesterday described a new diagnostic test for Zika virus that can reliably distinguish it from similar viruses, offering a simple, cost-effective tool for surveillance and clinical management. The group, based at the University of California-Berkeley, reported its findings in *Proceedings of the National Academy of Sciences (PNAS)*. The antibody test is based on a nonstructural protein 1 (NS1) human monoclonal antibody.

CIDRAP News Scan (fourth item)

New mercury pollution threats: a global health caution

15 July - The Minamata Convention—a global agreement to tackle mercury—will enter into force on Aug 16, 2017, as the required 50th of the 128 signatory countries recently ratified the treaty, marking a long-awaited moment for the advancement of public health. However, while this achievement is celebrated, questions about whether governments are prepared to tackle complex issues surrounding implementation of the Convention remain rife. The Trump Administration has been actively working to revoke a host of environmental and health regulations, including restrictions on mercury discharges from coal-fired power plants, despite legal challenges by civil society groups. The Lancet

Personalized 'earable' sensor monitors body temperature in real time

19 July - Wireless, wearable sensors are all the rage with millions of people now sporting fitness trackers on their wrists. These devices can count footsteps, monitor heart rate and other vital signs. Now researchers report in the journal *ACS Sensors* that they have developed a 3-D printed sensor worn on the ear that measures one of the most basic medical indicators of health in real time: core body temperature. The ups and downs of core body temperature can signal a range of health conditions. The most obvious is an infection, which causes a fever. But temperature fluctuations can also indicate insomnia, fatigue, metabolic function and depression. Current wearable sensors can detect skin temperature, but this can change depending on how hot or cold an environment is. EurekAlert!

Scales tip in AIDS fight as death rates decline, treatment rates rise

20 July - The scales have tipped in the fight against AIDS, with more than half of people infected with HIV now getting treatment and AIDS-related deaths almost halving since 2005, the United Nations said on Thursday. In its latest global report on the pandemic, which has killed around 35 million people worldwide since it began in the 1980s, the UNAIDS agency said there were particularly encouraging signs in Africa, a continent ravaged by the disease. Eastern and southern Africa are leading the way, reducing new HIV infections by nearly 30 percent since 2010, the report said. Malawi, Mozambique, Uganda and Zimbabwe have gone further, cutting new HIV infections by 40 percent or more since 2010. Reuters
Space station project seeks to crystalize the means to counteract nerve poisons

17 July - The microgravity conditions of the International Space Station (ISS) may hold the key to improving our understanding of how to combat toxic nerve agents such as sarin and VX. That is the hope of Countermeasures Against Chemical Threats (CounterACT) project. ... Developing antidotes to this type of poisoning requires detailed knowledge about the structure of the [acetylcholinesterase (AChE)] enzyme. Until now, the forces of gravity on Earth have posed a challenge to this area of research. That’s where traveling into space comes in. ... [A]stronauts are currently growing large crystals of pure enzyme of a size that cannot be formed on Earth due to interference from gravity. ... Once the crystals are grown to a large enough size, they will be returned to Earth and analyzed by a sophisticated imaging method called neutron diffraction that can provide an atomic-level view of the enzyme. NIH

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INFLUENZA

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

2016-2017 Influenza Season Week 24 ending July 8, 2017 - Pneumonia and Influenza (P&I) Mortality Surveillance: Based on National Center for Health Statistics (NCHS) mortality surveillance data available on July 13, 2017, 5.5% of the deaths occurring during the week ending June 24, 2017 (week 25) were due to P&I. This percentage is below the epidemic threshold of 6.2% for week 25. CDC

NHRC: Operational Infectious Diseases - Weekly Surveillance Report

13 July - Febrile respiratory illness cases:
- Moderately elevated febrile respiratory illness rate at Fort Benning.
- Military Recruits - 50 positive of 95 tested
- CDC Border Infectious Disease Surveillance and Zika Surveillance - 6 positive of 13 tested
- DoD Beneficiaries – 9 positive of 22 tested.

Moderately elevated acute gastroenteritis rate at MCRD Parris Island.

Naval Health Research Center
USAFSAM & DHA: DoD Global, Laboratory-Based, Influenza Surveillance Program

During 28 May - 8 July 2017 (Surveillance Weeks 22 - 27), a total of 86 specimens were collected and received from 31 locations. Results were finalized for 81 specimens from 30 locations. During Week 22, there was one influenza A(H3N2) and one influenza B identified. During Weeks 23, 25, and 26, there was one influenza A(H3N2) identified each week. There were no influenza viruses identified during Weeks 24 and 27. The highest percent positive during this time period occurred at Week 22 (11%) and showed a decreasing trend through the remaining Weeks (23-27). The influenza percent positive for the season is currently 35%. US Air Force School of Aerospace Medicine & Defense Health Agency

Skin vaccination with microneedle patch, influenza fusion protein improves efficacy of flu vaccines

19 July - A boosting skin vaccination with a biodegradable microneedle patch and protein constructed from sequences of influenza virus subtypes could improve the effectiveness of conventional influenza vaccines, according to a study led by Georgia State University. To increase the protection offered by standard influenza vaccines, Dr. Baozhong Wang’s group made a fusion protein (4M2e-tFliC) with four different sequences of M2e from four different influenza subtypes. ... The fusion protein also contains flagellin (FlitC), a peptide found in nearly all bacteria with flagella ... that acts as a strong catalyst when administered together with other antigens, or foreign substances that induce an immune response in the body. ... The study found mice receiving a conventional inactivated vaccine ... followed by a skin-applied dissolving 4M2e-tFliC microneedle patch boost could better maintain the humoral immunity antibody response against influenza virus infection compared to when they received the conventional vaccine alone. The findings, published in the Journal of Controlled Release, offer a new perspective for universal influenza vaccines. EurekAlert!

VETERINARY/FOOD SAFETY

Agencies added to deadly Utah-Arizona E. coli outbreak

18 July - The investigation into the deadly E. coli outbreak at the border of Utah and Arizona has been joined by the Centers for Disease Control and Prevention (CDC), the Utah Department of Health, the Arizona Department of Health Services, and the Utah Department of Health, according to the Southwest Utah Public Health Department. The confirmed case count stands at 11. ... The source of the outbreak hasn’t been identified, but warnings have been issued by various health departments against consuming raw milk and previously purchased ground beef. ... News reports state that four children have hemolytic
uremic syndrome (HUS). Two of those children have died. And seven patients have been hospitalized because they are so sick. Food Poisoning Bulletin

**APHIS releases response and preparedness plan for emerging animal diseases**

14 July - The US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) today unveiled an emerging animal disease preparedness and response plan, which sets out a strategy for detecting and responding to disease events and defines the process for identifying, evaluating, and responding to emerging diseases in animal populations. ... APHIS said [it] is a living document that can be updated as infrastructure and policies change. One theme of the document is that rather than offering a single process to fit all emerging diseases, it spells out roles and responsibilities across business units for evaluating animal health information and determining response options. CIDRAP News Scan (fifth item)

**Cyclospora outbreak in Texas sickens at least 68**

18 July - A health advisory for a *Cyclospora* outbreak has been issued by the Texas State Department of Health Services. At least 68 people are sick with cyclosporiasis in that state. Illnesses were reported to officials starting mid-June 2017. Public health officials are investigating the outbreak to identify possible common exposures. In the past, *Cyclospora* outbreaks have been linked to consumption of imported fresh produce, cilantro, pre-packaged salad mix, raspberries, basil, snow peas, and mesclun lettuce. The diagnosis of more patients and rapid reporting to public health by doctors is essential to try to prevent a large scale outbreak. Food Poisoning Bulletin

**Vibriosis outbreak in Seattle: Up to 25 people may have become ill**

19 July - In a follow-up to a report last week concerning a *Vibrio parahaemolyticus* outbreak linked to raw oyster consumption in Seattle, Washington, Public Health - Seattle & King County officials say as many as 25 people may have become ill since early June. The health department investigation is looking at multiple reports of persons ill with watery diarrhea, abdominal cramping, and vomiting – symptoms consistent with vibriosis – after eating raw oysters from one of several restaurants and markets in King County. Outbreak News Today
Artificial sweeteners don't help people lose weight, review finds

17 July - ... [A] review of the scientific evidence on non-nutritive sweeteners published Monday shows [that] there is no solid evidence that sweeteners like aspartame and sucralose help people manage their weight. And observational data suggest that the people who regularly consume these sweeteners are also more likely to develop future health problems, though those studies can't say those problems are caused by the sweeteners. ... Most of the participants in the randomized trials were on a weight-loss program, and taken together, the results showed no significant impact of sweetener use on body mass index. The observational studies actually found a small increase in BMI associated with use of sweeteners, and a 14 percent higher chance of developing Type 2 diabetes for those who consumed the most artificial sweeteners. NPR

As workouts intensify, a harmful side effect grows more common

17 July - ... [A case of rhabdomyolysis] was highlighted in April in The American Journal of Medicine along with two other cases of spinning-induced rhabdomyolysis treated by the same doctors. The report noted that at least 46 other cases of people developing the condition after a spin class were documented in the medical literature, 42 of them in people taking their first class. The report cautioned that the condition was very rare, and not a reason to avoid high-intensity exercise. But the authors said their goal was to raise public awareness so that people who begin a tough new workout program will ease into it to lower their risk of injury. ... Rhabdo, as many experts call it, has long been documented among soldiers, firefighters and others whose professions can be physically demanding. An Army study in 2012 estimated that about 400 cases of the condition are diagnosed among active-duty soldiers each year. The New York Times

Certain antibiotics in first trimester up risk of major birth defects

19 July - Several common types of antibiotics were linked both to major congenital and to organ specific malformations in infants when taken during the first trimester of pregnancy, a retrospective Canadian cohort study found. Exposure to antibiotics, such as clindamycin, doxycycline, quinolones, macrolides and phenoxymethylpenicillin, increased the risk of these birth defects, reported Flory T. Muanda, MD, of the University of Montreal, and colleagues. However, there was no increased risk of major congenital malformations linked to exposure to amoxicillin, cephalosporins, or nitrofurantoin, the authors wrote. MedPage Today
Fentanyl overdose kills 10-year-old boy, authorities confirm

18 July - A 10-year-old Miami boy died of a fentanyl overdose after visiting a local pool last month, making him among Florida’s youngest victims of the opioid crisis sweeping the nation. Miami-Dade State Attorney Katherine Fernandez Rundle said during a news conference Tuesday afternoon that authorities did not know how the child, Alton Banks, came into contact with the powerful painkiller. "We don’t believe he got it at his home," Rundle told reporters. "It could be as simple as touching it. It could have been a towel at the pool ... We just don’t know." ... Nearly 300 overdose deaths in Miami-Dade County last year involved variants of fentanyl, according to the medical examiner’s office. Statewide, fentanyl and its variants killed 853 people in the first half of 2016. Of those, only nine were under age 18. Fox News

Long work hours tied to irregular heart rhythm

18 July - People who typically work much more than 35 to 40 hours a week may be at heightened risk of developing atrial fibrillation, an irregular rapid heartbeat that can lead to strokes, heart failure and chronic fatigue, a recent study suggests. For the study, researchers followed more than 85,000 working men and women without an atrial fibrillation diagnosis for a decade, starting when they were typically around 43 years old. During the study period, people who worked at least 55 hours a week were 40 percent more likely to develop atrial fibrillation than those who worked 35 to 40 hours. To assess the connection between work hours and atrial fibrillation, [researchers] examined data on workers in the UK, Denmark, Sweden and Finland. ... Long working hours were associated with slightly higher rates of obesity, inactivity, smoking and alcohol use. Reuters

Low-carb vs. low-fat: New research says it doesn’t really matter

17 July - ... Christopher Gardner, professor of medicine at Stanford University, published a study comparing the Atkins, Zone, Ornish and LEARN diets among a group of 311 women. After a year, average weight loss was only a few pounds, but when you looked beyond that, the difference between losers and gainers on each of the four diets was huge: some lost 55 pounds, others gained 10 to 20 pounds. Why? Gardner’s group decided to try to answer that question, focusing not on which diet was best, but which diet was best for whom. ... Gardner and his team found that there was no difference between low-carb and low-fat diets. The average weight loss for each group only differed by about two pounds, and each group had individuals who lost 65 pounds and others who gained 20 pounds. Neither group had an advantage when it came to metabolism slowing or fat loss vs. loss of lean muscle. The hypothesis that people who had insulin resistance ... would do best on the low-carb diet, while those who did not would do better on a low-fat diet? That turned out not to be universally true. There was no pattern based on genetic makeup, either. Analysis based on participants’ gut microorganisms is pending. The Washington Post
NIH findings link aldosterone with alcohol use disorder

17 July - A new study led by scientists at the National Institute on Alcohol Abuse and Alcoholism ... demonstrates that aldosterone, a hormone produced in the adrenal glands, may contribute to alcohol use disorder (AUD). ... Aldosterone helps regulate electrolyte and fluid balance by binding to mineralocorticoid receptors (MRs), which are located throughout the body. In the brain, MRs are mainly located in the amygdala and the prefrontal cortex -- two key brain areas involved in the development and maintenance of AUD. NIH

Older, heavier, more at risk

18 July - Cumulative weight gain over the course of early and middle adulthood may increase health risks later in life, according to a new study led by researchers from Harvard T.H. Chan School of Public Health. They found that compared with people who kept their weight stable, people who gained a moderate amount of weight (5 to 22 pounds) before age 55 increased their risk of chronic diseases and premature death, and decreased the likelihood of achieving healthy aging. Higher amounts of weight gain were associated with greater risk of chronic diseases. Harvard Gazette


21 July - Homicide is one of the leading causes of death for women aged ≤44 years, and rates vary by race/ethnicity. Nearly half of female victims are killed by a current or former male intimate partner. Homicides occur in women of all ages and among all races/ethnicities, but young, racial/ethnic minority women are disproportionately affected. Over half of female homicides for which circumstances were known were related to intimate partner violence (IPV). Arguments and jealousy were common precipitating circumstances among IPV-related homicides. One in 10 victims of IPV-related homicide were reported to have experienced violence in the month preceding their deaths. Morbidity and Mortality Weekly Report

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USAFRICOM

Africa: Dire food insecurity in five east African countries facing drought

14 July - Five countries in East Africa face dire food insecurity after a third poor rainy season in a row, the United Nations Food and Agriculture Organization said Friday. Areas in five
countries - Somalia, Ethiopia, Kenya, Tanzania, and Uganda - received less than half of their normal seasonal rainfall. ... The extended drought along with a pest called an armyworm has drastically reduced crop yields, leaving millions in East Africa without enough food. ... Besides the widespread loss of crops, livestock herds have been decimated, causing milk production to plummet, further adding to food insecurity. The U.N. agency says rangeland and livestock conditions are expected to continue deteriorating at least until October, when the next rainy season is due. VOA

Kenya: Cholera kills four in Kenyan capital since May, government shuts hotels

19 July - A cholera outbreak in the Kenyan capital has killed four people since May and the government has shut down a three-star hotel and a popular restaurant there to control its spread, the health minister said on Wednesday. At least 79 people with confirmed cases of cholera were being treated in various Nairobi hospitals and authorities were setting up 10 more treatment centers to cope with the outbreak, Cleopa Mailu, the minister, told a news conference. ... The government had ordered the immediate testing of about half a million people in the food handling business in the next 21 days, he said. Mailu said local authorities in Nairobi would be required to repair all broken sewer lines, ensure all water vendors and their water sources were certified, and ban hawking of food. Reuters

USCENTCOM

Saudi Arabia: WHO warns of cholera risk at annual haj, praises Saudi preparedness

14 July - A cholera epidemic in Yemen, which has infected more than 332,000 people, could spread during the annual haj pilgrimage in Saudi Arabia in September, although Saudi authorities are well prepared, the World Health Organization (WHO) said on Friday. The pilgrimage draws 2-4 million Muslims every year, including 1.5-2 million foreigners, raising the risk from diseases such as dengue, yellow fever, Zika virus and meningococcal disease as well as cholera, the WHO said. "... Dominique Legros, a WHO cholera expert, said Saudi Arabia had not had a cholera outbreak in many years thanks to reinforced surveillance and rapid tests to detect cases early. Reuters

Syria: Syria polio (cVDPV2) outbreak rises to 27 cases

19 July - In a follow-up on the circulating vaccine-derived poliovirus type-2 (cVDPV2) outbreak in Syria, UN health officials report four additional cases this week, bringing the total to 27. Mayadeen district in Deir Ez-Zor governorate has seen 26 confirmed cases while
1 case has been confirmed from Tell Abyad district, Raqqa governorate. Monovalent type-2 oral polio vaccine (mOPV2) reached Deir Ez-Zor on 12 July. Vaccines for Raqqa are scheduled for transport this week, by air to Qamishli, then by road to Tell Abyad and Tabqa (Thawra). Immunization rounds for both Deir Ez-Zor and Raqqa governorates are expected to commence 22 July. Two immunization rounds are planned for July and August targeting children <5 years of age in Deir Ez-Zor and Raqqa governorates. Outbreak News Today

Yemen: Cholera Outbreak Daily Epidemiology Update

18 July - From 27 April to 17 July 2017, 356,591 suspected cholera cases and 1,802 deaths (CFR: 0.5%) have been reported in 91.3% (21/23) of Yemen governorates, and 88% (293/333) of the districts. ReliefWeb

Europe: Report details non-prescription use of antibiotics in Europe

17 July - A report today from the European Commission estimates that 7% of antibiotics taken in the European Union (EU) are taken without a prescription. The report, which describes the results of the ARNA (antimicrobial resistance and the causes of non-prudent use of antibiotics) project, found that the highest self-reported use of non-prescription oral antibiotics was in Romania (20% of all antibiotic users in 2013, and 16% in 2016) and Greece (16% of all antibiotic users in 2013, and 20% in 2016). High rates of non-prescription antibiotics use were also found in Latvia, Bulgaria, Croatia, and Hungary. The antibiotics were obtained from either a pharmacy or healthcare provider without a prescription, or were left over from a previous prescription. CIDRAP News Scan (second item)

Europe: Wildfires roar across southern Europe

18 July - Strong winds, dry weather and high temperatures: The fire season is in full swing across the Mediterranean. In France, fires raged on Tuesday less than 10 miles from the resort city of Nice. In Croatia, fires have damaged homes in the historic city of Split. And in Montenegro, the authorities have asked NATO for assistance in dealing with fires that had forced evacuations along the coast. … The Continent got a taste of what was to come last month, when a blaze tore through central Portugal, leaving more than 60 people dead. … Portugal hasn’t been spared from the latest devastation, with fires now burning in the Mangualde district, about 75 miles north of where the blazes spread last month. … Firefighters in Italy were dealing with more than 1,000 wildfires on Monday, Reuters
reported, with residents evacuated from parts of Rome and Naples. Three fires were reported near the Roman beach area of Ostia. The New York Times

Gaza Strip: Gaza health care suffers as Palestinian factions play blame game

19 July - ... Gaza has been under an Israeli blockade since 2007 after Hamas forces seized control of the territory following a brief civil war with security forces loyal to Mahmoud Abbas, the Western-backed Palestinian president based in the West Bank. ... Abbas in June reduced the payments the [Palestinian Authority] makes to Israel for electricity it supplies to the territory. The resulting cuts mean that Gaza's two million people now have only 3 to 4 hours of power a day, forcing hospitals and other medical facilities to rely chiefly on generators and expensive fuel, while many private homes just go without. Hamas says that Abbas restricted transfers of medicine to Gaza in March, accusing Hamas of failing to reimburse the PA for its purchases, and cut the salaries of its officials in May. Reuters

Italy: Navy warns of health risk from smoke produced by Mount Vesuvius wildfires

13 July - Navy hospital officials issued an advisory saying the Mount Vesuvius wildfires' heavy smoke could pose a health risk, especially to children, the elderly and those with respiratory problems. A series of fires have blazed across the mountain's wooded slopes for several days, generating massive smoke clouds that some people mistook for a volcanic eruption. Stars and Stripes

United Kingdom: NHS ranked 'number one' health system

14 July - The NHS has been ranked the number one health system in a comparison of 11 countries. The UK health service was praised for its safety, affordability and efficiency, but fared less well on outcomes such as preventing early death and cancer survival. The research by the Commonwealth Fund, a US think tank, looked at countries across the world, including the US, Canada, Australia, France and Germany. The US came bottom. It is the second time in a row that the UK has finished top. BBC News

USNORTHCOM

Canada/U.S.: Texas reports rise in Cyclospora cases

The Texas Department of State Health Services said today that clinicians should consider testing patients who complain of lingering diarrhea for Cyclospora, a parasite that can cause severe diarrheal illness. According to state officials, there have been 68 reported cases of
Cyclospora in the last month. Texas health officials are currently conducting investigations to determine if the reported cases share a common exposure source. ... Canada has reported a Cyclospora outbreak that has so far sickened 57 people in British Columbia and Ontario, with most of the illnesses reported from Ontario. The patients were sick between May and June, and an investigation into the source is underway. CIDRAP News Scan (first item)

U.S.: 9/11 survivors face higher risk of heart and lung problems

17 July - Survivors of the terrorist attack on the World Trade Center in New York City on September 11, 2001 - and first-responders who were on the scene that day - may have an increased risk for heart and lung diseases, a new study suggests. The World Trade Center attack exposed thousands of people to intense concentrations of hazardous materials that have resulted in reports of increased levels of asthma, heart disease, diabetes and other chronic physical and psychological disorders, researchers note. ... For the current study, researchers examined data on 8,701 people who were at the World Trade Center site on the day of the attacks and didn't have asthma, diabetes or heart and lung diseases. After up to 11 years of follow-up, people injured that day were at least twice as likely to develop heart disease as people who didn’t sustain injuries, the study found. Dust and debris exposure was associated with 30 percent higher odds of developing asthma and lung diseases, the study also found. Reuters

U.S.: Adult diagnosed with Jamestown Canyon virus in Maine

14 July - An older adult from Kennebec County, Maine, was diagnosed with Jamestown Canyon virus, a rare mosquito-borne disease, after his symptoms began in early June. The patient was hospitalized but recovered at home. Initial statements from state officials said this may be the first documented case of Jamestown Canyon virus in Maine. Symptoms include fever, neck stiffness and body aches, and in rare cases the illness can develop into meningitis and encephalitis. Mosquitoes become infected after feeding off of deer, and most human infections occur in late summer and early fall. According to a post on ProMED Mail ... there were only 31 cases of the disease documented nationally over a 14-year period. CIDRAP News Scan (second item)

U.S.: CDC awards grants to help states fight opioid epidemic

19 July - The Centers for Disease Control and Prevention is awarding more than $12 million to 23 states and to Washington, D.C., this week to support their fight against the opioid overdose epidemic. The funds will be used to strengthen prevention efforts and enable better tracking of opioid-related overdoses, and CDC indicated it expects to announce more funding for state opioid overdose prevention programs later this summer. Occupational Health & Safety
U.S.: CDC reminds travelers to Europe - Protect against measles

19 July - With the peak summer travel season under way, the Centers for Disease Control and Prevention (CDC) is reminding travelers to Europe and other global destinations to take steps to protect themselves against measles amid outbreaks of the disease. More than 14,000 cases of measles have been reported in Europe since January 2016, according to the European Centre for Disease Prevention and Control. In the past year, 35 people across Europe have died from the disease, according to the World Health Organization. ... Measles cases have been reported in 15 European countries in 2017: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, France, Germany, Hungary, Iceland, Italy, Portugal, Slovakia, Spain, Sweden, and the United Kingdom, according to the European Centre for Disease Prevention and Control. CDC

U.S.: CDC reports uptick in *Candida auris* cases

17 July - In its latest update on cases involving the multidrug-resistant fungus *Candida auris*, the US Centers for Disease Control and Prevention (CDC) said the number of illnesses detected in the United States has risen by 12 cases to 98. One of the new clinical cases reported since the last update in June is in Connecticut, which raises the number of affected states to nine. According to the CDC update, the other new cases are in New York, which has the most reported *C auris* cases with 68. Cases have also been reported in New Jersey (20), Illinois (4), Massachusetts, Maryland, Oklahoma, Florida, and Indiana (1 each). The case counts do not include colonized patients. But the agency said *C auris* has been isolated from an additional 110 patients from healthcare facilities in three states where clinical cases have been detected. CIDRAP

U.S.: Lab-related *Salmonella* outbreak sickens 24 in 16 states

19 July - The US Centers for Disease Control and Prevention (CDC) today announced a multistate *Salmonella* Typhimurium outbreak linked to microbiology laboratories that has sickened 24 people in 16 states. The infections have been associated with clinical, commercial, and teaching labs. The same *Salmonella* strain has been previously tied to lab-related exposures in 2011 and 2014, according to whole-genome sequencing. CIDRAP News Scan (first item)

U.S.: Missouri woman dies after contracting rare tick-borne Bourbon virus

12 July - Tamela Wilson worked at a state park for more than 10 years. ... The 58-year-old didn’t worry about contracting a tick-borne illness — but that’s exactly what happened. Three days after Wilson ... plucked two ticks off her body in late May, her health started to deteriorate. ... After undergoing several tests, she was told she had a low white blood cell
count and was admitted to Barnes-Jewish Hospital in St. Louis. But Wilson’s health continued to decline. She developed hemophagocytic lymphohistiocytosis (HLH), a condition affecting her immune cells. The Centers for Disease Control and Prevention (CDC) confirmed Wilson had Bourbon virus, an extremely rare tick-borne illness. According to the CDC, there is no known treatment for the virus. On June 23, about three weeks after she was admitted to the hospital, Wilson died. Doctors said she’s only the fifth confirmed case of the deadly disease since Bourbon virus was first discovered. CBS News


21 July - Occupational exposure to airborne respirable silica particles has been associated with work in mining, quarrying, tunneling, construction, sandblasting, masonry, foundry operations, glass manufacture, ceramic and pottery production, and cement and concrete production and with work with certain materials in dental laboratories. During 1999–2015, among 55 decedents aged 15–44 years who had pneumoconiosis due to dust containing silica assigned as either the underlying or contributing cause of death, 38 (69%) were assigned pneumoconiosis due to other dust containing silica, and 17 (31%) were assigned pneumoconiosis due to talc dust. Among 17 decedents with pneumoconiosis due to talc dust, 13 (76%) involved multiple drug use or drug overdose and none worked in talc exposure-associated jobs. Morbidity and Mortality Weekly Report

**U.S.: Upstate NY man died from rare tick-borne virus**

13 July - New York health officials say an upstate resident has died after contracting a rare tick-borne illness. The state Department of Health announced Wednesday that the victim was found to have had the Powassan virus after dying last month, but the illness hasn’t been medically confirmed to have caused the death. WNYT-TV in Albany reports the victim was a 74-year-old Saratoga County man who was bitten by a tick in late April, saw a doctor a few days later and fell ill shortly afterward. His family says he died June 6. U.S. News and World Report

**U.S.: White House developing comprehensive biosecurity strategy**

20 July - The Trump administration is developing the first comprehensive strategy to defend the United States against disease pandemics and biological attacks by terrorists, the top White House homeland security official said on Thursday. "We have not had as a country a comprehensive bio-defense strategy ever," White House homeland security adviser Thomas Bossert told the annual Aspen Security Forum. The effort involves retired Admiral Tim Ziemer, who oversaw the Obama administration’s initiative to fight malaria in Africa, and the White House hopes to publish the new strategy "as soon as we can," said Bossert, who provided no further details. Reuters
U.S.: Why this adorable mouse is to blame for the spread of Lyme disease

17 July - ... White-footed mice — known for their wide eyes and ears, long tails and snow-white bellies and the feet from which they get their name — are often overlooked by humans, hiding out by the billions in U.S. forests, shrubby thickets and even wooded wetlands. But there's one creature that knows them well: the tick. Scientists say white-footed mice, which are primary carriers of the Lyme bacterium Borrelia burgdorferi, are a highly popular host of black-legged ticks — which consequently makes them a key culprit in the spread of Lyme disease. ... Scientists say that white-footed mice are posing a particularly high risk to humans this year. A bountiful acorn harvest a couple of years ago gave them the sustenance needed to reproduce in greater numbers and climate change may be pushing them to expand their range toward the north. The Washington Post

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Asia: South Asia rife with undiscovered genetic disease?

19 July - ... In one of the first studies to look beyond consanguineous marriages there, researchers found that 81 out of 263 unique groups studied that are isolated by caste, language, religion, and geography "descend from founder events more extreme than those in Ashkenazi Jews and Finns, both of which have high rates of recessive disease due to founder events." Notably, 14 of those groups have populations of more than 1 million people, according to David Reich, DPhil, of Harvard, and colleagues. ... Reich and colleagues said the findings point to a big opportunity to improve health in South Asia (India, Pakistan, Bangladesh, Nepal, Bhutan, and Sri Lanka). Whereas many know to avoid marriage to close relatives, entire cultural groups are at risk of recessive diseases. MedPage Today

Australia/Sri Lanka: Australia helps Sri Lanka to control dengue fever after 250 die

19 July - Australia announced programs on Wednesday to help control dengue fever in Sri Lanka, where the mosquito-borne disease killed more around 250 people in the first half of this year. A short-term program through the World Health Organization will try to reduce the transmission of the dengue virus, aiming for a reduction of more than 50 percent over a period of four to six weeks. A longer-term programmer will use Wolbachia bacteria, a microbe that prevents the dengue virus from replicating inside the mosquitoes that carry it, to halt its transmission. ... Around 100,000 people have been infected, and the number of
infected has accelerated since floods in mid-May. Some hospitals have run out of beds. 

**Reuters**

**Bangladesh: Measles sickens 100 children, kills nine in Sitakunda**

17 July – The Institute of Epidemiology, Disease Control and Research (IEDCR) reported today that it was an outbreak of measles that hospitalized more than 100 kids, killing nine in Tripura Para, Sitakunda, according to the Dhaka Tribune. ... Immunization coverage for measles was poor in the area, according to Azad, and many of the children suffered from malnutrition. **Outbreak News Today**

**India: Dengue kills 21 in Indian tourist hotspot, crisis looms**

18 July - A dengue outbreak has killed at least 21 people in India's southern state of Kerala in the past three weeks, a government official said, adding that there was a shortage of medicines and health workers to tackle the crisis in the tourist hotspot. The mosquito-borne dengue virus, which causes flu-like symptoms and can develop into the deadly hemorrhagic dengue fever, has infected more than 11,000 people in Kerala since May, forcing the state to buy new hospital beds and cancel medical staff leave. **Reuters**

**South Korea: MERS super spreader analysis points to infection control role**

17 July - A detailed analysis of clinical data and MERS-CoV genetic sequences of the index patient in South Korea's 2015 outbreaks related to hospital settings suggests that the 68-year-old man was a super spreader because of problems with infection control rather than any changes in the virus. ... Before he got sick, the man had traveled to the Middle East for business, spending most of his time in Bahrain but also making side trips to the United Arab Emirates and Saudi Arabia. ... Researchers said the man was one of five super spreaders in the outbreak and that he visited four hospitals where 28 related secondary infections were reported. Prolonged duration of exposure before diagnosis and proper isolation may have contributed to the illnesses linked to the man, the group wrote. However, they also said greater pathogen shedding could have played a role, because the man had severe pneumonia and a severe cough during his illness which could have amplified transmission. **CIDRAP News Scan** (third item)

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Another slight rise noted in Americas chikungunya outbreak

17 July - Countries in the Americas reported 317 more chikungunya cases last week, similar to the past several weeks, though not all countries reported their latest numbers, according to an update from the Pan American Health Organization (PAHO). ... Americas countries have now reported 89,563 confirmed, suspected, and imported chikungunya cases this year, most of them from Brazil. The fatality number has held steady at 13.

CIDRAP Vector-borne Disease Scan (third item)

Brazil: Human Rights Watch says Brazil is risking new Zika surge

13 July - Poor sanitation and water conditions that contributed to an outbreak of Zika persist in Brazil and leave the country vulnerable to a resurgence of the virus, a rights group said Thursday. Brazil declared an end to the public health emergency over the mosquito-borne disease in May. ... But Human Rights Watch is warning of the threat of a new outbreak, saying Brazil has done too little to help the millions who don’t have a continuous water supply or access to adequate sanitation services. The group’s report notes that because more than one-third of Brazilians can’t count on their water supply, they often store water in tanks, which can serve as mosquito breeding grounds if not covered or treated. Researchers with the group also described seeing raw sewage flowing into communities, where it sometimes creates dirty pools of water that also are ideal breeding grounds. The Washington Post
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