20 January 2017

Army Public Health Weekly Update

Army Public Health Center

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- South Africa: Transmission of extensively drug-resistant tuberculosis in South Africa

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- Iraq's growing mental health problem
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- Russia: Russian proposal would phase in cigarette ban, but current smokers get a pass

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- U.S.: Construction workers still at high risk for strains and sprains
- U.S.: EPA issues nanomaterials reporting rule
- U.S.: Getting rid of Obamacare will cripple the department keeping bioterrorism and outbreaks at bay
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- U.S.: Ticks carrying Lyme disease confirmed in eastern national parks
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USPACOM

- Australia: Bees pose biggest public health threat in Australia, research shows
- India: Considering cattle could help eliminate malaria in India
- New Caledonia: Dengue epidemic declared
- Vietnam: Vietnam dengue cases top 110,000 in 2016, up nearly 40 percent

USSOUTHCOM

- Brazil: Suspect 'black urine disease' cases reported in Ceará state
- Brazil: Yellow fever outbreak in Brazil prompts a state of emergency
- PAHO reports 4,000 new chikungunya cases
NIOSH Sound Level Meter App

The NIOSH Sound Level Meter mobile application is a tool to measure sound levels in the workplace and provide noise exposure parameters to help reduce occupational noise-induced hearing loss.

Key Benefits:
- Raises workers' awareness about their work environment
- Helps workers make informed decisions about the potential hazards to their hearing
- Serves as a research tool to collect noise exposure data
- Promotes better hearing health and prevention efforts
- Easy to use

U.S. MILITARY

Breastfeeding and lactation support to implement Phase 2

19 January - The U.S. Army Medical Command is now implementing the program phase or Phase 2 of the Breastfeeding and Lactation Support initiative (BFLS), which the organization originally launched in January 2016. This second phase began Jan. 1 and includes tools that will access and measure BFLS progress throughout U.S. Army medical treatment facilities worldwide. "The program phase of this initiative monitors baseline data and implements quality improvement indicators in order to establish health and lactation support program performance outcome goals," said Dr. Laurena L. White, the program administrator for the Women’s Health Service Line (WHSL) in Falls Church, Virginia. Army.mil

Helmet sensors to record blast exposure in at-risk soldiers

16 January - ... Soldiers exposed to blast pressure and shock waves can go on to develop traumatic brain injury (TBI) well after the danger of more visible damage has passed. Looking to make faster and more informed decisions on this front, the US Navy is developing small sensors that, when paired with specialized scanner, can quickly convert blast pressure into a clear signal of whether or not that soldier should stand down. ... [The Office of Naval Research’s (ONR) Warfighter Performance Department] ... is funding the development of what it says will be an important advancement in the area. Dubbed the Blast Load Assessment Sense and Test (BLAST), the solution comprises three parts in total, with the first two designed to give medics on-the-spot guidance as to whether a soldier can continue the fight [and] the third part, a neurofunctional assessment tool around the size of a computer mouse. New Atlas

Study maps ‘uniquely devastating’ genital injuries among troops

13 January - A new report on one of the most dreaded war wounds finds that 1,367 men in the United States military suffered injuries to their genitals or urinary tract in Iraq or Afghanistan from 2001 to 2013, mostly from bomb blasts. More than a third of the injuries were severe. The report ... is thought to be the most comprehensive review of so-called genitourinary injuries in veterans. ... The number of cases is “unprecedented” and the injuries “uniquely devastating” because they can impair a man’s ability to have sex, father children or urinate normally, according to the report. Most of the wounded men — 94 percent — were 35 or younger, in “their peak years of sexual development and reproductive potential,” the report said, adding that the psychological toll was especially heavy in such young men. Researchers say these men are at high risk for suicide. The New York Times
### NMCPHC SHARP:
**Sexual Health Training**

**Location:** Memorial Auditorium, WRNMMC, Bethesda, MD  
**Date:** 16-17 Feb 2017  
**Topics:** Sessions include: HIV-STI Prevention Counseling, Sexual Partner Referral and Treatment, and Sexual Health Promotion in Military Populations  
**Registration:** Although walk-ins are welcome, pre-registration is needed for a certificate of completion and CME credit. For more information, contact the Navy and Marine Corps Public Health Center Sexual Health and Responsibility Program by email at [email] or call 757-953-0974

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#### GLOBAL

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<thead>
<tr>
<th>Event</th>
<th>Description</th>
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<tr>
<td><strong>Blood test can predict life or death outcome for patients with Ebola virus disease</strong></td>
<td>19 January - Scientists have identified a ‘molecular barcode’ in the blood of patients with Ebola virus disease that can predict whether they are likely to survive or die from the viral infection. A team ... used blood samples taken from infected and recovering patients during the 2013-2016 West Africa outbreak to identify gene products that act as strong predictors of patient outcome. <a href="http://example.com">Outbreak News Today</a></td>
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<tr>
<td><strong>Brain activity 'key in stress link to heart disease'</strong></td>
<td>12 January - The effect of constant stress on a deep-lying region of the brain explains the increased risk of heart attack, a study in The Lancet suggests. In a study of 300 people, those with higher activity in the amygdala were more likely to develop cardiovascular disease - and sooner than others. Stress could be as important a risk factor as smoking and high blood pressure, the US researchers said. ... The researchers suggest that the amygdala signals to the bone marrow to produce extra white blood cells, which in turn act on the arteries causing them to become inflamed. This can then cause heart attacks, angina and strokes. <a href="http://example.com">BBC News</a></td>
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<td><strong>‘Chocolate found to stave off death!’ Analyzing the scientific evidence behind health headlines</strong></td>
<td>18 January - With access to an overabundance of information from news organizations, on social media and through word of mouth, students (and adults) need to be adept at sorting through what they read or hear to determine its validity, value and implication. This is not only true for hard news like politics and war reporting, but it’s also true with health reporting, when competing claims and sensational headlines can make anyone’s head spin with confusion. ... In this lesson plan, students develop their analytical thinking skills by taking a critical look at health reporting while weighing reliability and relative significance. <a href="http://example.com">The New York Times</a></td>
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<td><strong>Donors and drug makers offer $500 million to control global epidemics</strong></td>
<td>18 January - Stung by the lack of vaccines to fight the West African Ebola epidemic, a group of prominent donors announced Wednesday that they had raised almost $500 million for a new partnership to stop epidemics before they spiral out of control. The partnership, the Coalition for Epidemic Preparedness Innovations, will initially develop and stockpile vaccines against three known viral threats, and also push the development of technology to brew large amounts of vaccine quickly when new threats, like the Zika virus, arise. With enough</td>
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money and scientific progress, the strategy could bring a drastic change in the way the world tackles pandemics. Now the global response often resembles a fire department racing from blaze to blaze. The coalition wants something more like a military campaign, with stores of ammunition and different weapons systems ready to be deployed as soon as a threat emerges. *The New York Times*

**Genetically modified mosquitoes resist dengue infection**

13 January - Researchers from John Hopkins University have developed a genetically modified mosquito that is resistant to dengue virus. The bug could help limit the spread of the disease that kills more than 200,000 people each year. The researchers ... describe how they changed the JAK/STAT pathway in the immune system of *Aedes aegypti* mosquitoes. The JAK-STAT pathway regulates production of antiviral factors and lives in the fat body of the mosquito, which acts like the bug’s liver. While low levels of dengue were still present in the mosquitoes’ salivary glands, they did not transmit the virus effectively. Unfortunately, the bugs did not show heightened resistance to Zika or chikungunya virus, which shows that Flaviviridae are genetically diverse and present unique challenges to mosquito immune systems. *CIDRAP News Scan* (second item)

**In search of a vaccine to vanquish the plague**

13 January - ... [A] team of researchers at the University of Texas Medical Branch at Galveston published a study of the three newest candidates for plague vaccine in the journal *Nature*. “So far, it looks very promising, at least in the two animal models we have tested.” ... Vaccines for the plague do already exist, but they have some serious flaws. One made with dead bacteria is approved by the U.S. Food and Drug Administration but no longer manufactured. It only protected against the bubonic plague and not the more dangerous pneumonic plague. Another vaccine is used in endemic regions such as China and the former Soviet Union, but it’s not approved by the FDA because of its high likelihood to cause severe side effects such as fever, malaise and headaches. [The] experimental vaccines reported on in *Nature* protect against the pneumonic plague and don’t cause side effects. *Medical Xpress*

**Malaria infection depends on number of parasites, not number of mosquito bites**

12 January - For the first time, researchers have shown that the number of parasites each mosquito carries influences the chance of successful malaria infection. ... The findings, from scientists at Imperial College London, may also explain why the only registered malaria vaccine, RTS,S, has had only partial efficacy in recent trials. ... To determine the intensity of malaria transmission, researchers ... currently rely on a measure called the entomological inoculation rate (EIR): the average number of potentially infectious mosquito bites per person per year. However, this does not take into account how infectious each of those bites may be – each bite is considered equally infectious. ... [R]esearchers have determined that the number of parasites each individual mosquito carries influences whether a person
will develop malaria. Some mosquitoes can be ‘hyperinfected’, making them particularly likely to pass on the disease. Imperial College London

New testimony therapy may benefit survivors of war trauma

13 January - Research has found a new treatment, testimony therapy plus ceremony, may offer mental health benefits to survivors of trauma among Khmer Rouge torture survivors in Cambodia. Testimony therapy plus ceremony involves counseling for war trauma survivors in which individuals tell their life story along with the traumatic events. The survivors receive support from counselors and their stories are documented into books for the survivor. ...

"We found that testimony therapy was effective at reducing symptoms of anxiety, depression, and PTSD among Khmer Rouge survivors," Dr. Jennifer Esala, co-author of the study, said in a press release. "This is especially notable because the intervention was brief [five days], culturally adapted [and adaptable], and was conducted in a low resource context." UPI

Pan-resistant CRE reported in Nevada

13 January - A deadly infection that a Nevada woman brought back with her from India is providing an example of the type of "nightmare" bacteria that infectious disease experts have been warning about. In a report today in the Centers for Disease Control and Prevention’s (CDC’s) Morbidity and Mortality Weekly Report (MMWR), investigators say the infection was caused by carbapenem-resistant Enterobacteriaceae (CRE), a multidrug-resistant organism associated with high mortality. While CRE are not new to Nevada or the United States, what was new in this case is that the infection was resistant or non-susceptible to all available antimicrobial drugs. CIDRAP

Study: 76% of Ebola survivors have symptoms 1-year after discharge

18 January - Researchers who followed 802 survivors of the 2013-2016 Ebola outbreaks in West Africa in Guinea said that the majority of patients (76%) had significant sequelae 1 year after discharge. ... The most frequent post-infection symptoms included generalized musculoskeletal pain (38%), fever and fatigue (40%), headache (35%), depression (17%), abdominal pain (22%), and ocular disorders (18%). The group will be followed for up to 24 months post-discharge from any of Guinea’s four Ebola treatment centers. The study also confirmed that Ebola virus DNA lingers for several months in semen: Of the 188 men included in the study, 10 (5%) tested positive for Ebola at a maximum of 548 days after disease onset. CIDRAP News Scan (second item)

Study: CRE could be spreading more widely than we think

17 January - ... [C]arbapenem-resistant Enterobacteriaceae (CRE), a family of bacteria that are resistant to several classes of antibiotics and can cause severe and sometimes deadly
infections, are more diverse, have more resistance mechanisms, and are more capable of increasing the spread of resistance than previously thought. ... Researchers collected and genetically sequenced more than 250 CRE isolates. ... Overall, eight species of CRE were found at the four hospitals, with the majority being *Klebsiella pneumoniae* of the sequence type 258 (ST258) lineage, which is responsible for much of the rise in CRE incidence in the United States. ... The number of CRE species identified surprised the authors, as did the fact that few of the isolates appeared to be genetically related. Those findings suggest that most were not linked to a hospital outbreak in which a CRE infection was spreading from patient to patient. What also surprised them was the amount of diversity they found in terms of resistance mechanisms. CIDRAP

**UV-light disinfection might cut hospital MRSA, VRE rates**

17 January - An expensive type of ultraviolet (UV) light treatment called UVC was associated with a 30% drop in the incidence of infections with methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE) but did not affect *Clostridium difficile* rates when used for cleaning hospital rooms between patients, according to a study yesterday in *The Lancet*. ... The hospitals used a portable UVC machine to disinfect rooms where patients with the target bacteria had been staying. For about 30 minutes, the device emits UVC light into an empty room and kills bacteria by disrupting their DNA.

CIDRAP Stewardship / Resistance Scan (first item)

**ZIKA VIRUS**

**Antivirals that block influenza can also inhibit Zika virus infection, study shows**

16 January - Researchers from the University of Helsinki have shown that three anti-influenza compounds effectively inhibit Zika virus infection in human cells. The results provide the foundation for development of the broad-spectrum cell-directed antivirals or their combinations for treatment of Zika and other emerging viral diseases. ... They were able to show that treatment of the cells with three drugs, called obatoclax, saliphenylhalamide and gemcitabine, prevented synthesis of viral building blocks and production of new viruses at concentrations that are not toxic to cells. News-Medical.net

**How the response to Zika failed millions**

16 January - Almost a year ago, the World Health Organization declared the Zika epidemic a global health emergency. ... How’d we do? Not so great, according to more than a dozen public health experts who were asked to reflect on the response. The battle was a series of missed opportunities, they said. ... “Latin America was pretty much left to its own devices,” said Lawrence O. Gostin, director of the O’Neill Institute for National and Global Health Law at Georgetown University. ... Yet
there were some notable successes. The biggest was that travel advisories issued in January kept many pregnant tourists and business travelers from venturing to areas where they might have been infected ... and new diagnostic tests for Zika were swiftly designed and deployed. Scientists are moving ahead with multiple vaccine candidates and new ways to fight mosquitoes without pesticides. But [experts] harshly criticized the partisan bickering that delayed a Zika-funding bill in Congress for months, and they decried the failure of every city in the hemisphere — other than Miami — to control mosquitoes. ... [T]he greatest failure, all agreed, was that while tourists were warned away from epidemic areas, tens of millions of women living in them — many of them poor slum dwellers — were left unprotected. ... The failure to advise women to postpone pregnancy, if they could, until the epidemic passed “was the single greatest travesty of the epidemic” ... Most countries did not focus enough on preventing sexual transmission, experts said. The New York Times

Larvicide reduces 80% of Aedes in Brazilian city

18 January - A study yesterday in PLoS Medicine shows that the larvicide pyriproxyfen (PPF) greatly reduces the number of adult Aedes mosquitoes, the vector that transmits Zika, yellow fever, and dengue. Aedes mosquitoes are notoriously hard to control, as they tend to live indoors and can concentrate in urban populations. Most insecticides only produce a transient reduction of adult populations, and breeding sites can be hard to target. To counter these factors, researchers used adult mosquitoes to disseminate particles of PPF to breeding sites. ... According to the study, the number of Aedes juvenile samples decreased by 79% to 92%, and mean adult Aedes emergence fell from 1,077 per month at baseline to 50.4 per month during PPF dissemination. The emergence of young female Aedes mosquitoes dropped by 96% to 98%. CIDRAP News Scan (first item)

INFLUENZA

AFHSB: DoD Seasonal Influenza Surveillance Summary

For Week 2:

- NORTHCOM: Influenza activity ranged from low to high across most of the country.
- EUCOM: Influenza activity was low to high for the majority of EUCOM.
- PACOM: Influenza activity was moderate in Japan, but minimal to low in other PACOM areas.
- CENTCOM and AFRICOM: Influenza activity was minimal for all locations with available data in CENTCOM and AFRICOM, except Afghanistan, which had moderate activity.
- SOUTHCOM: Influenza activity was minimal in Honduras this week based on DMSS data. DHA - Armed Forces Health Surveillance Branch
APHC: U.S. Army Influenza Activity Report

For the week ending 7 January 2017 (Week 1)

During week one, the number of specimens testing positive for influenza A increased in all regions except for CENTCOM.

- **ILI Activity:** Army incident ILI outpatient visits in week 1 were 16% lower than the same week last year.
- **Influenza cases:** Six hospitalized influenza-associated cases were reported to APHC through DRSi in week 1; all cases were among non-AD beneficiaries.
- **Viral specimens:** During week 1, 297 of 1291 (23%) laboratory specimens tested positive for respiratory pathogens. RHC-A reported most (38%) of the influenza A-positive specimens, followed by RHC-P (29%), RHC-C (24%), and RHC-E (9%). CENTCOM did not report any positive influenza A specimens. APHC

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

During week 1 (January 1-7, 2017), influenza activity increased in the United States.

- **Viral Surveillance:** The most frequently identified influenza virus subtype reported by public health laboratories during week 1 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased.
- **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:** Three influenza-associated pediatric deaths were reported. CDC

ECDC: Flu News Europe

Week 1/2017 (2 - 8 January 2017)

- Influenza activity remained high across the region with high or very high intensity in 10 out of 43 reporting countries.
- The proportion of influenza virus detections among sentinel surveillance specimens was around 50% for the third consecutive week.
- The great majority of influenza viruses detected were type A and, of those subtyped, 99% were A(H3N2).
- The number of influenza cases from hospital settings also increased, markedly for predominantly adults aged over 65 diagnosed with influenza A virus infection.
- Excess all-cause mortality seems to have been increasing among the elderly, notably in France and Portugal. European Center for Disease Prevention and Control/WHO
Human infection with avian influenza A(H7N9) virus – China

18 January - On 11 January 2017, the Department of Health, China, Hong Kong Special Administrative Region (SAR) notified WHO of a laboratory-confirmed human infection with avian influenza A(H7N9) virus and on 12 January 2017, the Health Bureau, China, Macao SAR notified WHO of an additional laboratory-confirmed case of human infection with avian influenza A(H7N9) virus. ... To date, a total of 918 laboratory-confirmed human infections with avian influenza A(H7N9) virus have been reported through IHR notification since early 2013. WHO

Hundreds of cats quarantined in New York City bird flu outbreak

13 January - Hundreds of domestic cats have been quarantined in New York City after contracting a strain of highly contagious avian flu at shelters operated by a major animal rescue organization, and the virus also infected at least one veterinarian, officials said. It is the first time the H7N2 strain of the virus, commonly found in birds, has infected domestic cats, according to the New York City Health Department. Symptoms are generally mild, and include sneezing, coughing and runny eyes and noses. The virus was first detected last month in 45 cats housed at a Manhattan shelter run by Animal Care Center of NYC, and later turned up in cats at shelters in the boroughs of Queens and Brooklyn. It was not immediately clear how the cats contracted the virus or how it spread so quickly, the city’s health department said in a statement on Thursday. Reuters

NHRC: Febrile Respiratory Illness Surveillance Update

For 2017 Week 1 (through 7 January 2017):

- Influenza: Three cases of NHRC laboratory-confirmed influenza (A/H3) among US military basic trainees at MRCD Parris Island. The new cases presented for care in mid-Dec. and had been vaccinated 6 days prior.
- FRI surveillance at all eight U.S. military basic training centers indicated FRI rates were at or below expected values. Naval Health Research Center

Surveillance Snapshot: Findings from the Department of Defense Global, Laboratory-based, Influenza Surveillance Program, 2015–2016 influenza season

December 2016 - ... During the 2015–2016 influenza season, a total of 4,591 specimens were tested from 80 locations. Of those submitted for routine surveillance, 755 (16.5%) tested positive for influenza A; 377 (8.2%) tested positive for influenza B; 1,182 (25.7%) tested positive for other respiratory pathogens; and 2,277 (49.6%) tested negative. The predominant influenza strain was A(H1N1)pdm09. Peak influenza activity occurred during weeks 7–13 (14 February–2 April 2016). The peak week for A(H1N1)pdm09 was week 10 and
the peak weeks for influenza B were weeks 8 and 12. Medical Surveillance Monthly Report

**USAFSAM & DHA: DoD Global, Laboratory-Based, Influenza Surveillance Program**

During 25 December 2016 - 7 January 2017 (Surveillance Weeks 52 & 1), a total of 198 specimens were collected from 37 locations. Results were finalized for 139 specimens from 33 locations. During Week 52, 31 influenza A(H3N2) viruses were identified. During Week 1, 29 influenza A(H3N2) and two influenza B viruses were identified. Approximately 37% of specimens tested positive for influenza during Week 52. Approximately 28% of specimens tested positive for influenza during Week 1. The influenza percent positive for the season is approximately 15%. US Air Force School of Aerospace Medicine & Defense Health Agency

**VETERINARY/FOOD SAFETY**

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**Ireland reports 'mad cow' case, says no risk to health**

18 January – Dublin, Ireland said on Wednesday that a dead cow had been confirmed as having bovine spongiform encephalopathy (BSE), known as mad cow disease, but said it had not entered the food chain and there was no risk to human health or beef's trade status. The animal tested positive for 'Atypical BSE', Ireland's agriculture department said in a statement, referring to the strain that it said has been identified more recently and which occurs spontaneously in older animals with a low incidence rate. That type is distinct from 'Typical BSE' which was the basis of widespread cases of mad cow disease that began in the 1980s. There have been 101 'Atypical' cases identified in the EU from 2003 to 2015 compared to 2,999 'Typical' cases, it added. Reuters

**Man's best friend, bacteria's worst enemy: dog sniffs out superbug in Canadian hospital**

12 January – Hospital ID badge dangling from his neck, Angus considered the empty bed in front of him. After a few strong sniffs, he moved on. Nearing the next bed, his floppy ears perked up before he stopped dead in his tracks, tapping his paw and eying his handler expectantly. The two-year-old English springer spaniel is believed to be the only canine hospital employee in the world trained to sniff out the notorious superbug *Clostridium difficile*, or *C difficile*. ... Hospitals normally use ultraviolet light to find the bacteria, but Angus can move much more quickly and efficiently through rooms. Once he detects the bacteria, the area is cleaned with a robot that uses ultraviolet light to disinfect 99.9% of the *C difficile* spores. The Guardian
Technology gives transparency to transportation food safety

16 January – [T]he Food and Agriculture Organization of the United Nations reports that problems with production, handling and storage are responsible for 54 percent of the world’s food waste, while 46 percent happens during processing, distribution and consumption phases. ... In efforts to protect food during the trip from the farm to a consumer’s fork, the Food Safety Modernization Act includes a rule on Sanitary Transportation of Human and Animal Food. It sets clear, defined responsibilities for shippers, loaders, carriers by rail or motor vehicle, to ensure food safety through sanitary practices while keeping in step with FSMA’s effort to shift food safety to a prevention focus. ... [F]ood companies will be able to more easily implement cutting-edge practices and safe guard their products with the help of technology to keep a close eye on sanitary conditions of shipping containers, temperature control and tracking of products. Food Safety News

U.S. salmon may carry Japanese tapeworm, scientists say

11 January - If you eat raw or undercooked fish, you risk developing an infection from parasites. One of the most gruesome is tapeworm, a species of digestive tract-invading parasites that includes Diphyllobothrium nihonkaiense, or the Japanese broad tapeworm. Though this worm was commonly believed to infect only fish in Asia, a study published Wednesday in the Centers for Disease Control and Prevention’s monthly journal Emerging Infectious Diseases says wild salmon caught in Alaska had also been infected by this parasite. Based on those results, researchers warn that salmon caught anywhere along the Pacific coast of North America may be infected. ... Four species of Pacific salmon are known to carry Japanese tapeworm infections: chum salmon, masu salmon, pink salmon and sockeye salmon. CNN

Walmart charged for selling food possibly tainted by wildfires: Alberta Health Services

14 January - Alberta Health Services alleges Walmart Canada kept and sold food that was potentially contaminated by the Fort McMurray wildfire. The health agency says Walmart Canada Corp. has been charged with 174 violations of the province’s Public Health Act. ... Alex Roberton, Walmart Canada’s senior director of corporate affairs, said the retailer is surprised by the charges. “Walmart Canada follows very strict policies and procedures specifically designed to ensure the safety of the food we offer our customers,” Roberton said in an email. ... The health authority said food exposed to wildfires can be damaged by unsafe temperatures, smoke, ash, soot, fire retardants, water and loss of power. 570 News
A diet rich in fruits and vegetables outweighs the risks of pesticides

18 January - When you shop for groceries, do you carry a copy of the Environmental Working Group’s “Dirty Dozen,” list with you? It’s a list of the 12 vegetables and fruits with the most pesticides, and some people only buy organic versions of the items on the list. ... Researchers ... wanted to know how the list influences our buying habits. They surveyed more than 500 low-income shoppers about their thoughts on organic and conventional vegetables and fruit. ... They found that specifically naming the “Dirty Dozen” resulted in shoppers being less likely to buy any vegetables and fruit. ... [D]oes it really make sense to pay up to 47 percent more for organic vegetables and fruit? Food toxicologist Carl K. Winter doesn’t think so. ... “Foods on the Dirty Dozen list pose no risks to consumers due to the extremely low levels of pesticides actually detected on those foods,” says Winter. ... Even the Environmental Working Group ... says “the health benefits of a diet rich in fruits and vegetables outweigh the risks of pesticide exposure. The Washington Post

Athlete-turned-trucker works to improve truckers’ health

19 January - ... A recent transportation industry report shows 21 percent of drivers who left the field in recent years did so for health reasons. With his voluntary wellness programs, [Sphiwe Baleka, an energetic former swimming champion in his mid-40s] encourages his drivers to do short bursts of exercise to boost metabolism, cut carbs and eat lots of protein every few hours. He remotely coaches around 3,000 drivers as they crisscross the country. ... The relatively small lifestyle changes that Baleka promotes could be enough to make a life-changing difference in the health of many truck drivers, says Dr. Clayton Cowl, chief of preventive, occupational and aerospace medicine at the Mayo Clinic. NPR

Food as medicine: It's not just a fringe idea anymore

17 January - ... The food-as-medicine movement has been around for decades, but it's making inroads as physicians and medical institutions make food a formal part of treatment, rather than relying solely on medications. By prescribing nutritional changes or launching programs such as "Shop with Your Doc," they’re trying to prevent, limit or even reverse disease by changing what patients eat. "There’s no question people can take things a long way toward reversing diabetes, reversing hypertension, even preventing cancer by food choices," [Daniel] Nadeau says. ... [P]hysicians say they look at the cumulative data and a clear picture emerges: that the salt, sugar, fat and processed foods in the American diet contribute to the nation’s high rates of obesity, diabetes and heart disease. NPR
Sedentary lifestyle in older women 'ages body cells'

19 January - Research on 1,500 women aged 64 to 95 found those who spent many hours sitting and exercised for less than 40 minutes a day had cells that were biologically eight years older. As people age, their cells age, causing DNA protectors to shorten and fray. ... During ageing, tiny caps on the ends of DNA strands naturally shorten. These telomeres - which have been likened to the plastic tips of shoelaces - are there to prevent chromosomes from deteriorating. Telomere length is one indicator of biological age, which does not always match chronological age. ... Dr Aladdin Shadyab, lead study author, from the University of California San Diego School of Medicine, said: "We found that women who sat for longer did not have shorter telomere length if they exercised for at least 30 minutes a day. BBC News

Senators demand better information from DEA on opioid campaign

18 January - Seven U.S. senators sharply criticized the Drug Enforcement Administration on Wednesday for failing to answer questions about enforcement actions against pharmaceutical companies accused of violating laws designed to prevent painkillers from reaching the black market. "We received an insufficient response that ignored those questions almost entirely and recited boilerplate information about the DEA's mission," said the letter to the acting DEA administrator, Chuck Rosenberg. The DEA did not immediately respond to a request for comment. The senators first sent the questions to the DEA in October after The Washington Post reported that the agency had slowed its enforcement efforts in the face of the opioid epidemic, which has cost nearly 180,000 lives since 2000. ... The Post reported that beginning in 2013, DEA lawyers at headquarters started to delay and block enforcement efforts against large opioid distributors and others, requiring investigators in the field to meet a higher burden of proof before they could take action.

Urine test reveals what you really eat

13 January - A urine test that can reveal how healthy your meals are has been developed by UK scientists. They think it could be used to improve nutritional advice or in weight loss because people are notoriously bad at recording their own eating habits. The test, detailed in the Lancet Diabetes and Endocrinology, detects chemicals made as food is processed by the body. The research team believe it could be widely available within two years. The urine samples are analysed to determine the structure of the chemicals floating around in it using a technique called a proton nuclear magnetic resonance spectroscopy. This gives clues to both recent meals and long term dietary habits. BBC News

U.S. abortion rate falls to lowest level since Roe v. Wade

17 January - The abortion rate in the United States fell to its lowest level since the historic Roe v. Wade Supreme Court decision legalized abortion nationwide, a new report finds. The
report by the Guttmacher Institute, a research group that supports legalized abortion, puts the rate at 14.6 abortions per 1,000 women of childbearing age (ages 15-44) in 2014. ... The abortion rate has been declining for decades — down from a peak of 29.3 in 1980 and 1981. ... Some anti-abortion groups ... argue the Guttmacher report shows new state restrictions on abortion are working. ... [The] lead author of the report, said [a] more important driver of the declining abortion rate ... appears to be improved access to contraception, particularly long-acting birth control options like IUDs. She ... said the declining birthrate suggests more women are preventing unwanted pregnancies. "Abortion is going down, and births aren't going up," Jones said. NPR

Who will care for the caregivers?

19 January - ... There are some 40 million Americans [who] help a parent, grandparent, relative or neighbor with basic needs: dressing, bathing, cooking, medications or transportation. Often, they do some or all of this while working, parenting, or both. ... About one-third of caregivers have a full-time job, and 25 percent work part time. A third provide more than 21 hours of care per week. Family caregivers are, of course, generally unpaid, but the economic value of their care is estimated at $470 billion a year — roughly the annual American spending on Medicaid. ... While the demand for caregivers is growing because of longer life expectancies and more complex medical care, the supply is shrinking, a result of declining marriage rates, smaller family sizes and greater geographic separation. In 2015, there were seven potential family caregivers for every person over 80. By 2030, this ratio is expected to be four-to-one. The New York Times

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Nigeria: Lassa outbreak results in 4 deaths in Nasarawa State

17 January - A Lassa fever outbreak in Nasarawa State in Central Nigeria has resulted in four fatalities, according to a local media report today. According to Nasarawa State Commissioner for Health, Daniel Iya, 16 suspected cases have been recorded in the state, out of which four were confirmed positive and all of them have died. He explained that the index case for the current outbreak was recorded in November 2016 and died a day later, while the three others died between January 13 and January 15. Outbreak News Today

South Africa: Transmission of extensively drug-resistant tuberculosis in South Africa

19 January - ... A widespread epidemic of extensively drug-resistant (XDR) tuberculosis is occurring in South Africa, where cases have increased substantially since 2002. The factors
driving this rapid increase have not been fully elucidated, but such knowledge is needed to
guide public health interventions. We conducted a prospective study involving 404
participants in KwaZulu-Natal Province, South Africa, with a diagnosis of XDR tuberculosis
between 2011 and 2014. ... Of the 404 participants, 311 (77%) had HIV infection; the median
CD4+ count was 340 cells per cubic millimeter (interquartile range, 117 to 431). A total of
280 participants (69%) had never received treatment for MDR tuberculosis. ... Person-to-
person or hospital-based epidemiologic links were identified in 123 of 404 participants
(30%). The majority of cases of XDR tuberculosis ... were probably due to transmission
rather than to inadequate treatment of MDR tuberculosis.
The New England Journal of Medicine

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Iraq’s growing mental health problem

16 January - Iraq already had shortages of psychiatrists and psychologists before the rise of
so-called Islamic State. Now, as hundreds of thousands of civilians emerge from years of IS
rule, the impact of those shortfalls is becoming painfully clear. Many of those needing help
are children. ... [Médecins Sans Frontières] MSF is the only aid group with specialist teams
dealing with severe mental health cases for those displaced from Mosul. Bilal Budair, MSF
mental health manager in Erbil – the de facto capital of Iraqi Kurdistan – said his teams had
even stopped doing outreach activities in Debaga because so many camp residents were
knocking on their doors (although they do similar work elsewhere). ... A unique positive to
take from the situation is that the stigma surrounding mental illness in Iraq appears greatly
diminished. IRIN

Saudi Arabia: More MERS cases linked to camel
exposure in Saudi Arabia

17 January - In recent days the Saudi Arabian Ministry of Health (MOH) announced three
more MERS-CoV cases, two in the city of Al Hofuf and one in Najran. Two Saudi men, 61
and 57, from Al Hofuf were diagnosed as having MERS-CoV (Middle East respiratory
syndrome coronavirus) on Jan 13. Both are in stable condition after presenting with
symptoms of the disease, and both are listed as having primary exposure to the virus, which
means they did not contract the disease from another person. The MOH said the 61-year-
old man had direct contact with camels. On Jan 14 a 66-year-old man from Najran was also
listed in stable condition with MERS. He is likewise listed as having a primary exposure to
the respiratory virus. The new cases raise Saudi Arabia’s MERS-CoV total to 1,539, including
640 deaths. Eleven people are still in treatment or monitoring. CIDRAP News Scan (first
item)
Europe: Study finds high colonization rates of drug-resistant pathogens in refugees

17 January - A new study suggests that refugees seeking asylum in Europe may be bringing with them higher carriage rates of antibiotic-resistant bacteria. In the observational study, published in PLoS One, 261 refugees at four refugee centers in Switzerland were screened to determine colonization rates for MRSA and extended-spectrum beta-lactamase (ESBL) and carbapenemase-producing Enterobacteriaceae. The refugees were from five different regions—Middle East, East Africa, Central/West Africa, Northern Africa, and Far East—with the majority coming from Afghanistan, Syria, and Eritrea. The screening results showed that 15.7% of the refugees were colonized with MRSA, a rate roughly 10 times higher than found in the Swiss population. The ESBL colonization rate among the refugees was 23.7%, about 2 to 5 times higher compared to the Swiss population, with significantly higher colonization in persons originating from the Middle East. No carbapenemase-producing isolates were identified. CIDRAP Stewardship / Resistance Scan (second item)

Russia: Russian proposal would phase in cigarette ban, but current smokers get a pass

12 January - Russia’s millennials may be the country’s last generation of cigarette smokers. If a proposal introduced by the Health Ministry is adopted, Russia will ban the sale of cigarettes to people born in 2015 and after. Tobacco kills about six million people globally each year, according to the World Health Organization, and 300,000 to 400,000 of them are Russians. About 33 percent of Russian adults use tobacco products. President Vladimir V. Putin, a nonsmoker, has stepped up efforts to curb smoking in recent years. In 2013, he signed a law that banned smoking in most public places, raised taxes on tobacco products and banned the sale of them at street kiosks. The efforts have had an impact. The number of children aged 13 to 15 who smoke declined to 9.3 percent in 2015 from 25.4 percent in 2004, according to the Health Ministry. The New York Times

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U.S.: Construction workers still at high risk for strains and sprains

16 January - Despite significant improvements in the last 25 years, U.S. construction workers are still at high risk for on-the-job injuries to muscles, tendons, joints and nerves, a new
study reports. These work-related injuries often occur because of overwork, excessive exposure to vibration, bending, twisting and adopting awkward body postures. Collectively known as work-related musculoskeletal disorders, or WMSDs, they can be costly. The estimated wage loss for private wage-and-salary construction workers in 2014 was US$46 million, the study authors say. ... “Our study found that the major event and exposure of WMSDs among construction workers was overexertion, and (the) back was the primary body part affected by WMSDs, accounting for more than 40 percent of the WMSDs,” Dong said. Reuters

U.S.: EPA issues nanomaterials reporting rule

17 January - EPA issued a final regulation Jan. 11 requiring one-time reporting and recordkeeping of exposure and health and safety information on chemical substances at the nanoscale level. The information is to include the specific chemical identity, production volume, methods of manufacture and processing, exposure and release information, and existing information concerning environmental and health effects, “insofar as known to or reasonably ascertainable by the person making the report,” it states. ... EPA said the information collection “is not intended to conclude that nanoscale materials will cause harm to human health or the environment. Rather, EPA will use the information gathered to determine if any further action under TSCA, including additional information collection, is needed.” Occupational Health & Safety

U.S.: Getting rid of Obamacare will cripple the department keeping bioterrorism and outbreaks at bay

17 January - It’s not just about doctor’s visits and medications. If the Affordable Care Act is repealed, a pot of money used to prevent bioterrorism attacks and prevent disease outbreaks may go down with it. The Prevention and Public Health Fund, part of Obamacare, allocates $890 million to the US Centers for Disease Control to create better infrastructure for identifying disease outbreaks before they happen, and addressing them before they spread, a new report from public health advocacy group Trust for America’s Health points out. For example, the Prevention Fund dedicated $210 million to the CDC’s immunization program in 2015. ... The Prevention Fund represents about 12 percent of the CDC’s budget, which totaled roughly $7 billion in 2016. ... Another $3 billion is allocated through the Prevention Fund to support state health agencies that deal in community-level disease prevention, bioterrorism prevention, pandemic response, and responding to other health emergencies. Quartz

U.S.: NIOSH adds to hazardous-drugs list

4 January - The National Institute for Occupational Safety and Health added 34 hazardous drugs to the list to bring awareness and enable health care worker to protect themselves from exposure at work. Afatinib, axitinib, and belinostat head the list of 34 additions to the updated National Institute for Occupational Safety and Health (NIOSH) List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings. ... NIOSH says “no single
approach can cover the diverse potential occupational exposures to the drugs* and notes that safe-handling precautions can vary with the activity and formulation of the drug. Still, the list also provides general guidance for “possible scenarios” that might be encountered in health care settings where hazardous drugs are handled. Federal Practitioner

U.S.: Shigella outbreak in SE New Mexico nears 200 cases

14 January - In a follow-up on a report on a shigellosis outbreak in three New Mexico counties, health officials say the investigation has seen the number of *Shigella sonnei* cases reported in Lea, Chaves, and Eddy counties rise to 196, up from 140 cases reported in November. ... Most cases since the beginning of the outbreak have been among preschool and school-aged children. However, recent data indicate that the infection has begun to affect the wider community. Outbreak News Today

U.S.: Ticks carrying Lyme disease confirmed in eastern national parks

17 January - Planning a hiking trip in an eastern U.S. national park? Better pack tick repellent -- a new study found these parks are home to ticks that carry Lyme disease. Blacklegged ticks -- also known as deer ticks -- carrying Lyme disease were found in nine national parks: Acadia National Park in Maine; Catoctin Mountain Park and Monocacy National Battlefield in Maryland; Fire Island National Seashore in Long Island, N.Y.; Gettysburg National Military Park in Pennsylvania; Rock Creek Park in Washington, D.C., and Manassas National Battlefield Park, Prince William Forest Park and Shenandoah National Park in Virginia. This is the first time researchers have confirmed that the ticks are living at the parks, although it's long been suspected that the ticks were there because of human Lyme disease infections. UPI

U.S.: West Nile virus and other nationally notifiable arboviral diseases — United States, 2015

20 January - ... In 2015, WNV remained the most common cause of neuroinvasive arboviral disease in the United States, with a similar incidence to the median incidence during 2002–2014. In addition, Arizona experienced an outbreak of St. Louis encephalitis virus, and four new states reported their first Jamestown Canyon virus disease cases in 2015. Morbidity and Mortality Weekly Update
Australia: Bees pose biggest public health threat in Australia, research shows

18 January - An Australian-first national analysis of 13 years’ data on bites and stings from venomous creatures reveals Australia’s towns and cities are a hot-spot for encounters. The stereotype-busting research also shows that of all Australia's venomous creatures, it is bees and other insects - not snakes, spiders, or jellyfish - that pose the biggest public health threat. Including fatalities, venomous stings and bites resulted in almost 42,000 hospitalisations over the study period. Bees and wasps were responsible for just over one-third (33%) of hospital admissions, followed by spider bites (30%) and snake bites (15%). Snake bites caused 27 deaths. Importantly, snake bite envenoming caused nearly twice as many deaths per hospital admission than other venomous creatures, making snake bite one of the most important venomous injuries to address. News-Medical.net

India: Considering cattle could help eliminate malaria in India

16 January - The goal of eliminating malaria in countries like India could be more achievable if mosquito-control efforts take into account the relationship between mosquitoes and cattle, according to an international team of researchers. "In many parts of the world, the mosquitoes responsible for transmitting malaria are specialist feeders on humans and often rest within human houses," said Matthew Thomas, professor of entomology, Penn State. "We found that in an area of India that has a high burden of malaria, most of the mosquitoes that are known to transmit malaria rest in cattle sheds and feed on both cows and humans." According to Jessica Waite, postdoctoral scholar in entomology, Penn State, cattle sheds are often next to, and sometimes even connected by, a shared wall to human houses, yet current control efforts are restricted to domestic dwellings only. Waite added that the model suggests very little cattle-based vector control effort would be required to drive malaria transmission in the region to elimination. Penn State News

New Caledonia: Dengue epidemic declared

13 January - After reporting 80 dengue fever cases since the beginning of the year, health authorities in New Caledonia have declared an epidemic on the South Pacific islands. Since the start of Dec. 2016, the territory has reported more than 160 dengue cases and a dozen people required hospitalization for their illness. The dengue strain circulating is DENV1. The island chain of Vanuatu is also experiencing a dengue outbreak; however, the strain involved is DENV2. Outbreak News Today
Vietnam: Vietnam dengue cases top 110,000 in 2016, up nearly 40 percent

18 January - The number of dengue fever cases reported in Vietnam during the first eleven months of 2016, reveal a 38 percent increase in cases compared to the same period in 2015. As of 30 November 2016, there were 110,854 cases of dengue including 42 deaths reported in Vietnam. 42 dengue-related fatalities have been reported. Compared to the median for 2011-2015, the cumulative number of cases increased by 79.9 percent. In neighboring Laos, there were 5617 cases of dengue with 10 deaths reported in Lao PDR in 2016. The number of cases is higher than in the two previous years. Outbreak News Today

Brazil: Suspect ‘black urine disease’ cases reported in Ceará state

15 January - The Secretary of Health of the State of Ceará in northeastern Brazil announced receiving reports of three suspect cases of “black urine disease” last week. The cases are being investigated by state and municipal health officials and samples were collected for laboratory testing. ... The three suspect cases presented with symptoms like those seen in Bahia state last month. ... Black urine disease still does not have an etiology and has been seen in dozens of people in Bahia. If the cases are confirmed in Ceará, they will be the first outside of Bahia. According to the Bahia State Department of Health, 44 patients had a negative result for bacterial infection. There is also a suspicion that fish consumed in the region have caused intoxication. Outbreak News Today

Brazil: Yellow fever outbreak in Brazil prompts a state of emergency

13 January - The governor of the Minas Gerais State in southeastern Brazil declared a public health emergency on Friday over an outbreak of yellow fever that appears to have killed at least 10 people so far and led to reports of more than 100 suspected cases of the disease. The state authorities said Friday they were investigating 133 suspected cases of yellow fever, of which 20 were considered probable, pending further testing. They said they were also looking into reports of 38 deaths, 10 of them suspected of being caused by yellow fever, according to the State Health Secretariat’s website. The state health authorities said the number of suspected cases had more than doubled in recent days: 48 suspected cases had been reported as of Wednesday, and that figure rose to 110 on Thursday. ... A spokeswoman for the Minas Gerais State Health Secretariat said all the cases reported so far
were sylvatic, meaning that the infection has been passed by mosquitoes in the wild, in rural areas where monkeys are known to carry the disease. The New York Times

PAHO reports 4,000 new chikungunya cases

18 January - The Pan American Health Organization (PAHO) in the first 2 weeks of 2017 reported 4,008 new suspected, confirmed, and imported chikungunya cases, mostly in Brazil, bringing the 2016-17 total in the Americas to more than 500,000. All but 241 of the cases were recorded in the most recent update, on Jan 13. The final PAHO report of 2016 also included 108 new cases, after the agency reported more than 56,000 new infections the week before. Brazil reported data for week 50 of 2016, which was the week of Dec 11. It noted 3,811 new cases, bringing its 2016-17 total to 412,468. Bolivia had 191 new cases (20,997 total), while Costa Rica logged 60 new cases and 3,421 total. Most countries, however, have not reported new cases for several weeks. Brazil, which accounted for 82% of all chikungunya cases in 2016 and was responsible for the big jump in cases in the Dec 23 update, has yet to report on the most recent 4 weeks. CIDRAP News Scan (third item)