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

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Approved for public release, distribution unlimited.
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Bipartisan bill to provide assistance to burn pit vets introduced in Senate

8 February - A bipartisan bill has been introduced in the Senate that aims to finally help veterans who were exposed to toxic burn pits while serving in Iraq and Afghanistan. The "Helping Veterans Exposed to Burn Pits Act" was introduced on Tuesday by senators Thom Tillis, R-N.C., and Amy Klobuchar, D-Minn., and aims to create what they say is a ‘center of excellence” within the Department of Veterans Affairs. … The issue of burn pits and their use on military bases during the wars in Iraq and Afghanistan has been referred to as "the new Agent Orange," as scores of soldiers returned home from the fight with a myriad of health issues—many of which proved lethal. … Nearly 64,000 active service members and retirees have put their names on a Burn Pit Registry, but documenting their plight doesn’t guarantee coverage. … The new bill aims to help soldiers like Diaz by providing resources to the VA to give them the ability to better study the health effects caused by burn pit exposure and provide dedicated staff and resources to treat patients. Fox News

Clinical trial using marijuana to treat PTSD in veterans gets underway

7 February - The first participant in a clinical trial designed to evaluate the effectiveness of smoking marijuana to treat PTSD in veterans was given cannabis on Monday, according to the organization conducting the study. The study is the first such trial to evaluate the safety and effectiveness of using marijuana to manage symptoms of post-traumatic stress disorder in U.S. veterans, officials with the Multidisciplinary Association for Psychedelic Studies said in a release on Tuesday. … The study will look at the safety and effectiveness of four separate levels of marijuana potency in 76 veterans. It will provide data on marijuana dosing, composition and side effects, and the potential benefits of using pot to treat PTSD. The data will be intended for clinicians and legislators considering marijuana as a potential treatment for PTSD. Army Times

DoD exempts certain civilian positions from hiring freeze

3 February - The Defense Department has exempted certain civilian positions from the federal hiring freeze that President Donald Trump ordered in a Jan.23 presidential memorandum. DoD released guidance that lists civilian roles necessary to support national security or public safety responsibilities, the Pentagon said Thursday. Defense Secretary James Mattis identified necessary functions such as roles that support contingency missions; scheduled military operations; security cooperation exercises; cyber, intelligence and space operations or planning; and healthcare activities. Other exemptions include first responder and law enforcement positions; roles that are necessary to enforce international obligations; personnel that provide operational support to the president, defense secretary or chairman of the Joint Chiefs of Staff; and care providers of military personnel’s children. ExecutiveGov
Prevalence of asthma tripled in recent deployed veterans

January 2017 - The prevalence of asthma nearly tripled during an eight-year period in VA patients who served in Iraq and Afghanistan, according to a new study. The report, published in *Military Medicine*, said prevalence of the lung condition jumped from 1.1% to 3.1% between 2003 and 2011. The South Texas Veterans Healthcare System-led research also found that the rate of chronic obstructive pulmonary disease (COPD) also increased, though not as dramatically, rising 0.31% to 0.55%. To reach those conclusions, the study team focused on more than 760,000 veterans who served in Iraq or Afghanistan and received VA healthcare during the study period. Researchers suggest the findings “may suggest a link between deployment exposures and increased diagnoses of chronic lung disease in troops deployed to those countries. *U.S. Medicine*

The Navy SEALs and other secretive units are quietly battling a frightening rise in parachute deaths

4 February - ... Since 2013, SEALs have lost four operators in jump training accidents. The Air Force has lost three operators over the past decade. The Marines lost three since 2009. The Army lost one Green Beret and one Ranger in the same time period. Officials say there was no single factor attributed to the jump deaths, which varied in both type and service. Eight of the 11 SOCOM jump deaths since 2011 involved free falls — with heavy combat gear — before the jumper opened his parachute. ... Three of the 11 jump deaths involved static-line jumps, in which the parachute opens immediately after leaving the plane. *Military Times*

Update: Malaria, U.S. Armed Forces, 2016

January 2017 - Malaria infection remains an important health threat to U.S. service members who are located in endemic areas because of long-term duty assignments, participation in shorter-term contingency operations, or personal travel. In 2016, a total of 57 service members were diagnosed with or reported to have malaria, which is the highest number of cases since 2011 (n=124). The relatively low numbers of cases during 2012–2016 mainly reflect decreases in cases acquired in Afghanistan, a reduction due largely to the progressive withdrawal of U.S. forces from that country. The percentage of cases of malaria caused by *Plasmodium vivax* (26.3%; n=15) in 2016 was the highest since 2012. The percentages of cases caused by *P. falciparum* (45.6%; n=26), by *P. malariae* and *P. ovale* (3.5%, n=2), and by unspecified agents (24.6%; n=14) remained similar to those of the preceding 4 years. Malaria was diagnosed at or reported from 25 different medical facilities in the U.S., Afghanistan, Germany, Korea, Djibouti, and Oman. Providers of medical care to military members should be knowledgeable of, and vigilant for, clinical manifestations of malaria outside of endemic areas. *Medical Surveillance Monthly Report*

Wounded Warrior Project cleared of ‘spending lavishly,’ report finds

8 February - After months of investigation, the Better Business Bureau has cleared the
Fact Sheet: Chemical Exposure at Al Hindiyah, 2003

In 2003, members from TF 2/502 INF (101st Airborne Division) discovered an agricultural compound and a military training compound at the north side of the town of Al Hindiyah. These Soldiers found eleven 25-gallon and three 55-gallon drums. The Soldiers donned chemical suits. Several Soldiers became ill with symptoms such as nausea, vomiting, dizziness, and headache.

If you were present at Al Hindiyah during this incident and had similar symptoms, please call the DoD hotline (1-800-497-6261) to enroll in the Iraq Chemical Warfare Agent Exposure project.

GLOBAL

Chinese study finds increasing rate of MCR-1 carriage in humans

8 February - A new study out of China indicates that human fecal carriage of MCR-1 positive, multidrug-resistant Enterobacteriaceae is on the rise. For the study ... Chinese investigators tested 8,022 human fecal samples collected from three hospitals in Guangdong from April 2011 through March 2016. They were looking for the presence of the MCR-1 gene. Of the 8,022 fecal samples, the investigators found that 497 (6.2%) were MCR-1 positive, and 182 (2.3%) were MCR-1 positive and resistant to cefotaxime, a broad-spectrum cephalosporin. The rate of MCR-1 gastrointestinal carriage noted in the study is significantly higher than previous studies have found. The investigators also found that the MCR-1-positive and MCR-1-positive/cefotaxime-resistant samples increased significantly over the 5 years of the study, with a specific increase after January 2014.

CIDRAP Stewardship/Resistance Scan (first item)

Designer compound may untangle damage leading to some dementias

8 February - In a study of mice and monkeys ... researchers showed that they could prevent and reverse some of the brain injury caused by the toxic form of a protein called tau. The results ... suggest that the study of compounds, called tau antisense oligonucleotides, that are genetically engineered to block a cell’s assembly line production of tau, might be pursued as an effective treatment for a variety of disorders. Cells throughout the body normally manufacture tau proteins. In several disorders, toxic forms of tau clump together inside dying brain cells and form neurofibrillary tangles, including Alzheimer’s disease, tau-
associated frontotemporal dementia, chronic traumatic encephalopathy and progressive supranuclear palsy. Currently there are no effective treatments for combating toxic tau. ... Currently researchers are conducting early phase clinical trials on the safety and effectiveness of antisense oligonucleotides designed to treat several neurological disorders, including Huntington's disease and amyotrophic lateral sclerosis. NIH

Disease and economic burdens of dengue

6 February - The burden of dengue is large and growing. More than half of the global population lives in areas with risk of dengue transmission. Uncertainty in burden estimates, however, challenges policy makers' ability to set priorities, allocate resources, and plan for interventions. In this report, the first in a Series on dengue, we explore the estimations of disease and economic burdens of dengue, and the major estimation challenges, limitations, and sources of uncertainty. We also reflect on opportunities to remedy these deficiencies. The Lancet

Map: Find out what new viruses are emerging in your backyard

7 February - ... Over the past 60 years, the number of new diseases cropping up in a decade has almost quadrupled. The number of outbreaks each year has more than tripled since 1980. ... More than a dozen new viruses and pathogenic bacteria have appeared in North America in the past 20 years. Europe has had at least 18. Asia 17. Africa seven. ... Several teams have quantified the global rise in infectious diseases by analyzing disease databases and reviewing studies. They used a few tricks to take into account the fact that over time, doctors and scientists have developed better tools for identifying pathogens. But still, the studies found a surge in diseases. Old diseases that we thought were gone — like the plague — are returning. New diseases are spreading into new regions. And more dangerous strains of old diseases are cropping up more frequently. NPR

Prion test for rare, fatal brain disease helps families cope

6 February - ... [D]iagnosis [of Creutzfeldt-Jakob disease] after death is too late — not just for the patient and families, but also for researchers trying to study potential therapies to slow down or stop the progression of the disease. These same diagnostic frustrations apply to some of the most common forms of dementia, including Parkinson's and Alzheimer's disease, which are also associated with protein misfolding. ... [A new] test, developed a few years ago and still available via only a few laboratories, harnesses the bad protein's ability to induce normal, neighboring proteins to take on its twisted form. The test takes about 90 hours and involves getting a sample of spinal fluid, shaking it up with normal proteins and waiting to see if the normal proteins misfold. ... In several studies now ... the RT-QuIC test has sensitively and specifically identified CJD prions in symptomatic patients; the test has since been distributed to CJD surveillance centers in multiple countries. NPR
Turning the tide against cholera

6 February - ... Thanks largely to efforts that began in cholera's birthplace, a way to finally conquer the long-dreaded plague is in sight. A treatment protocol so effective that it saves 99.9 percent of all victims was pioneered [in Bangladesh]. The World Health Organization estimates that it has saved about 50 million lives in the past four decades. Just as important, after 35 years of work, researchers in Bangladesh and elsewhere have developed an effective cholera vaccine. It has been accepted by the W.H.O. and stockpiled for epidemics. Soon, there may be enough to begin routine vaccination in countries where the disease has a permanent foothold. Merely creating that stockpile — even of a few million doses — profoundly improved the way the world fought cholera, Dr. Margaret Chan, secretary general of the W.H.O., said last year. Ready access to the vaccine has made countries less tempted to cover up outbreaks to protect tourism, she said. That has sped up emergency responses and attracted more vaccine makers, lowering costs. “More cholera vaccines have been deployed over the last two years than in the previous 15 years combined,” Dr. Chan said. The New York Times

ZIKA VIRUS

No women's Zika vaccine likely before 2020: WHO

1 February - About forty potential vaccines for the Zika virus are being tested, but none are likely to be available for women of childbearing age before 2020, the World Health Organization said Wednesday. WHO director Margaret Chan said the virus, linked to deformations in babies' heads and brains, remained "firmly entrenched" in large parts of the world. Although progress toward effective prevention has been made, with some drugs now in clinical trials, "a vaccine judged safe enough for use in women of childbearing age may not be fully licensed before 2020," Chan said. The agency declared in November that Zika was no longer a public health emergency, though Chan said Wednesday that the WHO was setting up a new support programme for countries around the world. Medical Xpress

Study shows low rate of positive tests in US Zika blood donor screening

7 February - Researchers this week described the first positive results from a new test to screen blood donations for Zika virus RNA, based on results from 358,796 donations. ... Twenty-three samples were positive on initial tests, with follow-up testing suggesting that 14 represented probable Zika infections. ... When the investigators looked at the 14 probable cases, they found that 10 people had traveled to active Zika transmission areas within 90 days of donating blood. Six (43%) reported at least one of four major symptoms of Zika illness. Three of the people with travel histories also had potential sexual exposure to the virus. The authors said they couldn't rule out the chance that some of the nine who tested negative on follow-up testing were true positives. ... However, assuming that all nine
Radiation Hazard Scale

The Centers for Disease Control and Prevention has developed the Radiation Hazard Scale as a tool for communication in emergencies. This tool:

- Provides a frame of reference for relative hazards of radiation.
- Conveys meaning without using radiation measurements or units that are unfamiliar to people.
- Is designed for use only in radiation emergencies and is applicable for short-term exposure durations, for example, over a period of several days.
- Is best used when accompanied with protective action recommendations or instructions.
- Has been audience tested with public information officers, emergency management and public health professionals, and members of the public.

The panic is over at Zika’s epicenter. But for many, the struggle has just begun.

7 February - ... A year ago Zika was spreading rapidly across the Americas, prompting governments to warn women to avoid or postpone pregnancy. Today Zika is waning virtually everywhere in the Western Hemisphere. Epidemiologists say the pattern fits the typical trajectory of a virus that spreads explosively at first but fizzles out as it runs out of new hosts to infect. What researchers still don’t understand is why the majority of Zika-related birth defects have been so concentrated in one region of a single country. Of the more than 2,600 cases of Zika-related congenital syndrome confirmed so far in the Americas, nearly 2,400 are in Brazil. The vast majority are in a cluster of northeastern states, including Pernambuco, where Recife is located. ... State health records show that 2015 was a peak year for births in Pernambuco, precisely at the moment when Zika was most virulent but had yet to be identified. As much as 70 percent of Recife’s inhabitants contracted Zika in 2015 and 2016, according to Pires, and that high rate of infection likely prevented a revival of the epidemic in recent months — summer in the Southern Hemisphere — because most of the population has become immune. The Washington Post

Zika virus ‘spillback’ into primates raises risk of future human outbreaks

8 February - Scientists usually worry that animal diseases could spill over into humans. But “spillback” of Zika virus into monkeys in South America could be just as dangerous. In areas where Zika infections are prevalent among humans and mosquitoes are abundant, the virus may be transmitted to wild primates, disease ecologist Barbara Han said. ... If the disease gets established in monkeys or other wild primates, the animals may serve as reservoirs for future human outbreaks. That could make it nearly impossible to get rid of the virus, said Han. ... Two contenders on her list of at-risk species — black-striped capuchin monkeys and common marmosets — had been found by other researchers to be infected with Zika viruses matching the human strain in Brazil. The finding indicates the spillback has already started. Capuchins are of particular concern because they are often kept as pets and used to attract tourists. Science News
Influenza Season Activity and Recommendations for Clinicians

Influenza activity in the United States began to increase in early December, remained elevated through mid-January, and is expected to continue for several more weeks. Influenza A(H3N2) viruses have been most common this season.

Clinicians will learn about 2016–2017 influenza activity to date, and hear an overview of CDC’s recommendations for healthcare providers including influenza vaccination and the use of antiviral medications for the treatment of influenza.

Date: Thursday, February 16, 2017
Time: 2:00-3:00 pm (Eastern Time)
Call-In: 888-469-3010 (U.S. Callers)
1-773-756-4803 (International Callers)
Passcode: 3607519
Webinar

AFHSB: DoD Seasonal Influenza Surveillance Summary

For Week 4:
- NORTHCOM: Influenza activity was low for the majority of the country.
- EUCOM: Influenza activity was minimal to low in EUCOM with the exception of Italy which had moderate activity.
- PACOM: Influenza activity remained minimal across PACOM.
- CENTCOM and AFRICOM: Influenza activity ranged from minimal to low for locations with available data in CENTCOM and AFRICOM.
- 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 28 January 2017 (Week 4):
All regions, except for RHC-E, saw a decrease in the percentage of specimens testing positive for influenza A. Of all the regions, RHC-A is still reporting the most number of influenza A cases.
- ILI Activity: Army incident ILI outpatient visits in week 4 were 20% lower than the same week last year.
- Influenza cases: Five hospitalized influenza-associated cases were reported to APHC through DRSi in week 4; 1 AD Service Member and 4 non-AD beneficiaries.
- Viral specimens: During week 4, 438 of 1632 (27%) laboratory specimens tested positive for respiratory pathogens. RHC-A reported most (42.3%) of the influenza A-positive specimens, followed by HC-C (30.6%), RHC-P (13.7%), RHC-E (13%), and CENTCOM (0.3%). APHC

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

During week 4 (January 22–28, 2017), influenza activity increased in the United States.
- Viral Surveillance: The most frequently identified influenza virus subtype reported by public health laboratories during week 4 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased.
- Pneumonia and Influenza Mortality: Due to data processing problems, the National Center for Health Statistics (NCHS) mortality surveillance data for the week ending January 14, 2015 (week 2) will not be published this week.
- Influenza-associated Pediatric Deaths: Seven influenza-associated pediatric deaths were reported. CDC
Long Acting Reversible Contraception Training Initiative

Learn about long-acting reversible contraception (LARC) – intrauterine devices and the subdermal hormonal implant - and get hands-on placement experience.

Also learn about the scope of the issue of unintended pregnancy in the military from a readiness standpoint and explore ways to decrease barriers to effective contraception. CME available.

No cost for DoD-affiliated healthcare team members.

Training Dates and Locations

China: Central China halts live poultry trade amid bird flu concerns

7 February - A suspension has been placed on the sale of live poultry in several markets in the central province of Hunan over bird flu concerns. Hunan has reported 20 H7N9 human infections, including five fatalities, since 2017, according to the provincial center for disease control and prevention Tuesday. The center expects more infections in the following months and, thus, decided to close several markets in cities including Changsha and Yueyang. The markets were ordered to disinfect on a regular basis to prevent the virus from spreading. There have been no human-to-human transmission of the H7N9 virus and no major genetic mutation of the virus has been found, according to the center. Xinhua

ECDC: Flu News Europe

Week 4/2017 (23 - 29 January 2017)

- Influenza activity remained elevated across the region with 28 of 43 countries reporting increased activity.
- Most countries reported stable or decreasing activity compared to the previous week.
- Excess all-cause mortality has been observed among the 15-64 years and 65 years and over age groups in many of the 18 countries that provide data on excess all-cause mortality and, most likely, this is mainly due to the circulation of influenza A(H3N2) virus.
- The proportion of influenza virus detections among sentinel surveillance specimens was 51%, similar to that seen since week 51/2016.
- The great majority of influenza viruses detected were type A (95%) and, of those subtyped, 97% were A(H3N2).

European Center for Disease Prevention and Control/WHO

NHRC: Febrile Respiratory Illness Surveillance Update

For 2017 Week 4 (through 28 January 2017):

- Influenza: Four cases of NHRC laboratory-confirmed influenza (4 A/H3 and 1 A/H1) among US military basic trainees. One case had been vaccinated > 14 days prior.
- FRI surveillance at all eight U.S. military basic training centers indicated FRI rates were elevated at Fort Benning and MCRD Parris Island.

Naval Health Research Center

Study finds some downside to multiple-year vaccination against H1N1 flu

8 February - A case-control study that included four seasons’ worth of data in Spain found only a small effect of previous-year vaccination lowering the vaccine effectiveness (VE) of flu immunization regarding the 2009 H1N1 strain, with a 46% VE over the seasons against that strain. ... When analyzing season-specific data, the investigators found no significant
differences in flu VE between those vaccinated in only the current season and those who had also been vaccinated before. They noted VE of 66% in those who had received one or two previous doses, 47% in those who had received more than two doses, and 52% in those who were vaccinated but had received no previous doses, but these differences were not statistically significant. In pooled analyses using all the data, however, the team determined that VE was lower among those with two or more previous-season doses. VE was 66% in those with one to two previous doses, 52% in those with no previous doses, and 37% in those with more than two doses. CIDRAP News Scan (fourth item)

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

During 15 - 28 January 2017 (Surveillance Weeks 3 & 4), a total of 388 specimens were collected from 52 locations. Results were finalized for 291 specimens from 50 locations. During Week 3, 79 influenza A(H3N2) and eight influenza B viruses were identified. During Week 4, one influenza A(H1N1)pdm09, 65 influenza A(H3N2), and five influenza B viruses were identified. Approximately 45% of specimens tested positive for influenza during Week 3. Approximately 38% of specimens tested positive for influenza during Week 4. The influenza percent positive for the season is approximately 25%. US Air Force School of Aerospace Medicine & Defense Health Agency

**WHO: Influenza Update**

6 February - Influenza activity in the temperate zone of the northern hemisphere continued to increase, with many countries especially in East Asia and Europe having passed their seasonal threshold early in comparison with previous years. Worldwide, influenza A(H3N2) virus was predominant. The majority of influenza viruses characterized so far were similar antigenically to the reference viruses contained in vaccines for use in the 2016-2017 northern hemisphere influenza season. All tested viruses collected recently for antiviral sensitivity were susceptible to the neuraminidase inhibitor antiviral medications. WHO

**VETERINARY/FOOD SAFETY**

Are we eating our fleece jackets? Microfibers are migrating into field and food

6 February - The innovation of synthetic fleece has allowed many outdoor enthusiasts to hike with warmth and comfort. But ... each wash of their jackets and pullovers releases thousands of microscopic plastic fibers, or microfibers, into the environment — from their favorite national park to agricultural lands to waters with fish that make it back onto our
In fact, peer-reviewed studies have shown that these synthetic microfibers — a type of plastic smaller than a millimeter in length and made up of various synthetic polymers — have popped up in table salt in China, in arctic waters and in fish caught off the coast of California. These tiny fibers make up 85 percent of human debris on shorelines across the globe, according to a 2011 study. NPR

Brazil yellow fever 'kills hundreds of monkeys'

8 February - An outbreak of yellow fever has claimed the lives of more than 600 monkeys and dozens of humans in Brazil's Atlantic rainforest region, threatening the survival of rare South American primates, according to a zoologist. The monkeys, mostly brown howlers and masked titis, are falling out of trees and dying on the ground in the forests of Espirito Santo state in Brazil's southeast. Al Jazeera

South Korea on high alert as second strain of foot-and-mouth disease confirmed

9 February - South Korea raised the country's foot-and-mouth disease alert status to the highest level as a second strain of the disease was confirmed three days after a first outbreak was reported, Seoul's agriculture ministry said on Thursday. The A-type strain of the disease was discovered at a dairy farm in Yeoncheon, less than 50 miles north of the capital, said Kim Kyeong-kyu, deputy minister for food industry policy. Reacting shortly after an outbreak of the O-type strain was confirmed in southeast Korea, the ministry raised the alert status one notch to the maximum. "We are raising the alert level as foot-and-mouth cases occurred at different parts of the country and a second type of the disease emerged," Kim said at a briefing. As of Wednesday, 826 cattle had been culled, the ministry said. Reuters

Adults urged to get vaccinated

7 February - Too many U.S. adults are not getting vaccinated, putting themselves and others at risk, immunization experts say. According to the latest available data, about 44 percent of adults over age 19 had a flu shot; 20 percent had a Tdap vaccine, which protects against tetanus, diphtheria and pertussis; and 20 percent of 19-to-64-year-olds at risk of pneumonia had that vaccine (compared to 60 percent of those over 65). Just 27 percent of those over age 60 were vaccinated against herpes zoster. ... [Dr. Sandra] Fryhofer, an Atlanta physician and adjunct associate professor at Emory University School of Medicine, also
pointed to racial and ethnic disparities in vaccination rates, with whites more likely than all other groups to be vaccinated. And she noted that adults with health insurance are two to five times more likely to be appropriately vaccinated. Reuters

American Cancer Society endorses 2-dose HPV vaccine recommendation

7 February - The American Cancer Society (ACS) today endorsed a recommendation in October by a federal vaccine advisory group that reduces the number of doses for human papillomavirus (HPV) vaccination. After reviewing the latest scientific evidence about protection, the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) in October voted to support a two-dose recommendation for boys and girls who receive their first dose from ages 9 to 14 years. The move whittles the number of doses in the HPV regimen from three to two, a move that could improve vaccine uptake—which is much lower than health officials would like—by streamlining doses and decreasing cost. Young people who receive their first HPV vaccine dose between ages 15 and 26 should still receive the three-dose series to be fully protected. CIDRAP News Scan (third item)

Aspirin may help prevent pregnancy loss in women with high inflammation, NIH study finds

7 February - A daily low dose of aspirin may help a subgroup of women, those who have previously lost a pregnancy, to successfully conceive and carry a pregnancy to term, according to an analysis by researchers at the National Institutes of Health. The women who benefited from the aspirin treatment had high levels of C-reactive protein (CRP), a substance in the blood indicating system-wide inflammation, which aspirin is thought to counteract. ... In their analysis, researchers found no significant differences in birth rates between those receiving aspirin and those receiving placebo in both the low CRP and mid CRP groups. For the high CRP group, those taking the placebo had the lowest rate of live birth at 44 percent, while those taking daily aspirin had a live-birth rate of 59 percent—a 35-percent increase. NIH

Lessons on aging well, from a 105-year-old cyclist

8 February - At the age of 105, the French amateur cyclist and world-record holder Robert Marchand is more aerobically fit than most 50-year-olds — and appears to be getting even fitter as he ages, according to a revelatory new study of his physiology. ... [Veronique Billat, a professor of exercise science at the University of Evry-Val d’Essonne in France] had him begin a new training regimen. Under this program, about 80 percent of his weekly workouts were performed at an easy intensity, the equivalent of a 12 or less on a scale of 1 to 20, with 20 being almost unbearably strenuous according to Mr. Marchand’s judgment. ... Mr. Marchand followed this program for two years. ... Mr. Marchand’s VO2 max
was now about 13 percent higher than it had been before, she found, and comparable to the aerobic capacity of a healthy, average 50-year-old. He also had added to his pedaling power, increasing that measure by nearly 40 percent. ... These data strongly suggest that "we can improve VO2 max and performance at every age," Dr. Billat says.

The New York Times

Male contraceptive gel passes monkey test

7 February - An experimental new type of male contraceptive that blocks sperm flow with a gel has been successful in monkey trials. Vasalgel acts as a physical barrier once injected into the tubes that sperm would swim down to the penis. The company behind it says a two-year trial, ... shows the gel works and is safe - at least in primates. It hopes to have enough evidence to begin tests in men within a few years. If those get funding and go well - two big “ifs” - it will seek regulatory approval to make the gel more widely available to men. It would be the first new type of male contraceptive to hit the market in many decades.

BBC News

Study of cancer-causing toxins finds e-cigarettes much safer than smoking

6 February - Consuming e-cigarettes is far safer and less toxic than smoking conventional tobacco cigarettes, according to the findings of a study analyzing levels of dangerous and cancer-causing substances in the body. Researchers found that people who switched from smoking regular cigarettes to e-cigarettes or nicotine replacement therapy (NRT) such as gum or patches for at least six months had much lower levels of toxins in their saliva and urine than those who continued to smoke. "Our study adds to existing evidence showing that e-cigarettes and NRT are far safer than smoking, and suggests that there is a very low risk associated with their long-term use," said Lion Shahab, a specialist in epidemiology and public health at University College London who led the work.

Reuters

Study: Toxic metals found in e-cigarette liquids

7 February - A study led by researchers at the Johns Hopkins Bloomberg School of Public Health found high levels of toxic metals in the liquid that creates the aerosol that e-cigarette users inhale when they vape. The study, believed to be the first to examine a cross-section of metals in multiple e-cigarette brands, analyzed the liquid in five brands of first generation e-cigarettes for cadmium, chromium, lead, manganese and nickel. The liquid is the component of e-cigarettes that, when heated, delivers ingredients, often including nicotine and flavors, to the user. In first generation e-cigarettes, the liquid is stored in the cartridge in close contact with the heating coil. The researchers found all five heavy metals – which can be toxic or carcinogenic when inhaled – in all five brands, though levels varied by brand. The main source of the metals, the researchers believe, is the coil that heats the liquid. Johns Hopkins Bloomberg School of Public Health News
Chad: Hepatitis E outbreak update - MSF calls for help

9 February - In a follow-up on the hepatitis E outbreak in Am Timan, Chad, Doctors Without Borders/Médecins Sans Frontières (MSF) reported Wednesday that hepatitis E outbreak is escalating across Am Timan, in the Salamat region of South-Eastern Chad and more help is needed. MSF identified the first hepatitis E cases five months ago and has treated 885 patients with Acute Jaundice Symptoms (AJS), with numbers increasing to an average of around 60 new cases a week. ... Since September, 70 patients have confirmed cases of hepatitis E (HEV RDT+), 64 have been hospitalized, and 11 have died, including four pregnant women. Outbreak News Today

South Africa: At least 94 psychiatric patients died of negligence in South Africa last year

1 February - At least 94 psychiatric patients died of negligence in South Africa last year after they were moved from a licensed home to unregistered facilities, the health ombudsman said on Wednesday, sparking public outrage. About 1,300 psychiatric patients were moved from a unit of the Life Healthcare Group to charities during last year in a cost-cutting bid by the health department in Gauteng province, the commercial hub where Johannesburg and Pretoria are located. The ombudsman said that all 27 facilities to which the patients were transferred operated under invalid licenses. ... "It's remarkable that only one person has died from a mental health-related illness," he told journalists. The other 93 "have died from other things like dehydration, diarrhea, epilepsy, heart attacks, all other things except mental illness". Reuters

Afghanistan/Pakistan: Dozens killed as heavy snow hits Afghanistan and Pakistan

5 February - Dozens of people in Afghanistan and Pakistan were killed after heavy snow and avalanches hit over the weekend. In eastern Afghanistan, at least 50 people died and dozens more were missing on Sunday after an avalanche buried a village in Nuristan, provincial governor Hafiz Abdul Qayum said. ... At least five other deaths from collapsed roofs were reported elsewhere in Nuristan. In the northern province of Badakhshan, over the past two days as many as 19 people were killed and 17 injured by avalanches, collapsed roofs and road accidents. ... In neighboring Pakistan, at least nine people, including children, were
killed by an avalanche in the northern Chitral district, with as many as 14 residents believed to still be trapped in collapsed houses, district official Syed Maghferat Shah said. Reuters

Afghanistan: Spike in Afghan kids killed, maimed by unexploded munitions

6 February - The number of child casualties in the long-running Afghan war jumped last year, spiking 24% from 2015 in large part from leftover munitions, the U.N. Assistance Mission in Afghanistan said in a report on Monday. "Children have been killed, blinded, crippled -- or inadvertently caused the death of their friends -- while playing with unexploded ordnance that is negligently left behind by parties to the conflict," said Zeid Ra'ad Al Hussein, UN High Commissioner for Human Rights. The report also cited a 3% increase in total conflict-related civilian casualties in 2016 compared to the previous year -- the highest number since the United Nations started documenting the deaths and injuries in the conflict in 2009. That number stands at 11,418 deaths and injuries in 2016. CNN

Yemen Emergencies Response Plan 2017

8 February - ... An estimated 14.8 million people [in Yemen] lack access to basic healthcare, including 8.8 million living in severely underserved areas. In light of access and security constraints, the 2017 Health Cluster response plan targets 10.4 million people. Medical materials are in chronically short supply, and only 45% of health facilities are functioning. As of October 2016, at least 274 health facilities had been damaged or destroyed, 13 health workers had been killed and 31 injured. According to Health Cluster analysis, the main causes of avoidable deaths in Yemen are communicable diseases, maternal, perinatal and nutritional conditions (together accounting for 50% of mortality) and non-communicable diseases (39% of mortality). There are 18 848 suspected cholera cases since October 2016. On average, the conflict kills or injures nearly 75 people every day. WHO

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Austria: Teufelberger recalls rescue ropes and throwlines

7 February - Teufelberger, a family-owned business headquartered in Wels, Austria, has recalled static ropes and throwlines because they are mislabeled as being certified to specific voluntary NFPA safety standards, but they "cannot be relied upon for any purpose, posing fall and injury hazards to users," according to the U.S. Consumer Product Safety Commission's and the company's recall notices. This recall involves CMC and New England Ropes brand 7.5 mm and 8 mm static ropes and throwlines used for rescue operations. Occupational Health and Safety
Europe: New European Commission directive establishes fourth list of OELs

7 February - A new European Commission directive, Directive 2017/164, issued on Jan. 31 establishes a fourth list of indicative occupational exposure limit values (IOELVs, as the directive calls them). The 28 Member States now must enact the laws, regulations, and administrative provisions needed to comply by Aug. 21, 2018. The list includes carbon monoxide, sulfur dioxide, hydrogen cyanide, manganese, and diacetyl, among many other chemicals.  

Occupational Health and Safety

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USNORTHCOM

U.S.: 9 tornadoes reported in Louisiana, Mississippi, at least 31 injured and 9,400 residents without power

8 February - Nine tornadoes were reported Tuesday in Louisiana and Mississippi -- four of which have been confirmed -- damaging property, injuring at least 31 people and prompting Louisiana Governor John Bel Edwards to declare a state of emergency in the state. … The tornado watch in Louisiana and Mississippi expired after 2 p.m., when the storms moved east, Griffin said. The tornado watch in Alabama and Florida is set to expire at 6 p.m. Severe storms are expected in cities such as Gulfport, Biloxi, Mobile and Pensacola. … Approximately 9,400 Orleans Parish residents are currently without power, the mayor said.  

ABC News

U.S.: A quarter of adults in the U.S. have hearing loss because of noise

7 February - Forty million American adults have lost some hearing because of noise, and half of them suffered the damage outside the workplace, from everyday exposure to leaf blowers, sirens, rock concerts and other loud sounds, the Centers for Disease Control and Prevention reported Tuesday. A quarter of people ages 20 to 69 were suffering some hearing deficits, the CDC reported in its Morbidity and Mortality Weekly Report, even though the vast majority of the people in the study claimed to have good or excellent hearing. The researchers found that 24 percent of adults had “audiometric notches” — a deterioration in the softest sound a person can hear — in one or both ears. The data came from 3,583 people who had undergone hearing tests and reported the results in the 2011-2012 National Health and Nutrition Examination Survey (NHANES).  

The Washington Post
U.S.: Drought dramatically worsens deadly West Nile virus epidemics in U.S. – scientists

8 February - Drought has increased the severity of outbreaks of the deadly West Nile virus in the United States, and may double the size of epidemics over the next 30 years, scientists said on Wednesday. Outbreaks of the mosquito-borne virus have occurred every year since the virus spread to North America in 1999, and in some years caused only a few hundred severe cases nationally. But in each of three years - 2002, 2003 and 2012 - about 3,000 people suffered brain-damaging meningitis or encephalitis, and almost 300 died. In some states the number of cases varied 50-fold from year to year. "We thought epidemics would coincide with the most ideal temperatures for (virus) transmission," Marm Kilpatrick, an associate professor of ecology and evolutionary biology at the University of California, Santa Cruz, said in a statement. "Instead, we found that the severity of drought was far more important nationally." Reuters

U.S.: Elevated blood lead levels associated with retained bullet fragments — United States, 2003–2012

10 February - Gunshot wounds cause an estimated 115,000 injuries in the United States per year, approximately 70% of which are nonfatal. Bullet removal is not routinely indicated for victims of gunshot injuries with retained bullet fragments (RBFs) unless they are a cause of immediate morbidity. Symptoms of lead toxicity are often nonspecific and can appear years after the initial injury. States participating in the Adult Blood Lead Epidemiology and Surveillance (ABLES) program require health care providers and laboratories to report blood lead level (BLL) test results to the state health department. The primary focus of adult screening is to detect occupational exposure; RBFs are a less recognized potential source of lead exposure. During 2003–2012, ABLES programs in 41 states reported 145,811 persons with BLLs ≥10 µg/dL. RBF-associated cases accounted for 457 (0.3%) of 145,811 persons with elevated BLLs. Among 349 persons with BLLs ≥80 µg/dL, 17 (4.9%) were RBF-associated; the maximum recorded RBF-associated BLL was 306 µg/dL. Elevated BLLs attributable to RBFs occurred primarily among males aged 16–24 years, whereas the greatest number of non-RBF–associated cases occurred among persons aged 35–44 years.

Morbidity and Mortality Weekly Update

U.S.: Fewer roadway fatalities tied to less driving

9 February - Researchers at the University of North Carolina at Chapel Hill have found a decrease in the number of people driving correlates with a marked decrease in traffic fatalities. The new study published in the American Journal of Preventive Medicine showed that a significant decrease in vehicle travel from 2003 to 2014 is linked to a decrease in the number of vehicle fatalities in the United States. ... The study showed that between 2004 and 2014, per-capita driving decreased by roughly 600 miles each year with millennials born in the 1980s and 1990s seeing the largest decline. Vehicle travel decreased by 9.2 minutes per day from 2003 to 2014 with the largest decline in men aged 20 to 29. During this time
period, motor vehicle fatalities showed marked declines among young men. UPI

**U.S.: Public health, bioethics experts discuss the consequences of refusing refugees**

3 February - Bioethicist Nancy Kass says there are two schools of thought governing the current refugee crisis: a nationalist view "that essentially says 'not my problem,'" and a globalist view that resettling displaced populations is a moral mandate. "Stated differently," says Kass, "the benefit to others is a matter of life and death. And the sacrifice to us, in the long run, is minimal. In such cases, ethics says we should act." Kass was among the nine speakers who convened at the Johns Hopkins University Bloomberg School of Public Health on Thursday for a symposium examining the impact of President Donald Trump’s recent executive order to block entry into the U.S. by individuals from seven countries, and to suspend for 120 days the U.S. Refugee Admissions Program. The Hub

**U.S.: The pharmacies thriving in Kentucky's opioid-stricken towns**

7 February - ... Clay's residents filled prescriptions for 2.2 million doses of hydrocodone and about 617,000 doses of oxycodone in the 12-month period ending last September—that's about 150 doses for every man, woman, and child. ... The expansion of Medicaid through the Affordable Care Act increased the percentage of Clay County residents with Medicaid and gave more of them access to free prescription drugs, including pain pills. ... “It did enable people to get pain pills for free if they can get someone to prescribe them, but it also increased their ability to get treatment because they now had a way to pay for it,” [Tim Cesario] said. “So on one hand it’s worked against us and on another, it has worked with us.” The Atlantic

**U.S.: Trump’s travel ban, aimed at terrorists, has blocked doctors**

6 February - The Trump administration has mounted a vigorous defense of its ban on travel from seven majority-Muslim nations, saying it is necessary to prevent terrorists from entering the United States. But the ban, now blocked by a federal judge, also ensnared travelers important to the well-being of many Americans: doctors. Foreign-born physicians have become crucial to the delivery of medical care in the United States. They work in small towns where there are no other doctors, in poor urban neighborhoods and in Veterans Affairs hospitals. Forty-two percent of office visits in rural America are with foreign-born physicians, according to the American Academy of Family Physicians. ... Across the United States, more than 15,000 doctors are from the seven Muslim-majority countries covered by the travel ban, according to The Medicus Firm, a firm that recruits doctors for hard-to-fill jobs. That includes almost 9,000 from Iran, almost 3,500 from Syria and more than 1,500 from Iraq. The New York Times
Asia: WHO, medical experts, warn of rising health costs in Asia

6 February - Asia faces a growing burden in treatment costs due to rising numbers of patients diagnosed with cancer, as well as those suffering from stroke and dementia over the next decade. While Asia's economic progress has led to sharply lower levels of poverty, it has resulted in social and lifestyles changes ranging from diets to increasing urban pollution, that extract an increasing toll on communities. ... [G]lobally treatment costs are rising. In 2015, the spending on cancer drugs rose by 11.5 percent to $107 billion, and is forecast to rise to $150 billion by 2020 – due largely to the expense of newer and more specialized drugs. The Boston Consulting Group said in a recent report the “cancer burden in developing countries is reaching pandemic proportions,” seen as a leading cause of death in India with some 2.5 million patients. They forecast that India has "a chance of the disease rising five-fold by 2025". China reported four million new cancer cases in 2016, with the national health bill set to soar “fourfold” to 12.7 trillion yuan ($1.84 trillion) by 2025, the consultants said. VOA

India: India scraps funding ties with Gates Foundation on immunisation

8 February - A group backed by the Bill & Melinda Gates Foundation that works on India's immunisation programmes will now be funded by the health ministry, a government official said, a move in part prompted by fears foreign donors could influence policy making. The decision is seen as part of India's broader clampdown on non-governmental organisations to assert control over decision making in key policy areas. Last year, India ordered the dismissal of dozens of foreign-funded health experts working on public welfare schemes. The Gates Foundation has for years funded the Immunization Technical Support Unit (ITSU), which provides strategy and monitoring advice for New Delhi’s massive immunisation programme that covers about 27 million infants each year. It will now be funded by the government which felt there was a need to completely manage the crucial programme on its own. Thomson Reuters Foundation

Japan: Are elevated Fukushima radiation levels cause for alarm?

8 February - The utility company that operated the Fukushima Daiichi nuclear plant in Japan — the one that went into triple meltdown after the enormous 2011 earthquake and tsunami — has released some jaw-dropping figures. The radiation level in the containment vessel of reactor two has reached as high as 530 Sieverts per hour, Tokyo Electric Power Co, or Tepco
as it’s known, said last week. At this level of radioactivity, a person could die from the briefest of exposures. Tepco recorded the radiation near the reactor core ... using a long, remote-controlled camera and radiation measurement device. ... Fumiya Tanabe, nuclear safety expert ... said while experts expected the radiation reading inside the Daiichi reactors to be high, it was still "shocking" to learn how high it was six years on. "It will be very difficult to operate robots in there for a long time to come, and to remove the melted fuel. So the finding might greatly affect the decommissioning time schedule," he said.

Stars and Stripes

Nepal: Report notes high levels of highly resistant Acinetobacter in Nepal

8 February - Almost all isolates of Acinetobacter baumannii in Nepal were found to be resistant to multiple antibiotics, according to a small study yesterday. ... Nepalese researchers analyzed 44 isolates of A baumannii, an increasingly important pathogen. The found that 43 (98%) were resistant to carbapenems, an important tool for combating antibiotic-resistant bacteria. The same number of isolates were multidrug resistant, but all were susceptible to colistin. The bla-OXA-23 gene was detected in all of the isolates, while the New Delhi Metallo-beta-lactamase-1 (NDM-1) gene was identified in 6 (14%).

CIDRAP Stewardship/Resistance Scan (second item)

Philippines: Philippines report more than 200,000 dengue cases for a 2nd year

9 February - The Philippines has been one of southeast Asia’s dengue hotspots in recent years and according to the latest figures from the Department of Health-Epidemiology Bureau (DOH-EB), the archipelago recorded more than 200,000 dengue cases for the second year in a row. Health officials report a total of 211,108 dengue cases in 2016, slightly down from 2015 when 213,930 cases were recorded. ... Last April, the DOH instituted The Dengue School-Based Immunization program and hundreds of thousands of schoolchildren were vaccinated with the vaccine, Dengvaxia. The Philippines was the first country to roll out a dengue vaccination program.

Outbreak News Today

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Brazil: Yellow fever in Brazil

1 February - The Brazilian Ministry of Health has reported an ongoing outbreak of yellow fever starting in December 2016. The first cases were reported in the state of Minas Gerais, but cases have since been reported in the neighboring states of Espirito Santo and Sao
Paulo. Cases have occurred mainly in rural areas, with most cases being reported from Minas Gerais state. Some cases have resulted in death. Health authorities in the affected states, with assistance from the Brazilian Ministry of Health, are conducting mass vaccination campaigns among unvaccinated residents of affected areas. In response to this outbreak, health authorities have recently expanded the list of areas in which yellow fever vaccination is recommended for travelers. CDC

PAHO reports only 123 new chikungunya case

6 February - Continuing a slow start to 2017, the Pan American Health Organization (PAHO) on Feb 3 reported only 123 new chikungunya cases, bringing the yearly total so far to 582 cases. Most of the new cases were in Peru and Colombia. Peru reported 47 new infections, to reach 98 cases for the year, while Colombia notched 39 new cases to bring its 2017 total to 106. Costa Rica had 21 new infections and 48 total. In addition, Ecuador (9 cases), Nicaragua (6), and Mexico (1) all reported their first cases, bringing to eight the number of chikungunya-affected nations that have reported case numbers to PAHO. CIDRAP News Scan (fourth item)