Contents

U.S. MILITARY

- Among veterans, younger age predicts higher risk for unsafe opioid dosing
- Army recognizes best Lean Six Sigma initiatives
- New Zealand company partners with U.S. Army for engineered skin
- Services required to report plans to accept new transgender troops

GLOBAL

- A radical approach against superbugs: learn to live with them
- Air pollution linked to poor sleep, study finds
- Brazilian doctors use fish skin to treat burn victims
- Faster is better when it comes to sepsis care
- G20 health ministers agree to tackle antibiotics resistance
- Health agency spends more on travel than AIDS
- Hospitals, health workers under attack
- Large study shows dengue in pregnancy might increase preterm births
- Modified experimental vaccine protects monkeys from deadly malaria
- PTSD tied to cardiac inflammation
- Scientists one step closer to 3-D-printed ovaries to treat infertility
- Some social scientists are tired of asking for permission
- Study calls 3D printing’s safety into question
- Which countries have the best healthcare?
- World Bank says most nations not ready for pandemic
- ZIKA VIRUS
- Cellular, molecular mechanisms of Zika revealed
- Drop in cases of Zika threatens large-scale trials
- Near real-time genomic sequencing maps introduction and spread of Zika virus in US
- Public health labs to get help sharing Zika test data electronically
- Study suggests Zika mosquitoes can spread 3 viruses in 1 bite

INFLUENZA

• China: Human infection with avian influenza A(H7N9) virus
• ECDC: Flu News Europe
• NHRC: Febrile Respiratory Illness Surveillance Update
• Two Chinese cities close poultry markets after H7N9 bird flu infections
• USAFSAM & DHA: DoD Global, Laboratory-Based, Influenza Surveillance Program

VETERINARY/FOOD SAFETY

• 10 hospitalized with botulism tied to nacho cheese sauce
• Almost 160 tons of institutional meals recalled for bad water
• Extensive multidrug resistance found in Salmonella from Ethiopian poultry
• Nathan’s, Curtis brands included in massive hot dog recall
• Study finds warmer ocean waters linked to domoic acid production

WELLNESS

• Army researchers showcase Performance Readiness Bar
• Chocolate tied to decreased risk of irregular heart rhythm
• Cigarette filters may increase lung cancer risk
• Emails can help smokers quit
• Poor sleep may hike mortality in metabolic syndrome
• Probiotics show promise as mood elevator
• The worst fat in the food supply
• To improve your diet, know these four food myths
• Treating sleep problems may ease depression

USAFRICOM

• Democratic Republic of the Congo: WHO optimistic on controlling DRC Ebola outbreak
• Democratic Republic of the Congo: WHO - 37 Ebola cases in DRC, 4 deaths
• Horn of Africa: UNICEF Measles Outbreak Humanitarian Situation Report

USCENTCOM

• Pakistan: Karachi chikungunya cases rise in May
• Saudi Arabia/Afghanistan: Saudi Arabia provides 32 ambulances to Afghanistan
• Saudi Arabia: Two new MERS cases reported in Saudi Arabia
• Yemen’s cholera case count nearly doubles

USEUCOM

• Italy: Italy makes vaccination mandatory for children
• New laws in the U.K. and EU further restrict tobacco industry

USNORTHCOM

• U.S.: 58 percent of construction workers say safety takes a backseat to productivity
• U.S.: A vital drug runs low, though its base ingredient is in many kitchens
• U.S.: CDC - Alzheimer’s disease deaths soaring
• U.S.: Gender-confirmation surgeries increase after social changes
• U.S.: Nearly 700 vacancies at CDC because of Trump administration’s hiring freeze
• NIOSH touts DERMaL eToolkit to aid responders
• U.S.: Norovirus outbreak grows to 2,800 cases in northern California schools
On May 17, 2017, the U.S. Food and Drug Administration (FDA) issued a safety communication warning about the use of Magellan Diagnostics' LeadCare® analyzers with venous blood samples because they might result in falsely low test results. FDA is now advising that Magellan Diagnostics' LeadCare® analyzers should no longer be used with venous blood samples. The safety alert does not apply to capillary blood lead test results collected by fingerstick or heelstick.

Date: Wednesday, May 24, 2017
Time: 2:00-3:00 pm (ET)

Webinar
Phone in listen-only mode:
1 408 638 0968 (U.S. Toll)
or
1 646 558 8656 (U.S. Toll)
Passcode: 115 393 676

International numbers

**Ambulatory visits, active component, U.S. Armed Forces, 2016**

April 2017 - ... During 2016, there were 19,158,557 reported ambulatory visits of active component service members. The crude annual rate (all causes) was 14,867 visits per 1,000 person-years (p-yrs) or 14.9 visits per person-year (p-yr); thus, on average, each service member had approximately 15 ambulatory encounters during the year. The rate of documented ambulatory visits in 2016 was 5.0% higher than the rate in 2014 and 40.9% higher than in 2007. Both the number of ambulatory visits (20,076,600) and the rate of such visits (14,438.9 visits per 1,000 p-yrs) had peaked in 2012, but the rate in 2016 was the highest of the 10-year period. In 2016, 39.6% of ambulatory visits were classified into the "other" category. ... This category ... includes health care not related to a current illness or injury. ... Three diagnoses accounted for close to half (45.6%) of the visits in the "other" category: general medical examination (including deployment health assessments) (24.9%), encounters for administrative examinations (10.8%), and encounters for immunization (9.9%). In 2016, there were 11,577,053 documented ambulatory visits for illnesses and injuries. Medical Surveillance Monthly Report

**Among veterans, younger age predicts higher risk for unsafe opioid dosing**

19 May - Among U.S. veterans in the VA health system and also enrolled in Medicare Part D who had opioid prescriptions, about 3% appeared to be taking potentially unsafe doses, and these tended to be younger and more disabled than those on lower doses, a researcher reported here. With respect to age, 10.5% of patients ages 18-39 included in the study were receiving very high opioid doses, compared with just 1.7% of those ages 65-84, said Leslie Hausmann, PhD, of the VA Pittsburgh Healthcare System; those ages 40-64 were receiving high doses at a rate of 8.6%. Also, 7.3% of those classified as disabled (defined as enrolling in Medicare on account of disability rather than age) were taking potentially unsafe opioid
YouTube: HIV Prevention in the Military

The 2016 film “HIV Prevention in the Military” was produced byBUMED and the Navy and Marine Corps Public Health Center Sexual Health and Responsibility Program in collaboration with the Army and Air Force. It is available from SHARP on DVD, on SWANK, and is now also available on YouTube.

Army recognizes best Lean Six Sigma initiatives

19 May - Saving millions of dollars, the recipients of this year’s Lean Six Sigma excellence awards reduced processing times, improved health of the force and increased readiness. The awards program in the Pentagon Thursday recognized 13 of the best process-improvement initiatives completed during fiscal year 2016. ... Army Public Health Center, U.S. Army Medical Command, reduced the process cycle time of its conference request and approval process from 22 days to 11 days, and reduced defects caused by lost conference request packets. Army.mil

New Zealand company partners with U.S. Army for engineered skin

24 May - New Zealand’s startup regenerative medicine company, Upside Biotechnologies, has signed a development agreement with the U.S. Army. The Cooperative Research and Development Agreement, or CRADA, with the Army’s Medical Research and Materiel Command is for Upside’s engineered skin product developed for people who have sustained major burns. ... “This product may provide a critical solution in the treatment of service members who have sustained severe burns. Our goal is to help Upside move this product as quickly and as safely as possible through the regulatory process, so it is available to our wounded service members.” Upside’s technology enables a small sample of unburnt patient skin to be grown in the laboratory into large areas of full-thickness skin. The lab-grown skin can be used as skin grafts in patients. The Upside skin is said to be produced faster than any competitive product and has handling characteristics preferred by surgeons. UPI

Services required to report plans to accept new transgender troops

21 May - A top Pentagon official has called on the civilian and uniformed leaders of the armed services to report on their plans to begin accepting new transgender troops by July 1, according to a memo obtained by USA TODAY. Last year, the Pentagon rescinded its ban on transgender troops, allowing those in uniform to serve openly. The policy, established under then-Defense Secretary Ash Carter in the Obama administration, also called for the services to develop plans to educate troops about transgender issues and to accept enlisted recruits and officer candidates by this summer. USA TODAY

top of page...
A radical approach against superbugs: learn to live with them

21 May - ... Scientists have focused for decades on the how the immune system battles pathogens. Ayres believes other elements of our physiology are at least as important—so she’s hunting for the beneficial bacteria that seem to help some patients maintain a healthy appetite and repair damaged tissue even during bouts of serious disease. If she can find them—and she’s already begun to do so—she believes she can develop drugs that will boost those qualities in patients who lack them and help keep people alive through battles with sepsis, malaria, cholera, and a host of other diseases. Scientific American

Air pollution linked to poor sleep, study finds

21 May - Air pollution might be linked to poor sleep, say researchers looking into the impact of toxic air on our slumbers. The study explored the proportion of time participants spent asleep in bed at night compared with being awake – a measure known as sleep efficiency. The results reveal that greater exposure to nitrogen dioxide and small particulates known as PM 2.5s are linked with a greater chance of having low sleep efficiency. That, researchers say, could be down to the impact of air pollution on the body. ... The study ... drew on air pollution data captured for nitrogen dioxide and PM2.5 levels over a five-year period in six US cities, including data captured near the homes of the 1,863 participants. The data was then used to provide estimates of pollution levels in the home. The Guardian

Brazilian doctors use fish skin to treat burn victims

25 May - Researchers in Brazil are experimenting with a new treatment for severe burns using the skin of tilapia fish, an unorthodox procedure they say can ease the pain of victims and cut medical costs. Frozen pig skin and even human tissue have long been placed on burns to keep them moist and allow the transfer of collagen, a protein that promotes healing. Brazil's public hospitals, however, lack human and pig skin supplies and the artificial alternatives easily available in Western countries. Instead, gauze bandage, which needs regular changing - often painfully - is the norm. ... Scientists at the Federal University of Ceara in northern Brazil have found that tilapia skin has moisture, collagen and disease resistance at levels comparable to human skin, and can aid in healing. Reuters

Faster is better when it comes to sepsis care

21 May - Following the tragic and widely publicized death of Rory Staunton, 12, from undiagnosed sepsis in 2012, New York became the first state to require that hospitals follow
a protocol to quickly identify and treat the condition. ... Now, five years after the boy’s death, a ... study covering nearly 50,000 patients from 149 New York hospitals is the first to offer scientific evidence that “Rory’s Regulations” work. ... Rory’s Regulations require hospitals to follow protocols for early identification and treatment of sepsis, and submit data on compliance and outcomes. The hospitals can tailor how they implement the protocols, but must include a blood culture to test for infection, measurement of blood lactate (a sign of tissue stress) and administration of antibiotics within three hours of diagnosis—collectively known as the "three-hour bundle." Seymour and his team found that 83 percent of the hospitals completed the bundle within the required three hours, overall averaging 1.3 hours for completion. For every hour that it took clinicians to complete the bundle, the odds of the patient dying increased by 4 percent. EurekAlert!

G20 health ministers agree to tackle antibiotics resistance

20 May - Health ministers of the G20 leading economies, meeting for the first time on Saturday, agreed to work together to tackle issues such as a growing resistance to antibiotics and to start implementing national action plans by the end of 2018. Germany, which holds the G20 presidency this year, said it was an "important breakthrough" that all nations had agreed to address the problem and work towards obligatory prescriptions for antibiotics. Saying that globalisation caused infectious diseases to spread more quickly than previously, the 20 nations also pledged to strengthen health systems and improve their ability to react to pandemics and other health risks. Reuters

Hospitals, health workers under attack

24 May – Deadly attacks on hospitals and medical workers in conflicts around the world remain uninvestigated and unpunished a year after the United Nations Security Council called for greater action, Human Rights Watch said today. On May 25, 2017, UN Secretary-General Antonio Guterres is scheduled to brief the Security Council on the implementation of Resolution 2286, which condemned wartime attacks on health facilities and urged governments to act against those responsible. Guterres should commit to alerting the Security Council of all future attacks on healthcare facilities on an ongoing rather than annual basis. ReliefWeb

Large study shows dengue in pregnancy might increase preterm births

19 May - Dengue infection during pregnancy might raise the risk of preterm birth but does not affect rates of congenital defects or low birth weight, according to the results of a large retrospective cohort study in Brazil. ... Brazilian researchers analyzed data from 2007 to 2013 involving 3,898 dengue-positive pregnant women, 3,165 dengue-negative pregnant women, and 3,898 newborn babies from the reference population. After adjusting for multiple variables, they found the dengue-positive women had a 26% higher risk of preterm births than the dengue-negative women. CIDRAP News Scan (third item)
Modified experimental vaccine protects monkeys from deadly malaria

22 May - Researchers ... modified an experimental malaria vaccine and showed that it completely protected four of eight monkeys who received it against challenge with the virulent Plasmodium falciparum malaria parasite. In three of the remaining four monkeys, the vaccine delayed when parasites first appeared in the blood by more than 25 days. ... [T]he NIAID scientists modified an AMA1 vaccine to include RON2L so that it more closely mimics the protein complex used by the parasite. Monkeys were vaccinated with either AMA1 alone or with the AMA1-RON2L complex vaccine. Although the overall levels of antibodies generated did not differ between the two groups, animals vaccinated with the complex vaccine produced much more neutralizing antibody, indicating a better quality antibody response with AMA1-RON2L vaccination. Moreover, antibodies taken from AMA1-RON2L-vaccinated monkeys neutralized parasite strains that differed from those used to create the vaccine. This suggests, the authors note, that an AMA1-RON2L complex vaccine could protect against multiple parasite strains. NIH

PTSD tied to cardiac inflammation

25 May - Patients with post-traumatic stress disorder (PTSD) have cardiac inflammatory profiles that may put them at risk for major cardiovascular events, researchers reported here. Patients with PTSD who underwent computed tomography angiography (CTA) had worse vascular dysfunction as measured by the coronary distensibility index (CDI) than those who didn't have PTSD (3.3 versus 4.5, P=0.001), according to Naser Ahmadi, MD PhD, of the University of California Los Angeles, and colleagues. These patients also had less brown epicardial adipose tissue (bEAT), which is known to be anti-inflammatory, and more white epicardial adipose tissue (wEAT), which has inflammatory functions. ... Also, cardiovascular event rates were higher among those PTSD patients with vascular dysfunction compared with controls who didn't have PTSD, the researchers found.

MedPage Today

Scientists one step closer to 3-D-printed ovaries to treat infertility

20 May - Scientists have used a 3-D printer to create a mouse ovary capable of producing healthy offspring. And researchers hope to create replacement human ovaries the same way someday. "It's really the holy grail of bioengineering for regenerative medicine," says Teresa Woodruff, who led the new research. ... She hopes to test a human ovary within a few years. ... "We were able to use 3-D printing to actually lay down a scaffold that was copying what we knew the scaffold looked like of the normal ovary," Woodruff says. ... Next, the researchers placed real tissue from mouse ovaries, known as follicles, into the 3-D-printed ovary scaffolds. ... The researchers then transplanted the devices into sterilized mice. Blood vessels attached themselves to the partially artificial ovaries and began functioning. When the researchers mated seven of the mice, three of them produced two healthy pups each.

NPR
Some social scientists are tired of asking for permission

22 May - … [T] he Department of Health and Human Services' Office for Human Research Protections revised its rules in January. The revision exempts from oversight studies involving “benign behavioral interventions.” This was welcome news to economists, psychologists and sociologists who have long complained that they need not receive as much scrutiny as, say, a medical researcher. … The problem is that the Office for Human Research Protections, in its revised rules, did not specify exactly who gets to determine what is and is not a benign behavioral intervention. The New York Times

Study calls 3D printing's safety into question

24 May - A study newly published … confirms that commonly used and commercially available thermoplastic filaments (acrylonitrile-butadiene-styrene, polylactic acid, polyethylene terephthalate, and nylon) used in these printers emit volatile organic compounds (VOCs) during the printing process. ... "The use of HEPA, as well as activated carbon filters does not solve the problem of air pollutants formed during 3D printing and there is the need for a new filtration system," the authors wrote. "Photocatalytic filters are one of possible solutions. Photocatalytic air treatment has the potential for degradation of organic and inorganic contaminants including volatile organic compounds from air." Occupational Health & Safety

Which countries have the best healthcare?

19 May - Neither Canada nor Japan cracked the top 10, and the United States finished a dismal 35th, according to a much anticipated ranking of healthcare quality in 195 countries, released Friday. Among nations with more than a million souls, top honours for 2015 went to Switzerland, followed by Sweden and Norway, though the healthcare gold standard remains tiny Andorra, a postage stamp of a country nestled between Spain (No. 8) and France (No. 15). Iceland (No. 2), Australia (No. 6), Finland (No. 7), the Netherlands (No. 9) and financial and banking centre Luxembourg rounded out the first 10 finishers, according to a comprehensive study published in the medical journal The Lancet. Of the 20 countries heading up the list, all but Australia and Japan (No. 11) are in western Europe, where virtually every nation boasts some form of universal health coverage. The United States ... ranked below Britain, which placed 30th. Medical Xpress

World Bank says most nations not ready for pandemic

25 May - A working group set up by the World Bank to take stock of the world's pandemic readiness said most countries aren't adequately prepared and that the world isn't doing enough to finance recommended steps. ... The 131-page report said many countries chronically underinvest in critical public health tasks that help with early identification and containment of infectious diseases: surveillance, diagnostic labs, and emergency operations centers. It also spells out 12 recommendations to ensure adequate financial support and infrastructure. CIDRAP
ZIKA VIRUS

Cellular, molecular mechanisms of Zika revealed

23 May - ... A major scientific collaboration including the Yale School of Public Health has shed some light on the cellular and molecular mechanisms of Zika, and its connection to other vector-borne diseases. The study, published in Cell, reveals that a history of dengue, another mosquito-borne infection in the same genus as Zika, could alter a patient’s response and susceptibility to the similar Zika virus. The team examined samples from 400 donors in Brazil and Mexico, both areas which experience high rates of Zika infection, and found a correlation between donor’s antibodies derived from dengue infection and a high neutralizing response to Zika. The study was also able to identify and isolate the specific antibodies that correlate to neutralization of dengue virus I and Zika virus, and their structures were solved. Yale School of Public Health

Drop in cases of Zika threatens large-scale trials

25 May - Studies of thousands of pregnant women that were set up to probe the link between Zika and birth defects may not provide definitive answers because of a sharp drop in the number of new cases, researchers have warned. The unexpected development is making the disease harder to study, and threatens to hamper trials of experimental vaccines that might protect pregnant women in future outbreaks. Scientific American

Near real-time genomic sequencing maps introduction and spread of Zika virus in US

24 May - A new study by a multi-national research team, including scientists from the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), explains how Zika virus entered the United States last year and how it might re-enter the country this year. ... In July 2016, mosquito-borne Zika virus transmission was first reported in the continental U.S. and since then, hundreds of locally-acquired infections have been reported in Florida. Through the Laboratory Response Network, scientists at USAMRIID and the Florida Department of Health (FLDOH) joined forces to understand how the virus entered and was spreading in Florida. They did this through near real-time genomic sequencing. Viral genome sequences were released publically, as they were generated, to help other scientists studying the Zika virus disease outbreak, many of whom are co-authors of this study. ... [T]he team created a "family tree" showing how the virus spread through space and time. They discovered that the Zika virus disease outbreak in Florida was actually the result of multiple independent introduction events, the earliest of which occurred in the spring of 2016, several months before initial detection. EurekAlert!

Public health labs to get help sharing Zika test data electronically

19 May - Although nearly all laboratory testing for the Zika virus is conducted at public
health laboratories, most of these labs currently do not have the ability to electronically exchange information such as orders and test results. However, a joint project between the Office of the National Coordinator for Health Information Technology and the Centers for Disease Control and Prevention is attempting to create a national system for order entry and test reporting so that public health labs can interface with providers’ electronic health records, replacing the current manual process between providers and labs. ... To facilitate electronic transmission and sharing of laboratory test data ... the project will leverage Health Level 7 International’s emerging Fast Healthcare Interoperability Resources (FHIR) standard and a web portal for providers. Health Data Management

Study suggests Zika mosquitoes can spread 3 viruses in 1 bite

19 May - *Aedes aegypti* mosquitoes that carry Zika can also transmit dengue and chikungunya in the same bite, according to a new study that suggests coinfections in outbreak areas may be more common than thought, opening up new questions about clinical consequences and the involvement of other viruses. In other research developments, Chinese researchers reported a mutation in the Asian-lineage Zika strain that made it more infectious to mosquitoes, which could have fueled transmission during recent epidemics in the Americas. Also, another team reported that *Aedes albopictus*, another species that can transmit Zika and other diseases, has become established and are spreading in Connecticut, which had been considered the northern part of its range. The new findings in mosquitoes come as the US Centers for Disease Control and Prevention (CDC) reported 6 more babies born in the United States with Zika-related birth defects, raising the total to 64. The number of pregnancy losses related to the virus remained at eight. CIDRAP

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**INFLUENZA**

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

During week 19 (May 7-13, 2017), influenza activity decreased in the United States.

- **Viral Surveillance:** The most frequently identified influenza virus type reported by public health laboratories during week 19 was influenza B. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.

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

China: Human infection with avian influenza A(H7N9) virus

23 May - On 13 May 2017, the National Health and Family Planning Commission of China (NHFPC) notified WHO of 23 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus in China. Onset dates ranged from 11 April to 6 May 2017. Of these 23 case patients, ten were female. The median age was 58 years (range 31 to 83 years). ... At the time of notification, there were seven deaths, 15 case patients were diagnosed as having either pneumonia (5) or severe pneumonia (10), and one case was mild. Nineteen case patients were reported to have had exposure to poultry or live poultry market, one case patient was reported to have visited a patient with avian influenza A(H7N9) in the hospital, one case patient was reported to have had both exposure to live poultry and a contact with a confirmed case, and two were reported to have had no known poultry exposure. Two clusters were reported. WHO

ECDC: Flu News Europe

Week 19/2017 (8 – 14 May 2017)
- Influenza activity has returned to out-of-season levels in most countries. All of 35 reporting countries have reported low intensity of influenza.
- The proportion of sentinel specimens testing positive for influenza viruses was 6%, and lower than in the previous week (12%). Influenza viruses were detected in 7 countries only and numbers were low.
- All sentinel detections were type B viruses and their numbers continued to decline since week 15/2017. European Center for Disease Prevention and Control/WHO

NHRC: Febrile Respiratory Illness Surveillance Update

For the week ending 2 January 2016:
- Influenza: One case of NHRC laboratory-confirmed influenza (A/H3) among US military basic trainees at Fort Jackson. The new case presented for care 6 April and had been vaccinated 6 days earlier
- FRI surveillance at all eight U.S. military basic training centers indicated FRI rates were at or below expected values. Naval Health Research Center

Two Chinese cities close poultry markets after H7N9 bird flu infections

21 May - China will shut poultry markets in certain districts of two cities after H7N9 bird flu infections were detected, state media reported on Sunday, the latest incidents in this year’s more severe outbreak of the virus. A 44-year-old man who sold poultry at a farmers market in southwestern Sichuan province’s Zigong city was diagnosed with H7N9, China News
Service reported. Local authorities announced a one-month halt to poultry markets in the city’s Ziliujing district from midnight on Monday. Separately, a 74-year old man who had visited poultry markets in Shandong province’s Binzhou city was also diagnosed with H7N9, China Central Television reported. Binzhou authorities will temporarily halt poultry markets in three of its districts. Reuters

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

During 30 April - 13 May 2017 (Surveillance Weeks 18 & 19), a total of 67 specimens were collected and received from 25 locations. Results were finalized for 54 specimens from 21 locations. During Week 18, one influenza A(H1N1)pdm09, one influenza A(H3N2), and nine influenza B viruses were identified. No influenza viruses were detected during Week 19. Approximately 21% of specimens tested positive for influenza during Week 18 and 0% during Week 19. The influenza percent positive for the season is currently 35%.

US Air Force School of Aerospace Medicine & Defense Health Agency

VETERINARY/FOOD SAFETY

10 hospitalized with botulism tied to nacho cheese sauce

21 May - Ten people have been hospitalized after they contracted botulism from eating nacho cheese sauce served at a gas station outside of Sacramento, California, according to state and local officials. The Sacramento County Department of Health and Human Services said in a statement last week that the cause of the illness "appears to be prepared food, particularly nacho cheese sauce" from a gas station in Walnut Grove. ... In a statement sent to CNN, state health officials confirmed that the outbreak is believed to have been caused by the nacho cheese sauce. There does not appear to be an ongoing risk to the public, CDPH said. ... In a statement sent to CNN, state health officials confirmed that the outbreak is believed to have been caused by the nacho cheese sauce. There does not appear to be an ongoing risk to the public, CDPH said. CNN

Almost 160 tons of institutional meals recalled for bad water

21 May - Correctional Industries, which supplies the Washington state Department of Corrections and senior citizen nutrition programs, is recalling almost 320,000 pounds of frozen meat and poultry products because they were made with contaminated water. ... Well water used to produce the frozen foods has been found to be contaminated with perfluorinated chemicals, known by the acronyms PFOS and PFOA, according to city and
county health officials. The public in the Airway Heights, WA, area has been warned not to use the water for cooking or drinking. Restaurants and other foodservice operators are under orders to not use tap water in the area. The contamination is thought to have come from runoff from nearby Fairchild Air Force Base, according to reports in The Spokesman-Review newspaper. The chemicals found in the well water are believed to be from fire-extinguishing foam the Air Force used from 1970 until last year on a fire-training site as well as two locations where aircraft have crashed. Food Safety News

Extensive multidrug resistance found in *Salmonella* from Ethiopian poultry

22 May - A new study in *BMC Infectious Diseases* has found extensive multidrug resistance in *Salmonella* isolates from poultry breeding, multiplication, and distribution centers in Ethiopia. ... Of the 45 *Salmonella* isolates subjected to antimicrobial susceptibility testing, 100% were resistant to at least three antimicrobials, with 93.3% exhibiting resistance to at least eight antimicrobials simultaneously, including all isolates from personnel and poultry bedding. Interviews with center supervisors revealed that antimicrobials were routinely overprescribed to avoid the undetected spread of pathogens and onset of disease outbreak at the centers. CIDRAP Stewardship/Resistance Scan (third item)

Nathan's, Curtis brands included in massive hot dog recall

22 May - The Ohio-based maker of Nathan's and Curtis hot dogs has issued a recall for more than 210,000 pounds of ready-to-eat beef franks after receiving complaints about metal materials in the product. The affected products were produced on January 26, 2017. John Morrell and Co. contacted the USDA Food Safety and Inspection Service on May 19 after receiving three complaints about metal objects in beef frank product packages. While there have been no illnesses or injuries reported in connection to the recall, the USDA urged customers not to consume the following products: Fox News

Study finds warmer ocean waters linked to domoic acid production

19 May - The National Oceanic and Atmospheric Administration released information about a study that showed the risk of domoic acid shellfish poisoning is increasing because of warmer West Coast ocean conditions. These conditions are supporting the increase of the marine algae that produce that toxin. Domoic acid found in shellfish can cause serious and fatal food poisoning. Food Poisoning Bulletin
Army researchers showcase Performance Readiness Bar

25 May - A broad audience ... had an opportunity during the Department of Defense Lab Day at the Pentagon on May 18 to learn about the science behind the Performance Readiness Bar, a calcium and vitamin D-fortified snack bar developed to optimize bone health in basic trainees. Use of the snack bar is slated to begin at Fort Benning, Georgia, this summer and will be fully implemented at all four Army basic training locations in 2018. ... “USARIEM has been researching the requirements for calcium and vitamin D intake during Initial Military Training (IMT) in order to optimize the bones’ anabolic response to training, as stronger bones are more resistant to stress fractures,” said Gaffney-Stomberg, a research physiologist from USARIEM’s Military Performance Division.

Chocolate tied to decreased risk of irregular heart rhythm

24 May - Eating a small amount of chocolate every week or so may decrease the risk of a common and serious type of irregular heart rhythm. ... For the new analysis, the researchers used data collected for a long-term study of 55,502 people in Denmark. The men and women were between 50 and 64 years old when it began, and they provided information about their diets when they entered the study between 1993 and 1997. The researchers then linked that diet data to Denmark’s national health registries to see who was diagnosed with atrial fibrillation. Overall, about 3,346 cases of atrial fibrillation occurred over an average of 13.5 years. Based on their diets at the beginning of the study period, people who ate one serving, about 1 ounce (28.35 grams), of chocolate per week were 17 percent less likely to be diagnosed with atrial fibrillation by the end of the study than people who reported eating chocolate less than once a month. Similarly, those who ate 2 to 6 ounces per week were 20 percent less likely to be diagnosed with atrial fibrillation while those who ate more than an ounce of chocolate a day were 16 percent less likely to have the condition.

Cigarette filters may increase lung cancer risk

22 May - Cigarette filters, introduced decades ago to reduce the amount of tar smokers inhale, also alter other properties of smoke and smoking in a way that raises the risk of lung cancer, researchers say. ... “The design of cigarette filters that have ventilation can make the cigarettes even more dangerous, because those holes can change how the tobacco burns, allow smokers to inhale more smoke and to think that the smoke is safer because it is smoother,” senior author Dr. Peter D. Shields from The Ohio State University’s Wexner Medical Center in Columbus told Reuters Health by email. ... Although rates of lung cancer in the population have fallen with declines in smoking overall, rates of lung cancer among
Emails can help smokers quit

19 May - Personalized email messages offering support to smokers trying to quit proved to be highly effective in a study conducted by researchers with the American Cancer Society, with quit rates among those receiving frequent emails rivaling rates often seen with the most effective smoking cessation medications. Roughly one-in-three (36.1%) smokers sent multiple, tailored emails for up to two months during their quit attempt were smoke-free six months later, compared to around one-in-four (26.5%) smokers receiving a single email. The tailored messages were based on minimal information about the smoker, such as quit date, social support, reasons for quitting, and smoking triggers.

Poor sleep may hike mortality in metabolic syndrome

24 May - Short sleep duration was associated with increased risk of mortality among people with a cluster of cardiovascular risk factors known as metabolic syndrome, according to an observational study. Among more than 1,300 adults who spent the night in a sleep lab, those with metabolic syndrome who slept 6 or more hours were more likely to die of cardiovascular disease (HR 1.49, 95% CI 0.75-2.97) during the 16.6-year follow-up period than people without metabolic syndrome, reported Julio Fernandez-Mendoza, PhD, of the Penn State Hershey Sleep Research & Treatment Center, and colleagues. People who slept less than 6 hours were more likely to die of heart disease or stroke (HR 2.10, 95% CI 1.39-3.16), as well as from any cause (HR 1.99 times, 95% CI 1.53-2.59), compared with those without metabolic syndrome. The researchers noted that the relationship was seen even after adjusting for sleep apnea, a known heart disease risk.

Probiotics show promise as mood elevator

25 May - A new study suggests that probiotics, so-called "good" bacteria that aid in digestion, may also ease symptoms of depression. The finding adds to a growing body of evidence that what happens in the gut affects the brain. Some 300 to 500 bacterial species inhabit the human gut, many aiding in digestion and the proper functioning of the gastrointestinal tract. Experts say some of these bacteria produce proteins that communicate with the brain.

The worst fat in the food supply

22 May - ... Starting in 2007 in New York City, New York State pioneered trans fat bans in this country. Scientists ... analyzed death rates in New York counties that forbid artificially produced trans fats in food sold in restaurants and bakeries. When death rates in these counties were compared with those in similar areas without a ban, the researchers found that restricting trans fats resulted in 13 fewer cardiovascular disease deaths and a saving of about $3.9 million per 100,000 persons annually. A more recent study showed a comparable decline in cardiovascular disease rates as well. By comparing counties with and without a trans fat ban in food service establishments, Dr. Eric J. Brandt, a cardiovascular disease
fellow at Yale University School of Medicine, found that three or more years later, heart attacks declined by 7.8 percent and strokes by 3.6 percent in counties with the ban over and above what occurred in counties without a ban, though the stroke numbers were not statistically significant. The New York Times

Treating sleep problems may ease depression

24 May - Treating sleep disorders may improve depressive symptoms, researchers reported here. In a retrospective study, positive airway pressure (PAP) therapy was associated with significantly improved scores on the Patient Health Questionnaire-2 (PHQ-2) over 6 months (mean decline -0.4, P<0.0001). "PAP therapy, regardless of adherence, resulted in improved PHQ-2 scores," [Sachin] Relia told MedPage Today. "Having knowledge of comorbid sleep disorders and including evaluation of these in routine psychiatric assessments would significantly impact treatment outcomes.” Relia noted that 10% to 15% of patients with obstructive sleep apnea meet criteria for depressive disorders.

MedPage Today

top of page...

USAFRICOM

Democratic Republic of the Congo: WHO - 37 Ebola cases in DRC, 4 deaths

22 May - Over the weekend the Democratic Republic of the Congo (DRC) reported 8 more suspected Ebola cases and one additional death, according to an update from the World Health Organization (WHO). This raises the total number of suspected cases to 37 and the total number of deaths to 4. The case-fatality rate for the current outbreak is 11%, and the DRC said that so far no healthcare workers have been diagnosed as having Ebola. In a sign that could mean the outbreak is well-contained in this remote region, the WHO said that no samples tested over the weekend in Likati Health Zone have tested positive for Ebola. The situation report contains new information about the possible use of VSV-EBOV, the Ebola vaccine. The vaccine will be offered to contacts and contacts of contacts of a confirmed EVD case, including Health Care Workers and Field Laboratory Workers.”

CIDRAP

Horn of Africa: UNICEF Measles Outbreak Humanitarian Situation Report

17 May - Due to the ongoing drought in the Horn Africa almost 3.4 million children under five are now at a high risk of contracting measles in the drought-affected areas of Ethiopia, Kenya and Somalia. Almost 7,400 cases have been reported among children in the drought
affected areas of the three countries. Somalia reports the highest figure, over 7,000 cases since beginning of 2017, compared to 5,657 for the entire 2016. In Somalia, a phased integrated measles and Vitamin A hotspots response campaign was launched in April 2017. The first phase is now completed with 252,827 children vaccinated in 12 hot spot districts in Somaliland. ... Measles outbreaks have now being reported in three drought-affected countries in the Horn of Africa, including Ethiopia (3481 cases), Kenya (11 cases) and Somalia (7,031 cases). ReliefWeb

Pakistan: Karachi chikungunya cases rise in May

21 May - In a follow-up on the chikungunya outbreak in Pakistan, the Sindh Health Department has reported 627 suspected cases of the mosquito borne disease in Karachi since May 1, according to a Pakistan Today report Saturday. This brings the total case count in the city to 2722 since the beginning of the year. Outbreak News Today

Saudi Arabia/Afghanistan: Saudi Arabia provides 32 ambulances to Afghanistan

18 May - Saudi Arabia has provided 32 ambulances worth around 1 million U.S. dollars to Afghan Public Health Ministry, local newspaper the Daily Afghanistan-e-Ma reported on Thursday. Quoting Public Health Ministry officials, the paper added that the ambulances would be given to needy provinces including Helmand, Takhar, Ghazni, Bamyam and Daikundi to help people get access to clinic centers. The contribution of 32 ambulances is part of a 5-million- U.S.-dollar agreement inked last year under which the Saudi Arabia kingdom agreed to build a hospital, an intermediate medical school and train Afghan midwives, the paper added. Xinhuanet

Saudi Arabia: Two new MERS cases reported in Saudi Arabia

19 May - The Saudi Arabian Ministry of Health (MOH) reported two new cases of MERS-CoV today. A 63-year-old Saudi man in Riyadh is in stable condition after presenting with symptoms of MERS-CoV (Middle East respiratory syndrome coronavirus). The patient’s infection is listed as "primary," meaning it’s unlikely he contracted the virus from another person. It is not known at this time if his case is linked to a small hospital outbreak occurring in Riyadh. The second patient is a 43-year-old Saudi man from Al Muhanna. He is also in stable condition after presenting with symptoms. The man had direct contact with camels, a known risk factor for MERS. The latest infections raise Saudi Arabia’s number of MERS cases
since the disease was first detected in humans in 2012 to 1,611, which now includes 666 deaths. Five people are still being treated for their infections. CIDRAP News Scan (first item)

Yemen's cholera case count nearly doubles

22 May - According to the latest cholera situation report published by the World Health Organization (WHO), there are 23,000 new suspected cases of the diarrheal disease in Yemen and 242 related deaths since the last update was published Apr 27. The current case-fatality rate for the outbreak is 1.1%. ... The WHO said the new cases represent a "significant upsurge," with 210 districts in 18 governorates across the country reporting cases. CIDRAP News Scan (first item)

top of page...

USEUCOM

Italy: Italy makes vaccination mandatory for children

19 May - The Italian government has approved a law ordering parents to vaccinate children or face fines. The authorities have noted a rise in measles cases, which the cabinet blames on "the spread of anti-scientific theories." The new legislation makes vaccines mandatory for 12 preventable diseases, including measles, chicken pox, polio, hepatitis B, and tetanus. Only children with immunizations would be eligible for nursery school, according to the Friday law. Parents would face large fines for sending non-vaccinated children to state childcare facilities or schools. ... Italy has noted a sudden spread of measles in recent years, with the number of infections rising from 250 in 2015 to 840 last year. Deutsche Welle

New laws in the U.K. and EU further restrict tobacco industry

20 May - ... [T]his weekend, new regulations on the tobacco industry came into force in the United Kingdom, and they go even further than what an EU directive required. The Tobacco Products Directive was revised by the EU a year ago to impose new restrictions on tobacco products in hopes of deterring smoking, especially among young people. The restrictions include the banning of flavored cigarettes that mask the smell and taste of tobacco, and the addition of larger warnings and graphic photos of some of the health risks. The EU cites evidence that pictorial warnings have been shown to contribute to the reduction of smoking rates in Canada and Brazil. There are also new rules regulating the amount of nicotine that e-cigarettes may contain, something the directive says was previously unregulated. There will also be new packaging and labeling rules for e-cigarettes. NPR

top of page...
U.S.: 58 percent of construction workers say safety takes a backseat to productivity

18 May - A National Safety Council survey found 58 percent of Americans working in construction – the industry that sees the most workplace fatalities each year – feel that safety takes a backseat to productivity and completing job tasks. What’s more, 51 percent say management does only the minimum required by law to keep employees safe, and 47 percent say employees are afraid to report safety issues. By contrast, 36 percent of the 2,000 full-time and part-time employees in the 14 industries surveyed by NSC feel their employers prioritize productivity over safety. EHS Today

U.S.: A vital drug runs low, though its base ingredient is in many kitchens

21 May - Hospitals around the country are scrambling to stockpile vials of a critical drug — even postponing operations or putting off chemotherapy treatments — because the country’s only two suppliers have run out. The medicine? Sodium bicarbonate solution. Yes, baking soda. Sodium bicarbonate is the simplest of drugs — its base ingredient, after all, is found in most kitchen cabinets — but it is vitally important for all kinds of patients whose blood has become too acidic. It is found on emergency crash carts and is used in open-heart surgery and as an antidote to certain poisons. Patients whose organs are failing are given the drug, and it is used in some types of chemotherapy. … Hospitals have been struggling with a dwindling supply of the medicine for months — one of the suppliers, Pfizer, has said that it had a problem with an outside supplier but that the situation worsened a few weeks ago. Pfizer and the other manufacturer, Amphastar, have said they don’t know precisely when the problem will be fixed, but it will not be before June for some forms of the drug, and in August or later for other formulations. The New York Times

U.S.: CDC - Alzheimer’s disease deaths soaring

25 May - Death rates from Alzheimer’s disease in the U.S. increased 55% over the past two decades, with a significant increase in the percentage of deaths occurring at home, reported researchers. The national age-adjusted Alzheimer’s disease death rate per 100,000 population increased from 16.5 (44,536 deaths) in 1999 to 25.4 (93,541 deaths) in 2014. Over this 16-year period, the majority of deaths due Alzheimer’s disease continued to occur in a nursing home or long-term care facility, but the percentage occurring in these institutional settings decreased from 68% to 54%, reported Christopher A. Taylor, PhD, of the CDC, and colleagues. Conversely, the percentage of patients who died at home increased from 13.9% in 1999 to 24.9% in 2014. MedPage Today
U.S.: Gender-confirmation surgeries increase after social changes

22 May - More than 3,200 transgender surgeries, from “facial and body contouring” to actual “gender reassignment,” were performed in the United States last year, the American Society of Plastic Surgeons said Monday in releasing the first such numbers ever reported. The 2016 total, reflecting a rapid evolution of public attitudes and health coverage, represented a 19 percent increase from the previous year, the data show. The numbers rose in all categories, with male-to-female confirmation surgeries climbing by 27 percent and female-to-male operations by 10 percent. The statistics reflect only procedures performed by board-certified members of the American Society of Plastic Surgeons, which only recently began tracking the procedures. The Washington Post

U.S.: Nearly 700 vacancies at CDC because of Trump administration’s hiring freeze

19 May - Nearly 700 positions are vacant at the Centers for Disease Control and Prevention because of a continuing freeze on hiring that officials and researchers say affects programs supporting local and state public health emergency readiness, infectious disease control and chronic disease prevention. The same restriction remains in place throughout the Health and Human Services Department despite the lifting of a government-wide hiring freeze last month. At the National Institutes of Health, staff say clinical work, patient care and recruitment are suffering. ... The situation has been made worse, the official said, because the agency has been operating without a permanent director since Tom Frieden stepped down in January. That job is considered one of the most crucial public health positions in the government. The Washington Post

NIOSH touts DERMaL eToolkit to aid responders

25 May - A new post to the NIOSH Science Blog from Naomi Hudson, DrPH, MPH, a health scientist in NIOSH’s Education and Information Division, showcases the DERMaL eToolkit, a tool that can provide information about chemicals to emergency responders while they are working in the field. ... Dermal contact is an important exposure pathway and can present significant health risks.” Accessed by a responder on his or her phone or tablet, the DERMaL eToolkit will offer information and tools about health effects, exposure assessment, control measures, and medical management. Occupational Health & Safety

U.S.: Norovirus outbreak grows to 2,800 cases in northern California schools

23 May - Health officials from Yolo County in northern California have reported an outbreak of norovirus in the county schools with 2,836 cases among students and faculty. During a press conference on May 12, the Yolo County Health and Human Services Agency reported a total of 952 cases of gastrointestinal illness — including stomach cramps, vomiting and
diarrhea — among 32 schools in Yolo County; within 5 days, the number of cases had more than doubled to 2,091. ... In neighboring Sacramento County, health officials have reported six school districts with suspected cases of norovirus, including Elk Grove, Natomas, Sacramento City, San Juan, and Twin Rivers, as well as the Elverta Joint Elementary School District where school officials closed three schools early in May due to 53 cases of norovirus among students and faculty. It remains unknown whether there is a connection between these new cases and the ongoing outbreak in Yolo County. Healio

top of page...

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**China: China expands DNA data grab in troubled western region**

24 May - Police in the northwestern region of Xinjiang, China, have been collecting DNA samples from citizens and are now ramping up their capacity to analyze that genetic cache, according to evidence compiled by activists and details gathered by Nature. The advocacy group Human Rights Watch reported last month that Xinjiang authorities intend to accelerate efforts to gather blood samples from the region’s large population of Muslim Uighur people. China’s government has cracked down on Xinjiang’s separatist movement in recent years, so the prospect of a DNA database there has stoked fears that authorities could use it as a political weapon. “Our concern is that there is widespread collection of DNA without legal protection and without telling people,” says Maya Wang, a researcher for Human Rights Watch in Hong Kong and the author of the report. *Scientific American*

**China: Hospital outbreak of MCR-1 *Klebsiella* reported in China**

25 May - Chinese scientists are reporting a deadly outbreak of MCR-1-producing *Klebsiella pneumoniae* among pediatric leukemia patients in China, apparently the first reported hospital outbreak involving the colistin-resistance gene. In a letter published in *The Lancet Infectious Diseases*, researchers say clinical isolates—including one *Escherichia coli* and five *K pneumoniae*—from six patients with pneumonia admitted to a pediatric leukemia ward in Guangzhou, China, were found to harbor the colistin-resistance gene. The isolates were collected from January 2015 through January 2016. *CIDRAP*

**Indonesia: Looming threat of Asian tobacco companies to global health**

20 May - The Indonesian Government is considering a ministerial decree that could triple cigarette production by 2020.1 The proposed decree follows unsuccessful bills2 to boost
tobacco growing and “farmer prosperity”, despite concerns about health and child labour practices. If adopted, manufacturers would be required to use at least 80% locally sourced leaf, and a 200% excise tax would be imposed on cigarette imports. The measures follow the takeover of Indonesia's major cigarette manufacturers by transnational tobacco companies (TTCs), which raises the concern that imports will displace domestic production. The Lancet

Brazil: Mortality among blood donors seropositive and seronegative for Chagas disease (1996–2000) in São Paulo, Brazil

18 May - Individuals in the indeterminate phase of Chagas disease are considered to have mortality rates similar to those of the overall population. This study compares mortality rates among blood donors seropositive for Chagas disease and negative controls in the city of São Paulo, Brazil. This is a retrospective cohort study of blood donors from 1996 to 2000: 2842 seropositive and 5684 seronegative for Chagas disease. [Record linkage] identified 159 deaths among the 2842 seropositive blood donors (5.6%) and 103 deaths among the 5684 seronegative (1.8%). Out of the 159 deaths among seropositive donors, 26 had the 10th International Statistical Classification of Diseases and Related Health Problems (ICD-10) indicating Chagas disease as the underlying cause of death. 23 had ICD-10 codes indicating cardiac abnormalities possibly related to Chagas disease listed as an underlying or associated cause of death, with the others having no mention of Chagas disease in part I of the death certificate. Donors seropositive for Chagas disease had a 2.3 times higher risk of death due to all causes than seronegative donors. PLOS

PAHO reports slight rise in chikungunya cases from handful of countries

22 May - In the latest update on chikungunya cases in the Americas from the Pan American Health Organization (PAHO), countries reported only 142 new cases, mainly reflecting slight increases in five countries. The new cases lift the number for 2017 to 48,151, according to the May 19 PAHO report. The weekly number is down from 16,000 new cases reported the previous week, most of which were in Brazil, which accounts for about 90% of the Americas' total this year. Countries reporting new cases include Colombia, El Salvador, Nicaragua, Peru, and Mexico. Many countries have not reported their chikungunya totals for several weeks, and some haven't reported any for 2017. The number of deaths from the disease this year remained at nine. CIDRAP News Scan (third item)
Peru: Peru dengue epidemic update: Piura reporting 300 cases daily, Army trained to assist

20 May - After a period of heavy flooding, which helped spread viral infection, the World Health Organization (WHO) has declared a dengue epidemic in the city of Piura, where 19 people have died according to a euronews report (computer translated). According to official figures, 3,150 cases have been confirmed in Peru in the latest outbreak, with another possible 12,446. In Piura alone, three hundred possible new dengue infections are reported daily. … [Vector control actions] include larval control using larvacide in containers with water in some 379,464 homes. In addition, more than 523,000 fumigations have been carried out in houses with the aim of ending the adult mosquito. … Lastly, Digesa trained 800 soldiers of the Peruvian Army to carry out larval control and fumigation, and delivered to the region 400 new thermo-fogging machines to support troop personnel in the area.

Outbreak News Today

top of page...