18 May 2018

Army Public Health Weekly Update

Army Public Health Center

Contents

U.S. MILITARY

- Borden Institute publishes first ever Army Physician Assistants Handbook
- Early deployment tied to increased suicide risk for soldiers
- Homeless veterans at increased risk of hospital readmission after surgery
- Pentagon revised Obama-era report to remove risks from climate change
- VA health care successfully reduces ‘rush to treatment’ rates for low-risk prostate cancer
- Veterans go back to court over burn pits. Do they have a chance?

GLOBAL

- As D.I.Y. gene editing gains popularity, ‘someone is going to get hurt’
- Clade X pandemic exercise highlights policies needed to prevent or reduce the worst possible outcomes in future pandemics
- Drug target for curing the common cold
- Ebola returns just as the White House loses its top biodefense expert
- Is malaria’s peculiar odor key to its conquest?
- ‘Memory transplant’ achieved in snails
- Microglia are key defenders against prion diseases
- New rapid rabies test could revolutionize testing and treatment
- Smartphone tests for infections could be the next step in global fight against superbugs, top scientist says
- Someone, somewhere, is making a banned chemical that destroys the ozone layer, scientists suspect
- Study upends conventional view of opioid mechanism of action
- Vaccines are pushing pathogens to evolve

INFLUENZA

- AFHSB: DoD Seasonal Influenza Surveillance Summary
- ECDC: Flu News Europe
- NHRC: Operational Infectious Diseases - Weekly Surveillance Report
- Senators urge Trump to support universal flu vaccine bill
- USAFSAM & DHA: DoD Global Respiratory Pathogen Surveillance Program
- WHO: Influenza Update

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.
VETERINARY/FOOD SAFETY

- Death toll from listeria outbreak in South Africa rises to more than 200
- FDA says harvest season over for E. coli-linked romaine lettuce
- France extends cheese recall after E. coli cases in children
- Norovirus found in almost 70 percent of oysters for sale in UK
- USDA may warn some facilities when animal welfare inspectors are coming

WELLNESS

- FDA approves first non-opioid drug to treat opioid withdrawal symptoms
- Florida officials probe cause of fatal vape device explosion
- ICD-11: Fewer PTSD diagnoses under new, stricter criteria
- Maintaining a daily rhythm is important for mental health, study suggests
- Male depression may lower pregnancy chances among infertile couples
- Obesity tied to risk of irregular heart rhythm in both genders
- Suicide-related hospital visits nearly double among kids

USAFRICOM

- Democratic Republic of the Congo: As Ebola flares once again, a rapid global response invites cautious hope
- Democratic Republic of the Congo: Hundreds of thousands of children close to dying of hunger in Congo, UN warns
- Democratic Republic of the Congo: ‘Major, major game-changer’: Ebola spreads to big Congo city
- Democratic Republic of the Congo: U.N. reports 120 unexplained deaths in northeast Congo
- São Tomé and Príncipe: This small island paradise is showing Africa how to beat malaria

USCENTCOM

- Syria: OPCW: Chlorine possibly used in attack in Syria’s Saraqeb
- Yemen: 91 killed in Yemen’s diphtheria outbreak – WHO
- Yemen: Concern over reported number of measles cases in Yemen

USEUCOM

- Europe: Molecular typing gives more precise picture of gonorrhea in Europe
- United Kingdom: Measles cases in England are up 65 per cent on last year

USNORTHCOM

- Canada: Canada sued over years of alleged experimentation on indigenous people
- U.S.: California’s deadly STD epidemic sets record
- U.S.: CDC warns of new tick-borne threat this summer in the northeast
- U.S.: EPA’s own advisory board questions “secret science” plan
- U.S.: Executive Order signed to protect California communities from wildfires
- U.S.: Hair-straightening products contain potentially toxic mix
- U.S.: New IARC website tracks UV radiation cancers
- U.S.: NIOSH and FDA collaboration streamlines regulatory oversight for N95 filtering facepiece respirators
- U.S.: Smallpox-related virus found lurking in Texas rodents
- U.S.: U.S. births dip to 30-year low; fertility rate sinks further below replacement level
- U.S.: U.S. investigates bloodstream infections for link to heparin syringes
- U.S.: Vermont signs law to allow import of prescription drugs from Canada
The Characteristics of Pandemic Pathogens

The overarching aim of the study was to provide an inductive, microbe-agnostic analysis of the microbial world to identify fundamental principles that underlie this special category of microorganisms that have potential to cause global catastrophe. Such principles could refine pandemic preparedness by providing a new framework or lens through which to survey the threat landscape of infectious diseases in order to better anticipate, prepare for, and respond to global catastrophic biological risk threats.

USPACOM

- China: Stanford researchers uncover the high levels of dangerous tapeworm infection in Chinese province
- U.S.: Kilauea eruption now threatens Hawaii with damaging earthquakes, acid rain, 'vog'

USSOUTHCOM

- Panama: What's behind the alarming spike in HIV infections in Panama?
- Peru: Peru reports increase in Guillain-Barré syndrome cases in first four months
- Venezuela: Venezuelan newborns suffer as mothers struggle with hunger

U.S. MILITARY

Borden Institute publishes first ever Army Physician Assistants Handbook

14 May - The U.S. Army Borden Institute recently announced the upcoming publication of the first ever Army Physician Assistants (PA) Handbook. The handbook will be available at the end of May. The book describes the myriad of positions and organizations in which PA’s play in leadership roles and patient care. The book will also cover PA education, certification, continuing training, and career progression. Topics include; the Inter-service PA Program, assignments at the White House and the Old Guard (3rd US Infantry Regiment), roles in research and recruiting, as well as the PA’s role in emergency medicine, aeromedical evacuation, clinical care, surgery, and occupational health. Army.mil

top of page...

Early deployment tied to increased suicide risk for soldiers

16 May - When soldiers have their first deployment within their first year of service, they may be twice as likely to attempt suicide during or after their second deployment, a U.S. study suggests. Researchers focused on 593 U.S. Army soldiers who had experienced two deployments within two years of continuous military service and had attempted suicide. While a quick deployment was linked to a larger increase in the risk of attempted suicide, the study also found that a gap of six months or less between deployments was associated with a 60 percent higher risk. ... Suicide attempts and deaths have become more common in the U.S. Army since the start of the wars in Iraq and Afghanistan, researchers note in JAMA Psychiatry. Readiness for deployment - both physical and mental - has been seen as one of many potential factors influencing soldiers’ suicide risk. Reuters

top of page...
Homeless veterans at increased risk of hospital readmission after surgery

14 May - For veterans undergoing surgery in the VA healthcare system, homelessness is an important risk factor for unplanned hospital readmission, reports a study in the June issue of Medical Care. Homeless veterans are more likely to be discharged to a nursing home or other residential setting after surgery, and these discharge destinations are associated with a lower risk of hospital readmission. ... The rate of unplanned hospital readmission within one month was 13.3 percent for homeless veterans compared to 9.3 percent of housed veterans. After adjustment for other factors, homelessness was associated with a 43 percent increase in the odds of readmission. Homeless veterans were more likely to be readmitted despite undergoing less-complex surgeries and longer postoperative hospital stays during the index admission. Medical Xpress
	op of page...

Pentagon revised Obama-era report to remove risks from climate change

10 May - Internal changes to a draft Defense Department report de-emphasized the threats climate change poses to military bases and installations, muting or removing references to climate-driven changes in the Arctic and potential risks from rising seas, an unpublished draft obtained by The Washington Post reveals. The earlier version of the document, dated December 2016, contains numerous references to “climate change” that were omitted or altered to “extreme weather” or simply “climate” in the final report, which was submitted to Congress in January 2018. ... The final Pentagon document even omits, in several cases, the simple observation that learning about bases’ vulnerability to sea-level rise was a core part of the survey that is the subject of the report. The Washington Post

top of page...


April 2018 - From 2002 through 2017, there were 1,552 incident diagnoses of exertional hyponatremia among active component service members, for a crude overall incidence rate of 7.1 cases per 100,000 person-years (p-yrs). Compared to their respective counterparts, overall incidence rates of exertional hyponatremia were higher among females, those aged 19 years or younger, and recruit trainees. The overall incidence rate during the 16-year period was highest in the Marine Corps, intermediate in the Army and Air Force, and lowest in the Navy. Overall rates during the surveillance period were highest among non-Hispanic white and Asian/Pacific Islander service members and lowest among non-Hispanic black service members. Between 2002 and 2017, crude annual incidence rates of exertional hyponatremia peaked in 2010 (12.7 per 100,000 p-yrs) and then decreased to 5.3 cases per 100,000 p-yrs in 2013 before increasing in 2014 and 2015. The crude annual rate in 2017
VA health care successfully reduces 'rush to treatment' rates for low-risk prostate cancer

15 May - Record numbers of American veterans diagnosed with non-aggressive prostate cancer are heeding the advice of international medical experts and opting out of immediate surgery or radiation to treat their cancer. Instead ... increasing numbers of these men are electing to postpone additional therapy unless their symptoms worsen -- a passive practice called watchful waiting -- or they are choosing so-called active surveillance. ... The new study ... is one of the largest studies of its kind, involving a review of the medical records of 125,083 former servicemen, mostly over the age of 55, who were newly diagnosed with low-risk prostate cancer between 2005 and 2015. EurekAlert!

Veterans go back to court over burn pits. Do they have a chance?

17 May - On May 9, a federal appeals court heard oral arguments in a case about an explosive issue among U.S. veterans: the widespread use of burn pits in Iraq and Afghanistan, and the potential health consequences they suffered as a result. The case, which dates back to 2008, consolidated dozens of lawsuits by hundreds of veterans and their families seeking to recover damages from the military contractor KBR Inc., but a trial court dismissed it in July 2017. It could be at a legal dead end unless the panel of judges, the Fourth Circuit Court of Appeals in Richmond, Va., overturns the dismissal. The plaintiffs accuse KBR of negligence for exposing them to toxic emissions from open-air trash fires known as burn pits, which they say cause respiratory, neurological and other health problems. In tossing the case last year, the trial court accepted KBR's argument that the American military made the decision to use burn pits to dispose of trash on bases, and that federal courts cannot second-guess the executive branch's wartime decisions. The New York Times

GLOBAL

As D.I.Y. gene editing gains popularity, ‘someone is going to get hurt’

14 May - ... As the equipment becomes cheaper and the expertise in gene-editing techniques, mostly Crispr-Cas9, more widely shared, citizen-scientists are attempting to re-
engineer DNA in surprising ways. ... The most pressing worry is that someone somewhere will use the spreading technology to create a bioweapon. Already a research team at the University of Alberta has recreated from scratch an extinct relative of smallpox, horsepox, by stitching together fragments of mail-order DNA in just six months for about $100,000 — without a glance from law enforcement officials. The team purchased overlapping DNA fragments from a commercial company. Once the researchers glued the full genome together and introduced it into cells infected by another type of poxvirus, the cells began to produce infectious particles. The New York Times

Clade X pandemic exercise highlights policies needed to prevent or reduce the worst possible outcomes in future pandemics

15 May - The outbreak of a moderately contagious and moderately lethal novel pathogen precipitated a catastrophic end to the scenario in Clade X, the day-long pandemic tabletop exercise hosted by the Johns Hopkins Center for Health Security on May 15 in Washington, DC. Clade X simulated a series of National Security Council–convened meetings of 10 US government leaders, played by individuals prominent in the fields of national security or epidemic response. Their dialogue as the scenario unfolded addressed significant uncertainties in current prevention and response capabilities, hamstrung by policy challenges at the federal level. The scenario opens with the present-day outbreak of a new, serious respiratory disease in Germany and Venezuela. ... Within a year, 150 million people die from the disease—15 million in the United States alone. At the conclusion of the exercise, the Center presented 6 strategic policy goals needing commitment from the United States to prevent or reduce the worst possible outcomes in future pandemics.

Drug target for curing the common cold

14 May - UK scientists believe they may have found a way to combat the common cold. Rather than attacking the virus itself, which comes in hundreds of versions, the treatment targets the human host. It blocks a key protein in the body’s cells that cold viruses normally hijack to self-replicate and spread. This should stop any cold virus in its tracks if given early enough, lab studies suggest. Safety trials in people could start within two years. The Imperial College London researchers are working on making a form of the drug that can be inhaled, to reduce the chance of side-effects. In the lab, it worked within minutes of being applied to human lung cells, targeting a human protein called NMT, Nature Chemistry journal reports. BBC News

Ebola returns just as the White House loses its top biodefense expert

11 May - This week, three things happened with painfully ironic synchronicity. First, the
Democratic Republic of the Congo revealed that it is facing down its ninth Ebola outbreak. Second, President Trump asked Congress to rescind a $252 million pot that had been put aside to deal with Ebola. And third, global health expert Tim Ziemer unexpectedly departed the National Security Council, where he served as senior director for global health security and biodefense. ... Ziemer is highly respected by his peers and has been described as “one of the most quietly effective leaders in public health.” Health-security experts called his departure from the NSC a serious mistake—one that jeopardizes America’s already fragile state of preparedness against infectious threats. The Atlantic

Is malaria's peculiar odor key to its conquest?

14 May - ... The Plasmodium parasite not only causes malaria but also makes victims more attractive to mosquitoes—which then transmit the parasite to still more victims. New research suggests, however, that this situation could actually make it easier to identify and treat carriers who have long eluded medical detection. ... The new research ... characterizes the distinctive profile of volatile organic compounds (VOCs)—chemicals often perceived as smells—produced by people infected with Plasmodium. Essentially, the researchers identify the odor of malaria as mosquitoes smell it. The scientists propose developing odor-based technology to detect malaria with far greater accuracy than any method currently available, even in patients who show no symptoms. Scientific American

'Memory transplant' achieved in snails

14 May - Memory transfer has been at the heart of science fiction for decades, but it's becoming more like science fact. A team successfully transplanted memories by transferring a form of genetic information called RNA from one snail into another. The snails were trained to develop a defensive reaction. When the RNA was inserted into snails that had not undergone this process, they behaved just as if they had been sensitised. The research, published in the journal eNeuro, could provide new clues in the search for the physical basis of memory. BBC News

Microglia are key defenders against prion diseases

17 May - Prion diseases are slow degenerative brain diseases that occur in people and various other mammals. No vaccines or treatments are available, and these diseases are almost always fatal. Scientists have found little evidence of a protective immune response to prion infections. Further, microglia -- brain cells usually involved in the first level of host defense against infections of the brain -- have been thought to worsen these diseases by
secreting toxic molecules that can damage nerve cells. Now, scientists have used an experimental drug, PLX5622, to test the role of microglia against scrapie, a prion disease of sheep. PLX5622 rapidly kills most of the microglia in the brain. When researchers gave the drug to mice infected with scrapie, microglia were eliminated and the mice died one month faster than did untreated mice. The results ... suggest that microglia can defend against a prion infection and thus slow the course of disease. NIH

New rapid rabies test could revolutionize testing and treatment

16 May - A new rabies test developed at the Centers for Disease Control and Prevention (CDC) could mean people exposed to potentially rabid animals could forego the weeks-long regimen of shots to prevent the deadly disease. The new test, designed for use in animals, can more easily and precisely diagnose rabies infection, according to a study published today in PLOS One. The new LN34 test is simpler and easier to use than current tests. During the pilot study, it produced no false negatives, fewer false positive, and fewer inconclusive results. It could allow doctors and patients to make better informed decisions about who needs treatment for rabies, which is nearly always fatal once symptoms start. The LN34 test can also be run on testing platforms already widely used in the U.S. and worldwide, without any extra training. And it yields results even from decomposing animal brain tissue. CDC

Smartphone tests for infections could be the next step in global fight against superbugs, top scientist says

12 May - Scientists are exploring a test involving smartphones to identify if users have a bacterial or viral infection, paving the way for more effective usage of antibiotics to fight the “global crisis” of superbugs, a leading microbiologist has said. ... “So now, many engineers are looking at how to utilise the phone not only to read a test result but also to power a diagnostic test.” For instance, she said, quick tests using smartphones to screen for antibodies produced by the body to fight infections from syphilis and HIV, have gone through clinical trials in Africa. “You can run 80 reaction tests before you have to recharge your phone,” she said. “That’s the beauty of it. It is taking lab testing out of the lab into communities and being able to send data to a central database.” South China Morning Post

Someone, somewhere, is making a banned chemical that destroys the ozone layer, scientists suspect

16 May - Emissions of a banned, ozone-depleting chemical are on the rise, a group of scientists reported Wednesday, suggesting someone may be secretly manufacturing the pollutant in violation of an international accord. Emissions of CFC-11 have climbed 25
percent since 2012, despite the chemical being part of a group of ozone pollutants that were phased out under the 1987 Montreal Protocol. ... [Scientists] considered a range of alternative explanations for the growth, such as a change in atmospheric patterns that gradually remove CFC gases in the stratosphere, an increase in the rate of demolition of buildings containing old residues of CFC-11, or accidental production. But they concluded these sources could not explain the increase. The Washington Post

Study upends conventional view of opioid mechanism of action

10 May - A new discovery shows that opioids used to treat pain, such as morphine and oxycodone, produce their effects by binding to receptors inside neurons, contrary to conventional wisdom that they acted only on the same surface receptors as endogenous opioids, which are produced naturally in the brain. However, when researchers funded by the National Institute on Drug Abuse (NIDA) used a novel molecular probe to test that common assumption, they discovered that medically used opioids also bind to receptors that are not a target for the naturally occurring opioids. ... This difference between how medically used and naturally made opioids interact with nerve cells may help guide the design of pain relievers that do not produce addiction or other adverse effects produced by morphine and other opioid medicines. NIH

Vaccines are pushing pathogens to evolve

10 May – ... [Andrew] Read and his colleagues are studying how the herpesvirus that causes Marek’s disease — a highly contagious, paralyzing and ultimately deadly ailment that costs the chicken industry more than $2 billion a year — might be evolving in response to its vaccine. Its latest vaccine, that is. ... Today, the poultry industry is on its third vaccine. It still works, but Read and others are concerned it might one day fail, too — and no fourth-line vaccine is waiting. Worse, in recent decades, the virus has become more deadly. Read and others, including researchers at the U.S. Department of Agriculture, posit that the virus that causes Marek’s has been changing over time in ways that helped it evade its previous vaccines. The big question is whether the vaccines directly incited these changes or the evolution happened, coincidentally, for other reasons, but Read is pretty sure the vaccines have played a role. Quanta Magazine

INFLUENZA

AFHSB: DoD Seasonal Influenza Surveillance Summary

For Week 18:

- NORTHCOM: Influenza activity continued to be minimal for the majority of states.
- EUCOM: Influenza activity in EUCOM remained minimal.
- PACOM: Influenza activity remained minimal across PACOM.
- CENTCOM and AFRICOM: Influenza activity remained minimal in CENTCOM locations with available data.
- SOUTHCOM: Influenza activity remained minimal in Honduras for week 18.  

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

During week 18 (April 29-May 5, 2018), influenza activity decreased in the United States.
- Viral Surveillance: Overall, influenza A(H3) viruses have predominated this season. Since early March, influenza B viruses have been more frequently reported than influenza A viruses. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.
- Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- Influenza-associated Pediatric Deaths: Two influenza-associated pediatric deaths were reported.  

**ECDC: Flu News Europe**

Week 18/2018 (30 April – 6 May 2018)
- Influenza activity was at inter-season levels in all but one reporting country.
- 6% of the individuals sampled from primary healthcare settings tested positive for influenza viruses (compared to 11% in the previous week).
- The number of influenza virus detections has further decreased compared to previous weeks. European Center for Disease Prevention and Control/WHO

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

10 May - Febrile respiratory illness cases:
- Military Recruits - 24 positive of 44 tested
- CDC Border Infectious Disease Surveillance and Zika Surveillance - 13 positive of 36 tested
- DoD Beneficiaries – 3 positive of 13 tested. Naval Health Research Center

**Senators urge Trump to support universal flu vaccine bill**

11 May - Seven senators are calling on President Trump to support their legislation that
would provide a $1 billion boost for research to create a universal flu vaccine. Six Democrats and Sen. Angus King (I-Maine) called the seasonal flu a “pressing public health threat, taking a substantial toll on our families, health care system, and economy each year” in a letter sent to Trump Friday. They wrote that they appreciated that Trump has reportedly expressed “strong interest” in the development of a universal vaccine. In March, philanthropist and Microsoft founder Bill Gates was reportedly talking to Trump in the Oval Office about the idea, according to Stat. Gates said Trump was “super interested” in the notion — so much so that he called Food and Drug Administration Commissioner Scott Gottlieb to ask him about the vaccine while Gates was still in the Oval Office. The Hill

USAFSAM & DHA: DoD Global Respiratory Pathogen Surveillance Program

During 29 April - 12 May 2018 (Surveillance Weeks 18 & 19), a total of 119 specimens were collected and received from 41 locations. Results were finalized for 113 specimens from 38 locations. The percent influenza positive for Weeks 18 and 19 were 8% and 6%, respectively. The influenza percent positive for the season is approximately 36%.

U.S. Air Force School of Aerospace Medicine & Defense Health Agency

WHO: Influenza Update

14 May - Influenza activity returned to inter-seasonal levels in most of the countries in the temperate zone of the northern hemisphere except for some countries in Eastern Europe. Activity increased in some countries in tropical America. In the temperate zone of the southern hemisphere, influenza activity increased but remained below the seasonal thresholds. Worldwide, seasonal influenza subtypes A and B accounted for approximately the same proportion of influenza detections. WHO

VETERINARY/FOOD SAFETY

Death toll from listeria outbreak in South Africa rises to more than 200

17 May - The death toll from the world’s largest ever outbreak of the food-borne disease listeria has risen to 204, but the number of new cases has declined sharply after products were recalled, South African authorities said on Thursday. The health department recalled processed meat products known as “polony”, after the source of the outbreak was traced to a factory owned by Tiger Brands unit Enterprise Foods in March resulting in a class action lawsuit filed against the company. ... The number of cases reported has risen to 1,033, the National Institute of Communicable Diseases (NICD) said. Reuters
FDA says harvest season over for *E. coli*-linked romaine lettuce

16 May - The U.S. Food and Drug Administration said on Wednesday the harvest season for romaine lettuce, linked to the multi-state *E. coli* outbreak, was over and it was unlikely that it was still available in stores due to its 21-day shelf life. The reported strain of *E. coli*, which produces poisonous substances known as Shiga toxins, can cause severe abdominal cramps, bloody diarrhea and vomiting. The Centers for Disease Control and Prevention said on May 2 one person from California had died related to the *E. coli* outbreak. The last shipments of romaine lettuce from Yuma, Arizona were harvested on April 16, according to the FDA.

France extends cheese recall after *E. coli* cases in children

14 May - All Reblochon cheese coming from a factory in the French Alps should be removed from the market after young children were found to have been infected by an *E. coli* bacteria linked to the raw milk based product, the French agriculture ministry said on Monday. French food retailer Leclerc had issued a recall on Friday of Reblochon products produced by cheesemaker Chabert. The move came after the French health authorities linked seven cases of *E. coli* 026 bacteria among children between one-and-a-half and three years to the cheese, which is a creamy specialty of the French Alps.

Norovirus found in almost 70 percent of oysters for sale in UK

16 May - About 12,000 people in Briton are poisoned by contaminated oysters each year; 11,800 of which are due to norovirus, according to the researchers at the Centre for Applied Marine Sciences on Anglesey. According to recent findings from two studies “more than two-thirds of the shellfish on sale is infected with the contagious norovirus.” Scientists at the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) checked more than 600 samples sold in supermarkets over a 12-month period.

USDA may warn some facilities when animal welfare inspectors are coming

17 May - For decades, the Agriculture Department has routinely conducted surprise inspections at zoos, breeding operations, research labs and other facilities to evaluate whether they are complying with federal animal welfare laws and to issue warnings or penalties if not. Now the agency is testing another approach: “announced inspections.” In a letter sent last month to entities regulated by the Animal Welfare Act, an agency official
announced the launch of a pilot project to explore whether letting some facilities know inspectors are coming “improves the efficiency of our inspection program and improves the humane treatment of animals.” The Washington Post

WELLNESS

FDA approves first non-opioid drug to treat opioid withdrawal symptoms
16 May - The U.S. Food and Drug Administration on Wednesday approved here the first non-opioid drug that will help reduce symptoms of opioid withdrawal in adults. The drug, Lucemyra, is an oral treatment from US WorldMeds LLC, and is only approved for treatment of up to 14 days. Opioid withdrawal includes symptoms — such as anxiety, agitation, sweating, vomiting, diarrhea and drug craving — that occur after stopping or reducing the use of opioids. The application was granted priority review and fast track designations, and an independent FDA advisory committee supported the approval of Lucemyra at a meeting held in March. Reuters

probe cause of fatal vape device explosion
17 May - Fire investigators are examining whether the battery in an electronic cigarette triggered a small explosion that killed a man in Florida this month, sending fragments of the vape device into his skull, in what may be the first such fatality in the country. Tallmadge D’Elia, 38, was found dead on May 5 when police and firefighters responded to a blaze at his home in St. Petersburg. D’Elia was killed by fragments of a vape device that shot through his skull. He also suffered burns on more than 80 percent of his body, the local medical examiner said in an autopsy report issued on Tuesday. Reuters

ICD-11: Fewer PTSD diagnoses under new, stricter criteria
16 May - The number of patients meeting criteria for post-traumatic stress disorder (PTSD) diagnosis may drop following the proposed revision of the International Classification of Diseases (ICD), researchers suggested. Geared towards creating more specificity for the disorder, the ICD-11 lists just six criteria for PTSD -- far fewer than the 13 symptoms in the current ICD-10 template. In a new analysis comparing the two classifications published in Psychological Medicine, Anna Barbano, BS, of New York University School of Medicine in New York City, and colleagues determined the ICD-11 criteria would still identify severe cases of PTSD, but miss patients whose symptoms fall in the moderate range. MedPage Today
Maintaining a daily rhythm is important for mental health, study suggests

15 May - Sticking to a normal daily rhythm -- being active during the day and sleeping at night -- can have more benefits than you might expect. A new study found that it is linked to improvements in mood and cognitive functioning as well as a decreased likelihood of developing major depression and bipolar disorder. The study ... looked at disruptions in the circadian rhythms -- or daily sleep-wake cycles -- of over 91,000 adults in the United Kingdom. ... The researchers found that individuals with more circadian rhythm disruptions -- defined as increased activity at night, decreased activity during the day or both -- were significantly more likely to have symptoms consistent with bipolar disorder or major depression. They were also more likely to have decreased feelings of well-being and to have reduced cognitive functioning, based on a computer-generated reaction time test. CNN

Male depression may lower pregnancy chances among infertile couples

17 May - Among couples being treated for infertility, depression in the male partner was linked to lower pregnancy chances, while depression in the female partner was not found to influence the rate of live birth, according to a study funded by the National Institutes of Health. The study ... also linked a class of antidepressants known as non-selective serotonin reuptake inhibitors (non-SSRIs) to a higher risk of early pregnancy loss among females being treated for infertility. SSRIs, another class of antidepressants, were not linked to pregnancy loss. Neither depression in the female partner nor use of any other class of antidepressant were linked to lower pregnancy rates. NIH

Obesity tied to risk of irregular heart rhythm in both genders

15 May - Both men and women who are overweight or obese may be more likely to develop an irregular heart rhythm condition known as atrial fibrillation than their counterparts who maintain a healthy weight, a recent study suggests. In atrial fibrillation, the upper chambers of the heart, or atria, quiver instead of beating to move blood effectively. While the condition has long been linked to obesity, the current study offers fresh evidence of how gender may impact the risk of atrial fibrillation associated with excess weight. Extremely obese men, for example, were more than four times more likely to develop atrial fibrillation than men who maintained a healthy weight, the study found. By contrast, extremely obese women had almost twice the risk of developing atrial fibrillation as women at a healthy weight. Reuters
Suicide-related hospital visits nearly double among kids

16 May - The annual percentage of hospital visits for suicide ideation and suicide attempts almost doubled among U.S. children from 2008 to 2015, a retrospective review of hospital database records found. There was a near doubling in the annual percentage of hospital visits for suicide ideation and suicidal attempts among children ages 5 to 17 (from 0.66% in 2008 to 1.82% in 2015), reported Gregory Plemmons, MD, of Vanderbilt University Medical Center in Nashville, and colleagues. Moreover, the highest average increases were among adolescents (ages 15 to 17), and were higher for girls across age groups. ... They cited research, including a report from the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), that child and adolescent mental health care remains "inadequate," and that research has indicated that emergency departments and acute care hospitals should offer a "safety net" for youth that experience suicidal ideation or suicide attempts. MedPage Today

top of page...

Democratic Republic of the Congo: As Ebola flares once again, a rapid global response invites cautious hope

15 May - In the week since the Democratic Republic of the Congo declared a new Ebola outbreak, health officials have set in motion a plan to distribute an experimental vaccine, logistics experts have established an airbridge to ferry responders and equipment into the epicenter, and the director-general of the World Health Organization has flown in from Geneva to take stock. It has been an extraordinarily rapid response — and a far cry from the tragically slow reaction by the global community following the West African Ebola outbreak that began in 2014. “I think the response so far has been impressive,” said Tom Inglesby, director of the Center for Health Security at Johns Hopkins Bloomberg School of Health. Inglesby said the early engagement of many partners — the Wellcome Trust has already committed funds; Doctors Without Borders is setting up treatment facilities; Gavi, the Vaccine Alliance has agreed to finance the vaccination efforts — suggests health experts across different organization are coordinating well. STAT

top of page...

Democratic Republic of the Congo: Hundreds of thousands of children close to dying of hunger in Congo, UN warns

11 May - Hundreds of thousands of children in a province of the Democratic Republic of the Congo face imminent death from hunger, the UN children’s agency, Unicef, warned on Friday. Without urgent humanitarian assistance, said the agency, child fatalities in the Kasai
region – which erupted in violence in August 2016, and has forced 1 million people from their homes – could “skyrocket”. According to Unicef, 770,000 children are malnourished, with 400,000 at risk of death. The agency has appealed for $88m (£65m) to support children in Kasai, with half the funds to be spent on child nutrition. The Guardian

Democratic Republic of the Congo: 'Major, major game-changer': Ebola spreads to big Congo city

17 May - Congo's latest Ebola outbreak has spread to a city of more than 1 million people, a worrying shift as the deadly virus risks traveling more easily in densely populated areas. Medical teams hurried to track down anyone thought to have had contact with infected people as this vast, impoverished nation — a veteran of eight previous Ebola outbreaks — for the first time is fighting the virus in an urban area. Two suspected cases of hemorrhagic fever were reported in the Wangata health zones that include Mbandaka, the capital of northwestern Equateur province. The city is about 150 kilometers (93 miles) from Bikoro, the rural area where the outbreak was announced last week, said Congo's Health Minister Oly Ilunga. One sample proved positive for Ebola, he said. That brings to three the number of confirmed Ebola cases. A total of 44 cases have now been reported, including 23 deaths, according to the World Health Organization. The total includes 20 probable cases and 21 suspected ones. Tampa Bay Times

Democratic Republic of the Congo: U.N. reports 120 unexplained deaths in northeast Congo

11 May - Authorities in northeastern Congo have reported the unexplained deaths of more than 120 internally displaced people, 93 of them under 15 years old, in an area bordering Uganda in March and April, a U.N. humanitarian report said on Friday. The deceased often showed symptoms of anemia and fever. They were displaced at Kandoyi in Ituri province, a town that has taken in more than 4,000 people uprooted northwards by fighting since mid-February, the report said. "At this time, there has still been no official epidemiological investigation by the Biringi health district," the report said, referring to a local town. Reuters

São Tomé and Príncipe: This small island paradise is showing Africa how to beat malaria

15 May - ... São Tomé and Príncipe ... has acquired a new reputation as one of Africa's most successful countries in fighting malaria, a disease that kills more than 400,000 people across the continent every year. According to the World Health Organization: Since 2014, the nation of São Tomé and Principe has had zero malaria deaths, making it the only country in sub-Saharan Africa to maintain that achievement for several consecutive years. Nonfatal infections are also dropping drastically, from a high of more than 50,000 in 2002 — in a
population of 200,000 — to fewer than 4,000 in 2016. ... Behind the success is the world's highest per-capita level of spending by the government and international donor organizations — $16 — on anti-malaria measures like indoor mosquito spraying and free treatment clinics. OZY

USCENTCOM

Syria: OPCW: Chlorine possibly used in attack in Syria's Saraqeb

16 May - Chlorine was possibly used as a weapon in the rebel-held northern Syrian town of Saraqeb in early February, the international chemical weapons watchdog has said. A fact-finding mission by the Organisation for the Prohibition of Chemical Weapons (OPCW) determined that “chlorine was released from cylinders by mechanical impact in the Al Talil neighbourhood of Saraqeb” on February 4, an OPCW statement said on Wednesday. The team's conclusions were based on finding two cylinders "which were determined as previously containing chlorine". Al Jazeera

Yemen: 91 killed in Yemen's diphtheria outbreak – WHO

13 May - The World Health Organization (WHO) said on Saturday that the diphtheria outbreak has killed at least 91 people in war-torn Yemen since late October. A total of 1,725 suspected cases of diphtheria have been recorded in 20 of Yemen's 23 provinces, compared to 1,516 suspected diphtheria cases with 84 associated deaths reported on April 3.

Diphtheria, which spreads through sneezing caused by a common cold, has mainly infected children in Yemen. ... In March, the WHO, the UN International Children's Emergency Fund (UNICEF) and Yemen's health authorities launched a large-scale vaccination campaign across the country to combat the disease. Xinhua

Yemen: Concern over reported number of measles cases in Yemen

12 May - Over 3000 suspected measles cases have been reported in 2018 across Yemen, where conflict has plunged the country into the world's largest humanitarian crisis. ... As of April 20, over 3000 suspected measles cases have been reported across the country, more than 60 of which were fatal, according to data from UNICEF and WHO. According to UNICEF, the highest numbers of cases have been seen in Aden (786 patients), Al Bayda (324 patients), and Sana’a (245 patients). The Lancet.
Europe: Molecular typing gives more precise picture of gonorrhea in Europe

16 May - A comprehensive genetic analysis of gonorrhea strains in Europe is providing a clearer picture of the distribution of antibiotic-resistant strains of the sexually transmitted infection throughout the continent. The surveillance study used whole-genome sequencing (WGS) in conjunction with epidemiologic data and antimicrobial resistance (AMR) profiles to analyze the gonococcal population in 20 European countries. The results show a wide diversity of gonorrhea strains both within and among countries, with certain genotypes and clones predominant, along with changes in the epidemiologic profiles of certain strains. CIDRAP News

top of page...

United Kingdom: Measles cases in England are up 65 per cent on last year

11 May - There have been 440 confirmed cases of measles in England so far this year. These cases are linked to “ongoing large outbreaks in Europe”, according to government agency Public Health England. These cases were all confirmed by laboratory tests, occurring between 1 January and 9 May. This is a 65 per cent increase on the same period in 2017, which saw 267 confirmed cases in England. ... There are currently large measles outbreaks underway in Italy and Romania. "We’d encourage people to ensure they are up to date with their MMR vaccine before travelling to countries with ongoing measles outbreaks,” says Mary Ramsay, of Public Health England. New Scientist

top of page...

Canada: Canada sued over years of alleged experimentation on indigenous people

11 May - A class action lawsuit has been filed in a Canadian court on behalf of the thousands of indigenous people alleged to have been unwittingly subjected to medical experiments without their consent. Filed this month in a courtroom in the province of Saskatchewan, the lawsuit holds the federal government responsible for experiments allegedly carried out on reserves and in residential schools between the 1930s and 1950s. The suit also accuses the Canadian government of a long history of “discriminatory and inadequate medical care” at Indian hospitals and sanatoriums – key components of a segregated healthcare system that operated across the country from 1945 into the early
1980s. The Guardian

U.S.: California’s deadly STD epidemic sets record

17 May - Diagnoses of sexually transmitted diseases hit a record high in California last year -- with sometimes deadly consequences, according to preliminary state data released this week. More than 300,000 cases of gonorrhea, chlamydia and syphilis — the most common sexually transmitted bacterial infections — were reported in 2017. That represents a 45 percent increase since 2013 and the highest number since at least 1990, state Department of Public Health numbers show. Some of those cases had tragic endings: Thirty of the 278 babies affected by congenital syphilis in 2017 were stillbirths, the highest number in 22 years. ... “We’re getting a lot of ... younger pregnant women infected with syphilis and not getting prenatal care,” said Mario Alfaro, regional program director for education at Planned Parenthood Mar Monte in Fresno. Washington Post

U.S.: CDC warns of new tick-borne threat this summer in the northeast

15 May - With warmer weather also comes the potential for insect and tick-borne illnesses. According to the Centers for Disease Control and Prevention, diseases transmitted by fleas, ticks, and mosquitoes have tripled in just 13 years. One virus, Powassan, or POW has seen a resurgence recently, according to Dr. Durland Fish, Professor Emeritus of Epidemiology at the Yale School of Public Health. Symptoms of Powassan infection include fever, headache, vomiting, weakness, confusion, and seizures. The CDC reports only about 100 cases of POW in the U.S. in the last 10 years, but ... Fish said there is a good reason why POW could be an issue for the Northeast this summer. “It’s recently become more prevalent because the deer tick, which transmits Lyme disease, is now transmitting this Powassan virus, and we hadn’t seen this before, that’s a recent event,” he said. WNPR

U.S.: EPA’s own advisory board questions “secret science” plan

16 May - EPA’s Science Advisory Board wants to review Administrator Scott Pruitt's plan to restrict studies the agency uses when crafting regulations. The board is now led by a Pruitt appointee, Michael Honeycutt, who signed off on the request for more discussion on Pruitt’s plan to limit the agency’s use of scientific studies to those that use public data. In a May 12 memo, members of an SAB working group flagged potential problems with the rule and determined that it could affect regulations by making them more or less stringent. They wrote that they learned of the proposed rule from news articles and the Federal Register and noted that EPA did not provide a description of the proposed action. Scientific American
U.S.: Executive Order signed to protect California communities from wildfires
17 May - California Gov. Jerry Brown has issued an executive order to protect communities from wildfire and from climate change impacts. Issued May 10, it aims to improve the health of the state’s forests and help mitigate the threat and impacts of wildfires. "Devastating forest fires are a profound challenge to California," Brown said. "I intend to mobilize the resources of the state to protect our forests and ensure they absorb carbon to the maximum degree." The order will double the land area actively managed through vegetation thinning, controlled fires, and reforestation from 250,000 acres to 500,000 acres.

U.S.: Hair-straightening products contain potentially toxic mix
14 May - Hair products used primarily by black women and children contain a host of hazardous chemicals, a new study shows. The findings could explain at least in part why African-American women go through puberty earlier and suffer from higher rates of asthma and reproductive diseases than other groups. ... Investigators tested 18 hair products - from hot-oil treatments to anti-frizz polishes, relaxers and conditioners - looking for the presence of chemicals called endocrine disrupters. These chemicals, which interfere with the way the body produces hormones, have been linked to reproductive disorders, birth defects, asthma and cancer. Altogether, the researchers looked for 66 different endocrine disrupters. Each of the tested hair products contained at least four and as many as 30, said lead author Jessica Helm. ... The vast majority of the chemicals discovered in the hair products - 84 percent - were not listed on the product labels. Reuters

U.S.: New IARC website tracks UV radiation cancers
14 May - The International Agency for Research on Cancer (IARC) recently launched its new database on cancers attributable to ultraviolet (UV) radiation. Part of the Global Cancer Observatory, the website aims to provide estimates of the preventable melanoma burden using a standardized analytical approach for all countries. The Cancers Attributable to UV Radiation website provides the population attributable fractions associated with UV radiation exposure and will help national decision makers as they set priorities for cancer prevention.

U.S.: NIOSH and FDA collaboration streamlines regulatory oversight for N95 filtering facepiece respirators
17 May - In a collaborative effort to harmonize regulatory oversight of N95 filtering
facepiece respirators, or N95s, the National Institute for Occupational Safety and Health (NIOSH) and the Food and Drug Administration (FDA) have joined forces to help reduce duplicative premarket processes for N95s used in healthcare settings. ... [C]ertain N95s will be exempt from FDA premarket notification requirements which means that manufacturers will now be able to submit a single application to NIOSH, rather than applications to both FDA and NIOSH prior to marketing their product. Previously, all N95s intended for use in healthcare needed clearance/approval from both agencies. NIOSH


18 May - During 2000–2014, 493 outbreaks associated with treated recreational water caused at least 27,219 cases and eight deaths. Outbreaks caused by Cryptosporidium increased 25% per year during 2000–2006; however, no significant trend occurred after 2007. The number of outbreaks caused by Legionella increased 14% per year. The aquatics sector, public health officials, bathers, and parents of young bathers can take steps to minimize risk for outbreaks. The halting of the increase in outbreaks caused by Cryptosporidium might be attributable to Healthy and Safe Swimming Week campaigns. Morbidity and Mortality Weekly Report

U.S.: Smallpox-related virus found lurking in Texas rodents

17 May - A never-before-seen virus that’s a relative of the notorious smallpox virus has been found lurking in rodents in Texas, according to a new study. Researchers discovered the new virus in pygmy mice in east-central Texas. A genetic analysis revealed that the virus was a type of poxvirus, a diverse family of viruses that includes the smallpox virus. But the new pathogen was quite different from any of the currently known poxviruses. Researchers dubbed the new virus "Brazospox virus," because the infected mice were found at sites near the Brazos River, which runs through east-central Texas. It’s still unclear whether the new virus can infect people, and right now, there's no need for the public to worry, said senior study author Dr. Sarah Hamer. Fox News

U.S.: U.S. births dip to 30-year low; fertility rate sinks further below replacement level

17 May - The birth rate fell for nearly every group of women of reproductive age in the U.S. in 2017, reflecting a sharp drop that saw the fewest newborns since 1978, according to a new report by the Centers for Disease Control and Prevention. There were 3,853,472 births
in the U.S. in 2017 – "down 2 percent from 2016 and the lowest number in 30 years," the CDC said. The general fertility rate sank to a record low of 60.2 births per 1,000 women between the ages of 15 and 44 – a 3 percent drop from 2016, the CDC said in its tally of provisional data for the year. The results put the U.S. further away from a viable replacement rate – the standard for a generation being able to replicate its numbers. "The rate has generally been below replacement since 1971," according to the report from CDC’s National Center for Health Statistics. 

U.S.: U.S. investigates bloodstream infections for link to heparin syringes

11 May - Health agencies are investigating an outbreak of bloodstream infections in children from four U.S. states that may be linked to heparin and saline syringes made by Becton Dickinson and Co, the agencies told Reuters. The U.S. Centers for Disease Control and Prevention has confirmed 14 cases of bloodstream infections in children caused by the same strain of the Serratia marcescens bacterium, the agency’s lead investigator on the outbreak said in a telephone interview. All of the infections occurred in seriously ill children receiving intravenous medications through a catheter or central line, a device used to deliver medications such as chemotherapy. None of the children have died and the number of cases appears to be winding down, the investigator said. 

U.S.: Vermont signs law to allow import of prescription drugs from Canada

16 May - Vermont Governor Phil Scott signed a law on Wednesday that will allow the import of prescription drugs from Canada into the U.S. state in a move that would help tackle rising drug prices. The law is yet to be certified by the Department of Health and Human Services (HHS), which is opposed to the idea. "Canada simply doesn’t have enough drugs to sell them to us for less money, and drug companies won’t sell Canada or Europe more just to have them imported here," HHS Secretary Alex Azar said here on Wednesday. 

China: Stanford researchers uncover the high levels of dangerous tapeworm infection in Chinese province

15 May - A recent Stanford study led by infectious diseases instructor at the Stanford School of Medicine John Openshaw has uncovered high levels of tapeworm infections among elementary schoolers in the western portion of China’s Sichuan province. The
researchers highlighted that the infections can lead to cognitive defects, ultimately compromising children’s access to educational opportunities and in reducing their chances of breaching poverty cycles. Openshaw’s research team tested fifth and sixth grade students — all at boarding schools in the Himalayan region of Sichuan — for tapeworm. The researchers identified antibodies for neurocysticercosis in up to 22 percent of children tested. This rate surpassed those of adults living in the surrounding area. ... *Taenia solium*, the specimen studied by Openshaw and his team, is a tapeworm whose larvae can be found in undercooked pork but can ultimately cause harm to the brain. Once the tapeworm has been ingested, it lays eggs which embed in feces and potentially contaminate the environment. The Stanford Daily

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**U.S.: Kilauea eruption now threatens Hawaii with damaging earthquakes, acid rain, 'vog'**

16 May - The ongoing eruption of Hawaii's Kilauea Volcano has opened up over twenty fissures in a residential neighborhood and resulting lava flows have destroyed dozens of homes and structures, but the threat to the Big Island extends beyond just the reach of emerging magma. On Wednesday, a magnitude 4.4 earthquake rattled the volcano's main caldera, damaging roads and buildings in Hawai’i Volcanoes National Park. Earlier, ash plumes led to an aviation red alert and raised the threat of acid rain and volcanic smog or “vog” from toxic sulfur dioxide gas that spews forth from the earth along with the lava. And the compounding threats from Kilauea show little sign of slowing down. The lava column in the volcano’s main caldera has been dropping and the movement has been contributing to frequent earthquakes; cracks in nearby Highway 11 have also opened up. “As deflation continues, strong earthquakes in the area around Kilauea Volcano’s summit are expected to continue and may become more frequent,” reads a statement from the USGS Hawaiian Volcano Observatory on Wednesday afternoon. Forbes

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**Panama: What's behind the alarming spike in HIV infections in Panama?**

14 May - ... In other parts of the world, the rate of new HIV infection is on the decline. Here [in Panama], it's spiking. About 150,000 people live in the Comarca Ngäbe-Bugle territory, and AIDS is the now the second-leading cause of death there, accounting for more than 8 percent of deaths. Approximately 2.5 percent of people who live in the Comarca Ngäbe-Bugle carry the virus. Arlene Calvo is a research professor at the University of South Florida’s Panama City campus. She says HIV was unheard of in Ngäbe territory until recently. The first
case wasn't identified until 2001, decades after the virus first ravaged other parts of the world. And now that it's here, it's entrenched. "It went from having just a few cases to after a few months having 100 identified cases, and probably a year after that having over 500 cases," Calvo says. ... The terrain is rugged and mountainous, and many communities aren't connected by roads. Some villages don't have electricity or running water. Blood tests must be administered in a hospital by a lab technician, which can mean an 8- to 10-hour trip for the patient, much of it on foot. Calvo says the lack of access to care is one of the biggest barriers to controlling the outbreak. NPR

Peru: Peru reports increase in Guillain-Barré syndrome cases in first four months

12 May - In a follow-up to a report last week, Peru health officials (computer translated) have recorded an increase in Guillain-Barré syndrome (GBS) cases during the first four months of 2018. According to Minister of Health, Silvia Pessah Eljay, 42 cases compatible with GBS have been reported to date. The statistics reveal an upward curve compared to the figures recorded between January and April 2016, when 22 cases were presented. Likewise, in the same period of 2017, 24 cases were reported, and in the first four months of 2018, 42 were registered. Outbreak News Today

Venezuela: Venezuelan newborns suffer as mothers struggle with hunger

13 May - ... It isn't getting easier for Venezuela's poorest to put food on the table. In 2017, inflation is projected to have exceeded 2,400 percent and to rise to about 13,000 percent in 2018, according to the International Monetary Fund. ... In May 2017, then Health Minister Antonieta Caporale published the latest official health statistics. The report revealed that maternal mortality had increased by 66 percent and infant mortality by 30 percent from 2015 to 2016. After Carporale made the figures public, President Nicolas Maduro fired her the next day. ... Susana Raffalli, an expert in nutrition who leads the aid organization's research, notes that the child malnutrition situation in Venezuela has surpassed the humanitarian crisis threshold, which is reached when global acute malnutrition (GAM) in children under five exceeds 10 percent. Once 15 percent of children in a given country or region suffer from GAM, the situation qualifies as an emergency. And that’s just what’s come to pass in Venezuela. Organized Crime and Corruption Reporting Project
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