24 June 2016

Army Public Health Weekly Update

Army Public Health Center

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Zika Virus:  
Know How to  
Protect Yourself  

An up-to-date APHC PowerPoint presentation on the Zika virus covers the following topics:

- No vaccine exists to prevent Zika
- If you live in or travel to an area with ongoing Zika virus transmission, take precautions to minimize risk.
- The risk of Zika infection is reduced by taking measures to avoid mosquito bites and sexual contact with men who have been infected with Zika.
- Pregnant women or women trying to become pregnant should avoid travel to areas with active Zika virus transmission.

![Zika Virus](image)

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**U.S. MILITARY**

Decades later, sickness among airmen after a hydrogen bomb accident

19 June - Alarms sounded on United States Air Force bases in Spain and officers began packing all the low-ranking troops they could grab onto buses for a secret mission. There were cooks, grocery clerks and even musicians from the Air Force band. It was a late winter night in 1966 and a fully loaded B-52 bomber on a Cold War nuclear patrol had collided with a refueling jet high over the Spanish coast, freeing four hydrogen bombs that went tumbling toward a farming village called Palomares, a patchwork of small fields and tile-roofed white houses in an out-of-the-way corner of Spain’s rugged southern coast. ... It was one of the biggest nuclear accidents in history, and the United States wanted it cleaned up quickly and quietly. But if the men getting onto buses were told anything about the Air Force’s plan for them to clean up spilled radioactive material, it was usually, “Don’t worry.”

The New York Times

**Naval Health Research Center launches norovirus vaccine trial**

22 June - Recently, the Naval Health Research Center (NHRC) launched a clinical trial at Recruit Training Command (RTC) to evaluate the effectiveness of the first norovirus vaccine in reducing outbreaks of acute gastroenteritis. Currently, there is no vaccine to prevent norovirus. ... “Norovirus is the largest cause of acute gastroenteritis in the United States,” said Navy Cmdr. Dennis Faix, preventive medicine physician at NHRC. “Military recruits are particularly vulnerable to the disease with recruits living side-by-side in the barracks. RTC has experienced outbreaks in recent years, which can significantly impact training populations, disrupt training schedules, and has the potential to cause long-term health consequences.” Extensive safety testing for this vaccine has been performed in civilian populations, but because the recruit training population regularly experiences large outbreaks of norovirus, it is a perfect place to test the effectiveness of the vaccine for the military, said Faix. MHS

**Psychologists behind CIA interrogation tactics deny torture**

22 June - The acknowledgement by two former Air Force psychologists that they used waterboarding and other harsh tactics against detainees in the war on terror is a striking development, according to a human rights lawyer. ... In federal court documents filed this week, the two psychologists who helped design the CIA’s enhanced interrogation techniques said they used harsh tactics, but they denied allegations of torture and war crimes leveled by the American Civil Liberties Union. The ACLU has sued James E. Mitchell and John "Bruce" Jessen of Washington state on behalf of three former CIA prisoners,
Identification and Care of Patients with Hantavirus Disease

Hantavirus infection in the United States can cause severe and life-threatening illness, requiring rapid assessment, presumptive diagnosis, and high-level supportive care of respiratory and cardiac functions. Approximately 37% of cases end in death. Although hantavirus disease is rare, clinicians should be aware of the risk factors, clinical picture, and essential care elements.

Date: Thursday, June 30, 2016
Time: 2:00 - 3:00 pm (Eastern Time)
Participate by Phone:
800-779-5346 (U.S. Callers)
517-308-9340 (International Callers)
Passcode: 2718213
Participate by Webinar

GLOBAL

First estimate of global HPV vaccine uptake finds wide disparities

21 June - A new pooled analysis ... shows substantial disparities among high- and low-income countries regarding use of national human papillomavirus (HPV) immunization programs. ... From 2006 to 2014, 64 countries nationally, four countries sub-nationally, and 12 overseas territories had introduced the HPV vaccine into national immunization programs. Most of these programs were in high-income and upper-middle-income countries, with Australia, Northern Europe, and New Zealand having the most comprehensive vaccination programs, the authors wrote. ... Globally, 118 million girls and women received at least one dose of the HPV vaccine, but only 1% were from low-income nations. ... Countries without HPV vaccine programs have the highest burden of disease and would benefit the most from efforts to prevent cervical cancer, they added.

CIDRAP News Scan (fourth item)

Fossil fuel combustion endangers children's health in two significant ways

21 June - Fossil fuel combustion and associated air pollution and carbon dioxide has been identified as the root cause of much of the ill health of children today. Because of their inherent biological vulnerability, children now bear a disproportionate burden of disease from both pollution and climate change. ... [By] reducing air pollution we will see fewer babies born at low birth weight, and fewer children suffering from asthma and neurodevelopmental problems such as lower IQ and ADHD. Lowered emissions of CO2 and mitigation of climate change will reduce the number of children dying as a result of floods and drought, and fewer children will suffer from heat stress, malnutrition, infectious disease, respiratory illness, and mental illness from displacement, social, and political instability.

Science Daily

Mosquito saliva increases disease severity following dengue virus infection

16 June - Insects transmit diseases when, probing for blood vessels, they inject saliva together with viral, bacterial, or parasitic pathogens into the skin of mammalian hosts. A
study in mice ... suggests a critical role of mosquito saliva in the outcome of dengue virus infection. ... [Dengue virus (DENV)] can cause severe disease, especially in people who have previously been exposed to a different serotype of the virus. In such patients, ... antibodies that were generated during the first infection bind but do not destroy the slightly different newly infecting virus. ... The resulting higher viral burden in the patients causes more severe disease symptoms, or even death. ... Among mice that had antibodies ... the researchers found that the addition of saliva extract caused more severe disease than virus alone. In contrast, saliva extract did not influence disease severity and symptoms in naïve mice. The researchers also report that saliva increased DENV infection of immune cells in the skin and enhanced immune cell migration to neighboring lymph nodes, which could promote the spread of disease throughout the body. EurekAlert!

One-third of hospitals in developing world lack running water

22 July - A study of 430 hospitals in the developing world found that more than one-third lacked running water, a deficiency that can lead to unsanitary conditions for patients in general and dangerous conditions for those who need surgery. For their study, the researchers analyzed published research related to surgical capacity in low- and middle-income countries. They identified 19 surgical capacity studies undertaken between 2009 and 2015 that included information on water availability covering 430 hospitals in 19 nations. They found that 147 of the 430 hospitals lacked continuous running water (34 percent). These ranged from less than 20 percent with running water in Liberia to more than 90 percent in Bangladesh and Ghana. Johns Hopkins Bloomberg School of Public Health News

Study: Diagnosed drug-resistant TB cases in kids are just tip of iceberg

22 July - Using mathematical modeling, researchers estimate that the number of drug-resistant tuberculosis (TB) cases in children around the world dwarfs the number actually reported. ... A team from two British universities and the World Health Organization (WHO) relied on data collected by the WHO's TB drug resistance surveillance program between 1988 and 2014 to generate their estimates. They used WHO data on adult TB cases to approximate the annual risk of TB infection in children, and employed data on demographic characteristics, BCG vaccine coverage, HIV prevalence, and the natural history of disease in children to estimate TB incidence in each of 180 countries. The researchers estimated that 850,000 children fell ill with TB in 2014, including 58,000 with isoniazid-resistant TB, 25,000 with multidrug-resistant (MDR) TB, and 1,200 with extensively drug-resistant (XDR) disease. As for latent TB cases, they estimated that 67 million children are infected with Mycobacterium tuberculosis. That includes 5 million with isoniazid monoresistance, 2 million with MDR-TB, and 100,000 with XDR-TB. CIDRAP News Scan (second item)
Study: Weakness, fever, distress common with Ebola in young children

21 July - A study published in the July issue of The Lancet Global Health notes that weakness, fever, distress, and diarrhea were common symptoms in children under the age of 5 years who were being treated for Ebola virus disease (EVD) in West Africa, and many presented without a fever. For the observational study, researchers used admissions data from two Medecins Sans Frontieres (MSF) Ebola management centers in Sierra Leone, collected from June to December of 2014. Ninety-one children were included in the study. The most common symptoms observed during admission were weakness (74.7%), fever (70.8%), distress (63.7%), diarrhea (59.3%), and cough (52.7%). About 25% presented without a fever. The symptoms most associated with mortality were fever (80%), diarrhea (51.9%), and vomiting (75%). Also, hiccups, confusion, and hemorrhaging were observed only in children who died. Distress was associated with a higher survival rate.

CIDRAP News Scan (first item)

WHO says Saudi misdiagnosis caused MERS outbreak

22 June - The wrong diagnosis of a woman suffering from the MERS coronavirus led to more than 49 other patients and medical staff being exposed to the disease in a Saudi hospital, the World Health Organization said in a statement on Tuesday. The unnamed 49-year-old from Buridah city developed symptoms on June 9 and was admitted to hospital on June 10 where she was in a critical condition in an intensive care unit, the WHO said. On June 12, she tested positive for Middle East Respiratory Syndrome (MERS). … The WHO said the woman had initially gone to hospital for a condition unrelated to MERS. “She was then admitted to the vascular surgery ward – MERS-CoV infection was not considered. She was not isolated and was managed in a multi-bed room. During this time, more than 49 HCWs (healthcare workers) and patients were exposed,” the WHO said. A rapid response team immediately tried to trace the people with whom she had had contact at her home or in the hospital in Riyadh, and 20 of them tested positive, although 18 of the 20 had no symptoms.

Scientific American

ZIKA VIRUS

Abortion demand 'soars' amid Zika fear

23 June - Fears over the Zika virus have contributed to a “huge” increase in the number of women in Latin America wanting abortions, researchers say. Estimates suggest there has been at least a doubling in requests in Brazil and an increase of a third in other countries. Many governments have advised women not to get pregnant due to the risk of babies being born with tiny brains. The findings were published in the New England Journal of Medicine. … A termination remains illegal in many parts of Latin America, but women simply turn to unofficial providers. Women on Web, which advises women online and then delivers
As Zika threat grows in U.S., testing lags for a vulnerable group

17 June - ... United States health officials decided in February that all expectant women who had visited the countries affected should be tested for the disease. But after the guidelines were put in place, public health officials and doctors in New York City found that large numbers of women, many uninsured or low-income immigrants from the Caribbean and Latin America, were not being screened and tested in a systematic way. The problems facing the city’s health care providers in ensuring that all of those who need testing can get it illustrates the monumental challenges involved in reaching those considered most at risk. ... The exact number of people missed is not known, because “nobody really keeps data on how many women who traveled to a Zika area should be tested,” said Dr. Jay Varma, deputy commissioner for disease control at the New York City Department of Health and Mental Hygiene. The New York Times

CDC and States ponder plans to keep ahead of Zika

21 June - The Centers for Disease Control and Prevention last week released a 58-page blueprint for what to do if a homegrown case of Zika surfaces. The mosquito that carries the virus, the *Aedes aegypti*, is found mostly in the South and Southwest, and the C.D.C. says it is focusing much of its mosquito control effort on six states at one county most at risk: California, Texas, Florida, Hawai i, Arizona and Louisiana, and Los Angeles County. ... Mosquito control, central to containing the spread, is spotty at best, particularly in impoverished areas with weak tax bases, common in parts of the South. In Tennessee, the overwhelming majority of counties and cities do not have mosquito control programs. In North Carolina, only about a quarter of counties have them. ... The C.D.C. plan stated that the risk of “prolonged widespread local transmission is not expected,” based on the history of two similar viruses [chikungunya and dengue]. ... [Most] experts do not believe there will be more than a handful of local cases, mainly because of the conditions of life in the United States — namely, widespread use of air-conditioning and window screens, and relatively little crowding. The New York Times

FDA paves way for first human Zika vaccine trial

20 June - In a first for Zika virus vaccine development, Inovio Pharmaceuticals announced today that it has received Food and Drug Administration (FDA) clearance to launch a phase 1 clinical trial of a DNA-based vaccine that it is developing with GeneOne Life Science. The company’s first human trial of the vaccine is launching sooner than it projected last month, when Inovio said it expected clinical trials to begin by the end of 2016. CIDRAP
NIH launches large study of pregnant women in areas affected by Zika virus

21 June - The National Institutes of Health and Fundacao Oswaldo Cruz-Fiocruz (Fiocruz), a national scientific research organization linked to the Brazilian Ministry of Health, have begun a multi-country study to evaluate the magnitude of health risks that Zika virus infection poses to pregnant women and their developing fetuses and infants. The study is opening in Puerto Rico and will expand to several locations in Brazil, Colombia and other areas that are experiencing active local transmission of the virus. NIH

Number of Zika-positive Puerto Ricans surprises health officials

17 June - Roughly 1 percent of recent blood donors in Puerto Rico showed signs of active infection with the Zika virus, suggesting that a substantial portion of the island’s population will become infected, federal health officials reported on Friday. From April 3 to June 11, testing of 12,700 donations at blood centers in Puerto Rico identified 68 infected donors, according to the Centers for Disease Control and Prevention. Over all, about 0.5 percent of donors had active Zika infections, but the prevalence rose to 1.1 percent in the week ending June 11. ... The C.D.C. has estimated that as many as a quarter of the island’s 3.5 million people may become infected with the Zika virus this year. ... Zika-contaminated donations are removed from the blood supply. In the continental United States, where local transmission of the virus has yet to be reported, most blood banks are not yet using the experimental screening test used in Puerto Rico. The New York Times

Previous exposure to dengue may make Zika worse, scientists find

23 June - Scientists studying the Zika outbreak in Brazil say previous exposure to another mosquito-borne virus, dengue, may exacerbate the potency of Zika infection. Early-stage laboratory findings by researchers in Britain France and Thailand suggest Zika uses the body’s own defenses as a “Trojan horse”, allowing it to enter a human cell undetected. Once inside the cell, it replicates rapidly. The scientists said their results, published in the journal Nature Immunology, suggested that some dengue antibodies can recognize and bind to Zika due to the similarities between the two viruses, but that these antibodies may also amplify Zika infection. Reuters

U.S. to help fund technology to eliminate Zika in blood supply

20 June - The U.S. government ... has agreed to help fund two pathogen reduction technologies to help reduce the risk of Zika virus and other infections from being transmitted through the blood supply. The Department of Health and Human Services (HHS) said the funding will flow through its Biomedical Advanced Research and
Development Authority (BARDA) unit, which will provide initial funding of $30.8 million to Cerus Corp and $17.5 million to the U.S. division of Japan's Terumo Corp. Cerus's Intercept technology has already been approved by the Food and Drug Administration to reduce pathogens in platelets and plasma. It is conducting a trial to show it can also reduce pathogens in red blood cells. BARDA's agreement with Cerus includes $10.7 million to help evaluate the safety of the blood system in Puerto Rico. ... The contract with Terumo is to further develop its Mirasol System to confirm its can reduce the risk of infection through platelets. Reuters

Zika reports note rise in abortion demand, eye issues in adult

22 June - [The rise in abortion demand is covered in the article above: Abortion demand ’soars’ amid Zika fear]. ... In a separate report, Brazilian researchers described uveitis in a man in his early 40s who had a lab-confirmed Zika infection along with typical symptoms, including conjunctivitis. The report appears to be the first for an eye complication related to the virus in an adult, aside from conjunctivitis, one of the disease's main symptoms. CIDRAP

Zika virus infection among Military Health System beneficiaries following introduction of the virus into the Western Hemisphere

20 May – As of 20 May 2016, the Armed Forces Health Surveillance Branch (AFHSB) has recorded 17 confirmed Zika virus infections in Military Health System (MHS) beneficiaries; two probable cases were also reported. ... On 17 May, AFHSB issued updated guidance for Detecting and Reporting DoD Cases of Acute Zika Virus Disease that includes changes to clinical criteria, case definitions, and laboratory testing, as well as a list of DoD laboratory points of contact. ... As of 18 May, two diagnostic tests are available in the DoD under an Emergency Use Authorization (EUA) from the U.S. Food and Drug Administration. The Centers for Disease Control and Prevention (CDC) Zika IgM MAC-ELISA is currently being or has been distributed to six DoD laboratories, with three laboratories (NIDDL, BAMC, and USAFSAM) having received approval to commence patient testing. The CDC Zika Triplex rRT-PCR assay is currently being or has been distributed to 16 DoD laboratories; to date, 15 laboratories have received approval to start diagnostic testing. Medical Surveillance Monthly Report
ACIP recommends against inhaled flu vaccine for next season

22 June - In an emotional vote today sure to shake-up flu immunization plans for the upcoming flu season, federal vaccine advisors recommended against using the nasal spray vaccine, made by AstraZeneca’s MedImmune and sold as FluMist, because of problems with vaccine effectiveness over the past three flu seasons. The vote marks a dramatic turnaround for a version of the vaccine for which health officials have had high hopes. In 2014, the Advisory Committee on Immunization Practices (ACIP), a group of outside experts that helps guide Centers for Disease Control and Prevention (CDC) vaccine policy, made a preferential recommendation for nasal spray version, also called the live attenuated influenza vaccine (LAIV), because it seemed to provide better protection. ACIP reversed itself, however, in 2015 because of disappointing performance against the 2009 H1N1 virus. As with other vaccines, LAIV also didn’t work well during the 2014-15 season against a drifted H3N2 strain. CIDRAP


Pneumonia and Influenza (P&I) Mortality Surveillance for 2015-2016 Influenza Season Week 23 ending June 11, 2016:

- NCHS Mortality Surveillance Data: Based on NCHS mortality surveillance data available on June 16, 2016, 5.8% of the deaths occurring during the week ending May 28, 2016 (week 21) were due to P&I. This percentage is below the epidemic threshold of 6.8% for week 21.
- 122 Cities Mortality Reporting System: During week 23, 5.8% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.3% for week 23. CDC

NHRC: Febrile Respiratory Illness Surveillance Update

For the week ending 2 January 2016:
- Influenza: No new cases of NHRC laboratory-confirmed influenza among US military basic trainees.
- FRI surveillance at all eight U.S. military basic training centers indicated FRI rates were elevated at MCRD San Diego and Fort Benning. Naval Health Research Center
Canada: Researchers trace rabies outbreak to raccoon that trekked 500 km

17 June - Scientists say they now have evidence suggesting a rabid raccoon hitchhiked more than 500 kilometres into Ontario from southeastern New York state to ignite Ontario’s first rabies outbreak in a decade. Susan Nadin-Davis, a researcher with the Canadian Food Inspection Agency who focuses on rabies research, said she was surprised at the result and had to run tests again to make sure it wasn’t a mistake. ... A fight between two Hamilton dogs and an aggressive raccoon in the back of an animal control van in December led to the discovery of the first documented case of rabies in a raccoon in the province since 2005. The outbreak has ballooned to 128 cases of raccoon strain rabies in both the masked creatures and skunks, according to the Ministry of Natural Resources and Forestry, which is charged with managing the outbreak. CTV

A protein that moves from muscle to brain may tie exercise to memory

23 June - Researchers have identified a substance in muscles that helps explain the connection between a fit body and a sharp mind. When muscles work, they release a protein that appears to generate new cells and connections in a part of the brain that is critical to memory. ... [Researchers] began by looking for substances produced by muscle cells in response to exercise. That search turned up cathepsin B, a protein best known for its association with cell death and some diseases. Experiments showed that blood levels of cathepsin B rose in mice that spent a lot of time on their exercise wheels. What’s more, as levels of the protein rose, the mice did better on a memory test in which they had to swim to a platform hidden just beneath the surface of a small pool. The team also found evidence that, in mice, cathepsin B was causing the growth of new cells and connections in the hippocampus, an area of the brain that is central to memory. NPR

Against suicide, a century of little progress

21 June - In late April, the National Center for Health Statistics reported a nearly 30-year high in suicides in the United States. ... The increase affected every age group. The lab of Matthew Nock, a professor of psychology, is conducting leading research on suicide and self-injury. In a conversation with the Gazette, Nock put the recent stats in perspective. ...
NOCK: For me, the take-home is that suicide is a huge problem. It’s not a new problem — the rates have always been where they are now. We have seen mortality rates for other problems or diseases decrease over time; the rates of death due to influenza or pneumonia have dropped enormously over the past 100 years, whereas for suicide, it has been pretty flat. It’s a big problem but not a new one. Harvard Gazette

Americans spent $30.2 billion out-of-pocket on complementary health approaches

22 June - Americans spent $30.2 billion — $28.3 billion for adults and $1.9 billion for children — out-of-pocket on complementary health approaches, according to a nationwide survey. These approaches include a group of diverse medical and health care systems, practices, and products such as herbal supplements, meditation, chiropractic, and yoga. This amount represents 9.2 percent of all out-of-pocket spending by Americans on health care and 1.1 percent of total health care spending. These findings come from an analysis by the National Center for Complementary and Integrative Health (NCCIH) and the Centers for Disease Control and Prevention. NIH

Birth control via app finds footing under political radar

19 June - A quiet shift is taking place in how women obtain birth control. A growing assortment of new apps and websites now make it possible to get prescription contraceptives without going to the doctor. The development has potential to be more than just a convenience for women already on birth control. Public health experts hope it will encourage more to start, or restart, using contraception. ... And as apps and websites, rather than legislative proposals or taxpayer-funded programs, the new services have so far sprung up beneath the political radar and grown through word of mouth. ... At least six digital ventures, by private companies and nonprofits, including Planned Parenthood, now provide prescriptions written by clinicians after women answer questions about their health online or by video. The New York Times

Herpes vaccine reduces the number of outbreaks per year

22 June - If you don’t have genital herpes, chances are you know someone who does—in the United States, one in six people between ages 14 and 49 have got it, according to the CDC. Herpes can’t be cured, so people with the disease often take daily medication to shorten their outbreaks, which can occur four or five times per year and cause discomfort. A new vaccine might be able to change that—it could reduce the activity of the virus, leading to fewer outbreaks and maybe even a lower transmission rate. Although this treatment can’t currently prevent the disease and isn’t made of deactivated versions of the virus, it does stimulate the immune system, as vaccines are designed to do. ... This new drug, dubbed GEN-003, consists of two different chemicals that recruit specialized immune cells to combat the virus by reducing that viral shedding. If it works as intended, the drug reduces the transmission of the virus by decreasing viral shedding, and thus it could also reduce the number of outbreaks an infected person experiences. Vocativ
How many calories we burn when we sit, stand or walk

22 June - There are many compelling reasons to get up out of your desk chair and stand more at work. But weight control is probably not one of them, according to a new study that precisely measured how many calories people burn during everyday office activities. The new study's results suggest that engaging frequently in one type of activity while at work may help many of us avoid weight gain. But that activity is not standing up. ... Over all, in fact, the researchers concluded, someone who stood up while working instead of sitting would burn about 8 or 9 extra calories per hour. ... But walking was a different matter. When the volunteers walked for 15 minutes, even at a fairly easy pace, they burned about three times as many calories as when they sat or stood. If they walked for an hour, the researchers calculated, they would incinerate about 130 more calories than if they stayed in their chairs or stood up at their desks. The New York Times

Infections reveal inequality between the sexes

22 June - The immune systems of men and women respond very differently to infection—and scientists are taking notice. Research presented last week at a microbiology meeting in Boston, Massachusetts, suggests that the split could influence the design of vaccination programmes and lead to more targeted treatment of illness. ... Women might have evolved a particularly fast and strong immune response to protect developing fetuses and newborn babies. ... But it comes at a cost: the immune system can overreact and attack the body. This might explain why more women than men tend to develop autoimmune diseases. ... Now, scientists are beginning to tease out some precise mechanisms. ... [A] tuberculosis vaccine given to Gambian infants ... suppressed production of an anti-inflammatory protein in girls, but not boys. This boosted the girls' immune responses, and may have made the vaccine more effective. Hormones also play a part. Estrogen can activate the cells involved in antiviral responses, and testosterone suppresses inflammation. Scientific American

Is it fair to call digital health apps today's "snake oil"?

21 June - ... In a speech delivered at the AMA's recent annual meeting, CEO James Madara described the digital health industry as peddling apps and devices that "impede care, confuse patients, and waste our time." Without naming names, he referenced ineffective electronic medical records, direct-to-consumer digital health products, and apps of "mixed quality." "This is the digital snake oil of the early 21st century," he declared. ... [In] 2015, many researchers started publishing studies showing that health apps rarely delivered improved health outcomes to patients and/or published inaccurate health information. AMA's Madara defended his comments to Stat News on Friday, citing one such study that looked at more than 1,000 health care apps for patients—and found that just 43% of iOS apps and 27% of Android apps were likely to be useful. Fast Company

No such thing as a healthy smoker

20 June - Smokers who think they are escaping the lung-damaging effects of inhaled
tobacco smoke may have to think again, according to the findings of two major new studies. ... Even when the results of spirometry are normal, Dr. Regan added, “a lot of smokers have respiratory symptoms. They get sick often, are more likely to be hospitalized with bronchitis or pneumonia, and have evidence on CT scans of thickened airway walls or emphysema that impair breathing.” Dr. Prescott G. Woodruff, lead author of the other study ... said in an interview, “Smokers have much more lung disease than we previously thought. The 15 to 20 percent who get C.O.P.D. is a gross underestimate.” Too often, Dr. Regan’s team pointed out, symptoms like shortness of breath and limits on exercise are “dismissed as normal aging.” The New York Times

The way Americans eat is becoming more divided

21 June - Americans are adding more whole grains, nuts and seeds to their diets and cutting back on sodas and sugary drinks, a U.S. study suggests. ... Researchers looked at trends in eating habits for almost 34,000 adults aged 20 or older who participated in seven nationally representative surveys from 1999 to 2012. ... Overall, the percentage of Americans with poor diets based on [American Heart Association] standards dropped from 56 percent to 46 percent during the study period. The proportion of people with ideal diets was low but inched up to 1.5 percent from less than 1 percent. Racial disparities in eating habits persisted throughout the study period. The proportion of white people with poor diets declined, while remaining little changed among black and Hispanic adults. More affluent adults saw greater improvements in diet than lower-income people, the study also found. Scientific American

Democratic Republic of the Congo: Congo declares a yellow fever epidemic

21 June - After confirming 67 cases of yellow fever, including several in the capital, Congo is rolling out official epidemic control measures. The cases, which currently span the provinces of Kinshasa, Kongo Central and Kwango, have resulted in five fatalities so far. On announcing this official epidemic, health minister Felix Kabange told reporters that agencies are currently testing around 1,000 people who may have contracted the virus. ... Health agencies say that of the cases currently being treated in the Republic of Congo, the majority can be traced back to an outbreak in Angola, which has killed over 300 people since December of 2015. Suspected cases of yellow fever linked to the Angola outbreak have also cropped up in Kenya and China. Care2
Nigeria: Kebbi State sees 99 leprosy cases in last six months

18 June - The north-western Nigerian state of Kebbi has reported 99 active leprosy cases since October 2015, according to a Nigeria media report Saturday. The data was disclosed after an investigation by The Leprosy Mission Nigeria (TLMN). According to the report, in the fourth quarter of 2015 between October, November and December, 97 cases of leprosy were detected while an additional two cases were discovered in the first quarter of 2016, making a total of 99 active cases of leprosy in the state. The advocacy group calls on media to reach out to the government for the promotion, protection and enforcement of human rights for persons affected by leprosy and other disabilities in the society.

Outbreak News Today

'Virtual doctors' helping patients in Zambia

22 June - ... Zambia has about 1,600 doctors for a population of 14 million, and two-thirds of these are working in towns and cities, while most of the country's population is in the countryside. It means access to good quality health care is often difficult if not impossible. ... [Huw Jones] set up the Virtual Doctors charity, based in Brighton, which uses the expertise of volunteer doctors in the UK to provide direct and individual support for health workers in Zambia. For many communities, it is not practical to expect sick and frail people to walk or cycle for hours to hospital. So families depend on rural health centres, which have health workers but no qualified doctors. The virtual doctors project means that these isolated health centres can be supported by doctors thousands of miles away. Health workers and clinical officers on the ground use an app on a smartphone or tablet computer to take notes on a patient’s symptoms and photographs. This information is sent to a volunteer doctor in the UK who helps with a diagnosis and recommends treatment.

BBC News

WHO approves fractional dosing to stretch yellow fever vaccine supply

17 July - As a stopgap measure to stretch limited supplies of yellow fever vaccine due to outbreaks in Angola and the Democratic Republic of Congo (DRC), vaccine experts for the World Health Organization (WHO) today said the vaccine can be given at one-fifth the regular dose. In outbreak developments, local transmission is still occurring in Angola’s heavily populated Luanda district, though 8 million people have been vaccinated, and Chad is the latest country on a growing list of those reporting sporadic yellow fever cases. In an announcement, the WHO said its Strategic Advisory Group of Experts (SAGE) on Immunization reviewed evidence that using one fifth of a standard dose protects against yellow fever for at least 12 months and possibly longer. The group emphasized that fractional dosing is a short-term measure, because there’s not enough data to show that the smaller dose would provide the lifelong protection of a full dose.

CIDRAP
Kazakhstan: Two die in suspected anthrax outbreak

21 June - Two people have died from a suspected anthrax virus in Kazakhstan and six more have been hospitalised, the health ministry said on Tuesday. The suspected outbreak of the highly lethal virus happened in a village in the central Karaganda region, the ministry said in a statement. All eight people had eaten the meat of a sick cow. euronews

Saudi Arabia: Middle East respiratory syndrome coronavirus (MERS-CoV)

22 June - Between 19 and 20 June 2016 the National IHR Focal Point of Saudi Arabia reported six additional cases of Middle East Respiratory Syndrome (MERS). Four of the newly reported cases are associated with the MERS-CoV Outbreak occurring in a hospital in Riyadh city, Riyadh region. ... Contact tracing of household and healthcare contacts is ongoing for these cases. The National IHR Focal Point for the Kingdom of Saudi Arabia also notified WHO of the death of I MERS-CoV case that was reported in a previous DON on 19 June (case no. 1). Globally, since September 2012, WHO has been notified of 1,768 laboratory-confirmed cases of infection with MERS-CoV, including at least 630 related deaths. WHO

United Arab Emirates: Middle East respiratory syndrome coronavirus (MERS-CoV)

21 June - On 16 June 2016 the National IHR Focal Point of United Arab Emirates (UAE) reported one additional case of Middle East Respiratory Syndrome Coronavirus (MERS-CoV). WHO

Yemen: Shortfalls will disrupt already limited Yemen food aid

22 June - The U.N. will be forced to scale back already limited food distribution in war-scarred Yemen by August because of severe funding shortages, a senior official said Wednesday. About 14 million people, or roughly half the country's population, suffer from food insecurity at "crisis" or "emergency" levels. ... Emergency level is just one step before famine on the U.N.'s food insecurity scale. The World Food Program currently reaches about 3.5 million people in Yemen every month. Khoury said in an interview that without more funding, "we don't have enough money to feed even these people." ABC News
Europe: Helping consumers to better understand health-related food package labelling

22 June - The EU CLYMBOL project has held its final project conference, presenting its findings on food labelling and health claims to a large audience of European stakeholders. The project has aimed to determine how health-related claims and symbols on food packaging are understood by consumers, and how they impact on both purchasing and consumption trends. ... CLYMBOL researchers began by looking at how often claims are used in Europe and discovered that 26 % of all food products carried at least one claim. Most of these claims were nutritional claims (64 %), followed by health claims (29 %), whilst only 6 % were health-related ingredient claims. ... The research team discovered that most products tended to have more than one claim per package, with several nutrition claims being often listed. ... Overall, CLYMBOL found that consumers prefer short and easily comprehensible claims. As such, the project team has argued that communication with the consumer on health labelling should be kept simple but backed by scientifically sound evidence. Medical Xpress

Europe: Millions in asylum claim backlog

20 June - The latest refugee and asylum figures, released by UNHCR today, show the global population of refugees rising to 16.1 million at the end of 2015. Africa, Asia and Europe all saw increases in refugee registrations, but Europe's "crisis" should be seen in perspective ... Europe has not yet processed all the applications by asylum-seekers that have arrived in the last year or two, and has about one million cases yet to consider, about one-third of the global total caseload. Even so, of the global backlog of 3.2 million asylum applications, Europe is by no means exceptional, as today's figures for UNHCR show. IRIN

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Canada: British Columbia declares public health emergency over Fentanyl overdoses

22 June - Overdose deaths have been driven lately by a synthetic opioid called Fentanyl, which is cheaper than heroin and more potent. Officials are expanding the alert to include a newer opioid called W-18. ... [Few] places in the U.S. have been as hard-hit as the Canadian province of British Columbia, where a surge in Fentanyl-related overdose deaths has
triggered the declaration of a public health emergency. ... KASTE: Fentanyl - it’s about 50 times stronger than heroin - so strong that the DEA warns police not to touch it with their bare skin. It’s replacing heroin because it’s cheaper to make and easier to smuggle from Mexico and China. ... [Just] as users are getting used to the idea that their heroin is actually Fentanyl, now maybe it’s not even Fentanyl anymore. An even stronger synthetic opioid called W-18 has now appeared. ... In Vancouver, public health officials are struggling with what they don’t know about it. For instance, Dr. Tyndall was confronted by questions of whether W-18 responds to the medicine Naloxone. NPR

U.S.: CDC - Source of *E. anophelis* outbreak still unknown

20 June - ... In the largest identified *Elizabethkingia* outbreak in history, 66 patients in Wisconsin, Michigan and Illinois — most of them older adults — have been infected with the same strain of *E. anophelis*. ... [Isolates] in 11 other states have tested positive for *Elizabethkingia* — half of them for *E. anophelis* — but none have matched the outbreak strain, Walters said. ... Walters said the CDC has not found a source of contamination in health care products, hospitals, food, personal care products, or in patients’ homes, nor has the agency discovered evidence of patient-to-patient transmission. She said the CDC is continuing its search by conducting focus groups among patients who have closely related isolates, who live in the same town or who share the same occupation, but that the investigation might soon end. Healio

U.S.: City of Philadelphia successfully passes a soda tax

20 June - Last week, Philadelphia became the first major city to pass a “soda tax.” While other cities have tried and ultimately failed to pass similar pieces of legislation, Philadelphia was successful. So what made Philadelphia different? ... [The] new Mayor (Jim Kenney) used a two pronged approach to justify the tax. ... The first salvo was that soft drinks are bad for you. By raising the price, this will make them less a “standard food” and more an “occasional food” (theoretically). Adding this tax will help wean people off of soft drinks, making them healthier and reducing health risks. ... Mayor Kenney’s next salvo positioned the soda tax as a revenue generator for the city: “(the tax) would fund five initiatives over five years. ... The genius here is that the tax now has a lot more support on council. For those members who want to create jobs or renovate schools, this suddenly gives them the funds to launch those projects. PLOS Blogs

U.S.: EPA says filtered Flint, Michigan drinking water safe to drink

23 June - Federal officials said on Thursday it is safe for anyone to drink properly filtered water in Flint, Michigan, where a public health crisis erupted after residents were exposed to dangerously high levels of lead. The U.S. Environmental Protection Agency (EPA) said in a statement that the most recent testing at nearly 50 locations in the city showed lead levels far below the levels considered dangerous. But the city’s mayor said some homes in Flint
cannot be fitted with filters, so bottled water is still needed. Reuters

**U.S.: Good news hidden in the data - today’s children are healthier**

17 June - ... The health of American children is improving sharply, and the health gap between the rich and the poor among children and young adults is shrinking. The research suggests that future generations of Americans may not reach old age with the same ailments and inequalities as today’s older Americans. Death rates among children always tend to be low, but the new data show large reductions in the number of American children who die. The mortality rate for children has declined by 52 deaths per 100,000 children between 1990 and 2010, according to new research in Science. ... And the death rates fell faster for children living in the poorest counties in the country. ... There are also new signs that public policy can help reduce inequality in the health of rich and poor Americans. A gulf between the life spans of rich and poor Americans who have reached middle age is widening. But, among children, the gaps between rich and poor are narrowing substantially. If those trends hold, income level may turn out to be less predictive of life span than the studies of adults suggest. *The New York Times*

**U.S.: Ferocious wildfires scorch California as extreme heat wave starts to ease**

21 June - Firefighters worked to make gains against Southern California wildfires as an intense heat wave eased slightly Tuesday, but officials warned nearby communities to stay alert and obey any evacuation orders. Two adjacent fires in the San Gabriel Mountains 20 miles northeast of Los Angeles remained uncontained but had not destroyed any homes while their combined size grew to more than eight square miles. ... The fires erupted separately Monday and scared homeowners before burning mostly away from the cities. *CBS News*

**U.S.: Heroin use at 20-year high in U.S. drug 'epidemic', U.N. says**

23 June - A heroin "epidemic" is gripping the United States, where cheap supply has helped push the number of users to a 20-year high, increasing drug-related deaths, the United Nations said on Thursday. According to the U.N.'s World Drug Report 2016, the number of heroin users in the United States reached around one million in 2014, almost three times as many as in 2003. Heroin-related deaths there have increased five-fold since 2000. ... [Heroin,] which in the United States mainly comes from Mexico and Colombia, is greater supply that has depressed prices in recent years, Me said. *Reuters*
U.S.: Human cases of plague, tularemia reported in New Mexico, Colorado

20 June - A teenage boy from Rio Arriba County, New Mexico, is the first person in the United States to be diagnosed as having plague this year, while an urban gardener in Colorado’s Front Range was diagnosed as having tularemia. ... Paul Ettestad, DVM, the public health veterinarian for the New Mexico Department of Health (NMDH) said sick or dead rodents and rabbits are being reported throughout the state. ... A patient in Larimer County, Colorado, presented with a lung infection and was later diagnosed as having tularemia this weekend, the county’s Department of Health & Environment said in a Jun 17 news release. ... Health officials suspect the patient was exposed after inhaling infected soil while gardening in his urban subdivision. CIDRAP News Scan (second item)

U.S.: More than half of New Mexico wildfire contained

22 June - More evacuees are expected to return home as firefighters inch closer to snuffing out a massive wildfire in central New Mexico. Authorities said Wednesday that the blaze in the mountains south of Albuquerque is more than halfway contained. It has destroyed at least two dozen homes and burned nearly 28 square miles. Fire officials say crews constructed more fire lines along two sides of the blaze. Helicopters also have dropped more than 2,100 gallons of water close to where there are structures. The human-caused fire ignited June 14, racing across miles of tinder-dry forest. Several villages that line the eastern side of the Manzano Mountains had to be evacuated. Fox News

U.S.: Puerto Rico public hospital faces Hepatitis A outbreak

22 June - Puerto Rico’s largest public hospital is reporting an outbreak of hepatitis A. The director of the island’s Medical Services Administration says at least 26 cases have been reported among employees at the Centro Medico in Rio Piedras. Irving Jimenez said Wednesday that it appears the employees all had bought food from an unlicensed street vendor. Officials say that no patients so far have been infected. KSL.com

U.S.: Rule ties hospital antibiotic stewardship to Medicare funds

22 June - A proposed rule submitted to the Federal Register by the Centers for Medicare and Medicaid Services (CMS) last week calls for combined antibiotic stewardship and infection prevention and control programs in all hospitals that receive federal funding, noting that coordinated activities can save $1 billion in annual costs. "The Department of Health and Human Services [HHS] is particularly concerned about HAIs [healthcare-associated infections], as they are a significant cause of morbidity and mortality in the United States," the authors said. In 2011, 722,000 people acquired an HAI, and 75,000 people died due to HAI-related complications. CIDRAP
U.S.: U.S. healthcare emits more greenhouse gas than entire U.K.

22 June - If the U.S. healthcare sector were ranked as a nation, it would be the world’s 13th-largest emitter of greenhouse gases, more than all of the UK, a new study finds. ... [A] new study, published in PLoS ONE, estimates that damage from pollutants connected to healthcare leads to an annual loss of 405,000 to 470,000 years of healthy life, or so-called disability-adjusted life years. The loss equates to roughly the same number of Americans as die every year from preventable medical errors: 44,000 to 98,000, the researchers say. Moreover, the pollution is growing. In the past 10 years, greenhouse gas emissions for the U.S. healthcare sector shot up by more than 30 percent, bringing the total to nearly 10 percent of the nation’s 2013 emissions. Reuters

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North Korea: North Korea's public health campaign

21 June - ... North Korea’s anti-smoking efforts are just one facet of a broader public health campaign launched by Kim Jong-un. The DPRK regime has also sought to curb infant mortality rates in a bid to close the 12-year gap in life expectancy with South Korea. .... North Korea’s smoking rates have been consistently amongst the highest in the Asia-Pacific region. ... In 2012, 54 percent of North Korean men smoked, a total far higher than the 30 percent target set by the DPRK regime. ... The second dimension of North Korea’s public health campaign, which has been more appreciably successful, is the DPRK’s attempt to reduce infant mortality rates. A UN report released on June 1 showed that North Korea’s mortality rate for children under age 5 has declined from 26.7 to 20 per 1,000 since 2008. Corresponding mortality rates for infants under age 1 fell from 19.3 to 14.2 per 1,000. These declines have been attributed to North Korea’s adoption of telemedicine in 2011 and the greater cooperation between regional hospitals on medical technology. The Diplomat

Papua New Guinea: Outbreak of multidrug-resistant tuberculosis on Daru Island – an update

21 June - ... The incidence of tuberculosis in Papua New Guinea is very high. ... The health system in the province and in Daru specifically is characteristic of a low-resource environment with limited financial and human resources, able to undertake little more than basic preventive and curative health services. Addressing the multidrug-resistant tuberculosis (MDR-TB) epidemic, therefore, not only requires immediate and effective tuberculosis control interventions, but equally strong efforts to strengthen the health system. ... The Government of Papua New Guinea and WHO jointly organised an
international meeting on Nov 25, 2015, to reach out to the global community for their support. ... The case detection of drug-resistant tuberculosis has increased (61 cases in 2013 and 120 cases in 2015), all diagnosed patients are treated in accordance with international standards, and the strengthening of case management systems for all tuberculosis (including drug resistant tuberculosis) has markedly improved retention in care. The Lancet

US SOUTHCOM

Brazil: Health advice for travellers to the 2016 Summer Olympic and Paralympic Games

21 June - The XXXI Summer Olympic and Paralympic Games Rio de Janeiro 2016, Brazil, will take place from 5 to 21 August 2016 and from 7 to 18 September 2016 respectively. ... Travellers should be vaccinated according to their national immunization schedule, which will vary from one country to another. ... For travellers at risk of serious complications of influenza, vaccination should be considered. ... Although the risk of mosquito borne disease is lower during winter, travellers should still take personal protective measures to prevent mosquito bites. ... On the basis of current knowledge about Zika virus disease and its complications, the following is recommended to national health authorities and health care practitioners:

- To provide travellers to areas of ongoing Zika virus transmission ... with up-to-date advice on appropriate measures to reduce the risk of becoming infected ... and on the potential consequences and complications of infection, especially for women who are pregnant or planning a pregnancy; non-barrier forms of birth control will not protect against sexual transmission of Zika virus infection;
- To advise pregnant women not to travel to areas of ongoing Zika virus outbreaks, including Brazil. ... [Antimalarial] drugs should be purchased before travelling. Travellers who become ill with a fever while traveling in a malaria-risk area within Brazil should seek immediate medical attention. ... [Adoption] of safe sex practices, and specifically consistent and correct condom use, is recommended. ... [Travellers should] take precautions to avoid illnesses caused by unsafe food and drink. WHO

Chikungunya cases spike as study notes antibody levels in Nicaragua

21 June - The Pan American Health Organization (PAHO) late last week reported 21,200 new chikungunya cases, to bring the 2016 total in the Americas to 148,453 infections, while a new study notes higher antibody levels in older people compared with younger in Nicaragua. The previous 2 weeks saw increases of 2,446 and 9,424 suspected and confirmed
cases, respectively. ... The vast majority of new cases are from Bolivia, which reported 19,329 new infections, bringing its 2016 total to 83,678. Honduras added 844 cases and now has 10,333 for the year. PAHO reported 1 new chikungunya-related death, in Brazil, raising that number to 17 for the year. ... [Researchers] from Nicaragua and the University of California, Berkeley, analyzed serum samples from 4,210 residents of Managua, including 3,362 who were 2 to 14 years old. ... They found that 13.1% of people 15 and older had antibodies to chikungunya virus, while 6.1% in the younger group did, a statistically significant difference. The proportion of unapparent infections was 64.9% in the older group and 58.3% in the younger. CIDRAP News Scan (second item)