

2 December 2016

# Army Public Health Weekly Update

Army Public Health Center

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**Fact Sheet:  
Chemical Warfare  
Agents**

During Operation Iraqi Freedom and Operation New Dawn, Service members who demolished or handled older explosive ordnance may have been exposed to chemical warfare agents.

The Department of Defense (DOD) wants to identify those who experienced symptoms following exposure to chemical warfare agent.

If you were exposed to chemical warfare agents while deployed in support of Operation Iraqi Freedom or Operation New Dawn (2003-2011), call the hotline and provide your contact information.

**Department of Defense  
Hotline: 1-800-497-6261**



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**U.S. MILITARY**

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## Excessive vomiting in pregnancy, active component service women, U.S. Armed Forces, 2005–2014

November 2016 - Up to 80% of women experience some form of nausea and vomiting during pregnancy. However, in some women, nausea and vomiting can be excessive and require inpatient and/or outpatient treatment. Data were obtained on 149,071 live births from 116,510 service women from 1 January 2005 through 31 December 2014. A total of 19,175 of the service women with live births had pregnancies complicated by excessive vomiting in pregnancy (EVP) and accounted for 20,511 EVP cases (overall rate of 13.8%). Mild and severe hyperemesis gravidarum (HG) combined accounted for almost two thirds of the total EVP cases. The slight increase observed in the annual rate of EVP between 2005 and 2014 was driven largely by the outpatient trend for mild HG. Together, mild and severe HG accounted for three-quarters of all hospital bed days for EVP. About one-third of the women with EVP-complicated pregnancies had two or more EVP-related medical encounters. [Medical Surveillance Monthly Report](#)

## Iraq-Afghanistan veterans with epilepsy more at risk of death

28 November - U.S. Iraq and Afghanistan war veterans (IAVs) with epilepsy were more than twice as likely to die between 2011 and 2015 as were similar veterans without epilepsy. A study published Nov. 11 in the U.S. Centers for Disease Control and Prevention's (CDC's) *Morbidity and Mortality Weekly Report* revealed that IAVs were found to have a higher prevalence of mental and physical comorbidity and to have substantially higher mortality than were veterans without epilepsy. ... Examination of mortality ... revealed that approximately five times more IAVs with epilepsy died by the end of 2015 than similar IAVs without epilepsy. ... "After controlling for comorbidities, IAVs with epilepsy were about 2.6 times more likely to die during the follow-up period than similar veterans without epilepsy." [EurekAlert](#)

## 'Major veterans health disparity' poses challenges, opportunities

28 November – When they enter the military, they're among the healthiest people in the country. But as they begin active duty — and even more so when they conclude their

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service and enter veteran status — they often join the ranks of the nation's unhealthiest populations. ... The primary explanation for this ... are poor health behaviors — especially cigarette smoking, heavy drinking, physical inactivity and poor diet — during or after military service. ... They cite recent estimates indicating that the Department of Defense spends as much as \$1.6 billion annually due to tobacco-related medical care and lost workdays among active duty personnel, and \$1.2 billion for alcohol misuse through medical costs, misconduct and reduced readiness. ... For servicemembers who retire or otherwise leave active duty, weight gain is another problem. They're particularly vulnerable to unhealthy behaviors during these key transition periods, Haibach notes.

[University at Buffalo – State University of New York](#)

## Obama signs bill to improve VA crisis hotline

28 November - President Barack Obama has signed into law a bill that seeks to ensure all telephone calls and other communications delivered through a Department of Veterans Affairs' crisis line get answered in a timely manner by a qualified person. The legislation signed Monday comes after federal investigators substantiated allegations that some calls went into a voicemail system and that some veterans didn't get immediate assistance. The bill creates a quality assurance process. It requires the VA to develop a plan to ensure any communication to the crisis line or a backup center is quickly handled by someone in accordance with guidance established by the American Association of Suicidology.

[Stars and Stripes](#)

## Over Obama's objection, Congress agrees on a bigger military pay raise, more troops

29 November - Military personnel would see a 2.1 percent pay raise starting in January and a significant manpower boost within the Army, Air Force and Marine Corps as part of Congress' annual defense spending bill unveiled Tuesday. The compromise measure also includes a massive overhaul of the military health care system, but it eliminates a controversial proposal to change troops' housing allowance, leaving the military's current stipend program largely unchanged. ... The defense health care overhaul would transfer control of most military medical facilities to the Defense Health Agency and put in place new fees for enrollment in Tricare. [Military Times](#)

## Senators, military specialists say army report on dismissed soldiers is troubling

1 December - An Army review concludes that commanders did nothing wrong when they kicked out more than 22,000 soldiers for misconduct after they came back from Iraq or Afghanistan – even though all of those troops had been diagnosed with mental health problems or brain injuries. The Army's report, ordered by Secretary Eric Fanning, seeks to reassure members of Congress that it's treating wounded soldiers fairly. ... The report's conclusion: "The Army remains confident in the administrative processes that define misconduct separation procedures." The report supports that statement by arguing that the

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<http://phc.army.smil.mil>

Look under Hot Topics & Current Issues.

To access this version, you will need a **SECRET** clearance and a SIPRNet account.

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Army has followed the letter of a 2009 law. But senators say the report focuses too narrowly on precise legal wording instead of examining a widespread problem. ... Both [Sen. Ron] Wyden and [Sen. Chris] Murphy told NPR that they are trying to figure out their next steps. That could include calling for congressional hearings and pushing for a tougher law to protect soldiers with mental health problems and brain injuries. [NPR](#)

## Should more troops become eligible for food stamps?

28 November - Despite steep pay raises since the 9/11 terror attacks, too many military personnel still struggle to feed their families and need an easier way to get food stamps, according to a new bill from a San Diego congresswoman. Susan Davis has introduced the Military Hunger Prevention Act in a bid to exempt the military's Basic Allowance for Housing — a central component of most troops' compensation — when determining eligibility for food stamps and 17 other federal food programs. The legislation comes as food pantries and other charities said they continue to encounter strong demand from military households for their services. [The San Diego Union-Tribune](#)

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### GLOBAL

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## Bumper load of new viruses identified

24 November - An international research team led from Australia and China has discovered nearly 1,500 new viruses. The scientists looked for evidence of virus infection in a group of animals called invertebrates, which includes insects and spiders. Not only does the study expand the catalogue of known viruses, it also indicates they have existed for billions of years. ... The research team collected around 220 species of land- and water-dwelling invertebrates living in China, extracted their RNA and, using next-generation sequencing, deciphered the sequence of a staggering 6 trillion letters present in the invertebrate RNA "libraries". When the researchers analysed this mass of data they realised that they had discovered almost 1,500 new virus species. ... Many of these were so distinct that they did not easily fit into our existing virus family tree. [BBC News](#)

## Predatory bacteria can wipe out superbugs, says study



24 November - Predatory bacteria - that eat others of their kind - could be a new weapon in the fight against superbugs, say UK researchers. Experiments showed a dose of *Bdellovibrio bacteriovorus* acted like a "living antibiotic" to help clear an otherwise lethal infection. ... *Bdellovibrio* is a fast-swimming

bacterium that works its way inside other bacteria where it devours its hosts' insides and swells in size. Once it has finished feeding it replicates and bursts out of its now dead host. ... Tests in a laboratory dish showed the predatory bacteria caused the population of superbug Shigella to collapse 4,000-fold. Further tests in fish larvae showed a deadly dose of the superbug led to only 25% surviving for three days. But when the fish larvae were also "infected" with the predator, survival soared to 60%. [BBC News](#)

## Study: Use of dengue vaccine effective in some regions, risky in others

29 November - The World Health Organization is continuing to assess the risks and benefits of the first vaccine developed to prevent dengue fever. A study, published in September, concluded that the vaccine, called Dengvaxia, could have a positive impact in regions where there is a high incidence of dengue, preventing one in five hospitalizations, but could be problematic in other areas. A new report ... refined that conclusion. ... According to the new report, the vaccine could potentially reduce the incidence of dengue fever between 6 percent and 25 percent in countries with moderate to high transmission rates, where at least 50 percent of children get infected for the first time by their ninth birthday. Investigators concluded a policy of routinely vaccinating 80 percent of 9-year-olds is needed to realize the reduction in cases. But in places where the disease is uncommon, affecting ten percent of the population or less, Dengvaxia could cause severe illness and hospitalization in individuals who contract dengue for the first time after being vaccinated. [VOA](#)

## Sunlight may reduce risk of nearsightedness

1 December - Exposure to sunlight may reduce the risk for nearsightedness, a new study reports. Researchers recruited 371 men and women with nearsightedness, or myopia, and 2,797 without. Their average age was 72. They gave them eye examinations, took blood samples and interviewed them about their health and behavior over the years, estimating exposure to ultraviolet B rays. The study, in *JAMA Ophthalmology*, found that those with the highest UVB exposure, especially in the teenage and young adult years, had about a 30 percent lower risk for myopia than those with the lowest exposure. ... They also found that more schooling increased the risk of nearsightedness. Those in the highest one-third in years of education had more than double the risk of myopia compared to those in the lowest one-third. The reason for the effect, which was independent of UVB exposure, remains unknown. [The New York Times](#)

## Tests may help spot brain damage after even mild concussions

28 November - Brain scans may help identify athletes who suffer from brain damage after mild concussions, a small study of current and former professional football players suggests. Researchers examined results from what's known as positron emission tomography (PET) scans for four current and 10 former National Football League (NFL) players who had at least one previous concussion as well as for 16 similar men who weren't athletes and had no

history of concussions. They measured levels of a substance called translocator protein 18KDa (TSPO), which are thought to rise when the brain responds to traumatic injuries. Compared with men who weren't in the NFL, the football players had higher levels of TSPO and greater changes in the brain's white matter, the study found. "The study showed that there is a measurable degree of this biomarker of brain injury and repair even in young NFL players, suggesting that the insult to their brains could have occurred long before they were scanned for the study – perhaps dating to collegiate or pre-collegiate play," said [the] senior study author. [Reuters](#)

## The new debate over bed nets and malaria prevention

22 November - ... Over the past two decades, the insecticide-treated bed net has been one of the most powerful tools against malaria. ... But there's growing evidence that mosquitoes are developing resistance to the insecticide used in the nets. Now the World Health Organization has just completed a five-year, five-country study looking into whether nets might be becoming less effective. On the one hand, the picture is bleak. WHO found that the insecticide has a range of effectiveness from 1 percent to 100 percent in Kenya. So in some places, the chemical killed all the mosquitoes all the time while in other places it hardly killed any. Elsewhere, the effectiveness of the insecticide ranged wildly. It was 20 to 100 percent effective in Benin, 47 to 100 percent in Sudan and 86 to 100 percent in India. The good news is that the effectiveness of the insecticide did not seem to have much impact on rates of malaria transmission. [NPR](#)

## ZIKA VIRUS

### Human trials of Zika vaccine underway

30 November - Human trials to test a vaccine for the Zika virus recently began around the United States. ... Walter Reed Army Institute of Research (WRAIR) in Washington, D.C., started a human trial in early November that will involve 75 healthy adults. The Phase 1 trial will test the safety and immunogenicity of the purified, inactivated Zika virus vaccine called ZPIV. "The Army has moved efficiently from recognizing Zika virus as a threat, producing ZPIV for use in animals and demonstrating its effectiveness in mice and monkeys, producing ZPIV for human testing, and now initiating clinical trials to establish its safety and build the case for subsequent efficacy trials," said Army Col. Nelson Michael, MD, Director of WRAIR's Military HIV Research Program (MHRP) and Zika program co-lead, in a statement. [Modern Medicine](#)

### Local transmission of Zika virus is reported in Texas

28 November - A probable case of local transmission of the Zika virus has been reported in Texas, state health officials announced on Monday, making it the second state, after Florida, in which the infection is thought to have been carried from person to person by mosquitoes. The patient is a woman who is not pregnant and lives in Brownsville, on the

Gulf Coast near the Mexican border. The state's first case of chikungunya, a virus spread by the type of mosquito that carries Zika, was confirmed this year in Brownsville. Medical investigators must now determine whether the infection is spreading and, if so, how many people may have become infected. Officials have begun asking the woman's neighbors for urine samples and trapping mosquitoes to test for the virus. [The New York Times](#)

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## INFLUENZA

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### Animal trials reveal potential for new antiviral against flu

29 November - Tests of a new type of antiviral medication—verdinexor—in mice and ferrets experimentally infected with influenza showed that the drug reduces viral load and inflammation in the lungs, a promising step in its evaluation as a potential drug for humans. ... Verdinexor is a novel selective inhibitor of nuclear export (SINE) compound, a drug class originally developed to treat some types of cancer. ... The findings suggested that verdinexor inhibited influenza A replication and reduced disease markers in the animals, even at suboptimal levels and when given late following an infection, which the authors said might have advantages over oseltamivir (Tamiflu) if the new drug is successful in human trials. [CIDRAP Flu Scan](#) (second item)

### APHC: U.S. Army Influenza Activity Report

For the week ending 12 November 2016 (Week 45)

Influenza detections remain sporadic among Army laboratories, with only nine influenza A-positive specimens identified in week 45.

- ILI Activity: Army incident ILI outpatient visits in week 45 were 3% lower than the same week last year.
- Influenza cases: No hospitalized influenza cases were reported to APHC through DRSi in week 45; At this same time during the last influenza season, two influenza-associated hospitalizations were reported.
- Viral specimens: During week 45, 77 of 688 (11%) laboratory specimens tested positive for respiratory pathogens. RHC-C reported most (44%) of the influenza A-positive specimens, followed by RHC-P (33%), and RHC-A (22%). RHC-E and CENTCOM did not report any positive specimens. [APHC](#)

### Avian flu outbreak expected in Europe and Asia

1 December - ... Incidents of highly pathogenic avian influenza (HPAI) have increased across Europe and Asia. The World Organization for Animal Health claimed that Europeans should expect more avian flu cases this season. Deputy Director General of the World Organization

for Animal Health (OIE) Matthew Stone told Reuters that North America, especially the United States ... should also prepare for new cases. ... Ron Fouchier of the Erasmus Medical Center in Rotterdam, the Netherlands explained that this strain is different from the 2014 strain since it has picked up new genes from flu strains in wild birds, making it more deadly to more species. In Netherlands alone, around 190,000 ducks infected with the avian flu were destroyed in attempts of containing the virus. ... According to the European Center for Disease (ECDC), they are conducting an ongoing monitoring and testing of wild birds and domestic poultry in the EU to detect and possibly control the virus from sweeping the rest of Europe. [Nature World News](#)

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

During week 46 (November 13-19, 2016), influenza activity increased slightly, but remained low in the United States.

- **Viral Surveillance:** The most frequently identified influenza virus subtype reported by public health laboratories during week 46 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased slightly, but remained low.
- **Novel Influenza A Virus:** One human infection with a novel influenza A virus was reported.
- **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.

[CDC](#)

## ECDC: Flu News Europe

Week 46/2016 (14–20 November 2016)

- Influenza activity remained at baseline intensity levels in the region.
- The total number of virus detections among sentinel surveillance specimens increased to 10%, reaching a threshold indicative of increasing regional activity.
- The majority of viruses detected this week were influenza A(H3N2).

[European Center for Disease Prevention and Control/WHO](#)

## Flu vaccine during pregnancy not linked to autism

28 November - Getting the flu while pregnant doesn't appear to increase the child's risk of being diagnosed with autism later on, a study finds, and neither does getting a flu shot while pregnant. The study, published Tuesday in JAMA Pediatrics, tries to tease apart subtle questions of risk and risk avoidance. Some smaller, earlier studies have found an association between serious viral infections in pregnancy or maternal fever in pregnancy and increased autism risk. This much larger study finds no such ties, though the authors note that it

shouldn't be the last word on the topic. [NPR](#)

## Japan culling 230,000 more birds over avian flu

1 December - Japan has mobilised its military to help with a second mass cull of 230,000 chickens amid a spreading outbreak of a highly contagious strain of avian flu, officials said. The highly virulent H5 strain was found in chickens at a farm in Joetsu city in Niigata prefecture, the local government said in a statement late Wednesday. It said that 2,100 people, including 1,020 members of the military, were being mobilised in the effort to kill the chickens and contain the virus. [Phys.org](#)

## NHRC: Febrile Respiratory Illness Surveillance Update

For 2016 Week 47 (through 26 November 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 Parris Island. [Naval Health Research Center](#)

## Study: Flu vaccine doesn't prevent missed school days

30 November - A new study ... shows that influenza vaccination does not reduce absenteeism, or the number of days of school that kids miss because of flu, casting some doubt about how often the vaccine prevents severe illness in children ages 5 to 17 years. The study contradicts previous research that showed lower absenteeism in vaccinated school-age children. Those studies looked at children suffering from any acute respiratory illnesses (ARIs). This is the first study to look at absentee rates among children with lab-confirmed flu, not just nonspecific respiratory illnesses, the authors said. ... The major flaw of the study, according to McLean, was that it did not include the vaccine status of children who had influenza but mild enough symptoms to avoid a clinic visit. It's unknown, McLean said, if these children had milder illnesses because they received the flu vaccine. [CIDRAP](#)

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

During 13 - 26 November 2016 (Surveillance Weeks 46 & 47), a total of 131 specimens were collected from 37 locations. Results were finalized for 98 specimens from 34 locations. During Week 46, two influenza A(H3N2) and one influenza B virus were identified. No influenza was identified during Week 47. Approximately 3% of specimens tested positive for influenza during Week 46. The influenza percent positive for the season is approximately 3%. [US Air Force School of Aerospace Medicine & Defense Health Agency](#)

## WHO: Influenza Update

28 November - Influenza activity in the temperate zone of the northern hemisphere has not yet picked up and remained at inter-seasonal levels. Influenza activity in temperate southern

hemisphere countries was back at inter-seasonal levels. [WHO](#)

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## VETERINARY/FOOD SAFETY

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### CDC: 21 ill from multidrug-resistant *Salmonella* outbreak tied to dairy calves

28 November - At least 21 people in eight states have been sickened by multidrug-resistant *Salmonella* linked to contact with dairy bull calves in an outbreak dating back to January, the Centers for Disease Control and Prevention (CDC) said today. Among 19 patients with available information, illness-onset dates range from Jan 11 to Oct 24, and ages vary from less than 1 year to 72, with a median age of 21; 62% of case-patients are female. Eight (42%) of the 19 have been hospitalized, but no deaths have been reported. ... "Epidemiologic, traceback, and laboratory findings have linked this outbreak to contact with dairy bull calves purchased from livestock markets in Wisconsin," the CDC said. ... All isolates tested were multidrug-resistant *Salmonella* Heidelberg.

[CIDRAP Stewardship / Resistance Scan](#) (first item)

### Health officials say at least 17 sickened, 3 fatally, by Thanksgiving meal

29 November - Officials are still trying to determine what specifically caused the illnesses, but they appear to have narrowed the source to a church-sponsored meal held at the American Legion hall in Antioch, Calif. ... Thursday's feast hosted by the Golden Hills Community Church served 835 people, including residents of assisted living facilities, homeless people and anyone who wanted a holiday meal, health officials said. All those who got sick ate food from the event and most became ill within 24 hours, said Dr. Louise McNitt, deputy health officer for Contra Costa County. The three people who died were admitted to the hospital on Friday and Saturday. ... As of Tuesday, one person remained hospitalized and the rest were recovering at home. Those who got sick ranged in age from teenagers to their 70s. [Fox News](#)

### UK report finds drug-resistant *Campylobacter* rising in poultry

29 November - A new report from the British government shows increasing antibiotic resistance in bacteria commonly found in retail poultry. The report from the Food Standards Agency (FSA) found that resistance to fluoroquinolone antibiotics have increased steadily since 2001 in *Campylobacter jejuni* isolates from UK-produced poultry meat samples (especially chicken and turkey). While resistance to ciproflaxin and nalidixic acid were

observed in 15% and 22% of poultry isolates in 2011, half of all isolates showed resistance to both drugs in 2014-2015. But the FSA review ... found the overall data for drug resistance levels in British-produced food were limited, a finding the report's authors say highlights the need for better AMR surveillance in the food chain. [CIDRAP](#)

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## WELLNESS

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### Flossing and the art of scientific investigation

25 November - ... In August, a widely read Associated Press report suggested that, contrary to the advice of dentists everywhere, flossing didn't necessarily foster good oral health. The report looked at 25 studies that had generally compared toothbrushing and flossing with toothbrushing alone and concluded that the evidence for the benefits of flossing was weak. In response, the Department of Health and Human services, the American Dental Association and the Academy of General Dentistry reaffirmed the importance of interdental cleaning. ... [D]entists know from a range of evidence, including clinical experience, that interdental cleaning is critical to oral health and that flossing, properly done, works. Yet the notion has taken hold that such expertise is fatally subjective and that only randomized controlled trials provide real knowledge. [The New York Times](#)

### Injections, implants tested as new weapons to prevent HIV

29 November - Scientists are taking the battle to prevent HIV to the next level with large-scale trials set to start using injections to protect vulnerable groups such as gay men and women in Africa for at least two months. Further down the road, the hope is to produce matchstick-sized implants containing slow-release drugs - similar to existing under-the-skin contraceptive devices - that could offer year-long protection. ... The initiatives build on the success of Gilead's once-daily pill Truvada, which has proved remarkably effective at stopping HIV infection during sex. [Reuters](#)

### Lack of sleep costing US economy up to \$411 billion per year

30 November - A lack of sleep among the U.S. working population is costing the economy up to \$411 billion a year, which is 2.28 percent of the country's GDP, a new report finds. According to researchers at the not-for-profit research organisation RAND Europe, part of the RAND Corporation, sleep deprivation leads to a higher mortality risk and lower productivity levels among the workforce, putting a significant damper on a nation's economy. A person who sleeps on average less than six hours a night has a 13 percent

higher mortality risk than someone sleeping between seven and nine hours, researchers found, while those sleeping between six and seven hours a day have a 7 percent higher mortality risk. Sleeping between seven and nine hours per night is described as the "healthy daily sleep range". In total, the U.S. loses just over 1.2 million working days a year due to sleep deprivation among its working population. Productivity losses at work occur through a combination of absenteeism, employees not being at work, and presenteeism, where employees are at work but working at a sub-optimal level. [EurekAlert](#)

## Monkey study raises hope for 'functional' HIV cure

1 December - When a drug already taken by thousands of people for intestinal conditions appeared to control the monkey version of HIV, it got Dr Anthony Fauci's attention. The director of the US National Institutes of Allergy and Infectious Diseases hopped on a plane to personally tell Japan's Takeda Pharmaceutical Co.'s US representatives their drug may offer a dramatic advance in the fight against AIDS. Takeda's drug [Entyvio] suppressed the virus to undetectable levels in eight monkeys, some for two years. The findings raise hopes for a so-called "functional cure" - a treatment that puts the disease in sustained remission. "The data was so dramatic," said Fauci, who has made AIDS research his life's work.

[Al Jazeera](#)

## New national mental health registry in the works

28 November - The American Psychiatric Association (APA) is developing a national clinical registry to provide psychiatrists with more efficient means to meet Medicare quality reporting requirements, to establish a database for mental health research, and ultimately to improve patient outcomes. ... The registry, known as PsychPRO (Psychiatric Patient Registry Online), is designed to provide psychiatrists with an easy method for avoiding payment penalties that are associated with failure to meet the quality reporting requirements set by the Centers for Medicare & Medicaid Services. ... Psychiatrists will also be able to compare the performance and outcomes of their own practices with those of similar practices in broader populations, ranging from local to national levels. [Medscape](#)

## Philip Morris CEO looks towards phasing out cigarettes

30 November - Philip Morris International, the world's largest international tobacco company, could eventually stop selling cigarettes, its chief executive told the BBC on Wednesday, as it launched its alternative product IQOS in Britain. The company's IQOS smokeless cigarette ... heats tobacco enough to produce a vapor without burning it. The company believes that makes it much less harmful than cigarettes. ... "I believe there will come a moment in time where I would say we have sufficient adoption of these alternative products ... to start envisaging, together with governments, a phase-out period for cigarettes," Andre Calantzopoulos said in an interview on BBC Radio 4. [Reuters](#)

## Some resilient black youth may face higher diabetes risk as adults

28 November - Low-income black teens with the resilience to succeed in school may be more likely to graduate college and achieve higher incomes than their less persistent peers, but they may also face more health problems as adults, a recent study suggests. High-striving black youth from the most disadvantaged homes were more than twice as likely to develop diabetes by age 29 as high-achieving black teens from more affluent homes, researchers report in *Pediatrics*. ... "We reasoned that, if disadvantaged children were succeeding academically and emotionally, they might also be protected from health problems that were more common in lower-income youth," Brody said by email. "As it turned out, the exact opposite was true." ... Researchers didn't find this pattern of skin-deep resilience in white youth. [Reuters](#)

## Smoking boosts heart attack risk 8-fold for younger adults

29 November - For young adults who smoke, the risk of a major heart attack is 8 times higher than for their peers who never smoked or who gave it up, a UK study found. Older adults who smoke are also more likely than non-smokers their age to end up with heart attacks, researchers say. ... For the new study, the researchers used data collected between 2009 and 2012 on people over age 18 in South Yorkshire. The population included 1,727 individuals who were treated for STEMIs, which are major heart attacks caused by a blockage in one of the heart's main arteries. About 49 percent of the STEMI patients were current smokers, about 27 percent were ex-smokers and about 24 percent were never smokers. Applying the results to the South Yorkshire population, the researchers calculated that in a group of 100,000 people, 60 smokers under age 50 would have a heart attack every year, compared to a combined total of 7 never-smokers and former smokers in that age group. [Reuters](#)

## Sweat detectors? Tiny sensors use perspiration to track health

28 November - Imagine if taking a snapshot of your health were as easy as slapping a sticker on your skin. A new study finds that a tiny adhesive sensor can read what's going on in your body based on your sweat, and relay information about your well-being wirelessly to a smartphone. This type of wearable sensor could work as an alternative to blood tests to assess people's health one day, according to the researchers. Perspiration is a rich chemical full of molecules ranging from simple electrically charged ions to more complex proteins that can shed light on what is happening inside the human body. Doctors can use sweat to diagnose certain diseases, uncover drug use and reveal insight into athletic performance. Sweat also can be gathered far less invasively than blood. ... The device is designed to collect and analyze sweat for key biomarkers, or markers of health. For instance, the sensor can show how people are responding to exercise, including whether someone needs to

make adjustments, such as drinking more water or replenishing electrolytes. [Live Science](#)

## U.S. imposes nationwide ban on smoking in all public housing

30 November - The Obama administration has issued a sweeping final rule banning smoking in all public housing units nationwide, extending a smoke-free environment to nearly a million units. The rule, issued Wednesday by the Department of Housing and Urban Development, prohibits smoking any lit tobacco products (like cigarettes, pipes and cigars) in indoor areas of public housing complexes. It also bans smoking in public housing administrative offices and in outdoor areas within 25 feet from the buildings. [NPR](#)

## Vital Signs: Trends in HIV diagnoses, risk behaviors, and prevention among persons who inject drugs — United States

29 November - ... During 2008–2014, HIV diagnoses among [persons who inject drugs (PWID)] declined in urban and nonurban areas, but have leveled off in recent years. Among PWID in 22 cities, during 2005–2015, syringe sharing decreased by 34% among blacks/African Americans (blacks) and by 12% among Hispanics/Latinos (Hispanics), but remained unchanged among whites. The racial composition of new PWID changed during 2005–2015: the percentage who were black decreased from 38% to 19%, the percentage who were white increased from 38% to 54%, and the percentage who were Hispanic remained stable. Among new PWID interviewed in 2015, whites engaged in riskier injection behaviors than blacks. Decreases in HIV diagnoses among PWID indicate success in HIV prevention. However, emerging behavioral and demographic trends could reverse this success. [Morbidity and Mortality Weekly Update](#)

## Want to delay death? Then swim, dance, or get on court, study shows

29 November - Swimming, racquet sports and aerobics are associated with the best odds of staving off death, and in particular of reducing the risk of dying from heart disease or stroke, scientists said on Tuesday. ... The study analysed data from 11 annual health surveys for England and Scotland carried out between 1994 and 2008, covering 80,306 adults with an average age of 52. Participants were asked about what type and how much exercise they had done in the preceding four weeks, and whether it had been enough to make them breathless and sweaty. ... The survival of each participant was tracked for an average of nine years, during which time 8,790 of them died from all causes and 1,909 from heart disease or stroke. Overall, compared with respondents who had not done a given sport, risk of death during the follow up period from any cause was 47 percent lower among those who played racquet sports, 28 percent lower among swimmers, 27 percent lower among dance aerobics fans and 15 percent lower among cyclists. [Reuters](#)

## White, rural drug users lack needle exchange programs to prevent HIV infections

29 November - Needle-sharing by opiate addicts is placing rural white communities at much greater risk of new HIV infections than ever before, and the United States doesn't have enough syringe programs in place to address the problem. ... The new report by the Centers for Disease Control and Prevention found that use of these programs has increased substantially during the past decade, but most people who inject drugs still don't always use sterile needles. Sharing needles and syringes is a direct route of transmission for HIV and hepatitis B and C viruses. ... For the first time, in 2014, whites who inject drugs had more HIV diagnoses than any other racial or ethnic population in the country, the report said.

[The Washington Post](#)

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## Burkina Faso: Dengue fever outbreak kills 18

24 November - Dengue fever has killed at least 18 people in Burkina Faso since August in the worst recorded outbreak of the disease to hit the West African nation, an aid agency said on Thursday. The mosquito-borne virus ... has infected nearly 2,000 people, mainly in central Burkina Faso, said The Alliance for International Medical Action (ALIMA). ... "This is certainly the largest documented outbreak of dengue fever to hit Burkina Faso," said Vincent Mendiboure of ALIMA. [Reuters](#)

## Niger: Rift Valley fever

24 November - On 30 August, the Ministry of Health in Niger notified WHO of unexplained deaths among humans, along with deaths in livestock in the Tahoua region of Niger. On 23 September, human and animal specimens were tested at the Institut Pasteur de Dakar (IPD) and were reported positive for Rift Valley Fever (RVF) virus by PCR and for specific IgM antibodies confirming the first outbreak of RVF in Niger. ... From 8 August to 21 November, 266 suspected human cases including 32 deaths have been reported. ... From 8 August to 18 November, 196 specimens were tested and 17 patients were confirmed positive by RVF PCR and/or serological identification of IgM antibodies. Further testing of RVF negative specimens is being performed at IPD. Given that more than 90% of the samples were tested negative for a recent RVF infection (IgG, PCR negative) and the increasing proportion of house wives and children affected there is a need to broaden the investigation to identify possible other underlying cause(s). In this regard an adapted investigation protocol is currently being developed which includes infectious and non-infectious diseases as well as chemicals and toxins. [WHO](#)

## South Africa: HIV vaccine test hopes for breakthrough in combat against the virus

27 November - The first new trial of a potential vaccine against HIV in seven years has begun in South Africa, raising hopes that it will help bring about the end of the epidemic. Although fewer people are now dying from Aids because 18.2 million are on drug treatment for life to suppress the virus, efforts to prevent people from becoming infected have not been very successful. The infection rate has continued to rise and experts do not believe the epidemic will be ended without a vaccine. The vaccine being tested is a modified version of the only one to have shown a positive effect, out of many that have gone into trials.

[The Guardian](#)

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### USCENTCOM

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

28 November - Between 3 and 10 November 2016 the National IHR Focal Point of Saudi Arabia reported six (6) additional cases of Middle East Respiratory Syndrome (MERS). Two (2) deaths among previously reported MERS cases were also reported. ... Globally, since September 2012, WHO has been notified of 1832 laboratory-confirmed cases of infection with MERS-CoV including at least 651 related deaths have been reported to WHO. [WHO](#)

## Syria: The last hospital in eastern Aleppo is no more

28 November - ... The fall of Omar Bin Abdul Aziz — the last standing hospital in eastern Aleppo — means as many as 300,000 civilians in the area, living under a siege imposed by the regime of President Bashar Assad, have nowhere to seek treatment for injuries or illness. Three other hospitals were put out of service that day as Aleppo was targeted by aerial bombardment. ... Warplanes have been specifically targeting hospitals in Aleppo for years, according to humanitarian groups. Since March 2011, the international aid group UOSSM — also known as the Union of Medical Care and Relief — has documented 545 attacks on 250 medical facilities throughout Syria. Most facilities have moved underground, to basement clinics, where they are safer from aerial bombings — but the severity of the recent attacks, and the potency of the explosives used, were able to take out even these fortified facilities.

[NPR](#)

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## Europe: One in seven people with HIV in EU unaware they have virus

29 November - One in seven people with HIV in the Europe Union region is unaware they have the virus, seriously hampering efforts to meet a global 2030 deadline for eradicating the AIDS epidemic, a senior health expert said on Tuesday. The average estimated time between infection and diagnosis is four years with nearly half of people not being diagnosed until the late stages of the disease, according to a report published ahead of World AIDS Day on Dec 1. Around 810,000 people are believed to be living with HIV in the EU's 28 member countries plus Norway, Iceland and Liechtenstein, the report by the European Centre for Disease Prevention and Control (ECDC) shows. But the ECDC estimates 122,000 are unaware they have the virus. [Reuters](#)

## Europe: Survey highlights resistant Enterobacteriaceae in European hospitals

28 November - A multinational survey of European hospitals is providing the first laboratory-substantiated data on the incidence of carbapenemase-producing Enterobacteriaceae (CPE) across the continent, according to a news release from the European Centre for Disease Prevention and Control (ECDC). For the European Survey on CPE (EuSCAPE), national laboratories in 36 countries collected the first 10 carbapenem non-susceptible *Klebsiella pneumoniae* and *Escherichia coli* clinical isolates from 455 sentinel hospitals, along with 10 susceptible same-species comparator isolates and pertinent patient and hospital information, between November 2013 and April 2014. Analysis of the isolates showed that 850 of 2,301 *K pneumoniae* samples (37%) and 77 of 402 *E coli* samples (19%) tested positive for carbapenemase production.

[CIDRAP Stewardship / Resistance Scan](#) (second item)

## United Kingdom: Ambulances 'too slow to reach 999 calls'

30 November - Ambulance services are struggling to reach seriously ill and injured patients quickly enough after rising demand has left the system at breaking point, a BBC investigation has found. Patients with life-threatening conditions - like cardiac arrests - are meant to be reached in eight minutes. But only one of the UK's 13 ambulance services is currently meeting its target. Ambulance bosses are blaming rising demand and pressure in the system. Freedom of information requests by the BBC to ambulance trusts showed over 500,000 hours of ambulance crews' time in England, Wales and Northern Ireland was lost last year waiting for A&E staff to be free to hand over their patients to - a rise of 52% in two years. This is the equivalent of 286 crews being taken out of the system for a whole year or enough to increase the number of ambulance journeys by 10%. Senior paramedics said the

situation had become so critical that it was not uncommon to run out of ambulances at peak times. [BBC News](#)

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**USNORTHCOM**

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## Canada: Women in Canadian military report widespread sexual assault

28 November - More than a quarter of women in the Canadian military have been sexually assaulted during their careers, according to a survey by the government's statistical agency. The survey, conducted by Statistics Canada and released on Monday, was commissioned by the armed forces and followed a scathing 2015 report that found that the culture of the military was "hostile to women and L.G.T.B.Q. members and conducive to more serious incidents" involving sexual harassment and assault. But only 23 percent of those who said they had been assaulted reported what had happened, most often "to their military supervisor," according to Statistics Canada. Just 7 percent filed reports with the military police or the Canadian Forces National Investigation Service. [The New York Times](#)

## U.S.: Americans' cholesterol, triglyceride levels continue to fall

30 November - In U.S. adults, levels of fatty substances in the blood have continued to fall over the past few years, according to the Centers for Disease Control and Prevention (CDC). Levels of total cholesterol, triglycerides and "bad" LDL cholesterol fell between 1999 and 2010 among U.S. adults, and that trend continued in 2013 and 2014, researchers write in *JAMA Cardiology*. ... [Researchers] analyzed information collected from the National Health and Nutrition Examination Survey, which is released every two years. Overall, they had total cholesterol data on 39,049 adults over age 20, triglycerides data from 17,486 adults and the LDL cholesterol levels of 17,096 adults. The average total cholesterol level decreased from 204 milligrams per deciliter (mg/dL) in 1999-2000 to 189 mg/dL in 2013-2014. A desirable total cholesterol level is below 200 mg/dL, according to the National Heart, Lung and Blood Institute (NHLBI). Average LDL cholesterol decreased from 126 mg/dL to 111 mg/dL over the same period. The NHLBI says a level below 100 mg/dL is optimal. ... Also, Rosinger said, the declines were present even in people who were not taking cholesterol-lowering medications. [Reuters](#)

## U.S.: F.D.A. agrees to new trials for Ecstasy as relief for PTSD patients

29 November - [T]he Food and Drug Administration gave permission Tuesday for large-scale, Phase 3 clinical trials of [Ecstasy] — a final step before the possible approval of

Ecstasy as a prescription drug. If successful, the trials could turn an illicit street substance into a potent treatment for PTSD. ... The Multidisciplinary Association for Psychedelic Studies ... [will] fund the Phase 3 research, which will include at least 230 patients. Two trials here in Charleston focused on treating combat veterans, sexual assault victims, and police and firefighters with PTSD who had not responded to traditional prescription drugs or psychotherapy. Patients had, on average, struggled with symptoms for 17 years. After three doses of MDMA administered under a psychiatrist's guidance, the patients reported a 56 percent decrease of severity of symptoms on average, one study found. By the end of the study, two-thirds no longer met the criteria for having PTSD. Follow-up examinations found that improvements lasted more than a year after therapy. [The New York Times](#)

## U.S.: House overwhelmingly approves sweeping health measure

30 November - The House overwhelmingly passed a far-reaching measure on Wednesday to increase funding for research into cancer and other diseases, address weaknesses in the nation's mental health systems and help combat the prescription drug addictions that have bedeviled nearly every state. The bill, known as the 21st Century Cures Act, also makes regulatory changes for drugs and medical devices, which critics argue lower standards to potentially perilous levels. ... The bill, which passed 392 to 26, was the product of three years of work, largely in the House, with former and current officials from the Food and Drug Administration and National Institutes of Health — two of the biggest beneficiaries of new funding in the bill — as well as scientists, health care advocates and others. It aims to streamline the federal drug regulatory structure to keep up with advances in biotechnology and other forms of medical research. [The New York Times](#)

## U.S.: Infectious diseases keep delivering surprises

22 November - Infectious diseases are no longer the major killers in the U.S. that they once were, but they still surprise us. According to a report published Tuesday in JAMA, the journal of the American Medical Association, deaths from infectious disease accounted for 5.4 percent of deaths from 1980 to 2014. That's a big change from 1900, when infectious diseases like pneumonia, tuberculosis and diarrhea accounted for almost half of all deaths. The historical decline represents great progress in sanitation, antibiotic discovery and vaccination programs. ... But if you dig into the data a bit ... you can see where new diseases make an appearance, sometimes a deadly and dramatic one. For example, between 1980 and 1995, the number of deaths per 100,000 people from HIV/AIDS rose by an average of more than 85 percent per year. Then when new antiretroviral drugs became available, that rate fell by an average of more than 10 percent annually from 1995 to 2014. [NPR](#)

## U.S.: Invasive strep outbreak claims lives of 4 Alaskans

30 November - Four Alaskans have died this year in an outbreak of invasive strep bacteria that has mostly affected the homeless and Alaska Natives in the state's two largest cities, the state's epidemiologist said Tuesday. Four Alaskans have died this year in an outbreak of

invasive strep bacteria that has mostly affected the homeless and Alaska Natives in the state's two largest cities, the state's epidemiologist said Tuesday. Two of the deaths occurred in Fairbanks and two in Anchorage. Another three probable cases in Anchorage have not been confirmed. All four of the deaths were of Alaska Natives. McLaughlin said studies have shown that American Indians and Alaska Natives are at increased risk of invasive disease. [Fox News](#)

## U.S.: Mental disorders top national list of health conditions

30 November - Mood and substance abuse disorders top the list of conditions negatively affecting the health of Americans with commercial health insurance, the newly published Blue Cross Blue Shield (BCBS) Health Index shows. On the basis of data from more than 40 million BCBS members, this first-of-its-kind index identified depression, anxiety, and other mood disorders as the top category of health conditions affecting longevity and quality of life. Substance use disorders were number five. According to Maureen Sullivan, chief strategy and innovation officer for the BCBS Association, the developers of the index started with data from millions of Blue Cross claims and used other information on healthcare costs and global burden of disease. They used an algorithm to measure how debilitating a condition is and how it affects quality of life. ... The top five conditions according to the Index are as follows:

1. Depression, anxiety, and other mood disorders
2. Hypertension
3. Diabetes
4. High cholesterol
5. Substance use disorders

[Medscape](#)

## U.S.: Ready for some *good* environment news? It's about coal

30 November - ... Thanks to a decrease in coal use in North America and better technology to make the fossil fuel less harmful, the amount of mercury in the atmosphere is on the decline—and our air, our oceans, and even our food appear to be getting safer. Mercury levels in Atlantic bluefin tuna plunged by 19 percent from 2004 to 2012, according to a study ... that examined more than 1,000 specimens. That correlates with a 20 percent decrease in mercury in North Atlantic air from 2001 to 2009, the study notes, meaning that human efforts to decrease the amount of mercury in the atmosphere appear to be paying off. ... "We have not conclusively proven that these declines in the tuna are attributable to declines in emissions," said Nicholas S. Fisher, who is a distinguished professor in the School of Marine & Atmospheric Sciences at Stony Brook University and an author of the study. But, he adds, it's "a striking parallel." [Bloomberg](#)

## U.S.: Stroke rates rising in younger people

29 November - Stroke rates have been declining in older people over the past 20 years — but have sharply increased in those under 55. Researchers at Rutgers University used data from the New Jersey Department of Health on more than 227,000 hospitalizations for stroke from 1995 through 2014. ... Compared with the 1995-99 period, the rate of stroke in 2010-14 increased by 147 percent in people 35 to 39, by 101 percent in people 40 to 44, by 68 percent in those 45 to 49, and by 23 percent in the 50 to 54 group. Stroke is still far more common in older people. But the rate decreased by 11 percent in those 55 to 59, by 22 percent in the 60 to 64 group, and by 18 percent in people 65 to 69. [The New York Times](#)

## U.S.: 'Worst possible conditions': Residents flee Gatlinburg, Tenn., as flames engulf popular resort town



29 November - Parts of two popular Tennessee tourist towns on the edge of the Smoky Mountains were on fire late Monday night, along with much of the mountains surrounding them. A wildland fire burning on Chimney Top Mountain, one of the Smokies' most popular hiking destinations, spread to the quaint resort cities of Gatlinburg and Pigeon Forge, Tenn. ... According to Reuters, the flames grew from 10 acres on Sunday night into a 500-acre blaze on Monday. ... The Southeast has spent much of the past few weeks

battling forest fires, which sparked as a result of some of its worst drought on record. Several states have been affected. [The Washington Post](#)

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## Australia: More Australian soldiers lost to suicide than fighting in Afghanistan war

30 November - Figures from the Australian Institute of Health and Welfare (AIHW) show from 2001-2014 there were 292 defence force personnel who took their own lives, but that only includes personnel who joined from 2001. Ex-serving men aged 18-24 accounted for 23 suicides during that time - a rate that's almost twice that of Australian men on average. The Veterans' Affairs Minister ... said that a federal government offer of free and uncapped treatment for depression, anxiety, alcohol abuse and post-traumatic stress disorder has been taken up by more than 1,000 current and former defence force personnel in just three months. Veteran support groups like the Defence Force Welfare Association believe mental health is the biggest problem for serving men and women when they come home. The Association's National President David Jamison told SBS: "We have lost more people through suicide than we lost in the Afghanistan war." [SBS](#)

## Australia: ‘Thunderstorm asthma’ kills 8 in Australia

29 November - ... [T]housands of people in Melbourne [had attacks] of thunderstorm asthma. They flooded the city’s emergency rooms, swamped ambulance call lines and joined lines around pharmacies during six hours on Nov. 21. All were struggling for breath. About 8,500 people went to hospitals. Eight have died, and one remains in intensive care more than a week after a thunderstorm surged across Melbourne, carrying pollen that strong winds and rain broke into tiny fragments. Perennial ryegrass seeds were swept up in whorls of wind and carried from four million hectares of pasturelands (about 9.9 million acres) that lie to Melbourne’s north and west. If broken into fragments, they are so fine that they can be inhaled. So many people became ill so quickly that some of the state’s crisis medical teams were stretched beyond their limits. Firefighters and police officers stepped in where paramedics were overloaded. Triage centers at 10 hospitals struggled with admissions across Melbourne. [The New York Times](#)

## China: Antibiotic-resistance genes in Beijing’s smog are nothing to worry about, Chinese officials say

28 November - Few doubt that Beijing’s notorious smog harms human health. In early 2013, the city’s air pollution was bad enough to hospitalize about 7,000 children a day due to respiratory ailments. But the city’s smog contains more than just particulates. Scientists from the University of Gothenburg in Sweden found that, out of 864 DNA samples taken from humans, animals, and external environments worldwide, Beijing smog contained the highest richness of antibiotic-resistance genes (ARGs). Such genes have the “potential to be transferred to pathogens in the future,” their study notes. “Notably, the Beijing smog metagenomes contained several resistance genes to carbapenems,” reads the study. That’s of particular concern, researcher Jaokim Larsson said on Nov. 18, since carbapenems are “the last resort” used to deal with the “difficult kind” of infections caused by bacteria. [Quartz](#)

## India: Indian Railways again seeks safety funds after Kanpur train accident kills 150

24 November - The track where an Indian train derailed on Sunday, killing 150 people, was inspected just two days earlier and found to be in good condition, raising more questions about the safety of a network seeking \$17 billion in funding to prevent more crashes. The derailment, among India’s worst train tragedies, was a stark reminder of the dilapidated condition of the vast state-run railways. ... Officials believe a rail fracture may have sent 14 carriages crumpling into each other as most of the 1,700-odd passengers on board slept. But they cannot be sure until each section of damaged track is analysed. ... India recorded 27,581 railway deaths in 2014, the most recent year for which figures are available, with most victims falling from, or being struck by, moving trains. [Livemint](#)

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## Brazil: Once underfed, Brazil's poor have a new problem: obesity

26 November - ... Brazil's government won worldwide plaudits for bringing 36 million people out of poverty during 13 years of rule by the leftist Workers' Party, which ended in August. As the economy boomed and consumer spending followed, some people even joined a lower-middle class which by 2014 had swelled to almost 60 percent of the population. But the progress came at an unexpected cost: an explosion in the number of overweight people, who now account for 57 percent of Brazil's population — with 1 in 5 obese. Doctors, nutritionists and other specialists say the weight gain is particularly pronounced among Brazilians with low earnings — many of whom swapped precarious lives, with food often scarce, for better incomes and cheap, abundant junk food and processed food. ... The rise in weight problems creates a huge burden for Brazil's stretched public health system, which is grappling with escalating levels of diabetes, hypertension and heart disease. [The Washington Post](#)

## Cuba: A public health phenomenon in the '90s showed the effects of national weight loss

1 December - ... The Castro years also included a unique but little recognized public-health phenomenon. In the early and mid-1990s, the Cuban population became the only modern society to lose significant weight on a national basis. As Cuba's citizens lost weight, their rates of diabetes and heart disease plummeted. When the weight came back roughly a decade later, diabetes and heart disease resumed their insidious attacks. "We were able to analyze weight and health in Cuba for three decades," says Manuel Franco, lead author of a 2013 British Medical Journal report on Cuba based on national vital statistics. "We found high quality data on weight, disease and mortality that let us show very strong relationships." [The Washington Post](#)

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