



Kentucky Hospital Research & Education Foundation Emergency Preparedness Update for July 7, 2018

Elon Musk's Idea to Save Thai Boys: *Make a 'Bouncy Castle'*

(Newser) – Initial elation at [finding 12 boys and their soccer coach](#) in a Thai cave has since turned to concern at not being able to immediately extract them, and sadness after a diver bringing supplies [died during his exit](#). Now, per the [BBC](#), renewed hope joins those emotions after Tesla and SpaceX CEO Elon Musk stepped forward to offer the services of yet another one of his businesses, the Boring Company. As Musk continued to think out loud on the matter on Twitter over the next few days, other ideas he came up with included [creating an air tunnel](#) of sorts under the network of caves where the 13 are stranded: "Maybe worth trying: insert a 1m diameter nylon tube (or shorter set of tubes for most difficult sections) through cave network & inflate with air like a bouncy castle." He [estimated](#) a 3-mile walk at a brisk pace through this inflated network "would take 40 [minutes] or so."

Full story: <http://www.newser.com/story/261576/a-new-helper-for-boys-trapped-in-thai-cave-elon-musk.html>

Woman's Unwanted Guests: Dozens of Poisonous Spiders

(Newser) – [Arachnophobes beware](#), this story may not be for you. A Tennessee woman says dozens of poisonous spiders took up residence in her apartment. Angela Wright of Brentwood says she was recently bitten in the night while she slept and awoke to find several bumps on her body, reports [WSMV](#). What she didn't realize at the time was that they were bites from a brown recluse, a type of spider whose flesh-dissolving venom can cause serious wounds.

Read more: <http://www.newser.com/story/261587/womans-unwanted-guests-dozens-of-poisonous-spiders.html>

Here are 13 laws which will go into effect in Kentucky July 14

(WKYT) - The Legislative Research Commission is letting the public know about 13 laws which will go into effect July 14. The laws range from education requirements to teen marriage. All 13 will go into effect July 14 as it marks three months after final adjournment of the legislative session.

See more: <http://www.wkyt.com/content/news/Here-are-13-laws-which-will-go-into-effect-in-Kentucky-July-14-487495601.html>

FDA revises Zika testing for blood donations to allow pooled screening

(CIDRAP) The US Food and Drug Administration (FDA) today announced that it has revised guidance for testing donated blood and blood products for Zika virus, allowing pooled testing of donations using an FDA-licensed test for that purpose.

The revised guidance replaces August 2016 guidance that recommended nucleic acid testing of individual units of blood donated in the United States and its territories. The update said the pooled testing method would help reduce the risk of Zika transmission, unless there's an increased risk of local mosquito-borne virus in a specific geographic location that would trigger a return to individual donation testing in that area. As another option, the FDA said blood establishments can use approved pathogen-reduction devices for plasma and certain platelet products.

Full story: <http://www.cidrap.umn.edu/news-perspective/2018/07/fda-revises-zika-testing-blood-donations-allow-pooled-screening>

'We had a nurse almost strangled with IV tubing'

Opioid crackdown, mental health crises aggravate violence in ERs.

(Politico) Violence is growing in American ERs, fed by patient anger over their inability to get painkillers and rising health care bills, as well as the proliferation of gangs and untreated mental illness.

Emergency rooms are a door into the underside of American life, and their growing violence speaks to the nation's unresolved health care ills —from people in the grip of addiction to opioids and powerful new substances like artificial marijuana, to the growing financial burdens on patients for their medical care. Gang violence, psychosis and various forms of rage spill into the emergency room, too.

Unable to address the bigger issues, state and federal lawmakers and emergency department employees have pressed hospitals to beef up security -- a step that lowers risks to staff even as it piles on another expense to already eye-popping bills. Hospitals spent \$1.1 billion in 2016 on increased security, on top of \$439 million in medical care, staffing, insurance and other costs as a result of violence against their employees, according to an American Hospital Association study.

But many say that without a concerted response to address the underlying mental health care issues, drug treatment and other problems, the eruptions of violence will continue.

The federal government collects no specific data on violence in emergency departments, but Bureau of Labor Statistics show the rate of attacks on registered nurses in hospitals more than doubled from 2008 to 2016.

Read full story: <https://www.politico.com/story/2018/07/07/emergency-room-violence-opioid-crackdown-700816?cid=apn>

The Other Victims:

First Responders to Violent Disasters Often Suffer Alone

(NPR) Many of the men and women who respond to tragedies have become heroes and victims at once. Some firefighters, EMTs, police and others say the scale, sadness and sometimes sheer gruesomeness of their experiences haunt them.

Research shows that emergency first responders suffer from the accumulation of stress and trauma. First responders report feeling depression, job burnout, substance abuse, troubled relationships — even suicide. Many studies have found [elevated rates of post-traumatic stress disorder](#) among nurses, firefighters and paramedics. A 2016 [report](#) by the International Association of Fire Fighters found that firefighters and paramedics are exhibiting levels of PTSD similar to that of combat veterans.

Yet there's a dearth of research on treatment, insufficient preparation by employers for traumatic events and significant [stigma associated with seeking care](#) for the emotional fallout of those events, says Jeff Dill, a counselor and founder of the [Firefighter Behavioral Health Alliance](#) in Anthem, Ariz.

Full story: <https://www.npr.org/sections/health-shots/2018/07/04/625784687/the-other-victims-first-responders-to-violent-disasters-often-suffer-alone>

Thousands without power in Los Angeles after high demand due to heat wave

(CNN)Thousands of Los Angeles residents were left without power Saturday morning after a heat wave prompted high electricity demand throughout the city. The department said that figure accounts for about 2.5% of their 1.5 million customers.

Scorching heat has descended upon California and parts of the southwest after a heat wave swept across Canada earlier in the week, [killing dozens in the province of Quebec](#), according to Canadian health officials.

Read more: <https://www.cnn.com/2018/07/07/us/heat-wave-los-angeles-wxc/index.html>

Immunotherapy for deadly bacteria shows early promise

(Phys.org) If immunotherapy—the harnessing of the body's immune system—can destroy cancer cells, as has been demonstrated, why not try to trigger the body's immune system to battle deadly bacteria?

That question drives Marcos Pires's pursuit of what he calls bacterial immunotherapy or immunobiotics—using the human immune system's powerful mechanisms of preventing entry and colonization of pathogens to defeat the deadliest, antibiotic-resistant [bacteria](#).

Read more: <https://phys.org/news/2018-07-immunotherapy-deadly-bacteria-early.html>

Nature's antifreeze inspires revolutionary bacteria cryopreservation technique

(Phys.org) The survival mechanisms of polar fish have led scientists at the University of Warwick to develop of a revolutionary approach to 'freeze' bacteria. The new technique could radically improve the work to store and transport human tissue.

Researchers from the Department of Chemistry and Warwick Medical School have established a way to cryopreserve (or 'freeze') a broad range of [bacteria](#) using synthetic reproductions of the natural antifreeze proteins found in polar organisms. They found that adding the protein mimics slows ice crystal growth and stops them destroying the bacteria cells.

The revolutionary [method](#) has potential applications within the food industry, organ transportation and medicine—as well as in laboratory research. Bacteria are used in a vast range of processes including food technology (e.g.in yoghurt and probiotics), pharmaceutical manufacturing (e.g. insulin) and enzyme production (e.g. for washing powders) and they are routinely used in research labs to study infection and the fundamentals of living processes.

Read full story: <https://phys.org/news/2018-07-nature-antifreeze-revolutionary-bacteria-cryopreservation.html>

Melting bacteria to decipher antibiotic resistance

(Phys.org) With antibiotic resistance spreading worldwide, there is a strong need for new technologies to study bacteria. EMBL researchers have adapted an existing technique to study the melting behaviour of proteins so that it can be used for the study of bacteria. *Molecular Systems Biology* published their results—allowing researchers worldwide to start using the technique—on July 6.

Thermal proteome profiling (TPP) was developed in 2014 (Savitski et al., *Science* 2014) and enables scientists to compare the melting behavior of all proteins in a cell or organism before and after a perturbation, such as the administration of a drug. By adapting TPP to bacteria, it can now be used to study the activity and architecture of most proteins in a bacterial cell while it's alive. André Mateus, a postdoc working in the Savitski and Typas groups at EMBL, led the study.

Read more: <https://phys.org/news/2018-07-bacteria-decipher-antibiotic-resistance.html>

**John Hopkins: Health Security Headlines
Extracts from [July 6, 2018](#)**

[Johns Hopkins Hospital in Baltimore Evacuated Due to Possible TB Exposure](#) (*Reuters*) Two buildings at the Johns Hopkins Hospital in Baltimore, Maryland, were evacuated on Thursday because people may have been exposed to tuberculosis, a hospital spokeswoman said. A small amount of the tuberculosis bacteria may have been released while being transported between two of the hospital's cancer research buildings, the spokeswoman, Kim Hoppe, said in an email. [Go to article](#)

[Amesbury Poisoning: Couple 'Handled Contaminated Item'](#) (*BBC News*) The couple poisoned by Novichok were exposed to the substance after handling a contaminated item, police say. Charlie Rowley, 45, and Dawn Sturgess, 44, collapsed at a flat in Amesbury, Wiltshire, on Saturday and remain critically ill. [Go to article](#)

U.S. private citizen cites mystery illness symptoms after China visit

(Reuters) - A U.S. private citizen who visited China has reported symptoms like those of U.S. diplomats afflicted with a mysterious illness in Havana and Guangzhou, a U.S. State Department official said on Thursday.

The person, who was not named by the department official, is the first non-official American known to have experienced the symptoms following a trip to China. Nineteen private U.S. citizens have reported similar symptoms after traveling to Cuba.

A U.S. private citizen who visited China has reported symptoms like those of U.S. diplomats afflicted with a mysterious illness in Havana and Guangzhou, a U.S. State Department official said on Thursday.

Affected individuals have exhibited a range of physical symptoms including ear complaints and hearing loss, dizziness, headaches, fatigue, cognitive issues, visual problems, and difficulty sleeping,

Full story: <https://www.reuters.com/article/us-china-usa-illness/u-s-private-citizen-cites-mystery-illness-symptoms-after-china-visit-idUSKBN1JV383>

NPR's Radiolab: Special Podcast on Poison Control Centers

When reporter Brenna Farrell was a new mom, her son gave her and her husband a scare -- prompting them to call Poison Control. For Brenna, the experience was so odd, and oddly comforting, that she decided to dive into the birth story of this invisible network of poison experts, and try to understand the evolving relationship we humans have with our poisonous planet. As we learn about how poison control has changed over the years, we end up wondering what a place devoted to data and human connection can tell us about ourselves in this cultural moment of anxiety and information-overload.

Listen to the story: <http://www.wnycstudios.org/story/poison-control/>

*Call the national Poison Help Hotline at 1-800-222-1222
or text POISON to 797979 to save the number in your phone.
KY Regional Poison Control Center: <http://www.kypoisoncontrol.com/>*

You can find out more about the country's 55 poison centers at the [American Association of Poison Control Centers](#), including a snapshot of the latest available from the [National Poison Data System \(2106\)](#).

The KHREF Emergency Preparedness Update is assembled several times a week. When events make it necessary, the Update may be sent out several times a day to keep our hospital and the healthcare community advised on preparedness news and information. Most of this information is compiled from open sources, and where possible reference links will be provided. There is an archive of [Emergency Preparedness Updates available here](#). If you would like to add or delete, or have something you would like to contribute to a future edition of the Emergency Preparedness Update, please contact rbartlett@kyha.com (include your current email address). The preparedness program for the Kentucky Hospital Association (KHA) and KHREF are supported by US DHHS ASPR HPP funds through a contract with Kentucky Public Health.