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CBRNE

NEWSLETTER



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EDITOR'S CORNER



Thank you!



August 2017 issue is dedicated to colleagues of the Hellenic Fire Service that both on ground and high in the sky operated in a heroic way in order to save houses (including mine), people, animals and nature during the Oropos-Varnavas-Kapandriti mega-fire.





Editorial

Brig Gen (ret'd) Ioannis Galatas, MD, MA, MC

Editor-in-Chief
CBRNE-Terrorism Newsletter

Dear Colleagues,

I wrote in July's issue: "I feel so relaxed that July was a terror-free month for Europe and I hope to stay like this until the end of this month. Of course, this does not mean that the rest of the world was equally quiet –especially in the usual hot spots of Middle East and Africa." I was so wrong!

The last few days of July was again characterized from another terrorist attack – this time in a supermarket in Hamburg, Germany (knife attack), followed in August by a series of terrorist attacks in Paris, France (French troops deliberately hit by a car), in Barcelona, Spain (van attack against pedestrians in a busy shopping street full of tourists from 38 different countries), in Cambrils (car attack the day after Barcelona) and in Turku, Finland (market stabbing).

This issue was partially composed under the threat of a mega fire that threaten our estate and house (at a suburb-village of Athens) one more time in the last 7 years. In 2010 the fire front stormed our



property and we managed to escape by driving through the flames. This time it was a three-days agony with full dependence on the winds direction and a lot of nasty praying like "Burn the others; please not us this time!" As you can see in the schematic if winds turned to north then the fire front would be in our yard within 30min or one hour. Well, until summer 2018 we remain!

The Editorial Team wishes to all our readers a very joyfull summertime – what is left from summer – and be ready to face the enemy in September onwards!

The Editor-in-Chief



Trump to reinstate US military ban on transgender people

Source: http://www.pronews.gr/amyna-asfaleia/diethnis-asfaleia/618187_porta-nt-tramp-stoys-diemfylikoys-stis-enoples-dynameis-ton

July 26 – President Donald Trump announced Wednesday that **he plans to reinstate a ban on transgender individuals from serving "in any capacity" in the US armed forces.**



The decision reversed a policy initially approved by the Defense Department under President Barack Obama, which was still under final review, that would allow transgender individuals to openly serve in the military. Defense Secretary James Mattis announced last month that he was delaying enactment of the plan to begin allowing transgender individuals to

join the US military.

"After consultation with my Generals and military experts, please be advised that the United States Government will not accept or allow Transgender individuals to serve in any capacity in the U.S. Military," Trump said in a series of tweets Wednesday morning. "Our military must be focused on decisive and overwhelming victory and cannot be burdened with the tremendous medical costs and disruption that transgender in the military would entail."

"Thank you," he added.

Ash Carter, the Defense secretary under Obama, ended the ban on transgender people serving openly in the military in 2016, but allowed for a year-long review process to allow the Pentagon to determine how it would accept new transgender recruits into the military.

On the eve of that one-year deadline, Mattis announced that he was delaying the implementation of the new policy, saying he needed more time.

"Since becoming the Secretary of Defense, I have emphasized that the Department of Defense must measure each policy decision against one critical standard: will the decision affect the readiness and lethality of the force?" Mattis said in a memo late last month. "Put another way, how will the decision affect the ability of America's military to defend the nation? It is against this standard that I provide the following guidance on the way forward in accessing transgender individuals into the military Services."

[A 2016 Rand Corp. study commissioned by the Defense Department](#) concluded that letting transgender people serve openly would have a "minimal impact" on readiness and health care costs, largely because there are so few in the military's 1.3 million-member force.

The study put the number of transgender people in the military between 1,320 and 6,630. Gender-change surgery is rare in the general population, and the RAND study estimated the possibility of 30 to 140 new hormone treatments a year in the military, with 25 to 130 gender transition-related surgeries among active service members. The cost could range from \$2.4 million and \$8.4 million, an amount that would represent an "exceedingly small proportion" of total health care expenditures, the study found.

Trump's decision marks a setback for LGBT rights groups who have expressed concerns that the Trump administration could chip away at progress the community has seen in recent years on the backs of a series of landmark decisions in recent years that have included the legalization of same-sex marriage nationwide and a repeal of the ban on gay people openly serving in the military.

Trump's decision is also another setback for the transgender community following his decision **several months ago to reverse an Obama administration policy allowing transgender students to use the bathroom of their choice.**



The Obama administration faced heated criticism from the right last year when it announced the military ban and several Republican members of Congress have urged the Trump administration to reverse the decision, arguing that the decision does not serve the US' defense interests.

EDITOR'S COMMENT: This is a very bold decision that might put President's future at stake given the infiltration of LGBT community. Even Cynthia Nixon (from Sex and the City series) tipped to run for Mayor of N York is supported by this community.

Is Turkey Becoming Another Iran?

By Uzay Bulut

Source: <http://www.meforum.org/6837/is-turkey-becoming-another-iran>

July 20 – Turkey has recently been in the news for various developments that include, among other matters, its record number of [jailed journalists](#), the [destruction of Kurdish towns](#) and forced displacement of thousands of Kurds, the [dismissal](#) or suspension of thousands of government employees for political reasons, the [arrest of thousands of citizens](#) for allegedly "organizing" last year's failed coup, the [creeping conversion](#) of the Hagia Sophia Basilica-museum into a mosque, and the [seizure of Assyrian Christian lands](#), churches and cemeteries by the government.

[Students of an Imam Hatip high school in Ankara, Turkey.](#)

One additional trend begging the media's attention is the determined Islamization of the Turkish educational system. Here is a short list of some of the latest developments in Turkish schools and their curricula:



Turkey to stop teaching evolution in secondary schools as part of new national curriculum

Evolution will no longer be taught in Turkish secondary schools after being described as a "controversial subject" by the government. The head of the education ministry's curriculum board, Alpaslan Durmuş, said a section on Darwinism would be cut from biology classes from 2019.

"We have excluded controversial subjects for students at an age unable yet to understand the issues' scientific background," he told a seminar in Ankara, [according](#) to *Hurriyet Daily News*.

"Jihad" in compulsory school curricula

So the question naturally arises what exactly will Turkish schoolchildren be taught instead. The answer is "jihad."

Turkey is in the process of including the concept of jihad in compulsory school curricula. According to a statement issued in January by the Turkish Ministry of National Education, Turkish textbooks will be teaching "jihad" as a "value" in classes at *Imam Hatip* middle schools (schools that offer an Islamic curriculum to pupils).

At a press conference, Ismet Yilmaz, the minister of national education, [explained](#) the details of the new curricula to the press. According to the newspaper *Cumhuriyet*, jihad will be taught in seventh grade while pupils study the fundamentals of "*tawhid*" (oneness of God) and *wahdat* (Islamic unity) civilization."

In eighth grade, jihad will also be taught under the title "Struggling on the Path to Allah: Jihad" under the chapter called "Worshipping Allah."



1.5 million *Imam Hatip* students across Turkey

Under Turkish president Recep Tayyip Erdogan's Justice and Development Party (AKP), the number of *Imam Hatip* schools has ballooned from 500 to 3,500, with [enrollment surging](#) from 60,000 to 1,500,000 since the AKP first came to power in 2002.

The first *Imam Hatip* schools in Turkey were [opened](#) in 1924 during the rule of the Republic's first president, Mustafa Kemal Atatürk, as vocational schools to train government-employed imams and Islamic scholars.

"All schools shall have *masjids* (mosques)"

The Ministry of National Education has also [declared](#) that for schools and other educational centers to be opened in Turkey, they have to have a washroom where people can perform ablution before reciting their prayers [*salah*] five times a day, as well as two *masjids* [mosques] -- one for males and the other for females.

More Islamic classes, less art and philosophy

The Ministry of National Education has also [increased class hours](#) for the mandatory course in "religion, culture and morality" and decreased art and philosophy classes to one hour per week. The Ministry also repealed the "Regulations on Fine Arts Education," which were enacted in 2008 "to give primary and secondary school students with special talents the necessary education to prepare them for the fine arts schools."

Secularism, positivism "problems of faith"

The new curricula prepared by the Ministry of National Education to be studied at Turkish schools also [describe](#) "secularism, positivism, deism, agnosticism, atheism, nihilism, Satanism, reincarnation and false prophethood" as "problems of faith."

...

With more Islamization of the Turkish educational system will come the segregation of women and men and the deterioration of women's rights; more pressure and hostility to non-Muslim communities; more violent anti-Semitism; more anti-Western and anti-Israel bigotry, as well as more sympathy with, and even active participation in, jihad. These developments will automatically create less stability and less safety both in Turkey and throughout the Middle East as well as Europe.

Given the political developments in Turkey for more than a decade, the country seems to be fast-forwarding to be the second -- and possibly even a more dangerous version of -- the Islamic Republic of Iran.

Uzay Bulut, a Turkish journalist and political analyst, is a fellow at the Middle East Forum.

Immigration as a Security Threat

By Waleed Aly

Source: <https://www.nytimes.com/2017/07/27/opinion/australia-immigration-as-a-security-threat.html>

July 27 – Every now and then you get the impression that Australia is desperate to be under grave threat.

That's certainly how it appeared when Prime Minister Malcolm Turnbull last week announced the creation of a "super ministry" of Home Affairs, choosing as his backdrop a mix of military equipment and soldiers wearing gas masks. There was a time when his predecessor, Tony Abbott, was lampooned for giving national-security-themed news conferences in front of an

ever-growing number of Australian flags. Now Mr. Abbott seems a master of subtlety.

It was a shocking yet predictable moment. Shocking because it seemed like a sudden escalation for Mr. Turnbull, who was once a critic of Mr. Abbott's tendency to overhype the threat of terrorism. Predictable because in so much of the world the appearance of being tough on terrorism has become the most common political currency.



Mr. Turnbull's plan is to merge the intelligence agency, the federal police and the immigration department into a single bureau headed by the current immigration minister, Peter Dutton. This takes a sizable chunk of responsibility from the attorney general, although that position (encouragingly) retains an oversight role over the security services in the new agency.

There has been [little](#) from the prime minister beyond platitudes — “as terrorists evolve their methods, we have to evolve our responses” — to explain the move, aside from a befuddling reference to the British approach to antiterrorism. Mr. Turnbull said that Australia was “adopting a model which is closer to the British Home Office than the large-scale American Homeland Security Department,” but he failed to explain why the British model is superior to the Australian one.

In most terrorism cases in Britain, some of the perpetrators had been [known](#) to intelligence authorities, who lack the resources to closely monitor every suspect. And with the police unable to follow every lead, British officials have in some cases failed to act to prevent attacks. If the chief benefit of centralization is meant to be better coordination among the different arms of government, Britain has hardly had the kind of raging success that should inspire Australia.

But putting aside its shortcomings in preventing attacks, the British approach may not work here for another reason: Australia faces a different kind of terrorist threat. And Australian authorities already have a strong record of arresting terrorists and of disrupting locally planned plots. No Australian terrorist attacks have been mass casualty incidents, not one has been the work of a sophisticated network, and all have used crude weaponry such as knives and guns rather than advanced bombs. There is no Australian equivalent of the 2005 coordinated suicide attacks on the London Tube and buses or the more recent Manchester attack.

Australian authorities may suspect that we could some day face the kind of sophisticated plots that Britain has dealt with, and assume that the British approach is the best way to handle those threats. But no one in Mr. Turnbull's government has made that case.

This is probably why, when asked, Mr. Turnbull could not name anyone who had asked for this reorganization. Not in the intelligence

community, not from the police, not even among outside experts. A government-commissioned intelligence review also released last week made no such recommendation. Tony Abbott has unhelpfully added that he was advised [against](#) it as prime minister.

This is becoming a pattern. Hardly a month ago, the government said it would change citizenship laws to make permanent residents wait longer for citizenship, upgrade the “values” component of the citizenship test, and require the same level of English-language proficiency as [university](#) entrants. The government did this, too, by [invoking](#) national security. And again, when asked if this move was on the advice of any intelligence or law enforcement agencies, Mr. Turnbull declined to say.

What is Mr. Turnbull thinking? The answer should be obvious: politics.

Between his low standing in the polls and the insurgency he faces from the right wing of his own party (led by the man he deposed as leader, Tony Abbott, who now takes to the airwaves at least once a week to criticize his successor's leadership), Mr. Turnbull's position is extremely weak. He needs a prominent right-wing ally, and Peter Dutton fills this role.

There's a more telling insight offered by the man who has lost most in this, and who was among the most vocal opponents of it within the Turnbull cabinet: Attorney General George Brandis. Pressured to support this reorganization publicly, Mr. Brandis declared the change ensures that a minister will “give 100 percent of his time and his attention to national security, both domestic, national security and border security.”

But the idea of a home affairs minister focused on national security makes sense only if we assume immigration is entirely a security problem. This points to the true ideological import of this newly formed department.

Australia began this century with a Department for Immigration and Multicultural Affairs. Back then, the department's slogan was “Enriching Australia through Migration.” Just over a decade ago it dropped the multiculturalism portfolio entirely, creating instead a Department of Immigration and Citizenship. Now it's to be rolled into a national security department. Thus, we can chart Australia's



public conception of migration from being a celebrated aspect of its multicultural character to a civic idea whose highest ultimate expression is citizenship to a threat to be managed.

That certainly chimes with Australia's established rhetoric on asylum seekers, which has dominated public expression of our immigration program. And it might suit the increasingly nationalist belligerence of our age. But it does not suit Mr. Turnbull, a man who until recently was fond of [celebrating](#) Australia as "the most successful multicultural society in the

world"; a man who only a few weeks ago was declaring that his party was established to be liberal, in contradistinction to conservative.

When the story of the Turnbull government is written, he will have been the prime minister who finally debased immigration in the Australian political imagination. The image last week of the prime minister draped awkwardly in military power will surely accompany that chapter. And those gas masks won't look much like liberalism. Most likely they won't look much like success either.

Waleed Aly is a columnist and broadcaster and a politics lecturer at Monash University in Melbourne.

Are China and India on the Road to War?

Source: <http://us11.campaign-archive1.com/>

July 31 – In mid-June, a remote area called the Dolam plateau in the Himalayas where the boundaries of China, India and Bhutan meet made headlines when Indian and Chinese troops began a standoff over a



road construction project. China conducted a live-fire exercise in the area, and there have been false reports of deaths. Diplomatic efforts are underway to de-escalate the situation, but still the risk of war has been on everyone's mind.

The terrain and weather in the area, located in a region called Doklam, are anathema to war. And yet, almost exactly 55 years ago, China and India fought briefly over this and other contested border areas. So what is the strategic value of this seemingly obscure plateau? And would India and China really go to war again over it?

►► [Read the rest of this article on source's URL.](#)

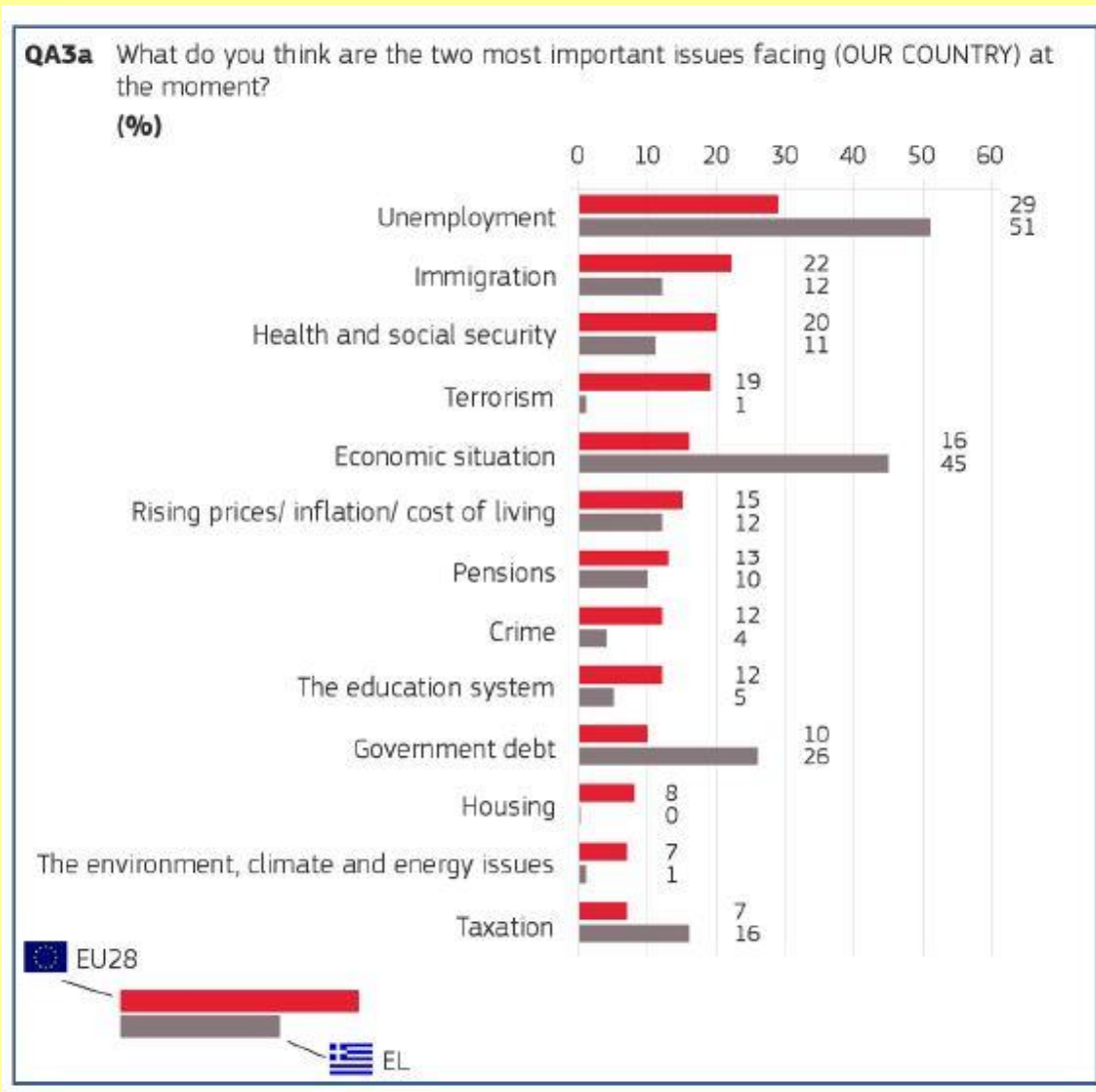




EUROBAROMETER – Life in Greece

Spring 2017

Source: http://www.protothema.gr/files/1/2017/08/02/eb87_fact_el_en.pdf



Muslim Family Finds Bacon in McDonald's Chicken Burgers

Source: <https://clarionproject.org/muslim-family-finds-bacon-in-mcdonalds-burgers/>



Aug 02 – A Muslim family in Alabama found bacon in 14 McChicken sandwiches they ordered from a Decatur McDonald's. The family was reportedly on holiday from New York and stopped at the McDonald's to eat after a day out at a nearby water park, according to local media outlet Al.com.

The Alabama chapter of the Council on American Islamic Relations (CAIR) demanded an



investigation into the incident. Khaula Hadeed, the head of the Alabama chapter of the Council on American-Islamic Relations, called the incident “an intentional act of religious and ethnic bigotry.”

“They ordered 14 sandwiches. They started noticing it tasted different to them. They eat McChicken all the time at McDonald’s. They knew what they ordered — they know what’s in the sandwich,” she told AL.com.

Upon investigating the sandwiches, the family discovered the bacon.

“It doesn’t sound like a mistake, especially on 14 sandwiches,” Hadeed said.

While Clarion Project has differences with the Council on American-Islamic Relations, Clarion opposes acts of anti-Muslim bigotry.

Eating pork is forbidden in Islam and for a restaurant worker to conceal pieces of bacon deliberately in sandwiches sold to a Muslim family certainly comes under that category. Much as a worker deliberately slipping beef into a Hindu’s food (or that of someone who said they were vegetarian), this act, if deliberate, should result in the firing of the employee responsible.

It represents a breach of trust between the customer and the restaurant that the customer will receive the food they asked for. In this case it caused clear emotional harm to the family and made them feel singled out and targeted for their faith.

EDITOR’S COMMENT: What a ridiculous story! Perhaps non-lethal pork bullets would be something McDonald’s should invest into.

'Second Calais' grows in France as Macron pledges to rid country of migrant camps

Source: <https://www.rt.com/news/397970-migrant-camp-france-metz-macron/>



July 29 – Violence, alcohol abuse and reports of rape have become a daily routine for people in and around an illegal migrant camp in the town of Metz in north-eastern France, where “a second Calais” is said to be emerging.

Reports of appalling living conditions have been emanating from Metz, where hundreds of migrants have set up camp. Although the illegal site has been dismantled several times, more people arrive and start it all up again.

“The city of Metz was not prepared for the camp. The authorities emptied it, but now there are 700 refugees back there again. It’s becoming a second Calais,” a concerned local woman told RT’s Charlotte Dubenskij.



"This problem has to be addressed quickly, for their sake as well as for us," another local woman said. Even aid workers don't feel safe at the camp which has been dubbed a "humanitarian slum."

"There is a problem with alcohol and violence. Even as an aid worker, I've faced problems. They don't have food, but they manage to get hold of alcohol. We don't know how to handle the situation. There is not enough security for the number of people here," an aid worker at the Metz camp told RT.

Locals say the many problems at the site are being downplayed by the authorities.

"There are a lot of home break-ins. A lot of aggression. They snatch women's handbags, but no one talks about that on TV," a local taxi driver told the RT crew while driving them to the camp site. "The migrants are everywhere in Metz," he added.

Security guards at the camp interfered with RT's filming, saying they didn't "want journalists here."

"People here are hiding from those who are looking for them in their own countries," a guard claimed.

This week, French president Emmanuel Macron unveiled an ambitious plan to rid the country of its migrant camps and to better accommodate refugees in the coming months.

"The first battle is to house everybody in a dignified manner. By the end of the year, I want no more women and men in the streets, in the woods, lost. It's a question of dignity, a question of humanity but also of efficiency. Everywhere where the emergency housing is built to welcome them, I want administrative steps for their cases to be examined," Macron pledged at a ceremony welcoming some of France's newest citizens.

France has struggled with refugee camps for years. One of the most infamous of these, the so-called "Jungle" in the port of Calais was dismantled last year, but migrants are still reportedly arriving at the illegal site. Human Rights Watch says over 400 people are now there, but other estimates say it could be up to 600.

EDITOR'S COMMENT: Of course you will do the same for poor French citizens! Right Mr. President?

Idiot Islamophobes Mistake Empty Bus Seats For Burqa-Wearing Women

Source <https://www.yahoo.com/news/idiot-islamophobes-mistake-empty-bus-120738141.html>



Aug 02 – They saw only what they wanted to see.

Members of a Norwegian Facebook group [reportedly mistook a photograph of empty bus seats](#) for a group of six [burqa](#)-wearing Muslim women — and responded with a slew of racist comments.

Journalist Johan Slåttavik shared the snap to the "[Fedrelandet viktigst](#)" group — which translates roughly as "Fatherland first." "What do people think about this?" he said in the accompanying caption last week.

Slåttavik was curious [to see what the members' reactions](#) to his "little practical joke" of sharing the "old internet meme" would be, he told HuffPost via Facebook. The group's members often use the forum to complain about what they believe is a [recent influx of Muslims](#) into the country," according to Mashable.

While some of the closed group's members appeared to understand Slåttavik's joke, it also sparked an avalanche of hate-filled replies that seemed to take it seriously.

["You can never know who is underneath,"](#) wrote one commenter,



according to The Local. “Maybe terrorists with weapons.” Other members reportedly described the image as “tragic,” “disgusting” and proof of Norway’s “Islamization.”

The comments went viral after Sindre Beyer, a political adviser for the Norwegian Labour Party who had been monitoring the group’s activities, [shared screen grabs](#) of the replies to his personal account on Friday:

“I’m shocked by how much hate and fake news is spread there,” he told the Nettavisen newspaper. “The hatred that was displayed toward some empty bus seats really shows how much prejudices trump wisdom.”

Slattavik told HuffPost that his stunt had prompted “some angry reactions” and he believes he’s now been banned from the group.

But his social experiment had proven an “educational” means of examining “the differences between legitimate criticism of immigration to Europe, and blind racism and xenophobia,” he said.

“As a journalist myself I am fascinated by social mechanisms such as group polarization, and how people’s perceptions of an impression are influenced by how others around them react,” Slattavik added.

EDITOR’S COMMENT: Sorry but I do not understand the point of this article. Is it about seats in a bus or about burqa wearing in a European country?

Fallout from Rio gamble shows IOC needs rotating Olympic host cities

Source: <https://www.thestar.com/sports/amateur/2017/08/04/fallout-from-rio-gamble-shows-ioc-needs-rotating-olympic-host-cities-feschuk.html>



Aug 04 – In the lead-up to the Rio Olympics, which began a year ago Saturday, there were widespread fears of impending disaster.

It certainly didn’t help that, in the weeks before the Games began, local emergency responders held up a sign at the Rio de Janeiro airport that read: “Welcome to Hell: Police and Firefighters Do Not Get Paid, Whoever Comes to Rio Will Not Be Safe.” But while hell was promised, it mostly didn’t materialize.



Rampant crime was a concern before the Games. But save a stray bullet or two — one of which ripped through a media tent, another of which shattered a window in a media bus — crime didn't end up becoming an outsized part of the plot line during the Olympic fortnight.

The [Zika virus was a concern before the Games](#) — one that kept more than a few athletes away from the competition. But as much as organizers had clearly prepared for the threat — as evidenced by the pallets of bug repellent that could be seen in abundance inside the Olympic bubble — there were plenty of areas of the city where it was difficult to find a single mosquito.

Terrorism has been a concern at every Games since 1972. Brazil didn't turn out to be a target.

As it was, the [hiccups that did occur were more embarrassing than earth-shaking](#). There was a green swimming pool here and a contaminated sailing venue there, but the Games mostly went off without calamity. For all the doomsayers who'd laid out forecasts of impending catastrophe going back to the eve of Brazil's hosting of the 2014 World Cup of soccer, the fact remains that Brazil hosted the world's two biggest sporting events in a two-year span without a major snafu.

Still, that's probably not the way the Rio Olympics will ultimately be remembered — as a grand time had by most, this scribe included. Rio will likely be remembered as yet another cautionary tale about the financial perils of buying into the money pit that an Olympic Games so often becomes. It will be remembered for underlining a lesson we'd probably already learned — that unless you're residing in one of the world's handful of exceptionally well-equipped cities, the Olympics coming to town is almost certainly going to be a bad deal for your citizenry. You don't need to be an economist to come to that conclusion, but as economists Robert Baade and Victor Matheson wrote in a 2016 study, "in most cases, the Olympics are a money-losing proposition for host cities."



The Olympic Aquatics Stadium that hosted the swimming competition at the Rio Olympic and Paralympic Games in 2016 sits empty. (LOUIS GENOTYASUYOSHI CHIBA/AFP/Getty Images)

A year on from hosting the first Olympics on South American soil, Rio is so financially strapped it's been late on paydays for police and teachers and other public employees. Its Olympic sports venues are mostly lying vacant — although a few of its Olympic-focused developments, including a new subway line and a rejuvenated port area, are being heralded as relative successes. Still, that doesn't sound like a residual value worthy of the estimated \$13-billion price tag. And when organizers recently asked the International Olympic Committee's



executive board for help in paying off a reported \$30 million to \$40 million in lingering debt, the IOC's executive board declined to offer assistance.

That helps explain why, in recent years, cities have been pulling out of the bidding process en masse. Budapest, Rome and Hamburg, to begin a long list, mounted short-lived bids for the 2024 Summer Games. Toronto, which had contemplated entering the race, ultimately forewent the process altogether. In the end, Paris and Los Angeles emerged as the only two contestants. Perhaps because there was no guarantee that there'd even be a bidder for the 2028 Olympics, last month the IOC announced that Paris and Los Angeles will host the 2024 and 2028 Games, respectively.

L.A. looks like a shoo-in to run an outlier of a fiscally successful Olympics — it is, after all, the city that turned a reported \$234-million profit back in 1984. And its bid played up the fact that it's already in possession of the vast majority of the required facilities.

The Paris bid promised that some 93 per cent of its infrastructure will either be existing or temporary, the exceptions being a yet-to-be-constructed aquatics centre and an \$1.44-billion plan for an Olympic Village that is slated to be developed as a public-private partnership.

The appeal of those bids, especially L.A.'s, raised a question: Why doesn't the IOC stick to awarding Games to cities with proven track records of both fiscal and logistical success? L.A., for instance, has billed itself as an "eternal Olympic city" — a boast it can clearly back up given its plethora of existing infrastructure, including an embarrassment of riches of stadia and television studio space. Maybe Vancouver could make a similar claim as a winter host. Certainly it would make more monetary sense to slate a future Games for Vancouver, which hosted a successful Games in 2010, than to send one to Calgary. And yet [Calgary is exploring a bid for the 2026 Winter Games](#), even if the structural remnants of its 1988 turn as host would require major upgrades, not to mention plenty of additional facilities built from scratch — hardly inviting prospects for a cash-strapped province.

Why not stick to rotation of proven Olympic cities rather than a gamble on so many unknown quantities? If only sound logic and reliable accounting more than occasionally prevailed in matters of five-ringed madness. Just when it seems like there isn't a nation on earth foolhardy enough to take the risk of hosting an Olympics, history suggests at least one will emerge. **And sure enough, it was only a couple of months ago that India's Olympic committee asked its government for permission to bid on the 2032 Olympics.**

The Olympics are built on the human urge to aspire, to be sure. Let's just hope India is fully aware that aspirational displays of international arrival can come at a steep price. **Last week Rio's Olympic velodrome was damaged after it was set ablaze by a small handmade hot-air balloon — the likes of which, though illegal, are apparently commonly launched into Rio's night sky for recreational and ceremonial purposes.**

It was an apt metaphor for the city's Olympic-hosting experience one year on — lasting damage incurred by a fleeting flame that seemed like a good idea at the time.

EDITOR'S COMMENT: The solution is simple: Either stop Olympic Games for good or make them permanently in Ancient Olympia, Greece – were they belong!



'Germany in three days and France in one hour' Shock threat to EU from Erdogan backers

Source: <http://www.express.co.uk/news/world/837041/Turkey-shock-threat-Germany-EU-war-France-Erdogan-storm>

Video: <https://www.youtube.com/watch?v=BYLowL5m6M>

Aug 05 – Newspaper Yeni Söz, closely aligned to the government, made the outlandish claim on the front page of its daily newspaper. Carrying the provocative headline "Turkey can occupy Europe within 3 days", the move is the

latest in a [political spat between Ankara and Berlin](#). [Turkey](#) has been vying to join the [EU](#) for more than a decade, with



official negotiants to become a member dragging into their 12th year.

President Recep Tayyip Erdogan attempted to use the migrant crisis as a bargaining chip, striking a deal with Brussels over the crisis in exchange for political sweeteners, which included kick-starting their membership bid.

But relations have turned sour with the EU, in particular [Germany](#), and the two countries have been engaged in a public spat over the past few months.

The paper's absurd claims appear to be a no more than a childish dig at Berlin, as it is a feat unlikely to be achieved.

Despite the outlandish statement, the paper attempts to back up its declaration by building their theory on a thesis of the American political scientist George Friedman, founder of the geopolitics institute Stratfor.

The paper said: "Friedman said the Turks could defeat Germany in one afternoon and France in one hour, if they have the courage to fight.

"If you believe the international research institute Gallup, that asked people if they would fight for their country, then the Europeans have already taken out the white flags in the event of a war.

"Germany is abandoned by its citizens. If we start in the morning, we can have our evening prayer in Bellevue Castle."

The paper references a two-year-old survey which reportedly gaged how likely citizens were to fight for their country.

They pointed towards the results which said 18 per cent of Germans would fight for their country, compared to 29 per cent of the French and 27 per cent of the British.

The barmy jingoism is not far off statements Mr Erdogan himself has made.

In April he described Europe as a "centre of national socialism".

That same month he called the EU "a continent that is rotting in every which way".

And he also made reference to going to war with the EU, saying in another interview: "If you continue to behave like this, not a single European will be able to securely take a step on a road anywhere in the world by tomorrow."

The bitter row between Germany and Turkey has seen relations steadily deteriorate.

Recently Berlin issued new travel warnings for tourists visiting the country, and foreign minister Sigmar Gabriel said he could no longer guarantee investment in Turkey following accusations made by Mr Erdogan.

The president accused German companies of colluding with the man he views as his political enemy - and who he suspects was behind the failed coup last year - Fethullah Gülen.

And in a painful move for Ankara, Mr Gabriel added he would discuss with other EU leaders the prospect of reviewing pre-accession funds being offered.

EDITOR'S COMMENT: Apart from Australian jokes there are some good Turkish jokes as well!

Muslim Miss Universe contestant Muna Jama makes history wearing kaftan in swimsuit round

Source: <http://www.independent.co.uk/news/uk/muna-jama-muslim-beauty-queen-kaftan-bikini-miss-universe-gb-miss-teen-usa-a7879196.html>

Aug 06 – A Muslim woman competing in the Miss Universe Great Britain pageant has become the first to do so in a kaftan, telling the beauty contest organisers that she would not wear a swimsuit.

Muna Jama, 27, was invited to the finals of the competition when the pageant officials agreed that she could "wear a cover-up if she chose."

According to the Metro newspaper, Ms Jama said: "I wouldn't wear a bikini to a beach, so I'm not going to wear one in a competition to score points."

Ms Jama walked on to the stage wearing a multi-coloured kaftan, large hooped earrings, a silver choker and black platform shoes.



On her Instagram feed she posted: “This moment has proved that I am capable of almost anything I set



my mind to and limitations is a status waiting to be changed. I thank everyone who stood beside me and believed in my vision.”

The businesswoman had been invited to apply for [Miss Universe GB](#) two years ago, but decided against taking part as she was uncomfortable stripping down to a bikini for the swimsuit section of the contest, where the women walk up

and down the stage, in front of a panel of judges.

On the Miss Universe GB website, Ms Jama wrote of her campaigning work as co-founder of Cloudless Research, a startup that tackles child abuse and the [migrant crisis](#). She was drawn to their plight after volunteering to help refugees in Egypt and her home country of Somalia. “We aim to reduce the number of victims channelling the Mediterranean Sea through education and encouraging new legislations in the country of origin.”

[Beauty contests](#) have drawn criticism for objectifying young girls and women. The Miss Teen USA competition (for 15- to 19-year-olds) announced in 2016 that the swimsuit round would be replaced by “athletic wear”.

Miss Universe president Paula Shugart said in a statement: “This decision reflects an important cultural shift we’re all celebrating that empowers women who lead active, purposeful lives ... and ... will help all of Miss Teen USA’s fans recognise these young women for the strong, inspiring individuals they are.”



Refusing to wear a swimsuit at beauty contests has a long history. In 1951, Miss Alabama and Miss America, Yolande Betbeze refused to wear swimwear at a public appearance. “To...go into Milwaukee in the middle of the winter and walk around a department store in a bathing suit,” she argued, “is not my idea of Miss America.”

EDITOR’S COMMENT: Europe-Eurabia: 0-1

Unmanned Re-Fuelling Abilities

Source: <http://i-hls.com/archives/77949>

Aug 07 – The UAV industry is finding all kinds of new applications and ventures that can use the devices’ unique abilities. The US Army Aviation and Missile Research, Development and Engineering Center (AMRDEC) has recently demonstrated initial capabilities of an unmanned air refuelling system to limit helicopters’ time on the ground and remove soldiers from isolated fuelling stations.

According to shepardmedia.com, the demonstration revealed a new science and technology effort, the Autonomous and Robotic Remote Refuelling Point (AR3P).

By using self-aligning robotics and sensors, the system can support a quick hook-up, ultimately reducing the receiving aircraft’s time on the ground. The robotic system can also



increase safety by removing soldiers from the fuelling station. The development uses an isolated forward arming and refuelling point approach to provide an autonomous, unmanned refuelling capability using existing technologies.

The technology includes aviation ground support equipment, sensors, energy efficient sustainment



equipment, aircraft components with minor modifications and aircraft refuelling interfaces and equipment. A majority of the robotic package is made out of commercial off-the-shelf materials, but the fuel port system is an AMRDEC-designed solution.

Currently, the project is addressing technical risk areas and hopes to establish a framework for future funding. The next phase will see modifications and flight testing of a Mosquito Test aircraft, while the final phase will feature a flight test of an Apache AH-64.

Spotting Patterns in Crowds – Promising Video Analytics Tool

Source: <http://i-hls.com/archives/77978>

Aug 07 – Security cameras are everywhere – in malls, stadiums, train stations, parking garages, airports. But with so much information flowing in, it can be challenging for the people in the control rooms monitoring activity to catch every little detail. And surprisingly, most mainstream video security technology lacks sound, color or both. Researchers in MITRE, a not-for-profit organization that operates research and development centers sponsored by the US federal government, have been exploring technology that will help spot patterns in crowds. Users will be able to identify and prevent hazards related to public safety based upon real-time surveillance feeds and respond more rapidly and accurately to natural or man-made emergencies. The technology also could be used to conduct analysis for city planning such as deciding the locations of crosswalks and streetlights.

If all goes according to plan, the research will help detect, alert and react to unusual activities

in crowded open, public areas that are more difficult to monitor; warn and help intelligence agents or soldiers on the battlefield in real time to anticipate threatening events by associating people's traits with a particular set of circumstances; and be used as an investigative tool to speed up and pinpoint evidence of fraudulent activities among an overwhelming amount of data.

Chongeun Lee is the principal investigator on the LinkBioMan technology project, part of MITRE's internal research program. A team of researchers is contributing its expertise in video analytics, biometrics, machine learning, human language technology and computational auditory perception to create sensors that can spot irregularities in videos.

"The goal of the research is to create a decision framework that can process audio and video in real time and recommend a timely action—alert or no-alert—based



upon the fusion of multimodal data,” Lee says. “The outcome is intended to be used for alerting operators ... monitoring multiple feeds of the one that requires attention and action.”

Researchers decided to compare public protests and riots with concerts to determine the differences in alert context. Then they designed and implemented a decision framework, trained audio and video classifiers leveraging existing open source tools, and developed ontology on the selected test cases.

According to afcea.org, having focused mainly on nonperson entities thus far, next fiscal year the team plans to add soft biometrics such as

gender, clothes and hair color to crowd behaviors; implement user error feedback and correction; and augment the decision framework with temporal tracking of events, Lee says. With continued funding, the technology should be fully developed by the end of the fiscal year 2019.

Transitioning LinkBioMan to commercial and government customers like the U.S. Defense Department and financial institutions won't be a stretch. “We are intentionally building our system to be modular, flexible and tailorable for individual needs,” Lee emphasizes.

Airbnb & terrorism; fighting future cyberwars; spotting terror groups' recruiters, and more

Source (Aug 09): <http://www.homelandsecuritynewswire.com/dr20170809-airbnb-terrorism-fighting-future-cyberwars-spotting-terror-groups-recruiters-and-more>

[“I thought al-Qaeda was recruiting me”: can we spot when terrorism is a delusion?](#) (Julia Rampen, *New Statesman*)

If there's one thing more controversial than the idea of a link between terrorism and religion, it's the link between terrorism and mental health.

[ASEAN security forum agrees to use social media to combat terrorism](#) (Christine T. Tjandraningsih, *Kyodo News*)

Foreign ministers from over two dozen countries joining in a major regional security meeting agreed Monday to counter terrorism by using social media amid raising concerns over possible threats of foreign terrorist fighters to the region.

[NYC hotel industry claims Airbnbs are enabling terrorists](#) (Natt Garun, *The Verge*)

The disputes between Airbnb and the hotel industry continue to be an ongoing battle, but things escalated last week when an ad campaign backed by the Hotel Association of New York City suggested that short-term rentals could be used to host terrorists like Salman Abedi, the bomber behind the Manchester attack in May.

[Congress may mandate 'information warfare' plan for Russia](#) (Joel Gehrke, *Washington Examiner*)

Lawmakers may mandate a specific strategy for countering Russian disinformation if the State Department does not, a senior House Democrat warned.

[View: Dealing with cyber warfare](#) (*Euronews*)

When cyber-security professionals were polled recently at their annual BlackHat conference in Las Vegas, 60% said they expected the United States to suffer a successful attack against its critical infrastructure in the next two years. And US politics remains convulsed by the aftermath of Russian cyber interference in the 2016 election. Are cyber-attacks the wave of the future, or can norms be developed to control international cyber conflict?

[Cyberwar: A guide to the frightening future of online conflict](#) (Steve Ranger, *ZDNet*)

At its core, cyberwarfare is the use of digital attacks by one state to disrupt the computer systems of another in order to create significant damage or destruction.

[Feds ID a flaw in flood-control system in Minnesota](#) (Mark Fischenich, *Free Press*)

Some property owners could suddenly find themselves living in a designated floodplain and be forced to buy hundreds of dollars of flood insurance each year.

[ISIS says secret weapons await coalition forces in battle for Raqqa](#) (Patrick Tucker, *DefenseOne*)



The terror group makes some big claims about its homegrown arsenal in the latest issue of its online magazine.

Drone halts air traffic at Stockholm's Arlanda Airport

Source: <http://www.thelocal.se>

Aug 07 – Flights in and out of Stockholm's Arlanda Airport were halted for an hour on Monday afternoon after a drone was spotted in the area.

A drone caused travel chaos and forced Sweden's busiest airport to **halt air traffic for security reasons between around 3.50pm and 4.50pm** on Monday, authorities said.

During this time, two incoming flights warned they were low on fuel and were therefore given permission to land despite no other planes being allowed to land or take off.

Emergency services, ambulance and police were called to the runway as a matter of routine, but both planes landed normally.

"The first plane landed at 4.19pm without problems and the second at 4.22pm also without problems," said Stockholm police in an update online.

Police had already been called to the airport to try to locate the drone and its pilot.

Air traffic resumed at 4.50pm, but Swedavia, which operates Arlanda Airport, warned that knock-on delays were to be expected.

The Most Embarrassingly Wrong Book Ever on the Middle East?

By Daniel Pipes

Source: <http://www.meforum.org/6863/the-worst-book-ever-on-the-middle-east>

Aug 09 – "The Middle East is the graveyard of predictions" notes the left-wing writer and Editor [Adam Shatz](#). That's partly because it's so volatile (no one in 2014 imagined the revival of an executive caliphate after eleven centuries) and it's perverse (Turkey's President Erdoğan started a near-civil war against the Kurds to win constitutional changes he does not need).

In part, too, predictions fail because of the general incompetence of the specialists in the field. Often, they lack the common sense to see what should be self-evident. Case in point: the collective swoon upon the accession of Bashar al-Assad to the presidency of Syria in 2000.

[Some analysts](#) of Syrian politics expressed skepticism about a 34-year-old ophthalmologist's ability to



manage the "desolate, repressive stability" that he inherited from his dictatorial father who had ruled for thirty years. They suggested that the "deep tensions in Syrian society ... could explode after the long-time dictator's demise."

But most observers divined in the young Assad a decent fellow if not a closet humanitarian. David W. Lesch, an

academic who rejoices in the title of Ewing Halsell Distinguished Professor of Middle East History at Trinity University in San Antonio, Texas, led this particular pack. Lesch befriended the young strongman, enjoying what his [publisher](#) calls "unique and extraordinary access to Syria's president, his circle, and his family."



Those long hours of conversation led to a 2005 book, [*The New Lion of Damascus: Bashar al-Assad and Modern Syria*](#) (Yale University Press) and a cascade of praise from fellow academics: [Moshe Ma'oz](#) of the Hebrew University found it "very informative and perceptive." [Curtis Ryan](#) of Appalachian State University called it "revealing." [James L. Gelvin](#) of UCLA praised it as "an extraordinarily readable and

timely account." A prestigious [Washington think tank](#) hosted a discussion of the book's findings.



David W. Lesch wrote his 2005 book *The New Lion of Damascus* after long hours of conversation with Syrian President Bashar Assad.

But the passage of a dozen years, half of them consumed by Assad's

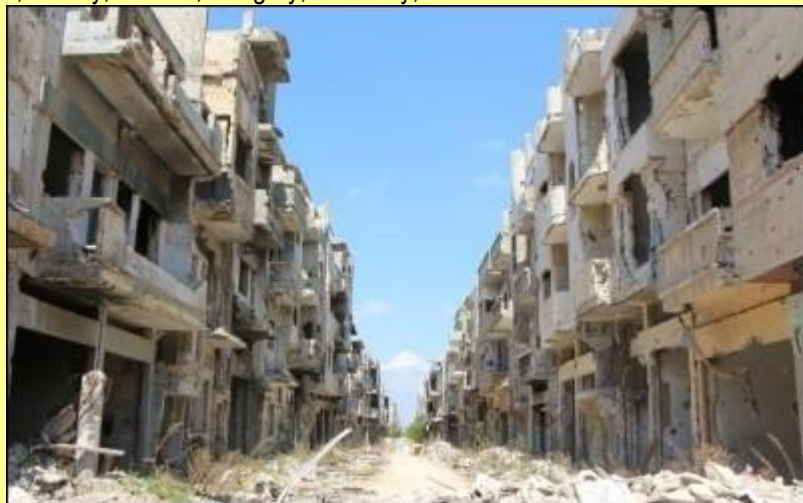
monstrous brutality in the region's most lethal civil war of modern times, provides a very different perspective from which to gauge Lesch's scholarship.

Assad responded to peaceful demonstrations against his regime that began in March 2011 not with reforms but with vicious force. The total number of dead totals about 450,000 out of a pre-war population of 21 million. Assad's personal barbarism has throughout been the key to this conflict; exploiting his control of the skies, his troops have perpetrated an estimated 90 percent of the war's fatalities.

According to the [United Nations High Commissioner for Refugees](#), over 5 million Syrians have been internally displaced and another 6.3 million have fled the country, causing crises in such disparate countries as Jordan, Lebanon, Turkey, Greece, Hungary, Germany, and Sweden.

[Destruction in Homs. Bashar al-Assad's "vision for the future of his country"?](#)

In light of this appalling record, Lesch's account contains many passages of extreme gullibility and poor judgment. He assessed Mr. Assad roughly as he might a university colleague, deploying such adjectives as "compassionate."



"principled," "unassuming," "innocent," and "morally sound." He described Assad as "a man of great personal integrity" with "appealing sincerity" with "a vision for the future of his country." Those who meet Assad, he tells us, are struck by "his politeness, his humility, and his simplicity." Turned around, "The thuggish behavior ... associated with his father is not in Bashar's character."

Privately too, Assad is an exemplar: "He changes diapers, gets up in the middle of the night to calm a crying child. ... During the entire first year of [his son's] life, Bashar did not once miss giving him his daily bath."



For Westerners, he's cool culturally: "As well as liking music by Phil Collins, he enjoys Kenny G., Vangelis, Yanni, some classical pieces, and 1970s Arab music. He loves classic rock, including the Beatles, Supertramp, and the Eagles, and he has every album by the Electric Light Orchestra."

As for his wife Asma, she "certainly seems to share her husband's calling to do everything in his power to make Syria a better place for their children and grandchildren."

To his credit, Lesch recognizes the possibility of an implosion, "with regime instability leading to a potential civil war." But he rejects this scenario because "The opposition to the regime within Syria ... is divided and relatively weak."

New Lion, a monument of scholarly humiliation, not surprisingly is out of print and has [vanished](#) from Yale University Press's website. More surprisingly, Yale in 2012 returned to Lesch for another masterpiece, this one with the unfortunate title, [Syria: The Fall of the House of Assad](#).

Daniel Pipes is president of the Middle East Forum.

Largest UK Navy carrier security under review after amateur lands drone on deck undetected

Source: <https://www.rt.com/uk/399419-uk-carrier-drone-landing/>

Aug 12 – **Security will be reviewed at the aircraft carrier 'HMS Queen Elizabeth' after a photo enthusiast landed a small drone aboard the largest ship in the Royal Navy and remained undetected**



undetected, the UK Ministry of Defence (MoD) said. The incident happened when the 'Queen Elizabeth', which is to be commissioned by the Royal Navy later this year, was docked in the Scottish port of Invergordon in July.

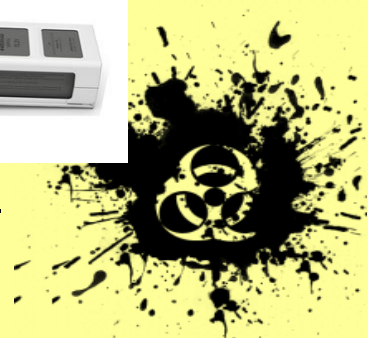
A local amateur photographer saw the arrival of the warship, which cost the £3 billion (US\$3.9

billion), as a great opportunity to obtain some footage.

The man, who opted to remain anonymous, told the [Daily Mail](#) he was "amazed" that he managed to land his DJI Phantom quadcopter drone aboard the 70,000-tonne vessel and then take off again without being detected.

"There was no-one about to prevent it from landing although there were security police around in small boats who were waving at the drone... There was absolutely no one around when I landed, it was like a ghost ship," the photographer told the Daily Mail.

In a separate interview with the [BBC](#), he said: "I could have been anybody... I could have carried 2 kilos of Semtex [plastic explosive] and left it on the deck."



According to the drone pilot, he never planned to land his quadcopter on the aircraft carrier's deck, but was forced to do so due to difficult weather conditions.

"I received a high wind warning as I was videoing up and down the flight deck and my control system advised me to land," he explained to the Daily Mail.

The man said he understood what he did was wrong and *"drove round to Invergordon and spoke to the port security and explained that I wanted to speak to someone from the ship such as the duty watch or the captain"* about the incident.

"I was only able to speak to some heavily armed police, I think from the MoD, and they said there was no one available on the carrier as they were at dinner ashore," he said.

The British Ministry of Defense, apparently, doesn't treat the drone landing as seriously as him, the pilot said, otherwise, the shots of Queen Elizabeth he made *"would not have been allowed to see the light of day."*

The military negligence may be explained by the fact that *"the ship has not been commissioned by the Royal Navy yet,"* the photographer suggested.

"We take the security of HMS Queen Elizabeth very seriously," an MoD spokesman told the Daily Mail, adding that *"an investigation is under way [into the drone landing] and we stepped up our security measures in light of it."*

The social media group, Black Isle Images, which published the footage of the aircraft carrier, said that it *"did not post anything to embarrass anyone, but in doing so hopefully security will be tightened."*

The group turned down *"some drone pilots, who are angry because they believe it [drone landing] will make drone regulations tighter."*

"Well we believe that those regulations should be tighter, there is no way we should have been able to do what we did," Black Isle Images said in a statement on Facebook.

The 280-meter-long 'HMS Queen Elizabeth' is the largest ship even built by the Royal Navy, capable of carrying up to 40 aircraft.

The construction of 'Queen Elizabeth's' sister ship, the 'Prince of Wales', is close to conclusion at the Rosyth shipyard.

EDITOR'S COMMENT: I thought it was only an US Nave privilage but it seems their UK allies follow the same patterns in training and security. By the way: I watched the video with the drone over the vessel and the sea condition was not that bad to force to land the drone on the carrier...

Turkey's New Morality Police

By Burak Bekdil

Source: <http://www.meforum.org/6865/turkey-new-morality-police>

Their number is just 17,000 in a population of 80 million (0.02%). They are full Turkish citizens. Most come from families living for centuries in what today is modern Turkey. They pay their taxes to the Turkish government. Their sons are conscripts in the Turkish army. Their mother tongue is Turkish. When someone asks them where they are from they say they are Turkish -- because they are Turkish.



Nevertheless, the Turks think of them as "Israelis" -- not because they are not Turkish, but because they are Turkish Jews.

Alperen Hearths Istanbul chief Kursat Mican (center) warned Turkey's Jews last month, *"We will prevent your freedom to worship here just like you are preventing ours [in Jerusalem]."*

The members of Alperen Hearths -- a bizarre name for a youth group -- are also Turkish. They speak the same language as



Turkish Jews and they carry the same passport that proudly sports the Crescent and Star. The members of this group, however, think that they are Turks but that Turkish Jews are not.

The Alperen group fuses pan-Turkic racism with Islamism, neo-Ottomanism, anti-Western and anti-Semitic ideas. It [promotes](#) an alliance spanning Central Asia to the Middle East based on "common historic [read: Turkish] values."

In April, the Alperen group [announced](#) that it would support highly controversial constitutional amendments granting President Recep Tayyip Erdogan new sweeping powers narrowly accepted, with 51.4% of the national vote, in a referendum. They are, in a way, Erdogan's willing army of young Ottoman soldiers.

In 2016, the Alperen [threatened violence](#) against an annual gay pride march in Istanbul. Alperen's Istanbul chief, Kursat Mican, said:

Degenerates will not be allowed to carry out their fantasies on this land...We're not responsible for what will happen after this point ... We do not want people to walk around half-naked with alcohol bottles in their hands in this sacred city watered by the blood of our ancestors.



The Istanbul governor's office later banned the march.

Members of the ultranationalist Alperen Hearts protest Christmas celebrations in Turkey last December by holding a man dressed as Santa Claus at gunpoint.

The Alperen can also sometimes be generously amusing. In December 2016, a group of Alperen

youths [celebrated](#) Christmas and New Year's Eve in Turkey by holding a man dressed as Santa Claus at gunpoint.

Burak Yasar, a provincial head of the group, said: "Our purpose is for people to go back to their roots. We are Muslim Turks and have been banner-bearers of Islam for a thousand years."

The Alperen were at the heart of a new anti-Semitic Turkish show recently, apparently inspired by Erdogan. This time, Erdogan's incitement against Israel themed around the Jewish state's control of security at the entrances to the Temple Mount site in Jerusalem. The Turkish president [warned](#) that Israel could not "expect the Islamic world to remain unresponsive after the humiliation Muslims suffered with the restrictions at the Noble Sanctuary" -- a reference to the new security measures briefly instituted by Israeli officials at the entrances to the Temple Mount, which [were removed](#) after a few days. Muslims may worship at the al-Aqsa mosque, but there should be safety precautions to protect both them and the mosque. It was the Muslims, not the Jews, who were telling Muslims not to enter the Temple Mount.

The Alperen, however, were immediately with Erdogan. They protested outside one of the most significant synagogues in Istanbul, to denounce Israel's security measures following a deadly attack at the Temple Mount that left two Israeli police officers dead. "If you prevent our freedom of worship there [at Jerusalem's al-Aqsa Mosque] then we will prevent your freedom of worship here [at Istanbul's Neve Shalom Synagogue]," a [statement](#) from the Alperen said. "Our [Palestinian] brothers cannot pray there. Putting metal detectors harasses our brothers." Some Alperen youths kicked the synagogue's doors and others [threw stones](#) at the building.

Eren Keskin, a human rights lawyer and activist, [said](#) that none of the Alperen members has been prosecuted for preventing prayers at the synagogue or for acts of violence in front of it. "This [group] is evidently being protected by the government ... It must be viewed as a violent group... What they do is to frighten the whole Jewish community."



It may sound absurd that a violent bunch of young Turkish men attacked a prayer house attended by other Turkish men and women in order to protest security measures announced in a foreign country. There were no protests in front of Israel's diplomatic mission buildings in Turkey. The protest was directed at full Turkish citizens just because these full Turkish citizens belong to a faith other than the majority's. To paraphrase George Orwell, "Some Turks are more equal than others."

Just as with the Egypt's Copts -- the indigenous descendants of the pharaohs; or the Yazidis in Iraq; or the Armenians, Greeks and Kurds in Turkey, the Jews are Turkey's "foreign" Turks, outcasts in the land where they and their ancestors were born.

Burak Bekdil is an Ankara-based political analyst and a fellow at the Middle East Forum.

At least 7 dead in alleged gang attack on Guatemala hospital

Source: <http://abcnews.go.com/International/wireStory/killed-attack-guatemala-hospital-49251302>



Aug 16 – **Attackers stormed one of Guatemala's largest hospitals with guns blazing Wednesday to free an imprisoned gang member, officials said. At least seven people were killed and five were arrested.**

Carlos Soto, director of Roosevelt Hospital in the capital, said an unknown number of gunmen entered the facility in the morning and began shooting. The jailed suspect, who had been taken to the hospital for lab tests, disappeared during the chaos.



Deputy hospital director Marco Antonio Barrientos told reporters that 12 people were wounded, including a child who underwent surgery and was in critical condition.

"The law doesn't consider it, but they are acts of terrorism," President Jimmy Morales said at a news conference. He said he would send police and soldiers to bolster security at hospitals.

National Civil

Police said the five men in custody were members of the Mara Salvatrucha gang. Via Twitter, the agency showed photographs of assault rifles seized from the attackers.



Astrid Villatoro was at the hospital waiting for her son to get an X-ray when the gunfire broke out. "You heard a lot of shots," Villatoro said. "I was in the emergency room when I felt a stray bullet hit my foot. I saw a man hit in the face by another bullet. It was terrible. Everyone ran for cover."

A body lay in the parking lot outside afterward covered with a plastic sheet, next to an assault rifle and blood drying on the pavement.

Police spokesman Jorge Aguilar said there were at least six deaths and five arrests. The hospital later raised the death toll to seven. Officers searched the hospital room by room.

The Interior Ministry said in a statement that the attack was staged to free a gang member identified as Anderson Daniel Cabrera Cifuentes.

"We believe he is the leader of a gang cell," Aguilar said.

Cabrera, 29, who was not listed among the people in custody, had been brought to the hospital by three guards from prison on a judge's order. Two of his guards were killed and one was wounded, according to a statement from the prison system.

Without sharing details, Barrientos said it was not the first time there was such an incident at the hospital, though none had been so deadly. The hospital had asked the government for additional security, Barrientos said.

A Tale of Refugees in Germany | DW Documentary

Source: <https://www.youtube.com/watch?v=2vE6XOR2H8Q>



EDITOR'S COMMENT: If you like propaganda films you will love it!

4 Places Where Dying Is Not Allowed

Source: <http://www.odditycentral.com/pics/4-places-where-dying-is-not-allowed.html>



When something as natural and inevitable as death is banned, it does seem a tad illogical. You would be surprised to know that there actually are quite a few places on Earth where death has been forbidden, and deemed illegal. In fact, it seems that this is actually an age-old practice; the earliest known instance of the prohibition of death was in the 5th century BC, when dying wasn't allowed on religious grounds at the Greek island of Delos. Each place has a reason of its own, varying from religious beliefs to environmental factors.

We'll take a look at four **places where death is forbidden** in today's world:



Itsukushima – Japan

According to the Shinto belief, the Japanese island of Itsukushima is a sacred place, and the maintenance of its purity is of utmost concern. So in an attempt to keep up the sanctity of the island, the shrine's priests have worked pretty hard to make sure no deaths occur there. Since the year 1878, no deaths or births have been permitted near the shrine. Pregnant women nearing the date of delivery aren't allowed there, nor are the elderly or the terminally ill.

The only battle that ever occurred on Itsukushima was the Battle of Miyajima in 1555, after which the victorious commander ordered the bodies to be removed to the mainland immediately. The entire island was cleansed of the blood that was spilled, blood-soaked soil was thrown away from the island, and even the buildings were scrubbed new. Well, isn't that cheating? Because no matter how much they cleaned it, the deaths clearly did happen. Still, nowadays dying is not allowed on Itsukushima.

Longyearbyen – Norway

The Arctic town of Longyearbyen in the Svalbard Islands of Norway has a similar rule. Death is forbidden, and the town has only a small graveyard that stopped accepting new burials over 70 years ago. The reason – the bodies never decompose. It was discovered that the bodies buried in Longyearbyen were actually perfectly preserved by permafrost. Scientists even removed tissue from a man who



died there and found intact traces of the influenza virus that he died from during the epidemic in 1917.

People who are gravely ill or expected to die soon are dispatched by air or ship to a different part of Norway, where they would spend the last days of their lives.

Falciano del Massico – Italy

At Falciano del Massico, a small town in southern Italy, the story is kind of different. People aren't allowed to die, not because of the environment or religious beliefs, but simply because there isn't any space left for the dead to be buried. The mayor issued an order earlier this month that stated, "It is forbidden for residents to go beyond the boundaries of earthly life, to go into the afterlife." Ever since local boundaries were redrawn in 1964, Falciano del Massico has been in dispute with a neighboring town over rights to the old cemetery. The mayor has decided to now build a new cemetery, but until then, people have been ordered to hold off their deaths. Perhaps they could learn a thing or two from the [Indonesian Toraja villagers](#), and have their dead walking about town.

Sarpourenx – France

A decree prohibiting people from dying was again issued by the Mayor of Sarpourenx, a picturesque village in the southwest of France. The decision came after a French court refused planning permission to extend the town's existing graveyard. But Mayor Gerard Lalanne has actually taken it a bit further, he's not only banned death, but those who dare to die will be severely sanctioned. Although, it's not yet clear what the sanctions will be. After all, how could you punish the dead? A coffin with no lining? Or perhaps, one that's lined with nails. The mayor's



decision has gotten the residents of Sarpourenx worried. "What will happen to me if I die," they ask. Well, don't we all want to know that now?



USS John S McCain collides with oil tanker off coast of Singapore; 10 missing, 5 injured

Source: <http://www.channelnewsasia.com/news/singapore/uss-john-s-mccain-collides-with-oil-tanker-off-coast-of-9141592>



Aug 20 – Ten sailors are missing and five are injured after a US destroyer and an oil tanker collided off the coast of Singapore on Monday (Aug 21), the US Navy said in a statement.

"The guided-missile destroyer USS John S McCain (DDG 56) was involved in a collision with the [merchant](#)



[vessel Alnic MC](#) while under way east of Singapore and the Strait of Malacca on Aug 21," the statement from the US Seventh Fleet Public Affairs said.



The collision was reported at 5.24am, and happened while the ship was on a routine port visit in Singapore, according to the statement.

"Initial reports indicate John S McCain sustained damage to her port side aft. The extent of damage and personnel injuries is being determined. The incident will be investigated," it said.



The US Navy said in a later update that the ship is sailing under its own power and heading to port. The Maritime and Port Authority of Singapore (MPA) said in a statement that Singapore is leading search



and rescue efforts, and it is "rendering all possible assistance".

Republic of Singapore Air Force helicopters have transferred the injured from the US ship to Singapore for medical attention, and MPA has sent three tug boats to assist on the US ship's request, it said.

The Alnic MC sustained damage to her fore peak tank 7m above the waterline, with no crew injuries, and both ships were on their way to Singapore for damage assessment, the MPA added.



"There is no report of oil pollution and traffic in the Singapore Strait is unaffected. MPA is investigating the incident," it said.

According to the MPA, the Singapore Navy and coast guard have deployed four vessels to help with rescue efforts. These include the RSS Gallant and coast guard vessel Basking Shark, according to the US Navy statement.

"MV-22s and SH-60s from USS America are also responding," the statement added.

The Alnic MC is described as a 180-metre long Liberian flagged oil and chemical tanker on the MarineTraffic website. It has a deadweight of more than 50,000 tonnes.

Malaysia has also sent a ship to render assistance. Its navy chief Admiral Ahmad Kamarulzaman Ahmad Badaruddin told Channel NewsAsia that the KD Handalan has been deployed.

Shipping data showed Alnic MC last sent a transponder signal at 6.58am. The ship data showed it was "ballasting", meaning that it was not loaded full of oil for cargo.

The US Navy vessel was commissioned in 1994 and named after US Republican Senator John McCain's father and grandfather, John S McCain Jr and Sr. Both men were highly decorated naval officers who played prolific roles during World War II.

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US Navy Orders Operational Pause, Broad Probe Following Collision Near Singapore

Source: <http://www.globalsecurity.org/military/library/news/2017/08/mil-170821-voa01.htm>

Aug 21 – **The U.S. Navy has ordered an immediate, worldwide "operational pause" after a guided-missile destroyer collided with a merchant ship Monday east of Singapore, the second such collision in as many months.**

Ten American sailors are reported missing and five injured, with the USS John S. McCain sustaining "significant damage" as a result of the incident near the Strait of Malacca, according to a statement from the U.S. 7th Fleet.

The chief of naval operations, Admiral John Richardson, has ordered an immediate operational pause for all U.S. fleets, along with a broader investigation in the root causes of what he described as a "series of incidents in the Pacific Theater."

"This requires urgent action," Richardson said in a video statement. "I want our fleet commanders to get together with their leaders and their commands to ensure we're taking all appropriate immediate cautions to ensure safe and effective operations."

Richardson said the broader investigation will look at training and operational tempo as well as at equipment and maintenance.

U.S. Defense Secretary Jim Mattis told reporters while traveling in Jordan he "fully supports" Navy Admiral John Richardson's probe that "will look into all related accidents at sea."

"Once we have those facts, we'll share them with you," Mattis said.

The commander of the U.S. Pacific fleet, Admiral Scott Swift, is enroute to Singapore to take charge of operations involving the damaged USS McCain.

Officials said the collision punctured a hole in the ship's hull, below the waterline, causing several areas to flood, including a sleeping compartment for sailors as well as some of the ship's communication rooms.

The Singapore military evacuated four of the injured sailors by helicopter to a hospital in Singapore, where they are being treated for non-life threatening injuries. The fifth sailor did not require medical attention.



Search & rescue

The U.S. Navy says it is continuing search and rescue operations with the help of local authorities, including the Malaysian and Singaporean navies.

The USS America, an amphibious assault ship that had been in the region, is also on the scene in Singapore to help with search and rescue operations, as well as with damage assessment.

The collision is the second involving a ship from the U.S. Navy's 7th Fleet in the Pacific in two months. Seven sailors died in June when the USS Fitzgerald and a container ship hit each other in waters off Japan.

In the case of the USS Fitzgerald, the Navy relieved the captain of his command and other sailors are to be punished after an inquiry found poor seamanship and flaws in keeping watch contributed to the collision.

The USS McCain had been scheduled for a routine port visit in Singapore when it collided with the Liberian-flagged tanker ship Alnic MC at about 6:20 a.m. local time.

Despite the damage, the McCain was able to pull into Singapore's Changi Naval Base under its own power.

Singapore's Maritime and Port Authority said the Alnic MC also sustained damage, but that there were no injuries among its crew.

President tweets support

U.S. President Donald Trump expressed support on Twitter, writing that his "thoughts and prayers" are with the sailors aboard the McCain.

The USS McCain is named for the father and grandfather of U.S. Senator John McCain, who each served as U.S. Navy admirals.

Leaders Of Top Robotics And AI Companies Call For Ban On Killer Robots

Source: http://www.huffingtonpost.com/entry/leaders-of-top-robotics-and-ai-companies-call-for-ban_us_59998ef3e4b03b5e472cf08f

Aug 20 – Leaders from AI and robotics companies around the world have released an [open letter calling on the United Nations to ban autonomous weapons](#), often referred to as killer robots.

Founders and CEOs of nearly 100 companies from 26 countries signed the letter, which warns:



"Lethal autonomous weapons threaten to become the third revolution in warfare. Once developed, they will permit armed conflict to be fought at a scale greater than ever, and at timescales faster than humans can comprehend."

In December, 123 member nations of the UN had agreed to move forward with formal discussions about autonomous weapons, with 19 members already calling for an outright ban. However, the next stage of discussions, which

were originally scheduled to begin on August 21 — the release date of the open letter — were postponed because a small number of nations hadn't paid their fees.



The letter was organized and announced by Toby Walsh, a prominent AI researcher at the University of New South Wales in Sydney, Australia. In an email, he noted that, “sadly, the UN didn’t begin today its formal deliberations around lethal autonomous weapons.”

“There is, however, a real urgency to take action here and prevent a very dangerous arms race,” Walsh added, “This open letter demonstrates clear concern and strong support for this from the Robotics & AI industry.”

The open letter included such signatories as:

- **Elon Musk**, founder of Tesla, SpaceX and OpenAI (USA)
- **Mustafa Suleyman**, founder and Head of Applied AI at Google’s DeepMind (UK)
- **Esben Østergaard**, founder & CTO of Universal Robotics (Denmark)
- **Jerome Monceaux**, founder of Aldebaran Robotics, makers of Nao and Pepper robots (France)
- **Jürgen Schmidhuber**, leading deep learning expert and founder of Nnaisense (Switzerland)
- **Yoshua Bengio**, leading deep learning expert and founder of Element AI (Canada)

In reference to the signatories, [the press release](#) for the letter added, “Their companies employ tens of thousands of researchers, roboticists and engineers, are worth billions of dollars and cover the globe from North to South, East to West: Australia, Canada, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Iceland, India, Ireland, Italy, Japan, Mexico, Netherlands, Norway, Poland, Russia, Singapore, South Africa, Spain, Switzerland, UK, United Arab Emirates and USA.”

Bengio explained why he signed, saying, “the use of AI in autonomous weapons hurts my sense of ethics.” He added that the development of autonomous weapons “would be likely to lead to a very dangerous escalation,” and that “it would hurt the further development of AI’s good applications.” He concluded his statement to FLI saying that this “is a matter that needs to be handled by the international community, similarly to what has been done in the past for some other morally wrong weapons (biological, chemical, nuclear).”

Stuart Russell, another of the world’s preeminent AI researchers and founder of Bayesian Logic Inc., added: “Unless people want to see new weapons of mass destruction - in the form of vast swarms of lethal microdrones - spreading around the world, it’s imperative to step up and support the United Nations’ efforts to create a treaty banning lethal autonomous weapons. This is vital for national and international security.”

Ryan Garipey, founder & CTO of Clearpath Robotics was the first to sign the letter. For the press release, he noted, “Autonomous weapons systems are on the cusp of development right now and have a very real potential to cause significant harm to innocent people along with global instability.”

The open letter ends with similar concerns. It states:

“These can be weapons of terror, weapons that despots and terrorists use against innocent populations, and weapons hacked to behave in undesirable ways. We do not have long to act. Once this Pandora’s box is opened, it will be hard to close. We therefore implore the High Contracting Parties to find a way to protect us all from these dangers.”

The letter was announced in Melbourne, Australia at the International Joint Conference on Artificial Intelligence (IJCAI), which draws many of the world’s top artificial intelligence researchers. Two years ago, at the last IJCAI meeting, Walsh released another [open letter](#), which called on countries to avoid engaging in an AI arms race. To date, that previous letter has been signed by over 20,000 people, including over 3,100 AI/robotics researchers.

►► Read the letter [here](#).





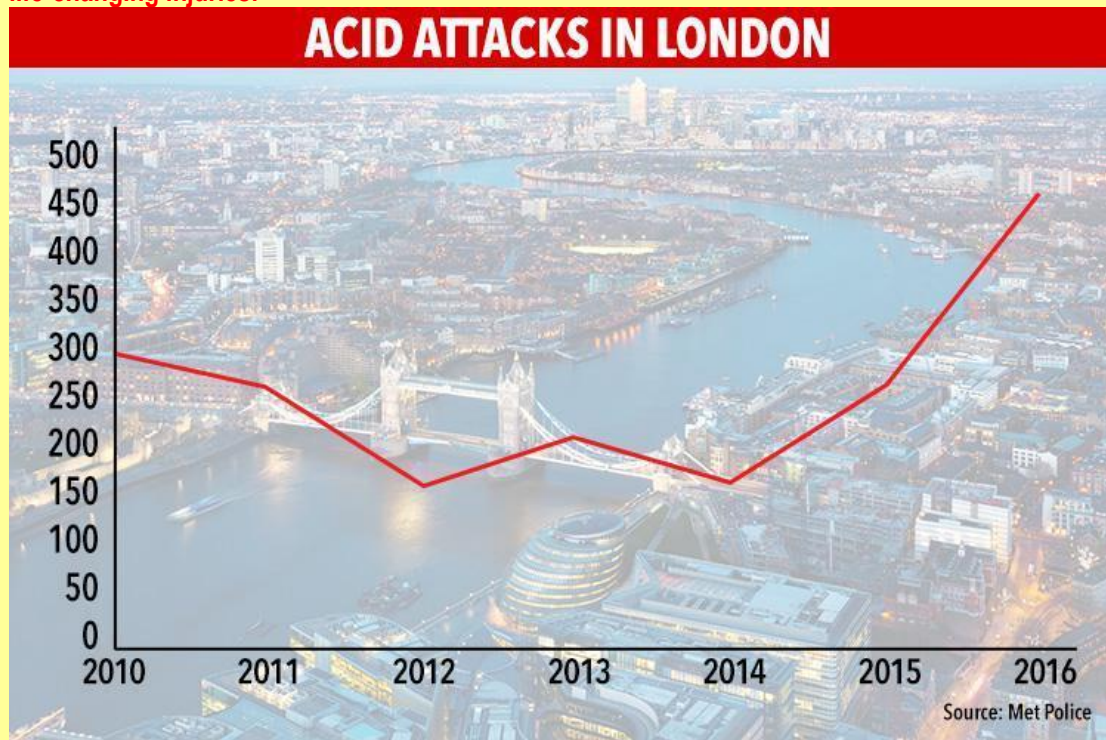
CHEM NEWS



Acid attacks in the UK – how many have there been in London and where have the latest taken place?

Source: <https://www.thesun.co.uk/news/4016850/acid-attacks-london-uk-figures-where-latest/>

July 26 – The number of acid attacks in London alone has shot up by 65 per cent over the past year to 431 – the equivalent to one every 20 hours – as a growing number of victims are left with life-changing injuries.



Two young men have been [targeted in East London](#) after a [recent attack in the capital saw five people doused with corrosive liquid](#) – and now police are being equipped with acid crime response kits.

Where are acid attacks being carried out?

London has emerged as a hotspot for acid attacks in recent years, with the number of cases more than doubling from fewer than 200 in 2014 to 431 last year.

Areas such as the West Midlands and Essex have also seen large rises in acid attacks in recent years as reports have soared from 340 in 2014 to 843.

But London's spike has been worse than anywhere else and now more than half of the UK's acid attacks take place in the capital.

What's more troubling for Scotland Yard is that the boom has been centralised on one specific area of the city.

Newham, in East London, had three times more acid attacks than the next highest borough, with almost 400 of London's 1,500 reports over the last five years happening there.

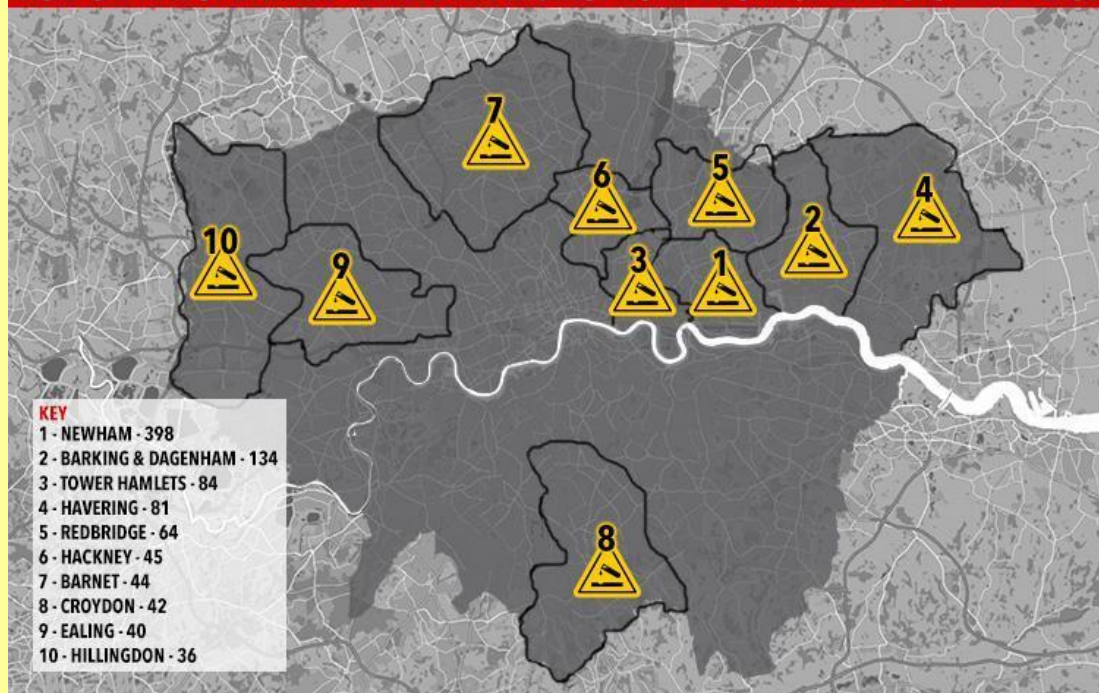
The borough – which includes Stratford's Olympic Park but also more deprived areas such as West Ham, Plaistow and Forest Gate – sits next door to Hackney where some of the latest spree was carried out.

East London neighbour Barking and Dagenham was the second biggest hotspot, whereas wealthier areas such as Kensington and Chelsea had the lowest level of attacks.

Police in London have been given 1000 acid crime response kits to help them deal with victims of the attacks. They will also get extra medical advice and protective clothing by the end of July.



ACID CAPITAL OF BRITAIN - WHERE THE HIGHEST NUMBER OF ACID ATTACKS TAKE PLACE



There's been a huge rise in acid attacks in East London

Where have the most recent attacks taken place?

- **Monday June 19** Towie star [Ferne McCann's ex-lover Arthur Collins](#) has denied carrying out an [acid attack](#) in a nightclub in Dalston, East London, which left two revellers partially blinded.
- **Wednesday June 21** Two cousins were [allegedly doused in acid while sitting in their car](#) in Beckton, East London, on June 21.
- **Tuesday, July 4** A heavily pregnant woman reportedly had [acid thrown over her baby bump while her partner suffered injuries](#) to his face in an alleged attack in East London.
- **Thursday July 13** A 16-year-old boy who was arrested in connection with a horrific spate of [five acid attacks across London](#) is charged with 15 offences.
- **Friday July 14** A biker reportedly had a "noxious substance" thrown in his face during a failed bid to steal his bike in Dagenham.
- **Sunday July 16** A female paramedic [was said to have had chemicals thrown in her face](#) by masked thugs as she responded to a 999 call in Ferry Lane, Tottenham Hale.
- **Tuesday July 18** Police were hunting a thug allegedly [caught on CCTV hurling cleaning fluid into a face of a drinker](#) outside The Chalice pub in Dickens Heath, near Solihull, West Mids.
- **Tuesday July 25** Witnesses described the desperate screams of two young men who [were targeted in what is believed to be an acid attack in Bethnal Green](#), East London.

Why are acid attacks on the rise?

There are fears many of the attacks are gang-related, which would explain explosions in cases in small areas of major cities.



Criminologists believe gang members may be swapping guns and knives for acid as a weapon of choice as possession is hard to police and because of the lasting impact attacks have on their victims.

Dr Simon Harding of Middlesex University, said: "Acid was once a weapon of last resort but may now be the first.

"It's used by gangs, if a business deal goes wrong or someone owes money.

"People can have a legitimate reason for having them.



"It's not prohibitive to carry bleach, you can buy it online or any DIY stores, it's difficult to prove any illegal motive in carrying it and you can hide it or disguise it in a drink bottle.

"A knife attack is attempted murder, but if you're caught in an acid attack it would be GBH."

Dräger Comfort Vest

Source: https://www.draeger.com/en_seeur/Applications/Products/Personal-Protection-Equipment/Protective-Clothing/Cooling-Vests/Comfort-Vest

Increased performance by up to four hours - without the need for elaborate preparation or logistics: when work gets hot, the Dräger Comfort Vest CVP 5220 is always ready to use as it delivers the cooling action itself. This means: no pre-freezing, no dipping into water, no risk due to dangerous circulating air - and no time loss.



Automatic cooling above 28°C

The vest's cooling action is derived from 20 individual PCM-elements (Phase Change



Material) integrated into the inner lining. Whether performing tasks that are physical enough to cause sweating or working in high temperature surroundings: at a skin temperature of 28°C, the content of the PCM-elements gradually become liquid by absorbing the excessive heat. This reduces skin temperature by approx. 3-4°C.

Depending on the level of physical work and the ambient temperature, the cooling benefit for the wearer of the Dräger Comfort Vest can last for up to 4 hours.

Wearing comfort

The arrangement of the PCM-elements provides high freedom of movement thanks to their flexible body fit. The vest can simply be worn underneath protective clothing such as fire brigade clothing or gas-tight chemical protective suits. Broad Velcro fasteners ensure a tight fit.

Regenerates when stored – within 4 hours at most

At a storage temperature below 22°C, the elements become solid again. After a maximum of 4 hours, the elements are ready to use again - the colder the faster. Extensive preparatory and post-work activities - as with ice vests - are no longer necessary.

Additional advantages

- Service life of the PCM-elements: up to three years
- Easy donning thanks to Velcro fasteners
- Vest can be washed after the elements have been removed
- Available in four different sizes: (S/M, L/XL, XXL/XXXL, XXXXL/XXXXXL)



Dräger X-plore® 8000

Source: https://www.draeger.com/en_seeur/Applications/Products/Personal-Protection-Equipment/Powered-Air-Purifying-Respirators/X-plore-8000

Challenging workplace conditions demand reliable solutions. The Dräger X-plore® 8000 offers a new level of intuitive handling combined with intelligent electronics that provide the high degree of safety your people need to focus on the task at hand.



Robust: Designed for daily use in tough environments

Let's face it: for your workplace, only the most rugged design will do. The Dräger X-plore 8000 features heavy-duty design with rubber protectors and high ingress protection (IP65) against dust and water jets from any direction. Two battery versions incorporating the latest Li-ion battery technology provide power for at least 4 h or 8 h, respectively. Protected air intake openings ensure that sparks or water coming from the front will not be sucked into the filter.

Comfortable: Let the user focus on the task

The Dräger X-plore 8000 lets your employees do their job and forget about the PAPR they need for proper personal protection. The advanced carrying system ensures optimal distribution of the weight. The system provides a tight and stable connection between the belt and the unit through a special adaptor plate; a comfort pad is also available as an option. The hose connector features a 360° click adaptor. New headpieces are designed for optimal airflow and maximum comfort to avoid unpleasant eye irritation.



Safe: Self-explanatory operation minimises user error

The unit recognises connected headgear and automatically selects the correct minimum flow rate, avoiding leakages caused by insufficient flow rates. An optical sensor prevents use without the filter and supports the right display of the saturation of the particle filter at any time. The filter system features plug-and-go exchange. In addition to the optical and acoustical alarm, the unit is also equipped with a vibration alarm. The entire system features uniform colour codes on all exchangeable elements and an error-proof hose connector.



Easy to maintain: Efficient cleaning together with secure operation

The Dräger X-plore 8000 was designed to be practically maintenance free, leading to low cost of ownership. The self-check and self-adjustment systems feature advanced temperature and pressure sensor technology to ensure the right flow rate for any environment. The simple and efficient charging system allows rapid charging (under 3h for an empty battery). The unit is designed for fast and easy disassembly for cleaning.

Modular: A wide range of components for every application

The Dräger X-plore 8000 offers a number of user-friendly standard and specialised carrying systems for standard and decontamination applications. Dräger has also developed a wide range of tight- and loose-fitting headgear such as half and full-face masks, short and long hoods and helmets with visor and protective visor. Standard and enhanced flexibility hoses are available and compatibility is ensured. Components and accessories can be combined to best fit your application, and system upgrades are possible at any time.

Government, Industry Officials Call for Global Culture of Chemical Security

Source: <https://www.voanews.com/a/government-industry-officials-call-for-global-culture-chemical-security/3963508.html>

July 28 – The east side of Houston is dotted with what look like skyscrapers from a distance, but are actually chemical plants, key parts of the Gulf Coast city's economy.

"Houston, here in Texas, is in many ways the center of the petrochemical industry universe in the United States, so [there are] a very large number of chemical facilities, oil refineries," said Dave Wulf, acting deputy assistant secretary for infrastructure protection at the U.S. Department of Homeland Security. Houston was the site of the 2017 Chemical Sector Security Summit, a three-day event ending Friday. Co-sponsored by DHS and the Chemical Sector Coordinating Council, composed of chemical industry trade associations, the summit is an event for sharing best practices related to securing chemical sites.

"We see terrorists globally continuing to seek out and actually use chemicals of this sort. ... They are using these in improvised explosive devices, among other things. They are using them in dispersion devices for toxic inhalation," Wulf said.

He pointed to examples such as the terrorist attack at the Brussels airport and metro station in 2016 and the 2015 attack in Lyon, France, where a terrorist drove into a chemical plant and caused an explosion.

Staying a step ahead

"Our challenge is always [to] be one step ahead, understanding what technology is coming, what's here," and then "to mitigate any of those threats or risks," said Gary Scheibe, security manager at Shell Deer Park refinery in Deer Park, Texas.



East Houston is an industrial area filled with various chemical and petrochemical plants and refineries. (E. Lee/VOA)

Wulf said it is not just chemical plants that could be targets for terrorists.

"We are talking about fisheries, wineries,

breweries, semiconductor fabrication sites, food-processing plants" and more, he said. In 2007, the federal government established security regulations, known as the Chemical Facility Anti-Terrorism Standards, that apply to chemical plants, electricity generation



stations, refineries and other high-risk facilities, and it works with such facilities to develop site security plans.

Security experts said building a global culture of chemical security is key to keeping chemicals out of the hands of bad actors.

"No state can afford to ignore chemical security. States who have done so often find that they regret that decision later," said Peter Newport, director of security with the International Chemical Trade Association. Traditionally, much of the chemicals have been produced in developed regions such as the U.S. and Europe, but developing nations such as China and India are stepping up production, said Krzysztof Paturej, president of the board of the International Centre for Chemical Safety and Security in Warsaw. He said Iran is a country where more production is also expected.

Paturej said it makes good economic as well as security sense for chemical producers to focus on having high security standards.

"If you want to go global, you have to apply the best standards, and the best standards are in developed countries and especially [the] United States," said Paturej.

Regardless of the country, security experts said chemical facilities hold symbolic and economic significance, so they become high-value targets for terrorists.

New class of chemical vapor sensors

Source: <http://www.homelandsecuritynewswire.com/dr20170728-new-class-of-chemical-vapor-sensors>

July 28 – An interdisciplinary team of scientists at the U.S. Naval Research Laboratory (NRL) demonstrated that monolayer 2D Transition Metal Dichalcogenides (TMDs) — atomically thin semiconductors — undergo a change from semiconductor-to-metallic phase when exposed to airborne chemical vapors.

The team validated optical and electronic evidence of the phase transition and how the behavior can be used to create an entirely new class of chemical vapor sensors. This new class of instruments are potentially more sensitive than current state-of-the-art models, and selective to specific nerve agents and explosive compounds which are of great concern on today's battlefields.

NRL notes that since the discovery in 2004-2005 that single monolayer films of TMDs can be isolated from bulk materials due to the weak interlayer bonding of atoms, known as van der Waals bonding, these materials continue to reveal new and remarkable behaviors and properties.

"These materials are extremely promising for chemical vapor sensing applications because the inherent few-atom-thickness of the material greatly enhances their sensitivity to even the smallest surface disturbance," said Dr. Adam L. Friedman, research physicist, Material Science and Technology Division. "Apart from the immediate interest to basic research, as this particular method of creating of phase transition

in TMDs has never been observed or explored before, it has great potential application in a new type of phase-based, multifunctional chemical vapor sensor."

Monolayer TMDs offer possible advances in technology over current material models, which pave the way for inexpensive, flexible, high-performance devices that exploit their unique surface-dominated functionality.

Chemically abbreviated as MX₂, where M is a transition metal and X is a chalcogen, the monolayer TMDs include insulators, semiconductors, metals and other types of materials, and include a variety of properties not observed in their bulk material equivalents. Certain films respond selectively through a charge transfer process to a class of analytes that includes nerve agents, such as venomous agent X (VX). A microscopic quantity of analyte lying on the surface of the TMD acts as an electron donor and local reducing agent, which measurably affects the conductance of the film. The NRL team hypothesized that certain strong electron donor chemical analytes, like those relevant for sensing certain nerve agents and explosives, can also provide enough charge transfer to the TMD to achieve a phase change. To test their hypothesis, the researchers exposed monolayer TMD films to strong electron donor chemical vapor analytes and monitored them for their



conductance and optical response. They found that the conductance response of their devices ceased after moderate exposure and the overall magnitude of the conductance abruptly increased significantly that moment, which signaled a phase change. The optical response also corroborated a phase change.

Friedman said, “We assembled an exceptionally large data set that included multiple methods of measuring these types of films and concluded that the behavior that we observed is not due to doping and is most likely due to partial, localized phase changes in the areas of the TMD film where weakly adsorbed analyte transfers charge to the lattice.”

This newly discovered behavior opens up an entirely new possibility for low-power, flexible, versatile chemical vapor sensor devices. If the phase transition can be harnessed to directly sense strong electron donor analytes it will create an entirely new chemical vapor-sensing model. It will allow passive-type optical measurements to be combined with, or used

separately from, active conductance measurements to identify analyte vapors all with the same device and be used as the operating mechanism for a new method to identify chemical compounds and the presence of dangerous vapor.

Previous studies of similar diffusionless phase changes have shown speeds in the nanosecond range, and the envisioned devices will also be fast, which will exceed the state-of-the-art in detection speed. Because the amount of charge necessary to induce a phase change in each TMD material is different, a suite of concurrently sensing TMD materials will allow various strength electron donors/acceptors to be detected and even identified with the necessary redundancy to minimize error. Due to their low space requirements and expense, these sensors can also easily be combined with current sensors to create an even more versatile instrument for current Department of Defense (DoD) platforms.

— Read more in Adam L. Friedman et al., “Evidence for Chemical Vapor Induced 2H to 1T Phase Transition in MoX_2 ($X = \text{Se}, \text{S}$) Transition Metal Dichalcogenide Films,” *Scientific Reports* 7, Article number: 3836 (19 June 2017) (doi:10.1038/s41598-017-04224-4).

Dräger PARAT® 7500

Source: https://www.draeger.com/en_seeur/Applications/Products/Personal-Protection-Equipment/Rescue-and-Escape-devices/Filtering-Escape-Devices/PARAT-7500



The combined fire and industrial escape hood Dräger PARAT® 7500 was developed with users, placing the focus on the fastest possible escape. Optimized operation and wearing comfort, a robust housing and a tested ABEK CO P3 filter ensure protection from toxic industrial and fire-related gases, vapours and particles for at least 15 minutes.

Ready for escape in only 3 steps

Exceptionally innovative and intuitive: When opening the packaging, the filter plug is automatically released from the filter. The filter is then deployed into operational position and the hood can be immediately donned. Thanks to the self-adjusting internal head harness, no additional adjustment is required. All you have to do is open the packaging, remove and don the hood – and leave the danger zone.





Reliable protection

The high-performance combination filter reliably protects against a wide range of fire and toxic industrial gases, vapours and particles. The ABEK CO P3 Filter is approved according to the EN standard 403:2004 for fire escape hoods, the DIN standard 58647-7 for filtering escape devices and is tested in accordance with the EN standard 14387:2004 for gas filter(s) and combined filter(s). In addition, the filter is tightly sealed with two filter plugs keeping it safe over its long lifetime.



16 years of service life

Replacing the filter after eight years will extend the service life of the Dräger PARAT Escape Hood to 16 years in total. For this, Dräger offers filter replacement service or expert training for your employees.



Robust and ergonomic

Both, ergonomics and wearing comfort were considered when designing the packaging of the Dräger PARAT Escape Hoods. The escape hood can be carried with a belt, shoulder strap, grip clip or belt clip. The PARAT Hard Case can also be mounted on the wall using a wallholder. Additionally, the robust packaging of the Dräger PARAT Escape Hoods protects the device from damage.

EDITOR'S COMMENT: It was the first time that I saw escape hoods in a company's offices and that was great! Photo taken from my recent visit to Draeger Hellas in Athens in order to be informed about their new CBRN specialized equipment.

Different packaging types

You can select between two packaging types: The Hard Case provides splash water protection (IP54) – the Soft Pack provides dust protection (IP5). Both packaging types



have a viewing window to check the filter expiration date and the condition of the device. Particularly convenient: The security seal on the packaging shows if the unit has been opened.

NEW: Dräger FPS®-COM 7000



The Dräger FPS®-COM 7000 provides hands-free communication for all wearers of respiratory protection devices during a mission. Excellent voice quality is achieved by removing interfering noises.

For missions under the harshest conditions

For missions requiring respiratory protection you have to expect extreme conditions: thick smoke and noise obstacles that not only cause stress but also significantly hinder any form of communication. This is even more difficult if a chemical protective suit is required: these suits restrict movement and

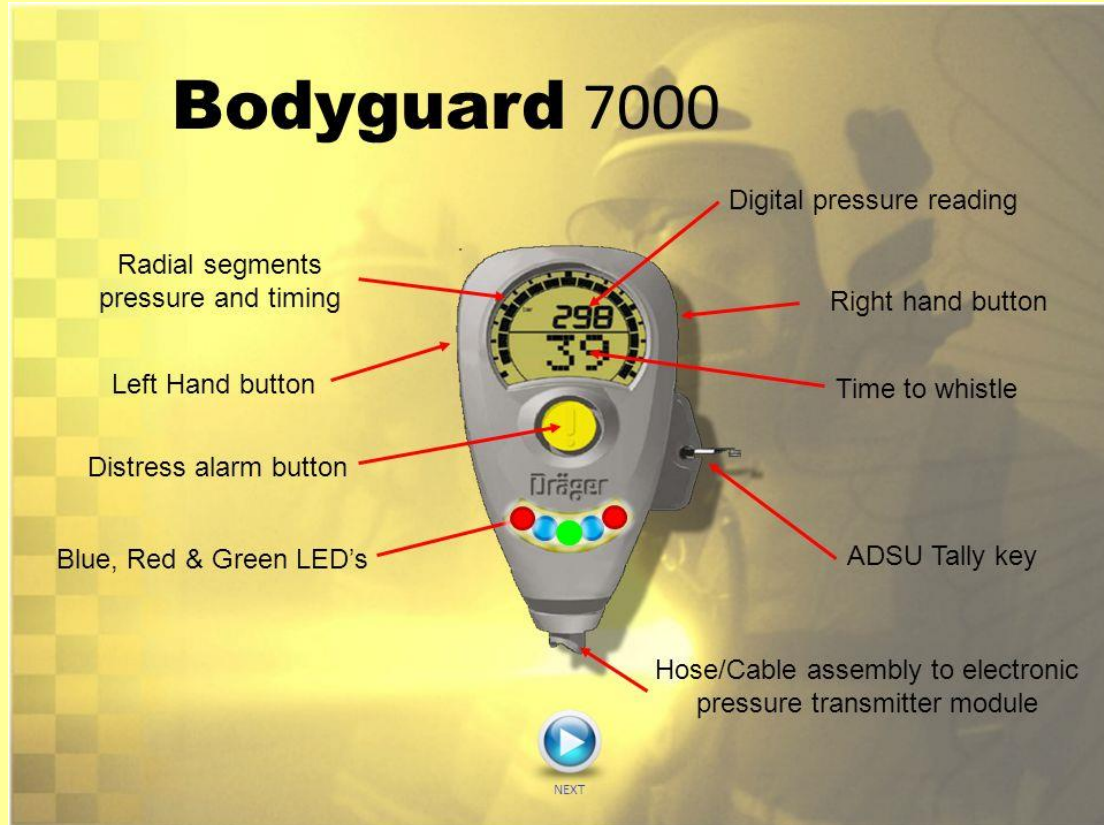
suppress your voice.

The Dräger FPS-COM 7000 in connection with the proven full-face mask Dräger FPS 7000 was developed especially for these applications. Each word is transmitted clearly and intelligibly to the members of the team.



Noise suppression for optimum voice quality

The newly developed digital noise reduction automatically suppresses ambient noises and only transmits your voice. In particular, breathing noise is filtered out preventing it from being transmitted to the voice amplifier or the radio. The integrated loudspeakers, with which you can interact directly with the injured [people and team members without radio equipment](#), also have [this function](#).



The [Dräger Bodyguard](#)® 7000 is an electronic monitoring unit which provides continuous monitoring of personal information and operational status of the Dräger PSS® 7000 and PSS® 5000 self contained breathing apparatus

Wireless connection to the incident commander

Each Dräger FPS-COM 7000 has an integrated PTT button (push-to-talk) to operate a radio that can be connected as an option. You can communicate using a tactical radio by pressing just one button. The tactical radio can be connected with a cable or Bluetooth. The latter means that there are no cables that could become entangled; reducing the risk of snagging.

Hands-free team communication

The Dräger FPS-COM 7000 allows fast and efficient communication within one group or among different ones. And it works without pressing a single button. This improves your safety by not distracting you from your task. The voice-activated function also provides full-duplex communication. This means that you can talk and listen at the same time – as if you were on the phone.

If there is only one radio for the entire group, the system allows the automatic transfer of the received instructions for up to ten group members via short-range radio. This means that only one member of the group needs a tactical radio while everyone is still informed immediately.

Easy operation and individual setup options

The Dräger FPS-COM 7000 was developed with a focus on ergonomic handling and intuitive operation. The set radio group is announced via the earphones. In addition, different alarm



tones warn of low battery status or if you are out of range from the team communication. An optional software allows numerous setting options with which you can adapt the system to your precise operation. You can, for example, define the number of groups. With the integrated switch you can switch between up to seven groups during the mission.

Robust and balanced

The robust communication unit adapts seamlessly to the Dräger FPS 7000. The robust design of the Dräger FPS-COM 7000 can resist even strong shocks and impacts. It is resistant to extreme temperatures and has protection class IP67. This means the Dräger FPS-COM 7000 is waterproof and can be easily cleaned after the operation. In addition, the balanced weight distribution prevents neck muscles from straining and increases wearing comfort – without restricting movement or limiting your field of view.

Flexibility before, during and after the mission

Thanks to its click connection that is easy to operate, the Dräger FPS-COM 7000 can be attached and removed in only a few steps – within seconds and without special tools. This allows greater flexibility to interchange between different face masks which can quickly be ready to operate by simply removing the protective cap. Therefore, you do not require a separate communication unit for every face mask. The device is easy to clean and maintain due to its easy assembly and distanced position between microphone and face seal.

►► Read more at: <https://www.draeger.com/Products/Content/fps-com-7000-pi-9072106-en.pdf>

Australia plane terror plot involved poisoning passengers, using homemade bombs, report says

Source: <http://www.foxnews.com/world/2017/07/31/australia-plane-terror-plot-involved-poisoning-passengers-using-homemade-bombs-report-says.html>

July 31 – Police in Australia are continuing to hunt for more evidence as they investigate a major terror plot targeting the aviation industry. Four people – two Lebanese-Australians men and their two sons – were arrested in raids in Sydney on Saturday, following an intelligence tip-off. Australian Prime Minister Malcolm Turnbull described the plot as “Islamic-inspired terrorism.”

“We have succeeded in disrupting a major terrorist plot to bring down an airplane,” Turnbull said. “Good intelligence, great police work, great investigation, great co-ordination has enabled us to disrupt that plot.”

Police are conducting forensic work at five properties linked to the suspects, but refused to elaborate on details of the planned attack. Australian Federal Police Commissioner Andrew Colvin would not confirm reports in the Australian media that **the plot involved poisoning passengers with a toxic gas, or using a homemade bomb smuggled onto a flight in hand luggage.**

“The plot that we are investigating, we believe was an attempt to put a device onto an aircraft. But, beyond that, the speculation is just that – it’s speculation,” Colvin said.

Colvin also refused to comment on unconfirmed reports that the suspects were not previously known to police.

A police officer wearing protective gear talks to fellow officers as he stands in the doorway of a home after Australian counter-terrorism police arrested four people in raids late on Saturday across several Sydney suburbs in Australia, July 30, 2017. (Reuters)

Since the arrests, security been stepped up at both domestic and international terminals of Australia’s major airports. Authorities warn the new measures may be in place indefinitely.

“We need to remind the public the threat is there, it’s why we’ve ramped up the security at our domestic and international airports,” said Peter Dutton, Australia’s Immigration and Border Protection Minister. He advised



passengers to arrive early at airports to allow time for additional screening.

Australian authorities have disrupted 13 terror threats over the past few years – but nothing on this scale. Turnbull said the terror threat level

would remain the same, at “probable,” despite these latest developments.

The four suspects have not yet been charged. Under Australian counterterrorism laws, they can be held for seven days for questioning.

UPDATE

The second terror plot in which the two men have been charged in connection with involved an attempt to create a “improvised chemical dispersion device” to release **hydrogen sulfide**, Phelan said.

It is suspected the device would have been used to disperse the toxic chemical in “closed spaces, potentially public transport.”

However, there is “no information at all to suggest” the device would be used on an airplane, Phelan said. Hydrogen sulfide is highly toxic, and it has a particular smell, Ian Musgrave, a molecular pharmacologist and toxicologist at the University of Adelaide, told CNN. When inhaled, the gas can cause respiratory paralysis and death. It can be made with high-school laboratory equipment, but a large amount of the compound is needed to be effective.

Concentrations of more than 500 parts per million (ppm) of hydrogen sulfide can result in asphyxia, Musgrave said. Concentrations of 700 ppm will result in death if not rescued promptly, he said.

However, no evidence exists that the device was completed due to the difficulty of producing the highly toxic chemical, he said.

“We were a long way away from having a functional device,” Phelan said.

10 chemical warfare agent training scenarios

By Steven Pike

Source: <http://www.argonelectronics.com/blog/10-chemical-warfare-agent-training-scenarios>

July 06 – Modern chemical warfare agent (CWA) training for unconventional threats requires a variety of



scenarios that can relate to different incident types; both indoor and outdoor, meaning CBRNe operatives need to be prepared for any situation.

This poses a challenge for instructors delivering training; the need for it be more **realistic** and more flexible is paramount.

Simulation training offers a real, workable solution that allows

students to experience the characteristics of live agent training in real-world scenarios, in a completely controlled setting. Sources can be easily hidden in any location, and emission levels can be varied to adapt the exercises.

The opportunities for training scenarios are endless. In this post we highlight ten examples you could use in your CWA training using **CBRN detector simulators** and electronic simulation sources.

1. Suspect packages

Hide the simulation source in a luggage case, rucksack, or any item that could be used to smuggle something. Set the source to provide a reading only when the student gets very close to the item. The package could be placed in a room, within a vehicle, on a train or other mode of public transport, or amongst other packages.

2. Suspect vehicle

Place the simulation source in a vehicle, either in the luggage storage compartment, or within a package hidden underneath a seat.

If placed in the luggage compartment, the difficulty of detection can be adapted by



changing the level of the simulation source. If placed under the seat, the scenario can be made more realistic by having a window slightly open and the simulation source set so a reading is obtained only at the gap in the window.

3. Contaminated vehicle

Place the simulation source under the wheel arch of a vehicle, and set the instructor controller to partial decontamination so a low reading (representing residual CW agent) can be obtained. The student searches for contamination while you observe the process.

4. Personal decontamination

Place the source within a person's clothing and observe as the student searches for contamination and starts the process of decontamination. As with the contaminated vehicle scenario, set the instructor controller so a low reading (residual CW agent) can be obtained.

5. Survey / recon

Place the simulation source so open ground can be checked for emissions. The instructor can simulate non-persistent agent by reducing the reading after a set period.

6. Search false positive

Set a simulation source to represent a false positive and place it in a location that would most likely cause a false positive on a real detector. For example, where cleaning chemicals may be stored in a building.

7. Simulated CW weapon / IED

Hide the simulation source within weapon housing. Task the student with obtaining a reading as they approach. The weapon can be "wrapped" to make it more difficult to detect.

To train for IED threats, the source should be placed in a required location and the instructor controller set to full response for rapid release, or partial response for slower release.

8. Room breach training

Set the simulation source so that a reading is obtained only when the door to the room is checked at the edges. When the door is breached the reading will rise without students having to enter the room.

9. Building search training (pre-entry)

Install the simulation source within the building so emission is just detectable through an open window when the detector sensor is placed through that window. This is a great way to train students on assessing a building prior to entry.

10. Search training

Use a standard locker room with multiple locker cupboards, like you would find in a gym. Place a simulation source within one of the lockers so a reading can only be obtained when the student is very close. Observe their technique and feed back to them. You can also video record the search and play it back to your students, using it as an exercise to create discussion about search technique.

Training scenarios need to realistically replicate the ability to detect and monitor hazards, and simulation training provides a [more feasible alternative to conventional methods](#).

Using electronic means to simulate chemical vapours can make life a lot easier for instructors to set up useful and effective training exercises. And once you develop a directory of scenario ideas, they can be set up very quickly.

Knightsbridge moped attack: Man left with facial injuries

Source: <http://www.bbc.com/news/uk-england-london-40784105>



Aug 01 – A man has been left with facial injuries after two people on a moped threw an unknown liquid at him in London's Knightsbridge.

The Met Police said the 47-year-old man was attacked in Walton Place at about 20:30 BST by "two males" on a moped.

The force said the man had been taken to a central London hospital but has since been discharged.

A spokesperson said it was not yet known if the liquid thrown was a corrosive substance.

They said no-one had yet been arrested but officers remained at the scene and inquiries were ongoing.

The incident follows a recent rise in the number of attacks involving corrosive substances.

More than 400 were carried out in the six months up to April 2017, according to figures from 39 forces in England and Wales.

The Metropolitan Police has said its response cars will now carry equipment that will help officers to better deal with calls to such attacks.



Breakthrough in countering deadly VX

Source: <http://www.homelandsecuritynewswire.com/dr20170802-breakthrough-in-countering-deadly-vx>

Aug 02 – First developed in the United Kingdom in the early 1950s, VX is one of the most toxic chemical weapon threats facing soldiers on the battlefield – and civilians as well, as the use by VX by Saddam Hussein and Bashar al-Assad shows. An organophosphorus nerve agent, VX is odorless, colorless and tasteless, and can stay on unprotected surfaces for days. Dermal or inhalation exposure to VX, like most chemical weapon nerve agents, may result in muscle paralysis, shortness of breath, seizures and death. To counter this threat, our warfighters need a reliable treatment option for both broken and unbroken skin. DoD currently uses the Reactive Skin Decontamination Lotion (RSDL) for broad-spectrum agent elimination on unbroken skin, but a capability gap exists for treating chemical agent exposure to large

affected areas or open wounds. DVIDS says that this need has led researchers from the Defense Threat Reduction Agency's Chemical and Biological Technologies Department (DTRA-CB)) to develop new personnel decontamination therapeutics.

A current DTRA CB-funded research effort, conducted by the U.S. Army Research Institute for Chemical Defense (USAMRICD), is exploring the decontamination properties of **Veriox**, a topical antimicrobial, anti-infective and disinfectant. Veriox is under development for use in hospitals for medical device sterilization, surface disinfection and advanced wound care. The same properties that make it useful in these situations may also mean that it could be used to treat warfighters after exposure to a chemical weapon.

Recent USAMRICD studies have shown that the median lethal dose of VX in Veriox-treated animals is 1.8-fold higher than in RSDL-treated animals. While preliminary studies

demonstrate Veriox provides a significant reduction in lethality from nerve agents, in-depth efficacy studies are needed to fully assess the compound. If successful, Veriox could provide an alternative dermal capability for military personnel, particularly for open wound and whole-body decontamination.

The USAMRICD team recently published their findings in the report, "USAMRICD-TR-16-06, Evaluation of Veriox as a Skin Decontamination Product after Dermal Exposure to the Nerve Agent VX."

DVIDS notes that DTRA CB is also working with the Edgewood Chemical and Biological Center on a parallel decontamination effort utilizing zirconium hydroxide ($Zr(OH)_4$). This effort has demonstrated dermal efficacy equal to or greater than RSDL against several chemical weapon agents, including VX, sulfur mustard and soman, when tested on pig and artificial skin. In addition, multiple endeavors to explore novel formulations of medical decontamination capabilities for open-wound treatment after exposure are underway.

"Through these promising treatment options for both broken and unbroken skin, creating a new capability of rapid decontamination will add another layer of defense for our warfighters from chemical threats," DTRA says.

Decon7 Sets the Bar for Fentanyl Decon Test Standards

Source: <http://www.decon7.com/defense>

Decon7 Systems recently announced that our patented D7 formula can effectively neutralize one of the country's most aggressive modern menaces: **fentanyl**.

With a mission to prove the efficacy of D7, the Decon7 team assembled a Fentanyl Working Group which included our staff chemist, chemists from both third party and government labs, and numerous decon experts from local, state, and national agencies across the US. This



collaborative effort resulted in the establishment of test standard protocols for the efficacy of decontamination agents against the fentanyl family of synthetic opioids for application in tactical environments.

After several months of working diligently to create procedures based on the *Oxidative Degradation of Fentanyl in Aqueous Solutions of Peroxides and Hypochlorite*, Defence Science Journal, Vol. 61, No. 1, January 2011, pp. 30-35, (Lihong Qi, Zhenxing Cheng, Guomin Zuo, Shanmao Li and Qiping Fan) and recent Edgewood Chemical and Biological Center (ECBC) testing, protocols were finally validated last week. **As a result, test protocol included a minimum fentanyl concentration of 10,000 nanograms so that both GC/MS and LC/MS can accurately identify neutralization and by-products when in contact with the decontamination agent being tested.** It was found that testing at lower concentrations could interfere with acquiring accurate quantitative results.

During the initial run of tests with these high standards, D7 was able to eliminate over 97% of certified fentanyl in 5 minutes. The new test results add to the already broad-spectrum efficacy of D7 against blood-borne bacteria and viruses, chemical and biological warfare agents (CBWs), toxic industrial chemicals (TICs), and volatile organic compounds (VOCs).

As a result of the urgent need from our first and military responders, Decon7 Systems and our Fentanyl Working Group are diligently working to progress an "Opioid Response Kit" into full scale production. In order to do so responsibly, we are awaiting a thorough final review of data by an additional independent laboratory and operational validation from the field. In addition to D7, we are exploring dry decon, wet wipe, and "super soap" options to include in the Opioid Response Kit.

Currently, Decon7's BDAS+ units alone offer law enforcement personnel and first responders a safe, portable, disposable, ready-to-use solution for decontamination of fentanyl and fentanyl-related substances from equipment, PPE, vehicles, building materials, uniforms, and more.



New way to treat nerve damage caused by insecticides and chemical weapons

Source: <https://www.sciencedaily.com/releases/2017/08/170801193353.htm>

Aug 01 – New research has uncovered a potential new therapy for the currently untreatable delayed neuropathy caused by acute exposure to insecticides or chemical weapons that attack the nervous system. The study, published in the open access journal *Cell Discovery*, identifies a new biological mechanism responsible for the neuropathy, as well as the drugs to treat it.

Organophosphates (OP) -- the chemical compound found in insecticides, herbicides, and nerve agents such as sarin -- were found to **damage sensory neurons by activating a channel, called TRPA1, in the neuron cell membrane.** Activation of TRPA1 caused hyperactivation of the neuron, which is known to cause neuronal damage and symptoms including burning pains on the skin, loss of muscle control and paralysis. Mice that were genetically engineered not to express TRPA1 in neuronal cells did not suffer the effects of OP poisoning that were seen in normal mice and their nerves showed no signs of damage.

Dr Zhaobing Gao, lead author from the Shanghai Institute of Materia Medica, Chinese Academy of Sciences, said: "In our study we have begun to unravel the biological mechanism which causes **organophosphate-induced delayed neuropathy**. Using our expertise in drug discovery we were also able to screen a Federal Drugs Administration approved drug library of around 2,000 drugs and identify two potent drugs, duloxetine and ketotifen, which alleviated the signs of neuropathy in an animal model."

Dr Gao added: "Our study provides compelling evidence that TRPA1 mediates OP-induced neuropathy and that TRPA1 can be targeted effectively with existing drugs that are approved by the Federal Drugs Administration. Further research will need to be conducted to assess the applicability of our findings to humans."

TRPA1 is a channel that mediates the movement of calcium ions into neurons. The



movement of calcium ions into the neuron is an important part of the process that leads to activation of a neuron and the physiological effects such as smell, taste, vision and temperature. TRPA1 is normally activated in response to cold temperatures of environmental stimuli and is associated with producing a cold sensation, coughing, itching and pain.

Using an OP commonly found in insecticides, the authors found that the OP activated TRPA1, causing an influx of calcium ions into the neuron. They also showed that neurons stimulated by the OP produced a current and showed signs of

electrical activation commonly seen in active neurons.

Although acute OP poisoning can be fatal, the initial symptoms are treatable. However, delayed neuropathy often occurs one to five weeks after exposure and at this stage no effective treatments are available.

This study is limited by the fact that all experiments were carried out in vitro or in animal models. However, the findings reveal a biological mechanism by which OPs interact with sensory neurons and present a novel explanation for how exposure to OPs leads to symptoms of neuropathy and nerve damage.

Article: *Qiang Ding, Sui Fang, Xueqin Chen, Youxin Wang, Jian Li, Fuyun Tian, Xiang Xu, Bernard Attali, Xin Xie, Zhaobing Gao. TRPA1 channel mediates organophosphate-induced delayed neuropathy. Cell Discovery, 2017; 3: 17024 DOI: [10.1038/celldisc.2017.24](https://doi.org/10.1038/celldisc.2017.24)*

Suspicious package in IRS building sickens 10 people as hazmat crews respond and building is locked down

Source: <http://www.dailymail.co.uk/news/article-4761852/10-people-sickened-package-Kansas-City-IRS-building.html>

Aug 04 – **Ten people have been sickened in an IRS building after coming into contact with a suspicious package.**

The IRS employees complained of nausea and vomiting following contact with a package smelling of ammonia in the mailroom of the Kansas City, Missouri facility on Friday morning.

At least two were hospitalized but both had been released in good condition by Friday afternoon.

The building, a sprawling 1.14million square foot facility, was placed on lockdown as fire crews and hazmat teams responded, but was not evacuated, officials said.

The package did not show any evidence of a powder but did smell of ammonia, Kansas City Fire Department spokesman James Garrett told **Fox4**.



'We have the box isolated, so we have the box away from everybody else. It's in a room where it's isolated. We have that part of it done. We haven't gotten to exactly what the substance is yet,' Garrett said.

The building, a sprawling 1.14million square foot facility seen in this file photo, was placed on lockdown as fire crews and hazmat teams responded, but was not evacuated, officials said

Local officials have turned the investigation over to federal authorities, including the Federal Protective Service and FBI.

Unhinged taxpayers have targeted IRS facilities in the past.

The worst attack, in 2010, came when a man under audit flew a small plane into an IRS building in Austin, Texas, killing himself and one IRS employee, and injuring 13 others.



Dräger Hybrid System (DHS) 7000

The newly designed Dräger Hybrid Respirator (DHR) 7000 is a mask capable of working in both positive pressure as an SCBA or in negative pressure as an APR or PAPR. Switching between these modes is as simple as flipping a switch and turning the cylinder on or off.

The DHR® 7000 offers a hydration device and optional communication system for demanding operations. The hydration device can be connected to a canteen or a CamelBak. The MS-COM offers a microphone that is inserted into the mask, an ear speaker for clear reception of messages, and a push-to-talk button that connects to the radio to ensure understanding of messages between teammates.



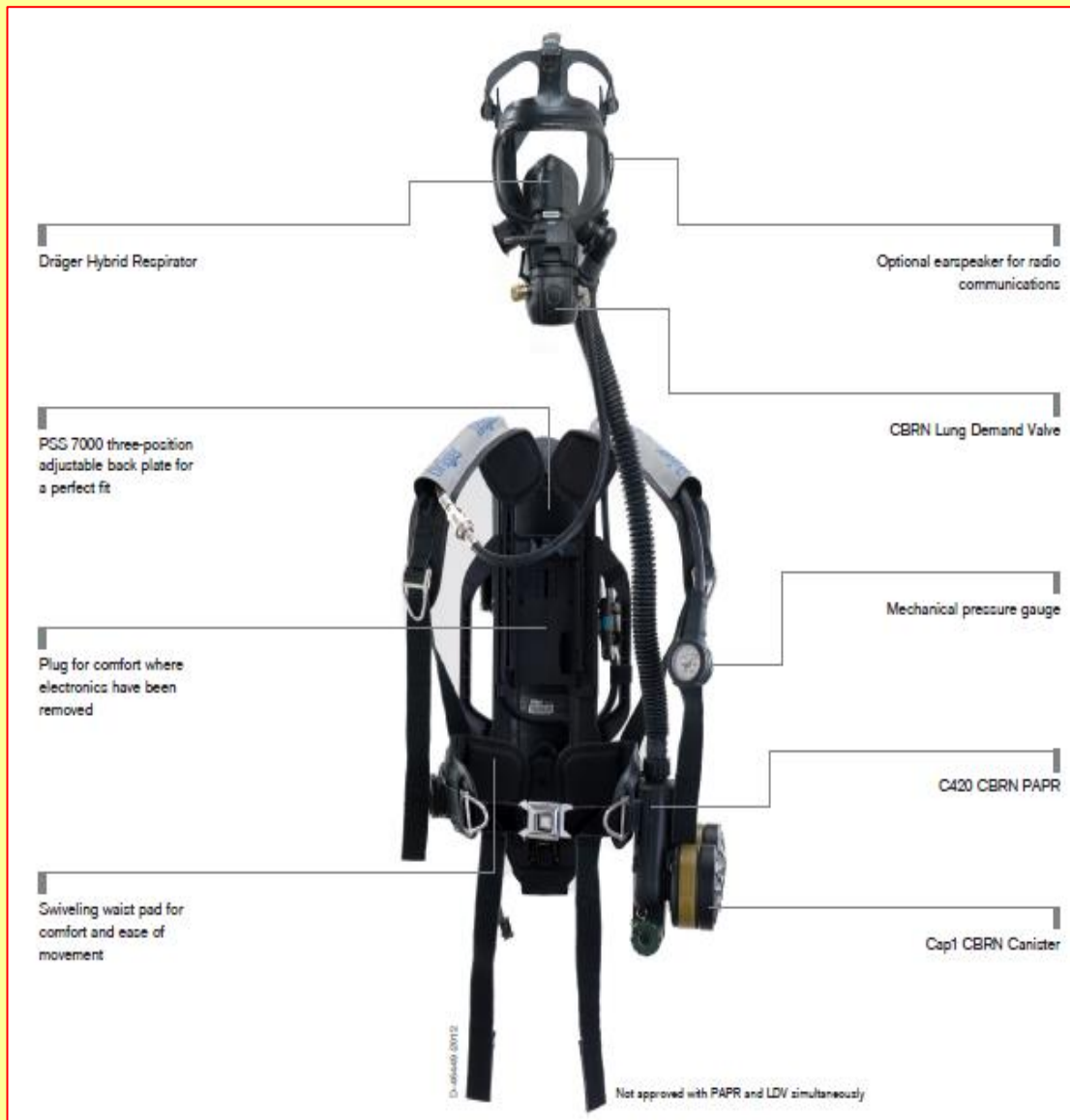
HIGHEST STANDARD TO KEEP YOU SAFE

To ensure the highest-level of safety, the all system components have passed a comprehensive National Fire Protection Association (NFPA) and National Institute for Occupational Safety and Health (NIOSH) CBRN testing and approval program. The Dräger DHS® 7000 uses Dräger's worldwide industry-leading breathing technology to ensure the air you breathe is safe. The C-420 Powered Air Purifying Respirator and the Dräger CAP 1 Canister are well known and field proven equipment.

DOING MORE WITH LESS

You have enough on your shoulders. Dräger wants to help minimize your burden, both physically and financially. The DHS enables you to use both a gas mask or PAPR and an SCBA in a single operation without having to carry multiple masks. This also means less time in pre-op preparation and in maintaining your gear. Additionally, it is only necessary to





purchase one mask for three modes, rather than a separate mask for each mode, saving you the cost of extra masks.

The return of chemical weapons?

Source: <https://www.chemistryworld.com/news/the-return-of-chemical-weapons/3007822.article>

Aug 07 – Recent events in Syria have raised questions over the control of chemical weapons. Civilians in Syria were exposed to the nerve agent sarin in April, the Organisation for the Prohibition of Chemical Weapons (OPCW) confirmed at the end of June. This was the second documented use of sarin in Syria, and follows cases of chlorine and mustard gas being used as weapons. So can the world expect to see more chemical warfare?

'There is a lot of concern within the OPCW,' says [Alastair Hay](#), professor of environmental toxicology at the University of Leeds, UK. 'If the Chemical Weapons Convention (CWC) can't be upheld, and perpetrators held accountable, then that is a problem.'

Syria crossed President Obama's 'red line' in 2013 when it used chemical weapons in Ghouta, and, although the threatened US retaliation did not happen, the result was that Syria reluctantly joined the CWC. Hay doesn't think that Syria will use chemical weapons again,



because it will be wary of triggering further US missile attacks following those ordered by President Trump in response to the April attack. 'The gains are marginal, while the outcry is huge,' he says.

[Tim Eaton](#), research fellow with the Middle East and North Africa Programme at Chatham House, agrees that Trump's military response will make Syria hesitate before using chemical weapons again. 'Now Trump has threatened heavy retaliation if they use sarin again. This is the first time that the Assad regime has been punished materially for human rights abuses in this conflict.'

However, security consultant [Dan Kaszeta](#) believes Syria will use chemical weapons again, eventually. 'Trump is a roulette wheel, the least predictable leader on the world stage at the moment, and so he has no deterrent value.'

Weapons expert [Richard Guthrie](#) also worries that there are significant implications if no one is held to account for the use of sarin in Syria. 'As it stands today, one lesson of Syria that could be drawn by other dictatorships is that a chemical weapons programme may buy you time within a civil war. If fear of being deposed, or getting caught and brought to trial, are the major disincentives to using chemical weapons, then the Syria case has illustrated neither of them.'



Chemical terrorism

Another security threat, says Eaton, is the potential of 'non-state actors', such as terrorist organisations, to obtain chemical weapons technology, particularly in ungoverned or contested areas. 'This is seen as a greater threat than a state using chemical weapons.'

Hay agrees that there are indications that some terrorist organisations are considering using chemical weapons, but so far there is only one instance verified by the OPCW which was ISIS using mustard gas. While the threat of countries using chemical weapons has diminished, 'chemical terrorism is no longer a theoretical proposition or even imminent threat, but a stark reality', says OPCW Director General Ahmet Üzümcü. The OPCW describes various scenarios for chemical terrorism including non-state actors acquiring chemical weapons through the black market, illicit trade or theft; acquiring or producing chemical agents then deploying them with improvised devices; finding ways to disperse industrial chemicals, or contaminating the food chain, for example with ricin.

The organisation notes terrorists still need to overcome the challenges of producing chemical agents, which involves having the right expertise, equipment and facilities, and sufficient funds. The least scientifically demanding scenario involves the use of industrial toxic chemicals, such as chlorine, which is widely available on the commercial market in large quantities and is relatively easy to disperse.

Hay agrees that, in terms of making new weapons, such as nerve agents, there are several barriers. Turning them into weapons requires expertise that is not widely available outside



the military. While chlorine is easier to obtain, non-state actors are limited by their lack of aircraft or weaponry with which to deliver it as a weapon. What's more, it would be hard for them to get hold of sufficient quantities to have an effect. The OPCW has destroyed almost 95% of global stockpiles, and is working with the chemical industry to secure and police their stocks. Hay believes access to major stocks is now reasonably well controlled.

For Kaszeta, the main reasons that both states and non-state actors are unlikely to use chemical weapons in future are because they are impractical, unaffordable and ineffective. 'To make one ton of nerve agent you need 9-10t of precursors – which OPCW control – and then you're left with 8t of toxic waste. You need a testing and evaluation programme, and military-trained personnel ... Chemical weapons are obsolete for a reason. The message should be: they just aren't worth the bother.'

But Guthrie is not so positive. He highlights four key risks and threats around future chemical weapon use: governments outside of the CWC possessing weapons (Egypt, Israel, North Korea and South Sudan are all non-signatories); national controls on relevant materials and technologies varying between countries; 'lack of capacity' to attribute attacks to the perpetrators; and a complacency that international conventions will deal with problems.

But perhaps the greatest political challenge, he says, is maintaining political focus. '[Syria's sarin attacks] brought a huge amount of political attention, but most of this has faded now.

'The challenge of preventing the use of [chemical weapons] will go on for longer than the lifetime of individual governments.'

EDITOR'S COMMENT: Something wrong (left) in the photo (enlarge) accompanying this article?

US to clean-up race test chemical weapon relics on Panama island

Source: <https://www.chemistryworld.com/news/us-to-clean-up-race-test-chemical-weapon-relics-on-panama-island/3007758.article>



July 26 – Pearl islands off the coast of Pedro Gonzalez island in Las Pearllos, Panama. Eight mustard gas weapons were discovered on one of the Pearl Islands in 2002

The US government has agreed to destroy chemical weapons that were left on Panama's San José Island after a US race-based test programme during the second world war. The



eight chemical bombs, which mostly contain mustard gas, were discovered on the island in 2002 and will be disposed of in September, [according to the Canadian National Post](#).

During the second world war, the US spearheaded an initiative with Canada on San José Island to investigate chemical warfare munitions under tropical conditions. As part of this, the US Chemical Warfare Service compared the physical responses of Puerto Ricans and Caucasian Americans to mustard gas,



explains University of Alberta medical historian [Susan Smith](#). 'Scientists were trying to understand the impact of mustard gas on people,' she tells *Chemistry World*. 'They thought there was a possibility that some racial groups are less sensitive to mustard gas – it turned out not at all to be true.' Smith says the military testing involved, among other things, the aerial release of mustard gas over soldiers via airplane in order to later examine and compare their blisters or other injuries.

Disposing of the eight weapons in question will require between six and eight weeks, the *National Post* states, citing Panamanian officials. The paper says Canada is not participating in the clean-up of the weapons, and Smith suggests that this might be because the old chemical testing programme is seen as a US-led operation in which Canada was the junior partner.

In terms of the actual clean-up of this chemical weaponry, Smith says the US government can [incinerate them or use other chemicals to neutralise](#)

[the weapons](#). However, she suspects that these bombs will need to be transported to appropriate facilities in the US for disposal. 'Any unexploded ordinance is dangerous, and with a toxic agent like mustard gas you have to be especially careful,' Smith warns. 'You'd have to have your gear on.'

Farhad Vladi, who owns the company that has been tasked with selling San José Island, confirms that the US has agreed to dispose of the old chemical weapons. 'In order to sell the island, it is definitely necessary to have the bombs removed, otherwise there is a cancer risk,' he tells *Chemistry World*. The [US National Toxicology Program has identified mustard gas as a known human carcinogen](#).

India: Inauguration of CBRN Workshop by the COAS

Source: <http://www.newkerala.com/news/fullnews-257719.html>



July 26 – The 5th Workshop on Medical Management of CBRN Casualties for Medical Officer is being held under the aegis of HQ Integrated Defence Staff (Medical) from 25 Jul 2017 to 28 Jul 2017. Gen Bipin Rawat, Chief of the Army Staff, was the Chief Guest at the inaugural session.

The Chief of Army Staff, highlighted the need to work towards equipping and training doctors and paramedical staff in the Armed Forces to deal with all types of CBRN emergencies. The Chief of the Army Staff congratulated the organizers and expressed confidence that the endeavor in conducting this workshop will greatly impact the medical preparedness in tackling CBRN emergencies in future.

Lt Gen MK Unni, DGAfMS & Sr Col Comdt highlighted the heightened threat perception of CBRN weapons by rogue states and terrorist outfits in the currently prevailing international security environment. The use of such agents is likely to result in thousands of casualties, thereby overwhelming local health and medical resources and AFMS should be prepared to tackle this challenge.



Lt Gen Satish Dua, Chief of Integrated Defence Staff to the Chairman COSC in his address emphasized that first response remains a national responsibility and it is of paramount importance that we build capacity to mitigate the consequence of CBRN emergencies affecting lives, property and the environment. This would also involve establishing procedural guidelines for strategic operational and tactical planners responsible for CBRN preparedness and response.

Lt Gen CS Narayanan, DCIDS(Med) and Colonel Commandant of the Army Medical Corps, the course controller said that a total of 69 Medical Officers from Army, Navy, Air Force and other Paramilitary Forces are participating in the 4 days workshop. The workshop will train participants on the various aspects of decontamination, evacuation and management of mass casualties in a CBRN scenario. The intensive curriculum includes sensitization of the participants on the national and international perspectives of CBRN threat, practical training on decontamination protocols and the use of personal protective equipment. Experts from DRDE Gwalior, DEBEL Bangalore, and NDMA will be actively involved in conducting the workshop in various venues including the Air Force Institute of NBC protection.



The World's First Decontamination Glove for Safe Removal of Chemical, Biological and Hazardous Agents

Source: <https://www.benzinga.com/pressreleases/17/08/p9893146/the-worlds-first-decontamination-glove-for-safe-removal-of-chemical-bio>

Matrix International Exchange Ltd. today announces the release of DECON-GLOVE, the world's first multi-purpose, decontamination glove. Unique properties enable the glove to remove and mitigate the risk of harm from highly-toxic chemical compounds, industrial materials, chemical warfare agents and pathogenic biological agents.



August 08, 2017

The **DECON-GLOVE** is specifically designed for use by First Responders, Police, Ambulance, Fire and Rescue personnel, together with the military and other professionals operating in high-risk emergency scenarios. At present other gloves on the market, are



limited to chemical decontamination, the DECON-GLOVE will remove both chemical and biological agents. Matrix International Exchange Ltd is delighted to be the global distributor of this truly amazing product.

"The unique ability to decontaminate both chemical and pathogenic biological agents is outstanding and will assist in the saving of many lives." - Lisa Fletcher CEO of Matrix International Exchange Ltd.

In the case of an unexpected chemical and/or biological contamination of areas of the body, the hazard can be swiftly removed and neutralized, due to the special design of the glove and the original formulation of the active decontamination powder.

The growth in the decontamination equipment and re-agents markets growth is driven by trends in world events including; Ebola outbreaks, CBRN attacks, hazardous material release and industrial scale accidents. World Governments now impose strict safety regulations and accident recovery funding. Life saving is driving the market for superior decontamination equipment and materials.

The DECON-GLOVE was developed from a joint collaboration between NBC systems, an international company specialising in the field of development, manufacture and marketing of protection and defence systems against non-conventional hazardous agents (CBRN threats) and the experts of the Laboratory of Heterogeneous Catalysis of the Institute of Molecular Sciences and Technologies of the National Research Council.

The DECON-GLOVE synergistic action is based on a balanced mixture of a highly adsorbent clay from natural origin, together with a chlorine-free solid oxidant, which, in the presence of the heterogeneous catalyst contained in the powder, releases in-situ, free-radical oxygen with remarkably high biocidal and decontaminating capability. Hazardous agent can be removed efficiently and neutralised. Matrix International Exchange Ltd, have shipped their first orders and expect a high demand for the product.

Increase in Chemical Security Vulnerability Assessments Likely Under New DHS Standards

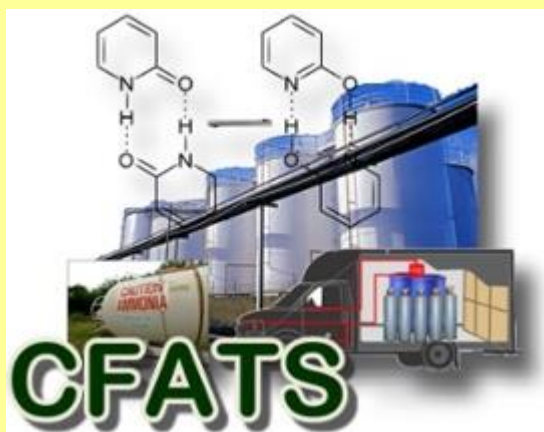
Source: <http://www.jdsupra.com/legalnews/increase-in-chemical-security-45277/>

Aug 08 – The Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) program identifies and regulates high-risk chemical facilities to ensure that security measures are in place to reduce the risk of misappropriation or misuse of chemicals by terrorists. The CFATS

regulatory program uses a risk-assessment methodology to identify high-risk chemical facilities. DHS determines risk profiles by requiring facilities that have specific threshold quantities of chemicals of interest to complete a questionnaire, known as a Top-Screen Analysis, regarding their chemical holdings. Facilities determined to be high-risk must submit a Security Vulnerability Assessment and Site Security Plan or Alternative Security Program to DHS for approval. The plan must include security measures that meet the risk-based performance standards established by DHS.

The Department performs an authorization inspection at high-risk facilities prior to granting approval of a Site Security Plan. Once the facility's plan is approved, DHS conducts regular compliance inspections to verify that the facility is implementing the agreed-upon security measures.

Because of recent revisions to the Top Screen Analysis, more than 17,000 chemical facilities may be required to complete a new TSA. This will undoubtedly result in some of them having to prepare or update a Security Vulnerability Analysis and Site Security Plan, tasks that can be very costly. DHS began sending notices to chemical facilities throughout the nation on a rolling basis in April 2017 indicating that the new enhanced risk assessment methodology must now be used. "Some facilities...previously not covered under CFATS will find



themselves covered, and some currently covered facilities may no longer be considered high risk,” the DHS CFATS website reports.

The CFATS program is one of those reporting and recordkeeping requirements that EHS professionals must add to their chemical management plans. One way for facilities to avoid the program is to either substitute another chemical for the COI and/or decrease the quantity of COI held so that it is below the threshold quantity at which the program applies.

The CFATS program website provides webtools to assist with the new TSA and can be found at <https://csat-help.dhs.gov>.

Identifying toxic threats, preparing for surprise

Source: <http://www.homelandsecuritynewswire.com/dr20170811-identifying-toxic-threats-preparing-for-surprise>

Aug 11 – Predicting chemical attacks is no small task, especially when there are so many toxic substances. There is no crystal ball to aid us in sorting through them all to identify and characterize the potential threats.



Instead, intelligence and defense communities use a broad network of tools to forecast hazards to safeguard our warfighters and nation. A new project from the Defense Threat Reduction Agency (DTRA) seeks to improve the U.S. defensive capability by creating a crystal ball to more rapidly determine the toxicity of such chemical hazards and increase our ability to prepare for surprise.

DVIDS [says](#) that DTRA's Chemical and Biological Technologies Department is spearheading the new **Computational Rapid Identification and Scientific Threat Analysis (CRISTAL) initiative**.

CRISTAL aims to provide a predictive tool that rapidly characterizes the toxic nature of previously uncharacterized chemicals that may pose a toxic, life endangering threat to our nation's warfighters. Traditional threat agent analysis is expensive, time consuming and requires significant animal testing. Currently, estimating the human toxicity of a potential chemical threat costs the DoD between \$5-30 million and between one to five years of research.

CRISTAL's objective is to provide vital data to the warfighter and defense community by combining state-of-the-art in vitro assays and software to

analyze chemical and toxicity properties in significantly less time.

In conjunction with DTRA, the Edgewood Chemical and Biological Center and four minority-serving institutions are leading the CRISTAL effort. Researchers from ECBC, North Carolina Agricultural and Technical State University, City College of New York, Albany State University and Fisk University are exploring computational and in vitro methods for characterizing the toxicity of organophosphate (OP) compounds.

OPs are commercially available and include insecticides, ophthalmic agents, herbicides, and anthelmintics. In addition, this group includes some of the most toxic chemical agents, such as the nerve agents sarin, soman and VX.

Researchers are developing computational models to predict the reactivity and enzyme kinetics of OPs as well as in vitro assays including 2-D and 3-D organ-in-a-dish/organ-on-a-



chip platforms for and in vivo, non-mammalian testing systems to more rapidly measure toxicity at both the cellular and molecular levels.

DVIDS says that CRISTAL will provide a more rapid determination of a chemical's threat potential and thus enable timely development of future detection, protection and therapeutic tools, supporting the DoD's Better Buying Power initiative, increasing warfighter safety and mission success. "If successful, these efforts may save the DoD millions and years of characterization time per hazard. Today's investments in these critical enablers will ensure combat effectiveness in the future," DTRA says.

'Chemical substance' in envelope injures 3 at London's Borough Market

Source: <https://www.rt.com/uk/399205-chemical-substance-borough-market/>

Aug 10 – Three people have been injured in London after a "chemical substance" was delivered to a Borough Market restaurant in an envelope.

The unidentified substance, believed to have been corrosive, was sent to Feng Sushi restaurant on Stoney Street - one of the locations targeted by the London Bridge terrorists in June.

The restaurant has been evacuated as a precaution and cordoned off by police.

The Metropolitan Police said the incident is not being treated as terrorism related "at this early stage."

London Fire Brigade said firefighters using protective equipment were inside the building after they were called to assist police with a "chemical incident" shortly before 2pm local time.

Police said they were called to reports of an "unidentified substance being delivered in an envelope" to a business in south east London.



CBRN Security: Growing Threat of Terrorism Propels Governments to Adopt CBRN Security Systems

Source: <http://www.editiontruth.com/growing-threat-terrorism-propels-governments-adopt-chemical-biological-radiological-nuclear-cbrn-security-systems/>

Aug 10 – World over chemical, biological, radiological and nuclear (CBRN) security are gaining prominence among governments of several nations. The demand is primarily driven by the need for mitigating the risks and threats of a variety of CBRN incidents. These incidents have wide-ranging repercussion on populations of the nations and the effects vary in their intensity and scope. Hence, there is a growing adoption of [CBRN security systems](#) in order to reduce the threat of intentional CBRN incidents. These are often caused by terrorist attacks that usually leads to the release of hazardous

materials into the environment. In addition, accidental leaks or factory spillage of poisonous gases and chemicals also aggravate the risk of CBRN incidents in various nations.

Regions with marked presence of nuclear facilities are highly prone to the unintended release of radioactive waste from nuclear facilities and toxic chemicals from biological waste. This is a key factor boosting the CBRN security market. The global chemical, biological, radiological and nuclear (CBRN) security market is projected to



expand at a CAGR of 4.8% from 2017 to 2025 and is anticipated to reach a valuation of US\$15074.8 mn by the end of the forecast period.

Which security type is anticipated to witness substantial demand for CBRN systems?

The major types of CBRN security comprise biological, radiological, nuclear, and chemical security. Among these, the market for nuclear security is expected to rise at a promising rate over the forecast period. The demand for CBRN systems for ensuring nuclear security is attributed to the large presence of well-developed nuclear facilities in various developing and developed nations. These facilities are either meant for production of nuclear power or to meet the varied needs of national defense. Various international laws that promote the accountability for use of nuclear weapons have boosted the market for CBRN surveillance systems and security for nuclear facilities.

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http://www.transparencymarketresearch.com/sample/sample.php?flag=B&rep_id=6475

Meanwhile, the chemical security segment of the market is anticipated to rise at an attractive pace, attributed to the burgeoning threats among various military and law enforcement agencies. There is rising evidence with these agencies that terrorist are trying to gain the possession of significant amounts of chemical agents, which will be used for making weapons of mass destruction.

Which regions are projected to provide lucrative growth avenues over the forecast period?

The major regional markets comprise North America, Europe, Asia Pacific, Latin America, the Middle East and Africa. Of these, the North America market for CBRN security leads and is expected to remain dominant throughout the forecast period. The rising threats of terrorist attacks and the growing applications of radiopharmaceuticals in several medical treatments are crucial factors leading to a substantial uptake of CBRN security systems. General Dynamics Information Technology (GDIT), a part of General Dynamics, an American aerospace and defense multinational corporation, is selected for Joint Effects Model (JEM) program by the U.S. Army Contract Command (ACC). JEM, a web-based software program, adopted by the U.S. army offers advanced computer-based tactical and operational hazard prediction models for the CBRN security. The single-award contract for indefinite quantity has an upper cap of \$45 mn and the ordering period extensible up to five years. GDIT will offer a variety of support activities for the development of the software such as offering system upgrades, timely modifications, comprehensive management for engineering systems, and maintenance activities. The program has been instrumental in providing near real-time hazard information before, during, and after a CBRN incident for the U.S. Armed Forces.

On the other hand, the Asia Pacific market is projected to expand at an impressive CAGR of 5.4% from 2017 to 2025. A number of governmental organizations, law enforcement agencies, and militaries in several developed and developing nations are proactively implementing CBRN surveillance systems to reduce the threats, especially due to modern chemical and biological warfare.

US, UK Made Chemical Weapons Found in ISIS-Held Syria

Source: <http://www.trunews.com/article/us-uk-made-chemical-weapons-found-in-isis-held-syria>

Aug 16 – Syria's Deputy Foreign Minister Faisal Mekdad has announced that chemical weapons from the United Kingdom and United States have been found in areas liberated from terrorists

During a press conference Wednesday Mr. Mekdad noted that the weapons included hand grenades and munitions for grenade launchers filled with the CN and CS gas.

According to Mr. Mekdad, these chemical weapons were produced by the U.S. Federal Laboratories and NonLethal Technologies, and U.K. based Cherming Defense.



The Chairman for Russia's State Duma Foreign Affairs Committee said this discovery of western-made chemical weapons has created grounds for Syria to apply to the United Nations.

"Now that western-made chemical weapons have been found in areas liberated from terrorists, Syria has every reason and right to apply to the United Nations," Leonid Slutsky told reporters Wednesday. "The information that the Syrian Foreign Ministry has made public, once again exposes the hypocrisy of the US-led coalition and proves that the main goal of their operation is to overthrow Bashar al-Assad's regime."

"Our 'strategic friends' are ready to do whatever it takes to achieve this goal - from making staged videos and spreading fake news to actually providing support to terrorists," the senior Russian lawmaker said according to TASS.

"It has become even more evident that Idlib, where the alleged chemical weapons attack took place, was the first link in a long chain of provocations aimed at justifying the Tomahawk missile attack, which, in fact, violated international law and Syria's sovereignty," Mr. Slutsky continued. "Another thing is clear: only Russia, who has been effectively countering international terrorism in Syria, prevents the West from using full force to achieve its objectives, which are far from being noble," Slutsky said. "We will continue to support the Syrian people in their fight against terrorists."

Inside America's top secret chemical weapons base

Source: <http://www.dailystar.co.uk/news/world-news/637983/US-Dugway-Proving-Ground-Utah-North-Korea-Kim-Jong-un>

Aug 16 – The 800,000-acre lab called "Dugway Proving Ground" in Utah provides 1,400 army personnel the facilities to work with biological agents.



Ryan Harris, the director of Dugway's West Desert Test Center, told FOX 13 that it stands ready to tackle any chemical warfare threat to the public including terrorism.





He added the US military refuses to reveal much about what happens behind its walls.

But last year information was released on a string of



experiments dating back to the Cold War. Tests looked at the use of "cluster bombs, incapacitating darts, chemical bombs, soil spores, and the Consequences of Ingestion by Man of Real and Simulated Fallout." Many of the tests detailed the impact of biological and chemical agents on humans exposed to substances.



The rare insight comes as tensions continue to escalate between the US and North Korea as leader Kim Jong-un threatens to hit Guam with a barrage of missiles.

Daily Star Online previously revealed how a nuclear war between North Korea [would be worse than anything seen since World War Two](#) with eight million dead.

Harry Kazianis, director of defence studies at the Center for the National Interest, described North Korea as "a human rights abuser on par with Nazi Germany".



Arms experts warn N. Korea could unleash retaliatory strike with chemical weapons

By Stuart Leavenworth

Source: <http://www.seattletimes.com/nation-world/arms-experts-warn-n-korea-could-unleash-retaliatory-strike-with-chemical-weapons/>

Aug 15 – As evidence piles up about North Korea's nuclear capabilities, some of President Donald Trump's supporters and outside advisers are urging him to launch a pre-emptive strike on Kim Jong Un's weapons facilities or the missiles being prepared for launch.



But there's at least one significant reason why U.S. military leaders would be reluctant to carry out such a strike: North Korea would surely retaliate, and this retaliation could include use of chemical weapons.

The casualties would be unimaginable. Some 23 million people live in the region of Seoul, with parts of the city sitting a mere 35 miles from the North Korean border. Also at risk would be some 150,000 U.S. citizens who live in South Korea, including 29,000 troops stationed there.

"Nuclear weapons are not the only threat," said

Kelsey Davenport, director of nonproliferation policy for the Arms Control Association. "North Korea could respond to a U.S. attack using chemical weapons. That would be devastating."

North Korea is known to have compiled large stockpiles of nerve agents such as sarin and VX. It could fire these from hidden artillery and missile sites, targeting U.S. military bases in the region and cities such as Seoul and Tokyo.

North Korea started developing chemical weapons in 1961, when the father of the country, Kim Il Sung, issued his "Declaration of Chemicalization" amid rising tensions at that time. North Korea officially denies that it possesses chemical weapons, but according to the Korea Research Institute of Chemical Technology, the country has four military bases equipped with chemical weapons and 11 facilities where such weapons are produced and stored.

A separate analysis in 2011 concluded that North Korea had 2,500 to 5,000 tons of these weapons.

While a surprise U.S. strike might be able to eliminate some of these stockpiles, North Korea's artillery guns are thought to be preloaded with chemical weapons, allowing them to be deployed instantly. Hundreds of these guns are within range of Seoul, or at least parts of the city, many of them buried in mountainsides.

"Compared to the nuclear threat, which involves a finite number of warheads and delivery systems vulnerable to air defenses and antimissile systems, the chemical threat is not as easily negated," wrote Reid Kirby, a military analyst, recently in the Bulletin of the Atomic Scientists.

Some analysts say that North Korea has purposely exaggerated its chemical-weapons capability, part of a strategy to deter a foreign attack. Chemical weapons decay over time and Joo Seong Ha, a defector from North Korea and a journalist based in Seoul, said the north does not have an effective system for maintaining and replenishing its supplies of agents such as sarin and VX.

VX and sarin are both potent nerve agents, which act on the nervous system of an organism, preventing muscles from functioning. Both are banned by the Chemical Weapons Convention, but several countries maintain stockpiles.

Syria has allegedly used sarin in its battle against anti-government rebels, and a terrorist group in Japan used homemade VX in a 1995 Tokyo subway attack that killed 13 people and injured thousands.

Daniel Pinkston, a North Korea military specialist at Troy University in Seoul, notes that North Korea most recently used VX in the February assassination of Kim Jong Nam, the outcast half brother of Kim Jong Un, at Kuala Lumpur's airport.



For decades, the city of Seoul has maintained a civil-defense plan to prepare residents for an attack from the north. **More than 3,300 civil-defense evacuation centers are spread across the city, along with 17,500 protective shelters.** Both the United States and South Korea have developed smartphone apps for their citizens to aid in an evacuation.

But bombardment of Seoul with conventional artillery would possibly kill tens of thousands of civilians, with numbers higher if chemical weapons were used. "Civilians would suffer much greater casualties than the military, which have protective gear," Pinkston said.

Every year, the United States and South Korea hold a joint military exercise to prepare for a possible conflict with North Korea. This exercise, which starts Aug. 21 this year, generally include troops donning protective gear to simulate conditions during a chemical attack.

David Maxwell, a retired U.S. Army special forces colonel, says he has little doubt about North Korea's willingness to use weapons of mass destruction.

"It would use chemical weapons on the first day," he said. One likely target would be U.S. and South Korean air bases, to disrupt allied air power. "Korean and U.S. forces train for this," he said. "They train to decontaminate runways and aircraft, so they can continue to launch aircraft and rearm them."

For the same reason, North Korea might also use chemical weapons on ports and navy bases in South Korea, to prevent resupply of forces during a conflict.

"The north would want to degrade the logistics chain of delivery in the south," Pinkston said. "Chemical weapons could be one tool to do that. It would also have some shock value that might prevent other countries from entering the conflict on the south's behalf."

Any North Korean use of chemical weapons, of course, would bring international condemnation and likely escalate the U.S. response. Still, if North Korea were attacked first and its nuclear deterrent were compromised, analysts have little doubt Pyongyang might turn to the chemical option.

Said Davenport, "There are legitimate concerns that sustained use of chemical weapons in Syria has lowered the threshold for their use elsewhere."

Israel's former counter terrorism chief warns: IS will carry out chemical attack

Source: <http://www.timesofisrael.com/former-counter-terrorism-chief-is-will-carry-out-chemical-attack/>

Aug 18 – **Islamic State is in its death throes but the worst is yet to come, the former head**



of Israel's Counter-Terrorism Bureau, Brigadier General Nitzan Nuriel, said Friday, warning that the terror group could carry out a chemical attack.

"Western society must get used to the fact that terrorism is part of our life," Nuriel said, speaking to Israel's Army Radio. "We must get used to this, not in the sense of sitting around waiting for the next attack, and not in the sense of stopping to go abroad or to stop living, but in the sense of

seeing who can improve the actions or processes that may help push back the next attack and make it an attack that will not claim large numbers of casualties."

Nuriel, a 30-year IDF veteran, was speaking in the wake of the Barcelona and Cambrils terror attacks. At least 14 people were killed and some 130 were wounded in the two attacks. Islamic State claimed responsibility.

Nuriel said that even though the group was in steep decline, it still had the ability to inflict great harm

"I, sadly, was among those who said, 'I told you so,' those who said that 2017 will be a bloody year in Europe," he said.

"I think the worst is yet to come. What we are witnessing is the death throes of death of the physical infrastructure of Islamic State in the region, and these will regrettably be accompanied by many incidents of



this kind and worse. I, for one, believe that a chemical terror attack is ahead of us,” he said, adding that “Islamic State has the knowledge, the capabilities and the means. I think they have already made the decision. All that remains is the operation in which this will happen.”

Nuriel said every aspect of such an attack, including obtaining the weapons and raw materials, could easily be organized by terror cells already located in European countries and trained for such missions.

He said that greater awareness was needed everywhere in order to intercept and prevent

further attacks. And prevention was the responsibility of everyone, he said. “Prevention is something local and municipal authorities can do, to minimize the possibility that this will happen again.”

“What we need is to get at a situation where such incidents, when they happen, end after 10-15 seconds; so that a driver cannot plough on for 530 meters, either because we have prepared – in advance – roadblocks that can be raised immediately, or because there is intervention with assault rifles by security forces posted at the site.”



Are Belgian, Military Trained Medical Officers Better Prepared for CBRN Incidents than Civilian Emergency Physicians?

By Luc JM Mortelmans, Jente Lievers, Marc Sabbe and Kurt Anseeuw

Conference: WCDEM 2015, At Cape Town, Volume: Prehosp Disaster Med 2015;30(Suppl. 1):s99

Source: https://www.researchgate.net/publication/275275657_Are_Belgian_Military_Trained_Medical_Officers_Better_Prepared_for_CBRN_Incidents_than_Civilian_Emergency_Physicians

Abstract

Study/Objective: To explore the effect of military training on medical officer's CBRN preparedness. Background: Belgium is a densely populated European country with heavy petrochemical industry, several nuclear installations and potential terrorist targets. The risk for a CBRN incident is realistic. Methods: An online survey on disaster training; estimated risk, - knowledge and - capability and, at last, willingness to work was presented by mail to all military active officers trained in medical sciences. These results were compared with the scores of civilian emergency physicians.

Results: The response rate was 39% with a mean age of 42. 47% had some training in disaster management and 11% stated they were ever confronted with a chemical incident. Estimated risk for incidents ranged from 2.07/10 for nuclear to 2.98/10 for chemical. Personal knowledge ranged from 3.89/10 for nuclear to 4.35/10 in chemical incidents. Estimated capability to deal with these incidents ranged from 83% for personal protective equipment. 78% felt to be sufficiently trained to decontaminate potential victims. Concerning willingness to work 50% would not report in case of a nuclear incident, 24% in a chemical incident. 13% works unconditionally in chemical incidents and 7% in a nuclear scenario. Conditions that convince those in doubt are: availability of appropriate PPEs (91%) and radiodetection equipment (86%), previous training (64%). If we compare our data with the results of the EP's we find similar demographics. Although more EP's were trained in disaster medicine their scores on knowledge and capability are much lower. The scores on decontamination, PPE and radiodetection are dramatically low. Although they have higher risk estimation the EP's are more willing to respond to work as our militaries.

Conclusion: The military background makes our population clearly better prepared than the Emergency Physicians.

Check this out

Source: <http://www.skrite.com/>

How this application can be used in case of CBRN agents' release?



ICI
International
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BIO NEWS



New test distinguishes Zika from similar viral infections

Source: <http://www.medicalnewstoday.com/releases/318523.php>

July 21 – A new test is the best-to-date in differentiating Zika virus infections from infections caused by similar viruses. The antibody-based assay, developed by researchers at UC Berkeley and Humabs BioMed, a private biotechnology company, is a simple, cost-effective way to determine if a person's infection is from the Zika virus or another virus of the same family, such as dengue and West Nile viruses.

Zika is a mosquito-borne disease and is linked to severe congenital birth defects. Assays already exist to detect Zika virus infection, but they either work only shortly after infection or are poor at differentiating Zika from other flaviviruses. The limited ability of assays to detect Zika virus has led to difficulty in determining the prevalence of Zika virus infections, the incidence of congenital Zika syndrome and the frequency of neurological complications associated with Zika virus infections.

The new assay has very high sensitivity (91.8 percent) and specificity (95.9 percent) for identifying Zika virus infections. The assay is currently in the licensing process and researchers hope it will be available to the medical community soon.

"The whole world has been in urgent need of a serological method to distinguish dengue virus from Zika virus infections, and this the first to have such high sensitivity and specificity in dengue-endemic regions," said Eva Harris, study co-author and UC Berkeley professor in the Division of Infectious Diseases and Vaccinology at the School of Public Health.

The article will be published online in the journal *Proceedings of the National Academy of Sciences*. The research was supported, in part, by grants from National Institutes of Health.

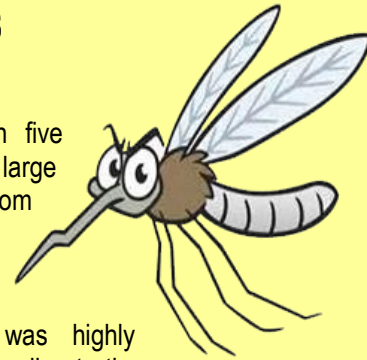
Utilizing its proprietary CellClone discovery technology, Humabs generated a new human antibody to the Zika virus, which the company then used to develop the assay. The assay is based on a well-established approach to detecting viral infections, but the new antibody and protocol give the assay superior sensitivity and specificity, two key assay metrics.

The assay was implemented in five countries and tested using a large number of clinical samples from travelers and patients living in areas with a high level of exposure to Zika virus and other flaviviruses. The new assay was highly sensitive, specific and robust, according to the study data. **When the assay was run on patients infected with Zika virus and also on a control group of 540 patients infected by other flaviviruses or other viruses, plus healthy donors, the specificity was 95.9 percent.**

The assay was developed using detailed patient samples from Harris's collaborative studies in Nicaragua, a large step forward over previous studies. These samples included multiple, longitudinal samples from Zika patients, with or without prior exposure to dengue virus, and samples from dengue patients infected either once or more than once with different types of the dengue virus. The samples were obtained from a 14-year study of a cohort of children whose previous viral infection histories were well documented. These samples were key to the research, because prior dengue virus infections can cross-react and confound many current Zika antibody-based assays; having a thoroughly analyzed pool of patient samples helped the research team characterize and avoid this cross-reactivity.

"These results support that the antibody-based assay that we have developed is highly effective in detecting both recent and past Zika virus infections and in discriminating Zika from other flavivirus infections," said Davide Corti, senior vice president and chief scientific officer of Humabs BioMed. "This novel assay has the potential to become an effective, simple and low-cost solution for Zika surveillance programs, prevalence studies and clinical intervention trials in flavivirus-endemic areas."

The assay is cost effective and easy to use, the researchers say, and additional studies are ongoing to further simplify the assay protocol.



Article: *Antibody-based assay discriminates Zika virus infection from other flaviviruses*, Davide Corti et al., Proceedings of the National Academy of Sciences, doi: 10.1073/pnas.1704984114, published online 17 July 2017.

Bio-terrorist threat : a virus of the pox created in the lab

Source: <https://stopru.org/bio-terrorist-threat-a-virus-of-the-pox-created-in-the-lab/5247>

July 28 – To reproduce in the laboratory, a deadly pathogen is no longer science-fiction. Canadian researchers have managed to

strain equine, this is also the case for a human strain,” said Science Gerd Sutter of the Ludwig-Maximilians-University in Munich (Germany).



synthesize a strain of the active smallpox virus, according to the american magazine Science. Has manipulation own to raise fears of a bio-terrorist threat. In this case, it is a strain of the equine they have reproduced, harmless to human so. Goal their approach shows that it is now possible to create agents that are pathogenic to man with relatively few means. \$ 100,000, a laboratory, six months of work and... an Internet connection were enough to Drs David Evans and Ryan Noyce, virologists at the university of Alberta (Canada), to create this strain of the virus complex. It is in fact on the Web that the two researchers have provided the DNA fragments necessary. The results of this work have been presented in 2016 at the world health Organization (who judged at the end of an international meeting on smallpox at Geneva, that the experiment was “not required knowledge gold expertise biochemical exceptional, gold investment, gold time is particularly important”. However, it would be possible to create a human strain of the virus with the same means. “If it is possible with the

The risk of bioterrorism in question

Eradicated in 1979, smallpox was a disease to be dreaded, fatal in a third of cases of infection. Only a few specimens still exist on the planet, kept in high security laboratories. Strains that have for years been at the center of a controversy : should he destroy them in order to eliminate the risk of accidental contamination gold that they fall one day into the wrong hands? Or should we retain in order to facilitate research in the case of a re-emergence of the disease ? This dilemma had to be re-laid to the world assembly of the WHO in 2019. But the experience of canadian researchers, changes the situation : while it is relatively simple to produce this virus in the laboratory, is not it preferable to retain these samples for research purposes ?

The achievement of canadian researchers that is not published yet — is not really a surprise. In 2002, a strain of polio had already been synthesized in the laboratory. And the progress of synthetic biology has left little to doubt on the ability next to be able to create viruses far more complex, such as smallpox. “This is an important step, a proof-of-concept of what can be done with the synthesis of viral genomes”, says David Evans. If the experience revives fears of bioterrorism, the researcher prefers to see this as an opportunity to develop new vaccines, or even explore the virus as vector for cancer therapies. Still, the risk bioterrorism-related smallpox is taken very seriously. Highly contagious, the virus is transmitted only from human to human by direct contact or by simple talking to them. And the dose viral is suspected to be very low : a few particles are enough to infect an individual. In other words, no need to produce a lot of of the virus to initiate an outbreak.



Foster Speaks about Security Threats from Advanced Technology and Bioterrorism

Source: <https://foster.house.gov/media-center/press-releases/press-release-foster-speaks-about-security-threats-from-advanced>

July 27 – Yesterday, Congressman Bill Foster (D-IL) offered an amendment to draw attention to areas of rising threats to national security. The amendment was offered as a part of H.R. 3219, the FY2018 National Security Appropriations Bill.

“For more than 70 years, nuclear weapons have held center stage among threats our national security and global safety, because of their unique capabilities to threaten the existence of all mankind,” Foster said. “But we live in a world where newly emerging and potentially equally great threats loom, including bioterror and lethal autonomous weapons systems. Each of these threats poses a unique problem, and Congress should allocate funds to proactively counteract them.”

▶▶ Video of Congressman Foster’s floor speech is available [here](#).

Threat from biological weapons is real - Kubuabola

Source: <http://fijivillage.com/news/Threat-from-biological-weapons-is-real---Kubuabola-5s9r2k/>



The Minister for Defence Ratu Inoke Kubuabola (sitting 6th from left) at the opening of the Regional Biological Weapons Convention Workshop in Nadi (Photo: Fijian Government).

July 27 – The Minister for Defence Ratu Inoke Kubuabola is calling on Non-State Parties’ representatives of the Biological Weapons Convention, to become strong advocates for encouraging national governments to join at the earliest as the threat from biological weapons is real.

Kubuabola made these comments at the opening of the Regional Biological Weapons Convention Workshop in Nadi this morning.

He says the Biological Weapons Convention represents one of the fundamental pillars in

multilateral disarmament as it was the first treaty to outlaw an entire category of weapons of mass destruction since it came into force in 1975, and to date, 178 States have joined the Convention. The Minister says the global security situation has changed dramatically in recent years making it more unpredictable, sophisticated and challenging.

Kubuabola says security has imposed a major challenge on all fronts, which is why assistance through international agencies and



more collaboration is needed to mitigate against these threats.

He says the Convention plays a fundamental role in collective security and serves as an internationally recognized forum for cooperation against the threats posed by biological weapons.

Kubuabola says the Convention also supports the development of peaceful use of biological science and technology, and contributes to

strengthening national public health, veterinary, agricultural and emergency-response capacities.

The Minister says the Biological Weapons Convention has a growing membership, however, to make it universal, and to make clear that all States reject the very notion of biological warfare, it is important that all States are party to the Convention.

Treating gun-shot victims: Initial hospital costs just “tip of the iceberg”

Source: <http://www.homelandsecuritynewswire.com/dr20170731-treating-gunshot-victims-initial-hospital-costs-just-tip-of-the-iceberg>

July 31 – **Gun violence resulted in initial hospitalization costs of more than \$6.6 billion nationwide from 2006 through 2014 — an average of \$734.6 million per year, according to a study by researchers at the Stanford University School of Medicine.**

Stanford [notes](#) that in an analysis of data from 267,265 patients who were admitted for firearm-related injuries during the nine-year period, the researchers reported that the \$6.6 billion figure is only a fraction of the total hospital costs incurred by gunshot wounds: It does not include costs of emergency room visits — medical costs for patients who are treated and released or those who are treated but die before admission — or hospital readmissions.

The study was published online in the [American Journal of Public Health](#). The lead author is medical student Sarabeth Spitzer. The senior author is [Thomas Weiser](#), MD, associate professor of surgery.

“There is a high cost for these injuries, especially because they are preventable,” Spitzer said. The study included hospitalization costs of shooting injuries that were self-inflicted, unintentional or due to assault.

At Stanford, 10 percent of trauma patients are admitted with gunshot or knife wounds — a small but important proportion of the patient population, Weiser said.

Little research on gun violence

Despite the scale of the problem, there exists surprisingly little research on gun violence from a public health perspective. This is, in part, due

to a measure Congress passed in 1996 that restricts federal funding for firearms research, Spitzer said.

Past studies have looked into the total costs of firearm injuries — medical as well as social — but most have focused either on particular states or within narrow time ranges. Analyzing data from 2012, a *Mother Jones* investigation estimated that the annual cost of gun violence in America exceeds \$229 billion, as much as \$3.4 billion of which includes emergency services, police investigations and long-term medical- and mental-health care costs. The actual costs of hospital visits are difficult to tease out from these figures, and it is unclear who actually ends up paying for them.

“Firearm injuries are tied to one of the most controversial political issues in the country, so it is important for all sides to have access to fact-based research,” Spitzer said. “Cost information can be especially helpful when making health policy decisions.”

The Stanford team set out to estimate the national medical costs of firearm injuries over a nine-year period by using publicly available data in the Nationwide Inpatient Sample, the largest database in the United States, which houses information from about 8 million hospital discharges each year. The researchers picked patients who were admitted for firearm-related injuries and analyzed the severity of their wounds, the cost of their care, where they were hospitalized and how they paid for the hospitalizations.



Government bears large share of cost

Spitzer and her colleagues interrogated the data to address two primary questions: What were the total medical costs when gunshot victims were first hospitalized, and where did the financial burden of medical care fall?

The team found that the government bears about 40 percent of the total costs. “It’s a very high financial burden,” Spitzer said.

The researchers found that victims paid for hospital costs through Medicare, Medicaid, private insurance, or out of their pockets. Patients were overwhelmingly male, and there was a correlation between their insurance status and how they sustained their injuries. For example, shootings of young and poor individuals insured by Medicaid comprised two-thirds of firearm injuries, and they were most

often victims of assault. In contrast, older Medicare-insured patients were more likely to suffer from self-inflicted gunshot wounds.

The study captures costs for a very limited experience because the costs of firearm injuries continue in many different ways, Spitzer said. “There’s a cost if you’re readmitted, there’s long-term rehab, and a lot of these patients end up needing long-term health care,” she said, adding that she and her colleagues will next systematically analyze costs of hospital readmissions.

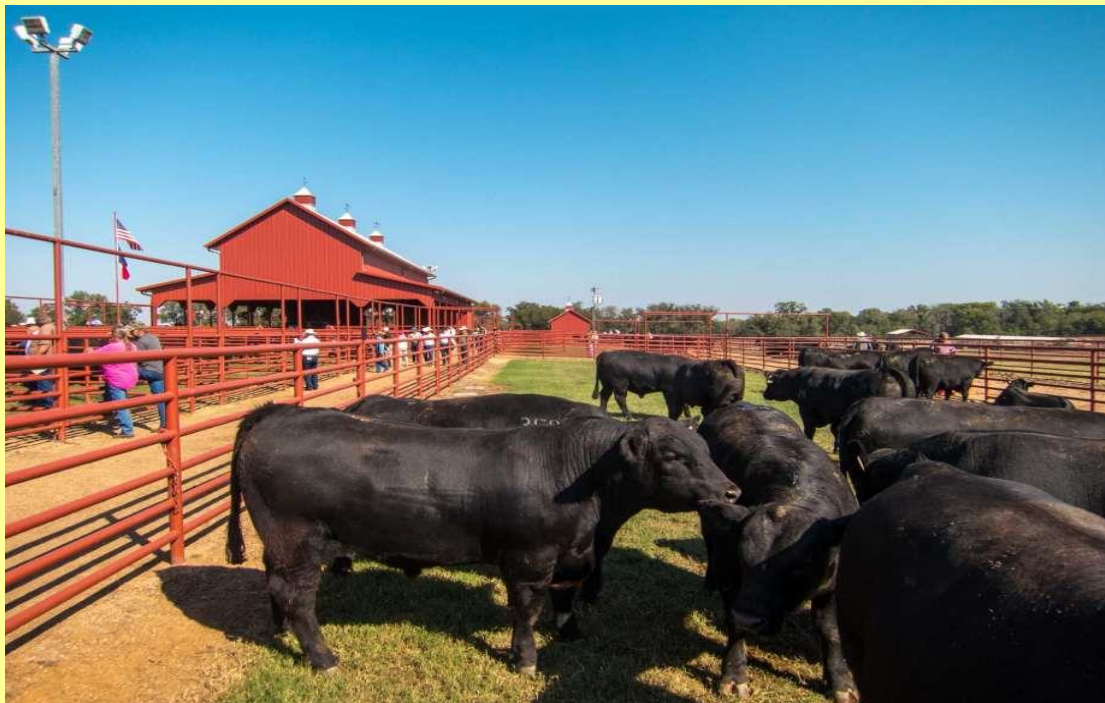
“It’s amazing that we don’t know as much about the medical costs of firearm injuries,” said David Hemenway, director of the Harvard Injury Control Center, who was not involved in the study. “[This study] highlights that this is just the tip of the iceberg.”

— Read more in Sarabeth A. Spitzer et al., “Costs and Financial Burden of Initial Hospitalizations for Firearm Injuries in the United States, 2006–2014,” *American Journal of Public Health* 107, no. 5 (1 May 2017): 770–74.

Are you a target for a bioterrorism attack?

By Burt Rutherford

Source: <http://www.beefmagazine.com/disaster/are-you-target-bioterrorism-attack>



Aug 02 – I’m certain you remember where you were when you first heard the terrible news that terrorists had flown commercial jets into the World Trade Center. 9-11 became a national watchword and a patriotic call to action.



Do you remember the 2001 foot and mouth disease ([FMD outbreak in England?](#)) I do, vividly. I was on the staff at the Texas Cattle Feeders Association and the outbreak shook us, and all of animal agriculture, to the core.

But do you also remember this? Both events occurred within months of each other. The first FMD case was diagnosed in February, 2001. By August, it became a national disaster and a major media event in England and was declared under control in October.

I remind you of these events as a follow-up to [last week's blog](#), where I discussed the gap between answers to a couple of questions from a [BEEF survey](#) and the experience that brand inspectors and other law enforcement people see in the field.

Here are the responses in question: To the question of Do you alert law enforcement when you see unusual activity, 90% of BEEF readers responded yes and 10% said no. Likewise, 86% of readers said yes when asked if they write down descriptions of suspicious vehicles, while 14% said no.

The brand inspectors and others attending the annual conference of the [International Livestock Identification Association \(ILIA\)](#) took exception to those figures.

Now, let's revisit 2001 again. One reason the FMD outbreak shook U.S. animal agriculture was a comment made by the head person for PETA in the UK, who said she hoped [FMD found its way](#) to the U.S. as well. It became quickly evident that we were a very soft target.

So we worked with feedyards to introduce biosecurity, physical security and employee screening and training into their day-to-day management. They did and they still adhere to those things today, by and large.

But time dims memories and I fear that the threat of bioterrorism, whether from domestic groups like PETA or HSUS, or international groups like ISIS, has faded from view.

The FBI considers the risk of an international bioterrorism attack on U.S. agriculture to be low.

That's because an attack on agriculture is an attack on our economy and national security. It isn't sexy, it doesn't blow things up and kill lots of people.

But the FBI also considers U.S. agriculture to be a prime target for such an attack, simply because we are a soft target. And make no mistake: we are on the terrorist radar. Documents captured in caves and terrorist training camps indicate there are plans for just such an attack.

I'm now going to surprise you and get to the point, which is this: It doesn't matter if it's somebody casing your place to steal tools from your workshop or [cattle from your pastures](#), or a terrorist casing a potential target for a [bioterrorism attack](#). The threat is there and we need to be aware of it. For bioterrorism, the FBI says areas particularly at risk are operations with large number of cattle that have fence-line contact, like feedyards and dairies, and sale barns and livestock trucking, where cattle are gathered and then dispersed in many directions and over many miles.

So how do we make ourselves a harder target? Biosecurity, physical security and awareness. Do you have a biosecurity procedure for new cattle that come onto your operation? That's a good way to prevent the spread of any virus or pathogen those cattle might be harboring, regardless of where they picked them up.

Physical security is a little harder. It's easier for confined animal operations, like feedyards and dairies, and possible for livestock auctions. But it's a fine line for auctions—buyers need to see the cattle.

Then there's employee screening and employee training. It's important to do both. It may keep an animal rights ...uuuh...activist with a hidden agenda and a hidden video camera from going to work for you.

But most of all, it's awareness. Remind yourself and your employees to keep their eyes open and if anything looks out of place or suspicious, note it and, most importantly, report it.

Penning Pigs: National Preparedness a Necessity

By JoAnn Alumbaugh, Editor

Source: <http://www.porknetwork.com/users/joannalumbaugh>

Aug 02 – As a world leader, the United States is vulnerable to terrorist attacks through the

deliberate use of biological and chemical agents. This fact has



been highlighted by the discovery of substantial biological weapons development programs and arsenals in foreign countries, attempts to acquire or possess biological agents by militants and high-profile terrorist attacks.

An act of biological terrorism might range from dissemination of aerosolized anthrax spores to food product contamination; and predicting when and how such an attack might occur is not possible. However, the possibility of biological or chemical terrorism should not be ignored, especially in light of events during the past 10 years. Preparing the nation to address this threat is a formidable challenge, but the consequences of being unprepared could be devastating.

As part of our national preparedness, animal identification is more than a desire – it is a necessity. It's a classic issue of surrendering a bit of the autonomy that likely appealed to your decision to become a pork producer in the first place, in deference to the broader interest of the pork industry and animal agriculture in general. In the long term, the ultimate reward comes back to the producer. It is the same issue of private versus public interest that permeates our lives every day. Take, for example, when seat belt laws were first enacted: We didn't want the government telling us what to do, even if the end goal was to ensure our own personal safety. They were considered a violation of our personal rights at first but it's become second nature to buckle-up.

Each approach is being considered in terms of retention, logistics and the ease of capture and transfer. From the database of movements established from the thousands of herds involved, traceability as enabled by divergent approaches will be assessed in the face of simulated foreign animal disease invasions. Only after intense review and analysis of different programs will the industry determine which system is most favorable for all parties. Industry leaders are at the discussion table, representing your best interests. Fortunately for producers, the overriding theme is to develop a voluntary program with widespread adoption. For a voluntary program to be successful,

animal agricultural experts must be involved in the overall design, implementation and execution of the program.

In the broader sense, livestock identification becomes an important component of a national biosecurity plan in which animal health officials work in tandem with local and state health departments, federal agencies, and medical and public health professional associations.

Success of the plan hinges on strengthening the relationships between medical and public health professionals and on building new partnerships with emergency management, the military and law enforcement

professionals.

From the viewpoint of animal health, it is highly unlikely that you will be asked to do more than can be justified on the basis of one or more positive contributions that result from a national identification program. These include the obvious and important benefits of safeguarding your industry and your livelihood. This position respects the crucial roles identification and tracking play in national preparedness in the event of a major animal disease outbreak. Knowing the infrastructure is equipped and ready to handle an emergency disease event offers a security and credibility we can't afford to deny.

Producers, government officials and agribusiness representatives must continue to collaborate. A thoughtful, far-sighted plan will ensure creation of identification and tracking systems that meet the necessary standards to serve both domestic needs and the expectations of the international trading community.

Strip away the rhetoric and it comes down to this: The pork industry, with its best interests and those of animal agriculture in mind, must make a voluntary commitment to national identification. National security and consumer demands dictate the need to move forward. Input from industry and government experts, as well as from broad-minded producers, will ensure consideration of viable approaches.



From the viewpoint of food quality and safety, the system will undoubtedly support Hazard Analysis and Critical Control Points (HAACP) approaches enacted along the food production, processing and distribution chains. From a public perspective, the pork industry will finally

have an answer for consumers who desire to know where their food comes from. And from the standpoint of national security, animal agriculture will take a leadership role in becoming the first line of defense should a food-related biosecurity breach occur.

JoAnn Alumbaugh, Editor, Farm Journal's Pork. JoAnn Alumbaugh grew up on a diversified farm in Michigan, and has been involved in many different facets of the industry. She joined PORK Network as Editor and Brand Champion on January 2013 and is anxious to engage in conversation with producers, educators, consultants and agri-business personnel.

How a bioterrorism drill turned into a vaccination debate at Hays CISD

Source: <http://kxan.com/2017/08/01/hays-cisd-facebook-posts-pulled-after-igniting-vaccination-debate/>

Aug 01 – The vaccination debate unexpectedly came to the Hays CISD Facebook page on Monday following two posts about a planned “emergency response and mass vaccination drill” at Hays High School.

The bioterrorism drill, from 7:30 a.m. until noon on Tuesday, took place in the high school parking lot, involving area first responders and volunteers. Hays County says they hold this kind of drill to practice the emergency distribution of relief items, vaccinations and medication and health assessments.

“This particular scenario was based upon an anthrax release in the county,” said Hays County Emergency Preparedness Coordinator Mike Jones. “We take that as a terrorist event or bioterrorism.”

Both the county and Hays CISD made clear that students were not part of the drill.

Hays CISD spokesperson Tim Savoy said an initial Facebook post about the drill on Monday got picked up by a large number of people from around the U.S. and Canada, who used it to debate whether or not vaccines are good for you.

“There is certainly a place for the debate, but that wasn’t the point of our post to you,” a follow-up Facebook message said. “The discussion got so far off topic that it was confusing to people who came late to the comment string.”

“We want emergency medicine, we want to be able to get water and food when we need it if there is a crisis, but a mass vaccination drill — it’s not real!” said Donna Voetee who saw the HCISD Facebook post and spoke out. “A mass

vaccination drill promoted by our government, its tyranny and it’s terrifying to me that this would happen.”

To see what would actually happen at the drill, Voetee traveled from Lockhart to Kyle to watch. “I think they downplayed it, we know that. It was promoted as a mass vaccination drill and they know that. So, cyber warriors, we prevailed and we took it down,” said Voetee.

The district said the initial post was removed as part of their continuing effort to be transparent and to provide accurate information [on their Facebook page](#). In particular, the district wanted to highlight that campus operations would not be affected and no actual vaccines or medicine would be used in the drill. Instead, volunteers received candy.

The second, follow-up Facebook post eventually came down after inappropriate language and GIFs were used that weren’t automatically caught by the page’s filters. Savoy says he wasn’t able to monitor the page overnight.

Either way, he says the Facebook post was secondary to an email sent out to parents earlier in the day to let them know about the drill.

Hays County officials say the drill was never intended to focus on vaccines, only the county’s ability to distribute supplies in an emergency.

“The government is not here to take care of them; we’re here to provide some resources and get them some direction,” said Jones.

During the Memorial Day Flood, Hays County used this process to distribute clean up kits. During the



Bastrop Fires, it worked to hand out bottled water.

"You can't always prevent a flood, but you can prepare to approach that flood with better processes and better preparations," said Jones. We asked the Hays County Office of Emergency Management what the threshold is for triggering

this type of response. They tell KXAN there isn't a required number of evacuations or people that have to be affected for supplies to be distributed. It depends on the subject of the emergency like whether it's a flood, fire or health problem. It also depends on the community's needs like if they need water or vaccinations.

'Combat Viruses'? US Military Looks for Biological Samples From Russians

Source: <https://sputniknews.com/us/201707291055994881-us-military-russian-rna-studies/>

July 29 – The United States Air Force has placed a tender to acquire samples of ribonucleic acid (RNA) and synovial fluid from Russians, according to the Federal Business Opportunities website.

The Air Force's Air Education and Training Command is looking to acquire at least 12 samples from Russian people and 27 samples of synovial fluid.

The listing contains several requirements suppliers must meet.



"All Normal Human Fresh Frozen (FF) Synovial Tissue and Normal Human Ribonucleic Acid (RNA) samples must be Russian / Caucasian origin. All FF Synovial tissue and RNA samples must come from normal donors, who have no musculoskeletal injuries. This shall be confirmed by pathology," the [contract](#) reads.

"All RNA samples must be frozen. Synovial Tissues and RNA samples can be unmatched, meaning from different donors. All Synovial Tissue and RNA samples must be HIV, HBV, HCV and syphilis negative," it specifies.

Moreover, information on donors must be provided, including their sex, age, ethnicity, smoking history, medical history, height, weight and body mass index (BMI).

The samples must be delivered to the Lackland Air Force Base near San Antonio, Texas, within 10 days after the contractor receives the money.

Later, a change was made to the contract specifications: "All samples (Synovial tissue and RNA samples) shall be collected from Russia and must be Caucasian. The Government will not consider tissue samples from Ukraine."

In his op-ed, RIA Novosti commentator Alexander Khrolenko [suggested](#) that the contract might be related to the development and testing of biological weapons.



"The US has a powerful nuclear arsenal. But even a small-scope nuclear conflict would backfire at the Pentagon. As for biological warfare, it is effective and doesn't lead to the destruction of economic infrastructure. In theory, a targeted epidemic could be a very powerful weapon," Khrolenko wrote.

According to Khrolenko, the US runs a network of biological weapons laboratories in post-Soviet countries, including in Georgia, Ukraine, Kazakhstan and Azerbaijan. He suggested that these facilities might potentially be used for the possible development of a new biological weapon.

For example, back in 2015, the Russian Defense Ministry said that one such facility is the US Richard G. Lugar Public Health Research Center in Tbilisi, which is actually a high level biological research laboratory overseen by the US Defense Threat Reduction Agency.

Another facility is the Central Reference Laboratory near Almaty, Kazakhstan, which is set to become operational this month under the Cooperative Biological Engagement Program led by the US Department of Defense.

There is another smaller US-controlled lab at a military base in the town of Otar in western Kazakhstan on the Caspian Sea.

Media reported that in 2013 in Ukraine, the US allegedly created laboratories in Vinnytsia, Ternopil, Uzhhorod, Kiev, Dnepropetrovsk, Simferopol, Kherson, Lviv and Lugansk.

Moreover, the author underscores that Washington regularly breaches the 1972 Biological Weapons Convention by preventing in a unilateral order international inspectors from visiting its overseas facilities. In turn, Russia insists that the agreement must be fully implemented. Moscow has repeatedly called on Washington to provide security guarantees of its military-biological programs.

Russian military expert Igor Nikulin also suggested that the US might be developing biological weapons.

"They're trying to create new forms of biological weapons, for example, combat viruses," Nikulin told RT. At the same time, specialists in genetic and biological studies stressed that the tender does not relate to the development of biological weapons and is very likely to serve a scientific purpose.

"The more you know about the genetic diversity of people, the more opportunities you have, in particular, to treat and diagnose diseases," Konstantin Severinov, professor at the Skolkovo Institute of Science and Technology (Scoltech) and Rutgers University, [told](#) RT.

"All people are different. The reasons why genetic differences are responsible for some other differences between people are still not known and are the subject of scientific research," he added.

Sergei Kiselev, director of the laboratory of the Vavilov Institute of General Genetics at the Russian Academy of Sciences, pointed out that the number of samples specified in the contract would be enough for a scientific study.

"A dozen RNA samples are normal to make the conclusion that this set of RNA is specific for this type of cells. It is also usually enough to identify deviations. Even if the military was interested in this there should be a very specific research purpose," Kiselev said.

Genetic scientist Valery Ilyinsky echoed Kiselev, saying that the samples will be used for fundamental studies.

"There are a lot of methods to analyze RNA and there is a variety of such studies. It's difficult to say which one will be conducted," the scientist said.

Draeger Bio-Agent Test

Source: <http://www.afcintl.com/pdfs/Draeger%20pdfs/bioagent.pdf>

The Draeger Bio-Agent Test product range offers quick immunological tests to identify the most hazardous biological substances. For example, Anthrax can be detected in suspicious powders and liquids. Within a matter of minutes you have the results of the test – usable as single or simultaneous tests – and can evaluate them directly on site.

The Draeger Bio-Agent Test is simple to operate and can also easily be operated while wearing heavy protective gloves. Just four simple handling steps lead





to a reliable result: the sample is taken, put into a buffer solution, dripped onto the wicking pad, and the result obtained. No additional pipette or reader is required.



Ebola detected in semen of survivors two years after infection

Source: <https://www.sciencedaily.com/releases/2017/08/170802152532.htm>

Aug 02 – Ebola virus RNA can persist in the semen of survivors more than two years after the onset of infection researchers at the University of North Carolina at Chapel Hill have found. The research team, which included investigators from Ohio-based Clinical Research Management and the ELWA Hospital in Liberia also observed the detection of Ebola virus RNA in the semen of men who had previously had a negative test of their semen in some cases.

These findings led the study team to suggest revision of the 2016 World Health Organization guidelines relating to the sexual transmission of Ebola, which calls for men who survive Ebola virus disease (EVD) to undertake measures such as abstinence and the use of condoms for at least 12 months after the onset of EVD or until their semen has tested negative for Ebola virus RNA twice. The study results were published in *Open Forum Infectious Diseases*.

Male participants enrolled in a longitudinal cohort study of Ebola survivors in Monrovia, Liberia, consented to donating semen. Of the 149 men who provided samples, 13 tested positive for Ebola virus RNA. Of these 13 men, 11 had positive results even two years after the onset of Ebola infection.

"Our finding of long term persistence and intermittent detection of viral RNA in semen suggests we need to change how we think about Ebola as it is no longer only an acute illness, but also one with potential long-term effects," said William A. Fischer II, M.D., an assistant professor in the UNC Division of Pulmonary and Critical Care Medicine and the study's co-author. "It is becoming clear that in some survivors, evidence of the virus can linger in the male genital tract for long periods of time with important potential implications for transmission."

Fischer notes that while there has been documented sexual transmission of Ebola earlier after acute infection, it is not known whether the presence of RNA serves as a correlate for infectious virus and if transmission this far out is possible.

The study team also reports that the men whose samples tested positive for Ebola virus RNA were more likely to be older than those with a negative result. Those who had Ebola virus



RNA detected in their semen also complained of vision problems at a higher rate than male survivors without evidence of Ebola virus RNA in their semen. The researchers recommend future studies investigate the source of viral persistence and whether the detection of viral RNA signifies the presence of infectious virus.

The large Ebola outbreak in West Africa in 2014 to 2015 was devastating to the people in West Africa and beyond, said David A. Wohl, M.D., professor of Infectious Diseases at UNC and study co-author.

"However, the scale of the epidemic has allowed for researchers to gain better insights into the Ebola virus, including the potential persistence of the virus in certain compartments of the body, such as the genital tract," Wohl said.

The researchers stress that such studies must be conducted in a way that empowers the Ebola survivor community and avoids further stigmatization.

Article: *William A Fischer II et al. Ebola Virus RNA Detection in Semen More than Two Years After Resolution of Acute Ebola Virus Infection.* Open Forum Infectious Diseases, 2017 DOI: [10.1093/ofid/ofx155/4004818](https://doi.org/10.1093/ofid/ofx155/4004818)

What You Should Know About Biological Warfare (1952)

Source (film): <https://www.youtube.com/watch?v=Y4ALYK8c5Yg>

Millions of eggs recalled in Europe over toxicity fears

Source: <http://www.euronews.com/2017/08/03/oeufs-contamines-inquietude-en-allemagne>

Aug 03 – Consumers in Germany, Belgium, the Netherlands and Luxembourg have been warned to avoid specific batches of eggs.

The Dutch food safety authority has stopped production at 180 poultry companies.

In the Netherlands and Belgium, almost 200 laying hen farms have now been closed as traces of toxicity were found in their products, which could lead to liver or kidney damage.

The Fipronil content found on the tainted eggs is higher than the daily recommended amount for children. It is used against lice, ticks and fleas, as well as flea collars for cats and dogs.

"We now also have pointed links to the Dutch side so that the consumer can be assured there at any time. Caution is recommended especially for children," said Christian Meyer, agriculture minister for Lower Saxony in Germany.

The warning was issued after it emerged last week that a pest controller used Fipronil at Dutch poultry companies over the last year.

The industry association for the egg sector said no contaminated eggs had been sent to stores since July 22.

Belgium admits it knew about insecticide-contaminated Dutch eggs back in June

Source: <https://www.rt.com/news/398791-belgium-contaminated-dutch-eggs/>

Aug 06 – Belgian officials have admitted they knew in early June that eggs from Dutch farms could possibly be contaminated with a toxic insecticide, fipronil, which can affect people's kidneys and liver, but chose not to go public because of an ongoing fraud investigation.





"We knew since the beginning of June there was probably a problem with fipronil in the poultry sector," Katrien Stragier, a spokeswoman for Belgium's food safety agency (AFSCA), told Flemish broadcaster VRT on Saturday, as [cited](#) by tagesschau.de

"We immediately launched an investigation and we also informed the prosecutor because it was a matter of possible fraud. From that point on the secrecy of the inquiry took precedent. We understand that people have questions about public health and we are trying to answer them," she [added](#), according to AFP.

Belgian supermarkets have removed eggs from the supermarkets while awaiting the results of tests. In Germany and the Netherlands, millions of eggs from Dutch farms have been recalled from shops.



German Agriculture Minister Christian Schmidt pressed the authorities, particularly in Belgium and The Netherlands, to clear up the situation.

"Someone has clearly proceeded with criminal intent to contaminate (the eggs) with a banned product," Schmidt told German tabloid Bild.

Dutch officials closed down 180 businesses earlier in the week.



The Dutch food authority (NVWA) said that 138 poultry farms (about a fifth of those in the Netherlands) would remain closed after tests. One batch of eggs posed "*an acute danger to public health*," the agency said on Thursday.

Eggs from another 59 farms contained high enough levels of fipronil that the NVWA stated they should not be consumed by children.

Belgian authorities did not report the first cases of fipronil until July 20, according to the European Commission.

On July 22, the substance was also detected in farms in the Netherlands. Shortly afterwards, it was announced that tainted eggs had also possibly made it into Germany, n-tv reported.

Fipronil is commonly used in veterinary products to get rid of fleas, lice, and ticks.

It is banned from use on farm animals.

In large quantities, the insecticide is considered to be "*moderately hazardous*" according to the World Health Organization, and can affect people's kidneys, liver, and thyroid glands.

Mystery illness at West Flemish potato processing factory

Source: <http://deredactie.be/cm/vrtnieuws.english/Health%2Band%2BEnvironment/1.3038272>



Aug 03 – Almost 100 workers at the potato processing factory Clarebout Potatoes in the West-Flemish municipality of Nieuwkerke have contracted a mystery illness. The first instance of the illness were noted last week. Workers that sort and wash potatoes at the plant started to encounter muscular pain, headaches and to run a fever.

Initially 18 workers became ill. However, in the meantime this has increased to almost 100. Blood samples taken showed signs of inflammation.

A number of workers were hospitalised, but most have since been allowed to return home. The company says that it has tighten still further its already strict hygiene regulation.

For example, workers are now obliged to wear mouth masks.

Bio-Agent Field Detection. The invisible, elusive enemy...

Source: <http://www.cbrneportal.com/bio-agent-field-detection-the-invisible-elusive-enemy/>

July 26 - Imagine an enemy so diminutive, so obscure, that the ramification of failing to apprehend "him" could prove deadly! This is a real and definable problem that plagues (pun intended) the response community today and will remain a dilemma for the foreseeable future...



“Getting it wrong” when it comes to timely and accurate detection of Biological Warfare Agents (BWA) is, and remains, a critical issue faced by the response community on a global scale.

In March 2005, Interpol stated that “there is no criminal threat with greater potential danger to all countries, regions and people of the world than the threat of bio-terrorism, and there is no crime area where the police generally have as little training as they do as in preventing or responding to bio-terrorist attacks.”

The response community is provided with a very finite set of tools to detect, mitigate and adjudicate limited bio-agent threats. Many of these tools are poorly designed, have high margins of error, have minimal shelf lives, or worse yet, end up in the hands of untrained personnel. The search for microbial organisms in the micron size range is a daunting task. Waiting for victim symptomatology to appear post-attack is not a viable response tactic.

Finding an enemy the human eye is not even capable of seeing (a benefit, in the eyes of a terrorist organization) leaves the response community in a severe and certain dilemma...

The dilemma is the passing of time in regard to a BWA attack and the latent onset of illness. Unfortunately, once a BWA is dispersed and a few days pass and victims begin to present illness, the mortality rate increases exponentially! For this reason, early, substantial and accurate field detection performed by trained and competent responders is paramount in the fight against biological terrorism. If the appropriate prophylaxis is not administered in a timely manner after an attack, lives will most certainly be in jeopardy.

►► Read the rest of this article at the source's URL.

AI can now detect anthrax which could help the fight against bioterrorism

Source: <https://www.theverge.com/2017/8/7/16110562/anthrax-artificial-intelligence-deep-learning-neural-network-bioweapon>

Aug 07 – In an effort to combat bioterrorism, scientists in South Korea have trained artificial intelligence to speedily spot anthrax. The new technique is not 100 percent accurate yet, but it's orders of magnitude faster than our current testing methods. And it could revolutionize how we screen mysterious white powders for the deadly bioweapon.

Researchers at the Korea Advanced Institute of Science and Technology combined a detailed imaging technique called **holographic microscopy with artificial intelligence**. The algorithm they created can analyze images of bacterial spores to identify whether they're anthrax in less than a second. It's accurate about 96 percent of the time, according to a paper published last week in the journal [Science Advances](#).

Anthrax is an infection caused by the bacteria [Bacillus anthracis](#), which lives in soil. (Both the infection and the bacteria are often referred to as anthrax.) People can accidentally get anthrax infections when they handle the skin or meat of infected animals. But anthrax can also be a dangerous bioweapon: in 2001, [anthrax spores sent in the mail](#) infected 22 people and killed five of them.

Once the spores enter the body, they germinate and multiply, causing [a flu-like illness](#) that poisons the blood. [At least 85 percent](#) of people infected by inhaling the spores die if left untreated, sometimes within just one to two days after symptoms appear. ([Anthrax infections of the skin](#), by contrast, tend to be less fatal.) For people especially at risk of contracting anthrax, like lab workers or people who work with animal hair, [there's a vaccine](#). For the rest of us, there are antibiotics — but these work best when they're started as soon as possible after exposure.

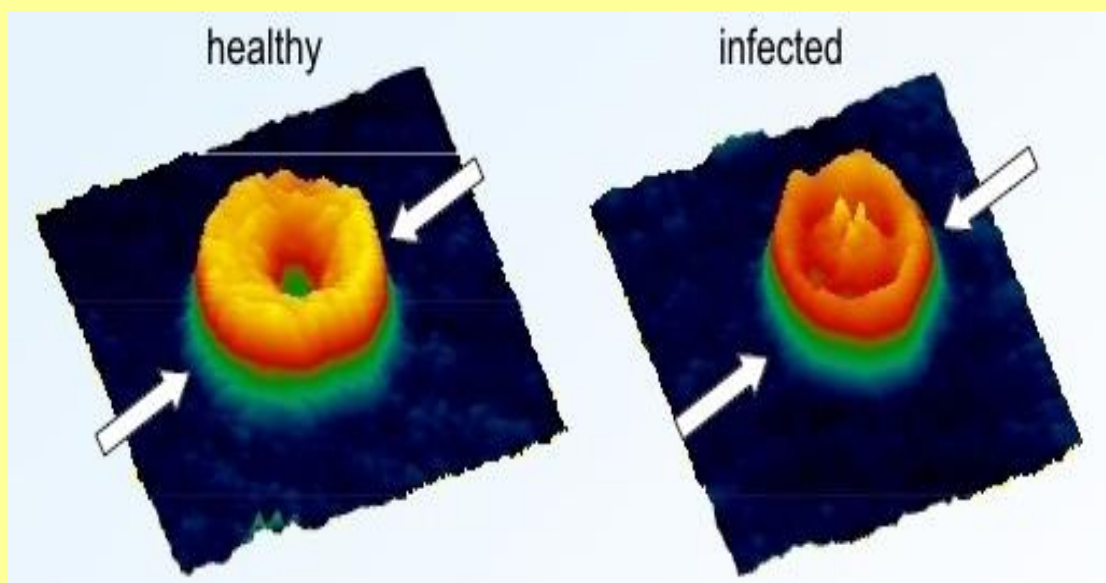
So it's important to detect anthrax fast. Right now, one of the most common methods is to analyze the genetic material of the spores or, once someone is infected, of the bacteria found in infected tissue. But that typically requires giving the spores a little time to multiply in order to yield enough genetic material to analyze. “It's still going to take the better part of a day with the most rapid approaches to get a result,” says bacteriologist [George Stewart](#) at the University of Missouri, who has also [developed an anthrax detector](#) and was not involved in this study.



In search of a quicker screening technique, the study's lead author, physicist [YongKeun Park](#), teamed up with South Korea's Agency for Defense Development. The goal is to be prepared in case North Korea [is developing anthrax as a bioweapon](#), he says.

Park turned to an imaging technique called holographic microscopy: unlike conventional microscopes, which can only capture the intensity of the light scattering off an object, a holographic microscope can also capture the direction that light is traveling. Since the structure and makeup of a cell can change how light bounces off of it, the researchers suspected that the holographic microscope might capture key, but subtle, differences between spores produced by anthrax and those produced by closely related, but less toxic species.

Park and his team then trained a deep learning algorithm to spot these key differences in more than 400 individual spores from five different species of bacteria. One species was *Bacillus*



anthracis, which causes anthrax, and four were closely related doppelgängers. The researchers didn't tell the neural network exactly how to spot the different species — the AI figured that out on its own. After some training, it could distinguish the anthrax spores from the non-anthrax doppelgänger species about 96 percent of the time.

The technique isn't perfect, and as a tool intended to detect bioweapons, it has to be. "The drawback is that the accuracy is lower than conventional methods," Park says. There are also multiple strains of each of the bacteria species analyzed — but the machine was trained on only one strain per species. Subtle differences between the strains might be able to throw off the algorithm, Stewart says. Still, the new technique is so rapid that it could come in handy. "It doesn't require culturing organisms, it doesn't require extracting DNA, it doesn't require much of anything other than being able to visualize the spores themselves," Stewart says.

Next, Park wants to feed the neural network more spore images, in order to boost accuracy. In the meantime, the method could be used as a pre-screening tool to rapidly determine whether a white powder that people have been exposed to is anthrax, and if they should start antibiotics. A slower, more accurate method could then confirm the results.

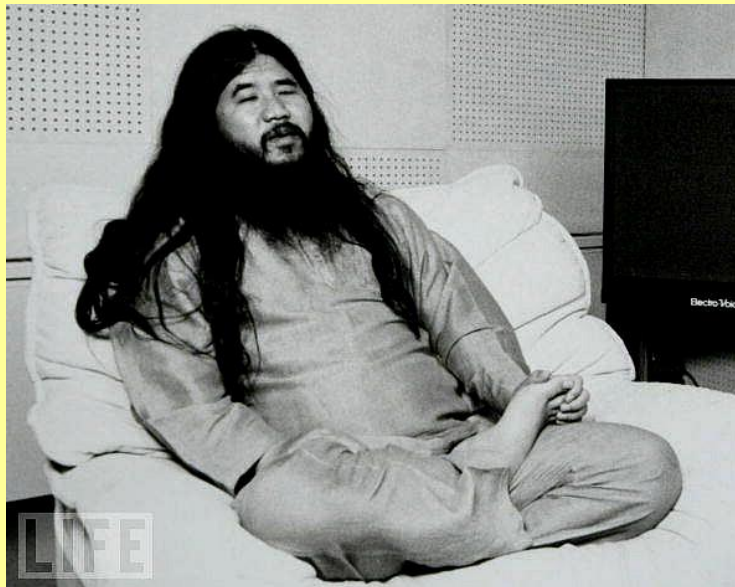
"This paper will not change everything," Park says, but it's one step toward a method that can quickly detect anthrax. "It could enhance our preparation for this kind of biological threat."



Revisiting Aum Shinrikyo: New Insights into the Most Extensive Non-State Biological Weapons Program to Date

Source: <http://www.nti.org/analysis/articles/revisiting-aum-shinrikyo-new-insights-most-extensive-non-state-biological-weapons-program-date-1/>

Dec 2011 – Among the chilling details unearthed in the manifesto of Norwegian domestic terrorist Anders Behring Breivik were passages advocating the use of biological weapons and especially *Bacillus anthracis*, the bacterium that causes [anthrax](#). Most commentators rightly downplayed the issue, since no evidence has emerged that Breivik obtained the bacterium or the capability to produce and disseminate



it. [2] At the same time, Breivik's manifesto is yet another data point highlighting the appeal that biological weapons generally, and *B. anthracis* in particular, have to extremist groups and individuals seeking to cause mass casualties.

The most extensive non-state biological weapons program unearthed to date was organized in the 1990s by the Japanese [Aum Shinrikyo](#) cult. [3] Together with the [2001 letters](#) containing *B. anthracis* mailed to the media and U.S. Congress, it is one of only two known non-state efforts to try to manufacture and

disseminate aerosolized biological weapons or *B. anthracis*. Especially with so few cases on which to base analysis, Aum provides a key data point for assessing bioterrorism risks. But while much has been written about the group, most analysis has focused either on its successful chemical weapons attacks or the cult's bizarre characteristics more generally. Aum's failed biological weapons program has received far less attention, presumably in part because of a paucity of information. [4]

A recent report based on extensive interviews with key cult members, including some imprisoned and on death row in Japan, sheds new light on Aum's biological weapons-related activities. The research effort that culminated in the publication of *Aum Shinrikyo: Insights Into How Terrorists Develop Biological and Chemical Weapons* was spearheaded by Richard Danzig, who served as Secretary of the Navy in the Clinton administration, and is a longtime advocate in Washington's inner sanctums of more robust efforts to counter bioterrorism. [5] For full disclosure, this author worked on the early stages of the multi-year research effort that culminated in the report, though not the drafting of the final paper. The following draws on that work generally and the recently released report specifically.

Prior to the Danzig et al. study, key cult members had apparently never been debriefed in any detail about their biological weapons program. Japanese authorities were more interested in the chemical weapons program, because it produced casualties, than the biological weapons program that appears to have failed. It is unclear whether outside analysts had previously tried to gain access to imprisoned cult members, which would have required the cooperation of the Japanese government.

Newly available information about Aum's biological weapons efforts provides grounds for both comfort and concern. The group grappled with challenges that will confront many non-state actors that might hope to employ biological weapons. Yet Aum's struggles appear to have had as much to do with its often bungling approach as with the inherent challenges of deploying biological weapons, and future groups may navigate these challenges less ineptly. The ways



in which Aum failed, and the trade-offs it confronted, provide lessons for policymakers looking to disrupt the efforts of future non-state actors that aspire to wield biological weapons.

From Yoga, Massage, and Alternative Medicine to Catalyzing the Apocalypse

Aum Shinrikyo began as a peaceful group before gradually morphing into an apocalyptic millenarian cult. The group evolved from a yoga studio founded in Tokyo in the mid-1980s by Chizuo Matsumoto (who later renamed himself Shoko Asahara), a semi-blind acupuncture, massage, and Chinese medicine practitioner. [6] Aum drew members stifled by a lack of purpose and spirituality in their lives, an early core of whom became Asahara's inner circle.

The group grew rapidly; by 1989, it comprised about 4,000 members, and by 1995, when the cult carried out the sarin gas attacks on the Tokyo subway and Asahara and other key cult members were consequently arrested, it had about 10,000 members in Japan. [7] The cult controlled about two dozen properties in Japan and had foreign offices in the United States, Germany, and Russia. [8]

As early as 1985, Asahara predicted a coming apocalypse and identified himself and his acolytes as key to averting it. Over time, this prediction morphed into a belief that the apocalypse was inevitable but cult members alone would survive it, and finally that the cult should hasten the apocalypse by launching attacks, including with biological weapons. [9]

The group's descent into violence was gradual. In late 1988, a follower accidentally drowned during ritual exercises, and fearing attention from authorities Asahara ordered his corpse burned and remains disposed of surreptitiously. When the deceased's best friend became disillusioned with the cult and attempted to leave it early the following year, he was killed. A few months after that, Asahara ordered the killing of a lawyer representing families of cult members, and cult members also killed the lawyer's wife and one-year-old son. [10]

One striking aspect of the Aum case is that roughly a dozen members of the inner circle personally carried out various criminal acts, including assassinations and the dissemination of biological and chemical agents. Cult rank-and-file appear to have assisted, likely often unknowingly, for example by staffing chemical and biological weapons production facilities, but appear not to have been directly involved in carrying out attacks. For members of the inner circle, crossing lesser thresholds to illegal action and violence appears to have reduced inhibitions to carrying out subsequent, more transgressive acts, and also made it difficult for members to contemplate leaving, since they were criminally implicated.

The trigger for the cult's shift from apocalypse survival to apocalypse initiation appears to have been its unsuccessful attempt to compete in Japan's 1990 parliamentary elections, on which it spent millions of dollars but garnered only a token number of votes. [11] The group's efforts to develop apocalypse-hastening weapons melded science and science fiction; members were fascinated by futuristic weapons concepts such as plasma guns that could atomize human bodies or mirrors several miles across that would float in space and reflect the sun's rays. [12] Several cult members visited the archive of Nicolai Tesla in Serbia to research his writings about earthquake-generating machines. [13] The cult purchased land in Australia with the intention of prospecting for uranium to build nuclear weapons. [14] And Aum purchased military hardware from the former Soviet Union, including AK-47 assault rifles, production equipment to manufacture its own versions in Japan, and a surplus MI-17 military transport helicopter, although its procurement efforts—like its later biological weapons efforts—were characterized by short attention spans and short shrift to technical challenges. [15]

While some of Aum's efforts are best characterized as science fiction, the cult's pursuit of chemical and biological weapons was substantially grounded in science. Chemical weapons were pursued in parallel with and ultimately as a substitute for failed biological weapons efforts. The cult reportedly manufactured small quantities of phosgene, hydrogen cyanide, soman, GF and VX nerve agents, and attempted to employ some of these in targeted assassinations, consistently without success. [16] It produced and disseminated larger quantities of sarin, with which it was able to kill and injure on several occasions. [17] Although Aum apparently dabbled with a variety of biological agents, it only seriously attempted to obtain and disseminate two, [botulinum neurotoxin](#) (BoNT), obtained from the bacterium *Clostridium botulinum*, and *B. anthracis*. The focus of this brief is Aum's



biological weapons efforts, which have received relatively little attention to date and on which the Danzig et al. study sheds more new light.

Botulinum Neurotoxin: Trying to Deploy the Most Potent Poison

After deciding that the lawyer representing cult members' families should be killed, Asahara asked his disciples what the most potent poison was, and one replied, "botulinum." Although not employed to assassinate the lawyer, after the humiliating 1990 electoral defeat Asahara ordered the toxin's acquisition. [18]

As with *B. anthracis*, the cult chose not to try to obtain *C. botulinum* from legitimate culture collections, presumably fearing such a mode of acquisition could be traced back to Aum following any attacks. [19] Instead, cult members gathered soil from an area known to contain the bacterium with the intention of culturing it. [20] The cult may also have obtained material from a South American culture collection. [21] One key cult member recalls the group worked with at least five distinct strains of *C. botulinum*, suggesting that some effort was made to isolate *C. botulinum* from the thousands of other bacterial and fungal species a soil sample would contain, though no information sheds light on the methods by which the cult attempted this task. [22] If no isolation was attempted, that would provide one clear explanation for the apparent abject failure of Aum's *C. botulinum* efforts, since a soil sample would contain thousands of living bacterial and fungal species that would crowd out any desired *C. botulinum* the samples might have contained.

Cult members cultivated material in two very large, crude, homemade fermenters; whether these were capable of maintaining the anaerobic (oxygen-free) environment or temperatures required is unclear. No efforts were made to purify the resulting yellow liquid, a mixture of growth media and bacteria. According to a key cult member, at least some of the product was contaminated with *Bacillus [subtilis] natto*, an aerobic bacterium used in Japan to ferment soybeans, although how the contaminant was identified remains unclear. [23] Enormous volumes of the yellow liquid were supposedly produced; based on data provided by interviewed cult members Danzig et al. estimate total production at a remarkable 450 metric tons. [24]

Given the challenges Aum faced and its crude approach, the cult's efforts to produce BoNT unsurprisingly appear to have been unsuccessful. Mice on which the yellow liquid was tested showed no toxic effects, and one cult member reportedly slipped into a fermenting tank and nearly drowned, but subsequently showed no signs of illness. [25] In early 1990 the cult nonetheless disseminated large volumes of the liquid from trucks fitted with crude spray devices, deploying these in the vicinity of two U.S. Naval bases, the Narita airport, the Japanese Diet, the Imperial Palace, and the headquarters of a rival religious group. [26] No one appears to have been affected (including cult members who accidentally exposed themselves during the dissemination process), and the efforts went unnoticed by legal authorities.

In fall 1990, three Aum leaders were arrested for fraudulently purchasing land for a new compound; unbeknownst to the police, chemical weapons production facilities were under construction on the new land. According to a key cult member, the arrests were interpreted as a sign that a police raid was imminent, and Aum responded by dismantling its chemical and biological weapons facilities. [27] In 1992 the cult reinvigorated its efforts with a new focus on *B. anthracis*, detailed below. When these efforts failed to produce any casualties, in 1993 the group again attempted to produce BoNT and used small quantities of material it produced to unsuccessfully attack individuals and a subway station. [28]

A variety of factors may have contributed to the failed BoNT efforts. Several analysts have speculated that Aum may not have acquired a strain of *C. botulinum* capable of producing significant toxin. [29] Available information suggests the cult may simply have cultured a soil sample without attempting to isolate *C. botulinum*, which would not have yielded meaningful quantities of toxin even if the sample had contained a toxin-producing strain alongside thousands of other organic contaminants.

Even if the group did acquire and isolate a toxigenic strain, conditions for appropriate anaerobic fermentation may not have been achieved. Two cult members indicated the presence of bacterial contamination, and this would have interfered with the growth of *C. botulinum*. [30] It is also possible that some toxin was successfully produced but degraded or destroyed during processing, storage, or dissemination, or that whatever toxin was present was too



dilute to have an effect. The most likely hypothesis remains that the cult failed to obtain or isolate the requisite bacteria.

Bacillus Anthracis: “Genetic Engineering” to Produce Lethality?

In 1992, Aum reinvigorated its biological weapons efforts in the context of more robust militarized interaction with the outside world, the trigger for which seems to have been leader Asahara’s whims rather than any particular external event. [31] Efforts now focused on *B. anthracis*, the bacterium that causes anthrax. As with the *C. botulinum*, Aum decided not to try to obtain material from a culture collection for fear the acquisition could be traced. An unsuccessful effort was apparently made to steal a strain from a laboratory, after which a cult sympathizer provided access to a vaccine strain of the material, although the details remain murky. [32]

Perhaps the most important puzzle on which the Danzig et al. report sheds potential light is with its alternative theory about how the cult ended up with a vaccine strain of *B. anthracis*. The conventional wisdom is that this represented bungling, possibly as simple as a clerical error when ordering material from a culture collection. Others have suggested that the anthrax dissemination was only intended as a trial run, or that the effort was sabotaged. [33] Danzig et al. advance a plausible, if still speculative, alternative explanation.

The cult member in charge of biological weapons efforts had completed undergraduate studies in agricultural and veterinary medicine at a university with a substantial anthrax collection, including both Sterne and Pasteur vaccine strains, before going on to PhD studies in virology. [34] Danzig et al. speculate that a contact at his old university provided him with *B. anthracis*, a supposition supported by new analysis of the samples gathered by the Japanese police, which suggest that the cult’s material closely matched the particular strain of Sterne held by the university. [35]

Two key cult members indicated that Aum members working on the project were aware they had a vaccine strain but planned to use “genetic engineering” to convert it to a more lethal form. While other analysts have dismissed this as more science fiction than science, Danzig et al. speculate that the cult may have obtained both Sterne and Pasteur strains and sought to combine them to produce a virulent strain. [36] It turns out that Russian scientists had published a paper detailing such an effort in 1989, and scientists at the Japanese agricultural and veterinary university had been working on the technique around the same time. [37] It bears emphasizing that no concrete evidence suggests the cult obtained a Pasteur strain, and even if it had, employing Sterne and Pasteur strains to create a virulent pathogen is a challenging task almost certainly beyond cult members’ capabilities.

As with BoNT, in 1993 the cult began attempting to mass produce *B. anthracis* without evidence that it had successfully obtained a pathogenic strain. Material was prepared in crude drum fermenters. No efforts were made to purify the 10-20 metric tons of liquid slurry produced, which was dispersed using a homemade sprayer, first from the roof of a cult building located in a residential neighborhood and later from a modified truck.

In the former case, some birds and neighborhood pets were apparently killed, though whether by the substance released remains unclear. Neighbors complained of the foul odor and gelatinous substance that rained down in the building’s vicinity, leading the police to visit and gather samples, but these were not tested until after the 1995 sarin subway attacks. [38] After attacks with liquid slurry failed to produce any casualties, the group began to employ crude drying devices to produce a powder, an unknown quantity of which was disseminated by truck in Tokyo. [39]

Although some neighborhood birds may have perished, it appears no humans were harmed as a result of Aum’s *B. anthracis* efforts. In fact, multiple cult members apparently inadvertently inhaled the material produced and subsequently reported no ill effects. [40] As with BoNT, a variety of factors appear to explain Aum’s lack of success. If the cult was indeed attempting to produce a virulent strain of *B. anthracis* using two vaccine strains, this remarkably ambitious effort unsurprisingly failed. Even in the unlikely event that the effort had been successful, the resulting strain might not have been sufficiently robust for subsequent production, storage, and dissemination. In the even more unlikely event that Aum had produced and successfully stored volumes of a virulent strain, it is possible that poor dissemination capabilities might have damaged the material or failed to



aerosolize it so that sufficient quantities could be inhaled. For example, the cult employed a homemade nozzle that reportedly spouted rather than sprayed and dispersed material during the day, exposing it to UV radiation and thermal updrafts that would have reduced concentrations at ground level. [41] But the most plausible hypothesis remains that Aum failed to obtain a virulent strain of *B. anthracis*.

Learning from Aum's Failed Efforts

Especially in light of the paucity of bioterrorism cases, Aum's failed efforts to deploy effective biological weapons are a rich data point for assessing the threat and identifying policies to ameliorate it. Every case has its idiosyncrasies, and perhaps none quite so much as Aum, which really was "stranger than fiction." But with that caveat in mind, the case does suggest three generalizations about the bioterrorism threat.

Putting the bioterrorism threat in perspective

Cult leader Asahara took a key lesson from his acolytes' repeated failures to mount an effective biological weapons attack: American hyping of the bioterrorism threat was intended to mislead groups like his into pursuing this unproductive path in lieu of other, potentially more effective weapons. [42] Although to this observer it appears unlikely Washington's public diplomacy efforts are quite so crafty (at least not intentionally so), Aum's struggles do suggest that successful bioterrorism is more challenging than it is often portrayed.

Generalizations from one case should be taken with a grain of salt, all the more so when the case is as idiosyncratic as this one. But the cult brought to bear both some degree of relevant expertise and very substantial resources. The head of the biological weapons program had completed undergraduate studies in agricultural and veterinary medicine and conducted PhD studies in virology, albeit was not a microbiologist and lacked tacit knowledge regarding working with bacteria. [43] Another senior member was a medical doctor. As for resources, the cult possessed and was willing to spend millions of dollars on its unconventional weapons programs and constructed substantial infrastructure to support it.

The Aum case particularly highlights the importance of specialized, tacit knowledge to be able to isolate, manipulate, cultivate, and sustain living organisms, somewhat in contrast to chemical weapons development efforts. [44] The cult's failure to successfully deploy biological weapons appears to be over determined. Whatever the causes of its failures—and these remain somewhat ambiguous—it appears that plenty of others stood between the cult and a successful bioterrorism attack. For example, the cult appears to have failed to obtain a pathogenic strain of *B. anthracis* or a toxigenic strain of *C. botulinum*. But had it succeeded, it appears likely the cult would have struggled to cultivate those strains. Had it overcome that hurdle, cult members would almost certainly have exposed themselves during the production and dissemination process. Had they avoided those hurdles, Aum's crude production and dissemination techniques would have meant that few if any non-cult members would have been sickened by the crudely disseminated slurry, even if it had contained BoNT or a virulent strain of *B. anthracis*.

Effective dispersal is a significant hurdle

Discussions of bioterrorism tend to focus on the possibility that individuals or groups might obtain agents they could use to conduct attacks, but often give short shrift to how readily such agents could be disseminated if they were obtained. The evidence suggests that Aum likely failed to obtain potent agents, and that its struggles to distribute what it did obtain effectively are therefore not necessary to explaining its failure to cause harm via biological weapons.

Nonetheless, Aum's struggles to effectively disseminate the material it produced highlight an important finding. Obtaining agents is likely the greatest hurdle to successful bioterrorism, but disseminating them to cause large numbers of casualties, and simultaneously avoiding exposure of those doing the disseminating, is a non-trivial secondary challenge that popular discussions of bioterrorism often overlook.

Where there is smoke, there may later be fire

Aum's efforts were characterized by steadily escalating levels of attempted violence, a relatively seamless transition from individual to mass attacks, and from conventional to



unconventional weapons, and a trial-and-error process of repeated errors but persistence and attempts at correction in the face of failure.

Like other non-state groups, Aum engaged in steadily escalating levels of illegal action and violence. The group began with the illegal disposal of the body of a cult member who had been accidentally killed and escalated to attacks on individuals perceived to be antagonistic to the cult and ultimately the general populace. Initial transgressions appear to have cemented group affiliation, emboldened cult members and especially the leader Asahara, and made it difficult for members to back out as violence escalated.

One striking element of the case is the relatively seamless transition from individual to mass attacks, and from more to less conventional ones, (i.e., from killing a lapsed cult member by strangling him with a rope to attempting to expose large populations to BoNT and *B. anthracis*). Normative inhibitions appear to have played little role, although it is hard to know how far that can be generalized beyond the case.

Relatedly, the cult was not dissuaded by repeated failures, and it was emboldened at the lack of consequences for its earlier actions. This suggests that where there is smoke there may be fire, in other words, failed attacks may be harbingers of future, and potentially more successful, ones. The pattern of trial, error, and potential later success also provides support for a "broken windows" theory of counterterrorism: responding robustly to more modest initial transgressions may make subsequent greater transgressions less likely. [45]

Canadian, U.S. diplomats in Cuba suffer unexplained hearing loss

Source: <https://beta.theglobeandmail.com/news/politics/cuba-says-it-is-investigating-incidents-concerning-us-diplomats-in-havana/article35934221/>

Aug 11 – **Canadian diplomats and their families in Cuba have experienced unexplained hearing loss and headaches that are believed to have been caused by a "sonic emission," according to the federal government.**

The disclosure comes after reports that a group of U.S. diplomats began suffering from unexplained hearing loss in the fall of 2016; officials with knowledge of the investigation into the case told the Associated Press that some of the affected diplomats were forced to return to the United States as a result of their symptoms. Global Affairs Canada said it is working with the United States and Cuba to determine the cause of the strange symptoms.

"The health and safety of our employees abroad is a top priority for Canada. We are aware of unusual symptoms affecting Canadian and U.S. diplomatic personnel and their families in Havana. The government is actively working – including with U.S. and Cuban authorities – to ascertain the cause," said Global Affairs Canada spokeswoman Natasha Nystrom.

The Canadian government did not say when diplomats and their families experienced the symptoms. Ms. Nystrom said that the government doesn't have any reason to believe

Canadian tourists and other visitors could be affected.

It's not clear if the symptoms experienced by the Canadian and American diplomats were related, or if they were deliberately targeted.

Speaking on background, a Canadian government official said the hearing loss and headaches were believed to have been caused by some sort of "sonic emission,"

but did not offer any more

details. The official did

not know if the

affected diplomatic

personnel and their

families suffered any

permanent health problems as a result,

and could not say how many

individuals were affected for privacy

reasons.

A months-long U.S. investigation

found that a group of American

diplomats were attacked with an

advanced sonic weapon that

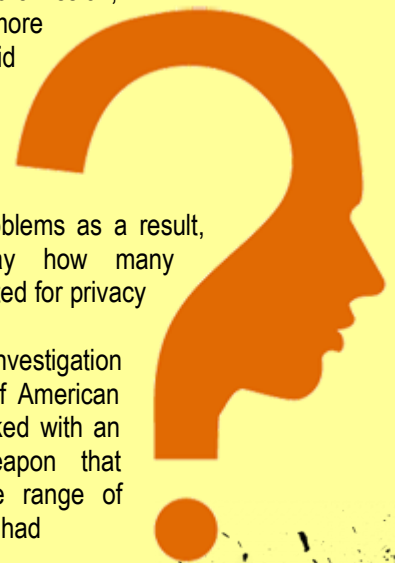
operated outside the range of

audible sound and had

been emitted either

inside or outside their homes,

according to the AP report. State



Department spokeswoman Heather Nauert said the United States retaliated by expelling two Cuban diplomats from Washington on May 23.

After 54 years of severed diplomatic relations, the United States reopened its Havana embassy in 2015 as a part of former president Barack Obama's effort to restore ties with Cuba. Canada helped facilitate talks between the two countries that led to the reestablishment of relations.

Canada established diplomatic relations with Cuba in 1945. It was only one of two countries in the hemisphere – the other being Mexico – that did not break relations with the Caribbean nation in the years that followed the Cuban revolution in 1959, according to Global Affairs Canada's website.

Former Canadian ambassador to Cuba James Bartleman said he is not surprised by this week's reports, given his experience as envoy from 1981 to 1983. Halfway through his posting, a series of strange events occurred: His family dog was poisoned, a trade officer had a dead rat

nailed to their door and the embassy started receiving threatening phone calls. Fed up, he called out the Cuban government.

"I called up the Foreign Ministry and told them to call off their goons," he said. "I went down there and I really gave them hell."

Upon returning to the residence from the Foreign Ministry, everything appeared to be back to normal – there was even a veterinarian waiting at the front door ready to treat Mr. Bartleman's dog. He says he still doesn't know why he and his staff were targeted, and that he never forgave the Cuban government.

Another former Canadian diplomat who was once posted in Cuba said they never experienced anything kind of overt harassment or surveillance during their time in the country. The source, who asked to remain anonymous given the sensitivity of the continuing investigation, said any suggestion that diplomats were purposely targeted is not in sync with the Cuban government he knows.

US biomedical-research facilities unprepared for attacks and natural disasters

Source: <http://www.nature.com/news/us-biomedical-research-facilities-unprepared-for-attacks-and-natural-disasters-1.22446>

Aug 10 – When Hurricane Sandy hit New York City in 2012, the storm [destroyed scientific equipment worth more than US\\$20 million](#) at the New York University (NYU) Langone Medical Center. Tropical Storm Allison hit the University of Texas Health Science Center (UT Health) in Houston in 2001, and caused so



much damage that some researchers had to restart their careers elsewhere. Despite such catastrophes, a report published on 10 August finds that many research institutions in the United States are still unprepared for disasters.

The report, released by the US National Academies of Sciences, Engineering, and Medicine, looked at what happened to research facilities during past disasters, interviewed people about how they had

changed their current policies and procedures and consulted with experts on disaster and risk management. It recommends that universities and scientists take steps to protect biomedical research from emergencies on all scales, including natural disasters, fire, cyber-attacks and terrorism.



Biomedical research is especially vulnerable to disasters, says the report's lead author Georges Benjamin, executive director of the American Public Health Association, a non-profit organization in Washington DC. Although insurance companies may cover expensive machinery, resources such as strains of genetically engineered mice and cells are irreplaceable, and it is difficult for insurance companies to quantify their value. Researchers at NYU lost 35,000 mice, including 751 different lines of genetically modified animals that existed nowhere else.

The report suggests ten steps that researchers, institutions and funding organizations can take to [prepare for disasters and minimize the damage](#). It says that although every institution has different needs, all should appoint a "chief resilience officer" who can handle contingency plans for various scenarios. They should also institute mandatory training for staff to prepare them for emergencies.

Taking responsibility

One of the biggest problems is that many institutions house their animals in basements, often in an attempt to isolate the smell and to protect them from animal-rights activists, says report co-author Bradford Goodwin, former animal-facilities director at UT Health. But basements are susceptible to flooding, and can be difficult to evacuate in the event of an emergency.

Individual researchers should also take responsibility for protecting their own work, the report says. "You go into the lab every day and you worry about your lab work, but you're making the assumption that everyone around you is protecting you," Benjamin says. Instead, scientists should make sure their data are backed up off-site, and work with their institutions to ensure that the most crucial samples and resources are duplicated, with the duplicates stored at other locations.

It's also important that institutions assess their individual risks and prepare for all types of potential disaster, say the report's authors. For instance, California's building codes already require lab buildings to withstand earthquakes. But research facilities on the US East Coast, which was unexpectedly hit by an earthquake in 2011, may not be as resilient. And because climate change means that major storms and floods are becoming more common, Benjamin says, institutions should reassess whether their risk assessments are accurate.

The report adds that funders such as the National Institutes of Health should do more to help pay for redesigns and preparedness efforts. Institutions are becoming better about disaster preparedness, Goodwin says. But most people still think it'll never happen to them, he adds. "We've got to change that attitude."

Anthrax & Plague: How 1 Vaccine Could Protect Against 2 Bioterror Threats

Source: <https://www.livescience.com/60118-anthrax-plague-vaccine.html>

Aug 11 – A single vaccine could potentially protect against two of the biggest [bioterrorism threats](#) — plague and anthrax, an early study suggests.

The researchers tested a new "bivalent" anthrax-plague vaccine in mice, rats and rabbits that were later exposed to plague and [anthrax](#) at the same time. They found that the vaccine offered 100 percent protection against both typically deadly diseases.

"Our studies provide the first proof-of-concept data that a bivalent anthrax-plague vaccine can potentially protect vaccinees in the event of a bioterror attack," with weaponized anthrax or [plague bacteria](#), the researchers [wrote](#) in the June 26 issue of the journal *Frontiers in Immunology*. "This bivalent vaccine, therefore, is a strong candidate for stockpiling as part of our national preparedness against bioterrorism threats," they said.

However, additional studies in humans are still needed to determine the safety and effectiveness of the vaccine, the researchers said. [\[27 Devastating Infectious Diseases\]](#)

Anthrax is caused by the bacterium *Bacillus anthracis*, and plague is caused by the bacterium [Yersinia pestis](#). Both anthrax and plague are considered potential agents for use in a biological attack, in which microbes are intentionally released to sicken or kill people. In



addition, both anthrax and plague are lethal, typically causing rapid death in three to six days unless the victim receives antibiotics within 24 hours of their symptoms, according to the study.

"Intentional release of these organisms as a bioweapon could lead to massive deaths, public panic and social chaos," the researchers said.

The best way to counteract such an attack would be to vaccinate people before the attack, they said. Vaccines could also be given after an attack to minimize further casualties and reduce harms from future attacks.

However, in the United States, there is no vaccine against either anthrax or [plague](#) that's approved for the general population. (There is an anthrax vaccine that's recommended only for people at increased risk of being exposed to anthrax, including some laboratory workers and military personnel.)

In the new study, the researchers designed a vaccine containing three proteins — two from plague bacteria and one from anthrax bacteria. The three proteins were joined so that they formed one single, large protein. The idea is that the body can then build up immunity to those proteins, and when exposed could launch a successful attack against them.

The researchers immunized eight mice with their vaccine, and 23 days later, exposed the mice to anthrax through an injection, and [pneumonic plague](#) (the most serious form of plague that can spread through the air) through a nasal spray. A separate group of control mice was exposed but not vaccinated.

All of the mice that received the vaccine survived, whereas all of the mice that were not vaccinated died within two days of being exposed to both bacteria, the study found.

Experiments in rats had a similar result, with all of the vaccinated rats surviving exposure to plague and anthrax, and all of the unvaccinated animals succumbing to the diseases.

The researchers also tested their vaccine in rabbits, because rabbits are a better animal model for experiments with "aerosolized" anthrax that can be inhaled. All 10 rabbits that were given the vaccine survived exposure to aerosolized anthrax, while all of the unvaccinated rabbits died within two to four days of exposure to anthrax.

This study is the first to show that a vaccine can completely protect animals against simultaneous exposure to both anthrax and plague, the researchers said.

If the new vaccine is successful in future clinical trials, it "could streamline efforts to stockpile a biodefense vaccine" against both anthrax and plague, they said.

The study was conducted by researchers at the Catholic University of America in Washington, D.C.; the National Institute of Allergy and Infectious Diseases in Bethesda, Maryland; and the University of Texas Medical Branch in Galveston, Texas. The study was funded by the National Institutes of Health.

Encyclopedia of Bioterrorism Defense, 2nd Edition

Rebecca Katz (Editor), Raymond A. Zilinskas (Editor)

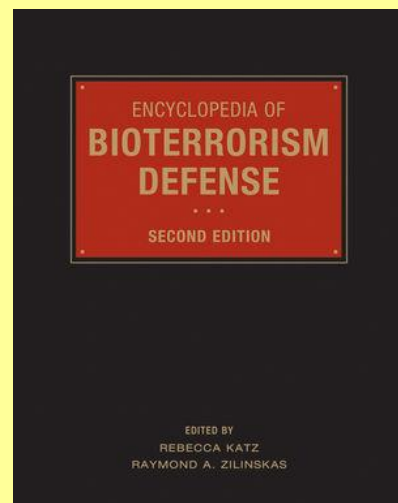
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The second edition of the *Encyclopedia of Bioterrorism Defense* provides complete coverage of bioterrorism and defense against it, spanning scientific, technological, clinical, legal, historical, and political aspects. The topics cover the most recent developments and thinking on biodefense, biosecurity, terrorism, science, and policy. In addition, the *Encyclopedia of Bioterrorism Defense* provides an up-to-date overview of U.S.

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New Tool Has Higher Sensitivity in Major-incident Triage

Source: http://www.medscape.com/viewarticle/884156?nlid=117324_1362&src=WNL_mdplsnews_170818_mscpedit_emed&uac=82598DG&spon=45&impID=1413731&faf=1



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Major incident triage: Derivation and comparative analysis of the Modified Physiological Triage Tool (MPTT)

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Aug 14 – The Modified Physiological Triage Tool (MPTT) is more sensitive than other such tools to the need for life-saving intervention during major incidents from battlegrounds to civilian settings.

"Primary triage is about not missing the sickest - therefore, a higher rate of over-triage needs to be accepted in order to avoid missing these patients," said Dr. James Vassallo from the Institute of Naval Medicine, in Gosport, UK.

"The MPTT we believe is the optimum simple physiological assessment for this purpose with the lowest rate of under-triage and acceptable levels of over-triage (well within those limits described by the American College of Surgeons for field triage to a Level 1 center)," he told Reuters Health by email.

The MPTT was derived from a military cohort using logistic regression methodology with the purpose of identifying those in need of life-saving intervention. In retrospective studies, it has performed better than existing triage methods.

Dr. Vassallo and colleagues compared the performance of the MPTT with that of other

triage tools in their prospective study of 357 patients presenting to the emergency department; 60% were deemed priority 1, that is, in need of a life-saving intervention.

The MPTT was more sensitive than all other existing triage tools, at 83.6%. This represented an absolute increase of 14.9% over the Military Sieve, 19.6% over the Modified Military Sieve, and 26.1% over the best-performing civilian triage tool (START), the team reports in the Journal of the Royal Army Medical Corps, online July 23.

The MPTT also had the lowest specificity (51.0%), which resulted in the highest rate of over-triage (28.1%).

During the July 7, 2005, London bombings, the city "tolerated an over-triage rate of 64% - though this is with 4 Level 1 trauma centers and a number of additional EDs," Dr. Vassallo said. "Whether this level could be tolerated in more rural settings is questionable - therefore, the need for effective secondary triage."

"We must remember that triage is a dynamic process - it needs to be



repeated and changed as required,” he explained. “Secondary triage, when it is performed, must contribute to this process - existing studies demonstrate that by keeping it a purely physiological process, we are unlikely to add much more to this process (in terms of sensitivity/specificity), and therefore we need to

explore a more detailed method (such as repeating the field triage process).”

Dr. Vassallo added, “The views expressed here, and also within our manuscript, represent our personal opinions and are not necessarily reflective of that of the Ministry of Defence or the UK Defence Medical Services.”

►► Source: <http://bit.ly/2vsuboO> (J R Army Med Corps 2017).

