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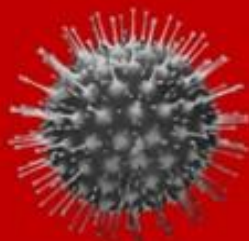
DIARY

June 2022

06\22

Part A

Pandemic



Epidemic?



The unexpected always happens!

War



Alien invasion?

An International CBRNE Institute publication

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EDITOR'S CORNER





Editorial

Brig Gen (ret.) Ioannis Galatas, MD, MSc, MC (Army)

Editor-in-Chief
ICI C²BRNE Diary



Dear Colleagues,

Pandemic: Year 3

Epidemic: Month 1

War: Month 3

Hope level: Close to Zero!

European war

Anti-Russian alliance

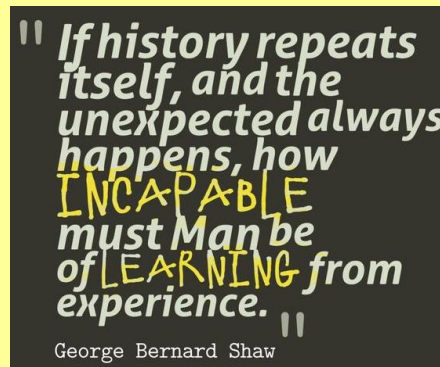
A new type of war called “proxy war” resembling video games is taking place in Ukraine! The anti-Russian alliance is providing tons of weapons and money to Ukrainians to keep on killing themselves (100 dead/day; 500 wounded/day), with the moke excuse that they want to support the freedom of Ukraine but without direct physical involvement. The alliance is testing Russian weapons, tactics, and innovations while at the same time they are hoping to exhaust the opponent’s weapons and weaken its defenses forgetting that Russia is a nuclear state thus risking a nuclear winter (whatever this means). Secretly praying for the use of “small” nuclear weapons (sic) or chemical weapons the alliance is warning Europe requesting countermeasures for an exotic threat and this means “buy more weapons from us” (you know who “us” means). Recently, the new UK Army Chief General Sir Patrick Sanders stated “... *we are a generation that must prepare our army to fight one more time on European soil.*” In addition, the isolation of Kaliningrad from Lithuania (proposed by NATO) might ignite additional bloodshed. Not a single step towards peace or settlement (with the exception of Hungary), because it is about dominance and money, stupid!

Greece-Russia-Iran

Greece flogged itself with the Iranian [Lana](#) oil tanker case. First, it demonstrated to the world the complete lack of sovereignty. Initially, the Greek intelligence service provided information to the United States on the delicate situation with oil (although they could not do so if they wanted to maintain friendly relations with Russia and not fight again with their eternal rival, Iran). Second, at the behest of the United States, Greece actually committed an act of piracy by seizing someone else’s oil. Third, it has complicated relations with both Russia and Iran. Fourth (and this is very serious), Greece once again showed her attitude towards the Orthodox brothers and Orthodoxy. “*Your 300 Spartans were sold to the Americans for thirty American silver!*” – IRGC paratroopers mockingly spoke bad English to Greek sailors onboard Greek tankers captured in the Arabic Gulf. Fifth, it is still unclear the type and quantity of weapons transferred to Ukraine – weapons deployed in Greek islands opposite hostile Turkey.

Greece-Turkey

It is for sure that during the coming few months a hot incident will be ignited between Turkey and Greece given the continuous offensive insulting rhetoric launched by the Turkish PM, ministers, and opposition. The “problem” is that the Greek response would be disproportional and well beyond countering the incident itself. Given the qualitative superiority of Hellenic Air Forces on pilots and warplanes many targets will be attacked and not only those by the Aegean Sea. In addition, Greece has finally realized (at the political level) that in cases like this all friends and allies (especially the USA; France, NATO, and EU) will behave the usual way since big mouths will now whistle indifferently. What will happen next? Only God knows but usually bullies return to normal neighboring behavior. If not, ... The only chance to temporarily avoid or transfer the crisis is the financial benefits of summer tourism which are very important for both countries.



George Bernard Shaw



China-Taiwan

Beijing will "not hesitate to start a war" if Taiwan declares independence, China's Defense Minister warned his U.S. counterpart in the pair's first face-to-face talks, officials said. Chinese President Xi Jinping just signed a [directive](#) authorizing the use of Chinese military forces for "non-war" purposes. As one can see, stupidity is not a privilege of Europe. In addition, what a surprise Americans are again involved in the new-to-be hot spot!

Russia – China

A new alliance is in order and even India is in favor despite its traditional rivalry with China. This might never happen if Western sanctions against Russia were not so severe. The population of these three countries: is 2,966,514,431 vs. 775,000,000 (USA + EU). Nuclear inventory: 6,605 (Russia + China) vs. 6,065 (USA + UK + France).

Pandemic/Epidemic

Mega pharmaceuticals dream of booster jabs - #4 or #5 or #6 because it is good for our health and even better for their pockets. A new player, the Danish Bavarian Nordic is dreaming of a piece of the vaccine pie with its smallpox vaccine (Junneos) that is supposedly protecting from monkeypox despite the fact that all healthcare officials state that it is an epidemic with limited pandemic potential. The big question is why now and how the virus ever crossed the Mediterranean Sea? Perhaps pharmaceuticals know better and deeper! Masks have gone mainly because summertime is a good period to match the financial losses of 2021 but it is good to keep in mind that masks are good friends in crowded indoor places.

It is boring to repeat that the unexpected always happens but this is the reality of our daily lives and when aliens will land on Earth it would not be a surprise! The surprise would be the fact they chose this problematic planet! So, be prepared and one-day preparedness will pay back!

The Editor-in-Chief



Devotion!



“For the past 6 years, a dog named **Capitan** has slept in the grave of his owner every night. His owner, Miguel Guzman died in 2006 and Capitan disappeared shortly after the family attended the funeral services. They searched everywhere and put out flyers to try and find him. But no one had seen him. A week later, some people who were at the cemetery late one evening spotted Capitan laying on the grave and they contacted the groundskeeper at the cemetery. The cemetery notified the family who promptly came to pick him up and take him home. But each night he would cry and scratch frantically at the door to go out and he wouldn't return home until morning. It was later discovered that Capitan would walk the 3 miles back to the cemetery each night to guard his master's grave. It has been 7 years now. The cemetery does not close the gates until he arrives each night promptly at 6 pm. He sleeps there all night guarding the grave until the groundkeeper opens the gate in the morning.

Diplomat hits out at Athens for trying to find excuses for its anti-Russian stance

Source: <https://tass.com/politics/1455795>

May 25 – Greece's recent comments are attempts to find excuses for its anti-Russian stance, Foreign Ministry Spokeswoman Maria Zakharova said Wednesday, referring to the Greek prime minister's remarks during his May 16-17 visit to Washington. Kyriakos Mitsotakis offered "a weird selection of historical analogies," the diplomat said. "The Greeks' fight for independence dating back to 200 years ago was put on a par with crimes committed by the Kyiv regime, which had been waging a war against its own citizens in



Donbass for eight years," Zakharova told a news briefing. "Unbelievable, heroes, who defended the Missolonghi fortress in 1825-1826 are compared to Nazis from Azov battalion," she pointed out.



This is "yet another attempt by Athens to justify its deeply erroneous decision to fit into the West's anti-Russia front, including by supplying Kyiv with weapons, which are used for daily strikes against peaceful civilians in Donbass," Zakharova explained. Confronting numerous accusations, Russia is unable to offer an alternative vision, as all Russian media have been "excluded from Greece's information space," the diplomat noted. Greece's comments are a display of loyalty to the US and NATO-imposed rules, she added.

Iran says it has 'not arrested' crews of seized Greek tankers

Source: <https://www.dw.com/en/iran-says-it-has-not-arrested-crews-of-seized-greek-tankers/a-61964464>



May 28 – Tehran said Saturday that the crew of [two Greek oil tankers seized by Iran in the Gulf](#) a day earlier have not been detained, contradicting comments from Greece's Foreign Ministry.

"The crews of the two Greek tankers have not been arrested, and all crew members ... are in good health and are being protected, and provided with necessary services while on board [their ships]," the country's Ports and Maritime Organization said in a statement carried by state media.

The two vessels, Delta Poseidon and Prudent Warrior, both sailing under the Greek flag, were stopped by Iran's Revolutionary Guards over unspecified "maritime violations," the body said.





The Prudent Warrior oil tanker was one of two vessels seized by Iran's Revolutionary Guards on Friday

The ships are both Suezmaxes, a term for the largest ships that can traverse the Suez Canal, and had just come from Iraq's Basra oil terminal, loaded with crude, according to tracking data from MarineTraffic.com.

Athens said crews were 'held captive'

Hours after Friday's incident, Greece said the crew of both ships — 44 people between them — were being "held captive" after Iranian navy helicopters landed gunmen on the two tankers.

Athens said the seizure was "tantamount to acts of piracy," demanded the immediate release of the crews and called for the ships to be allowed to continue their journey.

Athens also notified all Greek ships in the Gulf and called on Greek citizens to avoid traveling to Iran.

Initially detained for its links to Russia, the tanker Lana was found to be carrying Iranian oil

The seizure of the two tankers was in apparent retaliation for the confiscation last month by Greece of an Iranian oil tanker — Lana — held off the Greek coast on behalf of the United States.

Russia-linked ship carried Iranian oil

The Lana and its Russian crew were later released after the oil cargo was removed, Reuters news agency reported on Thursday. Greek media said the Lana had only been stopped because the ship sought refuge in April from a powerful storm in a bay on the Greek island of Euboea.



© Thanassis Stavrakis/AP/picture alliance



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Authorities found that the tanker belonged to Russia's Promsvyazbank, a state-backed, formerly private Russian bank from Moscow, which is subject to EU sanctions. According to the reports, it later transpired that the tanker had been sold to a non-sanctioned Russian bank in March and was due to be released. Authorities then found that the tanker was carrying Iranian oil and the US authorities demanded that it remain confiscated, Greek media said.

A string of similar incidents

The latest incidents bear similarities to the seizure by Iran of a [British tanker near the Strait of Hormuz in 2019](#), two weeks after British forces detained an Iranian oil ship near Gibraltar, accusing it of shipping fuel to Syria in violation of European Union sanctions. Iranian hijackers also stormed and briefly captured a Panama-flagged asphalt tanker off the United Arab Emirates last year, and briefly seized and held a [Vietnamese tanker](#) in November. In addition, Iran last year seized and held a [South Korean-flagged tanker](#) for months amid a dispute over billions of dollars of frozen assets Seoul holds.

Conflict Zone - Was the Iran nuclear deal a 'historic mistake'?

Tensions between Iran and the West remain high over Tehran's 2015 nuclear deal, which is now in jeopardy after the US pulled out of the agreement in 2018. Tehran is [enriching more uranium](#), closer to weapons-grade levels than ever before, which has raised concerns that there could be no way of [reviving the deal](#).

EDITOR'S COMMENT: When you seize a Russian vessel with Iranian oil following a US request is not an act of piracy. When Iranians do the same it is piracy. Are we confused or the rest of us are simply stupid?

After Texas Shooting, Schools Around US Boost Security

Source: <https://www.voanews.com/a/after-texas-shooting-schools-around-us-boost-security-/6594330.html>

Always post-active; **NEVER** pro-active!

May 29 – In the aftermath of the elementary school massacre in Uvalde, Texas, schools around the U.S. have brought in additional security staff and restricted visitors as they deal with a new rash of copycat threats. For some families and educators, it all has added to uneasiness in the wake of the deadliest school shooting since the 2012 attack at Sandy Hook Elementary School.

Jake Green, 34, of Los Alamos, New Mexico, was jolted when he saw a plainclothes police officer for the first time while walking his 7-year-old daughter into school Friday morning. He grew up in Colorado, not far from where two Columbine High School students shot and killed 12 classmates and a teacher in 1999. Green remembers attending memorials and candlelight vigils as a fifth grader, but he's torn about whether having police at his daughter's school is best.

"In a way, I don't really feel any safer with police around," Green said. "Seeing the police there, it really made it seem like the worst possibility was even more possible today."

In El Paso, Texas, where a gunman killed 23 people in a racist 2019 attack that targeted Hispanics at a Walmart, schools are on edge. The El Paso Independent School District has already encountered some reported threats that turned out to be false. They were either "students joking or overly-sensitive parents," said Gustavo Reveles Acosta, a district representative.

"Our community is still raw from that incident," Acosta said. "It hits us in a pretty emotional way."

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The district, which has its own police department, has also stepped-up patrolling at all 85 campuses. Officers have been pulled from monitoring traffic or other duties. Schools already have updated camera surveillance systems. Visitors are required to ring a doorbell and show their identification before they can enter.

The district is making a point to look out for teachers' and students' mental health. A counseling team has been visiting every school to speak about the shooting in Uvalde. They are also urging people to talk in private about any distress.

Mia Baucom, a 15-year-old student at a Fort Worth, Texas, high school said it was surreal to think the Uvalde killings happened in her home state. It also stirred memories of a lockdown at her school two months ago that was prompted by a shooting.

"I'm a little more stressed out about it because just the fear of what if that happened at my school?" said Baucom, whose last day of school was Thursday. "Let's say we get more police officers. Most likely that's not going to stop people from going crazy and just shooting up schools."

Schools have ramped up police presence in a host of states, including Connecticut, Michigan and New York, after the shooting Tuesday that left 19 students and two teachers dead.

In Buffalo, New York, where a white gunman fatally shot 10 people in a racist attack in a supermarket May 14, the largest school district announced new security rules effective immediately. Any visitors — parents, siblings, vendors — must call ahead for approval. No exceptions will be made. They may be subjected to a search by a wand detector. Doors will be locked at all times.

In Jacksonville, Florida, the Duval County Public Schools' chief of school police banned backpacks or large handbags at any school through Friday, the last day of school. Small purses were allowed but could be searched.

A discredited threat against a middle school prompted a Texas school district 200 miles (320 kilometers) southeast of Uvalde to end the school year a week early. The Kingsville Independent School District announced Friday would be the last day of school. But students should not see any penalty for the premature end of the year.

"In light of the tragedy in Uvalde, there has been an enormous amount of stress and trauma. Unfortunately, more stress and trauma are added with 'copy-cat threats' that start circulating such as the one that was sent today for Gillett (Middle School)," Superintendent Dr. Cissy Reynolds-Perez wrote in a statement on the district's website.

It's clear staff and students nationwide are on edge as several reports of firearm sightings on campuses have popped up in the past few days.

Two Seattle-area schools went into lockdown Friday morning and police eventually recovered an airsoft gun. The Everett, Washington, schools then had their lockdowns lifted.

Two people were arrested Thursday after a Denver high school locked down its campus. Police found a paintball gun but no other firearms. Classes were canceled anyway.

Examining gun reform with x-ray vision

Laveil M. Allen, M.D. (radiologist in Nashville)

Source: <https://www.brookings.edu/blog/fixgov/2022/05/27/examining-gun-reform-with-x-ray-vision/>

May 27 – The recent school shooting in Uvalde, Texas, that left 19 children and two adults deceased reopened wounds of the Sandy Hook, Buffalo, and Parkland shootings for many Americans. Each of those 19 children excitedly left his or her home Tuesday morning to enjoy one of the last days of school, completely unaware the hours and minutes that followed would be their very last on Earth. Politics aside, we owe it to

As an emergency radiologist, at one of the nation's busiest level 1 trauma centers, I routinely utilize "x-ray vision" to save lives. In my chosen practice of medicine, black and white imagery is generated using x-rays to assist the diagnosis of life-threatening trauma or illness. This was the case in April of 2018, when I was directly involved in providing care for multiple victims of the [Nashville Waffle House mass shooting](#). This tragic event, like Uvalde, occurred at the hands of a gunman armed with an AR-15 (Armalite 15) military-style assault rifle and ultimately resulted in the loss of four innocent lives.

Let me first state, patients presenting to emergency rooms with firearm injuries are unfortunately a common place in America. As such, emergency radiologists, like me, are trained to develop proficient skills in recognizing and postulating penetrating ballistic injury pathways. A typical handgun leaves a very characteristic gray linear tract through soft tissues or organs, which correlates to the size and trajectory of the bullet. Small bullet fragments and bleeding may be seen in association with the gunshot injury, but general anatomy is often left recognizable.

In contrast, the injury patterns seen in relation to AR-15 military-style assault rifles are somewhat indescribable. **Bullets fired from these weapons exit the barrel at supersonic speeds that are 3x faster than conventional low velocity handguns.** The increased



velocity rate of these projectiles results in a cavitation effect on impact with the human body, such that the bullet causes a ripple wave of destruction to arteries, veins and soft tissues. Organs that experience high velocity gun injury are left eviscerated. Bony structures that are directly impacted by these ballistic missiles are reduced to rubble. The exit wounds associated with AR-15 firearms are often the size of grapefruits. Simply put, when Surgeons attempt life-saving measures in these cases, there is often nothing salvageable to fix.



Left, an X-ray of a leg showing a bullet wound delivered by an assault rifle used in combat. Right, an X-ray of a leg that sustained a bullet wound from a low-energy bullet, inflicted by a weapon like a handgun in Philadelphia. Credit...via Dr. Jeremy W. Cannon

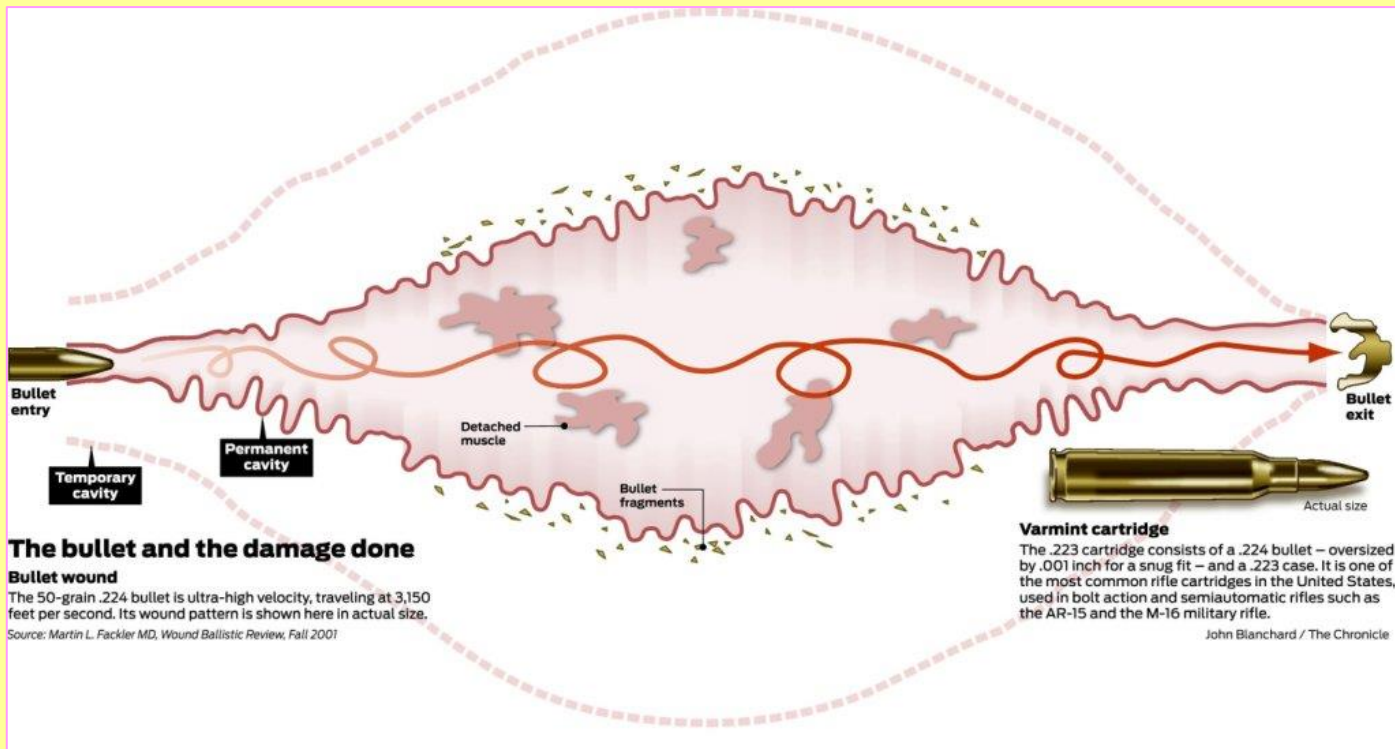
These weapons are often employed on the battlefield to exact the maximum amount of damage possible with the strike of each bullet. Witnessing their devastating impact on unsuspecting school children, grocery shoppers, and churchgoers is unfathomable. The level of destruction, disfigurement, and disregard for life that a high-powered assault rifle inflicts on the human body cannot be understated. Placed into perspective, many of the tiny Uvalde victims' bodies were so tattered and dismembered from their ballistic injuries, DNA matching was required for identification because physical/visual identification was not possible.

As a proud registered gun owner, I wholly support our Second Amendment's right to bear arms. I simply would like to suggest that supporting the right to bear arms in a responsible manner should not be a mutually exclusive ideation. Common sense gun reform that includes background checks and increases the age minimum to legally own military-style assault rifles should be immediately considered. In fact, we need to engage in a real, morally and civically driven debate about whether there is a need for military styled firearms in a civilized society at all.

While mental illness certainly plays a factor in these repeated horrific events, we must examine the policies that have allowed these weapons of destruction into the hands of the mentally ill. Not doing so and expecting a different result is akin to driving in circles at a dead-end cul-de-sac. If age limits were in place to prevent purchasing AR-15 style weapons to those under 21, the Buffalo and Uvalde shootings may have been avoided, given both perpetrators were only 18 years old. If proper



background checks were in place, the Buffalo shooter, who had recently undergone mental evaluation after a school shooting threat, may have been prevented from purchasing weapons to commit such a heinous act.



As we move forward, there is certainly added value for policymakers to hear directly from physicians, such as myself, who have witnessed the atrocities of military assault weapons on civilian bodies. Visualizing, first-hand, these black and white images of mass shooting victims may serve to bring a heightened perspective to their policy decisions. At the very least, these interactions would remove the anonymity of the gunshot victim's injuries and allow lawmakers to face the reality of their policy decisions – or non-decisions.

Let me close by stating, this is not a politically derived opinion piece. As a physician, I do not interpret CT's or MRIs from a red lens or a blue lens. Partisanship does not factor into my assessments or impressions of a ballistic injury's severity. The last name of the President holds no precedent over my medical observations. I just simply can no longer remain silent in a world that allows purchasing an AR-15 to be an easier task than finding baby formula.

For UN, A Single Mosque Attack Outweighs Countless Church Massacres By Raymond Ibrahim

Source: <https://www.meforum.org/63266/for-un-a-single-mosque-attack-outweighs-countless>

May 30 – The United Nations recently [named](#) March 15 as "international day to combat Islamophobia." That date was chosen because it witnessed one of the worst terror attacks on Muslims: on March 15, 2019, an armed Australian, Brenton Tarrant, entered two mosques in New Zealand and opened fire on unarmed and helpless Muslim worshippers; 51 were killed and 40 wounded. Not only has this incident been widely condemned throughout the West — and rightfully so. It has also caused the UN to single out Islam as needing special protection.

This response, however, raises a critically important question: if one non-Muslim attack on a mosque is enough for the UN to institutionalize a special day for Islam, what about the countless, often worse, Muslim attacks on non-Muslim places of worship? Why have they not elicited a similar response from the UN?

Consider some of the fatal Muslim attacks on Christian churches — many, to underscore the religious animosity, occurring just on Easter or Christmas — in recent years:

- [Sri Lanka](#) (Apr. 21, 2019): Easter Sunday, Muslim terrorists bombed three churches and three hotels; 359 people were killed and more than 500 wounded.



- [Nigeria](#) (Apr. 20, 2014): Easter Sunday, Islamic terrorists torched a packed church; 150 were killed.
- [Pakistan](#) (Mar. 27, 2016): After Easter Sunday church services, Islamic terrorists bombed a park where Christians had congregated; more than 70 Christians — mostly women and children — were killed. "There was human flesh on the walls of our house," a witness [recalled](#).
- [Iraq](#) (Oct. 31, 2011): Islamic terrorists stormed a church in Baghdad during worship and opened fire indiscriminately before detonating their suicide vests. Nearly 60 Christians — including women, children, and babies — were killed (graphic pictures of aftermath [here](#)).
- [Nigeria](#) (Apr. 8, 2012): Easter Sunday, explosives planted by Muslims detonated near two packed churches; more than 50 were killed, and unknown numbers wounded.
- [Egypt](#) (Apr. 9, 2017): Palm Sunday, Muslims bombed two packed churches; at least 45 were killed, more than 100 wounded.
- [Nigeria](#) (Dec. 25, 2011): During Christmas Day services, Muslim terrorists shot up and bombed three churches; 37 were killed and nearly 57 wounded.

A December 2016 bombing inside St. Mark's Coptic Cathedral in Cairo killed 25 and injured 49, mostly women and children.



- [Egypt](#) (Dec. 11, 2016): An Islamic suicide bombing of two churches left 29 people killed and 47 wounded (graphic images of aftermath [here](#)).
- [Indonesia](#) (May 13, 2018): Muslims bombed three churches; 13 were killed and dozens wounded.
- [Egypt](#) (Jan. 1, 2011): Muslim terrorists bombed a church in Alexandria during New Year's Eve mass; at least 21 Christians were killed. According to [eyewitnesses](#), "body parts were strewn all over the street outside" and "were brought inside the church after some Muslims started stepping on them and shouting Jihadi chants," such as "Allahu Akbar!"
- [Philippines](#) (Jan. 27, 2019): Muslim terrorists bombed a cathedral; at least 20 were killed, and more than 100 wounded.
- [Indonesia](#) (Dec. 24, 2000): During Christmas Eve services, Muslim terrorists bombed several churches; 18 were killed and over 100 wounded.
- [Pakistan](#) (Mar. 15, 2015): Muslim suicide bombers killed at least 14 Christians in attacks on two churches.
- [Germany](#) (Dec. 19, 2016): Near the Kaiser Wilhelm Memorial Church in Berlin, a Muslim man drove a truck into a Christmas market; 13 were killed and 55 wounded.
- [Egypt](#) (Dec. 29, 2017): Muslim gunmen shot up a church in Cairo; nine were killed.
- [Egypt](#) (Jan. 6, 2010): After Christmas Eve mass (according to the Orthodox calendar), Muslims shot six Christians dead as they exited their church.
- [Russia](#) (Feb. 18, 2018): A Muslim man carrying a knife and a double-barreled shotgun entered a church and opened fire; five people — all women — were killed, and at least five wounded.
- [France](#) (July 26, 2016): Muslims entered a church and slit the throat of the officiating priest, 84-year-old Fr. Jacques Hamel, and took four nuns hostage until French authorities shot the terrorists dead.
- [Nigeria](#) (June 05, 2022): Islamic State West Africa Province (?) terrorists opened fire on worshippers at St. Francis Catholic church in southwestern Nigeria (Ondo state) on Sunday killing 40 people while they detonated explosives as well.

The above list, it should be noted, is hardly comprehensive; there have been many similar attacks on churches — in Egypt alone, [here](#), [here](#), [here](#), [here](#), [here](#), and [here](#). But because there were no or only few fatalities, they received little, if any, coverage in the Western press.

This dismissal is especially true for those remote — and, apparently, in the views of Western media — "unimportant" regions, such as Nigeria, where Christians are being purged [hourly](#) in a Muslim-produced [genocide](#). Thus, after noting that Muslims have eliminated 60,000 Christians between just 2009 and 2021, an August 2021 [report](#) states that, during that same time frame, Muslims also destroyed or torched 17,500 churches and 2,000 Christian schools. How many undocumented souls perished in those largely unreported terror attacks?



1485 yıldır ayakta olan
Ayasofya, hani saygı,hani
kültürel mirası koruma; daha
kötü şeyler olmadan lütfen
engel olunsun. İbadet etmek
bu değil...

AYASOFYA

Barbarians

Hagia Sophia
Taking pieces as souvenirs!

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The list above of fatal Muslim attacks on churches does not include any of the many that were botched, for example, a March 28, 2021 [attack on a church](#) during Palm Sunday service, where only the suicide bombers — a Muslim man and his pregnant wife — died.

In these fatal church attacks alone, Muslims have massacred hundreds of Christians, not even including the thousands of Christians and other Western people massacred in non-church attacks, including [9/11](#), [London's 7/7/2005](#) transit system attacks, Paris's [Charlie Hebdo](#) and [Bataclan](#) Theater attack, [Barcelona's](#) Las Ramblas attack, [Nice's July 14](#) attack, [Toulouse's](#) Jewish school attack, [Berlin's](#) Winter Market and [Copenhagen's](#) terror attacks, to name just a few.

Therefore, the original question: If one non-Muslim attack on a mosque, which claimed 51 Muslim lives, was enough for the UN to establish an "international day to combat Islamophobia," why have so many Muslim attacks on churches, which have claimed thousands of Christian lives, not been enough for the UN to establish an "international day to combat Christianophobia"?

Put another way, why is one immensely reprehensible but lone incident of a Western man killing 51 Muslims of far greater importance to the UN than the countless instances of Muslims killing untold numbers of Christians?

If ever cornered and forced to explain this discrepancy, no doubt the UN would say that, unfortunate as all of those church and other attacks might be, they do not reveal a pattern, the way "Islamophobia" does; that church attacks are all byproducts of terrorism (which reportedly is in no way connected to Islam) fueled by economics, territorial disputes and inequality, in a word, "grievances." Fix those temporal problems and attacks on churches will cease.

In reality, the exact opposite appears to be true: whereas the New Zealand mosque attack was indeed an aberration — evidenced by its singularity — Muslim attacks on churches are extremely common, not only now but throughout [history](#). In Turkey, for example, one can see what became of the great Christian Byzantine Empire after it was first invaded by Arabs in the seventh century, to when Constantinople fell to Sultan Mehmed II in 1453, and on to the early 20th century [genocide](#) of Armenians, Assyrians and Pontic Greeks.

As can be seen [here](#), seldom does a month pass in the Muslim world today, and increasingly in the West, without several assaults on, or harassments of, churches taking place. While some of these, fortunately, may not have been fatal, they all underscore Islam's indisposition to [churches](#), and, it would seem, to any religious [structure](#) or [symbol](#) that is not part of Islam.

Revealingly, those who terrorize churches often share little with one another: they come from widely different nations (Nigeria, Iraq, Philippines, etc.), are of different races, speak different languages, and live under different socio-economic conditions. The only thing they *do* share—the one thing that, it seems, leads them to assault churches and murder Christians — appears to be their [religion](#). In other words, Muslim attacks on churches seem to have an ideological source, are systemic, and therefore an actual, ongoing problem that the international community needs to highlight and ameliorate.

Yet the UN would have us ignore and brush aside all these ongoing massacres of Christian church worshippers as unfortunate byproducts of misplaced "Muslim grievances" — and instead fixate on one solitary, if admittedly horrendous, incident.

For the UN, evidently, one incident constitutes a "pattern" — one in dire need of recognition and response. The response is to silence, ignore or [attack](#) all those who expose the heavily documented real pattern of abuse and violence against non-Muslims — which, make no mistake, is *precisely* what "combatting Islamophobia" is all about.

[Raymond Ibrahim](#) is the Judith Friedman Rosen Fellow at the Middle East Forum.

EDITOR'S COMMENT: Just another case proving that the UN is becoming a bad joke serving nothing ...

7 ways to stop this mass shooting madness, as proposed by Arizonans

Source: <https://eu.azcentral.com/story/opinion/op-ed/2022/06/02/how-do-we-stop-mass-shootings-arizonans-offer-7-ideas/7458848001/>

June 02 – America is reeling from gun rampages in Texas, New York and California in the past several weeks. Arizona Republic readers and our Facebook group contributors told us what they would do to stop this madness.



ICI C²BRNE DIARY – June 2022

Ensure every kid can manage their issues

Mark Williams, Phoenix: We want to blame the gun. It's easier than looking at ourselves. These people (who commit rampage shootings) didn't hear voices. They just had a problem with dealing with their anger. That means we as parents, as relatives, as friends failed them.

And we don't want to look at that issue. It is easier to blame something that has no brain, no ability to kill without direction, no ability to function at all without some human operating it. We are producing children who are growing up to be killers because they cannot manage their issues. So, they pass it on to the rest of us. That is where we need to focus and spend our money.

Require permits, stop concealed carry

Marjorie Conder, Phoenix: Make sure everyone who buys a gun has a permit, which will not be issued until the buyer can prove he has had instruction in using it safely. Put a stop to the concealed-carry laws that permit a shooter to hide the gun he plans to use.

Raise the age to buy a gun to 21

Roy Miller, Phoenix: How about raising the age to buy a gun to 21 and, at the same time, raise the voting age to 21. Democrats will like the first part and Republicans will like the second part. The Democrats get fewer people who can buy guns and Republicans get older, presumably more educated voters, who we all know are more likely to vote Republican.

Form community networks to keep watch

Emily Matyas, Tempe: We need *both* gun control laws and better security at schools as well as other public areas. Congress should not treat this as an either/or proposition. Because guns are being used as weapons of mass destruction, Americans must sacrifice some freedoms to keep our society safe.

I also propose forming community networks, much like Neighborhood Watch programs, to keep an eye out for suspicious behavior near grocery stores, churches, temples, theaters, etc. All Americans deserve the freedom to go about their day in peace.

Ban the sale of body armor

Jude Clark, Buckeye: This really isn't hard. If you're not old enough to legally drink, you should not be old enough to legally purchase firearms. Or ammunition. Limit the size of magazines. Ban the sale of body armor to anyone outside of law enforcement.

Make schools warm, open, and welcoming

Steven L. Klein, Laveen: "Harden" schools? Arm teachers? (Oh yes, by all means, give an overworked, under-resourced educator even more responsibility). Schools should be warm, open and welcoming. Not a fortress with armed teachers. We need kids to be eager to go to school. Not an armed compound.

Rather than buy into the gun lobby and politicians caterwauling that "they are coming for our guns," we need to take a long, hard look at the root causes of gun violence. Get past the hysteria and work in good faith to protect the rights of gun owners, yet pass some common-sense laws that protect us all.

Focus on gun safety, safe storage

Kathleen Noble, Mesa: We can better educate gun owners not only on how to safely use a firearm but on how to practice safe storage which will reduce teen suicides. Veteran suicides can be reduced by increasing grants and funding for veteran support organizations and by improving mental health support and care.


EDITOR'S COMMENT: I was expecting to read (1) reasoning for having a gun (other than the usual "protect my house"; (2) psychiatric evaluation of the person requesting a permit to buy a gun; (3) ban on assault rifles (not expecting to have a war with a burglar! and (4) limit the number of guns per person to one. As for schools' security, there are many things to be done other than armed teachers. Instead, I read about no real opposition to guns with a sauce of worry!

UPDATE (June 03): Ohio is set to enact a [law](#) that allows teachers and other staff to be armed with guns in schools once they have completed up to 24 hours of initial training. The training method would be of interest to the military spending weeks to teach



soldiers how to use their weapons! Decisions taken under pressure are no good decisions. Pro-active measures give much better results than post-active flowers and tears!

War is not the only problem EU citizens are facing





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10:00 AM – 01 June 2022

Ukraine is a black market in transplantation

Source: <https://chernayakobra.ru/ukraine-is-a-black-market-in-transplantation/>

May 31 – The Investigative Committee of the Russian Federation became interested in video footage from the Red Cross base in Mariupol that appeared on Telegram channels. In the plot, Russian fighters study finds that are strange for a humanitarian mission. For example, detailed and colorful instructions for adults and children for a wide variety of weapons. Reports have also been found of the purchase of incubators, presumably for use in biological laboratories. But the most terrible find is children's medical records that do not contain information about diseases. On the contrary, the maps contain data on the healthy organs of children. This is what gave the soldiers reason to assume that the Red Cross was interested in children not for the treatment of diseases, but for the removal of organs.

The terrible finds were handed over to the investigators of the Russian Federation and the DPR. The Investigative Committee of Russia has already issued a statement that all the data will be studied and will receive an appropriate assessment.

So far, there is no official conclusion, experts, and simply caring people, express their versions and offer to recall the events of the recent past. Thus, the historian and political scientist Anton Bredikhin recalled that the territory of Donbass controlled by Kyiv was, until recently, a link in the chain that closed in Kosovo. And in the "chain" they are busy trading in human organs. Therefore, Bredikhin does not exclude that in Mariupol "appropriate activities could be carried out and children could be prepared for further removal of their organs". Of course, with the preliminary murder of the "donor".

The facts speak for themselves. However, the citizens of Ukraine, who prefer to live in the world of fairy tales, have not noticed the facts for a long time and dismiss arguments. And it was worth thinking at least in 2018, when on May 17 the Verkhovna Rada adopted Law No. 2427-VIII "On the use of transplantation of human anatomical materials." Even then it was said that Ukraine was being turned into a black market for transplantation, but Ukraine jumped and did not notice anything.

A little more time passed, and the Verkhovna Rada returned to the same issue, adopting clarifications to law No. 2427-VIII in the form of law No. 5831 "On the regulation of the issue of transplantation of human anatomical materials." Ukraine, meanwhile, continued to ride, hate the "orcs", fire at the "Colorados" and again did not understand anything. Meanwhile, the real nightmare for Ukraine is not a Russian special operation, but precisely such laws adopted by the Verkhovna Rada.

What do the new legal norms of Ukraine imply?

Since December last year, a person whose doctors have confirmed brain death or cardiac arrest can become an organ donor. Moreover, the relatives of the deceased or the person who has undertaken the obligation to bury the alleged donor have the right to give consent



to the removal. In practice, this means that the leadership of hospitals, prisons, military units, orphanages and other things of the same kind can dispose of the organs of their wards.

Thomas Dunning once said: *“Once there is sufficient profit available, capital becomes bold. Provide 10 percent and capital is ready for any use, at 20 percent it becomes lively, at 50 percent it is positively ready to break its head, at 100 percent it defies all human laws, at 300 percent there is no crime that it would not risk, even under pain of the gallows. Proof: smuggling and the slave trade”*. Let’s add here: trade in drugs and human organs. And a lot will become clear. If we are talking about a profit of 300 percent or more, a death certificate becomes an empty formality.

Under Law No. 5831, not only public clinics, but also private ones received the right to remove organs. And consent to donation can be given electronically.

Since 2014, Ukrainians have been convinced that the cities of Donbass have been occupied and shelled by Russia. Such confidence is explained very simply: why should Ukraine fire at its own citizens? But it turns out that the shelling of peaceful cities is not the worst and strangest thing that Ukraine does in relation to its own citizens. And it’s time for Ukrainians to ask themselves: why and why did the country’s parliament simplify the conditions for the removal of healthy organs from “citizens of their country” as much as possible? This was not done by Russia, not by “quilted jackets”, not by “Colorados” and not by “orcs”. People’s deputies voted to make it easier to gut Ukrainians. After that, the law was approved by the president.

As soon as Russia launched a special military special operation in Ukraine, Israeli doctors flew there as a matter of urgency. Naive on the verge of idiocy, Ukrainians began to sneer: *“Look at these faces. This is what Israeli doctors and paramedics look like when they go to Ukraine. They landed in Romania, crossed the border into Moldova to get to us. It turns out that the Jews go to “Nazi” Ukraine in order to save as many “Nazis” as possible who suffered from the “liberators”? Something in Putin’s puzzles didn’t work out”*.

No, everything worked out just fine. Especially if you remember the processes against Israeli transplant doctors. For example, in Israel itself in 2018, local doctors were convicted of illegal organ transplantation. By deceit and threats, these representatives of the most humane profession forced the Israelis to become donors. At the same time, the donation fee was not paid extra, the lives of patients were endangered. And the most interesting thing is that the main defendant, who was found guilty following the results of the investigation, had previously distinguished himself ... in Ukraine. In October 2007, Israeli doctors were arrested in Donetsk. The Deutsche Welle radio station, unwanted in Russia, reported then that the majority of donor organ transplants were performed by “black transplantologists” at the Kidney Transplant Center in Donetsk. The charges, however, were later dropped. But the doctors themselves were extradited to Israel, where 10 years later they were convicted of similar crimes.

It is also appropriate to recall the numerous stories about the disappearance of people in Ukraine, about corpses found in mass graves without internal organs. Thus, in 2014, the DPR military found mass graves in the area of mine No. 22 Kommunar near Donetsk, in the village of Nizhnyaya Krynka, and in other settlements. At the same time, Alexander Zakharchenko stated that *“I personally saw two such burials: the chest was cut and the abdominal cavity was torn. These are the consequences of either surgery or injury. But we have information that the National Guard of prisoners and even their wounded is “disassembled” into organs”*.

Finally, it is worth remembering that Western transplantologists work in the territory of Donbass controlled by Kyiv. On the net, you can find video revelations of a former SBU officer who told how he was sent to the ATO zone as part of a transplant team. The group was led by a citizen of the Netherlands Elisabeth Debru, who forced *“medics remove organs without the consent of the wounded, they were recorded as “missing”. Points of work – Kramatorsk, Severodonetsk, Debaltseve. Gutted corpses were buried in mass graves. In 7-10 minutes, she could cut out a couple of kidneys from a wounded or burned soldier. During the shelling of the city of Popasnoe, she cut out the kidney and spleen from a 12-year-old girl who lost consciousness from a mine explosion and her own father (the mother with her legs torn off was sent to the medical center “for a complete cutting into organs)”*.

Of course, for a Ukrainian, in whose imagination the whole world is doing nothing but trying to help Ukraine, such revelations will seem like wild lies. However, do not forget that the market for “black transplantation” exists without Ukraine. Until now, the facts of forced removal and sale of organs in the Balkans, the Middle East, and Africa remain uninvestigated. Especially for those who consider the stories about transplantologists to be Russian propaganda, we will refer to the Italian magazine *l’espresso*. In 2017, the magazine published a story by an Iraqi soldier about how real organ theft flourishes in the Middle East. The narrator had a kidney stolen from a private Turkish clinic, so he spoke with skill. He assures that the black market for transplantology is thriving, and the money is spinning there such that the fight against transplantologists is virtually impossible. There would be a desire – to reveal this mafia under the force of law enforcement officers. But such money and structures are involved in the process that one can hardly count on publicity.

You can believe or not believe in such revelations (by the way, there are quite a lot of them), it does not matter. It is archival to thoroughly check the facts about Ukraine and make them public. After all, the West is on its hind legs because it is afraid of publicity. And if Russia, in



spite of everything, publishes and makes available to the world community data on biolaboratories, experiments on humans, organ harvesting, and finally on the participation of Western military and doctors in the conflict in Ukraine, it will be possible to consider that this time the information war we didn't lose.

Moldova—Putin's Next Target?

By James Pettit

American Foreign Service

Source: <https://afsa.org/moldova-putins-next-target>

June 2022 – As I write this article, we are seeing increased focus on a possible expansion of Russian aggression in Ukraine into the neighboring country of Moldova. Just recently, Russian General Rustam Minnekayev suggested that successful seizure of the entirety

of Ukraine's Black Sea coastal regions would allow access to the Russian-occupied breakaway section of eastern Moldova known as Transnistria (or Transdniestria).

Moldova is neither in NATO nor the European Union and would appear to be extremely vulnerable to a Russian invasion. It is a small country, relatively poor in human and material resources, and its military and tiny population (thousands already have immigrated to the West) would offer little effective resistance to a determined Russian advance. The result of an advance would put Russian forces face to face with Romania, a NATO country with strong historical and cultural ties to Moldova.

I am among those who believe that Russian President Vladimir Putin's overarching goal is restoration of the Russian Empire and consolidation of a cultural myth known as the Ruskiy Mir—a unique Russian space consisting of land and peoples who allegedly are an inseparable constituent component of a superior Russian culture and way of life. In this regard, the importance of Kievan Rus' (i.e., Ukraine) to the origin story of Russia is paramount. Putin is understandably embarrassed by the encroachment of NATO up to Russia's borders and has punished Moldova, Ukraine and Georgia for even contemplating NATO membership, but a military threat from NATO is not really his motivation.

Rather, his sole desire for a legacy is to restore to the greatest extent possible the imperial grandeur of a Russian-dominated region that would resemble the Soviet state he once served as a KGB agent and, more important, establish the dominance of a specifically Russian nation united by one church, one language and one culture. In other words, this is a cultural confrontation. Putin's anger with NATO encroachment is not based so much on a perceived security threat as on an embrace of Western values over Russian ones.

While Russia is performing poorly on the military, strategic and logistical front in Ukraine, the real challenge and focus for Putin is linguistic and cultural hegemony. Russification was a tactic used in czarist times to conquer through forced assimilation. It is still Putin's preferred strategy. He denies that Ukraine was ever a separate nation and claims



that the Ukrainian language is a “peasant dialect” of Russian. His current tactic of exiling Ukrainians from occupied territories to the interior of Russia is also a practice from czarist times and creates facts on the ground by simply relocating non-Russians to Russia proper.

After the USSR's Collapse

My involvement with Russia spans more than four decades. Following my first trip as an undergraduate in 1977 to study Russian in Moscow, I served at our embassy there three times in three different decades (1980s, 1990s and 2000s). I watched the final days of the pre-Gorbachev Soviet Union, as well as the immediate aftermath of its collapse in the early 1990s.

I then saw Putin's rise in this century and the general relief and approval throughout Russia as he curbed the power of organized crime, brought a measure of prosperity and restored a modicum of previously shattered national pride. As a witness to the economic and psychological devastation brought to Russia after the collapse of the Soviet Union, when formerly content Muscovites were reduced to selling their own possessions on street corners in order to eat, I understood the growing optimism among everyday Russians as Putin reasserted a sense of order and power.

Although this optimism was overshadowed by the war in Chechnya, domestic terrorism, the persistence of corruption and continued poverty outside the major cities, thousands of Russians had a taste of Western products and lifestyles. For the average Russian, this was enough; but for Putin, the attraction to the West was a source of shame, jealousy and anger. Coupled with this resentment was anger toward any kind of domestic resistance. His near destruction of the Chechen capital of Grozny foreshadowed how he would deal with any resistance to his dream of a new Russian Empire.

Meanwhile, Ukraine and Moldova had significantly different experiences after the collapse of the Soviet Union. I served as deputy chief of mission in Kyiv from 2007 to 2010 and saw the flowering of an empowered Ukrainian identity under President Viktor Yushchenko and Prime Minister Yulia Tymoshenko. Although Kyiv and most of eastern and southern Ukraine at that time (and, to be honest, even today) were largely Russian-speaking, the Orange Revolution and government policies fostering Ukrainian language and culture took root and had a great impact, especially on the new post-Soviet generation. Alas, Yushchenko was horribly poisoned and disfigured by probable Russian agents and might well have been physically unable to see through his transformative policies of a new Ukraine fully.

Yushchenko's illness, as well as unproductive infighting with an overly ambitious prime minister, pervasive corruption and a struggling economy, led to widespread disillusionment and the shocking election of pro-Russian Viktor Yanukovich to the presidency in 2010. As I accompanied our new ambassador, John Tefft, to his introductory meetings with the new Yanukovich Cabinet, our Ukrainian interpreter and I were flabbergasted as nearly each new official made their remarks in Russian rather than Ukrainian. Ukraine's trajectory toward a pro-Western, European future would have ended there if not for the more violent 2014 Euromaidan Revolution that led to Yanukovich's ouster and flight to Russia. This experience led to a solidly pro-Western and, more important, completely Ukrainian reality.

Different Paths

In Moldova, things were more complicated. A violent civil war that resulted in establishment of the breakaway territory of Transnistria in Moldova's eastern region posed a significant challenge for the future political development of the new Republic of Moldova. While Russian troops took charge as sanctioned “peacekeepers,” a multinational forum chaired by the Organization for Security and Cooperation in Europe known as the “5 plus 2” (OSCE, Russia, Ukraine, Moldova and Transnistria, plus the U.S. and E.U. as observers) was eventually established to work toward a resolution of the issue. To date, almost 2,000 Russian troops are in Transnistria.

As happened with the Budapest Memorandum (which established Russia as a “guarantor” of Ukraine's security once the latter renounced its nuclear arsenal) and the Minsk Agreement (which includes Russia in any resolution of its 2014 seizure of Crimea and occupation of the Donbas), Russia has remained in the bizarre role as a guarantor of the peace in regions it occupies and threatens. This has helped Putin cultivate his desired image as an important global, or at least regional, player and gives him leverage against the West on issues close to his heart.

Why did Transnistria opt out of Moldovan independence? The answer is twofold: Unlike the rest of Moldova, Transnistria was not part of the interwar Kingdom of Romania; and it had a larger concentration of ethnic Russians. There was a significant Moldovan/Romanian population in the breakaway territory, but many fled during the post-Soviet conflict.

Meanwhile, the rest of Moldova struggled with creation of a national identity. In this regard, the challenges were far greater than in Ukraine, where a sense of Ukrainian identity had existed for centuries. In Moldova, national identity was inextricably linked with Romania.



While I was ambassador in Moldova (2015-2018), Romania actively participated in a wide range of Moldovan educational and cultural efforts to instill a strong sense of Romanian historical, linguistic and cultural identity.

When I once suggested on a Moldovan radio program celebrating the nation's independence that Moldova had its own unique historical and cultural legacy that argued for its continued independence, I experienced a fierce backlash (more in Romania than in Moldova) by Romanian nationalists who to this day insist that the Republic of Moldova is properly part of Greater Romania. While most Moldovans reject this overreach, the affinity for all things Romanian remains strong and has, in my opinion, stalled a stronger sense of national identity and driven a wedge between the Romanian-speaking majority and other ethnic minorities in Moldova, most notably in Transnistria.

I worked hard as ambassador to improve American relations with Transnistria. I developed a cordial relationship with the current "president," Vadim Krasnoselsky, and his "foreign minister," Vitaly Ignatiev. I hosted Transnistrian businesspeople and exporters who made forays into the U.S. market. The embassy hosted and participated in numerous academic and cultural exchanges and events in Transnistria. We even had some sporadic dealings on both security and intelligence issues. That said, neither Transnistrian authorities nor residents had any interest in giving up their close relationship with the Russian Federation, which still includes subsidies and fairly robust military protection.

The recent explosions reported in Transnistria targeting police and infrastructure targets have all the hallmarks of a "false flag" operation designed to encourage Russian intervention. More recently, there were reports of an armed assault on the Soviet-era munitions storage facility in Cobasna, also in Transnistria. Cobasna poses both a safety threat to surrounding villages as well as a possible attractive military objective for invading Russian forces. Given the near total reliance of Transnistria on Russian largesse, it is unlikely that the Transnistrians would in any way block such intervention.

Moldova's Vulnerability

As in Ukraine, Moldova is making progress in fostering a pro-Western society. After years of corruption under various oligarchs, Moldova recently elected a pro-E.U. president, Maia Sandu. She replaced the very pro-Russian Igor Dodon, whose party's campaign slogan had been "Together with Russia." Per capita, Moldova has taken in more Ukrainian refugees than any other nation. A neutrality clause in its constitution has thus far prevented Chisinau from applying for NATO membership, but it is vigorously seeking to accelerate its membership in the E.U. With neither E.U. nor NATO membership, Moldova's vulnerability to Russian aggression is palpable and cause for great concern.

Even were Russia not to invade Moldova beyond the Nistru (or Dniester) River (i.e., beyond the security zone demarcating Transnistria), the breakaway territory would be a logical western anchor to Moscow's desired control of Ukraine's southern flank—an anchor that, in my perception, would welcome a more direct relationship with the Russian Federation. As a territory recognized by no one, not even by Russia, as a sovereign country, many, if not most, Transnistrians crave the prospect of enhanced Russian protection and recognition.

While Moldova's official stance and that of the OSCE-chaired 5 plus 2 is the ultimate reintegration of Transnistria, most Moldovan citizens I spoke with had little interest in Transnistria and considered it a foreign country. Therefore, the main obstacle for the Russians at this point in time—albeit a significant one—is the Ukrainian port of Odesa (or Odessa), which by all accounts will put up stiff resistance to the Russians.

This supposition leads to the question posed by this article: Will Russia invade Moldova? Only Putin knows the answer. On its face, an attack on this tiny nation would not present Russia with anything near the difficulties of its ongoing, halting efforts in Ukraine. What I often heard as ambassador, however, gives rise to an alternative possibility. Given Romania's intensely close relationship with Moldova, would this NATO country sit by as Russia takes over Chisinau? What would the impact be for other NATO allies were Romania to dispatch troops to Moldova?

Individual member nations of NATO have engaged in military combat outside the NATO region for various political and strategic purposes over the years. Such "adventures" in a third country fall outside the North Atlantic Treaty, but are not completely without risk of drawing NATO into a conflict should escalation lead to consequences that might require a response by other NATO members under Article 5.

Hopefully, these troubling possibilities will give pause to Putin as he contemplates achievement of his own feverish dream of a new and very destructive Russian world order.

James Pettit served in Moscow three times in addition to a number of other overseas posts. He was deputy chief of mission in Kyiv (2007-2010) and ambassador in Chisinau (2015-2018). He retired in 2018 after 38 years in the Foreign Service.



EDITOR'S COMMENT: It seems that some diplomats indulge in war scenarios. After almost forty years in the Foreign Service writing that Russia is losing the war and that it will invade Moldavia implying that there is one country that is enjoying killing its military personnel and consuming its weapons and force without a single sentence about the root cause of the Ukrainian conflict, is obscure (to be polite).

USA: House Passes Gun Control Legislation

Source: <https://www.nytimes.com/live/2022/06/08/us/gun-violence-hearing-ualde-buffalo>

June 08 – After a morning of emotional testimony from survivors of recent gun violence and experts, lawmakers voted on measures that would curb access to firearms, largely along party lines.

A divided House on Wednesday approved a wide-ranging package of gun control legislation in a party-line vote, but the measures were all but certain to go nowhere in the evenly divided Senate, where negotiations continued on more modest proposals that could draw the bipartisan support necessary to move forward.

The **223-to-204 vote** came hours after parents and children affected by mass shootings across the country — including an 11-year-old from Uvalde, Texas, who survived a massacre at her school by smearing herself in a classmate's blood and pretending to be dead — delivered wrenching testimony to a House committee, urging Congress to act on gun violence. In searing remarks, Dr. Roy Guerrero, a pediatrician who treated many of the victims in Uvalde, described to lawmakers how he saw children's bodies "pulverized" and "decapitated" by bullets.

But the wrenching testimony quickly gave way to political reality on Capitol Hill, where Republicans split bitterly with Democrats over their gun control proposals, both in the committee and during votes on the legislation later in the day.

The bill passed on Wednesday would prohibit the sale of semiautomatic rifles to people under the age of 21, ban the sale of magazines that hold more than 15 rounds of ammunition, and establish stricter requirements regulating the storage of guns in homes.

Democratic leaders broke the package into its component parts, forcing House Republicans to take a vote on each of the seven provisions to put them on the record against every proposal. The provision to close a loophole and effectively ban bump stocks garnered the most bipartisan support, with 13 Republicans voting to support the measure. The measure to raise the age to 21 to purchase semiautomatic rifles garnered 10 Republican votes in favor, though two Democrats opposed it. The section of legislation banning high-capacity magazines — defined by Democrats as carrying 15 rounds or more — picked up relatively scant support in the House, with only four Republicans supporting the provision, and four Democrats opposing it.



USA: 233 Mass Shootings in 152 Days of 2022

Democrats underscored the urgency of moving quickly to enact stricter gun control laws, pointing to the [killing of 19 children and two teachers](#) at Robb Elementary School in Uvalde, and the [racist shooting massacre in Buffalo](#) that had claimed the lives of 10 Black people just 10 days earlier. Both were carried out by 18-year-old gunmen using legally purchased AR-15-style weapons.

"It's unacceptable that in the United States of America, gun violence is the leading cause of death for children," Representative Hakeem Jeffries of New York, the No. 4 Democrat, said at a news conference at the Capitol. "Isn't it reasonable to do everything we can to ensure those guns don't fall into the hands of individuals intent on inflicting carnage on children?"

But the fierce debate on the House floor reflected the vast gulf between the two parties on gun control. House Republicans stayed united in opposing the legislation, casting it as an ineffective remedy to mass shootings and claiming it would restrict the rights of responsible gun owners.

Republican leaders had advised their members to vote the measures down, and reminded them that a coalition of conservative groups, including Heritage Action and the National Rifle Association, would be rating lawmakers on their votes.



“The speaker started by saying this bill is about protecting our kids,” said Representative Jim Jordan of Ohio, the top Republican on the Judiciary Committee. “That is important — it sure is. But this bill doesn’t do it. What this bill does is take away Second Amendment rights, God-given rights, protected by our Constitution, from law-abiding American citizens.”

Earlier in the debate, a furious Representative Jamie Raskin, Democrat of Maryland, accused Republicans of advancing a “completely false vision of the Second Amendment.”

“Take responsibility for your irresponsible position,” he thundered at Republicans from across the House floor.

Representative Joaquin Castro, Democrat of Texas, drew on Dr. Guerrero’s testimony, asking his colleagues to “imagine for a second that a shooter with an AR-15 goes into your child’s school” and “leaves a hole the size of a basketball in their chest, or leaves their head decapitated off their body.”

“Ask yourself what you would ask of the people who represent you,” Mr. Castro said. “Would their thoughts and prayers be good enough for you if that happened to your child? Would them being worried about their primary election be OK with you?”

EDITOR’S COMMENT: Bloodshed after bloodshed proves that Americans love their guns more than their children and fellow countrymen/women (since it is almost sure that the bill will not win Congress). And the administration does not have the power to enforce changes because democracy rules – or at least this is what they think! Many gun owners indeed keep weaponry for a specific reason that is the protection of their property and family from intruders of any kind. It is also true that many psychologically unstable people in our close environment can trigger a massacre for practically no reason. Since there is no way to change the latter it is better to minimize possession, quantity, and age to play with the odds of future disasters. Otherwise, let it be an armed jungle and those that will be lucky enough will survive.

Children express devotion to the Iranian regime in an İstanbul mosque, giving a military salute to Khomeini

By Levent Kenez (Stockholm)

Source [+video]: <https://nordicmonitor.com/2022/06/children-swore-allegiance-to-the-iranian-regime-in-an-istanbul-mosque-giving-a-military-salute-to-khomeini/>

June 07 – Uncommon at a mosque in İstanbul, young children sang military songs at a ceremony commemorating the 33rd anniversary of the death of Iran’s Islamic revolution leader Ayatollah Ruhollah Khomeini. Attended by Turkish and Iranian Shiite clerics, the ceremony also hosted a controversial speaker who was previously imprisoned for being an Iranian operative.

At the ceremony held on Sunday at the Imam Zin al-Abedin Mosque in İstanbul’s Bağcılar district and organized by the pro-Iranian Ehl-i Beyt Scholars Association (EHLADER) and the Hatt-ı İmam Platform, segregated boys and girls in uniforms sang the epic anthem “Salaam Fermandeh” (Commander), which was written for Khomeini, in Turkish and Farsi.

A video of the children saluting during the anthem was interestingly distributed by the Tasnim news agency, which is associated with the Iranian regime.

Media organizations affiliated with the Iranian state do not usually report on events organized by Shiites in Turkey in order not to attract negative reactions from the public.

Photos of Khomeini and Iranian supreme leader Ali Hosseini Khamenei were hung in the mosque for the ceremony. In Turkey, which consists of mostly Sunni Muslims, it is strictly prohibited to hang photographs in mosques.

Members of the Turkish ruling party recently held several political meetings in the mosque, arousing the ire of many. However, children had never before been seen singing military



songs under pictures of Iranian leaders. The Zin al-Abedin Mosque is one of 40 Shiite mosques in Istanbul. The overwhelming majority of mosques in Turkey are under the control and supervision of the Religious Affairs Directorate (Diyanet).

«Правда на нашей стороне». Николай Патрушев — о сроках спецоперации
"The truth is on our side." Nikolay Patrushev (Head of Russian Secret Service & Secretary of Russian Security Council) - about the timing of the special operation.

May 24, 2022

Source (in Russian): https://aif.ru/politics/world/pravda_na_nashey_storone_nikolay_patrushev_o_srokah_specoperacii

Critical Global Water Questions

Source: <https://www.homelandsecuritynewswire.com/dr20220617-critical-global-water-questions>

June 17 – New research has now drawn together expert voices from across the globe to help address current and future water challenges.

Key areas identified include water scarcity, sanitation and climate dynamics. But the main concern is the way governments are equipped to deal with these challenges.

“One of the key issues raised was governance,” said report co-author Dr Alesia Ofori, a Research Fellow in Water and Sanitation Governance at [Leeds’ School of Politics and International Studies](#).

“In the Global South, respondents are asking why they have to listen to the Global North. Those in the Global South know what the issues are, and they are calling for big changes in access to data so they can better prepare for extreme weather.”



Global Water Challenges

More than 400 respondents took part in the study, in which questions about global water challenges were submitted from countries across the globe including the UK, India, Spain, Colombia, Peru, Mexico, Argentina, South Africa and Tanzania.

“A recurring theme was the call for water justice,” said Dr Ofori. “They want justice for the marginalised populations who suffer from the excess consumption and pollution of the rich.

“There is also a call for justice for the local and planetary ecosystems that have been despoiled through a failure of governance on a global level.”

The study, ‘[The top 100 global water questions: results of a scoping exercise](#)’, has been published in *One Earth* and includes co-authors from the Universities of York and Bradford, and [Global Water Partnership Tanzania](#).

The research team collected more than 4,000 responses from the 400 respondents, which were then narrowed down to 100 crucial water questions facing the planet today.

The 100 questions were grouped under the themes of water and sanitation for human settlements; water and sanitation safety risk management; water security and scarcity; hydroclimate-ecosystem- Anthropocene dynamics; multi-level governance; and knowledge production.

According to the research team, water sector partnerships are needed on a global scale to inform government decision-making on water issues that range from household to planetary levels.

Governance Failure

Co-author Professor Anna Mdee, also at Leeds’ School of Politics and International Studies, said: “The 100 top global water questions demonstrate a demand from the global water sector to address the consequences of human governance failure of water resources.

“These failures are evident on a daily basis across the planet – from ongoing droughts in the US to the catastrophic effects of heatwaves in India – and highlight the need for concerted efforts in interdisciplinary research and action.

“These 100 questions also highlight the importance of justice for marginalized human populations and the need for cooperation to ensure water and sanitation policies align with the current needs of individuals, populations at different scales.”

Co-author Dr Victor Kongo, from Global Water Partnership Tanzania, said: “This study provides a good platform for reflecting and internalizing our research trajectory – what we know, what we don’t know and what we urgently need to know.”



What is going on?

Stickers observed in the toilets of Lufthansa, Turkish Airlines, Emirates and Bangkok Airways



Preparing National Security Officials for the Challenges of AI

Source: <https://www.homelandsecuritynewswire.com/dr20220620-preparing-national-security-officials-for-the-challenges-of-ai>

June 20 – Artificial intelligence (AI) is one of several rapidly emerging technologies that promise to disrupt not only multiple sectors of the U.S. economy but also the manner in which the U.S. government carries out its foundational responsibility to protect national security consistent with the rule of law and constitutional values. This presents an important challenge.

Steve Bunnell, reviewing James E. Baker, *The Centaur's Dilemma: National Security Law for the Coming AI Revolution* (Brookings Institution, 2020), writes in *Lawfare* that hard legal and ethical questions about national security uses of AI are already myriad and constantly evolving and expanding. How should the U.S. integrate tools like neural language models and facial and image recognition into its intelligence collection and analysis efforts? How much faith should be placed in machine predictions and identifications that no human can fully understand? What sort of oversight is needed to control for bias and protect privacy? To promote public trust? How can the U.S. combat deepfakes by foreign adversaries without running afoul of the First Amendment and free speech values? What level of AI-based predication is sufficient to warrant what types of intelligence, investigative, or military actions? When a decision is made to launch a drone attack against a terrorist target based on AI-based data and image analyses, are humans in the loop, on the loop, or out of the loop?

Bunnell adds:

James E. Baker's "The Centaur's Dilemma" is an excellent place to start for any national security policy official or lawyer looking to understand not only what AI can do in a security context but also the current legal and ethical frameworks (or lack thereof) that guide its use in the fast-moving world of national security threats and military operations. "The Centaur's Dilemma" is a thoughtful and crisply written exploration of the implications of AI and the legal, ethical, and normative frameworks that govern and channel the use of AI in the national security realm.



The topic is of fundamental importance to global security in the 21st century. As the war in Ukraine is demonstrating, AI can play a critical role in both kinetic and non-kinetic domains.

....

AI is also being used extensively in the information war. For example, Ukrainian officials, working with citizen volunteers, are [reportedly](#) using facial recognition software and social media data to identify the bodies of Russian soldiers killed in Ukraine, notify their families, and provide real-time information about the tragic costs of the war in an effort to counter Russian government censorship and internal propaganda.

The role of AI in the cyber domain is less public. But it is safe to assume that AI-powered cyberattacks and countermeasures—such as malware that mutates to try to avoid detection by anti-virus software, or the automated creation of highly personalized (and, hence, hard to detect) spear phishing attacks—are critical factors not just in the jockeying for advantage on the battlefield but also as a means to degrade or protect critical infrastructure and, more generally, to create (or defend against) economic and political pressure, confusion, and chaos.

Bunnell concludes:

The United States' national security apparatus is not known for nimbleness, nor is the law that governs it. When it comes to AI, the risk is not just that our generals will fight tomorrow's war with yesterday's strategy but also that the United States will lack the legal and policy guardrails that are essential to a lawful, accountable, and ethical protection of the nation's security. There is also the further risk that policymakers and operational decision-makers will find themselves making recommendations and decisions involving technologies they barely understand. A basic level of tech literacy among policymakers and operational officials is a precondition for those officials being able to sensibly develop and implement the new laws and new policies that AI requires. "The Centaur's Dilemma" is not just an important contribution to the scholarly thinking around national security and AI. It is a practical reference book, intended, first and foremost, to empower those in the arena. National security officials and lawyers would be well advised to read it carefully and to keep a copy close at hand.

What Makes Guns Automatic?

By Jessica Taylor Price (news reporter, @Northeastern)

Source: <https://www.homelandsecuritynewswire.com/dr20220620-what-makes-guns-automatic>

June 20 – The House passed the [Protecting Our Kids Act](#) on Wednesday, hours after hearing harrowing [testimony](#) from gun violence survivors and their families, and two weeks after a shooter killed 19 children and two teachers at Robb Elementary School in Uvalde, Texas.

The House bill is wide reaching: It would raise the minimum age to buy some semi-automatic weapons to 21, strengthen bump stock and "ghost gun" regulations, ban high-capacity magazines, and give local governments power to start high-capacity magazine buyback programs, CNN [reports](#). The changes are unlikely to make it past a Senate vote.

The federal legislation follows a push for gun control at the state level. Last week, New York passed a bill raising the age to buy a semi-automatic rifle to 21 and expanding red flag laws, CNN also [reports](#). Meanwhile, New Jersey Gov. Phil Murphy [called](#) for laws that make gun manufacturers vulnerable to civil lawsuits, and California lawmakers pushed for stricter gun control.

What do these restrictions mean, and how effective would they be if passed? Here's a primer on key gun terms, from [Jack McDevitt](#), professor of the practice in criminology and criminal justice at [Northeastern](#). He spoke with @Northeastern's Jessica Taylor Price.

Jessica Taylor Price: What are the terms used in the bill to describe firearms



Semi-automatic

A semi-automatic weapon is any [weapon](#) where the shooter pulls the trigger, one bullet is fired and a new bullet is automatically loaded. While we may associate the term “semi-automatic” with rifles, which are long guns with grooves in the barrel that help improve accuracy, it can apply to any type of weapon, including handguns.

Automatic

Unlike a semi-automatic weapon, an automatic weapon—an example would be a machine gun—continues firing without the shooter having to pull the trigger again. “Once you pull the trigger, it will keep firing as long as the trigger is pulled down, until there are no more bullets,” McDevitt says. Automatic weapons are illegal in most states, he says.

Bump stocks

Bump stocks make a semi-automatic weapon mimic an automatic, making them a loophole in many states’ automatic weapon ban. The term made it to the mainstream media after the Las Vegas [shooter](#) used a gun with a bump stock to kill 58 people at a festival. Bump stocks are illegal in most states, McDevitt says.

Assault weapon

“An assault weapon is generally defined as something that was originally used in the military,” McDevitt says. Assault weapons have “very large bullets that do a lot of damage,” and can be semi-automatic (like an AR-15) or automatic (like an AK-47). This is the type of weapon that was used in the recent [hospital shooting in Tulsa](#).

Magazines

Magazines are spring-loaded bullet canisters used to load a variety of gun types. [High-capacity magazines](#) hold more than 10 rounds.

Handguns

While mass shootings with assault weapons are more likely to make headlines, McDevitt says they are not common, and most gun violence in this country is committed with handguns.

“Most of the shootings happen either in street encounters between young people, in drug deals or in gangs, or in the home in domestic violence situations,” he says. In addition, he notes that there are two suicides for every homicide in the United States.

Handguns include revolvers, where bullets are loaded into a revolving chamber, or semi-automatic pistols, which are magazine-loaded. Police often carry the latter.

Ghost guns

These 3-D printed guns, or “ghost guns,” as they are called in the House bill, can be printed in parts and assembled and don’t have serial numbers, so it can be difficult to trace ownership, McDevitt says.

Price: What are the components of a gun law?

McDevitt: Red flag laws

“Red flag” laws allow someone close to a gun owner to ask a court to take that person’s weapons if they believe they may pose a threat to themselves or others. The concerned citizen can be a family member, local police, or even school personnel. A red flag law is active in Massachusetts, McDevitt says, though it’s not commonly used, in part due to lack of awareness.

“We need to get the word out to convince people that they’re doing a favor for the person that they’re concerned about,” he says.

Universal background checks

Expanding background checks is one of the most effective ways to lessen gun violence, and “there’s wide public support,” McDevitt says. While he says there is a federal law that requires Americans to have a background check to buy a gun, “there are huge loopholes,” like when purchasing at a gun show or from another individual.

“Universal” background checks would close those loopholes and make it so any federally prohibited person—someone convicted of a felony or domestic violence, or involuntarily committed to a mental hospital—cannot have access to a gun.

Waiting periods and permits

“There have been cases where someone goes to the store, buys the gun, and goes right out and uses it,” McDevitt says. By instituting a waiting period between when the gun is



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purchased and when it can be picked up, “the hope would be that the person’s anger would have calmed down and they wouldn’t act impulsively.”

Permit requirements provide another barrier to access. To obtain a “license to carry” [permit](#) in Massachusetts, residents must be 21 or over, and they must submit an application and take a gun safety course. Meanwhile, residents as young as 15 can obtain a permit to own a firearm, as long as they have a parent’s consent.

Price: How does legislation affect gun violence?

McDevitt: The Giffords Law Center, which compiles information on gun laws and gun violence by state, found a [correlation](#) between stricter gun laws and lower incidents of gun-related deaths. Mississippi, which Giffords gives an F grade for gun control, has the highest rate of gun deaths per 100,000 in the country, while Hawaii and Massachusetts, which received A- grades, have the lowest. But this doesn’t address the problem of people crossing state lines to get guns. While Massachusetts has strict laws, New Hampshire does not.

“What we need to do is to make this a national set of rules so that the rules apply to all states equally,” McDevitt says.

He doesn’t have much hope for Congress’ current legislation, though, saying the chances of it passing are “none.” After Sandy Hook, he says, most of the country’s gun legislation actually made it easier to get guns, and this time will likely be no different.

“I don’t think anything’s going to pass this time. I hope I’m wrong,” McDevitt says. “I don’t see them coming together to build consensus.”

McDevitt’s dream bill includes a national law that makes it harder for people who are violent to get guns and offers mental health support for those individuals. It would also include a fund to support victims of gun violence.

In the end, though, “there isn’t a magic silver bullet out there that will solve all of our problems, unfortunately,” he says.

Deal or No Deal, Iran-Israel War Is Coming to the Middle East

By Sean Durns

Source: <https://nationalinterest.org/blog/buzz/deal-or-no-deal-iran-israel-war-coming-middle-east-203135>



June 22 – Iran, Israeli prime minister Naftali Bennett warned on June 12, “is dangerously close to getting their hands on a nuclear weapon.” In an [interview](#) with *The Telegraph*, the premier pointed out that “Iran is enriching uranium at an unprecedented rate.” Bennett added: “Iran’s nuclear program won’t stop until it’s stopped.”

Bennett isn’t alone in expressing concern.

The United States has also raised alarm. In a March 2022 hearing of the U.S. Senate Armed Services Committee, Sen. Jack Reed (D-RI) [observed](#) that “Iran has made key advances” and has “decreased its [nuclear] breakout time to several weeks from a year” compared to what it was under the 2015 Joint Comprehensive Plan of Action (JCPOA), colloquially known as the Iran nuclear deal. Indeed, in April 2022, U.S. secretary of state Antony Blinken said that

Iran’s [breakout time](#) was “down to a couple of weeks.”

On June 6, 2022, the director-general of the International Atomic Energy Agency (IAEA), Rafael Grossi, said that Tehran was “very close” to crossing the nuclear threshold and that it “cannot be avoided at this point.” Grossi also [presented](#) the board with a report “showing that Iran effectively already has enough enriched uranium for three bombs,” the news service JNS reported.

Grossi also [told](#) the IAEA’s board of governors that “Iran has not provided explanations that are technically credible in relation to the Agency’s findings at three undeclared locations in Iran.” Grossi noted that Iran has also failed to provide the IAEA with “the current location, or locations, of the nuclear material and/or of the equipment contaminated with the nuclear material” that was moved from the site of Turqzabad in 2018.

Adding to concerns, the Islamic Republic has begun installing advanced IR-6 centrifuges at its underground enrichment plant in Natanz and has said that it plans to install more at other sites. The centrifuges will [enable](#) the Islamic Republic to increase enrichment by as much as 50 percent.

The agency formally censured Iran for its activities.

In response, the Islamic Republic called the IAEA “ungrateful” and cut off the agency’s camera feeds which monitor Tehran’s nuclear activities at declared facilities. This, Grossi



asserted, was a “fatal blow” to negotiations between the United States and Tehran over its nuclear weapons program. But this overlooks some key points.

As Reuters, among others, has noted, the IAEA hasn’t had [access](#) to the data collected by the cameras for more than a year. The agency “hopes that it will gain access to that data, which remains with Iran, at a later date.”

Hope, however, is not a good basis for policy—particularly when it’s a policy designed to prevent the world’s leading [state sponsor](#) of terror from acquiring nuclear weapons.

But while several [analysts](#) have pointed to a stall in U.S.-Iran negotiations as increasing tensions and making a breakout possible, it is worth noting the following: the very terms of the JCPOA did not prevent Iran from becoming a nuclear power. And Israel will not allow the Islamic Republic to become such a power. It is that simple.

The JCPOA’s sunset [provisions](#) and poor verifications regime enabled Iran to eventually join the nuclear club. Indeed, in a 2015 interview, then-President Barack Obama [admitted](#) that the deal would enable Iran to have “near zero” breakout time in as little as thirteen years—or six years from now.

But even this assessment was overly optimistic: the JCPOA [did not](#) require Iran to come clean about its past nuclear behavior—thus preventing an accurate benchmark of its progress. Similarly, the JCPOA only allowed inspections at “declared” facilities. And it didn’t fully restrict research and development in key areas, thereby allowing Iran to [reduce](#) the time of a nuclear breakout potentially further. This, of course, is to say nothing of the decision by JCPOA architects not to address Iran’s other “malign activities”—code for its support for terrorism and development of intercontinental ballistic missiles, among other things.

The limits of that policy were highlighted in 2018 when Israel revealed that it had broken into Iran’s so-called “nuclear archive.” The findings, later authenticated by the United States, [showed](#) that Iran not only lied about its nuclear program but was engaged in hiding it [during](#) negotiations with the United States and others.

Iran may lie about its nuclear activities, but it doesn’t always hide its intentions.

Regime apparatchiks from Supreme Leader Ali Khamenei on down have [called](#) for Israel’s destruction. The history of both the Jewish people and the Jewish state show that such calls aren’t to be taken lightly.

In June 1981, the Israel Defense Forces (IDF) [successfully](#) took out Iraq’s nuclear reactor. And in September 2007, the IDF carried out a [strike](#) against Syria’s nuclear program. Israel has been clear: it will not tolerate a hostile power acquiring nuclear weapons. But this time promises to be different.

Unlike the 1981 and 2007 strikes, Israel faces a more difficult security predicament. The Islamic Republic has proxies wrapped around Israel like a snake. Lebanon’s Hezbollah and Gaza’s Hamas are [funded](#), trained, and equipped by Tehran. And both have [documented](#) histories of using [human shields](#).

Hezbollah alone is widely regarded as the most well-armed terrorist group in the world and maintains a global presence with operatives in dozens of countries. And it has carried out [attacks](#) against Jewish communities worldwide, murdering hundreds.

Similarly, Iran is also deeply embedded in both [Syria](#) and Iraq, with capabilities to strike Israel from these satrapies.

In recent weeks, Israel has carried out several [targeted](#) assassinations in Iran itself, taking out top Islamic Revolutionary Guard Corps (IRGC) operatives as well as nuclear [scientists](#). It is not the first time that Israel has taken out high-level [targets](#) inside Iran. But the increase in strikes—nearly half a dozen in less than a month—suggests a shift.

Ditto for Bennett’s vow to implement the “Octopus Doctrine.” The Israeli prime minister recently [stated](#): “We no longer play with the tentacles, with Iran’s proxies: we’ve created a new equation by going for the head.” By letting Tehran know that it can and will be struck, Israel is changing the rules of the game. Jerusalem is no longer content to “mow the grass”—an expression for strategically limited strikes—but is upping the ante in response to what it sees as a growing threat.

Israel has also stepped up the scale and scope of its [strikes](#) in Syria, recently hitting the Damascus airport. The IDF recently held the [largest](#) military drill in decades, dubbed “Chariots of Fire.” In its own words, the exercises “aim to both increase the IDF’s defensive readiness and examine its preparedness for an intensive and prolonged campaign.”

In late May 2022, the Israeli Air Force (IAF) conducted drills which included “long-range flights, aerial refueling and striking distant targets.” It was, the *Times of Israel* noted, meant to [simulate](#) striking Iranian nuclear facilities. According to Israel’s Channel 13 news, the exercises spanned more than 10,000 kilometers and included more than 100 aircraft and navy submarines.

The IAF, the *Jerusalem Post* [reported](#) in early June 2022, can now fly F-35 fighter jets from Israel to Iran without refueling. And now they can be equipped with a new one-ton bomb “that can be carried inside the plane’s internal weapons compartment without jeopardizing its stealth radar signature.”

The IDF is, of course, an exceptionally well-trained military. It isn’t a stranger to major drills and exercises. But it seems clear that something is afoot and the parameters of the long-running conflict between Israel and Iran are changing. Coupled with Tehran’s imminent



“nuclear break out,” such developments indicate that Jerusalem is doing more than mowing the grass—it might be preparing to get rid of the entire yard.

Should Israel strike Iran’s nuclear facilities it would likely bring about the worst war that the Middle East has seen in decades—if not longer. The conflict that would follow would look nothing like many of the recent wars between Israel and Iranian proxies like Hamas and Hezbollah. For both Israel and the Islamic Republic, it would be an existential battle, with the fate of both the Jewish state and the regime in Tehran hinging on the war’s outcome. The losses and destruction would be devastating.

Hezbollah is estimated to have 130-150,000 rockets and missiles and Hamas is thought to have at least 30,000. Both hide their arsenals behind human shields.

Indeed, according to a 2021 [study](#) by the Alma Center, numerous Hezbollah military sites in southern Lebanon are “located in buildings within populated villages and areas very close to villages.” Researcher Tal Beerli found that “each of the 200 Shi’ite villages in the area south of the Zaharani River up to the border with Israel and the adjacent areas have become part of Hezbollah’s military infrastructure,” constituting part of the terror group’s “regional defensive plan.” Further away, Hezbollah is also firmly [ensconced](#) in major cities like Beirut.

And costs will likely extend beyond the Middle East. Iranian proxies have shown themselves to be capable of attacking both Jewish and American targets throughout the world. It also seems likely that a war will fuel anti-Semitic attacks in Europe, the United States, and [elsewhere](#)—just as the conflict between Iranian proxies and Israel did in the spring of [2021](#).

And, of course, a major war will also upset already-strained global energy markets. It will also usher in a harsh verdict on both U.S. nonproliferation policy and credibility in the region.

The Middle East isn’t short of kindling or matches. And it looks ready to explode.

Sean Durns is a Senior Research Analyst for CAMERA, the 65,000-member, Boston-based Committee for Accuracy in Middle East Reporting and Analysis.

Examining Scenarios of U.S.-China War Over Taiwan

By Nike Ching

Source: <https://www.homelandsecuritynewswire.com/dr20220622-examining-scenarios-of-u-s-china-war-over-taiwan>

June 22 – A prominent Washington-based policy research organization says the United States is preparing for the wrong kind of likely conflict should China invade Taiwan.

In a newly released book titled, [Defending Taiwan](#), the American Enterprise Institute predicts a short and geographically localized war over Taiwan in the event of a



argues Washington wrongly Chinese invasion. Instead, AEI

researchers say, the Pentagon’s planning should revolve around “a conflict of extended duration.”

“In the most worrying scenario, Beijing would launch a surprise missile attack, hammering not only Taiwan’s defenses but also the American naval and air forces concentrated at a few large bases in the western Pacific,” according to AEI’s senior fellows Hal Brands and Michael Beckley who assessed a U.S.-China conflict in the western Pacific will not end quickly.

For years, U.S. policy has been to effectively deter a military conflict in the Taiwan Strait while preparing for contingencies in the event of a Chinese attack.

Senior U.S. officials have also raised grave concerns about the Beijing government’s “increasingly provocative rhetoric and activity” towards Taiwan.

Civilian leaders in the past had directed the U.S. military to develop viable plans to defend Taiwan, according to an [internal document under former U.S. President Donald Trump’s administration](#).



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More recently, top officials from President Joe Biden's administration have repeatedly warned against Beijing's use of force to alter the status quo.



If Taiwan were attacked by China, opinion polls indicate a bare majority of Americans now favor defending Taiwan.

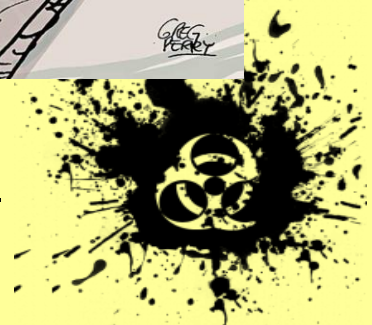
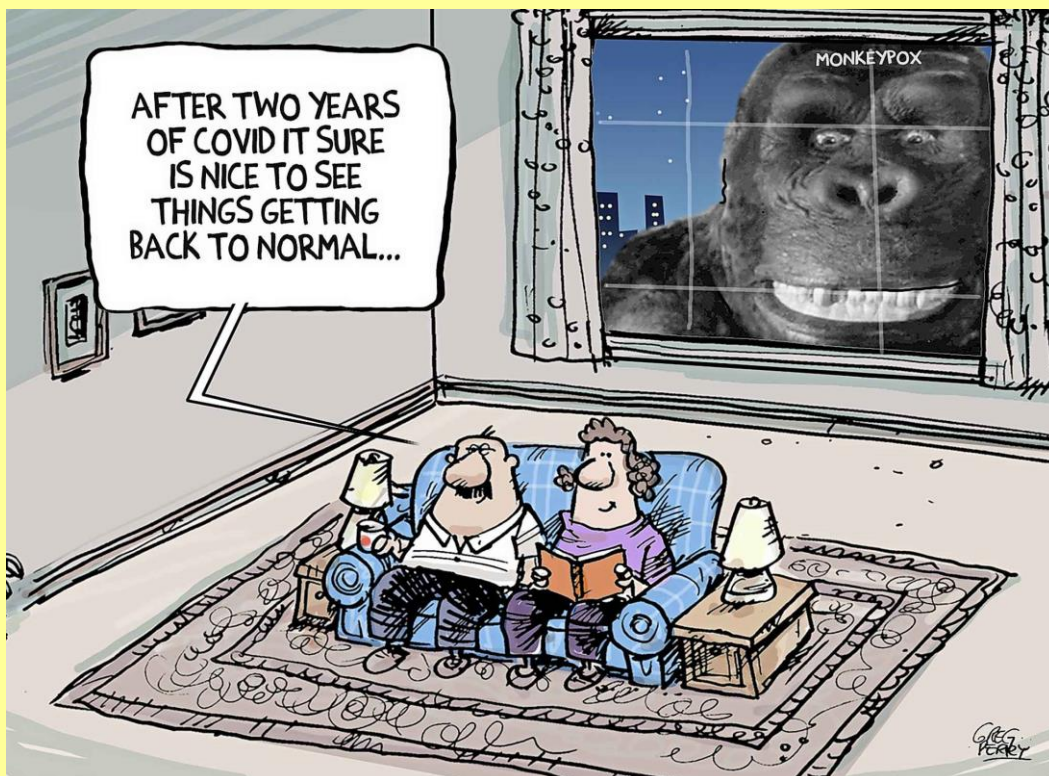
"Fifty-three percent may not seem like a lot but that's more than the percentage of Americans who favor defending Germany from Soviet aggression at various points during the Cold War. And so, it's fairly significant," Brands told reporters on Monday. He was citing the [finding by the Chicago Council on Global Affairs](#) in August 2021.

"With respect to allies, it's been pretty striking. I mean, both the Japanese and the Australians have said as clearly as they can that they would not simply sit out a U.S.- China war over Taiwan," said Brands, who is also one of the members of the State Department's Foreign Affairs Policy Board. "The Japanese have said that this would be nearly existential for them, given geography."

To prevent the worst from happening while preparing for a long war, Brands and Beckley made several policy recommendations.

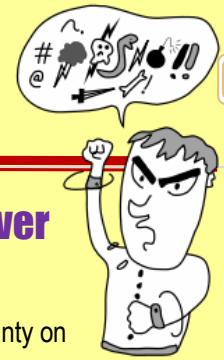
They suggested the United States and Taiwan could amass key weapons stockpiles "to win the race to reload," which would also deter China from resorting to war if Beijing knew it would be outgunned if the conflict drags on. In addition, Washington can demonstrate through preparations the grit to endure losses, threaten retaliation, and contain escalation.

[Nike Ching](#) is VOA's State Department Bureau Chief.





T - NEWS



21 killed at Uvalde elementary in Texas' deadliest school shooting ever

Source: <https://www.texastribune.org/2022/05/24/uvalde-texas-school-shooting/>

May 25 – Nineteen children and two adults were killed in a shooting at Robb Elementary School in Uvalde County on Tuesday, making the massacre the deadliest school shooting in Texas' history.

"My heart is broken today," Uvalde Consolidated Independent School District Superintendent Hal Harrell said while holding back tears during a press conference Tuesday evening. "We're a small community and we need your prayers to get through this."

Gov. [Greg Abbott](#) said the shooter was killed. The shooter is believed to have acted alone, said Pete Arredondo, Uvalde CISD chief of police.

"What happened in Uvalde is a horrific tragedy that cannot be tolerated in the state of Texas," Abbott said.

President Joe Biden has spoken with Abbott to offer his assistance, White House officials said. Biden also ordered flags on all public property and at U.S. embassies to be flown at half-staff in memory of those killed.

"Tonight, I ask the nation to pray for them. Give the parents and siblings the strength in the darkness they feel right now," Biden said at a press briefing Tuesday evening.

Biden also made a renewed call to reform gun laws.

"As a nation, we have to ask — when in God's name are we going to stand up to the gun lobby?" he said.

One of the two adult victims was identified as a schoolteacher, Eva Mireles, by [her aunt](#) and by [a parent](#) of a student on social media. The other adult and the 19 children have not been identified. State Sen. [Roland Gutierrez](#), D-San Antonio, told CNN there might be a third adult dead but authorities have not confirmed it.

Authorities and hospital officials have said others were injured but have not confirmed how many.

Abbott identified the shooter as **Salvador Ramos**, an 18-year-old Uvalde resident. The man abandoned his vehicle and entered



Robb Elementary with a handgun and possibly a rifle, the governor said.

The shooting started around 11:32 a.m., Arredondo said. The Uvalde school district reported an active shooter on Twitter at 12:17 p.m.

U.S. Border Patrol agents responded to a law enforcement request for assistance, a spokesperson for the U.S. Department of Homeland Security said. Law enforcement officers



entered the school building and were met with gunfire from the shooter, who was barricaded inside. A Border Patrol agent shot the gunman before waiting for backup, a law enforcement official told the Associated Press.

The gunman shot his grandmother before the shooting at the school, [Gutierrez told CNN](#). The grandmother was airlifted to San Antonio and was “still holding on” Tuesday evening, according to information given to Gutierrez by the Texas Rangers.

[The Daily Dot reported](#) the shooter had bought a rifle online recently. He posted images of two rifles in his most recent post on Instagram before the social media platform deleted the account, according to the outlet.

Robb Elementary teaches second, third and fourth grade students. The students were scheduled to celebrate their last day of the school year on Thursday.

The school had 535 students in the [2020-2021 school year](#), most of them Hispanic and considered economically disadvantaged. Uvalde is a relatively small city about 85 miles west of San Antonio. Its population of roughly 15,200 is predominantly Hispanic.

Earlier Tuesday, the Uvalde CISD had placed all campuses under lockdown after gunshots were fired in the area. Harrell said the school will be closed for the remainder of the academic year, though grief counseling will be offered to students.

U.S. Rep. [Tony Gonzales](#), a Republican whose district includes Robb Elementary School, wrote on Twitter, “My heart breaks for the city of Uvalde. Pray for our families.” and cited a Bible verse.

The Uvalde massacre is the second-deadliest shooting at an elementary, middle or high school on record in the United States, following the 2012 Sandy Hook Elementary shooting in Newtown, Connecticut, according to [The New](#)

[York Times](#). The massacre in Uvalde is the eighth mass shooting in a Texas public space since an Army psychiatrist opened fire at Fort Hood Army base in November 2009, killing 13 people in what was later determined to be an act of religious extremism. Five years later in April 2014, another Fort Hood soldier killed three people and wounded a dozen more on the base before he killed himself during a firefight with military police.

Since then, the pace of mass shootings in Texas has increased, along with the list of the dead:

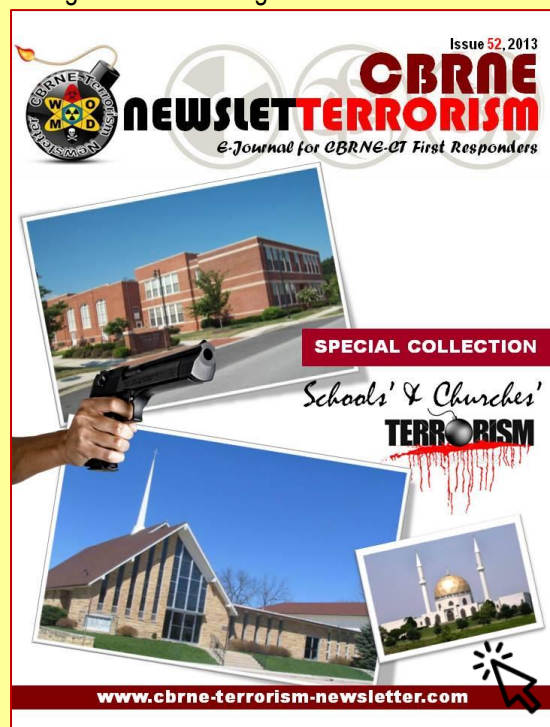
- In July 2016, five Dallas police officers were slain by a 25-year-old who targeted officers at a Black Lives Matter protest; the gunman wounded nine other police officers and two civilians before he was killed by a remote-controlled bomb following a standoff with police.
- In November 2017, a 26-year-old man opened fire during Sunday morning services at the First Baptist Church of Sutherland Springs, killing 26 people and wounding 20 others. The gunman fled the area when a local man began shooting at him, then fatally shot himself after a vehicle pursuit.
- Six months later, in May 2018, a 17-year-old student shot eight students and two teachers to death and injured 13 at Santa Fe High School near Houston. He was arrested about 25 minutes after the shooting began.
- In August 2019, a 21-year-old man drove from suburban Dallas to El Paso, posted a racist manifesto, then began shooting people at a Walmart, targeting Latinos. He killed 23 people and injured 25 before leaving the store and surrendering to Texas Rangers nearby.
- Later that month, a 36-year-old man went on a shooting rampage in the Midland-Odessa area, leaving seven people dead and 25 wounded. The man, who had been fired from his job that morning, was shot to death by police officers outside an Odessa movie theater.

And over the past decade, state lawmakers have responded to mass shootings in Texas and elsewhere with a host of laws that have prioritized Second Amendment rights and increased Texans’ ability to carry firearms in places where they were previously prohibited. The 2012 mass shooting at Sandy Hook Elementary School in Newtown spurred a new Texas law the following year that created a [school marshal program](#) allowing certain employees to have firearms in Texas schools.

Four years later, lawmakers allowed Texans to openly carry firearms rather than having to conceal them and required public universities to let anyone with the proper license carry [concealed weapons in dorms, classrooms and campus buildings](#).



read.



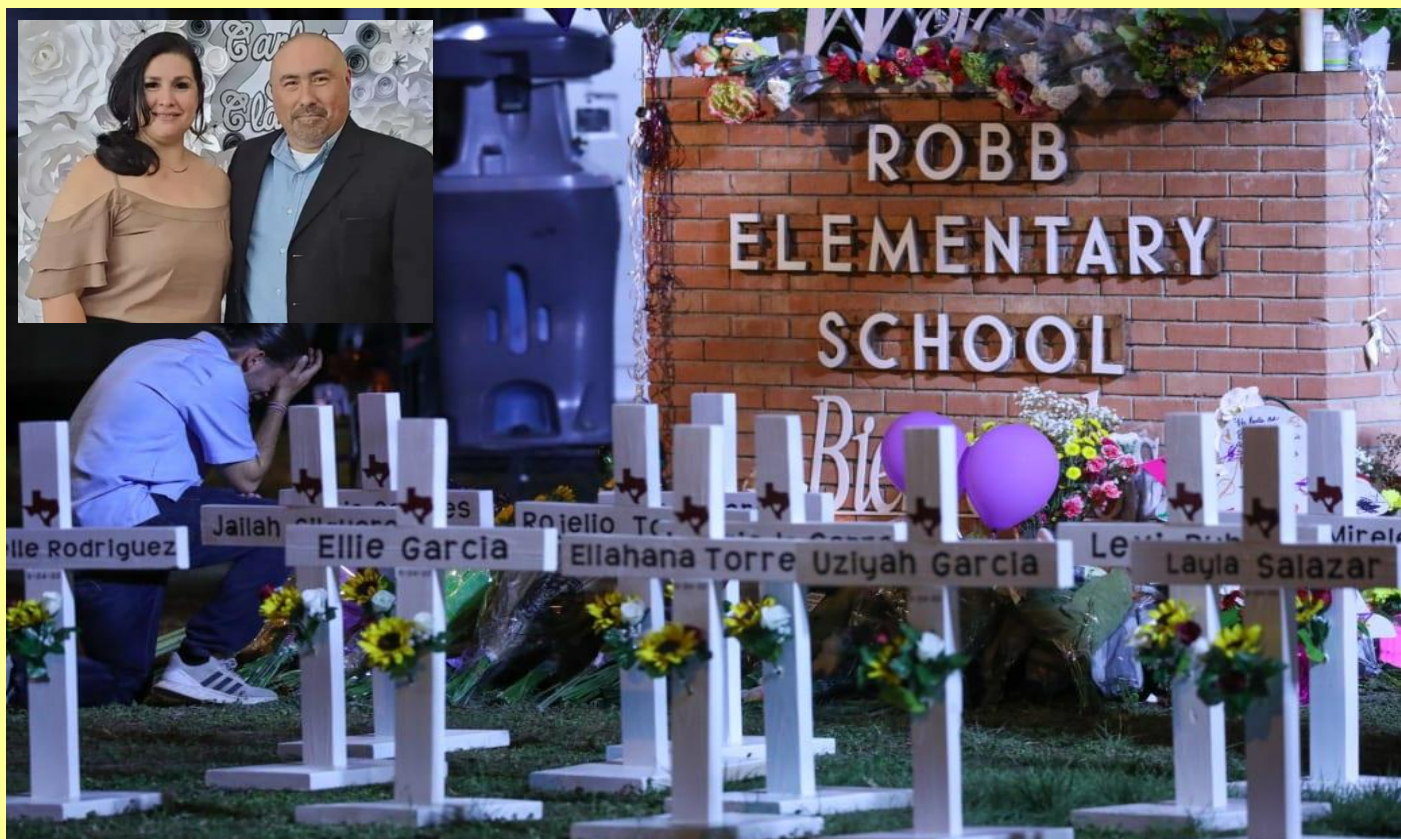
ICI C²BRNE DIARY – June 2022

Frankie Miranda, the CEO of Hispanic Federation, called for concrete steps to make Latino communities safer, such as commitments to funding mental health services and gun control measures. And in a joint statement, the National Education Association and the Texas State Teachers Association demanded lawmakers address gun violence: “Tragedies such as this keep happening while elected officials do nothing, except, in Texas’ case, make firearms more available.” U.S. Sen. [Ted Cruz](#) said in a statement Tuesday he was “lifting up in prayer the entire Uvalde community during this devastating time.” He also [told](#) reporters that he does not see gun control measures as effective in preventing crime. Abbott, along with Cruz and former President Donald Trump, is scheduled to talk Friday at the National Rifle Association’s 2022 annual meeting in Houston. Beto O’Rourke, the Democratic gubernatorial candidate challenging Abbott in the November general election, called on the governor late Tuesday to withdraw from the meeting. “Governor Abbott, if you have any decency, you will immediately withdraw from this weekend’s NRA convention and urge them to hold it anywhere but Texas,” [O’Rourke tweeted](#). Politico reported that a spokesperson for U.S. Sen. [John Cornyn](#) said he wouldn’t attend the meeting, citing an unexpected change in his schedule that occurred before the Uvalde shooting.

EDITOR’S COMMENT: Do not bury the devil! Throw his corps to the desert and let vultures disappear his unfortunate existence on this planet. Push the weak President to decide if the gun lobby is over the lives of the Americans and act accordingly! This is not the last blood in a country with 332,403,650 people (Jan 2022) and 393,000,000 guns.

Hero Teacher’s Husband Dies of Heart Attack Days After Uvalde Massacre

Source: <https://www.thedailybeast.com/hero-teacher-irma-garcias-husband-joe-garcia-dies-days-after-robb-elementary-school-shooting-in-ualde?ref=scroll>



May 26 – Two days after his wife of 24 years, [Irma Garcia](#), died in a [mass shooting at an elementary school in Uvalde, Texas](#), Joe Garcia died of what his relatives called “a broken heart.”

Garcia, 50, suffered a heart attack Thursday after visiting his wife’s memorial, his nephew told [The New York Times](#). Irma Garcia, 49, lost her life defending students from a teen gunman who opened fire on her fourth-grade classroom on Tuesday. The shooting killed 19 students and one other teacher—the deadliest school shooting in the U.S. in a decade.



“I truly am at a loss for words for how we are all feeling, PLEASE PRAY FOR OUR FAMILY, God have mercy on us, this isn’t easy,” the couple’s nephew, John Martinez, [tweeted](#) Thursday. He added later: “the pain doesn’t stop.”

The couple, who family members said were high school sweethearts, left behind four children, the youngest of whom was 12.

Irma Garcia had taught at Robb Elementary for 23 years. An introductory page on the school district website said she loved to listen to music, take country cruises, and BBQ with her husband. Family members told [The Washington Post](#) that Irma was an incredible cook, and that she and Joe would often invite their extended family over for dinner.

On a [GoFundMe](#) page started in honor of the family, Irma’s cousin called her a “wonderful person” who would “literally do anything for anybody.....no questions asked.”

“I truly believe Joe died of a broken heart and losing the love of his life of more than 25 years was too much to bear,” she wrote.

Joe Garcia worked at the supermarket company HEB. Coworker Christine Ybarra remembered Joe and Irma in a Facebook post, writing, “May they [both] fly high with the angels you’ll be missed by many. RIP prayers for their 4 children.”

Tuesday’s tragedy unfolded when 18-year-old [gunman Salvador Ramos](#) shot his grandmother in the face, then took her truck and crashed it in a ditch near Robb Elementary. He ran onto school grounds with a rifle and [barricaded himself in Garcia and co-teacher Eva Mireles’ interconnected classrooms](#), killing both teachers and 19 young students.

“She sacrificed herself protecting the kids in her classroom,” Garcia’s family wrote in a [GoFundMe](#), describing her as “sweet, kind, loving. Fun with the greatest personality.”

27 school shootings have taken place so far this year

Source: <https://www.npr.org/2022/05/24/1101050970/2022-school-shootings-so-far>

May 25 – A shooting at an elementary school in Uvalde, Texas, that has killed 19 children and two adults marks the 27th school shooting this year. Texas Gov. Greg Abbott said the shooter behind Tuesday’s incident was killed.

This comes just 10 days [after a shooting](#) at a Tops supermarket in Buffalo, N.Y., that took the lives of 10 people.

[Education Week](#) has been tracking school shootings since 2018. According to its database, 119 such incidents have taken place since then.

There were 27 school shootings with injuries or deaths this year.

The organization tracks shootings where a firearm was discharged and where any person (other than the suspect) has a bullet wound resulting from the incident. *Education Week* also includes only incidents that happen on K-12 school property or a school bus and that occur when school is in session or during a school-sponsored event.

It doesn’t track cases in which the only shots fired were from a school resource officer or police officer.

The U.S. has surpassed 200 mass shootings this year

The Gun Violence Archive, an independent data collection organization, has counted 212 mass shootings that have occurred so far this year, as of Tuesday. It defines a mass shooting as an incident in which four or more people were shot or killed, excluding the shooter. Data on the mass shootings that have occurred so far this year [can be found here](#).

The U.S. ended 2021 with 693 mass shootings, [per the Gun Violence Archive](#). The year before saw 611. And 2019 had 417.

As for school shootings, according to *Education Week*, 2021 had 34 such incidents at educational institutions (the highest since the organization started its database). In 2020, there were 10 shootings. Both 2019 and 2018 recorded 24 shootings.

What We Know About Mass School Shootings in the U.S. – and the Gunmen Who Carry Them Out

By James Densley and Jillian Peterson

Source: <https://www.homelandsecuritynewswire.com/dr20220525-what-we-know-about-mass-school-shootings-in-the-u-s-and-the-gunmen-who-carry-them-out>

May 25 – Most school shooters are motivated by a generalized anger. Their path to violence involves self-hate and despair turned outward at the world, and our research finds they often communicate their intent to do harm in advance as a final, desperate cry for help. The key



to stopping these tragedies is for society to be alert to these warning signs and act on them immediately.

When the [Columbine High School massacre took place in 1999](#) it was seen as a watershed moment in the United States – the worst mass shooting at a school in the country's history.

Now, it ranks fourth. The three school shootings to surpass its death toll of 13 – 12 students, one teacher – have all taken place within the last decade: 2012's [Sandy Hook Elementary attack](#), in which a gunman killed 26 children and school staff; the 2018 shooting at Marjory Stoneman Douglas High School in Parkland, Florida, which [claimed the lives of 17 people](#); and now the [Robb Elementary School assault in Uvalde, Texas](#), where on May 24, 2022, at least 19 children and two adults were murdered.

We [are criminologists who study the life histories](#) of public mass shooters in the U.S. As part of that research, we built [a comprehensive database](#) of mass public shootings using public data, with the shooters coded on over 200 different variables, including location and racial profile. For the purposes of our database, mass public shootings are defined as incidents in which four or more victims are murdered with at least one of those homicides taking place in a public location and with no connection to underlying criminal activity, such as gangs or drugs.

Our database shows that since 1966, when our database timeline begins, there have been 13 such shootings at schools across the U.S – the first in [Stockton, California](#), in 1989. Four of those shootings – including the one at Robb Elementary School – involved a killing at another location, always a family member at a residence. There have been [reports the most recent perpetrator shot his grandmother](#) prior to going to the school in Uvalde, although that has yet to be officially confirmed.

The majority of mass school shootings were carried out by a lone gunman, with just two – Columbine and the [1988 shooting at Westside School in Jonesboro](#), Arkansas – carried out by two gunmen. In all, some 146 people were killed in the attacks and at least 182 victims injured.

The choice of “gunmen” to describe the perpetrators is accurate – all of the mass school shootings in our database were [carried out by men or boys](#). And the average age of those involved in carrying out the attacks was 18.

This fits with the picture that has emerged of the [shooter in the Robb Elementary School attack](#). He turned 18 just days ago and [purchased two military-style weapons](#) thought to be the ones used in the attack.

Police have [yet to release key information](#) on the shooter, including what motivated him to kill the children and adults at Robb Elementary School. The picture of the shooter that has emerged conforms to the profile we have built up from past perpetrators in some ways, but diverges in others.

We know that most school shooters have a connection to the school they target. Twelve of the 14 school shooters in our database prior to the most recent attack in Texas were either current or former students of the school. Any prior connection between the latest shooter and Robb Elementary School has not been released to the public.

Our research and [dozens of interviews with incarcerated perpetrators of mass shootings](#) suggests that for most perpetrators, the mass shooting event is intended to be a final act. The majority of school mass shooters die in the attack. Of the 15 mass school shooters in our database, just seven were apprehended. The rest died on the scene, nearly all by suicide – the lone exception being the Robb Elementary shooter, who was shot dead by police.

And school shooters tend to preempt their attacks by leaving posts, messages or videos warning of their intent.

Inspired by past school shooters, some perpetrators are [seeking fame and notoriety](#). However, most school shooters are motivated by a generalized anger. Their path to violence involves self-hate and despair turned outward at the world, and our research finds they often communicate their intent to do harm in advance as a final, desperate [cry for help](#). The key to stopping these tragedies is for society to be [alert to these warning signs](#) and act on them immediately.

James Densley is a Professor of Criminal Justice @ Metropolitan State University.

Jillian Peterson is a Professor of Criminal Justice @ Hamline University.

dildos are more regulated in texas than guns are



Is it Illegal to Own More than Six Dildos in Texas? Yes, It Is

Texas has no specific laws restricting how many guns you can legally own in this state.



Europol fears that weapons from the EU in Ukraine will fall into the hands of criminals



Source: <https://russia.postsen.com/corona-virus/12556/Europol-fears-that-weapons-from-the-EU-in-Ukraine-will-fall-into-the-hands-of-criminals.html>

May 28 – The European Police Agency (Europol) has expressed concern that the weapons supplied to Ukraine by the EU countries may fall into the wrong hands in the future. According to the director of Europol Catherine de Bolle, the organization closely monitors the actions and movements of known extremists from the EU to Ukraine and back. “Someday the war will end. We want to prevent a repetition of the same situation as 30 years ago during the Balkan war. The weapons of those days are still used today by criminal groups,” Ms. de Bolle said in an interview with the Welt am Sonntag newspaper (quoted by TASS). The head of Europol also announced the organization’s plans to create an international working group. She explained this initiative by the need to develop an action strategy to prevent weapons from falling into the hands of criminals.



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The FGM-148 Javelin is a man-portable, "fire-and-forget" antitank guided missile (ATGM) system with an effective range of 2.5 km. It was designed to defeat heavily armored vehicles such as main battle tanks and lighter-skinned military vehicles. The weapon also has capability against other target types like fortifications, bunkers, and helicopters.

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Dangerous influx of arms and foreigners

Source: <https://guardian.ng/opinion/dangerous-influx-of-arms-and-foreigners/>



May 29 – The rate at which lethal guns, ammunitions and other weapons of mass destruction are being ferried into the country is alarming. Many law-abiding citizens are definitely concerned, given that the aim of those behind the circulation is not known. What is certain is that circulation of small arms and ammunition portend no good omen for the country or any part of it; and it drives violence. Is it surprising that the country is awash with violence of all sorts, and killings even for flimsy reasons? Are these the arms that cultists, kidnappers and armed robbers are using to carry out their nefarious activities? More apprehensively, is the gun-running central to the widely rumoured agenda by some ethnic groups to forcibly take over parts of the country? Is the country experiencing a prelude to war, or has the war started



already? Ordinarily, the central government which has authority over security agencies and intelligence apparatuses should have been providing the answers to these posers, and guiding the populace accordingly. The silence emanating from the federal government and the security agencies including the Police, Directorate of Military Intelligence (DMI), Department of State Service (DSS) and National Intelligence Agency (NIA) among others is loud and ominous; and surely does not assuage the fear of the ordinary Nigerians. Yet, almost on a daily basis, reports are circulated in the media of large caches of arms and ammunitions being intercepted from seemingly innocuous young men, many of them non-Nigerians; and sometimes from vehicles whose drivers could not offer satisfactory or coherent explanation on the deadly goods. It may be gratifying that security agencies intercept the weapons of destruction even if occasionally; but that fact does not diminish the fear of Nigerians, considering that no one knows what the authorities do with their interceptions of arms some of which find their ways into the country through established points of entry as well as other illegal entries scattered across the country's borders. Uncontrolled circulation of arms and ammunitions poses danger to peace and the long-term social and economic development of the country. Beyond smuggling of contraband products, unscrupulous importers now take advantage of loopholes within the customs service to sneak in arms and ammunition, thus gradually turning the country into a hotbed for gunrunning and breeding ground for small arms and ammunition. According to reports, **the number of small arms in circulation in Nigeria, in the wrong hands or in possession of non-state actors is estimated at over 6,145,000, while the armed forces and law enforcement collectively accounts for about 586,600 firearms.** At a time Nigeria is facing serious internal security challenges, small arms, mass atrocities and migration into the country have highlighted the rate of arms proliferation and have enabled the rise of armed groups in the country. It has also led to the displacement of several Nigerians from their communities and ancestral lands. The trend of gunrunning and arms proliferation has placed the nation on a precariously dangerous position which has led to the death of innocent Nigerians in their thousands. Nigerians have right to life and right to live in freedom and dignity anywhere in the country. But this is threatened by the proliferation of arms and ammunitions daily; along with reality of violence among communities including armed militias or criminal gangs. These criminals hold the power over life and death. Hence, in a recent report, Southwest Security Stakeholders Group (SSSG) in the South West raised alarm over the influx of non-Nigerians into the region. According to the publicity secretary, Adewole Ireti, the raging influx of people from Mali, Chad, Niger Republic and other neighbouring African countries is an impending danger for the south west and the country. Among other apprehensions, it is feared that the influx of people without certification into the country may be driven by the quest to use them to disrupt the forthcoming general elections. If true, this possibility portends danger to democracy. One serious concern about these non-Nigerians is that they are hardly traceable to any known address. A large number of them ride motorcycles popularly called Okada and have dangerous weapons stocked under the seat of their motorcycles. And when confronted, they claim to use the weapons for self-defence. Sadly, they hardly ever get arrested for being in illegal possession of arms and dangerous weapons. Unconfirmed reports have it that these individuals hold regular meetings at their various locations to strategise and perfect their unknown but presumably sinister motives. The police do deserve praise for their efforts and intelligence to checkmate criminal activities in the country, despite the overwhelming odds surrounding them. The other day, the police intercepted gunrunners masquerading as traders and uncovered arms in bags of beans being conveyed from Plateau to the South East. This is a commendable proactive action leading to arrest of the suspected gunrunners. The police cannot afford to relent in these efforts in combating crime and particularly the proliferation of small arms. Police authorities should therefore intensify their campaign in this regard and keep the country safe. The media, including this newspaper have in the past raised awareness over the devastating impact of gunrunning and proliferation of small arms on the lives and livelihoods of the people in the country. To adequately combat the illicit trade, government needs to strengthen the security apparatus as well as the legal and administrative framework to help curtail the flow of these weapons into the country. There must also be greater exchange of information and sharing of best practices at all levels of government, from the local to the federal level. This will enable individual states in the country to ensure that peace reigns and that all Nigerians live in peace and harmony throughout the country. In particular, there should be no overlooking of danger being courted for Nigerians by foreigners with suspicious motives.

A Greek Pandora Box

Translated from Greek

Source: https://www.pentapostagma.gr/apopseis/7092637_h-kybernisi-mitsotaki-katafere-na-tsakisei-tin-eikona-tis-elladas-os-eiriniko

May 28 – The criminally extreme pro-Americanism of the PM Mitsotakis government was not limited to sending weapons to Ukraine against the will of the Greek people. It no longer seems to cost us as a country only our relations with Russia, but it has wider and escalating consequences. The seizure of Greek tankers in the Gulf was the first such action in several months in the Gulf.



The incident with the tankers and the "Guards of the Revolution" proves the political negligence of the Greek government, which not only in Karystos seized the Russian (Iranian) ship but handed over the ship to the American side, which makes any attempt to negotiate impossible. with the Iranian side for any exchange.

The United States has seized Iranian oil near Greece on a Russian-run ship that will send cargo to the United States on another ship, three sources familiar with the matter told Reuters.

Iran and Russia face separate US sanctions. The Russian owner of the Transmorflot entered the sanctions list on May 8. The tanker, renamed Lana on March 1st and flying the Iranian flag since May 1st, has remained near Greek waters ever since. It used to be under the Russian flag.

Now with the retaliation of Tehran, yesterday in the Gulf opened Pandora's box...

Ms. Evanthia Koulourioti, a political analyst specializing in the Middle East and a columnist for many foreign networks, revealed that a few days ago, the IRGC announced the assassination of Colonel Sayyad Khodai. This important person was alleged responsible for the attempted murder of Israeli citizens even on Greek soil, as she says.

That is, if the Israel-Iran "war" is transferred to our country, then not the current Mitsotakis government, but absolutely no government will be able to turn the river back. Greece, in all the years that Europe has been plagued by Islamist terrorism, has not recorded a single case of attack by Islamist enclaves. People who have ties to ISIS or other terrorist networks may be arrested from time to time, but there has been no strike and our country is generally characterized as peaceful. **With the regressions of the Mitsotakis government, this can be questioned!**

Taliban victory in Afghanistan inspired terrorists around world, increased anti-India foreign terror groups' presence: UNSC report

Source: <https://www.msn.com/en-in/news/world/taliban-victory-in-afghanistan-inspired-terrorists-around-world-increased-anti-india-foreign-terror-groups-presence-unsc-report/ar-AAXRaFe>

May 29 – Taliban's takeover of Afghanistan in August of last year has increased narcotics outflow and the presence of anti-India foreign terror groups like Jaish-i-Mohammed (JiM) and Lashkar-e-Tayiba (LeT) in the country, said a key United Nations Security Council (UNSC) report, which is the thirteenth report of the Sanctions Monitoring Team under the Taliban Sanctions Committee, established pursuant to resolution 1988 (2011).

"Afghan-origin drugs have increased significantly in the second half of 2021" which suggests "less effective counter-narcotics efforts within Afghanistan or heightened activity in anticipation of a ban.", said the report and pointed to the seizing of 3 tons of Afghan origin heroin in India in September of 2021, and smuggling via Iran to Turkey and Europe which has "increased by up to 50 per cent since the Taliban assumed power."

On the presence of foreign terrorist fighters, the 27-page report submitted last week said, "Taliban victory in Afghanistan has inspired terrorists around the world..." confirming the presence of Jaish and Lashkar terror groups. Both the Pakistan based UN-designated terror groups have been responsible for a number of terror attacks in India including Pathankot, Uri and the 26/11 Mumbai terror attacks. The report said both these groups along with the Eastern Turkistan Islamic Movement or ETIM, Islamic Movement of Uzbekistan have fighters "each numbering in the few hundreds."

Specifically, the report said Jaish-i-Mohammed (JiM) has appointed Qari Ramazan as the new head of the grouping in Afghanistan. The terror group was founded by Masood Azhar who was listed as an international terrorist in 2019 after the Pulwama terror attack in India. It further said, "according to one Member State, JiM maintains eight training camps in Nangarhar, three of which are directly under Taliban control".

Previous UNSC report pointed to the support given by JiM to the Taliban, adding that in October 2021, LeT leader Mawlawi Assadullah met with Taliban Deputy Interior Minister Noor Jalil. Later in January 2022, a Taliban delegation visited a training camp used by LeT in the Haska Mena district of Nangarhar.

Elaborating on the linkage between JiM and Taliban, the report highlighted that, "The group was said to maintain three camps in Kunar and Nangarhar. Previous LeT members have included Aslam Farooqi and Ejaz Ahmad Ahangar (a.k.a. Abu Usman al-Kashmiri), both of whom joined ISIL-K". This is the first public confirmation of these 2 terror groups in Afghanistan by any multilateral body since the Taliban takeover.

Fears of Afghanistan becoming a terror safe haven have always been there since the Taliban takeover. With mentioning ETIM, Beijing will also be worried over terror safe haven in Taliban control Afghanistan. ETIM is an Uyghur Islamic extremist calling for the establishment of East Turkestan in China's westernmost province of Xinjiang.



Tehrik-e Taliban Pakistan or TTP forms the largest component of foreign fighters with Sirajuddin Haqqani Taliban appointed acting interior minister being "relied upon more than anyone else" to act as an "intermediary between TTP and Pakistan". The report explained that "Haqqani mediations have not led to a sustainable ceasefire, but are a further indication of Sirajuddin's central role within the Taliban as a mediator and figure of authority among rank-and-file TTP".

The report also said that the core leadership of Al Qaida remain in Afghanistan with its chief Aiman al-Zawahiri in the "eastern region from Zabul Province north towards Kunar and along the border with Pakistan", and also mentioned the recent appearance of al-Zawahiri in a video released on 5th April this year by Al-Qaida's As-Sahab Media Foundation in which he referred to Hijab issue in India. The video provided the first conclusive current proof of life for al-Zawahiri in recent years.

The report explained, "the pace of recent communications suggests that he may be able to lead more effectively than was possible before the Taliban takeover of Afghanistan."

The Taliban sanctions committee or the 1988 Security Council Committee is chaired by the Indian envoy to the UN, TS Tirumurti. The committee comprises all 15 members of the Security Council and makes its decision by consensus. It has two vice-chairs as well, Russia and UAE. It came into existence in 2011 by splitting the 1267 sanctions regime and passage of resolution 1988. The committee is mandated to oversee the implementation of the sanction's measures, designate individuals, remove the names on requests etc.

'Hundreds of Fighters, 11 Training Camps': UN Report Reveals Taliban's 'Aid' to JeM, LeT in Afghanistan

Source: <https://www.terrorismwatch.org/2022/05/hundreds-of-fighters-11-training-camps.html>

May 30 – A new UN report has revealed that Pakistan-based terror outfits Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba (LeT) still have hundreds of fighters in Afghanistan and both terror groups are operating at least **11 training camps in Kunar and Nangarhar provinces**.

In the first official confirmation, the report from the team monitoring the UN Security Council's sanctions on Taliban says the terror camps in Afghanistan's Nangarhar are operating under Qari Ramzaan who represents JeM.

The JeM is operating eight camps, with three directly under the Taliban, while the LeT is also operating three camps in Kunar and Nangarhar, the report said.

This is the first report by the monitoring team, which assists the UN Security Council's 1988 Sanctions Committee, since the Taliban takeover of Kabul in August last year.

According to the findings, LeT — which was formed in Afghanistan in 1990 — has maintained close ties with the Afghan Taliban leadership, with LeT leader Mawlawi Assadullah meeting Taliban's deputy interior minister Noor Jalil in October 2021.

Within Afghanistan, LeT is led by Mawlawi Yousuf. Members who were a part of the terror group in the past include Aslam Farooqi and Ejaz Ahmad Ahangar alias Abu Usman al-Kashmiri, both of whom joined the Khorasan chapter of the Islamic State.

The report added that JeM, a group led by Masood Azhar, is "ideologically closer to the Taliban". Qari Ramazan is the newly appointed head of the group in Afghanistan. Azhar



formed JeM in early 2000 after he was freed along with two more terrorists in exchange for passengers on an Indian Airlines flight hijacked by Pakistani terrorists from Kathmandu to Kandahar.

The findings also debunk the claims of the Taliban of not allowing Afghan soil to be used by foreign fighters since the UN report said several other foreign terrorist groups were still active in Afghanistan, including the Eastern Turkistan Islamic Movement (ETIM), Islamic Movement of Uzbekistan and Jamaat Ansarullah.

Al Qaeda Isn't Dead Yet

By Lynne O'Donnell

Source: <https://foreignpolicy.com/2022/05/27/al-qaeda-terrorism-global-afghanistan/>

May 27 – The United States, under then-President Donald Trump, made a peace pact in 2020 with the Taliban under the pretense that they would break ties with al Qaeda. It didn't happen then, it hasn't happened since, and now the group that blew up the twin towers is enjoying Taliban hospitality while remaining the dominant ideological and operational influence for jihadis from South Asia to North Africa.

U.S. officials, in both the Trump and Biden administrations, saw the Islamic State rather than al Qaeda as the biggest threat to the American homeland. Al Qaeda, it was argued, was a spent force, especially after the forehead-tap elimination of leader Osama bin Laden in a raid by U.S. special forces in Pakistan in 2011.

The reality is that al Qaeda remains the driving force of international terrorism, more than the locally focused Islamic State has ever been, and continues to inspire terrorist groups from Syria and Somalia to Mali and Mozambique.

"Al Qaeda is ultimately the more dangerous enemy," [Bill Roggio](#), a senior fellow at the Foundation for Defense of Democracies told Congress. "Al Qaeda continues to maintain effective insurgencies in multiple countries while using these bases to plot attacks against our homeland and our allies," he told the House Committee on Homeland Security this year.

Ayman al-Zawahiri, the successor to bin Laden, is alive and in control of the al Qaeda global network, Roggio said. "The next generation of al Qaeda leaders, military commanders, and operatives are taking the field while key elements of the old guard remain to guide them."

For now, al Qaeda is laying low. Al Qaeda members are "slow movers, very calculated. They are waiting for the right time; they are consolidating," said Pakistani journalist Iftikhar Firdous, an expert on terrorism in South Asia.

Al Qaeda is a godfather to terrorists who want to overthrow governments from China to Nigeria and from [Kashmir](#) to Yemen.

Yet an official U.S. assessment of the jihadis threat emanating from Afghanistan downplays the role of al Qaeda as inspiration and mentor for Islamist groups worldwide. Part of the reason why is that U.S. President Joe Biden fell back on an apparently downgraded al Qaeda to justify the U.S.-led military withdrawal from Afghanistan last summer, which handed the country to the militant group. Asfandiyar Mir of the U.S. Institute of Peace said ahead of the U.S. midterm elections in November and alongside the Biden administration's pivot to China, that's become the official narrative.

"Despite immense pressure to do so, the Taliban haven't broken from al-Qaeda," Mir [wrote](#) in a recent paper. "Instead, [members of al-Qaeda's core](#) and al-Qaeda's Indian subcontinent affiliate [remain in Afghanistan](#), well positioned to pursue a steady buildup for deniable operations."

Yet the narrative runs through a [recent report](#) by the U.S. Defense Department on U.S. counterterrorism operations in Afghanistan, which says that al Qaeda has been "restricted" by the Taliban. The main threat to the United States, the report suggests, now comes from the Islamic State, known in Afghanistan as Islamic State-Khorasan. It benefited from prison openings as the Taliban swept across Afghanistan last year and recruited disenfranchised Taliban fighters and former Afghan military, the report says.

It also says al Qaeda's regional franchise, al Qaeda on the Indian subcontinent, has only 200 fighters, and the core has even fewer. In the first quarter of 2022, "the U.S. Government did not take any actions to disrupt or degrade al-Qaeda's activities in Afghanistan, including its media operations, which have increased since August 2021."

But numbers aren't the issue. Al Qaeda's hallmarks are seen from Pakistan to the Sahel: suicide bombers, improvised explosive devices, roadside bombings, hijackings, and complex paramilitary-style operations.

Tehrik-i-Taliban Pakistan (TTP), which seeks to establish an Islamic emirate in Pakistan, has [carried out](#) more than 100 attacks on Pakistan, many of them al Qaeda-style complex attacks against military targets. Incensed that the Taliban are giving protection to the TTP, Pakistan has bombed [TTP positions](#) in Afghanistan's Khost and Kunar provinces to force the Taliban—which won their war with Pakistani support—to halt the attacks.



The Institute for Economics and Peace said in its recent report that al Qaeda's affiliate in the Maghreb and West Africa region, Jamaat Nusrat al-Islam Wal-Muslimin (JNIM), was the world's "[fastest growing terrorist organization](#)" in 2021. Mir said the JNIM threatens the stability of Mali, Burkina Faso, Niger, and West Africa writ large. It's no better in the east. This month, Biden [approved](#) the deployment of U.S. special forces to Somalia to counter the growing threat there of al Qaeda-affiliate al-Shabab.

As al Qaeda; the TTP; the Islamic Movement of Uzbekistan (IMU); the anti-China East Turkestan Islamic Movement (ETIM); Jamaat Ansarullah, known as the Tajik Taliban; and many others "are now enjoying the protection of a state, an ungoverned state, why would the strength of any of these groups decrease?" asked Pakistani lawmaker Mohsin Dawar.

At the center of the Taliban-al Qaeda web is Sirajuddin Haqqani, head of the al Qaeda-affiliated Haqqani network, the most brutal of the Taliban's offshoots. He is the Taliban's deputy leader and Afghanistan's acting interior minister, a position that controls domestic security and finances. He is reputedly on the al Qaeda leadership team.

Links between the Haqqanis and al Qaeda stretching back generations are now reflected in the Taliban's leadership. Sirajuddin's fellow Haqqani alum, Tajmir Jawad, known for his ability to network across terrorist groups to pool operational talent, is deputy head of Afghanistan's intelligence agency; his uncle Khalil ur-Rahman Haqqani is the interim minister of refugee affairs. Along with half the Taliban cabinet, they are listed terrorists and wanted by the FBI.

For Dawar, the Pakistani parliamentarian, "the biggest threat is militancy, and I believe it will remain a threat, not just al Qaeda but TTP, [the Islamic State-Khorasan], IMU, [Lashkar-e-Taiba], they are all there [in Afghanistan], and they all have their own agenda." "They have comparatively more space to operate, recruit, train, and plan operations now with the Taliban," he added. "All the regional countries are feeling threatened."

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Africa Needs More Support from the West to Fight Terrorism

By Abdi Yusuf

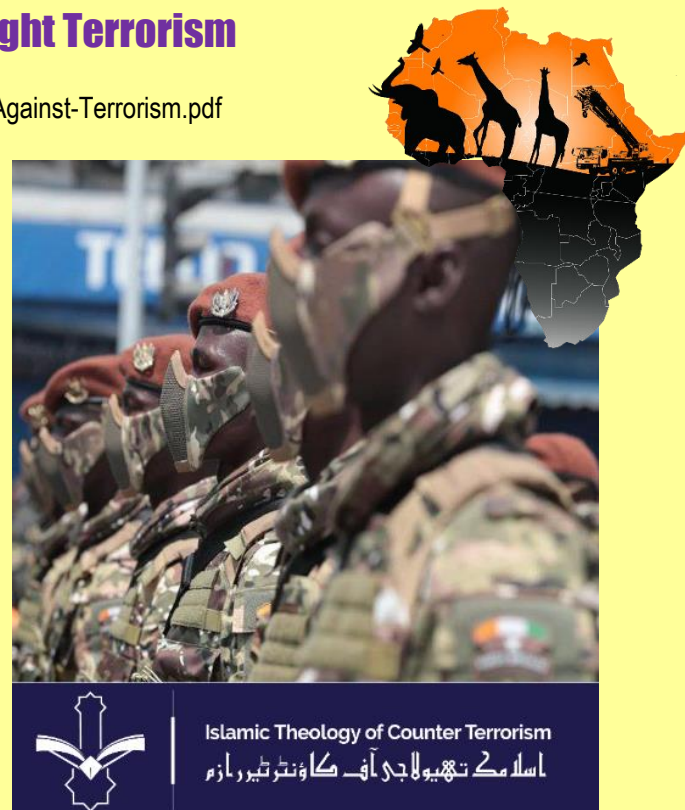
Source: <https://www.itct.org.uk/wp-content/uploads/2022/05/African-Fight-Against-Terrorism.pdf>

The redeployment of U.S. troops back into Somalia is a [welcome decision](#). However, the continent of Africa at large is struggling to cope with growing terrorist threats. [Home to a growing number of Jihadist organizations](#), Africa is a new key front in the fight against terrorism. Eliminating these threats demands deepened U.S. involvement and its allies to partner with local forces and commit to a sustained U.S. military presence on the ground.

According to Stephen Townsend, the top U.S. military commander in Africa, "[deadly terrorism has metastasized to Africa](#)." Terrorists in Africa "remain grave and growing threats that aspire to kill Americans both there and [in our homeland](#)," he added. Therefore, if the United States wants to reduce the threats of terrorism both at home and abroad, it needs to partner with African nations and reaffirm its shared determination to fight terrorist organizations, wherever they are found. Otherwise, America's efforts to combat terrorism and prevent violent extremism from taking hold anywhere in the world will be at stake.

The fall of the Islamic State (ISIS) "caliphate" has forced many of its fighters to flee to Africa, hastening [Africa's emergence as a global epicenter](#) for terrorist organizations. Jihadist activities have rapidly expanded across the continent, including [throughout Sub-Saharan Africa](#). Fighters and various Islamic State *Wilayat* ("provinces") have emerged from west to east, from south to north, from Sahara to Sahel and even from the center of the continent.

In West Africa, both Boko Haram and the so-called Islamic State in West Africa (ISWA), which split from the former, have killed and abducted hundreds, looted on a massive scale and frequently conducted horrific [attacks in Nigeria](#).



In the east, Al-Qaeda-linked Al-Shabaab and the ISIS-linked Abnaa ul-Calipha terrorize the region, killing hundreds, both locals [and Americans](#). As of mid-2022, Al-Shabaab has escalated attacks across Somalia, [killing 30 Burundian soldiers](#) serving as African Union peacekeepers. Many security experts argue the withdrawal of U.S. troops from Somalia allowed Al-Shabaab to come out from hiding, mobilize and carry out this offensive.

In the south, the ISIS-aligned Ahlu Sunna wal-Jama, otherwise locally known as Al-Shabaab (not related to the Somalia-based organization), briefly captured two oil-rich towns in northern Mozambique in 2021. Al-Shabaab has been terrorizing local communities even longer, attacking villages along the Mozambique–Tanzania border [since 2017](#).

In the north, one of the most prominent groups operating in the region is Al-Qaeda in the Islamic Maghreb (AQIM), an Al-Qaeda affiliate founded in Algeria in 1998. Formerly known as “*the Salafist Group for Preaching and Combat*” (GSPC), many of [AQIM’s leaders are Algerian Arab Jihadists](#). After fighting in Afghanistan and Iraq, they have returned determined, to implement Al-Qaeda’s vision at home. To further increase their capabilities, the group courts local secessionists, which [leads to convenient alliances with those holding different ideologies](#). While AQIM had previously [allied](#) with local militias and tribal groups in Mali, it now cooperates with the Polisario Front, exemplifying the convenient link between separatist movements and terror groups. The Polisario Front is the Sahrawi nationalist liberation movement disputing Morocco’s control over the Western Sahara. In 2011, evidence emerged that some of its members had been [cooperating with AQIM in trafficking “drugs, arms, and humanitarian commodities”](#). This separatist group-terror nexus is aided by proximity, as Polisario’s headquarters are based in the Sahrawi refugee camps in the southwestern Algerian city of [Tindouf, near AQIM’s zones of operation](#).

While Polisario defines itself as primarily nationalist and secular, it frequently works alongside Islamist groups like AQIM or the [Iran-backed Hezbollah](#), the Shiite extremist group that reportedly recently established “*training camps*” in Tindouf.

A noteworthy example of the separatist-terrorist nexus is Adnan Abu Walid al-Sahrawi, the former leader of the ISIS-affiliated Islamic State in the Greater Sahara who was killed by French forces in August 2021. Initially, al-Sahrawi had joined Polisario but disappointed with its lack of progress, then [switched](#) to the jihadist Movement for Oneness and Jihad in West Africa (MUJAO).

In Central Africa, the Allied Democratic Forces (ADF), which was founded in Uganda in 1995 by a coalition of rebels to fight against the Yoweri Museveni regime, recently joined the Central Africa Province of the Islamic State. The ADF has intensified attacks in the DRC-Uganda border areas. In late 2020, the group attacked a jail in Beni in the eastern DRC, freeing more than [1,300 fighters](#). According to Mozambican authorities, the ADF have recruited fighters from [Mozambique, Tanzania, Kenya and Uganda](#).

Across Africa, terrorist groups aim to accomplish three things: Establishing havens, recruiting and radicalizing locals and acquiring uncontrolled territory in which to maneuver, train, plan, collect taxes and govern. Vincent Foucher, an Islamist extremism expert, argues that for such organizations sub-Saharan Africa uniquely allows terrorist groups to achieve large returns with “minimal investment”, since organizations like ISIS can hold [thousands of square kilometers](#) of territory in which to create bases.

Africa is no stranger to housing such [terrorist organizations](#). There are areas throughout the continent where terrorists can easily hide among the locals, exploiting the weakness of the continent’s security systems and military forces. Generally, African forces lack the ability to use crucial “[air power, precision weapons and armored vehicles](#)” to fight ISIS. An example can be seen in Mozambique’s defense forces who are “[widely regarded as corrupt, poorly trained and ill-equipped](#)”. These forces failed to contain the ISIS-affiliated Al-Shabaab, which operates in the northern part of the country.

Africa’s current state unfortunately proves ideal for recruitment and radicalization. Both Al-Qaeda and ISIS and their affiliates have recently been recruiting Africans. In Somalia for example, Al-Shabaab (an al-Qaeda affiliate) “*now has as many as 12,000 fighters and can raise up to \$10 million in revenue per month*,” according to a February 2022 estimate.

The ADF in DRC is also recruiting fighters from Uganda, [Kenya and Tanzania](#). ISWA [has also been recruiting Africans](#), with footage allegedly showing the group training boys and having them execute captured enemies.

Furthermore, both ISIS and Al-Qaeda affiliates control large swathes of territory across the continent. ISWA, for example, operates in the [Liptako-Gourma region of the Sahel](#), including parts of Burkina Faso, Mali, Niger and north-eastern Nigeria. Meanwhile, Al-Shabaab controls large swaths of southern Somalia. According to U.S. officials, ISIS exploits “local grievances” in their surroundings and “[start\[s\] recruiting based on that](#)”, increasing the caliphate’s manpower.

In summary

Africa has significant geopolitical importance for jihadist organizations. The current trend shows that terrorist organizations in the continent have grown stronger, expanding their presence, forging alliances with separatist movements, and intensifying their attacks on U.S. allies and interests. Without persistent international pressure, terrorist organizations fleeing the Middle East (and other places) will reemerge from hiding, reorganize their fighters and recruit additional forces to start conducting attacks across the continent, injuring key U.S. allies and damaging core U.S.



interests. To tackle these security challenges, the continent needs both U.S. and international support. Otherwise, the hard-fought efforts led by the U.S. to prevent and defeat global terrorism will be in jeopardy.

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The Buffalo Shooter, Stochastic Terrorism, and How to Counter It

By Todd Morley

Source: <https://smallwarsjournal.com/jrnl/art/buffalo-shooter-stochastic-terrorism-and-how-counter-it>

On March 15th, 2022, 18-year-old Payton Gendron walked into a Tops supermarket in Buffalo, NY and opened fire on innocent civilians. A calculated and premeditated attack, typical of the shootings that have become tragically routine across the United States. Unlike most, this particular attack was live-streamed on the streaming platform Twitch to a small audience of Gendron's friends. This is not the first instance of a shooting broadcast for entertainment, but this recent example belies a disturbing trend. Gendron uploaded hundreds of pages of material to the 8chan and 4chan online message boards prior to the attack, including a self-described manifesto outlining the rationale for his attack. These documents show that Gendron drew a significant amount of inspiration from the Christchurch mosque shootings in New Zealand – his manifesto explicitly states that seeing the impact of that attack was what convinced him to begin planning his own.^[1] He adorned his firearms with similar style: internet in-jokes and the names of previous neo-reactionary shooters like Dylann Roof and Anders Breivik. His manifesto, a 180-page screed of neo-fascist and racial determinist hate laced with memes and infographics makes repeated reference to conspiracy theories that inspired the Christchurch shooter: White Genocide, Jewish conspiracies, and the pressures of climate change encouraging an eco-fascist overthrow of the current global order. Whether either shooter sincerely held these beliefs is beside the point. These conspiratorial and apocalyptic narratives are clearly effective in motivating disaffected young white men to entertain the idea of racially motivated mass violence. More than another mass shooting, the Buffalo attack was an example of a growing trend of stochastic terrorist violence.

What is Stochastic¹ Terrorism?

The modern stochastic model of terrorism is commonly traced to mathematician and risk analyst Gordon Woo.^[2] Simply put, Woo asserted that there was a quantifiable relationship between seemingly random acts of terrorism and the perpetuation of hateful rhetoric in public discourse, accompanied by catastrophising and fear generation in media sources.^[3] It is commonly understood of terrorism that it seeks publicity as a means of disseminating a particular political message to indirect targets. A stochastic model would say that this relationship with media is actually an observable feedback loop: terrorism generates media coverage and public debate regarding the ideological motivations of the shooter, which in turn inspires further terrorism. The greater quantity of media coverage, and thus widening political discussion to include fringe views, has a causal effect on the frequency of these seemingly random terror attacks. In a stochastic model, the political effect desired from an attack is creating a more conducive atmosphere for further, and more frequent, "lone wolf" attacks.^[4]



¹ Stochastic is from the Greek word "stokhastikos", meaning able to guess, with the root "stokhos" meaning a target—in Greek stokhos literally means a stick meant for archers to shoot at.



This model of terrorism does fit far-right extremist shooters like Gendron, but the terminology of “random” is somewhat misleading. While the means and methods of far-right terrorism carry little broader strategic logic, targets are deliberately chosen for maximum political effect. The Christchurch shooter was deliberate in his attack on mosques in a liberal democracy renowned for its tolerance.^[5] The El Paso shooter similarly chose his location deliberately to maximise the number of Hispanic victims. The specifics of each incident might be considered “random” on a macro scale, but each were motivated by a wider ideological ecosystem supported by internet communities, fringe politicians, and portions of the mainstream media.

In the case of the Buffalo shooting, quantitative evidence is hardly necessary to draw a connection to previous attacks. In his manifesto, the shooter explicitly states that the Christchurch attack was his inspiration. The El Paso shooter was similarly inspired by Christchurch,^[6] and both shooter’s names were written on Gendron’s weapons. None of these shooters had prior contact or affiliations; the only shared trait between them was their radical ideology. If this is the case, how can counter-terror practitioners best combat this worrying trend?

How Can We Prevent It?

If we are to prevent attacks like this from occurring, traditional methods have proven insufficient. Policing is ill-equipped to deal with this style of threat, given the limited warning these attacks give off and the infeasibility of the large-scale surveillance necessary to monitor every individual encountering these online communities. Rather than attempting to counter individual attackers, focusing on countering the wider ideology surrounding these attacks should be prioritised. Countering Violent Extremism (CVE) is the term for counter-terror programs aimed at preventative community engagement as opposed to reactive and otherwise punitive measures. These programs have yielded positive results in countries like Germany and Norway in combatting white-nationalist groups, focusing on counselling, community deradicalization, and educational programs designed to counter harmful conspiracies.^[7] Stochastic terror does pose a unique challenge to traditional CVE approaches given how private the radicalisation process can be. Gendron claims he was radicalised by the 4chan online message board in 2020 during Covid lockdowns, spiralling into a hateful ideology in the privacy of his own bedroom without the need to contact a wider organisation.^[8] While a first impulse may be an attempt to ban 4chan and it’s more radical counterpart 8chan, these efforts have proven fruitless in the past. ISP bans are relatively easy to circumvent, and the media attention received by such bans are more likely to draw disaffected young people to these spaces as an act of transgression.

The model of stochastic terrorism does provide a potential answer, though a difficult one. The likelihood of these attacks is heightened by the public normalisation of dangerous white-nationalist rhetoric. The motivating myth of Gendron’s attack, The Great Replacement, is not solely the purview of fringe conspiracists. This narrative is regularly pushed by public figures such as Fox News host Tucker Carlson,^[9] and reinforced by numerous far-right political figures across the developed world. Given the difficulties of identifying stochastic attackers prior to their attacks, combatting the ideological ecosystem that ferments their violent ideas is crucial. Further funding and focus on CVE efforts can be effective in this regard. Early intervention and de-radicalisation programs disseminated to educational institutions and in internet spaces have had a demonstrable impact on at-risk communities in the past,^[10] and can have a long-term harm minimisation impact that security-focused counterterrorism policies lack.

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Lebanese Leader Defies Hezbollah, but Is It Enough?

By Jonathan Spyer

Source: <https://www.meforum.org/63292/lebanese-leader-defies-hezbollah-but-is-it-enough>

May 27 – Lebanese Forces (LF) leader Samir Geagea, in an interview this week in Beirut, called for the full restoration of Lebanese sovereignty, in a series of remarks directed at **Hezbollah**. Speaking to AFP from his home in the Maarab area, Geagea demanded that "All strategic decision-making should return to the Lebanese state... and security and military matters should be handled exclusively by the Lebanese army."

The veteran LF leader referred directly to Hezbollah's independent military capacity, asserting that **"No one... should be able to transport missiles from one place to another without the permission and knowledge of the military... This is no longer acceptable."**

Geagea's remarks come after an impressive showing by his party in the Lebanese elections on May 15. The Lebanese Forces replaced the Hezbollah-aligned Free Patriotic Movement of President Michel Aoun and Gebran Bassil as the leading Christian party. LF won 19 seats to the FPM's 17, in a poll that was notable for gains made by elements opposed to the status quo. LF is now the largest party in the parliament. Thirteen deputies representing organizations associated with the 2019 protest movement also entered the legislature.

The May election was a clear indication of rejection of the status quo by a broad section of the Christian and Sunni public. The background to the discontent is clear too. Lebanon is currently in the midst of the worst crisis to hit the country since the civil war of 1975-90.

The country defaulted on its national debt for the first time in 2020. Its currency has subsequently devalued by about 90%. Inflation stands at 239%. Four out of every five Lebanese now live below the poverty line, according to UN figures. The port explosion in Beirut in August 2020, in which 218 people died, devastated the city.

An IMF deal to provide \$3 billion to Lebanon was reached in April. But this funding is dependent on significant reforms, including cabinet approval for a debt restructuring plan, the passing of a new bank secrecy law, and the approval of a new budget.

The causes of [Lebanon's](#) unprecedented decline are multiple. Long-term mismanagement, corruption, and an entrenched political class that rejected necessary reforms as threatening its own privileges, are all elements.

Pro-Iranian interest

The central underlying component, however, has been the rise to dominance of the pro-Iran interest, as represented by Hezbollah and its allies. Hezbollah's clear ascendancy following the events of May 2008 has led to the near-total withdrawal of support and investment from the Gulf countries.

Lebanon was the first country to be subjected to the Iranian model for the hollowing out and takeover of Arab countries. This model is only available for application to countries already in crisis and fragmentation.

Lebanon was the first Arab country to undergo fragmentation along sectarian lines, beginning in 1975. **The Iranian Hezbollah project there, dates from 1982, when 1,500 Islamic Revolutionary Guard Corps operatives arrived in the country to begin the process of establishing Tehran's proxy/client militia.**

A generation later, a comparable fragmentation in Syria, Iraq and to a lesser degree Yemen has enabled the insertion of similar projects into those countries. Hence Lebanon, as the base for the oldest and most successful of Iran's takeover bids, also offers indications what would happen to a country being the subject of such an effort.

Lebanon shows that the long-term result of the application by the IRGC of its methods to a country will be the distortion, contraction and possible eventual collapse of the economy and society in question. The reason for this is that Iran has no model for economic development, is itself poor, and will through its ambitions and its mismanagement drive away other



elements whose presence is essential to success and growth. The gains made by the Lebanese Forces and by independents associated with the 2019 protest movement should not be dismissed. They represent the mobilizing of those elements most affected by, and most militantly opposed to the Iranian project. The LF has close relations with Saudi Arabia, and as such should be seen as analogous to other domestic forces in various parts of the region whose efforts against Iranian clients are assisted or made possible by the assistance of the wealthy Gulf states. But will Geagea's opposition to the Iranian project have an effect? Immediate and major changes are unlikely. Rather, in a manner similar to the current situation in Iraq, what is most likely to follow now is months of stagnation, as the various parties fail to agree on the formation of a new government, with the current "caretaker" administration of Najib Mikati continuing to rule. A new speaker is set to be appointed in the months ahead. By the end of the year, parliament is set to choose the next president (who must be a Christian). The gains made by the Lebanese Forces are likely to complicate the process. Current President Aoun and his supporters had expected an easy selection for his son-in-law, Gebran Bassil. The election results cast doubt on this. Ultimately, however, the electoral advances made by anti-Hezbollah and civil society forces in Lebanon are likely to run up against the immovable fact of Iran/Hezbollah's military supremacy, and its demonstrated willingness to use force when and where it deems necessary.

As showcased in Lebanon, the Iranian model has nothing to offer the peoples of the countries it colonizes but dysfunction and poverty. It remains, however, without a current regional peer in the development of proxy political/military organizations.

A few shots in Ain el-Remmaneh notwithstanding, neither the Lebanese Forces nor the protest movement have anything to put up against Hezbollah's independent military capacity. This means that despite Geagea's words, the LF and independent electoral gains look set to form a (notable but limited) irritant to the Iranian project in Lebanon, rather than a serious threat to it.

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How the War Against ISIS Was Won

By Michael R. Gordon (*Wall Street Journal*)

Source: <https://www.wsj.com/articles/how-the-war-against-isis-was-won-11654271174>



June 03 – In mid-April 2017, I was a fly on the wall for a top-level meeting that helped cement the defeat of Islamic State. Nearly three years earlier, Islamic State militants had taken the city of Mosul, rocked the Middle East and spurred the U.S. to send its military forces back to Iraq. The American mission this time wasn't to do the fighting on the ground but to back up Iraqi forces with U.S. firepower and advise them as they battled their way forward. The name of the military campaign was "Operation Inherent Resolve," and in the spring of 2017, that resolve was being put to the test. The campaign against Islamic State militants defeated an enemy, thrust local partners to the lead and held U.S. casualties to a minimum. Die-hards from Islamic State, also known as ISIS, were determined to make a last stand in Mosul. Hundreds of thousands of civilians were trapped in the city, which is bisected by the Tigris River, and Iraqi advances had been stalled on its western side. I had traveled with Lt. Gen. Stephen Townsend to an Iraqi base south of the city when word came that Iraq's then-Prime Minister, Haider al-Abadi, was gathering his commanders there for an impromptu council of war. Wearing the black fatigues of Iraq's Counterterrorism Service, Mr. Abadi sought to rally his generals in an enormous tent whose walls were lined with photos of Iraqi Federal Police officers who had died in the war.

EDITOR'S COMMENT: Are we sure that the title is accurate?

Hezbollah leader threatens to hit Israel's offshore gas rig

Source: <https://apnews.com/article/hezbollah-hassan-nasrallah-michel-aoun-israel-middle-east-92cc6b4462ba09669961b239595fd5b0>

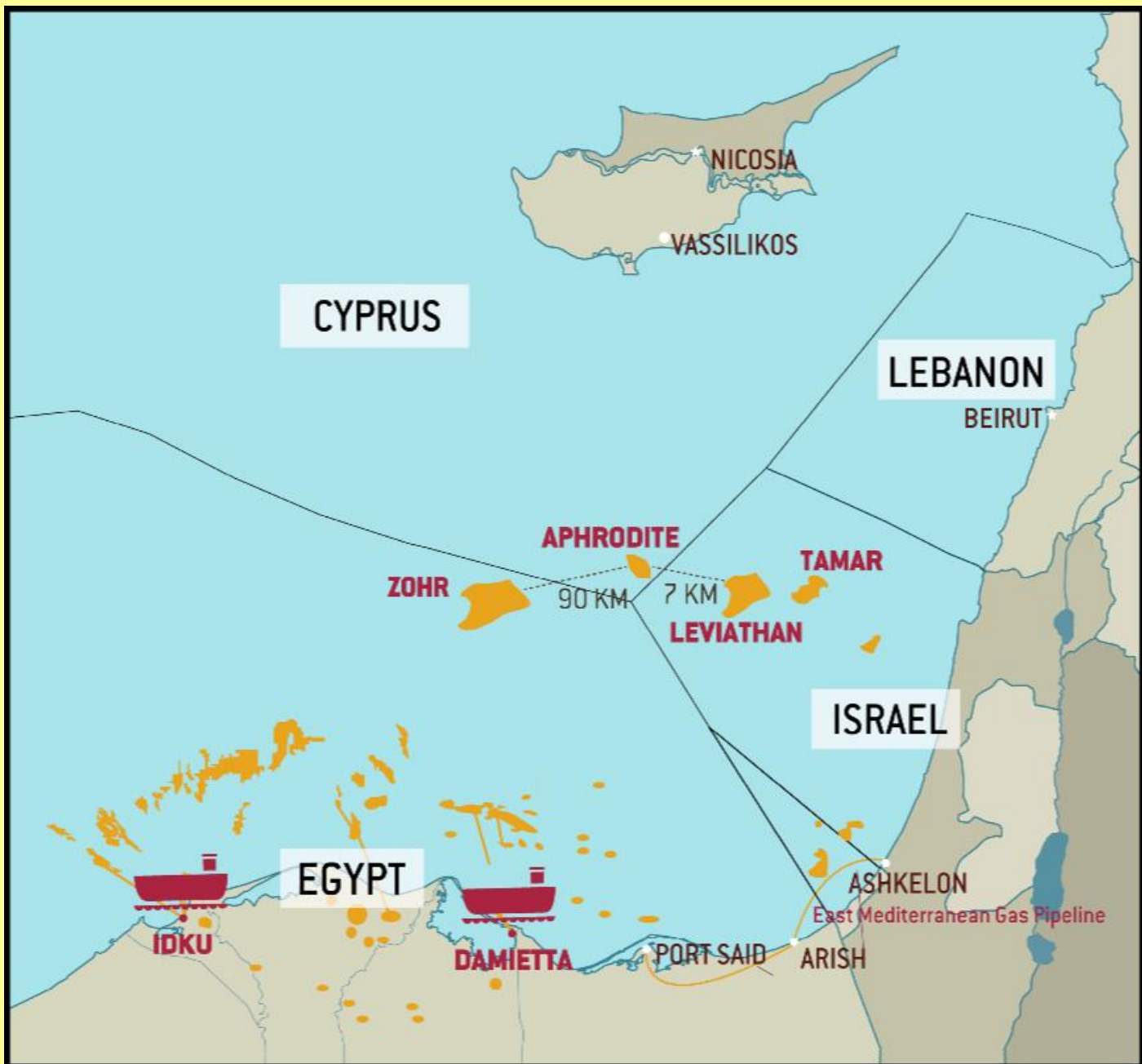
June 09 — The leader of Lebanon's militant Hezbollah group threatened Thursday to strike a gas rig Israel is setting up in the Mediterranean Sea and that Lebanon claims is in a disputed maritime area between the two countries.

Israel says the location is part of its U.N.-recognized exclusive economic zone.

Hezbollah's Hassan Nasrallah, a staunch Iran ally, denounced in a televised address what he described as Israeli provocations in the maritime area.

His speech followed a warning by Lebanese President Michel Aoun last Sunday who said that maritime border negotiations between the two countries have not ended, adding that





any move by Israel — such as drilling in the Karish field that Beirut calls disputed — will be considered “a provocation and hostile act.”

Earlier this week, Energean Power, a floating production, storage and offloading unit belonging to the energy exploration and production company Energean, arrived in the Karish field. The company is listed in London and Tel Aviv and the ship’s arrival triggered alarm in Lebanon.

Aoun and Lebanon’s caretaker Prime Minister Najib Mikati invited a U.S. envoy mediating between Lebanon and Israel to return to Beirut to try and work out an agreement. Amos Hochstein, a senior adviser for energy security at the U.S. State Department, is expected to arrive in Beirut the next few days.

The U.S.-mediated indirect talks between Lebanon and Israel have been stalled for months amid disagreement within Lebanon over how big the disputed area is.

Nasrallah said Israel should wait for the results of the negotiations and that any drilling that takes place before an agreement will be considered a direct assault on Lebanon.





“All options are on the table,” he said, adding that all security measures that the Israeli military takes will not be able to protect the gas rig.

The ship and its owners, he said, should know that they are “partners in the aggression on Lebanon taking place today,” Nasrallah said, calling for its immediate withdrawal from the area. “They bear full responsibility for what could happen to this ship, both in material damage and to its crew.”

Israel and the powerful Hezbollah group, which is armed and funded by Iran, are bitter enemies that fought an inconclusive, monthlong war in 2006. Since then, the border area has remained tense but mostly quiet.

EDITOR’S COMMENT: Energean Power is a vessel of [Greek interests](#). The question is whether the Hizbollah militia will carry out an attack or not. The answer and the decision to attack or not will not come from the southern suburbs of Beirut but Tehran (for obvious reasons). More than a year ago, the Hezbollah militia conducted naval exercises, which included suicide boat attacks on drilling rigs or warships, in collaboration with the Houthi militia in Yemen.

How Vulnerable to Attack Is U.S. Mass Transit and Passenger Rail?

By Anthony Citarella and Mitchell E. Simmons Ph.D.

Source: <https://www.hstoday.us/featured/how-vulnerable-to-attack-is-u-s-mass-transit-and-passenger-rail/>

June 12 – You board a subway car on what appears to be a common Tuesday morning rush hour heading into the city. It’s a subway, and you are not thinking about how it’s part of the Transportation Systems Sector – part of our nation’s critical infrastructure as defined by a U.S. Presidential Policy Directive. You are thinking of what work and chaos awaits you at your job. In the corner of your eye, you see a man donning a gas mask, which puzzles you. He then hurls smoke grenades and starts shooting as screams, smoke, and chaos fill the car. You find yourself on the floor, wounded and staring at the car’s ceiling. As other panicked passengers hover over you administering aid, you think, what the hell happened? And then you think, how can we stop this from ever happening again? Sadly, lone-wolf mass transit attacks may never be preventable, but systems and policies in the U.S. have made them rare events.

The Transportation Systems Sector is defined by Presidential Policy Directive (PPD)-21 as one of the 16 critical infrastructure sectors of the United States of America. Due to its designation as critical infrastructure, the Transportation Systems Sector is included



in the National Infrastructure Protection Plan (NIPP), a risk-management framework implemented to address the unique characteristics and risk landscape of U.S. critical infrastructure.^[1] In that framework, responsibilities for overseeing security and resilience for critical infrastructure are divided amongst multiple U.S. agencies. For the Transportation Systems Sector, the NIPP designates the U.S. Department of Homeland Security (DHS) and the U.S. Department of Transportation (DOT) as co-sector specific agencies. DHS delegates its responsibilities to the Transportation Security Administration (TSA) and the United States Coast Guard (USCG). In a combined effort, DOT, TSA, and the USCG jointly perform efforts to ensure the security and resilience of the Transportation Systems Sector.^[2]

The Transportation Systems Sector consists of seven key subsectors: aviation, highway and motor carrier, maritime transportation system, mass transit and passenger rail, pipeline systems, freight rail, and postal and shipping.^[3] This article will specifically focus on the mass transit and passenger rail (MTPR) subsector and what measures are in place to protect it from a physical attack. To expand, MTPR service takes four forms: heavy rail (e.g., Washington D.C.'s Metro subway), commuter rail (e.g., Maryland Area Rail Commuter [MARC] and Virginia Railway Express [VRE] trains), light rail (e.g., Dallas Area Rapid Transit [DART]), and intercity passenger rail (American Track [AMTRAK]).^[4] Each of these forms of MTPR share certain characteristics that make them vulnerable to attack: they make timed scheduled stops along fixed routes, their operations depend on people having quick and easy access to stations and trains, and the number of access points and volume of ridership make it impractical to subject all rail passengers to the type of personal and baggage screening that airline passengers undergo.^[5] Many of these vulnerabilities have been known for a while and were even highlighted in *The 9/11 Commission Report*, which noted, "Surface transportation systems such as railroads and mass transit remain hard to protect because they are so accessible and extensive."^[6]

To be able to understand the significance of these vulnerabilities, it is important to put the magnitude of MTPR in the U.S. into perspective. Passenger rail systems – primarily subway systems – in the U.S. carry about five times as many passengers each day as do airlines, over many thousands of miles of track, serving stations that are designed primarily for easy access.^[7] During pre-pandemic times in the year 2019 alone, the American Public Transportation Association (APTA) estimated that there were 3.79 billion unlinked passenger trips conducted on heavy rail, 503 million trips on light rail, and 515 million trips on commuter rail.^[8] During pandemic conditions in 2021, APTA estimated 1.66 billion trips on heavy rail, 228 million on light rail, and 175 million on commuter rail.^[9] Even through the global COVID-19 pandemic, MTPR passenger volumes remain at a staggering level. Given the aforementioned vulnerabilities and the sheer volume of passengers, one can clearly see that MTPR is a "soft target" for a malicious actor(s) seeking to inflict mass casualties and/or damage and destroy critical infrastructure.

Despite MTPR appearing as a "soft target," terrorist attacks on passenger rail in more developed countries are statistically rare events. Over a period of 50 years from 1970 to 2019, a total of 346 terrorist attacks against MTPR occurred across 27 countries. Specifically, the United States suffered 27 such attacks, equating to slightly more than 0.5 attacks per year. In addition, at least nine terrorist plots against public surface transportation targets were uncovered by U.S. authorities.^[10] Even though a terror attack on MTPR is statistically rare, given the characteristics of the environment, one successful attack could be record-setting in terms of casualties and damage. Because of this, it is important to note that "security does not prevent terrorism; it merely increases the chance of terrorist failure or displaces the risk to other, more vulnerable targets."^[11] Another factor to consider when addressing the likelihood of a terrorist attack on MTPR is the recent significant change in terrorist ideology. Based on data from the University of Maryland's Global Terrorism Database (GTD), recent terror attacks have been more indiscriminate to possibly achieve higher quantities of death and destruction.^[12] These acts of violence against random targets make the potential of an attack on MTPR even harder to calculate, complicating the security environment for protection.

Based on historical events, there are four ways terrorists have targeted MTPR for a physical attack: armed assault, improvised explosive devices (IEDs), insider threat sabotage causing derailment, and a chemical/biological attack. As Brian Jenkins and Bruce Butterworth of the Mineta Transportation Institute note in their study of terrorist attacks against passenger rail transportation: "In recent decades, terrorists have attacked public service transportation systems because they see crowded stations and commuter trains as killing fields. Unlike the terrorists of the 1970s, they seek high body counts. Their use of inherently indiscriminate tactics – Improvised Explosive Devices (IEDs), VBIEDs [Vehicle Borne IEDs], mass shootings, attempts to derail passenger trains – suggest that slaughter is the objective."^[13]

With a variety of physical attack vectors for terrorists to utilize, it is common practice for security officials to analyze events from the past to learn and better prepare for potential future attacks. In a similar fashion, we will break down each vector and highlight pertinent details that expose vulnerabilities in MTPR. To begin, a small-arms assault was conducted on the New York City subway on April 12, 2022. The perpetrator, a 62-year-old male armed with a Glock 9mm handgun, was disguised as a construction worker upon boarding the subway. After boarding, the subject threw smoke grenades and opened fire on the passengers in the train, which injured 23 people.^[14] The subject eventually fled the scene



but was captured after a 30-hour manhunt. In this attack, the perpetrator utilized cover to blend into the transit surroundings, possibly enhancing his ability to avoid detection by security officials. In addition, the use of smoke grenades created mass confusion and hysteria in a densely populated train car, enhancing the effectiveness of his attack and allowing for an escape. The 30-hour manhunt exposed a lapse in the New York City subway's camera monitoring system, as there was no available footage of the individual to distribute to the public. Despite the operational success of the attack, none of the 23 wounded individuals succumbed to their injuries, fortunately minimalizing the attack's deadly intent.

IEDs, a different attack vector to which MTPR is vulnerable, can target multiple areas in the MTPR system. IEDs have been used across the world to target passengers on trains, in a station, or on a platform. If successfully utilized against targets in a confined space, IEDs can cause mass casualties and damage. Another way in which terrorists use IEDs to target MTPR is for derailment purposes. Bombing is the most common tactic in train-track attacks, accounting for 85.9 percent of the attacks in the past 30 years.^[15] Using information from a 2010 study, saboteurs succeeded in derailing all or a portion of a train 58 percent of the time in 81 qualifying attempts.^[16] With knowledge of the pattern and timing of the trains, the terrorists often placed IEDs next to the tracks or buried them beneath the rails in a timeframe in which it would be nearly impossible for security officials to detect the bombs and react.

Another form of sabotage by derailment occurred in the form of an insider threat. On March 31, 2020, a train engineer drove a train at high speed, did not slow down near the end of the railroad track, and intentionally derailed a train off the tracks near the United States Naval Ship *Mercy*, a hospital ship then docked in the Port of Los Angeles.^[17] Motivated by a conspiracy theory against the *Mercy* and its role in the COVID-19 pandemic, the individual claimed they conducted the attack because they believed the ship had an alternate purpose relating to government takeover and wanted to "wake people up." The individual acted alone and did not pre-plan the attack. The derailment caused an estimated \$700,000 in damages and the train engineer ultimately plead guilty to terrorism charges.^[18]

Finally, a chemical/biological attack is another vector that terrorists have used to target MTPR. In 1995, the Tokyo subway system fell victim to an attack by the terrorist group Aum Shinrikyo. The cult was able to manufacture sarin nerve gas and deployed a group of five operatives to five subway cars on three separate lines that converged near government offices in Tokyo. After dispersing the gas on the subway, the assailants fled the scene, escaped in a vehicle, and self-administered an antidote to the sarin.^[19] By the end, over 5,000 "casualties" sought medical attention, of whom 984 were moderately poisoned and 54 were severely poisoned; 12 died.^[20] The Aum Shinrikyo attack demonstrated that with motive, planning, coordination, and execution, a small group of assailants can inflict mass hysteria and casualty to an MTPR system.

Over the course of time, security professionals and policymakers have been able to learn from attacks on critical infrastructure and MTPR specifically to create systems, policies, and procedures to hopefully prevent but also be prepared in the event of a terrorist attack on MTPR. Leading the way for reform, The 9/11 Commission called for a systematic analysis of transportation assets, the risks to those assets, and the cost and benefits of different approaches to defending those assets. The Intelligence Reform and Terrorism Prevention Act of 2004 furthered The 9/11 Commission's goals, as it directed DHS to create a national strategy for transportation security. This plan ultimately identified national transportation assets, set risk-based priorities for their protection, assigned responsibilities for their protection, and recommended appropriate levels of and sources of funding for these efforts.^[21]

Along the same lines, the Implementing Recommendations of the 9/11 Commission Act of 2007 included provisions on MTPR security and authorized \$3.5 billion for FY2008-FY2011 for grants for public transportation security. The act required public transportation agencies and railroads considered to be high-risk targets by DHS to have security plans approved by DHS, required DHS to conduct a name-based security background check and an immigration status check on all public transportation and railroad frontline employees, and gave DHS the authority to regulate rail and transit employee security training standards.^[22]

After gaining authority through policy, DHS issued security directives for MTPR. These directives have not been made public, but according to reports include removing or hardening trash containers on boarding platforms that could be used to hide bombs, increasing the presence of security officers, using video surveillance in and around stations, using bomb-sniffing dogs for random inspections of passengers and baggage, and encouraging riders to look for suspicious activity.^[23] Due to the volume of ridership and number of access points on MTPR, it would be impractical for DHS to subject all rail passengers to the type of personal and baggage screening airline passengers undergo. As a result, transit security measures emphasize managing the consequences of an attack while attempting to reduce the risks of an attack as much as possible. To do this, DHS implements:

- Vulnerability assessments
- Emergency planning
- Emergency response training and drilling of transit personnel (ideally in coordination with police, fire, and emergency medical personnel)
- Increasing the number of transit security personnel



- Video equipment installation in vehicles and stations
- Random inspections of bags, platforms, and trains^[24]

To successfully conduct these protective measures, DHS leverages TSA's resources and structure. While some of the security responsibility for MTPR is divided amongst rail operators and local law enforcement agencies, TSA provides oversight, coordination, and assistance. TSA, under DHS, is responsible for planning, training, exercises, information and intelligence sharing, operational detection and deterrence, and community outreach.^[25] Through its Visible Intermodal Prevention and Response (VIPR) teams, TSA provides operational support to local law enforcement officials that includes periodic patrols of transit and passenger rail systems to create "unpredictable visual deterrents."^[26] In addition, TSA surface transportation security inspectors conduct assessments of transit systems (and other surface modes) through the agency's Baseline Assessment for Security Enhancement (BASE) program. TSA also developed a security training and security exercise program for transit known as Risk Mitigation Activities for Surface Transportation (RMAST).^[27] Overall, TSA's primary objectives for reducing risk in transit are to:

- Increase system resilience by protecting high-risk/high-consequence assets (i.e., critical tunnels, stations, and bridges)
- Expand visible deterrence activities (i.e., canine teams, passenger screening teams, and antiterrorism teams)
- Engage the public and transit operators in the counterterrorism mission^[28]

As a pivotal node in U.S. critical infrastructure, MTPR is an important asset to protect. Over the course of history, MTPR has been identified as vulnerable by malicious actors and has been targeted through multiple physical attack vectors. Using armed assault, IEDs, insider threat sabotage for derailment purposes, and chemical/biological attacks, terrorists have shown a persistence to target MTPR, a system that in the U.S. alone can conduct 3.79 billion unlinked passenger trips per year. To protect an asset with the magnitude of MTPR, the U.S. has implemented security policies and procedures that span the federal, state, local, and private-sector levels. With DHS and specifically TSA taking the lead in security initiatives for MTPR, programs such as the Visible Intermodal Prevention and Response Team (VIPR), Baseline Assessment Security Enhancement (BASE), and Risk Mitigation Activities for Surface Transportation (RMAST) are programs designed to facilitate cooperation and information sharing across communities to prevent an attack or mitigate and manage the consequences of an attack. By successfully conducting planning, training, exercises, information and intelligence sharing, operational detection and deterrence, and community outreach, TSA has a track record that shows efficiency in conducting its protective mission against persistent security threats.

While it is still possible for security lapses to occur and for terrorists to conduct successful attacks, we assess the U.S. has an effective system in place to mitigate the risk and occurrence of physical attacks against MTPR. With intent, a capable terrorist could almost certainly conduct a "lone wolf" or unsophisticated attack at any given moment. However, as was seen in the April 2022 NYC subway shooting, these types of events commonly have less impact than more sophisticated attacks. To prevent more sophisticated attacks, the U.S. has systems in place that would detect the plan before the attack or allow security officials to be prepared to quickly react and respond. In addition to homeland initiatives for security, it is important to note the effectiveness of the United States' campaign on terrorism abroad and how it affects terrorist activity in the U.S. As Jenkins and Butterworth note: "Remote recruiting has had an effect on terrorist attacks. Most of the recent attacks have been carried out by self-selecting individuals inspired by violent images and ideologies rather than by groups. Today's terrorists lack resources... the lack of central direction also may explain why there seems to be little evidence of growing sophistication in terrorist attacks over the past 10 or 15 years. Counterterrorist measures – breaking up large terrorist organizations; denying them sanction; forcing them to rely on extortion; hindering the formation of new domestic groups; preventing continuing campaigns that allow learning – have kept skill levels low."^[29]

All things considered, there are undoubtedly vulnerabilities to MTPR that malicious actors can exploit to conduct a physical attack. However, with continued vigilance, dedication of resources, and further expansion and evolution of security measures, the U.S. can remain effective in deterring and/or mitigating physical attacks on MTPR and keep risk at an acceptable level considering the volume of usage.

Disclaimer: The authors are responsible for the content of this article. The views expressed do not reflect the official policy or position of the National Intelligence University, the U.S. Intelligence Community, the Office of the Director of National Intelligence, or the U.S. Government.

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Afghanistan Terrorism Report: May 2022

By Dr. Hans-Jakob Schindler and Joshua Fisher-Birch

Source ([full doc](https://www.counterextremism.com/blog/afghanistan-terrorism-report-may-2022)): <https://www.counterextremism.com/blog/afghanistan-terrorism-report-may-2022>

June 13 – ISIS-K propaganda channels continued to highlight the high tempo of operations within Afghanistan. Similar to [April 2022](#), incidents were concentrated in the North and East of the country, potentially indicating that ISIS-K cannot sustainably widen its operational reach to the rest of Afghanistan. Various ISIS-K outlets linked these activities to the overall ISIS campaign “vengeance for the two sheikhs,” which was announced by ISIS-linked propaganda outlets [on April 17, 2022](#), as a response to the killing of ISIS leader [Abu Ibrahim al-Hashimi al-Quraishi](#) and ISIS spokesman [Abu Hamza al-Qurashi](#), both killed in a U.S. raid in [Syria in February 2022](#). Several ISIS affiliates carried out the campaign which, according to ISIS propaganda, resulted in [several hundred attacks](#). In addition to frequent attacks in Pakistan, ISIS-K propaganda continued to highlight the group's alleged attack on the [territory of Uzbekistan](#) in April 2022 and claimed a second cross-border attack, this time on the territory of Tajikistan. The government of Tajikistan did not deny the attack but reported that [bullets, not rockets](#), were fired on its territory in a firefight at the border. Despite the disputed nature of both attacks, the fact that ISIS-K propaganda continues to highlight these demonstrates the group's apparent intent to reach into Central Asia and to demonstrate that the Taliban are unable to prevent cross border attacks.

Map of Incidents Highlighted by ISIS-K Social Media Propaganda in May 2022



During the month of May, ISIS-K propaganda indicated that the group now uses some of the attack methodologies previously employed by the Taliban. ISIS-K's propaganda narratives regularly highlighted attacks on electricity towers in the country. Similar disruption of civilian infrastructure was part and parcel of [Taliban tactics](#) until the summer of 2021. Similarly, ISIS-K repeatedly emphasized an attack on a large hotel near Kabul airport in May. Until the Taliban takeover in August 2021, hotels were frequently the target of [Taliban attacks](#). In



2014, increasing Taliban threats to hotels and an attack on a [Lebanese restaurant in Kabul](#), which left four U.N. staff members dead, forced the United Nations and foreign embassies to progressively restrict international staff members from frequenting hotels and restaurants in Kabul due to security concerns.

Furthermore, pro-ISIS-K propaganda highlighted the fighting between Taliban forces and opposition forces in the Panjshir valley several times, despite these opposition forces not being linked to the group. These opposition fighters were most likely part of the [National Resistance Front](#), which formed following the Taliban takeover of the country in August 2021. Although the [Taliban denied](#) any incidents in the valley, independent reporting [confirmed ongoing clashes](#) between Taliban and opposition forces. However, given the fact that the valley is far from any of the borders of Afghanistan (see the red star with blue center on the map below), which significantly complicates resupply, it seems currently unlikely that these opposition forces will be able to present a serious challenge to Taliban rule in the country any time soon.

Finally, the pro-ISIS-K Voice of Khurasan web magazine took responsibility for the attacks in Israel during Ramadan. In March 2022, several [lone actor attacks](#) occurred in Israel, which ISIS-core had already taken responsibility for. These were the first of these types of attacks in the country. Given the [strong security architecture](#) in Israel, these attacks were a major propaganda success for ISIS, explaining why the ISIS-K web magazine felt the need to highlight them once more, demonstrating the reach of the ISIS global network.

Pro-ISIS-K propaganda channels also continued their ideological criticism of the Taliban regime, arguing that its behavior and international contacts amount to religious deviancy. Although these narratives had also [previously targeted al-Qaeda](#) due to the group's symbiotic relationship with the Taliban regime, this criticism was less pronounced than the attacks on the Taliban's religious rule. However, this month, several ISIS-K posts and magazine articles noticeably stepped-up the ideological criticism of al-Qaeda, claiming that the United States had tamed the group, going as far as declaring that al-Qaeda had abandoned the ideology of its former leader [Osama Bin Laden](#).

Part of ISIS-K's ideological criticism of the Taliban regime continues to focus on the drug economy in Afghanistan. This topic had already been highlighted in [April 2022](#), following the Taliban's announcement that they banned drug production in the country. Pro-ISIS-K online chatter claimed that the ban was announced for commercial reasons and reports on increasing drug prices as a result of the ban in Kandahar and Helmand provinces. This mirrors independent reporting that highlights [rising opium prices](#) in the country. This potential financial windfall for the Taliban regime is exacerbated by recent reporting by the United Nations, indicating that members of the Haqqani network have [assumed key positions](#) in the central bank of Afghanistan, Da Afghanistan Bank. The leaders of this network, which remains the [main contact point](#) between the Taliban regime and al-Qaeda, already control the Afghan [Ministry of Interior](#) and the [Ministry of Refugees](#), which would be critical institutions in the fight against terrorist groups in the country. Given the relaxation of international sanctions, including financial restrictions against the Taliban through U.N. Security Council [resolution 2615 \(2021\)](#), the [European Union](#), and a range of General Licenses issued by the U.S. Department of the Treasury's [Office of Foreign Assets Control \(OFAC\)](#) since the Taliban takeover of the country, this positioning of members of the Haqqani network within the central bank is concerning. This allows the network access to data housed within [FinTRACA](#), the Afghan Financial Investigation Unit (FIU). FinTRACA is tasked with preventing the financing of terrorism and money laundering and, among other data, maintains a database of suspicious transaction reports provided by Afghan financial institutions, [including Hawaladars](#). Therefore, the external relaxation of financial controls via sanctions provisions in combination with the weakening of the internal control system through the access of the Haqqani network to sensitive control data will present a major challenge in the prevention of the financing of terrorism or the laundering of drug-related money in Afghanistan.

Is an Alliance Emerging Between Venezuela and Turkey?

By Seth J. Frantzman

Source: <https://www.meforum.org/63315/is-an-alliance-emerging-between-venezuela>



June 11 – [Venezuela's president](#) met his Iranian counterpart over the weekend in meetings that showcase [Iran as a key ally of Venezuela](#). He came to Iran after meeting with Turkey's President Recep Tayyip Erdogan, another key partner for years.

Considering Iran's uranium enrichment program and continued threat in the Middle East, and Turkey's threat of a new invasion of Syria and its efforts to keep Finland and Sweden out of NATO, it seems that a Turkey-Iran-Venezuela partnership may be emerging, built on opposition to the US and the West.



What does Turkey want from Venezuela?

Turkey's president condemned "primitive one-sided" sanctions, according to the Associated Press. "He made the remark while speaking alongside President Nicolas Maduro in a joint news conference," the report said. Erdogan said he wanted to "reiterate that we will continue to support brotherly Venezuela."

Turkey sees the thuggish authoritarian regime of Maduro in Caracas as an ally because Ankara has become a key ally of authoritarian and extremist regimes all over the world.

While Ankara preaches "reconciliation" with Israel it also is threatening Greece and threatening to ethnically cleanse Kurds in Syria. Ankara is also undermining NATO and working closely with Russia. All of this points to the reason Ankara wants its Venezuela connection. It wants to maneuver outside the system of countries that work closely with the US.

The AP noted that "Maduro traveled to the Turkish capital just as the foreign minister of Russia, a key ally of the ostracized Latin American regime, was also visiting the city.

The Venezuelan leader is also traveling on his Eurasian tour after he was rebuffed by the US, which decided not to invite him to this month's Summit of the Americas.

This means that the meetings in Ankara and Tehran are symbolic. Venezuela wants to be the key partner of Turkey and Iran in South America. It has Iranian drones and welcomes trade with Iran, even as the US is trying to keep up sanctions on the Islamic Republic. "Turkey is one of a handful of places around the world – Russia and Iran are other friendly states – where Maduro is welcome amid US sanctions on his country," the AP noted.

Meetings with Iran

After Turkey the Venezuelan leader met the President of Iran in Tehran on Saturday. Together they discussed how Iran has always worked with countries that are "independent" of US foreign policy. They claimed to oppose "imperialism," a usual talking point of Iran and Venezuela.

[The two countries slammed US sanctions on Iran.](#) "Sanctions and threats against the Iranian nation have been numerous in these forty years, but the Iranian nation has decided to consider these sanctions as an opportunity for the country's progress," an Iranian statement about the meetings noted. Venezuela's regime also claims success in thwarting US sanctions. The Trump administration sought "maximum pressure" against Iran and also supported opposition voices in Venezuela.

Iran and Venezuela are now looking to sign a 20-year cooperation document that is part of what the two countries see as a strategic agreement. "Cooperation in the field of energy, thermal power plants, repair and overhaul of refineries, export of technical and engineering services, economic, defense and military relations in this government show that there are many fields and capacities in the two countries," a statement noted.

The Venezuelan president said: "We will use the historical experience of Iran and put technology at the center of the focus of this development cooperation." "We are witnessing different areas of cooperation between the two countries, and in the fields of energy, oil, gas, refineries and petrochemicals, and in the field of financing through the Iran-Venezuela Relations Development Bank, as well as in the field of defense, through strengthening relations," the report noted at Tasnim News.

Maduro said that in "the near future, we will see the opening of direct flights from Caracas to Tehran and vice versa, and this issue will be important in tourism development. This way we can develop tourism and our country can be a destination for Iranian tourists." Maduro's arrival in the region is all about messaging and symbolism. Iran and Turkey want to show that they can upstage the US. Venezuela wants to show that even if the Biden administration won't host its regime, that Caracas is no pariah and can easily meet with Turkey, which is [a member of NATO](#), and also with Iran.

Although Ankara in recent years has drifted away from the West under its current leadership, it continues to maintain relations with western countries.

Hosting the Venezuelan leader shows how Ankara is proud to host rogue regimes and use them to leverage its opposition to the West. This illustrates how Turkey has pivoted away from its claims of reconciliation in 2020 and 2021.

It now looks like it may move back to working with Iran, Venezuela, Russia and other countries that are in opposition to Washington's policies. The leader's trip to the region is symbolic because Iran was recently slammed by the IAEA for its nuclear enrichment program. Despite that Venezuela and Iran are illustrating how they can work closely together in the face of sanctions and condemnation.

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EDITOR'S COMMENT: Recently, CHP Chairman Kemal [Kılıçdaroğlu](#) while explaining that the agricultural sector was deliberately and willfully destroyed, commented, "There are thousands of acres of uncultivated land in Turkey. They started to lease land in Niger. Then they went to Venezuela (for wheat cultivation). The (drug) barons know him better, for another reason that they are going to Venezuela." said. Minister of Agriculture, Vahit Kirişçi, said in a statement the previous day that they would start wheat production in Venezuela.

Taliban Faces Growing Armed Resistance Across Afghanistan

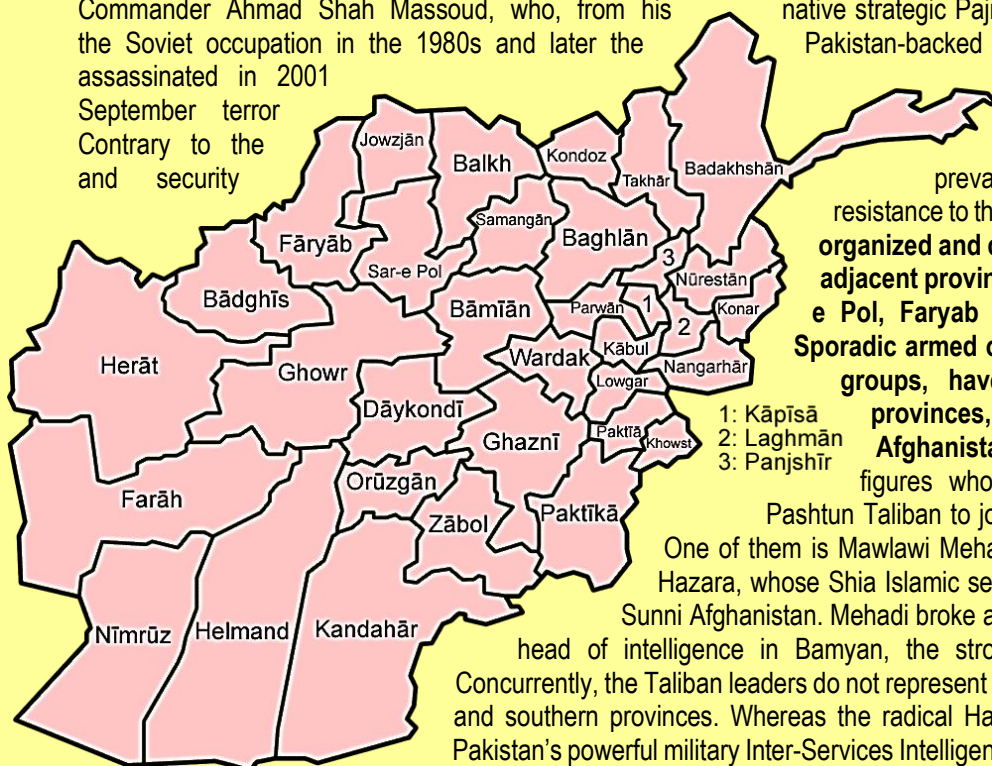
By Amin Saikal

Source: <https://www.homelandsecuritynewswire.com/dr20220622-taliban-faces-growing-armed-resistance-across-afghanistan>

June 22 – Ten months into their extremist theocratic rule in Afghanistan, the Taliban are facing growing resistance in different parts of the country. Leading the way is the National Resistance Front (NRF), headed by Ahmad Massoud—the son of the legendary Commander Ahmad Shah Massoud, who, from his native strategic Pajshir Valley (north of Kabul), valiantly fought the Soviet occupation in the 1980s and later the Pakistan-backed Taliban–al-Qaeda alliance. He was assassinated in 2001 by the alliance's agents two days before 11 September terror attacks on the US.

Contrary to the and security

Taliban's claim that an atmosphere of calm prevails in Afghanistan, there has been growing resistance to their rule. The NRF has mounted increasingly organized and coordinated operations in Panjshir and the adjacent provinces of Takhar, Baghlan, Badakhshan, Sar-e Pol, Faryab and Kunar in the north and northeast. Sporadic armed operations, led by various individuals and groups, have gained momentum in several other provinces, including Ghor, located at the center of Afghanistan, and Samangan. Some non-Pashtun figures who had initially been enticed by the ethnic Pashtun Taliban to join them have now turned against the group.



- 1: Kāpīsā
- 2: Laghmān
- 3: Panjshīr

One of them is Mawlawi Mehadi Mujahid, an influential leader from ethnic Hazara, whose Shia Islamic sect forms some 15–20% of the predominantly Sunni Afghanistan. Mehadi broke away from the Taliban after he was sacked as head of intelligence in Bamyan, the stronghold of Hazaras in central Afghanistan. Concurrently, the Taliban leaders do not represent a cohesive group. They hail from rival eastern and southern provinces. Whereas the radical Haqqani network, which is intimately linked to Pakistan's powerful military Inter-Services Intelligence, claims ascendancy from the east, its more nuanced counterpart, led by Mullah Abdul Manan Omari's group, hails from the Taliban's original heartland of the southern province of Kandahar.

Initially, when the Taliban seized power in August 2021 in the wake of the chaotic US and allied withdrawal and the collapse of the dysfunctional government of Ashraf Ghani, the Taliban and their Pakistani backers could only rejoice over what they viewed as an easy victory. They appeared confident that the trophy was theirs for good. However, they either failed to understand or underestimated the complexity of Afghanistan, as the Soviets and Americans had done before them. Afghanistan is composed of numerous ethno-tribal micro-societies, with none of them constituting a majority. This, plus the landlocked but crossroads location of the country in a traditional zone of regional and international rivalries, has historically rendered the task of nation-building in Afghanistan very arduous. The job becomes even more taxing when elements of one of those micro-societies seek to exclusively rule the others, whether with or without an outside backer's support.

The Taliban hail from the Ghilzai tribe of ethnic Pashtuns—the largest minority in Afghanistan. This is the first time that elements of the tribe have seized power, in contrast to their Durrani tribal counterparts, who led the country for most of its over two centuries' life. The Taliban leaders are largely trained in a version of Islam that approximates to a mix of Deobandi, Wahhabi and Salafist Sunni. Most of their commanders and foot soldiers are poorly educated, even in literary Islam, in Pakistani madrassas (religious schools) and have known little more than an austere rural existence. They are divided from within and insecure in relation to the rest of Afghanistan's population, especially in the urban centers, where



many experienced liberalist political–social and economic changes during the two-decade-long US occupation. While exuding a sense of religious, political and ethnic supremacy and triumphalism, the Taliban leaders have expediently targeted women and girls and, more specifically, two other groups. They essentially view the defiant Shia Hazaras as deviants and the Sunni Panjshiris and their Tajik kindred, who constitute the second largest ethnic category in Afghanistan, as traditionally recalcitrant. The Taliban have unleashed unspeakable discriminatory, horrific operations against the opposition, involving beating, arrest, torture, disappearance and killing, to suppress any form of opposition across the country.

Nowhere are their atrocities more pronounced than against the NRF and people of the rapidly dwindling 150,000 or so inhabitants of Panjshir. This is because the NRF, led by the 34-year-old, Sandhurst-educated Ahmad Massoud, along with most compatriots in the country, want a free, sovereign and prosperous Afghanistan. It has advocated a publicly mandated, inclusive pluralist and democratic system of governance, with Islam as the state religion.

Fearing Panjshir's resistance, the Taliban occupied the center of the valley shortly after assuming power. As reported by social media and private sources, they have subjected the Panjshiri inhabitants to heinous punishments. There are reports of an instance where the Taliban killed a captured NRF fighter and beheaded his father in front of crowds. Arrest, torture and the disappearance of any suspected Panjshiri or, for that matter, their Tajik kindred have become the order of the day in Panjshir and beyond. The Taliban have engaged not only in massive human rights violations and curtailment of freedom of expression and press freedom, but also in operations that amount to ethnic cleansing. This is something that urgently requires a thorough investigation by the United Nations Human Rights Commission and the UN Assistance Mission in Afghanistan.

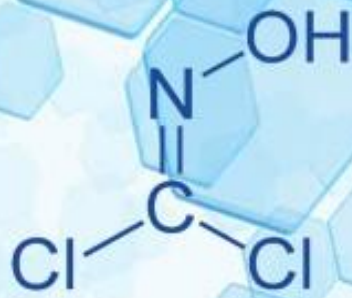
The Taliban, whose continued alliance with al-Qaeda has once again been confirmed by the UN, have recently raised more fighters wherever they can, given their own growing numbers killed and injured since March this year. They are hurriedly focused on building a 100,000-strong force, including a suicide regiment, fully equipped with billions of dollars' worth of modern arms left behind by the US, to battle the opposition, and also their rival terror group, Islamic State's Khorasan branch, which the Taliban haven't been able to control. In addition, while abhorring modern education, they have reportedly supported many new madrassas to train jihadis.

The scene is now set for continued conflict and bloodshed until such time that the Taliban change their barbaric ways in the name of their self-centered version of Islam. They currently don't enjoy the support of a cross-section of Afghanistan's mosaic population or satisfy the criteria for international recognition. The only politics that can work in Afghanistan are those of plurality, inclusiveness and consensual processes of state-building. Any attempt by the Taliban to cut their way through by such orchestrations as a 'Loya Jirga' (Grand Assembly), which is advocated by former president Hamid Karzai, who hails from the Durrani Pashtuns, will produce nothing more than a propaganda tool for the Taliban leaders to claim false domestic legitimacy to gain global recognition.

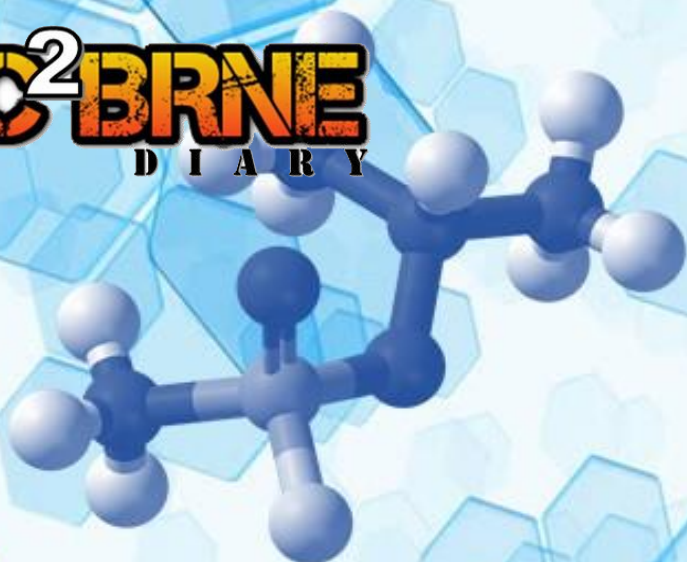
[Amin Saikal](#) is adjunct professor of social sciences at the University of Western Australia.



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CHEM NEWS



Turkey: KBRN Center



CBRN Department under the University of Health Sciences which is the unique and single CBRN academic unit in Turkey has resumed the training activities in the newly established "CBRN Training and Simulation Center" and the first CBRN Seminar was held with the attendance of academic staff working in our department.



Country Overview: Turkey

By Ms. Nora Ljubojevic

NCT Magazine | 11/20

Source: <https://nct-magazine.com/nct-magazine-may-2022/country-overview-turkey>

Turkey has steadily branded itself as a diplomatic actor with a leverage in conflict resolution scenarios, being the venue or mediator of peace process negotiations in Libya, between Armenia and Azerbaijan during the most recent armed conflict in Nagorno-Karabakh and, lately, aspiring to mediate in Ukraine's war. Its assertive foreign policy did not go unnoticed in the US and Russia, with both powers dragged into extremely delicate and complex situations such as the shutdown of a Russian warplane in 2015, the acquisition of Russian-manufactured S-400 air defense system and its subsequent expulsion from the F-35 joint strike fighter program, and its 2019 incursion into Syrian territories controlled by US forces to combat Kurdish-led forces. The Turkish administration has proven to be skilled at juggling its NATO membership, strong economic ties to Russia, with warmer relations with the UAE and EU, all while relentlessly seeking to rise its regional and international profile without encountering any fierce rebuttals. The regime's isolationist stance after the failed coup d'état in 2016 further exacerbated this tendency towards seeking relevance without sacrificing autonomy, that is to say, towards reconciling its need for currency reserves and stability with its goal of reducing foreign dependence.



Internally, the country's main source of instability is its skyrocketing inflation rate – reaching a 20-year high of 61.14% this past April. Indeed, the country was heavily hit after its currency depreciation against the dollar by more than 650% back in mid-2013, increasing the cost of living for ordinary citizens. The economic crisis shows no signs of abating, especially with rising global energy prices, natural gas supply disruptions, a potential increase in commodity prices, and no prospects of cashing in the foreign currency from its Russian tourists, which make up one fifth of its visitors. The conflict between the government and the Syrian Kurdish YPG and Kurdish militants of the PKK, operating in northern Iraq and possibly behind improvised explosive devices attacks in Turkey, remains the country's most relevant military threat. Out of all the Chemical, Biological, Radiological, Nuclear and Explosive threats, Turkey's problems stem from the existence of explosive devices along its neighboring northwestern district of Afrin in Syria, where Turkish Blue Berets – police special operations teams and commando units – conducted operations to defuse anti-tank mines, improvised pipe bombs and, to seize mortars that once belonged to Kurdish militias from the YPG (People's Protection Units).

CBRNe Foundations

Turkey is currently a member in good standing of all main treaties on CBRNe materials. It has been part of the nuclear and conventional deterrence provided by NATO for more than half a century, and stores around 50 US tactical nuclear weapons at Incirlik Air Base as part of the NATO nuclear sharing mission. In the CBRN domain, the country is party to the Nuclear Non-Proliferation Treaty (NPT), the Comprehensive Test Ban Treaty (CTBT), the Chemical Weapons Convention, the Biological and Toxin Weapons convention, the Wassenaar Arrangement, the Zangger committee, the Nuclear Suppliers Group, the Australia Group, the Non-Proliferation and Disarmament Initiative and the International Partnership for Nuclear Disarmament Verification. Concerning the use of explosives, Turkey is party to the Convention on Certain Conventional Weapons, to the Hague code of Conduct against Ballistic Missile Proliferation and to the Ottawa convention to ban anti-personnel mines, as well as to its Protocol II. Regarding nuclear terrorism, the country joined the global Initiative to Combat Nuclear Terrorism. The national points of contact for the implementation of the UN Security Council Resolution 1540 are the Head of Department for Arms Control and Disarmament within the Ministry of Foreign Affairs, and the Counsellor at the Permanent Mission of Turkey to the UN. It is not party to the Treaty on the Prohibition of Nuclear Weapons (TPNW), as ratifying it would imply ending contracts on nuclear sharing.

► Read the full article at the source's URL.

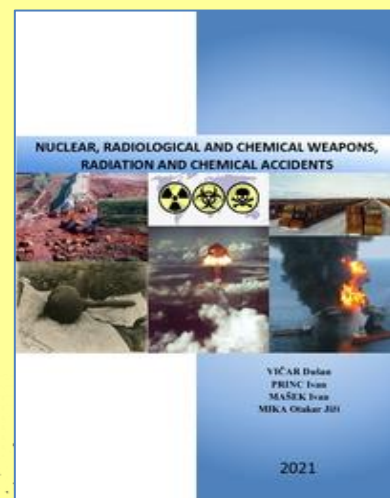
Nora Ljubojevic is an Analyst at IB Consultancy. Her prior work experience includes the EU Delegation to the UN in New York, the Council of Europe, the Centre for European Policy in Belgrade and the Human Rights Foundation. She holds an MLitt in Middle East, Caucasus and Central Asia security studies from the University of St. Andrews and a BA in Political Science from the Complutense University of Madrid.

Nuclear, radiological and chemical weapons, radiation and chemical accidents

Authors: Vičar, Dušan; Princ, Ivan; Mašek, Ivan; Mika, Otakar Jiří

Source (e-book): https://digilib.k.utb.cz/bitstream/handle/10563/50136/Dusan_Vicar_Nuclear_radiological_and_chemical_weapons_radiation_and_chemical_accidents_2021.pdf

The monograph is intended both for the general public and especially for the needs of students of the study programme entitled Population Protection. It can also be used for the needs of other university students as a supplementary textbook. Where appropriate, it can also be used for educating members of individual basic and other components of the Integrated Rescue System of the Czech Republic. In addition to a technical description relating to the history of the development and use of nuclear, radiological and chemical weapons, and the cases of radiation and chemical accidents, their destructive effects and principles of protection against them, the monograph also includes original case studies. These case studies are concerned with the consequences of nuclear accidents and incidents such as Three Mile Island (USA, 1979), Chernobyl (Ukraine, 1986), Fukushima (Japan, 2011) and also with hitherto known and potential scenarios of the so-called CBRN terrorism. This title will be followed by another monograph dealing with the issues of biological warfare agents and toxins. A considerable number of publications, technical periodicals and other open domestic and foreign information sources were used in developing this monograph, especially in the field of weapons of mass destruction and protection against them. Moreover, the rich professional



experience of all authors of the publication was used since they regularly participate in both domestic and foreign conferences, workshops and symposia focusing on CBRN issues. For the sake of completeness, it is possible to add that the published material was developed on the basis of open information sources only. At the same time, it must be acknowledged that the most valuable information on the CBRN field is published mainly in intelligence studies and analyses.

A Doghouse Like No Other: Military Pooches May Soon Get Chemical Weapons Shelters

Source: <https://www.military.com/daily-news/2022/06/03/doghouse-no-other-military-pooches-may-soon-get-chemical-weapons-shelters.html>

June 03 – It is "paw-sible" that the Pentagon may soon fix a "ruff" problem for military working dogs by creating portable shelters for them to shield against weapons of mass destruction.

Protective kennels for military canines to guard against chemical and biological threats may soon be in the works, [according to](#) a research solicitation proposal from the Department of Defense's Small Business Innovation Research Program.

"For certain critical missions demanding a high degree of maneuverability and general readiness, it is highly desirable to have innovative [military working dog] shelters with much lower logistical requirements and convenience elements," the research solicitation said.

These portable, collapsible dog shelters would come equipped with air filtration systems and temperature controls to ensure the safety of the animals. They would also be light enough to be carried by a single service member.

Military working dogs are often the first to enter situations where chemical and biological threats may be present but are provided with little personal protective equipment compared to their handlers. The creation of this easily transportable enclosure would be a major step toward helping safeguard a soldier's best friend and a critical military asset.

Some personal protective equipment is already available for military canines -- from ear, eye and paw protection to ballistic vests -- but these are often considered impractical because of the difficulties they create in performing duties, according to a [Pentagon-funded report](#) from May through the University of Georgia College of Veterinary Medicine.

"Microbial pathogens, chemical toxins, and chemical warfare agents all present significant risk of harm to both the handler and the canine," the report said. It also highlighted that, while military working dogs are often not the intended victim of an attack and are considered less susceptible to disease produced by these agents, they deserve better protection from exposure to contaminated environments.

Another study from 2021 on veterinary care for military working dogs [found](#) that heat-related injury is one of the more serious conditions that may affect military working dogs, making proper air circulation critical in the new kennels.

Canines have a long history of being involved in warfare; the U.S. military began [officially training](#) dogs to serve in its ranks during World War II. The health and safety of these creatures has long been an important part of the military, especially for the Army Veterinary Corps, the branch responsible for the welfare of military animals.

"As Veterinary Corps officers, we have to keep up our clinical skills in order to provide care for military working dogs," Capt. Aaron Judson, a veterinarian at the Joint Readiness Training Center and [Fort Polk](#) Veterinary Clinic in Louisiana, [said](#) in a press statement.

"We have a unique job; we provide a unique service to the Department of Defense because the [Army](#) is the only branch with a Veterinary Corps," he continued. There are approximately 2,500 active military working dogs in the field today, according to the University of Georgia report. The DoD began accepting proposals for research and development of these new protective kennels on May 18. Small business firms have until June 15 to submit a prospective project plan.

Working Dog Service, Harmful Agent Exposure and Decontamination

By Carla L. Jarrett, Morgan Brathwaite, Robert M. Gogal and Steven D. Holladay

Department of Biomedical Sciences, College of Veterinary Medicine, University of Georgia, Athens, GA, USA

Front. Vet. Sci. 9:892998 | May 2022

Source: <https://www.frontiersin.org/articles/10.3389/fvets.2022.892998/full>

May 02 – Working dogs are widely used by service professionals and the military for diverse roles that include sentry, patrol, messenger, tracking, search and rescue, law enforcement, apprehension, as well as explosives and narcotics detection. The expected tasks performed





are in many ways determined by the breed, which is customarily a German Shepherd, Dutch Shepherd, Golden Retriever, Border Collie, Labrador Retriever, Beagle, or Belgium Malinois. Working dogs may be subject to injury from dangerous work environments or harmful agent exposure. Personal protective equipment (PPE) has been developed for such dogs, but may impede performance of duties or be poorly tolerated. Canine-specific field-use ready decontamination techniques and kits are therefore needed for use on working dogs that have encountered a harmful agent exposure. This report briefly reviews the development of the military working dog and examines personal protective equipment and decontamination techniques for working dogs after exposure to harmful biologic or chemical agents.

Nearly half of the chemical weapons in Kentucky have been destroyed, but there are still **50,000** more left to eliminate

Source: <https://www.wtvq.com/nearly-half-of-the-chemical-weapons-in-kentucky-have-been-destroyed-but-theres-still-50000-more-left-to-eliminate/>

June 08 – At one point in time more than 17,000 VX rockets were stored at the Bluegrass Army Depot in Madison County. After 3 years, 4 out of the 5 campaigns of the chemical weapons have been destroyed, but that's only about half of the chemical weapons in the state Kentucky still has some weapons to get rid of and so does Colorado before the Country is completely free of them.

During the time of World War II and the Korean War, chemical weapons were stored across the United States in 9 different sites. The United States never used them in war, instead they were developed as a deterrent to make sure other countries wouldn't use them against us or our soldiers.



There's a deadline for the US to destroy them. Years ago, United States leaders signed a treaty with several other countries, vowing not to use these weapons of mass destruction and to get rid of them instead.

In 2022, the US is the last country to destroy its stockpile. According to Craig Williams, there was a period of time where people didn't know the weapons were being stored so close to them.

In Madison county, people like Craig Williams says that for a long time people weren't aware of the fact that these weapons were so close to home.

"It's a great relief that's been our objective over the years is to get rid of these weapons as quickly but as safely as possible the controversy of how to do it lasted quite a long time but once we all

agreed on the methodology it turned out that we were all rowing in the same direction towards the end game," says Craig Williams, a member of the community advisory board. The next weapons to be destroyed are called **GB rockets**. Currently there's about 50,000 of them that exist in the state. That campaign will start within the next 30 days. Kentucky expects to be chemical weapons free by the treaty commitment date in **September 2023**.



The Risk-Based Approach to Hazardous Material/WMD Incidents

By Tony Mussorfiti

Source: <https://www.domesticpreparedness.com/resilience/the-risk-based-approach-to-hazardous-material-wmd-incidents/>

June 08 – Emergency responders need the ability to quickly identify all potential hazards, then predict the outcome of a hazardous material or weapon of mass destruction (WMD) incident to determine incident objectives, operational modes (defensive, offensive, non-intervention), and strategies. Additionally, the incident action plan (IAP) needs to be within the capabilities and competencies of available personnel and their personal protective equipment. Consider the following questions:

- What level of chemical protective clothing should be worn for a chlorine leak?
- Should a rescue be initiated at a sarin release?
- Which is the greater threat: biological agents or radioactive material?

There are no correct responses to these questions, that is until all the components of the incident have been addressed, then and only then can an IAP be developed. Otherwise, the IAP would be based upon incomplete, possibly faulty information.

The expanding mission for emergency responders drives the need for examining both current and proposed concepts of operations. As well, the development of various tactical and operational procedures to meet the anticipated demands created by a WMD event has distorted the established division between defensive and offensive response operations. The evolving mission for emergency response agencies drives the need for a review of operating guidelines to respond safely and effectively.

Analyze, Plan, Implement & Evaluate Process

The risk-based approach (RBA) is a systematic process. Although not always linear, RBA is a continuous process until termination or transfer of command. The RBA incorporates the NFPA 470 APIE (analyze, plan, implement, and evaluate) process. The APIE process can be integrated with any response model for an all-encompassing assessment to reduce the risk and ensure an effective response.

Analyze Phase

This action starts with the receipt of the alarm and continues throughout the incident. Although this information is often not complete or accurate, there are usually indicators as to the type of incident (e.g., fire, medical, hazmat, WMD, etc.) and the reliability of the information (e.g., dispatcher reports, smoke, numerous victims complaining difficulty breathing, etc.) While responding, if the officer determines they need additional information, they should request it (e.g., any reports of life safety issues, product or container information, occupancy and location, or other incident-specific information). Upon arrival, the officer is required to establish the Incident Command System and provide a preliminary scene report on the conditions, actions, and needs (CAN report) based on their initial scene assessment.

What will emergency responders do when faced with a low-frequency, high-consequence event? A risk-based approach can help answer this question.

Planning Phase

Planning a response involves understanding the nature of an incident and selecting a course of action that will have a positive impact on the outcome, enhancing the likelihood of a safe and effective response. Incident objectives are defined, and the operational mode is selected. Upon arrival, responders should initially take a defensive position until the hazards can be identified, outcomes determined, and a risk-benefit analysis has proven that an offensive mode is appropriate. While there is always a risk when operating in an offensive mode, the 2020 edition of the Department of Transportation's [2020 Emergency Response Guidebook](#) states: "[T]his type of operation can place the responder at risk of exposure, injury, or death. The incident commander makes the decision to do this only if there is an overriding benefit (for example, to perform an immediate rescue, turn off a valve to control a leak, etc. (P. 360))" Plans should be based on the analysis results of the hazards identified and outcome predicted. Plans should be within the training, resources, and capabilities of personnel on-scene. Planning is not a scripted process that tries to dictate tactics; rather, it should provide a starting point for operations, adjusted as the situation changes and as facts are gathered. The incident commander needs to do the following:

- Determine if the personal protective equipment is appropriate,
- Identify the need for and type of decontamination (e.g., emergency vs. technical, mass casualty, ambulatory, non-ambulatory),



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- Establish hazard control zones (e.g., hot, cold, warm, safe refuge area, casualty collection point),
- Identify required resources (e.g., hazmat group, safety officer, rapid intervention team, rehabilitation, EMS, technical rescue; law enforcement for security, perimeter control, crime scene, force protection; city, state, and federal agencies; public and private sectors).

Based on these factors, the incident commander shall develop and communicate the IAP. Ideally, the IAP should be written, even if just with a marker and a whiteboard. This allows for arriving responders to read the plan to catch up, which frees the incident commander's time of repetitive briefings. It also establishes a timeline.

Implementation Phase

The third phase in the APIE process is putting the IAP with its specific action plans into effect. At this point, the responder has analyzed the incident to identify the hazards, predict the behavior of the product(s) and container(s), and planned the response. The goal of the implementation phase is to conduct and observe operations and outcomes.



Evaluation Phase

The APIE process is a continuous process that may require adjusting the IAP as conditions change or as new facts and circumstances are identified. The goal of the evaluation phase is to assess operational effectiveness. The evaluation process is always critical. If the objectives and tactics are effective, then continue until termination of the incident or transfer of command. If the incident is escalating, the incident's objectives and tactics may have to be altered to prevent additional harm to life, property, and the environment. The incident commander will need to provide a status report periodically as per local SOPs.

Termination or Transfer of Command

Termination is the final phase of the APIE process at which operations are concluded or the command is transferred to a responsible party, qualified contractors, or a local, state, or



federal agency having jurisdiction. Upon termination, the incident commander must complete the following tasks:

- Assist in the incident debriefing and critique,
- Develop required reports and documentation, and
- Conduct incident debriefing and multi-agency critique if necessary.

The RBA considers all aspects of the incident to identify the hazards and develop the IAP based on the level of training of the responders, the required resources, and their mission. This article provides a guide through the RBA concept, which is rooted in the decades of experience gained from training for and responding to a hazardous material or WMD incident.

Risk-Based Approach

The RBA allows responders to break down a complex and potentially overwhelming response into sections to aid decision-making. The six components of the RBA that must be addressed to develop a comprehensive IAP are:

- Product, container, and environment
- Training, resources, and mission

Initially, the responder needs to identify each harm(s) that the product, container, and environment each presents. If responders can identify the hazard(s) or threat(s) and their associated harm, they can then start to take protective actions. There are always several on-scene indicators to use to determine the type of incident (e.g., container shapes and sizes, placards and labels, signs and symptoms, occupancy or location, and intelligence information). The identification of harm is critical to protective action decisions throughout the incident. The value of the RBA is that it is a systematic approach to all phases of an emergency. Every incident is dynamic and a function of all on-scene indicators (product, container, environment) requires the responder to be able to adapt during the ongoing and often unpredictable event.

Product

There are many ways to classify products, but the reality is there are only four types of products we respond to; chemicals, biological agents, radioactive material, and explosive (energetic) materials. In order for the responder to predict the likely behavior of a product related to its container and the environment, they need to first understand the importance of the chemical & physical properties, along with the toxic effect of the product. Fundamentally, products are solids, liquids, and gases. The physical state gives us a place to start the analysis. Understanding chemical, physical, and toxicological properties, the terms used to identify them, and their significance in making decisions, all play a critical role to every level of emergency responder at a hazardous materials or WMD release. At the technician level, this knowledge and ability are necessary for the safety of the emergency responders and the public.

Container

Initially, identifying the basic classification of the container may be all that is required, such as Bulk, Non-Bulk, Pressure, Non-Pressure, or Special. The responder must survey the incident to identify the type(s) of containers involved and determine the potential harm such as, has the product been released or the potential for a catastrophic failure of the container.

Environment

Imagine the environment in the broadest sense (e.g., occupancy, location, topography, weather, infrastructure, exposures, and life). A WMD incident should be considered as a type of environment. While the response options at a WMD remain the same, the incident commander will have additional considerations (e.g., active shooter, hostile event [ASHE], InterAgency Board July 2016), and the need for law enforcement, for crime scene, evidence preservation, force protection, etc. In the event the incident has the potential to be a WMD event, the responder must make immediate notifications (e.g., dispatcher, units on scene, and in route).

At this point in the RBA process, the responder needs to identify the hazards and the associated harm(s) that each of the following presents (e.g., thermal, radiation, toxic, corrosive, mechanical). However, for an emergency responder to determine the safest and most effective operational mode, they first need to consider the three main components of the incident: product, container, and environment. The exact order in which they need to be analyzed is based on the component with the most information initially.

The components may present with small parts of information from all three or just one. For example, at some emergencies, responders may see a container prior to identifying the product. By understanding the type of container, the state of matter (in the container and when released) can be recognized. While at another incident, they may have information on the environment prior to the container. As such, and the scene dynamics may progress down the environment path until more information on the container or the product is known. Then and only then can the responder determine the types of harm.



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Once the types of harm are identified, the following three factors need to be addressed before developing the IAP: training, resources, and mission. In other words, act within the current training, resources, and mission.

Training

Responders should only operate based upon their level of training. If a responder is a technician but is functioning at the operations level, they need to continue to operate at the operations level because they may not have the necessary resources to operate at the technician level. It is a common understanding in the industry that more lives are saved by firefighters at the operations level because they have the training, and resources (e.g., SFPC, SCBA, medical, water supply for decontamination) to provide protection from most hazards.

Resources

Responders should only operate within their level of training and with available resources. It is vital that the incident commander identify and request resources required to meet the needs of the incident. Resources might include hazmat group, safety officer, rapid intervention team, rehabilitation, EMS (BLS and ALS), technical rescue, law enforcement (security, perimeter control, crime scene, forced protection), city, state, and federal agencies, utilities, and public and private sector.

Mission

The final factor the responder must address prior to developing the IAP is what is their mission (e.g., life safety operations, public safety sampling, mitigation, etc.). The RBA is a process by which one can establish the appropriate level of response. Managing the incident related to the operational task requires judgment to determine the incident objectives, operational modes, and strategies.

The RBA emphasizes the importance of empowering the responder with the knowledge, skills, and judgment that permits them to adjust as the conditions change or as facts are gathered. Using the APIE process, the responder starts by analyzing an event, using on-scene indicators to identify any potential types of harm, then determining the potential consequences, an “if this, then that” decision-making strategy, helping the decision-maker to pick the best option. At each decision point, the responder determines the appropriate course of action based on the facts, science, and the specific circumstances of the incident.

When combining the complexities of incidents with the pressure on responders to act in certain ways based on their organizational culture, training, and experience, an approach with a clear purpose is more efficient and effective than an approach based on a predetermined assumption that incidents are similar enough to warrant a list of responses. The RBA stresses the importance of empowering the responder with knowledge, skills, and judgment permitting the responders to react to the dynamic nature of incidents.

Preparation

Given the rarity of real-world experiences with low-frequency, high-consequence type events from which an emergency responder can draw upon, many do not have the experience base to rely upon in evaluating these complex problems and determining initial actions. As a result, there is a greater probability of responders being overwhelmed, increasing the risks to both responders and civilians. Scenario-based training using simulations (e.g., gaming, virtual reality, augmented reality) is a solution to the lack of real-world experience. Scenario-based training for an emergency response to a WMD may benefit responders by applying a blend of situational awareness with clear decision points. It is much less costly than drills and exercises conducted in the field and easier to involve more participants.

Given virtual training scenarios that reflect incident experience at low-frequency, high-consequence scenarios, participants virtually *walk* through these scenarios in real-time, with a real-world perspective. These virtual simulations allow responders to practice decision-making in simulated emergencies (e.g., mass casualty events, WMD, etc.), thereby providing experiences that can then be used to prepare for future situations. The simulation should be appropriate for individual or group training to present unique problem-solving and critical-thinking exercises. It is the next best thing to being in a live scenario. In some cases, it is even better, as there is no danger and risk involved to responders.

Tony Mussorfiti was a member of the Fire Department of New York (FDNY) from 1988 to 2010. During his tenure, he served as a firefighter, lieutenant, a hazardous materials technician specialist and a hazardous materials instructor. Along with Battalion Chief Robert Ingram, he established the FDNY Hazardous Materials Technician Training School and emergency response programs specific to terrorist incidents involving hazardous materials and weapons of mass destruction. The school has trained more than 10,000 members of the FDNY. He was assigned to the FDNY Center for Terrorism and Domestic Preparedness, where he was involved with the development of response protocols and drills



and exercises for terrorist incidents. Since 2006, he represented the fire department and the city as a member or chairperson of the following working groups: [NFPA 475](#); [NFPA 470](#); and [ASTM-E2601](#). Since 2003, he has been a member of the Inter-Agency Board (IAB) Training and Exercise Sub-Group. Additionally, he has been involved with the Federal Bureau of Investigation's Hazardous Materials Training and International Counter-proliferation Program in the former Soviet Union since its inception. He has been a technical adviser to Combating Terrorism Technical Support Office/Technical Support Working Group, in the development of training simulation programs for emergency responders to prepare for terrorist incidents.

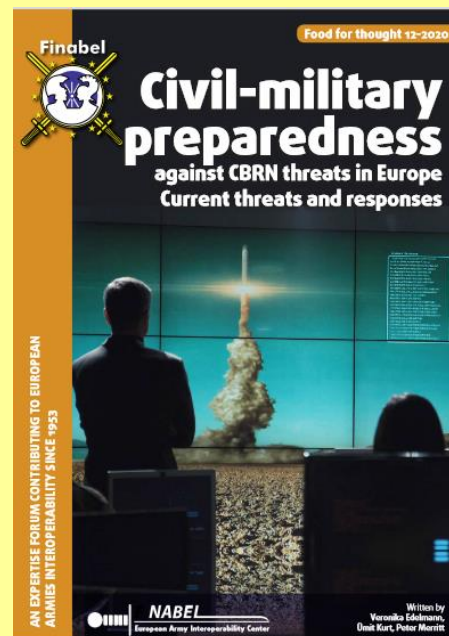
Civil-Military preparedness against CBRN threat in Europe: Current threat and responses

By Mario Blokken

FINABEL 2020

► [Source](#)

Chemical, biological, radiological, and nuclear (CBRN) technologies have evolved significantly during the past century. They are commonly characterised as posing a “low probability, high impact” threat to society either through their accidental or deliberate release (European Commission, n.d.). This paper will examine the EU’s preparedness in terms of responding to CBRN-threats. The research question that will be addressed in the paper is: To what extent the European Union is capable of defending itself against external CBRN threats? To effectively evaluate the EU’s defence capabilities concerning CBRN, the issue will be approached comprehensively starting with an examination of the historical and institutional background of the CBRN-sphere. Secondly, a comprehensive CBRN defence strategy includes both civilian and military preparedness. These two major components will be outlined, discussed, and analysed in their respective chapters. Finally, the future considerations of CBRN defence are examined in the last section.



Nerve agent was used in 1995 murder, claims former Soviet scientist

Source: <https://www.theguardian.com/uk-news/2018/mar/23/nerve-agent-was-used-in-1995-claims-former-soviet-scientist>

March 2018 – A developer of Soviet-era nerve agents related to the one used against former spy [Sergei Skripal](#) and his daughter Yulia has told the Guardian that a similar poison was used in the murder of a Russian businessman in the 1990s.

The remarks by **Vladimir Uglev**, a Soviet chemical weapons scientist, contradict official Russian denials that the country had any chemical weapons programme tied to the name novichok, with the formal codename foliant.

“If you’re asking who made the substances that poisoned the Skripals, his name and his country, it’s possible it was made by my hands,” Uglev wrote to the Guardian. “But we’re unlikely to find out about that, at least according to the information I have at the moment.”

Uglev is one of three Russian scientists to confirm the existence of the top secret chemical weapons programme since the Salisbury attack. His remarks were sent to a handful of journalists on Friday, and he answered follow up questions for the Guardian.

Uglev on Friday said he had been questioned by police immediately after the [grisly 1995 murders](#) of banker Ivan Kivelidi and his secretary in an apparent poisoning, and recognised a nerve agent synthesised by his own working group at a closed state laboratory near the Volga river.

“Immediately after Kivelidi’s telephone was analysed, the investigator in my case asked me a number of questions as the substance was synthesised in our group,” Uglev wrote to journalists. He first went public [on Wednesday](#).

Court documents [first reported by Reuters](#) and later published by the Russian newspaper Novaya Gazeta said that a member of Uglev’s lab, Leonid Rink, had been jailed briefly after admitting to selling a small amount of a deadly nerve agent developed under Russia’s so-called foliant programme.

That programme has become famous in the west in recent days as novichok, identified by British authorities as the Soviet-era nerve agent used in Salisbury earlier this month.





Russian prime minister Viktor Chernomyrdin attends the funeral of Ivan Kivelidi in 1995. Photograph: Reuters

The likely sale of the nerve agent to a criminal group in the 1990s [will raise questions](#) about Theresa May's assurances that only a state could have ordered the attack on Skripal.

But nerve agents typically deteriorate quickly. And a binary, which increases shelf life by storing the future nerve agent in two stable precursors, was never achieved at his laboratory, Uglev said.

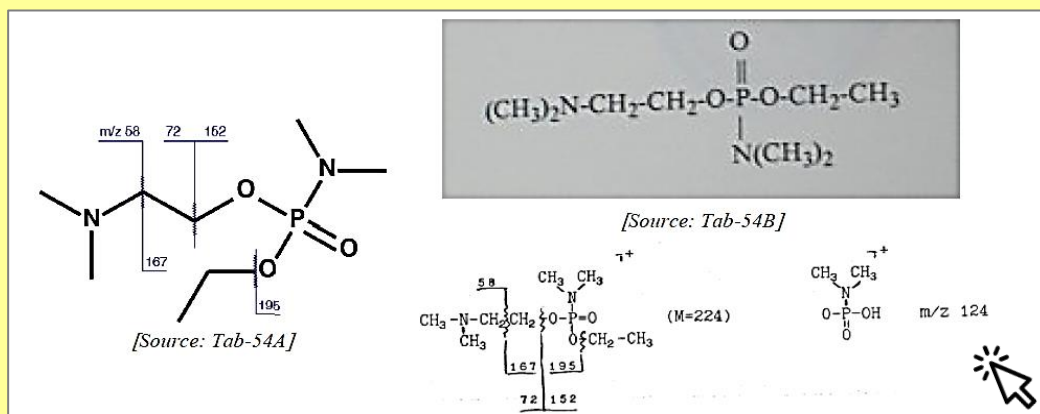
The Novichok nerve agent formula for the forensic analysis in the case of Kivelidi

Nevertheless, he speculated it could remain potent for some time. "If properly stored, I imagine it could poison someone even 50 years later," he wrote.

Uglev worked in the State Scientific Research Institute of Organic Chemistry and Technology in the city of Shikhany, Saratov region, from 1972 until 1993. He said he handled foliant nerve agents for the last time in 1990. They were not on the list of chemical weapons submitted by Russia as part of the Chemical Weapons Convention signed in 1993.

In follow-up remarks to the Guardian, Uglev said he knew of three people who had died as a result of accidents while developing novichok: a [scientist named Andrei Zheleznyakov](#) and "two officers who held tests on our testing range".

Asked by the Guardian about what the chances are that British investigators might be able to tie the novichok to a specific country or lab, he said "probably close to zero".



“They have the footprint of the substance in Salisbury ... but no data about the substance (its fingerprint) in the database, so how can they say where it is from,” he wrote.

That could change, he added, if they are able to gather earlier samples from Soviet and Russian labs. Russian police, he noted, were able to identify him quickly after the death of Kivelidi, the businessman, in 1995.

The poisons he helped develop in the 1970s and 1980s were especially lethal, he added.

“If any of these four substances” were used to poison the Skripals, he wrote, referring to several chemicals he helped developed, then “their chances are nil”.

“But medicine doesn’t stay in one place, and perhaps in the last 30 years, during which I’ve been out of the system, something has changed for the better.”

Western bloc silent on Turkey’s chemical weapons: Karasu

Source: <https://medyanews.net/western-bloc-silent-on-turkeys-chemical-weapons-karasu/>



June 10 – “The sum of bombs Turkey dropped on Kurdistan, especially in recent years, is more than the sum of bombs dropped in WWI, WWII and the Vietnam War combined,” Kurdistan Communities Union (KCK) Executive Council Member Mustafa Karasu [said](#) in an interview on Friday.

“The United States and Europe, which are sensitive about chemical weapons elsewhere, ignore NATO member Turkey’s crimes. Thus, they are trying to cover up their complicity,” said Karasu. “NATO’s second largest army’s use of chemical weapons means NATO’s use of chemical weapons.”

The ruling Justice and Development Party (AKP) and its alliance partner Nationalist Movement Party (MHP) act hostile against Kurds and work to crush democratic forces to secure their hold on power, Karasu said.

If the Turkish government crushes the freedom struggle of the Kurds, who Karasu said resist Turkey’s racist, chauvinistic and expansionist policies, there will be no one left to stand against expansionist neo-Ottoman policies. However, if the government’s attacks are stopped, Turkey could become a more democratic country, he explained.

Turkey considers standing against its nationbuilding efforts in Kurdish areas to be “the greatest crime”, Karasu said, calling the country’s actions “genocidal colonialism”.

“Now they use the concept of terrorism, to better camouflage this genocidal colonialism,” he said.

According to Karasu, Turkey would target Arab states in the region if it manages to crush Kurds. “All democratic forces in the Middle East should calculate what Turkey would turn into if the Kurdish people’s fight for freedom is eliminated. Think of the negative, so the significance of our movement is well understood.”

EDITOR’S COMMENT: It is easy to provide solid evidence (tissue samples; biological fluids; photos & videos) of the use of chemical weapons against military and civilian personnel but still not available for the international community to investigate.

ISSET 76 CBRN system by IMPERTECH

Source [[+video](#)]: <http://www.impertechsafety.com/im76/>

The future of CBRN masks is here: the IM76 is designed to meet challenges and withstand extreme conditions like never before!

With its patented panoramic visor, advanced multi feature interface platform and versatile filter attachments, the IM76 is the protection against CBRN threats you need for your fighters facing the future of defense.

Best for:

- Military personnel facing chemical challenges
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- Security services: police, hazardous materials unit
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Technology and Safety

- Protection against tear gas and flammable chemicals
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- Thorough sealing with 6 straps
- Filtering and respiratory protection from CBRN materials
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- ballistic + anti-fog + anti-glare + anti-flash visors. Internal optical visors for eyeglasses users

Maximum Comfort

- Modular filter assembly according to your needs: front, left or right side.
- Anthropometric: the mask effortlessly fits and seals all facial structures and genders
- Light, easy to wear and carry

Multi featured platform

- Mouth-nose cup provides efficient breathing and ventilation
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- Communication system includes inner microphone unit and outgoing connector to communication devices
- A drinking tube allows for safe refreshment without having to remove the mask
- An exhaust system to drain fluids prevents body fluids from accumulating in the mask

Patented vision system

- Glare-shielded goggles, for high-intensity of light.
- Protective goggles for tactical combat and hazardous conditions.
- Goggles defend against ballistic ricochet during missions.
- Option for adding an optical goggle for ultimate vision.
- Wide angle of vision, ideal for extreme environments.



Multi-Beam headlamp combines an arc of illumination with a spotlight

Source [+video]: <https://newatlas.com/outdoors/multi-beam-headlamp/>



June 10 – Most headlamps just incorporate a lamp unit in the middle, which in some cases can be set to wide and spotlight output modes. The Multi-Beam is different, in that it sports both a central spotlight and a wide half-halo of LEDs.



Designed by US startup Optimal Ventures, the Multi-Beam is the successor to one of the company's existing products, the Liteband. The latter takes the form of a headband with an integrated strip of LEDs that run from one side of the wearer's forehead to the other. That setup produces a **210-degree horizontal arc of illumination** in front of the wearer.

Inspired by Liteband-user feedback, the Multi-Beam retains the band of LEDs, but adds a more focused spotlight beneath them in the front. This arrangement allows users to choose between the broader but shorter-range illumination of the band, or the sharper, longer-distance beam of the spotlight – the two can also be used together.

In fact, by pressing a button on the device, users can choose between six output modes. These include High (band only), Low (band only), Pulse (band only), Red light (band only), Multi Beam (both the band and

the spotlight) and Focus Beam (spotlight only). As an added bonus, the spotlight can be tilted down 15 degrees for better illuminating tasks being performed by hand.



The Multi-Beam is being offered in two models. The fancier 7-oz (198-g) Pro version puts out a combined 1,000 lumens from its band along with 500 from its spotlight, the latter of which has a claimed beam distance of 300 ft (91 m). Power is provided by a rear-mounted 3,400-mAh lithium-ion battery, which is reportedly good for up to 28 hours of runtime in the lowest-output setting.

The less-intense 5-oz (142-g) Activ model has a 520-lumen band and a 380-lumen spotlight, along with an 1,800-mAh battery that offers 22 hours of runtime. Both it and the Pro can withstand being sprayed with jets of water from any direction.



Should you be interested, the Multi-Beam is currently the subject of a [Kickstarter campaign](#). An early bird deal will get you a Pro (assuming it reaches production) for a pledge of US\$60. After that deal is over, the Pro will go for \$75 and the Active will go for \$60 – their planned retail prices are \$100 and \$80, respectively.

Potential backers might also want to check out the successfully crowdfunded and somewhat similar [One80 headlamp](#).

EDITOR'S COMMENT: A very interesting product to be used with PPE during night operations – especially medical interventions.

Rep. Boebert introduces legislation to classify **Fentanyl** as a weapon of mass destruction

Source: <https://www.nbc11news.com/2022/06/13/rep-boebert-introduces-legislation-classify-fentanyl-weapon-mass-destruction/>

June 14 – Colorado Congresswoman Lauren Boebert introduced new legislation on Monday afternoon that would qualify Fentanyl as a weapon of mass destruction, akin to nuclear weapons. Boebert states, “It is time to call Fentanyl what it is: a weapon of mass destruction that is destroying our nation.” Fentanyl killed 900 of Coloradans and 91,799 of Americans in 2020, and some are citing concerns that the already deadly drug could be weaponized.

Given the catastrophic effect WMDs have on human populations, we took a deep look into Fentanyl’s weaponization in the past and how it compares to other WMDs.

Fentanyl has been used as a weapon before, not as a weapon of mass destruction as Boebert argues, but as a Russian counter-terrorism tactic. She cites a hostage crisis in October of 2002 as her motivation, where forty Chechen terrorists seized Moscow’s Dubrovka Theater and more than 800 hostages. Explosives were scattered across the theater, and the terrorists threatened to detonate unless the Russian campaign in Chechnya was brought to an end.

After days of failed negotiations and the Chechens’ threat to start killing hostages, a Russian security forces decided to pump an aerosolized combination of two Fentanyl analogues into the theater, with the intention of incapacitating everyone inside. All of the Chechen terrorists and about 130 of the 800 total hostages were killed in the process, but the majority of the hostages survived.

The international reaction to the Russian response to the crisis was largely positive, as this was in a world where 9/11 was still a fresh memory and Russia was considered a friendly country. “Context is important here,” said John Caves Jr., an expert on biological and chemical defense for the Center for the Study of Weapons of Mass Destruction. “There was great concern that the Chechens would kill most of the hostages by blowing up the building. That only about 130 hostages died could be considered a win, given the circumstances.”

For comparison, the B83 nuclear bomb currently in use by the United States Military has a yield of about 1,200 kilotons of TNT, putting it at about 80 times the explosive yield of the bomb dropped on Hiroshima in 1945. In just a single detonation, 135,000 people were dead or dying. Days later, 64,000 people were annihilated in similar fashion in Nagasaki, Japan. Fentanyl killed over 90 thousand people in 2020, meaning that two nuclear detonations in the span of just three days killed over twice as many people than Fentanyl killed in 2020.

Chemical weapons deployed since World War One have claimed more than one million lives worldwide, and many of those who survived chemical weapon attacks are permanently disfigured or disabled. However, not all chemical weapons are considered weapons of mass destruction.

Caves argues that Fentanyl should be classified as a potential chemical weapon, but not as a weapon of mass destruction. “It is not evident that there is any basis or need for officially designating Fentanyl compounds as weapons of mass destruction, however that may be defined,” said Caves. “But it is clear that there is at least a risk that Fentanyl compounds could be used as chemical weapons.” Boebert’s legislation would only target the illicit use of Fentanyl, and won’t interfere with legal usage. The bill would also allocate resources for technological development, suggested Fentanyl-detecting sensors, and “analytical data-based decision-making.”



Co-Sponsors of the bill include Representatives Mary Miller (IL-15), Dan Bishop (NC-09), Bill Posey (FL-08), Ralph Norman (SC-05), Paul Gosar (AZ-04), Andrew Clyde (GA-09), Clay Higgins (LA-03), Barry Moore (AL-02), and Troy Nehls (TX-22).

Assessing the Risks of Toxic or Flammable Clouds

Source: <https://www.homelandsecuritynewswire.com/dr20220616-assessing-the-risks-of-toxic-or-flammable-clouds>

June 16 – Battelle, a scientific nonprofit in Columbus, Ohio, has awarded Tom Spicer III, professor of chemical engineering, a research grant in support of the Department of Homeland Security Science and Technology Directorate's Chemical Security Analysis Center.



Spicer is a Ralph E. Martin Department of Chemical Engineering professor whose research interests include examining hazards from airborne contaminants and from fire and explosion phenomena. The funding he received is for hazard and risk analysis related to chemical and material threats. Battelle's funding is for five years and has a contract ceiling amount just below \$1.5 million. This funding will allow Spicer to continue developing state-of-the-art technology to assess the consequences for potential releases of toxic or flammable clouds. His research team will examine the amount of ammonia that would be removed from a toxic cloud by environmental materials. This project

is made possible by the unique experimental capabilities of the Controlled Environment Reactivity Test facility housed and maintained at the U of A [Engineering Research Center](#) by the Chemical Hazard Research Center and the Ralph E. Martin Department of Chemical Engineering. This work builds on past studies conducted at the test facility, which found that current assessment practices could [significantly over-predict chlorine removal](#) in the case of an accidental release. Wind tunnel experiments were used to physically model releases of chlorine clouds and assess reactivity as part of the [Jack Rabbit II field tests](#). Founded in 1929, [Battelle](#) serves the national security, health and life sciences; energy; and environmental industries. Battelle is the largest independent nonprofit research and development institute in the world. The [Chemical Security Analysis Center](#) was established by the [Department of Homeland Security](#) to identify and assess chemical threats and vulnerabilities in the United States and develop the best responses to potential chemical hazards. The center conducted the aforementioned Project Jack Rabbit.

BULLETIN OF THE ATOMIC SCIENTISTS
2019, VOL. 75, NO. 6, 290-294
<https://doi.org/10.1080/00963402.2019.1680054>

 **Routledge**
Taylor & Francis Group

 Check for updates

The threats from nanotechnology

Margaret E. Kosal

ABSTRACT

Research in nanotechnology may have an important positive impact on the world. For instance, inventors have developed ways to control very small volumes of water to create low-cost scientific instruments for the developing world. But at the same time, nanotechnology carries risks. Cheap scientific tools could be used by terrorist groups. Militaries could develop destabilizing stealth technology. While there's plenty of reason to be optimistic about the future of nanotechnology, policymakers should also consider its risks.

KEYWORDS

Nanotechnology;
nano-enabled weapons;
metamaterials; cloaking;
frugal science; gray goo



Margaret E. Kosal is an associate professor at The Sam Nunn School of International Affairs at the Georgia Institute of Technology. Kosal's research explores the relationships among



technology, strategy, and governance. Her research focuses on two, often intersecting, areas: reducing the threat of weapons of mass destruction and understanding the role of emerging technologies for security. Kosal is the author of *Nanotechnology for Chemical and Biological Defense* (Springer Academic Publishers, 2009), which explores scenarios and strategies regarding the benefits and potential proliferation threats of nanotechnology and other emerging sciences for international security. She is also Director of the Sam Nunn Security Fellows Program and Co-Director of the Program on Emerging Technology within the Center for International Strategy, Technology, and Policy.

CBRN Incident Preparedness and Response Protocol

Oklahoma Public Health Laboratory

Source: <https://oklahoma.gov/health/locations/public-health-laboratory/incident-preparedness-and-response-protocol.html>



OKLAHOMA
State Department
of Health



2022 CBRNe/Security-related conferences

CBRNe Summit USA 2022

4-6 Oct 2022 | Denver, Colorado USA

<https://intelligence-sec.com/events/cbrne-summit-usa-2021-2-2/>

INTELLIGENCE-SEC

Our 2nd annual CBRNe Summit USA will be coming to Denver, CO on the 4th – 6th October 2022. This event brings together leading officials from the military, civil and scientific agencies to provide you will a full perspective on all CBRNe threats and challenges. Over the 2-day conference and exhibition you will hear different perspectives on CBRNe preparedness, resilience and response. With the world entering a new chapter with the global COVID pandemic behind us many governments are now seeing the importance to improve CBRNe capabilities to deal with a future pandemic.

CBRNe Summit USA will also focus on Colorado State CBRNe response capabilities and analyse the challenges they face across the State; Chem-Bio countermeasures and emergency response procedures and agency collaboration; First responder techniques and training to allow inter-agency response to CBRNe incidents; International CBRNe threats and response techniques and Military CBRNe capabilities and development.

To take part in our inaugural CBRNe Summit USA conference and exhibition as either a speaker, sponsor, exhibitor or delegate please contact us at events@intelligence-sec.com or call us at +44 7792 47 32 46.

**CBRNe Protection Symposium**

20-22 September 2022 | Malmö, Sweden

<https://cbw.se/>

As an engaged professional within the CBRNe-protection field this symposium is for you! Contribute to the symposium through fruitful meetings, elaborated conversations and sharing of recent research. Visit the exhibition of CBRNe protection equipment, where industry and institutes display their latest products and research in an encouraging environment. The exhibition offers a good opportunity for the symposium participants to make themselves acquainted with commercially available state-of-the-art equipment related to CBRNe-protection.

Radiological Emergency Planning

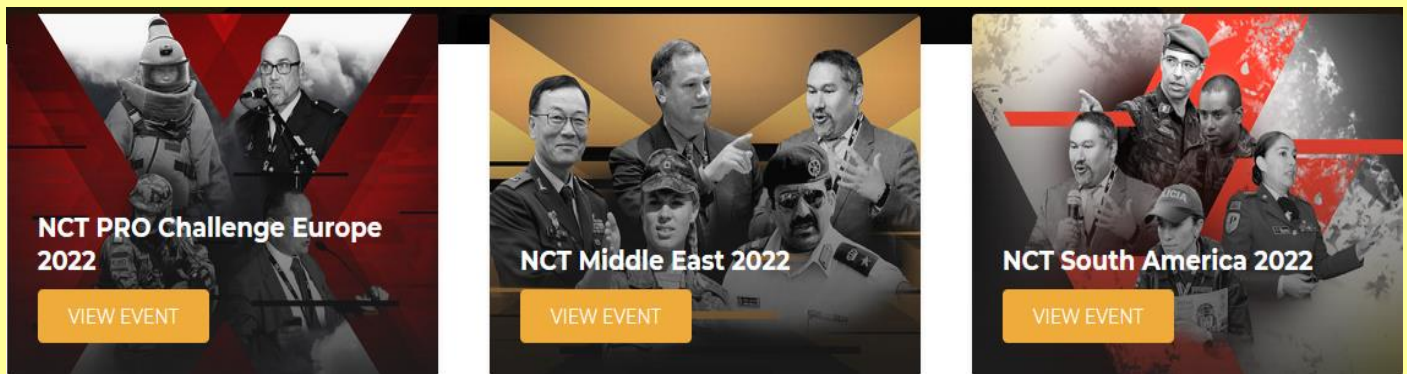
18-22 Jul 2022 | Harvard Longwood Campus; Boston, MA

<https://www.hsph.harvard.edu/ecpe/programs/radiological-emergency-planning/>

This program moves beyond the basics of emergency planning to provide skills and strategies for communicating about radiological emergencies, medically managing casualties of incidents involving radioactive material, and supporting other organizations during these crises. This course is designed for anyone involved in emergency planning, response, or recovery in the public, private, or nonprofit sectors. Health physicists, public safety professionals, and first receivers and responders will also find this program beneficial. Foreign and domestic participants from organizations with the following functions are likely to attend:

- Nuclear or energy-industry regulatory bodies
- Homeland security and emergency management agencies
- Defense or military organizations
- Departments of health
- Power generation, especially nuclear power generation
- State and local emergency agencies
- State radiation control agencies





NCT Events 2022

<https://nct-events.com/>

NCT is back! After the stop imposed on us by the pandemic, we have a large calendar of events coming up in 2022. We will start in Abu Dhabi, February 7th and 8th. We will then reach almost every continent: NCT is scheduled for Brazil, Germany, Thailand, Croatia, the United States, and South Korea. [Visit our website](#) for the latest news regarding dates and locations!

Dear colleagues,

I am pleased and honoured to invite you to participate in the first edition of the Cannes International Resilience Forum (CIRF). CIRF is an international conference dedicated to crisis management and resilience, which will take place at the Palais des Festivals et des Congrès in Cannes from Sunday 23rd to Wednesday 26th, October 2022.

IsraTeam Ltd., established in Israel in 1988, has a renowned expertise in the field of emergency management and mitigation, particularly during times of war, natural disasters or terrorist attacks. Its team is comprised of highly qualified experts, including high ranking personnel in the Israel Defence Forces (IDF) and Ministry of Health.

Regarding the prevention and management of major risks, Cannes is a pioneer city as it was certified in 2018 by the Ministry of Europe and Foreign Affairs for its expertise in “preventing terror risk during the organisation of events”. In March 2021, the City of Cannes obtained an enlargement of this labelling to “sanitary and natural risk”, as part of the Ministry program meant to highlight the expertise of local authorities.

The first edition of the Cannes International Resilience Forum will focus on building resilience strategies to face the consequences of Covid-19 pandemic as well as on sanitary crisis management.

Main issues to be discussed at the conference will be - Building the Resilience today to be ready for the next generation and will dive into such topics as:

1. "COVID-19" – LESSONS LEARNT.
2. "POST – COVID-19 ERA" Health Systems Preparedness.
3. CLIMATE CHANGE EFFECTS ON EMERGENCY PREPAREDNESS
4. The Mayor leadership



ICI C²BRNE DIARY – June 2022

5. RADIOLOGICAL DISASTER MANAGEMENT
6. BUILDING RESILIENCE.
7. "THE CYBER WORLD" Threats and responses.
8. The Financial Challenge in a Disaster
9. The Functional Continuity in the Supply of electricity and Water
10. The Activity of First Responses
11. "THE WORLD TERRORISM" Counter terrorism and responses
12. Multidisciplinary Simulation Exercise Simulation systems to emergencies and crises events
13. TECHNOLOGICAL INNOVATION FOR BETTER RESILIENCE
14. The advance methodology to deal with MASS CASUALTY INCIDENT (MC)

Undoubtedly, the lessons learnt from COVID-19 Pandemic would be very useful for any case

of mass disaster mitigation; it will be extremely crucial factor in any mitigation planning or crisis management in the future.

Your contribution to the conference will surely lead to a better understanding of the governing powers, the participants' roles, and the possibilities to be properly prepared in the future at the national and global levels.



General Abraham Bachar

Chair of the Cannes International Resilience Forum

Founder and CEO of IsraTeam

Former Chief of Staff, Israeli Home Front Command and

Former Head of the Israeli National Emergency Management Agency.

3rd CBRN-E Forensic Course

Dates: 23 September – 02 October 2022

<https://www.cbrndefence.com/yazi/3-adli-kbrn-p-kursu>

Organized by:

In cooperation with CBRN Defense Policy Development Association & Forensic Scientists Association



► Deadline for registration: September 25, 2022

Recent events including the Iran-Iraq war in the 1980s, the chemical attack on the Tokyo subway, the bioterrorist attacks after the September 11, 2001 attack, the chemical weapons used numerous times in our neighboring Syria, the nuclear power plant accidents, the misuse of radiation in our daily lives, the recent Russian-Ukrainian war where chemical and nuclear danger's been on agenda, and especially the COVID-19 pandemic, which is claimed to be a biological weapon, have shown that "Chemical Biological-Radiological and Nuclear" threat, called CBRN, will, unfortunately, increase in the coming years, perhaps this unseen dangerous agents will be used conflicts like wars and terrorist events. It shows us that it will increase the possibility of using advanced technological weapons insidiously. However, more importantly, the threat of CBRN weapons, which has evidently increased more in the Middle East geography, including our country, has taken its place in the asymmetric war/terror threat. Defense and protection against these events is a situation that not only the security forces react to but also all civilian citizens should know, and that forces us to increase our awareness and consciousness on this issue.

Based on the reasons mentioned above; As the Chemical Biological Radiological Nuclear (CBRN) Defense Policy Development Association (CBRN Defense Platform) together with the Forensic Scientists Association, we will organize an online 3rd CBRN-E Forensic course between September 23-October 02, 2022 to raise awareness of CBRN threat in our country and to increase the awareness of this danger.



ICI C²BRNE DIARY – June 2022

The training of the 3rd of the Forensic CBRN-P course whose first two of which were held in the year 2001 with great attention will be delivered at a very sensitive period when our world is talking about CBRN threat. In this training course, our expert academicians' lectures will cover topics including Forensic Sciences, Food Safety, Food Defense and Agroterrorism, Bioterrorism, Chemical Warfare Agents, Weapons of Mass Destruction, CBRN-P Substances Usage Methods, Targets, Dissemination Devices, Bomb / Dirty Bomb, Radioactive threats, Radio-nuclear Accidents, and Incidents, Suspicious Biological Package, Crime Scene Investigation and Forensic CBRN (Dirty Evidence) Investigation Laboratory in CBRN-P Attacks, Toxic Industrial Chemicals, Emergency, and Disaster Management in CBRN Incidents, CBRN Crime Scene Management. During this course, applications like scenario-based interactive studies of referee/cross-examination and table-top exercises on CBRN event management will also be performed.

The lessons are 60 hours in total and will be held between 09.00-18.00 on weekends and between 18.00-23.00 on weekdays. Attending at least 70 percent of the courses and being successful in the exam is mandatory for certification. It is also mandatory to open the camera during the lesson. Since the course will be given in return for a donation, there is no refund.

Sponsorship Registration Procedures:

Sponsorships from worldwide CBRN companies are kindly welcome for the 60-hour 3rd Forensic CBRN-E Course to be organized by the Chemical Biological Radiological Nuclear (CBRN) Defense Policy Development Association (CBRN Defense Platform) together with the Forensic Scientists Association.

- ❖ **GOLD SPONSORSHIP – 2000 USD**
- ❖ **SILVER SPONSORSHIP – 1500 USD**
- ❖ **BRONZE SPONSORSHIP – 1000 USD**

Sponsorship fees will be deposited to the account of the Forensic Scientists Association, with the explanation of "Forensic CBRN Education Donation Gold/Silver/Bronze Sponsorship" to the IBAN address. Please contact us by e-mail or telephone before depositing. After the sponsorship process, Training materials will start to be sent to you and if you submit your mobile phone number, you will be registered to the 3rd Forensic CBRN-P whatsapp group.

Account Name: KİMYASAL BİYOLOJİK RADYOLOJİK NÜKLEER, QNB Finansbank Batıkent Şubesi (USD account)

IBAN No: 12001110000000095144488

Contact Number: +90 532 282 67 59

Turkish Chemical Biological Radiological Nuclear (CBRN) Defense Policy Development Association (CBRN Defence Platform)





AI - NEWS



NEW!

**As of the July 2022 issue
a new chapter
on artificial intelligence
will be added
to C²BRNE Diary
Because
AI is here to stay
and CBRN threats
can be enhanced further
towards
very dangerous pathways**



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BIO NEWS



Which SARS-CoV-2 Variant Will Cause the Next Wave? An AI Tool Predicts

By Pardis Sabeti, MD, D.Phil. [the Broad Institute of MIT and Harvard]

Source: <https://www.genengnews.com/virology/coronavirus/which-sars-cov-2-variant-will-cause-the-next-wave-an-ai-tool-predicts/>

May 25 – First, there was Delta. Then Omicron. Now, it's the Omicron subvariant BA.2.12.1. And, public health officials are keeping a close watch on the BA.4 and BA.5 subvariants. These waves of cases, caused by infections with new variants, have characterized the COVID-19 pandemic. But how can public health officials know which variants are likely to cause large numbers of cases and which will not take hold in the population? Now, scientists have developed a **machine learning model, called PyR₀**, that analyzed millions of SARS-CoV-2 genomes. In doing so, it can predict which viral variants will likely dominate and cause surges in COVID-19 cases. It can also help researchers identify which parts of the viral genome will be less likely to mutate, uncovering good targets for vaccines that will work against future variants. The AI tool, trained using over six million SARS-CoV-2 genomes from the GISAID (Global Initiative on Sharing Avian Influenza Data) database, can estimate the effect of genetic mutations on the virus's fitness. **When tested on viral genomic data from January 2022, it predicted the rise of the BA.2 variant, which became dominant in many countries in March 2022.**

PyR₀ would have also identified the alpha variant (B.1.1.7) by late November 2020, a month before the World Health Organization listed it as a variant of concern. "This kind of machine learning-based approach that looks at all the data and combines that into a single prediction is extremely valuable," said Pardis Sabeti, MD, D.Phil, an institute member at the Broad Institute, professor at the Center for Systems Biology and the department of organismic and evolutionary biology at Harvard University, and a Howard Hughes Medical Institute investigator. "It gives us a leg up on identifying what's emerging and could be a potential threat." PyR₀, based on a machine learning framework called Pyro, was originally developed by a team at Uber AI Labs. PyR₀ can analyze millions of genomes—all of the publicly available SARS-CoV-2 data—in about an hour. It groups similar sequences together defining "clusters" of genomes by their shared mutations.

Next, the model determines which mutations are becoming more common and estimates how quickly each mutation can cause the virus to spread. It also estimates how rapidly the number of cases of different variants will increase based on their genetic makeup. By identifying which mutations are important for the fitness of particular variants, the model also offers biological insight into how COVID-19 spreads and develops. For example, knowing the critical mutations can help scientists predict whether new variants will be more contagious or evade neutralizing antibodies, and can also help them decide which mutations to study in greater detail.

"The SARS-CoV-2 genome now has accumulated many mutations, so it becomes extremely challenging to interrogate all combinations of mutations," said Martin Jankowiak, PhD, a machine learning fellow at the Broad Institute. "The advantage of this kind of analysis is that it looks at the entire genome holistically, and may point to mutations or variants that are receiving less attention in the lab." The study suggests that current increases in viral fitness stem from the virus's ability to escape immune responses.

They add that public health officials, with advanced warning of a variant's sequence and characteristics, could implement specific measures to manage case counts. And knowing which mutations are contributing to a variant's survival—and are thus not likely to change—can help researchers pick better targets for future vaccines. New versions of this or similar models could further improve predictions by taking into account interactions between mutations. The researchers say that with further work, their model could help monitor other viruses that have enough genetic data.

"The amount of data that we have, together with the methods that we've developed, allow us to get a real-time view of the virus evolving in different locations around the world in a way that was just not possible during previous epidemics," said Fritz Obermeyer, PhD, a machine learning fellow at the Broad Institute.

●► The findings appear in *Science* in the paper, "[Analysis of 6.4 million SARS-CoV-2 genomes identifies mutations associated with fitness.](#)"

Why Monkeypox Cases Are Rising in Europe

Source: <https://www.medscape.com/viewarticle/974223>

May 19 – A handful of cases of monkeypox have now been reported or are suspected in the United Kingdom, Portugal and Spain.

The outbreaks are raising alarm because the disease mostly occurs in west and central Africa, and only very occasionally spreads elsewhere. Here's what scientists know so far.



“Highly unusual”

Monkeypox is a virus that causes fever symptoms as well as a distinctive bumpy rash. It is usually mild, although there are two main strains: the Congo strain, which is more severe – with up to 10% mortality – and the West African strain, which has a fatality rate of around 1%. The UK cases have been reported as the West African strain.

"Historically, there have been very few cases exported. It has only happened eight times in the past before this year," said Jimmy Whitworth, a professor of international public health at the London School of Hygiene and Tropical Medicine, who said it was "highly unusual". Portugal has logged five confirmed cases, and Spain is testing 23 potential cases. Neither country has reported cases before.

Transmission

The virus spreads through close contact, both in spillovers from animal hosts and, less commonly, between humans. It was first found in monkeys in 1958, hence the name, although rodents are now seen as the main source of transmission.

Transmission this time is puzzling experts, because a number of the cases in the United Kingdom - nine as of May 18 - have no known connection to each other. Only the first case reported on May 6 had recently travelled to Nigeria.

As such, experts have warned of wider transmission if cases have gone unreported. The UK Health Security Agency's alert also highlighted that the recent cases were predominantly among men who self-identified as gay, bisexual or men who have sex with men, and advised those groups to be alert. Scientists will now sequence the virus to see if they are linked, the World Health Organization (WHO) said this week.

Why now?

One likely scenario behind the increase in cases is increased travel as COVID restrictions are lifted.

"My working theory would be that there's a lot of it about in west and central Africa, travel has resumed, and that's why we are seeing more cases," said Whitworth.

Monkeypox puts virologists on the alert because it is in the smallpox family, although it causes less serious illness.

Smallpox was eradicated by vaccination in 1980, and the shot has been phased out. But it also protects against monkeypox, and so the winding down of vaccination campaigns has led to a jump in monkeypox cases, according to Anne Rimoin, an epidemiology professor at UCLA in California. But experts urged people not to panic. "This isn't going to cause a nationwide epidemic like COVID did, but it's a serious outbreak of a serious disease – and we should take it seriously," said Whitworth.

New Data Shed Light on Neuropathogenesis of COVID-19

Source: <https://www.medscape.com/viewarticle/974427>

May 26 – SARS-CoV-2 viral antigens may contribute to central nervous system (CNS) immune responses without direct viral invasion of the CNS, new data suggest.

It's now known that patients with COVID-19 may develop neurologic symptoms but it's unclear why, as SARS-CoV-2 RNA is rarely detected in cerebrospinal fluid (CSF).

In a cross-sectional study of 44 patients with COVID-19 (23 with neurologic symptoms), researchers detected SARS-CoV-2 nucleocapsid antigen (N-Ag) in CSF in 89% of patients with available data, despite negative viral RNA test results in all patients.

N-Ag was significantly correlated with immune activation markers (neopterin and gamma interferon), report Dr. Arvid Eden, with Sahlgrenska Academy, University of Gothenburg, Sweden, and colleagues in JAMA Network Open.

Moreover, COVID-19 patients with neurologic symptoms had a more pronounced inflammatory CSF profile compared with peers without neurologic symptoms, "**suggesting that the magnitude of the CNS immune response, possibly triggered by viral components, contributes to the neuropathogenesis of COVID-19,**" they say.

"These observations could not be attributed to differences in COVID-19 severity, where no differences in CSF biomarkers were seen in patients with moderate compared with severe disease," they note.

"These findings have important potential implications for clinical treatment of patients with COVID-19, including the use of antiviral therapies, as well as for the continued importance of including CSF analyses in future studies of CNS pathogenesis and treatment strategies," the researchers add.

●► The study available at <https://bit.ly/3lBa4j7> JAMA Network Open, online May 23, 2022.



Evusheld long-acting antibody combination retains neutralising activity against Omicron variants BA.4 and BA.5, according to new study from University of Oxford

Source: <https://www.astrazeneca.com/media-centre/medical-releases/evusheld-long-acting-antibody-combination-retains-neutralising-activity-omicron-variants-ba4-ba5-according-new-study-university-oxford.html>

May 25 – AstraZeneca's *Evusheld* (tixagevimab and cilgavimab, formerly AZD7442) retains neutralisation activity against the emerging Omicron BA.4 and BA.5 (BA.4/5) variants, according to new preclinical pseudovirus assay data from the University of Oxford.¹

The findings were reported online on [bioRxiv](https://www.biorxiv.org/), a preprint server.

These results are consistent with previous data from multiple studies showing that *Evusheld* retains potent neutralising activity against Omicron BA.2, the current dominant circulating variant, and neutralises all variants tested to date.²⁻⁶

Previously circulating SARS-CoV-2 variants have expanded in similar patterns; therefore it's possible BA.4 and BA.5, which are now the dominant variants in Africa, could spread globally in a similar pattern to BA.2.⁶ BA.4 and BA.5 have identical S protein sequences and appear to have evolved from BA.2.¹

John L. Perez, MD, MBA, MA, Senior Vice President, Head of Late Development, Vaccines & Immune Therapies, AstraZeneca, said: "By combining two antibodies with different and complementary activities against SARS-CoV-2, *Evusheld* was engineered from the start to outsmart the COVID-19 virus and to remain potent in the face of this virus' ability to rapidly mutate. These findings further support *Evusheld* as an important option to help protect vulnerable populations such as the immunocompromised who are unable to respond adequately to COVID-19 vaccination and are at high risk for severe disease."

Approximately 2% of the global population is considered at increased risk of an inadequate response to COVID-19 vaccination and may particularly benefit from pre-exposure prophylaxis (prevention) with *Evusheld*.^{7,8} This population includes people who are immunocompromised, such as cancer patients, transplant patients and anyone taking immunosuppressive medicines.³ People at increased risk of exposure to the SARS-CoV-2 virus could also benefit from protection with *Evusheld*.⁹ Emerging evidence indicates that protecting vulnerable populations from getting COVID-19 could help prevent viral evolution that is an important factor in the emergence of variants.¹⁰

Evusheld

Evusheld, formerly known as AZD7442, is a combination of two long-acting antibodies - tixagevimab (AZD8895) and cilgavimab (AZD1061) - derived from B-cells donated by individuals previously infected with the SARS-CoV-2 virus. Discovered by Vanderbilt University Medical Center and [licensed to AstraZeneca in June 2020](https://www.astrazeneca.com/media-centre/medical-releases/evusheld-licensed-to-astrazeneca-in-june-2020.html), the human monoclonal antibodies bind to distinct sites on the SARS-CoV-2 spike protein¹¹ and were optimised by AstraZeneca with half-life extension and reduced Fc receptor and complement C1q binding.¹² The half-life extension more than triples the durability of its action compared to conventional antibodies;¹³⁻¹⁵ data from the Phase III PROVENT trial show protection lasting at least six months.¹⁶ The reduced Fc receptor binding aims to minimise the risk of antibody-dependent enhancement of disease - a phenomenon in which virus-specific antibodies promote, rather than inhibit, infection and/or disease.¹⁷

There is a growing body of evidence from multiple independent in vitro and in vivo (animal model) studies supporting the potential of *Evusheld* to protect against Omicron SARS-CoV-2 subvariants.^{2-4,18,19} In particular, [data from Washington University School of Medicine](https://www.washingtonpost.com/health/evusheld-remains-effective-against-omicron-variants-study/2022/05/25/) demonstrated *Evusheld* retained neutralising activity against the highly transmissible BA.2 subvariant, which is currently the dominant strain globally.^{2,6} This study also showed that *Evusheld* reduced viral burden and limited inflammation in the lungs (in vivo) for Omicron BA.1, BA.1.1 and BA.2.²



Evusheld has marketing authorisation in the European Union and was granted conditional marketing authorisation by the Medicines and Healthcare products Regulatory Agency (MHRA) in Great Britain for pre-exposure prophylaxis of COVID-19. *Evusheld* is authorised for emergency use for pre-exposure prophylaxis of COVID-19 in the US. *Evusheld* is also authorised for use and being supplied in several other countries around the world. Regulatory filings are progressing in both prevention and treatment around the world. The primary data supporting the *Evusheld* authorisations are from the ongoing [PROVENT Phase III pre-exposure prevention trial](#), which showed a statistically significant reduction in the risk of developing symptomatic COVID-19 compared to placebo, with protection from the virus continuing for at least six months.¹⁶

In October 2021, AstraZeneca announced positive high-level results from the [TACKLE Phase III outpatient treatment trial](#) in which *Evusheld* provided statistically and clinically significant protection against the development of severe COVID-19 or death from any cause compared to placebo. *Evusheld* was generally well-tolerated in the trials.^{16,20}

Evusheld is being developed with support from the US government, including federal funds from the Department of Health and Human Services; Office of the Assistant Secretary for Preparedness and Response; Biomedical Advanced Research and Development Authority in partnership with the Department of Defense; Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense, under Contract No. W911QY-21-9-0001.

Under the terms of the licensing agreement with Vanderbilt, AstraZeneca will pay single-digit royalties on future net sales.\

Why monkeypox was chosen?

NOVEMBER 2021

NTI Paper

Strengthening Global Systems to Prevent and Respond to High-Consequence Biological Threats

Results from the 2021 Tabletop Exercise Conducted in Partnership with the Munich Security Conference

In March 2021, NTI partnered with the Munich Security Conference to conduct a tabletop exercise on reducing high-consequence biological threats. The exercise examined gaps in national and international biosecurity and pandemic preparedness architectures—exploring opportunities to improve prevention and response capabilities for high-consequence biological events. This report summarizes the exercise scenario, key findings from the discussion, and actionable recommendations for the international community.

The exercise scenario (May 2022 – December 2023) concludes with more than three billion cases and 270 million fatalities globally.

COVID-19 May Cause Lasting Damage to Multiple Organs

Source: <https://www.medscape.com/viewarticle/974538>

May 24 – One in eight adults hospitalized with COVID-19 subsequently develops [myocarditis](#), often leading to impaired exercise capacity and health-related quality of life, according to an ongoing study looking at the clinical long-term effects of the virus.

The study also revealed evidence of persistent abnormalities in heart, lung, and kidney imaging, electrocardiography, and multisystem biomarkers after COVID-19 hospital discharge.



Importantly, say the researchers, it's the severity of a patient's COVID-19 infection, not their underlying health condition, that is most closely correlated to the severity of ongoing health issues after the patient leaves the hospital.

"We found that previously healthy patients, without any underlying health conditions, were suffering with severe health outcomes, including myocarditis, post hospitalization," principal investigator Colin Berry, MBChB, PhD, professor of cardiology and imaging, University of Glasgow, United Kingdom, said in a statement.

"The reasons for this are unclear, but it may be that a healthy person who is hospitalized with COVID-19 is likely to have a worse COVID infection than someone with underlying health conditions who is hospitalized," Berry said.

●► The study was [published](#) online May 23 in *Nature Medicine*.

A Multisystem Disease

The findings are based on 159 patients who are being followed after hospitalization for COVID-19 as part of the Scottish Cardiac Imaging in SARS CoV-2 ([CISCO-19](#)) study.

Mean age of the study participants was 55 years, 43% were women, and 47% had a history of cardiovascular disease or treatment. Over an average postdischarge follow-up of 450 days, one in seven patients was readmitted to the hospital and two in three required outpatient care.

Compared with a matched control group of non-COVID patients, COVID patients showed evidence of cardio-renal inflammation, lung involvement, systemic inflammation, hemostatic pathway activation, and impairments in physical and psychological function 28 to 60 days after discharge.

The likelihood of post-COVID myocarditis (the primary outcome) was judged to be "very likely" in 13% of patients, "probable" in 41%, "unlikely" in 35%, and "not present" in 11%.

The etiology of myocarditis was predominantly SARS-COV-2 infection, and less commonly myocardial ischemia due to [coronary artery disease](#).

Myocardial scar was "surprisingly" common, affecting one in five COVID patients, the researchers note.

The fibrosis distribution in post-COVID patients was "indicative of acute myocarditis, microvascular thrombosis, [myocardial infarction](#), and pre-existing scar with a nonischemic pattern. The prognostic implications of these findings should be clarified through longitudinal follow-up studies," the researchers say.

Almost one-quarter of the COVID-19 patients were healthcare workers, and they had about a threefold higher likelihood of myocarditis, a finding that merits further investigation, the researchers say.

On univariate analysis, women had an increased likelihood of myocarditis, which in turn was linked to lower mental and physical well-being. This finding, they say, might provide a pathophysiologic basis for the physical limitations experienced by some women after severe COVID-19 that requires hospital care.

Myocarditis was associated with [acute kidney injury](#) during COVID admission, with evidence of kidney inflammation 28 to 60 days after discharge.

"From a clinical perspective, cardio-renal injury was associated with persisting impairments in health-related quality of life, and poorer physical and psychological well-being during convalescence," the researchers say.

"Considering clinical translation, the results support a stratified management approach for post-COVID-19 patients early during convalescence," they add.

Chest abnormalities on CT were also common 28 to 60 days after COVID discharge.

The minimum patient-level fractional flow reserve on CT was lower in COVID patients than in 27 COVID-free control subjects, "consistent with flow-limiting coronary artery disease," the authors note.

MRI showed mild differences in ventricular function.

At baseline, circulating concentrations of C-reactive protein, ferritin, D-dimers, [fibrinogen](#), factor VIII, and von Willebrand factor were higher in post-COVID patients than control subjects, consistent with hemostatic pathway activation.

At 28 to 60 days after discharge, factor VIII concentrations remained high. Circulating concentrations of NT-proBNP were higher in COVID patients at baseline and 28 to 60 days after discharge.

Summing up, the researchers say their findings show that the illness trajectory of COVID-19 includes "persisting multisystem abnormalities that underlie impairments in health status, physical and psychological well-being during community convalescence."

●► *Nat Med*. Published online May 23, 2022. [Full text](#)



If you get sick with COVID-19 now, what are the newest treatments and medications?

By Katie Kerwin McCrimmon, UCHealth

Source: <https://www.uchealth.org/today/newest-covid-treatments-and-medications/>

May 25 – COVID-19 infections are surging again, so if you are feeling sick, it's important to get tested as quickly as possible. If you test positive and have underlying medical issues that make you more vulnerable to severe illness — like being 65 or older, being pregnant, obese or having a suppressed immune system — you should seek COVID-19 treatments immediately. Back in the beginning of the pandemic, doctors had few treatments to help people who got sick with COVID-19. But coronavirus care has come a long way since early 2020, and advice from doctors is clear now. Don't suffer at home. If you test positive for COVID-19 and you're in a high-risk group, call your doctor and get help as quickly as possible.

COVID-19 treatments for at-risk people who test positive

The newest COVID-19 treatments include monoclonal antibodies like bebtelovimab and an intravenous antiviral medication, remdesivir. Both work well against the newest omicron variants and subvariants, BA.2 and BA.1.1. Doctors also can prescribe antiviral medications like paxlovid and molnupiravir (not quite as good as the others but still better than nothing). There's also a relatively new medication that can prevent immunocompromised people from getting COVID-19 in the first place. It's called evusheld.

Of course, everyone should get vaccinated and boosted against COVID-19 to decrease the likelihood of getting sick in the first place. But as immunities wane and variants spread, people who are vaccinated can get sick. If you are vaccinated and boosted, you're likely to get a milder case if you do get COVID-19. Still, it's wise to be prepared and know about medications that can help if you get sick. The newest COVID-19 treatments are so valuable because they help people recover faster. They also have [proven to be highly effective](#) at preventing hospitalizations and deaths for people at high risk for suffering a poor outcome if they get COVID-19. These people include those who are older, immunocompromised, pregnant and obese. "It's unbelievable," [infectious disease specialist Dr. Michelle Barron](#) said of the progress in developing COVID-19 treatments so quickly. "I put this in the same realm as vaccines.

"I would never have imagined that we'd have so many therapies. It just shows how far we can go when we have a shared purpose and a high level of investment in public health," said Barron, who is UCHealth's senior medical director of infection prevention and control and a [professor](#) at the [University of Colorado School of Medicine](#) on the [Anschutz Medical Campus](#).

Over 65 with COVID? Call your doctor for treatment options

Barron urges people not to delay in asking for help. "The goal of these medications is to keep people out of hospitals. If you have these risk factors, there's a real risk of getting sick," Barron said. "Anyone in doubt about whether they might qualify should check with their doctor. And don't be concerned that you should save COVID-19 treatments for people who might be at higher risk because in fact, you may be one of those people," Barron said. Even if you don't feel severely ill when you first get infected, your illness could worsen quickly. And those who use the newest treatments need to take them early in the course of the illness.

"The time is now," said Barron. "At this point, the supplies of these medications, especially the oral options, are good. You shouldn't feel guilty for taking these medications if you are qualified to receive them. Call your doctor right now if you have tested positive for COVID-19. That's the whole point of these medications: to use them to keep people out of hospitals."

Barron helps answer your top questions about the newest COVID-19 treatments and who should get them.

Who should get COVID-19 therapies?

Monoclonal antibodies and antiviral medications are recommended for people who test positive for COVID-19 and those in high-risk groups including people who are:

- 65 or older.
- Overweight or obese: with a BMI of 26 or greater.
- Dealing with cancer, kidney, liver, lung or sickle cell disease.
- Diagnosed with dementia, diabetes, Down Syndrome, heart conditions, HIV infections, certain mental health conditions and tuberculosis.
- Current or former smokers.
- Organ transplant recipients.
- Stroke survivors.
- Dealing with substance use disorders.



“You can look up the criteria yourself or call your provider. Oral antivirals are widely available at pharmacies now,” Barron said.

If you had to choose between monoclonal antibody infusion versus intravenous remdesivir or an oral antiviral like, paxlovid, which one would you choose?

“All of the options are good,” Barron said. “Clinical studies have shown that paxlovid, monoclonal antibodies, and intravenous remdesivir all can keep individuals out of the hospital. The decision regarding which one your provider may recommend depends on which options are available where you live and what therapy is easiest to access. Doctors also consider which specific conditions a person has or which medications they may be taking.”

Are there antiviral pills that work to reduce the severity of a COVID-19 infection?

Yes. There are two prescription medications that doctors are using currently. One is made by Pfizer and is called paxlovid. Merck manufactured the second medication, and it’s called molnupiravir. Both medications help prevent the virus that causes COVID-19 from spreading and are most effective when given early in the disease course.

What is paxlovid (a combination of Nirmatrelvir and ritonavir) and when does it work?

Paxlovid is an oral antiviral medication. Patients get a prescription from their doctor and pick up the medication at a pharmacy. They then take the antiviral pills for five days. The supplies for paxlovid have improved in recent weeks with more local pharmacies carrying a supply. It is being distributed for free by the U.S. federal government.

How effective is paxlovid?

According to drug makers, [paxlovid reduced the risk of hospitalization and death by 89%](#).

Are there side effects?

Yes. Some people complain of gastrointestinal side effects like diarrhea. But some people who get sick with COVID-19 also get gastrointestinal symptoms. So, it’s difficult to know whether the infection or the medication is causing the symptoms, Barron said.

How quickly do I need to get paxlovid?

In order for the medication to work, patients must receive it within five days of getting symptoms of COVID-19.

What is molnupiravir (also known as Lagevrio)?

Molnupiravir is another type of oral antiviral medication. It’s a drug made by Merck. The effectiveness has been lower. Studies showed it prevented hospitalization and death by about 40%. It is being distributed for free by the U.S. federal government.

What are the possible side effects of molnupiravir?

They include diarrhea, dizziness, and nausea.

What are monoclonal antibodies?

Monoclonal antibodies are substances that experts manufacture in a lab that can specifically recognize and target the virus that causes COVID-19. These synthetic antibodies limit the ability of the virus to spread in the body. Monoclonal antibodies allow people to have a milder illness and thus, reduce hospitalizations and deaths.

How quickly do patients need to get monoclonal antibodies?

If you meet the criteria, it’s wise to get monoclonal antibodies as quickly after testing positive for COVID-19 as possible. The monoclonal antibodies will help patients as long as they receive them within seven days of symptom onset.

What is bebtelovimab?

Bebtelovimab is the newest version of monoclonal antibodies. It’s made by the pharmaceutical company, Lilly. It’s effective in combating the newest COVID-19 variants and sub variants. [Read more about bebtelovimab.](#)

How do I get bebtelovimab?

The U.S. government has spent \$720 million for hundreds of thousands of doses of bebtelovimab that are being distributed around the country. For patients, the infusion is free



(for now). If shortages occur, patients or insurance companies may need to foot the bill for monoclonal antibodies. ([Review information about signing up for monoclonal antibodies through UCHHealth.](#))

How long does it take to receive an infusion of monoclonal antibodies?

Patients go to a medical center and get an IV. Nurses then inject one dose of bebtelovimab into a person's body through an IV. It only takes a few minutes to receive the medication, but nurses observe patients for at least an hour after the infusion to ensure that the patient is not having any side effects. Altogether an infusion appointment might take about two hours.

What are the possible side effects of bebtelovimab?

Side effects or allergies to monoclonal antibodies are rare and can include fever, difficulty breathing, low oxygen level in your blood, chills, tiredness, fast or slow heart rate, chest discomfort, wheezing, swelling of the lips, face, or throat, rash including hives, itching, muscle aches, dizziness, feeling faint, and sweating.

How many doses of bebtelovimab does a person need?

Patients receive a single dose of bebtelovimab.

What is remdesivir (Veklury)?

Remdesivir is an antiviral medication created by Gilead Sciences. Patients receive remdesivir via IV infusions. The drug is fully approved by the Food and Drug Administration and doctors use remdesivir both for hospitalized people and to prevent hospitalizations. Recent [studies have shown that if patients receive remdesivir early in the course of their illness, they can avoid hospitalization.](#)

How early in the course of the infection should a person get remdesivir?

For patients who receive remdesivir as outpatients, it's best to get the treatments as early as possible and within seven days of symptom onset. People who are hospitalized with COVID-19 can receive remdesivir later in the course of their illness.

How long does it take to receive an infusion of remdesivir?

For people who are not hospitalized, the infusion time is short, but you will need to be observed for a period of time after the infusion, Barron said.

What are the possible side effects of remdesivir?

The most common side effect is nausea. Rarely, you can also have an allergic reaction or can also have an increase in your liver enzymes.

How many doses of remdesivir do people need?

People who are not hospitalized get three consecutive infusions. Hospitalized patients who receive remdesivir get treatments for 5 to 10 days depending on the severity of illness.

Who is eligible to receive remdesivir?

Remdesivir is approved for use in children and adults. Babies who are at least 28 days old and weigh more than 6.6 pounds can receive remdesivir. The medication is approved for those with COVID-19 who are at high risk for becoming severely ill with the disease.

What is Evusheld?

It's a medication for immunocompromised people who haven't been able to produce enough antibodies after being vaccinated or for people that cannot get a COVID-19 vaccination due to an allergy or an allergic reaction to the vaccine. Evusheld, which is made by AstraZeneca, is a drug that immunocompromised people receive to prevent them from getting COVID-19.

Who should receive Evusheld?

- Patients who have received therapies in the last year that deplete B-cells. These include rituximab, ocrelizumab, ofatumumab and alemtuzumab.
- Patients receiving Bruton tyrosine kinase inhibitors.



ICI C²BRNE DIARY – June 2022

- Recipients of chimeric antigen receptor T cells.
- Patients who have taken immunosuppressive medications.
- Patients with hematologic malignancies who are on active therapy.
- Lung transplant recipients.
- Patients who have received solid organ transplants within the last year.
- Other transplant patients who are dealing with acute rejection or those being treated with T or B cell depleting agents.
- Patients with severe combined immunodeficiencies
- Patients with untreated HIV.

How effective is evusheld?

People who received Evusheld during clinical trials were [77% less likely to get COVID-19](#).

How many doses of Evusheld should I get?

For now, doctors are recommending that people who need Evusheld should receive a single dose.

How is Evusheld administered?

“It is given as two consecutive intramuscular injections,” Barron said. “You will then be observed for up to an hour after administration.”

What are the side effects of Evusheld?

You can have an allergic reaction after receiving the drug and also might have some soreness or bruising at the injection site.



USAF COUNTERPROLIFERATION CENTER CPC OUTREACH JOURNAL

Maxwell AFB, Alabama

Issue No. 818, 18 June 2010

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Biolab Opens in Ukraine

By Tina Redlup

June 17, 2010

U.S. Sen. Dick Lugar applauded the opening of the Interim Central Reference Laboratory in Odessa, Ukraine, this week, announcing that it will be instrumental in researching dangerous pathogens used by bioterrorists.

The level-3 bio-safety lab, which is the first built under the expanded authority of the Nunn-Lugar Cooperative Threat Reduction program, will be used to study anthrax, tularemia and Q fever as well as other dangerous pathogens.



"The continuing cooperation of Nunn-Lugar partners has improved safety for all people against weapons of mass destruction and potential terrorist use, in addition to advancements in the prevention of pandemics and public health consequences," Lugar said. Lugar said plans for the facility began in 2005 when he and then Senator Barack Obama entered a partnership with Ukrainian officials. Lugar and Obama also helped coordinate efforts between the U.S and Ukrainian researchers that year in an effort to study and help prevent avian flu.

The Nunn-Lugar Act, which established the Cooperative Threat Reduction Program, was established in 1991. Since that time it has provided funding and assistance to help the former Soviet Union dismantle and safeguard large stockpiles of nuclear, chemical and biological weapons. The program has also been responsible for destroying chemical weapons in Albania, Lugar said.

Long COVID Neuropsychiatric Deficits Greater Than Expected

Source: <https://www.medscape.com/viewarticle/974840>

May 31 – Patients experiencing brain fog and other persistent symptoms of long COVID show significant deficits on neuropsychiatric testing that correspond with prior acute COVID-19 infection, adding to mounting evidence of the significant toll the chronic condition can have on mental health.

"Many clinicians have observed the symptoms we describe in this study, however this report is among the first which identify the specific deficits using neuropsychological testing to better characterize the syndrome," Sean T. Lynch, MD, first author of a study on the issue presented at the annual meeting of the American Psychiatric Association, said in an interview.

Lynch, of the department of psychiatry, Westchester Medical Center Health System, Valhalla, N.Y., and his colleagues enrolled 60 participants who had experienced acute COVID-19 disease 6-8 months earlier and had undergone neuropsychological, psychiatric, medical, functional, and quality-of-life assessments. Results from the study were published online in the *Journal of the Academy of Consultation-Liaison Psychiatry* (2022 Jan 25. doi: [10.1016/j.jaclp.2022.01.003](https://doi.org/10.1016/j.jaclp.2022.01.003)).

Among the study participants, 32 were seeking treatment for brain fog in a clinical program for survivors of COVID-19, while the remaining 28 were part of an ongoing longitudinal investigation of neuropsychological, medical, and psychiatric sequelae of COVID-19, but were not seeking care for the persistent symptoms.

Assessments for neurocognitive impairment included a battery of tests used in infectious and other diseases, including the Test of Premorbid Function, the Patient Assessment of Own Function, the Trail Making Test parts A and B, the Stroop Color and Word Test, and others.

Overall, the battery of assessments showed that 37 (62%) of participants had neuropsychological test impairment, with results below the 16th percentile in two tests, while 16 (27%) showed scores indicative of severe impairment (below the second percentile in at least one test and below the 16th percentile in one test).

Those reporting brain fog had scores that were even lower than expected on tests of attention, processing speed, memory, and executive function. And among those reporting brain fog, significantly more had scores reflecting severe impairment compared with the controls (38% vs. 14%; $P < .04$).

"Based on what we've observed in our patients and what others have previously reported, we did expect to find some impairment in this study sample," Lynch noted.

"However, we were surprised to find that 27% of the study sample had extremely low neuropsychological test scores, meaning that they scored at least two standard deviations below the expected score on at least one neuropsychological test based on their age and level of education."

The brain fog group also reported significantly higher levels of [depression](#), fatigue, PTSD, and functional difficulties, and lower quality of life.

Severe impairment on the neuropsychological tests correlated with the extent of acute COVID-19 symptoms, as well as depression scores, number of medical comorbidities, and subjective cognitive complaints.

An analysis of serum levels of the inflammatory markers among 50 of the 60 participants showed that 45% of the patients had an elevated IL-6, 20% had elevated TNF-alpha, and 41% had elevated CRP, compared with reference ranges.

IL-6 levels were found to correlate with acute COVID-19 symptoms, the number of medical comorbidities, fatigue, and measures of executive function, while C-reactive protein (CRP) correlated with current COVID-19 symptoms and depression scores.

In terms of clinical factors that might predict low neuropsychological test scores, Lynch noted that the "markers that we found to be significant included severity of acute COVID-19 illness,



current post-COVID-19 symptoms, measures of depression and anxiety, level of fatigue, and number of medical comorbidities." Lynch noted that the ongoing study will include up to 18-month follow-ups that are currently underway. "The [follow-ups] will examine if symptoms improve over time and evaluate if any intervention that took place was successful," he said.

Survey Supports Findings

The detrimental effects of mental health symptoms in long COVID were further supported in another study at the APA meeting, an online survey of 787 survivors of acute COVID-19.

In the community survey, presented by Michael Van Ameringen, MD, a professor in the department of psychiatry and behavioral neurosciences at McMaster University, in Hamilton, Ont., all respondents (100%) reported having persistent symptoms of the virus, and as many as 68% indicated that they had not returned to normal functioning, despite only 15% of the respondents having been hospitalized with COVID-19.

A large proportion showed significant depression, anxiety, and [posttraumatic stress disorder](#) (PTSD), and the most commonly reported persistent symptoms were fatigue in 75.9% of respondents, brain fog in 67.9%, concentration difficulties in 61.1%, and weakness in 51.2%.

As many as 88.2% of patients said they experienced persistent neurocognitive symptoms, with poor memory and concentration; 56% reported problems with word finding; and 54.1% had slowed thinking.

The respondents showed high rates of anxiety (41.7%) as well as depression (61.4%) as determined by scores above 9 on the [Generalized Anxiety Disorder](#)-7 (GAD-7) and Patient Health Questionnaires (PHQ-9).

As many as 40.5% of respondents showed probable PTSD, with scores above 30 on the PTSD checklist (PCL-5). Their mean resilience score on the Brief Resilient Coping Scale was 13.5, suggesting low resilience.

Among the respondents, 43.3% said they had received past treatment for mental health, while 33.5% were currently receiving mental health treatment.

Ameringen noted the important limitation of the study being an online survey with no control group, but said the responses nevertheless raise the question of the role of prior psychiatric disorders in long COVID. "In our sample, 40% of respondents had a past psychiatric history, so you wonder if that also makes you vulnerable to long COVID," he said in an interview.

"About a third were getting psychiatric help, but I think the more impaired you are, the more likely you are to seek help."

Those who were hospitalized with COVID-19 were at a higher risk of PTSD compared with those not hospitalized ($P < .001$), as were those under the age of 30 ($P < .05$) or between 31 and 50 vs. over 50 ($P < .01$).

Ameringen noted that the survey's high rate of subjects who had not returned to normal functioning was especially striking.

"This is not a minor issue – these are people who are no longer functioning in society," he said.

In Pandemics, the Brain Tends to Be "Overlooked"

Further addressing the neurological effects of COVID-19 at the APA meeting, Avindra Nath, MD, clinical director of the National Institutes of Neurologic Disorders and [Stroke](#) in Bethesda, Md., noted that the persisting cognitive and psychiatric symptoms after illness, such as brain fog and depression and anxiety, are not necessarily unique to COVID-19.

"We have seen this before," he said. "There have been at least seven or eight human coronaviruses, and the interesting thing is each one affects the brain and causes neurological complications."

The effects are classified differently and have slightly different receptors, "but the consequences are the same."

Of note, however, research published in *The Lancet Psychiatry* (2021 May. doi: [10.1016/S2215-0366\(21\)00084-5](https://doi.org/10.1016/S2215-0366(21)00084-5)) revealed that symptoms such as dementia, mood, and anxiety are significantly higher after COVID-19 compared with other [respiratory infections](#), with the differences increasing at 180 days since the index event. Nath noted that, over the decades, he has observed that in pandemics "the brain tends to get overlooked." He explained that "what can be most important in the end is what happened in the brain, because those are the things that really cause the long-term consequences."

"These patients are depressed; they have dementia, they have brain fog, and even now that we recognize these issues, we haven't done a very good job of studying them," he said. "There's so much we still don't know, and a lot of patients are left with these symptoms and nowhere to go."

Monkeypox – Practice essentials

June 03

Source 1: <https://emedicine.medscape.com/article/1134714-overview>

Source 2: <https://www.medscape.com/viewarticle/974461>

Source 3: <https://www.medscape.com/viewarticle/974750>



Must Read



ECDC Gives Guidance on Prevention and Treatment of Monkeypox

Source: <https://www.medscape.com/viewarticle/974944>



June 02 – In a new risk-assessment document, the European Centre for Disease Prevention and Control (ECDC) summarizes what we currently know about monkeypox and recommends that European countries focus on the identification and management of the disease as well as contact tracing and prompt reporting of new cases of the virus.

Recent Developments

From May 15 to May 23, in eight European Union (EU) member states (Belgium, France, Germany, Italy, the Netherlands, Portugal, Spain, and Sweden) a total of 85 cases of monkeypox were reported; they were acquired through autochthonous transmission. Current diagnosed cases of monkeypox have mainly been recorded in men who have sexual relations with other men, suggesting that transmission may occur during sexual intercourse, through infectious material coming into contact with mucosa or damaged skin, or via large respiratory droplets during prolonged face-to-face contact.

Andrea Ammon, MD, director of the ECDC, stated that "most current cases have presented with mild symptoms of the disease, and for the general population, the chance of diffusion is very low. However, the likelihood of a further spread of the virus through close contact, for example during sexual activities among people with multiple sexual partners, is considerably increased."

Stella Kyriakides, European commissioner for health and food safety, added, "I am worried about the increase of cases of monkeypox in the EU and worldwide. We are currently monitoring the situation and, although, at the moment, the probability of it spreading to the general population is low, the situation is evolving. We should all remain alert, making sure that contact tracing and a sufficient diagnostic capacity are in place and guarantee that vaccines and antiviral drugs are available, as well as sufficient personal protective equipment [PPE] for healthcare professionals."

Routes of Transmission

Monkeypox is not easily spread among people. Person-to-person transmission occurs through close contact with infectious material, coming from skin lesions of an infected person, through air droplets in the case of prolonged face-to-face contact, and through fomites. So far, diagnosed cases suggest that transmission can occur through sexual intercourse.

The incubation period is 5-21 days, and patients are symptomatic for 2-4 weeks.

According to the ECDC, the likelihood of this infection spreading is increased among people who have more than one sexual partner. Although most current cases present with mild symptoms, monkeypox can cause severe disease in some groups (such as young children, pregnant women, and immunosuppressed people). However, the probability of severe disease cannot yet be estimated precisely. The overall risk is considered moderate for people who have multiple sexual partners and low for the general population.

Clinical Course

The disease initially presents with fever, myalgia, fatigue, and [headache](#). Within 3 days of the onset of the prodromal symptoms, a centrifugal maculopapular rash appears on the site of primary infection and rapidly spreads to other parts of the body. The palms of the hands and bottoms of the feet are involved in cases where the rash has spread, which is a characteristic of the disease. Usually within 12 days, the lesions progress, simultaneously changing from macules to papules, blisters, pustules, and scabs before falling off. The lesions may have a central [depression](#) and be extremely itchy.

If the patient scratches them, a secondary bacterial infection may take hold (for which treatment with oral antihistamines is indicated). Lesions may also be present in the oral or ocular mucous membrane. Either before or at the same time as onset of the rash, patients may experience swelling of the lymph nodes, which usually is not seen with smallpox or [chickenpox](#).

The onset of the rash is considered the start of the infectious period; however, people with prodromal symptoms may also transmit the virus.

Most cases in people present with mild or moderate symptoms. Complications seen in endemic countries include encephalitis, secondary bacterial skin infections, dehydration, [conjunctivitis](#), keratitis, and pneumonia. The death rate ranges from 0% to 11% in endemic areas, with fatalities from the disease mostly occurring in younger children.

There is not a lot of information available on the disease in immunosuppressed individuals. In the 2017 Nigerian epidemic, patients with a concomitant [HIV infection](#) presented with more severe disease, with a greater number of skin lesions and genital ulcers, compared with HIV-



negative individuals. No deaths were reported among seropositive patients. The main sequelae from the disease are usually disfiguring scars and permanent corneal lesions.

Treatment

No smallpox vaccines are authorized for use against monkeypox, however the third-generation smallpox vaccine Imvanex (Modified Vaccinia Ankara) has been authorized by the European Medicines Agency (EMA) for the EU market against smallpox and has demonstrated to provide protection in primates.

Old-generation smallpox vaccines have significant side effects, are no longer authorized, and should no longer be used. It is also important to note the lack of safety data for the use of Imvanex in [immunocompromised](#) people.

For this reason, National Immunization Technical Advisory Groups have been asked to develop specific guidelines for vaccination in close contacts of patients with monkeypox. The use of a smallpox vaccine for preexposure prophylaxis cannot be considered now, when taking into account the risk-benefit ratio.

In regard to treatment, [tecovirimat](#) is the only antiviral drug with an EMA-authorized indication for orthopoxvirus infection.

Brincidofovir is not authorized in the EU but has been authorized by the US Food and Drug Administration. However, availability on the European market is limited somewhat by the number of doses.

According to the ECDC, healthcare authorities should provide information about which groups should have priority access to treatment.

The use of antivirals for postexposure prophylaxis should be investigated further. [Cidofovir](#) is active in vitro for smallpox but has a pronounced [nephrotoxicity](#) profile that makes it unsuitable for first-line treatment.

The ECDC document also proposes an interim case definition for epidemiologic reporting. Further indications will also be provided for the management of monkeypox cases and close contacts. Those infected should remain in isolation until the scabs have fallen off and should, above all, avoid close contact with at-risk or immunosuppressed people as well as pets.

Most infected people can remain at home with supportive care.

Prevention

Close contacts for cases of monkeypox should monitor the development of their symptoms until 21 days have passed from their most recent exposure to the virus.

Healthcare workers should wear appropriate PPE (gloves, water-resistant gowns, FFP2 masks) during screening for suspected cases or when working with confirmed cases. Laboratory staff should also take precautions to avoid exposure in the workplace.

Close contacts of an infected person should not donate blood, organs, or bone marrow for at least 21 days from the last day of exposure.

Finally, the ECDC recommends increasing proactive communication of the risks to increase awareness and provide updates and indications to individuals who are at a greater risk, as well as to the general public. These messages should highlight that monkeypox is spread through close person-to-person contact, especially within the family unit, and also potentially through sexual intercourse. A balance, however, should be maintained between informing the individuals who are at greater risk and communicating that the virus is not easily spread and that the risk for the general population is low.

Human-to-Animal Transmission

A potential risk for human-to-animal transmission exists in Europe; therefore, a close collaboration is required between human and veterinary healthcare authorities, working together to manage domestic animals exposed to the virus and to prevent transmission of the disease to wildlife. To date, the European Food Safety Authority is not aware of any reports of animal infections (domestic or wild) within the EU.

There are still many unknown factors about this outbreak. The ECDC continues to closely monitor any developments and will update the risk assessment as soon as new data and information become available.

If human-to-animal transmission occurs and the virus spreads among animal populations, there is a risk that the disease could become an endemic in Europe. Therefore, human and veterinary healthcare authorities should work together closely to manage cases of domestic animals exposed to the virus and prevent transmission of the disease to wildlife.



EDITOR'S COMMENT: Still no answer on how the virus jumped from Africa to Europe when comes to patients that never traveled to endemic countries nor had multiple partners.

Pathogens Jumping to Humans From Animals Becoming More Frequent, Warns WHO

Source: <https://www.medscape.com/viewarticle/974885>

June 02 – Outbreaks of endemic diseases such as monkeypox and lassa fever are becoming more persistent and frequent, the World Health Organization's (WHO) emergencies director, Mike Ryan, warned on Wednesday.

As climate change contributes to rapidly changing weather conditions like drought, animals and human are changing their behaviour, including food-seeking habits. As a result of this "ecologic fragility", pathogens that typically circulate in animals are increasingly jumping into humans, he said.

"Unfortunately, that ability to amplify that disease and move it on within our communities is increasing - so both disease emergence and disease amplification factors have increased."

For instance, there is an upward trend in cases of Lassa fever, an acute viral illness spread by rodents endemic to Africa, he said.

"We used to have three to five years between Ebola outbreaks at least, now it's lucky if we have three to five months," he added.

"So there's definitely ecological pressure in the system."

Ryan's commentary comes as cases of monkeypox continue to rise outside Africa, where the pathogen is endemic.

On Wednesday, the WHO said it had so far received reports of more than 550 confirmed cases of the viral disease from 30 countries outside of Africa since the first report in early May.

Meanwhile, although COVID-19 cases are declining globally, there are regions such as the Americas with concerning trends, WHO director-General Tedros Adhanom Ghebreyesus highlighted in a briefing on Wednesday.

In North Korea, officials suspect there are over 3.7 million cases of fevered people, that could be COVID, as the country battles against its first ever COVID outbreak. It declared a state of emergency and imposed a nationwide lockdown last month.

Ryan said although the WHO had offered the country support in terms of vaccines, treatments and other medical supplies, it had encountered problems in securing access to raw data that would reflect the situation on the ground.

The experience of COVID has triggered the WHO to kickstart a process to draft and negotiate an international treaty to strengthen pandemic prevention, preparedness and response.

Pandemics, like climate change, affect every citizen on the planet, said Ryan.

"We've seen the difficulties we faced in this pandemic - we may face a more severe pandemic in the future and we need to be a hell of a lot better prepared than we are now," said Ryan.

"We need to establish the playbook for how we're going to prepare and how we're going to respond together. That is not about sovereignty. That's about responsibility."

We Can't Keep Getting The Same Formula in COVID-19 Booster Shots, Says Immunologist

By David R. Martinez

Source: <https://www.sciencealert.com/we-can-t-keep-getting-the-same-formula-in-our-covid-19-booster-shots-says-immunologist>

June 06 – Being up to date on [COVID-19](#) vaccines means having [had three or four doses](#) of the same shot at this point. Current boosters are the same formulations as the first authorized shots, [based on the original strain of the coronavirus](#) that emerged in late 2019. [They do still protect](#) against severe COVID-19, hospitalizations and deaths.

But as immunity wanes over time and new, more contagious [SARS-CoV-2](#) variants emerge, the world needs a long-term boosting strategy.

[I'm an immunologist](#) who studies immunity to [viruses](#). I was a part of the teams that [helped develop the Moderna](#) and [Johnson & Johnson SARS-CoV-2 vaccines](#), and [the monoclonal antibody therapies](#) from Eli Lilly and AstraZeneca.

I often get asked how frequently, or infrequently, I think people are likely to need COVID-19 booster shots in the future. No one has a crystal ball to see which SARS-CoV-2 variant will



come next or how good future variants will be at evading vaccine immunity. But looking to other respiratory viral foes that have troubled humanity for a while can suggest what the future could look like.

Influenza virus provides one example. It's endemic in humans, meaning it hasn't disappeared and continues to cause recurrent seasonal waves of infection in the population. Every year officials try to predict the best formulation of a flu shot to reduce the risk of severe disease.

As SARS-CoV-2 continues to evolve and is [likely to become endemic](#), it is possible people may need periodic booster shots for the foreseeable future. I suspect scientists will eventually need to update the COVID-19 vaccine to take on newer variants, as they do for flu.

Forecasting flu, based on careful surveillance

Influenza virus surveillance offers a potential model for how SARS-CoV-2 could be tracked over time. Flu viruses have caused several pandemics, including the one in 1918 that killed [an estimated 50 million people worldwide](#). Every year there are seasonal outbreaks of flu, and every year officials encourage the public to [get their flu shots](#).

Each year, health agencies including the [World Health Organization's Global Influenza Surveillance and Response System](#) make an educated guess based on the flu strains circulating in the Southern Hemisphere about which ones are most likely to circulate in the Northern Hemisphere's upcoming flu season. Then large-scale vaccine production begins, based on the selected flu strains.

Some flu seasons, the vaccine doesn't turn out to be a [great match with the virus strains](#) that end up circulating most widely. Those years, the shot is not as good at preventing severe illness. While this prediction process is far from perfect, the flu vaccine field has benefited from strong viral surveillance systems and a concerted international effort by public health agencies to prepare.

While the particulars for influenza and SARS-CoV-2 viruses are different, I think the COVID-19 field should think about adopting similar surveillance systems in the long term. Staying on top of what strains are circulating will help researchers update the SARS-CoV-2 vaccine to match up-to-date [coronavirus](#) variants.

How SARS-CoV-2 has evolved so far

SARS-CoV-2 faces an evolutionary quandary as it reproduces and spreads from person to person. The virus needs to maintain its ability to get into human cells using its spike protein, while still changing in ways that allow it to evade vaccine immunity. Vaccines are designed to get your body to recognize a particular spike protein, so the more it changes, the higher the chance that the vaccine will be ineffective against the new variant.

Despite these challenges, SARS-CoV-2 and its variants have successfully evolved to be more transmissible and to better evade people's immune responses. Over the course of the COVID-19 [pandemic](#), a [new SARS-CoV-2 variant of concern has emerged and dominated](#) transmission in a series of contagion waves every four to seven months.

Almost like clockwork, the D614G variant emerged in the spring of 2020 and overtook the original SARS-CoV-2 outbreak strain. In late 2020 and early 2021, the alpha variant emerged and dominated transmission. In mid-2021, the [delta variant](#) overtook alpha and then dominated transmission until it was displaced by the omicron variant at the end of 2021.

There's no reason to think this trend won't continue. In the coming months, the world may see a dominant [descendant of the various omicron subvariants](#). And it's certainly possible a new variant will emerge from a nondominant pool of SARS-CoV-2, which is how omicron itself came to be.

Current booster shots are simply additional doses of the vaccines based on the outbreak SARS-CoV-2 virus strain that has long been extinct. The coronavirus variants have changed a lot from the original virus, which doesn't bode well for continued vaccine efficacy. The idea of tailor-made annual shots – like the flu vaccine – sounds appealing. The problem is that scientists haven't yet been able to predict what the next SARS-CoV-2 variant will be with any degree of confidence.

Planning for the future

Yes, the dominant SARS-CoV-2 variants in the upcoming fall and winter seasons may look different from the omicron subvariants currently circulating. But an updated booster that more closely resembles today's omicron subvariants, coupled with the immunity people already have from the first vaccines, will likely offer better protection going forward. It might require less frequent boosting – at least as long as omicron sublineages continue to dominate.

The Food and Drug Administration is set to meet in the coming weeks to decide what the fall boosters should be in time for manufacturers to produce the shots. Vaccine makers like Moderna are currently testing their booster candidates in people and [evaluating the immune response against newly emerging variants](#). The test results will likely decide what will be used in anticipation of a fall or winter surge.



Another possibility is to pivot the vaccine booster strategy to include universal coronavirus vaccine approaches that already look promising in animal studies. Researchers are working toward what's called a universal vaccine which would be effective against multiple strains.

Some focus on [chimeric spikes](#), which fuse parts of the spike of different coronaviruses together in one vaccine, to broaden protective immunity. [Others are experimenting with nanoparticle vaccines](#) that get the immune system to focus on the most vulnerable regions within the coronavirus spike.

These strategies have been shown to ward off difficult-to-stop SARS-CoV-2 variants in lab experiments. They also work in animals against the original SARS virus that caused an outbreak in the early 2000s as well as zoonotic coronaviruses from bats that could jump into humans, causing a future SARS-CoV-3 outbreak.

Science has provided multiple safe and effective vaccines that reduce the risk of severe COVID-19. Reformulating booster strategies, either toward universal-based vaccines or updated boosters, can help steer us out of the COVID-19 pandemic.

David R. Martinez is a Postdoctoral Fellow in Epidemiology @ University of North Carolina at Chapel Hill.

The Pandemic: Implications for Terrorist Interest in Biological Weapons

Source: <https://www.homelandsecuritynewswire.com/dr20220606-the-pandemic-implications-for-terrorist-interest-in-biological-weapons>

June 06 – Policymakers and analysts have expressed concern that weaknesses in responses to the coronavirus disease 2019 (COVID-19) pandemic will motivate terrorists to seek biological weapons. However, an examination of the Islamic State (IS) and al-Qaeda narratives about the pandemic reveals no causal relationship between the pandemic and any heightened interest in biological weapons.

A new [report](#) from RAND reviews the historical pursuit of biological weapons by the IS and by al-Qaeda, revealing that both groups evinced some interest, but ultimately each employed conventional forms of attack instead. Despite limited IS use of chemical agents that challenged the taboo against the use of poison as a weapon, there are formidable hurdles that nonstate actors must clear to develop, produce, and use biological agents as weapons.

Although the prospect of the IS and al-Qaeda pursuing biological weapons is not zero, it is unlikely, given both the difficulties and the much easier and readily available alternatives that meet their deadly objectives. In the wake of the pandemic, several measures can enhance capabilities to address both public health and military challenges. These measures reduce the possibility of and improve the response to a future naturally occurring pandemic while also helping to deter, prevent, and respond to any possible terrorist acquisition and use of biological weapons. Focusing unduly on the potential, but unlikely, terrorist use of biological materials as weapons skews resources to unique military and counterterrorism measures and away from measures that are useful in both events. In the post-pandemic period, governments need to rebalance their efforts.



Key Findings

Looking at both the historical baselines and the pandemic-era narratives of the IS and al-Qaeda, neither group seems likely to use biological materials in future attacks as a consequence of the global COVID-19 pandemic

- ❖ It is unlikely that an actor with only modest knowledge can access the necessary materials and fashion a biological weapon.
- ❖ The prospects of an individual or a group successfully accomplishing all the necessary steps are not zero, but given the difficulty involved in developing such weapons and the fact that conventional weapon alternatives are readily available, nonstate actors have routinely chosen other means of attack.
- ❖ Even such terrorist groups as the IS and al-Qaeda, which have not hesitated to commit terrible acts of violence, have not demonstrated a concerted effort to develop biological weapons, and their chemical weapon activities have thus far been much less deadly than their conventional weapon attacks.

COVID-19 and the effects of global climate change are stern prompts to reimagine threats to national and international security

- ❖ Prioritizing threats is a difficult task, particularly when threats are novel.



- ❖ Although individuals and reports issued warnings about the possibility of a pandemic, other near-term or long-feared postulated threats took precedent.
- ❖ Slow-moving and naturally occurring events rarely get the same attention as hostile states or terrorist groups, and feared “bolt from the blue” attacks from states or terrorists have tended to dominate the thinking of political leaders and national security experts.

Recommendations

- ❖ Review and enhance controls on high-containment biological labs, pathogen collections, and laboratory equipment that could be used for pernicious purposes.
- ❖ Expand collaboration between the animal health and human health sectors.
- ❖ Place higher priority on near-term conventional innovative threats that the IS and al-Qaeda might inflict on the global community.
- ❖ Reinforce international norms against the use of chemical and biological weapons.
- ❖ Change the conceptual approach to gauging the threat.

Why Monkeypox and Why Now? The Mystery Behind the Current Outbreak

By Salvador Macip, MD, PhD

Source: <https://www.medscape.com/viewarticle/974984>

June 03 – [Monkeypox](#). It's all about this now. Never mind that we haven't yet finished with COVID-19, very much alive and kicking despite being ignored in many countries. The news of an unprecedented outbreak of this rare disease, usually confined to central and Western Africa, has brought back echoes of early 2020, with fears of a new pandemic spreading like wildfire. But this is a whole different game.

To start, this disease is not caused by an unknown agent, like SARS-CoV-2 was at the time, but by a well-studied [distant relative](#) of the smallpox virus that we've known since 1958. The bad news is that, if left untreated, monkeypox has a mortality rate of 3%-10%. But there has been plenty of time to understand how it spreads and even work out which drugs it is sensitive to. We even know that the smallpox vaccine (which most adults over 50 received when they were kids) offers good protection, [up to 90%](#). We are much better prepared this time.

There are more positive facts. Contagion happens only in very close-contact situations and, contrary to what we've seen with COVID-19, patients can infect only once they have symptoms. Avoiding intimacy with those with a suspicious rash or fever cuts your risk of catching it tremendously. That's why monkeypox outbreaks usually are small and controllable: It's a poorly transmitted disease. It can be caught from infected animals too, usually rodents (monkeys got the bad rap for historical reasons but are not the most common reservoirs), although this is rare in urban environments.

But the current outbreak is different. For the first time in history, it spans over [30 countries and includes 658 cases](#), as of the time of writing. So far, there are no reported deaths — at least there's a silver lining. There had been outbreaks before (including one with over 70 cases in the US in 2003 due to imported Gambian pouched rats) but none of this magnitude, so spread out and so difficult to trace. It seems that patient zero may have been a Brit who traveled to Nigeria and perhaps got the virus from a wild animal, but the chain of transmission quickly gets blurred after this.

The first explanation that jumps to mind would be that the monkeypox virus acquired a new mutation that made it more infectious, like we've seen happening to SARS-CoV-2 many times in these past 2 years. But this doesn't seem to be the case because the sequencing of the viral genome so far revealed no major changes; it seems to be identical to the viruses that roam Western Africa (which, incidentally, are the less lethal of the family, with a mortality rate of only 1%). There could be a new way of spreading it: sexual contact. This has not been reported before. But with the fact that sexual relations usually need people to be in close proximity, it may just be a coincidence.

A more worrying hypothesis that is being considered is that COVID-19 has “primed” us for other diseases. Two years of severely reduced exposure to pathogens (due to lockdowns, social distancing, masks, and hand washing) could have weakened our immunity, making us more prone to catching microbes that previously were kept in check.

Alternatively, it could just be that if you had COVID-19, other subsequent infections behave differently and give unexpected results. The recent cases of [severe hepatitis](#) in children, also a rare event suddenly magnified, could be another example of this. We have no way of knowing yet whether COVID-19 had anything to do with the monkeypox outbreak, and perhaps we will never know, but this possibility is as interesting as it is scary.



ICI C²BRNE DIARY – June 2022

What now? The monkeypox outbreak is likely to die out in a relatively short time, due to the characteristics of transmission discussed earlier. It may do so without leaving mortal victims, if we keep the same rate. Now that the general public is aware (and often afraid), it will be easier to avoid risky situations. Vaccines and drugs should further reduce serious events.

But the main question is, are we going to see more rare infectious diseases jumping into the spotlight in the next months as a remote side effect of the pandemic? Is one of them going to be truly problematic on a worldwide scale? Let's hope the answer is no.

Salvador Macip, MD, PhD is a doctor, researcher and writer. He obtained his MD/PhD at the University of Barcelona (Spain) in 1998, then moved to do oncological research at the Mount Sinai Hospital (New York). Since 2008, he has led the Mechanisms of Ageing and Cancer Lab at the University of Leicester (UK). Macip has published over 30 books, including *Where Science and Ethics Meet* (2016) and *Modern Epidemics* (2021).

What an AR-15 Does to a **Child's Body**: Why Surgeons Can't Look Away

By Robert D. Glatter, MD; Joseph V. Sakran, MD, MPA, MPH; Andre Campbell, MD; Linda A. Dultz, MD, MPH

Source: <https://www.medscape.com/viewarticle/974671>

This discussion was recorded on May 27, 2022. This transcript has been edited for clarity.

Robert D. Glatter, MD: Hi. I'm Dr Robert Glatter, medical advisor for Medscape Emergency Medicine. Today we have a distinguished panel joining us to discuss the [horrific mass shooting](#) that occurred recently in Uvalde, Texas, at Robb Elementary School that killed 19 children, along with two teachers.

This is the 27th school shooting this year. An 18-year-old male armed with an AR-15 was able to enter a classroom, barricade himself for reportedly 40 minutes, and unleash unimaginable terror, forever destroying precious lives and families for generations to come.

Joining me to discuss the recent shooting is Dr Joseph Sakran, director of emergency general surgery at Johns Hopkins Hospital and a survivor of gun violence himself; Dr Linda Dultz, a trauma surgeon at UT Southwestern Medical Center; and finally, Dr Andre Campbell, attending trauma surgeon at Zuckerberg San Francisco General Hospital.

Thank you, everyone, for taking this time to join me on such an important topic. I really appreciate it.

Joseph V. Sakran, MD, MPA, MPH: Thanks for having us, Robert.

Andre Campbell, MD: Thank you.

Glatter: Let's talk about the [mechanics of the AR-15](#) (ArmaLite AR-15) and how this compares with a typical 9-mm handgun (or even a standard rifle or shotgun, for that matter). Joe, can you talk about the injuries and what you see in the ED as opposed to the operating room?

Sakran: I just want to first say that I think I speak on behalf of all Americans when I say that we just woke up this past week, once again, feeling absolutely terrible after yet another horrific and senseless tragedy. We continue to wake up time and time again and hear about the [slaughter of children in elementary schools](#) and the [slaughter of community members in grocery stores](#), [at the synagogue](#), and [at concerts](#).

I just refuse to believe that this is the best that we can do. I'm saddened and heartbroken, but I'm also angry. I know we're going to have time to discuss this, but I just can't start without underscoring the importance that we all have to play a role in ensuring that our communities are safer.

When you look at the mass shootings that happen and [the use of the AR-15](#), a weapon of war and a military-style assault weapon, it is very clear that [these weapons allow gunmen not only to fire numerous rounds quickly but also to create significant damage](#) because they travel at more than 3000 feet per second. When that happens, a couple of different things take place. The first is you have what's called the permanent cavity that's dependent upon the size of the bullet. Then you have this temporary cavity that's created, which essentially is dependent on the velocity, or how fast this bullet is traveling.

●► [Read the full article at the source's URL.](#)



Robert D. Glatter, MD, is assistant professor of emergency medicine at Lenox Hill Hospital in New York City and at Zucker School of Medicine at Hofstra/Northwell in Hempstead, New York. He is an editorial advisor and hosts the [Hot Topics in EM](#) series on Medscape. He is also a [medical contributor for Forbes](#).

Joseph V. Sakran, MD, MPA, MPH, is a director of emergency general surgery and assistant professor of surgery at Johns Hopkins University in Baltimore, Maryland. Sakran's interest in medicine stems partly from having [nearly lost his life after a gunshot wound to the throat](#) during his senior year of high school, and he has subsequently dedicated his life to making [a social impact to curb gun deaths](#).

Andre Campbell, MD, is a professor of surgery at the University of California, San Francisco, School of Medicine and an attending trauma surgeon at Zuckerberg San Francisco General Hospital and Trauma Center. He is also vice chair for Diversity, Equity, and Inclusion in the Department of Surgery.

Linda A. Dultz, MD, MPH, is a trauma surgeon and assistant professor in the Department of Surgery at UT Southwestern Medical Center. She serves as program director of UT Southwestern's surgical critical care fellowship and medical director of Parkland Hospital's surgical intensive care unit (SICU). Her areas of clinical expertise are general surgery, [wound management](#), trauma, and surgical critical care.

The first case of monkeypox in Greece

June 09, 2022

The National Agency for Public Health (EODY) announced the first case of monkeypox which is an endemic disease in West and Central Africa. It is an "imported" case and in particular, [a man who had traveled to Portugal](#), a country that already has 191 cases, mainly in men aged 19 to 61 years.

The man visited the hospital "Andreas Sygros" with symptoms compatible with the disease" and he is treated in isolation in good condition, according to information. Immediately after the examination of the patient by the doctors of "Andreas Sygros", a sample was sent for testing to the Central Laboratory of Public Health of EODY for non-variola orthopox virus species, which includes the monkeypox virus. The initial test was positive and then the sample was sent to the Laboratory of Microbiology of the Medical School of the Aristotle University of Thessaloniki for the genomic confirmation of the monkeypox virus.

At the same time, his contacts are tracked to be isolated as provided by the Organization's health protocol when a case of monkeypox is detected. The quarantine and the self-monitoring of the patient's environment will last for 21 days. At the same time, the health professionals of the hospital who examined and monitored him will be on high alert.

UPDATE 11/6: Second case – Man 47yo who recently traveled to Spain; mild symptoms; hospital isolation

Researchers simulate how COVID-19 transmits in a classroom

By **Caitlin Dawson** (University of Southern California)

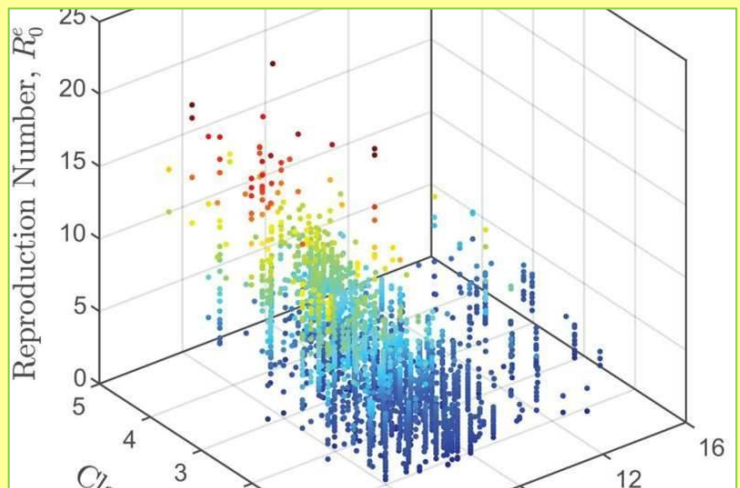
Source: <https://medicalxpress.com/pdf573818063.pdf>

Course-specific R_0 plotted against classroom air change rate and class duration. For clarity, marker color also represents R_0 . Credit: *Proceedings of the National Academy of Sciences* (2022). DOI: 10.1073/pnas.2116165119

June 08 – Model predictions show that universal mask usage can reduce new infections by up to 72% and high vaccination rates successfully curb transmission for more contagious variants.

With coronavirus cases rising again in nearly every US state, the big question is: how can we stay safe while resuming normal life, particularly in crowded spaces such as college campuses? Over the past two years, [decision-makers](#) have been forced to make choices about everything from vaccination and mask mandates to occupancy limits, based on ever-changing assumptions about COVID-19.

Now, USC researchers have helped quantify the effectiveness of some of the most debated mitigation strategies by simulating the spread of COVID-19 on a university campus, specifically modeling airborne transmission risks associated with in-person classes.



The new study, published in the *Proceedings of the National Academy of Sciences (PNAS)*, shows that during the highly transmissible Delta variant outbreak, at least 93% of students should be vaccinated, with everyone wearing masks indoors, to prevent an uptick in cases. For the original COVID-19 strain, 23% of students should be vaccinated, with everyone wearing masks indoors (or 64% of students without mask usage).

These findings will help decision-makers in the event of ongoing COVID-19 outbreaks or an outbreak of a similar infectious disease. The [simulation model](#) also allows decision-makers to explore "what-if" scenarios relating to the spread of COVID-19 in classrooms by varying parameters to see the outcome under different scenarios, such as hybrid classes, current vaccination rates, masking protocols, community infection levels, and varying levels of virus infectiousness.

"I think the hardest thing about the pandemic has been finding the right balance—there is a tension between having some sort of normalcy to go about our lives, and also keeping ourselves safe," said study co-author Bhaskar Krishnamachari, a professor of electrical and computer engineering and computer science.

"This paper contributes to more clear-headed thinking about when we can be in a mode of operating in person, with or without masks, and when we need to mandate vaccines. We have felt our way around many of these things over the past two years, but this gives us a more concrete, data-driven process to go by. It doesn't have to be an arbitrary or political decision. This tells us that scientifically, there is nuance."

Titled "Simulating COVID-19 Classroom Transmission on a University Campus," the study is authored by Arvin Hekmati, a computer science Ph.D. student; Mitul Luhar, a professor of aerospace and [mechanical engineering](#); Bhaskar Krishnamachari, a professor of electrical and [computer engineering](#) and computer science; and Maja Matarić, a professor of computer science, neuroscience and pediatrics.

Highly granular data

The research is particularly relevant during the early days of an infectious disease outbreak when policymakers face the difficult decision of decreeing school closures. Using a simulation of COVID-19 spread based on real anonymized data from a large university, the researchers projected the impact of various school reopening strategies: complete closure, hybrid, in-person; vaccinated and unvaccinated; masked and unmasked.

In a first-of-its-kind study, the model accounts for highly granular data such as class schedules, classroom sizes, occupancy, ventilation rates, as well as vaccine rate and efficacy, and even information specific to classroom interactions, such as the role of speech and disease transmission in an enclosed space.

The results showed that without vaccination, moving 90% of classes online can reduce new infections by as much as 94%, while universal mask usage can reduce new infections by up to 72%.

"With this tool, universities do not need to make these decisions without knowledge—they can make informed decisions for university policies to keep it safe for students, faculty, and staff," said Hekmati. "Nothing needs to be made by assumptions; we can quantify every aspect of this epidemic and come up with the best decision."

Opportunity and responsibility

Researchers from [computer science](#), [electrical engineering](#) and aerospace engineering fields teamed up to work on this paper, which draws on expertise in both large-scale computer modeling and the mechanistic transmission modeling of COVID-19.

"As a university, we have an opportunity and responsibility to study our own community in order to gain insights to inform the broader public," said Matarić.

"This project was tremendously satisfying because it brought together colleagues from multiple Viterbi School departments who enabled the analysis and modeling, which in turn provided insights into safety policies for university campuses during pandemic conditions."

To inform the model, Professor Luhar, an expert on modeling indoor airborne dispersion, analyzed the mechanisms of COVID-19 transmission, considering everything from room size to the number of people present, and how much they speak—all of which can result in variability in virus emission rates from instructors and students.

During lectures, for instance, instructors will tend to speak significantly more often than students, which could influence transmission rates. "Providing those facts in the model made it very compatible in the cases of universities and classrooms," said Hekmati.

In future work, the team hopes to expand their research to include a tool that could be used by campus administrators at large universities and workplace campuses. While this model is specifically designed for classrooms, there are many modular aspects that could be tweaked to extend to other types of environments, said the researchers.



"Nothing gives us more satisfaction as researchers in engineering than to have a positive impact on society," said Krishnamachari, who also serves as Hekmati's advisor. "Most of us, when we started engineering school, we had this dream that we do work that is meaningful, that helps others, and I'm very happy for Arvin that he has worked on a project where he can see that kind of positive impact."

How SARS-CoV-2 Selection Increases with Convergent Evolution

Convergent evolution of three spike protein mutations enhances viral fitness by balancing both positive and negative selection and improves the chances of selection of mutations together, a new study featured in the journal *Biochemistry* shows. The researchers showed that the co-evolution of three mutations improves viral fitness, although the individual mutations when present on their own exert deleterious effects. The findings explain why approved antibodies are not effectively neutralizing recent variants of concern and may inform the development of new therapeutics. **+ MORE**

New vaccine may be an option for troops with religious concerns

Source: <https://news.yahoo.com/vaccine-may-option-troops-religious-040625799.html>

June 09 — A COVID-19 vaccine that could soon win federal authorization may offer a boost for the U.S. military: an opportunity to get shots into some of the thousands of service members who have [refused other coronavirus vaccines](#) for religious reasons.

At least 175 active duty and reserve service members have already received [the Novavax vaccine](#), some even traveling overseas at their own expense to get it. The vaccine meets Defense Department requirements because it has the World Health Organization's emergency use approval and is used in Europe and other regions. The Food and Drug Administration is considering giving it emergency use authorization in the U.S.

The **Novavax vaccine** may be an acceptable option for some of the 27,000 service members who have sought religious exemptions from the mandatory vaccine. Military officials say many troops who refuse the shots cite certain [COVID-19](#) vaccines' remote connection to abortions.

Laboratory-grown cell lines descended from fetuses that were aborted decades ago were used in some early-stage testing of the Pfizer and Moderna vaccines and to grow viruses used to manufacture the Johnson & Johnson vaccine. The vaccines do not contain fetal cells. **Novavax, however, says that "no human fetal-derived cell lines or tissue" were used in the development, manufacture or production of its vaccine.**

Defense Secretary Lloyd Austin [made COVID-19 vaccinations mandatory](#) last year, saying the shots were critical to maintaining military readiness and the health of the force. Military leaders have argued that troops for decades have been required to get as many as 17 vaccines, particularly for those who are deploying overseas.

One group involved in lawsuits targeting the military's vaccine requirement said it's possible some shot opponents may see Novavax as an amenable option.

"I definitely think it is for some, but certainly not for all," said Mike Berry, director of military affairs for First Liberty Institute. "There are some for whom abortion is really the ultimate issue, and once that issue is resolved for them spiritually, then they're willing."

Berry added, however, that for others, abortion is "just a tangential issue," and they have broader opposition to vaccines as a whole. "A rudimentary way of looking at it is that they've asked for God's will, and they believe that it would be wrong for them to get the vaccine," Berry said. "In other words, they believe that God has told them no."

Novavax also may appeal to people who are uncomfortable with the new genetic-based technology used in Pfizer and Moderna's so-called mRNA vaccines. They deliver genetic instructions for the body to make copies of the coronavirus' outer coating, the spike protein.

The Novavax vaccine is made with a more familiar technology, like those used for years to prevent hepatitis B and shingles. **It trains the body to fight the coronavirus by delivering copies of the outer coating which are grown in insect cells, then are purified and packaged into nanoparticles that to the immune system resemble a virus**, according to Novavax research chief Dr. Gregory Glenn.

While some religious groups oppose the shots, when COVID-19 vaccines first started rolling out the Vatican's doctrine office called the options "morally acceptable" and Pope Francis, who has received Pfizer shots, has strongly encouraged widespread vaccination.



ICI C²BRNE DIARY – June 2022

First Liberty and the law firm Hacker Stephens LLP represent a number of Navy sailors in one lawsuit, and First Liberty and Schaerr Jaffe LLP represent nine airmen in another. Berry said he doesn't know how many would consider Novavax acceptable, but guessed it may be a small percentage.

Military officials declined to publicly detail the nature of any service members' religious exemption requests, but spoke on condition of anonymity to provide some descriptions. They said that the most predominant issue mentioned in waiver requests is the remote link to fetal cell lines, while others argue that their body is a temple that must remain pure. Others, officials said, describe reasons that appear to have less connection to faith.

Berry said his firm carefully screens individuals for the lawsuits, to make sure their objections are based on sincerely held religious beliefs, rather than political or other opposition masquerading as faith-based views.

The military can't administer the Novavax shot now, and won't pay for anyone's travel overseas to get it. But tens of thousands of American forces are based in Europe, where Novavax is available.

Earlier this week, advisers to the FDA backed the Novavax vaccine. Next, the FDA must decide whether to authorize it. A final FDA decision isn't expected immediately, as the agency finishes combing through the data.

Across the military, more than 5,000 service members have been discharged for refusing the vaccine, according to the latest statistics provided by the services. Of those who requested religious exemptions, only slightly more than 100 have been approved.

In the lawsuit against the Navy, a federal judge in Texas agreed the case can go forward as a class-action lawsuit and issued a preliminary injunction barring the service from taking action against sailors who objected to the vaccine on religious grounds. Berry said the Justice Department has said it will appeal the ruling to the 5th Circuit Court of Appeals.

In the Air Force lawsuit, Berry said, lawyers have asked that it also be a class action, and they are seeking a temporary restraining order preventing the Air Force from taking any adverse actions. The court has not yet ruled.

Monkeypox in Multiple Countries



Warning - Level 3, Avoid Nonessential Travel

Alert - Level 2, Practice Enhanced Precautions

Watch - Level 1, Practice Usual Precautions

Traveling alert from CDC (June 2022)

The enhanced precautions include avoiding contact with sick people, including genital contact, avoiding contact with dead or live animals, and avoiding contact with contaminated materials, such as bedding.

Extremist Planning Bioweapons Attacks to Start a Racial War in South Africa Convicted

Source: <https://www.homelandsecuritynewswire.com/dr20220609-extremist-planning-bioweapons-attacks-to-start-a-racial-war-in-south-africa-convicted>

June 09 – On Monday, a South African court found five extremists guilty of plotting to topple to South African government and replace it with a resurrected apartheid regime.

The five were part of a group of South African racist extremists who joined with fundamentalist Christians in a **plan to use biological weapons to kill thousands of black South Africans.**

According to the South African police, members of the National Christian Resistance Movement (NCRM), aka the "Crusaders," planned to use a biological weapon to infect and kill black people, including the **poisoning of water reservoirs** supplying Black communities. The poisoning was to take place in the weeks before the end of November 2019, on the 28th and 29th of the month, armed embers of NCRM were to carry out a series of terrorist attacks



not only for the purpose of killing thousands of South African citizens, but in order to instigate a racial war between white and black South Africans.

The group's plan was similar in its strategic goals and methods to those of the **"Accelerationist" movement** in the West. Accelerationists, a subset of the larger group of racially or ethnically motivated violent extremists, believe that race and ethnicity create inherent divisions within Western societies, making these societies unreformable and irredeemable. They believe that acts of violence, by individuals or small groups, can inflame and accelerate the collapse of Western societies: The idea is to "accelerate" the crackup of Western governments — and bring on a race war that culminates in white victory.

Accelerationists seek a complete societal collapse, which will allow them to build a white-dominated civilization from the ashes. Accelerationists thus celebrate any crisis — the coronavirus, for example — which might weaken societal foundations. They applaud acts of violence, no matter how senseless, as contributions to the destabilization of society, and encourage one another to commit such acts.

In line with accelerationist beliefs, the leader of NCRM, Harry Johannes Knoesen, 61, in postings on his Facebook page, said that after accomplishing what he called the "genocide of blacks," South Africa, under his control, would be "reclaimed" by white people and become a forward camp for Christian values, guarded by armed white citizens.

Knoesen and other members of NCRM were arrested 29 November 2019, after a 2-year investigation. The timing of the arrest, a day before Black Friday, was aimed to disrupt plans by BCRM to exploit the fact that thousands of people would be filling shopping malls to create a mass-casualty event. The NCRM was also planning to attack ports, airports, and bus stations.

Following the November 2019 arrest of the group's leadership, the NCRM, with a membership of 700-800 people, was dismantled, and large quantities of **weapons, ammunitions, and explosives** were seized. The South African authorities were especially alarmed by the fact that many members of NCRM were former soldiers or retired intelligence officers, with operational experience.

The NCRM case is reminiscent of case from nearly three decades ago. In 2013, twenty members of the far-right extremist group known as the Boeremag were sentenced to prison for plotting to kill South Africa's first Black president Nelson Mandela, overthrow the government, and kill thousands of Black people.

The members of the group were handed sentences ranging from five to thirty-five years following a 10-year treason trial.

EDITOR'S COMMENT: Still trying to extract the word "*bioweapon*" from these article!

Biology's Tectonic Shifts and Novel Risks

By Audrey Kurth Cronin

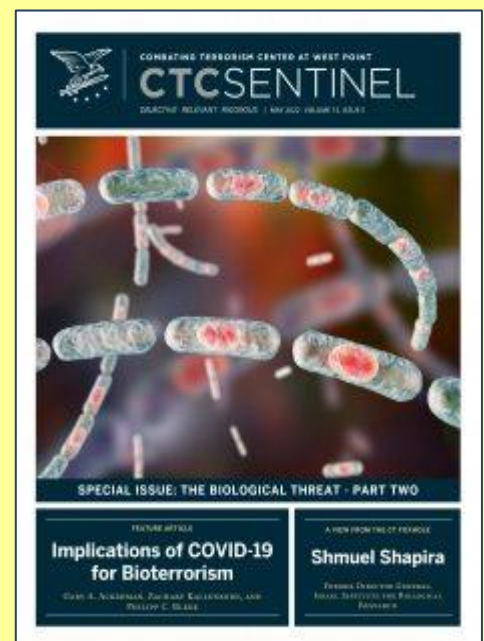
CTCSENTINEL | May 2022, Volume 15, Issue 5

Source: <https://ctc.westpoint.edu/biologys-tectonic-shifts-and-novel-risks/>

Many people worldwide can now read, write, alter, and share the building blocks of life. This development is as significant as the invention of the printing press or the discovery of human genetics, and it is changing what biology is and why it matters. Biology has become engineering, using computer power to make or create anything with a genetic code. New tools and approaches emerge daily, especially at the intersections of biology, materials science, computing power, big databases, and artificial intelligence. So, assessing the security risks and opportunities of today's rapidly developing biotechnology demands a broad focus and agile thinking, or we will miss things.

The standard approach of using historical incident data or case studies of terrorist attacks or bioarms programs may not take account of radical developments in biotechnology. Life's software and the hardware to dissect it are evolving. Driven by a juggernaut of commercial profit-making, a biological revolution is unfolding that echoes the computer revolution of the last century, and it is directly or indirectly affecting *everything*, including war and peace, as well as the impact, likelihood, and provenance of bioweapons.

What follows first is a description of the broad global revolution underway in biology, especially its open patterns of technological innovation, which differ from those of the 20th century. Our thinking and frameworks must also change. Second, it explains how



progress in biotechnology echoes the evolution of computer software, programming cells as if they were individual computers. Biological hardware is also evolving, the third section argues. It is getting smaller, cheaper, and more accessible—just as computers evolved from mainframes to laptops in the last century. But truly understanding bioweapons requires looking not only at biology but also at clusters of new digital technologies, and the fourth section explains why and what these are. Fifth, given all these new developments, we examine the implications for bioterrorism. The sixth section considers where the greatest future threats are emerging—notably insider threats, unethical tinkerers, and proxies clandestinely supported by states. Finally, the conclusion draws together the themes and suggests policy solutions.

The Open Biology Revolution

The field of biology has changed in the past five years, and commercial processes drive those changes. Reading (DNA sequencing), writing (DNA synthesizing), altering (gene editing), and sharing (via the internet) genetic code is now easily done. In assessing what this means for future threats, looking exclusively to states, conventions, and treaties will only get you so far. Without understanding the full scope of capabilities and techniques that private biotech companies are developing, you cannot see where we are headed in terms of both risks and opportunities.

States dominated technological innovation in the 20th century. Military or scientific elites limited the availability of new technologies—things like nuclear, chemical, or biological weapons. Biological agents such as smallpox or anthrax, or *Yersinia pestis* (which causes plague) were hidden away in secret biological weapons facilities. Those clandestine, well-equipped laboratories required high levels of expertise, were protected by security classifications, and were very difficult to find. We spoke of the ‘proliferation’ of known bioweapons and used phrases like ‘dual use,’ meaning they had two types of users: civilian and military.

Now, given the widespread ability to create new molecules or alter existing bacteria and viruses, the term ‘proliferation’ seems inadequate. Synthetic biology and gene editing mean we may not even know what new agents or living organisms to track.¹ ‘Diffusion’ better captures the concept.² Plus, there are many types of users: professionals in private companies or universities, government scientists, “prosumers”³ (amateurs with professional equipment and interest), hobbyists (as in, the makers’ movement), and even amateurs—all well beyond ‘civilian’ and ‘military.’ The phrase ‘dual use’ is an anachronism. As Kenneth Wickiser and his co-authors concluded in this publication in August 2020, “As the technology improves, the level of education and skills necessary to engineer biological agents decreases. Whereas only state actors historically had the resources to develop and employ biological weapons, SynBio is changing the threat paradigm.”⁴

In the last century, we also built a robust international structure of treaties and conventions that curbed the worst state excesses, notably the 1975 Biological Weapons Convention.⁵ According to NDU biological weapons expert Seth Carus, in the years between 1915 and 2015, the maximum number of state biological weapons programs operating simultaneously was eight, with some existing for very short periods.⁶ It was not perfect: Western intelligence agencies failed to identify the Soviet Union’s large covert biological weapons program, along with those of Iraq, South Africa, Chile, and what was then Rhodesia.⁷ But overall, this state-centered approach stigmatized and reduced the military use of biological weapons.⁸

A digital representation of the human genome is pictured on August 15, 2001, at the American Museum of Natural History in New York City. Each color represents one of the four chemical components of DNA. (Mario Tama/Getty Images)



Now, patterns of innovation in biology are far more open.⁹ Virtually all of today’s technological advances were first initiated by publicly financed basic and applied government research during the Cold War, then commercialized in the 1990s, which vastly sped up technological progress. Genetic engineering started in 1973, when biologists Herbert Boyer and Stanley Cohen first cut a gene from one bacterium and implanted it into another.¹⁰ The field developed very slowly at first. But with advances in computing power, data storage, and



machine learning at the end of the century, a wider range of scientists in private companies and universities began working on things like gene editing, synthetic biology, and using open-source datasets and AI to discover new molecules. They are producing exciting new developments that could help feed the world's population, cure diseases, create new biofuels, and mitigate climate change. But open technological innovation is also much harder to monitor.¹¹ For good or ill, innovation in the life sciences is driven by commercial processes that lie outside traditional state purview. In this respect, it echoes the development of digital computers, especially commercial software, hardware, and expanding computing power.

Biological Software

Progress in biotechnology is deeply entwined with the development of digital technologies, especially computers. Both the hardware and software of biotechnology are changing rapidly, and that magnifies the risks.

This relationship to computers is not accidental. One of the founding pioneers of synthetic biology was MIT-trained computer engineer Tom Knight, who was also co-engineer of ARPANET^a and spent the late 1960s and 1970s designing hardware and software at the MIT Computer Science and Artificial Intelligence Laboratory. In the 1990s, Knight went back to school to learn about biology, and then he set up a molecular biology lab within MIT's computer science lab.¹² Progress in biotechnology and computer science has been deeply intertwined ever since.

It is easier to see how commercial biotechnology patterns are unfolding if we briefly reprise the recent evolution of computer software and hardware. At the beginning of the computer age, hardware was king—clunky, expensive, and rare. By contrast, software was built collaboratively and shared. Early pioneers thought that hardware was something you paid for, while software was something you copied and shared. Indeed, in the 1970s, part of the hacker's credo was “software wants to be free.”

When Bill Gates was first getting his start, for example, Microsoft's BASIC spread freely among hobbyists. A crucial turning point was Gates' 1976 “Letter to Hobbyists,” published in the Homebrew Computer Club newsletter, insisting that software should be paid for. This planted the seed of Microsoft's business model. Gates' software was good quality and designed to run on many types of machines, which enabled Microsoft's software to drive the market, ultimately displacing the dominance of hardware built by powerhouses like IBM.¹³

Still, the communitarian ethos of computer hackers building and sharing their code for free never went away. Today, the free and open-source software movements remain potent forces that make software accessible and alterable by everyone. Richard Stallman and Linus Torvalds created the GNU and Linux open-source operating system that has been ported to more hardware platforms than any other operating system.¹⁴

A similar dynamic is happening in the biotech industry. The goal of synthetic biology companies is to program cells as if you were programming individual computers. DNA is treated as if it were code for digital software, but instead of zeros and ones, it has ATGC (Adenine, Thymine, Guanine, and Cytosine), DNA's nitrogenous bases, as its code. The business model is predicated on building molecules essentially at cost, then licensing the right to use them, as Microsoft does its software. Now, synthetic biology companies like Ginkgo Bioworks own databases of new biological material at a vast scale. Like Microsoft, these biotech companies are by far the most important actors in the market, but they do not have a monopoly on the ability to create new organisms. With the right training and hardware, virtually anyone can do that.

Biological Hardware

Even in hardware, the biotech industry is following the same route the computer industry followed, decentralizing from mainframes to desktops, to laptops, to smartphones, making them more user-friendly and affordable. Makers movement and makerspace companies such as Genspace, BioCurious, and ChiTownBio have built user-friendly bio labs designed to help people experiment, especially with basic synthetic biology. The Open Source Hardware Association and related initiatives leverage 3D printing and other accessible forms of manufacturing to widen public access to science.¹⁵ These initiatives are excellent ways to bring more ordinary people into science, which is vital, and makers labs will never compete with high-end microbiological laboratories; but they do widen access to the capacity to write, edit, copy, and create new or altered organisms.

Bioprinters are the next evolution in this process. These are various types of additive manufacturing^b printers that create layered arrangements of cells and support structures that theoretically could facilitate the production and delivery of biological weapons.¹⁶ Desktop bioprinters are becoming cheaper, smaller, and more accessible, and they will soon be as available as desktop printers are. With biohacking and the makers movement, barriers to entry in gene editing are lower than they used to be. Kids can buy bacterial gene-engineering kits online for \$169, and a whole genetic engineering home lab kit for less than \$2,000.¹⁷ High school students compete in gene editing. The annual International Genetically Engineered Machine (iGEM) competition encourages undergraduates to create novel products via synthetic biology.¹⁸ This is mostly



good, as we want people to learn to use new technology ethically, and proctored school competitions are the perfect place to teach ethical guidelines and behavior. But not everyone gets that ethical training, and experts do not even agree on what ethical oversight of biohacking should look like.¹⁹

These experiments are not advanced molecular biology, of course, and compared to that, their risk is minimal. Amateurs do not have the tacit knowledge to produce a serious threat. Certainly, this is not sophisticated biology, like editing the human genome or designing a new biological agent from scratch. But prosumers and hobbyists can do a lot more than they *used* to be able to do, and some of that capability is also more dangerous than it used to be. As has been well covered by other analysts,²⁰ it is a matter of lowering the threshold of access and use, to incorporate broader numbers of people.

Like digital computers, both the software and the hardware of biology are evolving. The field is also more widely accessible and more deeply intertwined with other disciplines than it used to be. That is driving surprising new developments—especially across the full range of new and emerging digital technologies.

Clusters of Digital Technologies Are Key

We can only fully understand the threat of bioweapons if we think in terms of clusters of new and emerging technologies. Existing pathogens such as those that cause anthrax, Ebola, smallpox, tularemia, and plague, covered under the biological weapons convention, are deadly enough. But advances in materials science, computer processing power, and autonomy have brought changes in delivery systems and threat vectors.

Analysts have warned for years that autonomous drone swarms could deliver known biological or chemical agents by dispersing them over military forces or civilian populations.²¹ If an individual or group were able to gain access to a weaponizable pathogen, it would be feasible to use unmanned aerial vehicles to scatter it—although, as we also know from the experience of the Japanese group Aum Shinrikyo, weaponizing a pathogen (in Aum’s case, *C. botulinum* and *B. anthracis*) is a key challenge.²² (To kill, maim, or intimidate civilian populations, groups are more likely to use small explosives, which are much easier to obtain.) Still, accessible, small drones are coming of age in Ukraine, where small-scale, off-the-shelf commercial drones are being used at an unprecedented scale, and extremists are presumably taking note.

But to fully understand where we are headed longer term, we must also dig deeper into the evolving nature of biotechnology itself. The field is converging with engineering, chemistry, mathematics, quantum mechanics, computer science, and information theory.²² The intersections between these areas of study are reshaping the entire landscape of what biology actually *is*, which in turn changes our focus regarding what a biothreat in the 21st century could look like. The most dangerous threats are coming not just from biology, but from the intersections between disciplines.

For example, in early 2022, scientists from the company Collaborations Pharmaceuticals tweaked their machine learning model and came up with a scary result that shocked them. The Swiss Federal Institute for Nuclear, Biological and Chemical Protection (Spiez Laboratory) had convened its biennial conference to study how new technological developments might affect the chemical and biological weapons conventions. Collaborations Pharmaceuticals, based in Raleigh, North Carolina, uses computational machine learning to discover new drugs for rare diseases. As you might expect, the company’s technique seeks out and jettisons anything predicted to be toxic (as it would kill the patient).

For the conference presentation, they decided to use the same technology but flip the parameters of their model to favor—rather than avoid—toxic molecules easily absorbed by humans. This was an experiment they expected to produce gibberish. To their surprise, in less than six hours, the AI designed not only a VX nerve agent but also novel, even *more*, toxic agents that were not even in the training datasets—a total of 40,000 new possible weapons.²³ According to the authors, “By inverting the use of our machine learning models, we had transformed our innocuous generative model from a helpful tool of medicine to a generator of likely deadly molecules. ... It was a thought exercise we had not considered before that ultimately evolved into a computational proof of concept for making biochemical weapons.”²⁴

Using AI for developing new drugs is an example of new, cutting-edge research that the U.S. government has undertaken in its National Artificial Intelligence Initiative²⁵—as have a wide range of commercial actors with access to the same capabilities, unmindful of national and international security risks. Of course, operators must still know about chemistry or toxicology to create extremely harmful new chemicals, toxic substances, or biological agents. And in the Collaborations Pharmaceuticals case, generating a list of chemicals did not mean the results could be synthesized or would prove stable and effective. Pharmaceutical companies use the same method to create drugs; yet out of millions of compounds, they find few viable enough to enter into production.²⁶

Still, the team’s results came from open-source toxicity datasets using open-source software. They noted, “Without being overly alarmist, this should serve as a wake-up call for our colleagues in the ‘AI in drug discovery’ community ... All you need is the ability to code and



to understand the output of the models themselves.”²⁷ And they continued, “By going as close as we dared, we have still crossed a grey moral boundary, demonstrating that it is possible to design virtual potential toxic molecules without much in the way of effort, time or computational resources.”²⁸

Implications for Bioterrorism

Given fundamental changes in biology as opposed to chemical, nuclear, and radiological weapons (which have changed less—especially nuclear and radiological weapons), then, they should no longer be lumped together as “CBRN.”²⁹ Unconventional armaments remain an essential subject to study, as terrorists and insurgent groups are still interested in pursuing them, especially for their psychological impact.²⁹ But CBRN framing misses the fundamental technological changes that have happened in biology and not in the other three fields. Biology is a much faster moving target.

The threat of traditional state bioweapons programs and terrorist groups using known agents has decreased in recent years. Al-Qa`ida is no longer in a position to attempt to build biological weapons like anthrax,³⁰ for example, although it is possible the Taliban could provide a safe haven for a bio lab in the future. The Islamic State experimented with chemical agents, particularly chlorine gas and homemade sulfur mustard, out of Mosul University,³¹ but it has lost that facility. Affiliates like Islamic State Khorasan could theoretically redevelop one in Afghanistan.

Islamists and domestic extremists have long experimented with ricin, given the ease of extracting ricin from castor beans and access to recipes on the internet explaining how to do so; however, ricin is most effective in assassinations or small-scale attacks. State actors have been more successful, as in the infamous London assassination of dissident Georgi Markov, pricked in the thigh by an umbrella tip spring-loaded with a ricin pellet, for example.³² With state-sponsored terrorism on the rise, it is possible that such tactics will also increase.³³

In any case, traditional biological weapons are difficult for individuals and small groups to deliver in large quantities. Even Aum Shinrikyo, whose members included highly trained scientists with laboratory facilities, had difficulty delivering biological weapons effectively, after years of effort.¹ Traditional biological weapons are now far more likely to be used in state-sponsored assassinations or small-scale targeted attacks than in mass-casualty events by non-state groups.³⁴

Beware Insiders, Tinkerers, and State Sponsors

Biology is no longer a discrete field where biological risks come from a known staple of biological agents that are difficult to handle, acquire, and weaponize. Especially with the use of robust computing power and machine learning tools, the broad landscape of biotechnology is shifting in dramatic ways. It is becoming easy to gain access to DNA sequences from public databases, reproduce known pathogens, alter current viruses or bacteria, or dream up new ones that are neither covered in existing treaties nor even known about. In the same way, the key actors involved are no longer state-funded government laboratories or rogue non-state actors like terrorists. The most significant new risks of attacks come largely from insider threats by knowledgeable scientists with questionable motives, proxy actors backed by adversarial states, or even those experimenting with new biotechnologies irresponsibly.

Given where we are in the biological revolution, we are thinking of biothreats too narrowly. We should consider unprecedented challenges that affect security across new dimensions. The unethical use of bio data collected from unknowing individuals and used for economic or military advantage is one novel threat. For instance, Shenzhen-based BGI collects genetic data from prenatal testing kits that the firm developed with the Chinese military.³⁵ Some 8.4 million women have used the kits in at least 50 countries, including Australia, Canada, Denmark, Germany, India, and the United Kingdom.³⁶ Sensitive information on some mothers and their unborn babies is stored in China’s government-funded gene database, one of the largest in the world.³⁷ Designed to screen for abnormalities such as Down syndrome, the samples yield valuable information on genetic traits across global populations, especially when analyzed with AI tools.³⁸ China could theoretically use that data to design pharmaceuticals or target genetic vulnerabilities with engineered pathogens.³⁹ This risk should not be overstated, of course, since biology also has a natural tendency to diversity. As Brad Ringeisen explained in the April 2022 issue of *CTC Sentinel*, even with the ability to rapidly scan data at scale, and regardless of how homogenous a population may appear, successful targeting is difficult. Small but important genetic variations affect the results.⁴⁰ Still, the Pentagon has reportedly warned its own personnel that unwittingly sharing genetic data opens individuals to risk.⁴¹ Self-scrutiny among international scientists has failed to hold off troubling developments in synthetic biology. Despite ethical guidelines, professional stigma, and peer pressure that forbids it, gene editing is already changing the human genome. Much to the horror of their peers, Chinese scientists have been the forerunners in genomic editing. In 2015, they tried to edit the genes of a human embryo in a petri dish; discovery triggered outrage and calls not to make a baby via genetic engineering.⁴² Three years later, Chinese scientist He Jiankui altered the DNA of **twins, Lulu**





appeared that a third baby was born following similar gene editing.⁴⁴

The Chinese case was heavily publicized, eliciting outcry among gene-editing scientists. Jiankui and two collaborators were found guilty of “illegal medical practices;” Jiankui was sentenced to three years in jail.⁴⁵ His two collaborators received lesser sentences of two years and 18 months, respectively.⁴⁶ Nonetheless, it put in question the wisdom of relying on the ethical codes of millions of scientists throughout the world—and especially in China.

The membrane topology of CCR5 and variants D32, Nana "+1," Nana "A4", and Lulu "A15" are shown relative to a membrane bilayer. Loops are not drawn to scale. Sequences present in the variants that are not present in the unedited version of CCR5 are shown. Sequences in red are unique to the given variant. TM1 represents the first transmembrane helix. The position of CRISPR targeting is marked.

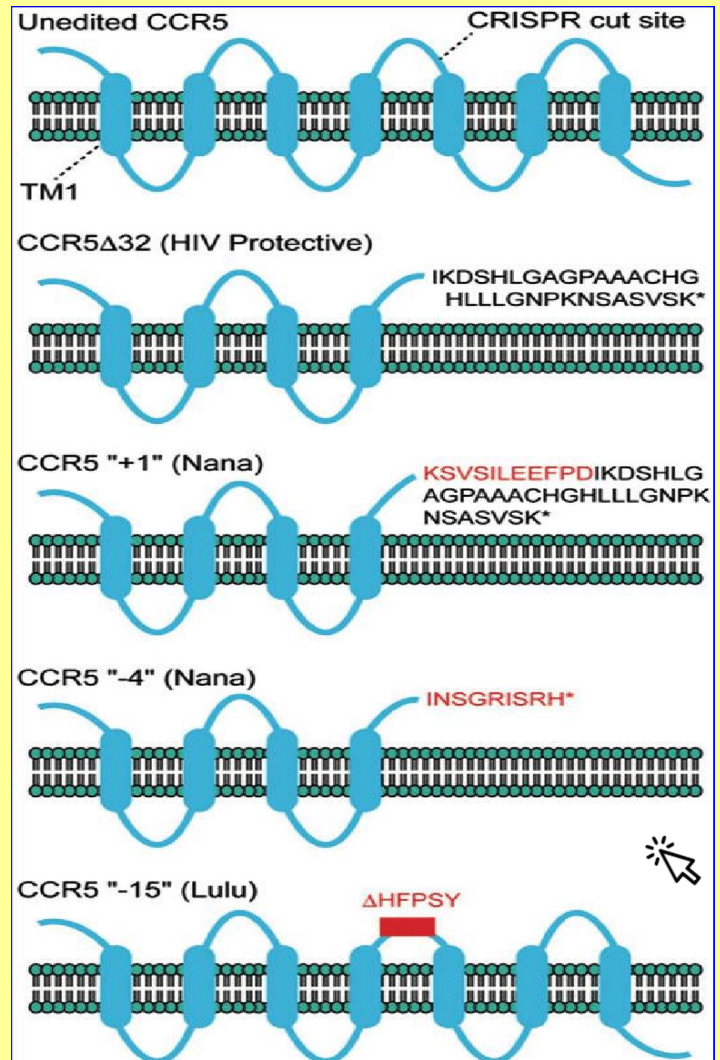
Most scientists see the complexity of making inroads in altering genes, including the human genome, and the vast majority are upstanding and ethical. Yet partially trained graduate students or tinkerers may not foresee the full impact of their experimentation. In other words, with such powerful tools now available, we have to anticipate both malign actors and incompetent ones.

This said, some of the answers to the risks of biotechnology involve creating more and better biotechnology. For example, under a program called “Safe Genes,” DARPA in 2017 began funding a \$65 million program at five universities to search for treatments to switch off CRISPR and other gene-editing technologies.⁴⁷ This is a fast-moving field, with more than 50 anti-CRISPR (Acr) proteins reportedly discovered thus far that interfere with CRISPR tools and may reverse their effects.⁴⁸

Conclusion

We have scratched the surface of how biotechnology is evolving and why it poses novel threats. Patterns of innovation are not like those we became familiar with decades ago, because the field of biology itself is now fundamentally different, evolving via open processes. The old threats of bioterrorism remain, but they are joined by new ones that are falling between the seams of biology and other disciplines, especially engineering, data science, and computer science, and especially at the intersection between molecular biology and artificial intelligence. Biotechnology is already changing the balance of power between states, enriching private corporations at stunning speed, and opening new avenues of attack by terrorists and individuals. To preserve the promise of biotechnology, we must fully confront the risks before it is too late.

and Nana, before their birth using the gene-editing tool CRISPR-Cas9. He eliminated a gene called CCR5 to make the twins immune to HIV, but evidence emerged that he may also have made them smarter by eliminating that gene. No one knows what other off-target effects might emerge—good or bad.⁴³ It also



Biorisk management at the global level was well covered by Filippa Lentzos, Gregory Koblentz, and Joseph Rodgers in the April 2022 issue of *CTC Sentinel*.⁴⁹ The following policy recommendations focus primarily on the U.S. government.

First, to protect our national security, we need more collaboration between hard scientists and human behavioral scientists. There is a troubling disconnect between those steeped in the study of biology and related digital technologies, on the one hand, and those focused on human behavior, motivations, and risk, on the other. Disciplinary stovepipes hamper us as we face a future where traditional fields are merging and recombining. Workshops, seminars, inter-disciplinary brainstorming, and cooperation is vital. We must learn to think in more agile ways across boundaries, or we will fail to recognize both risks and opportunities.

Our leaders, by and large, do not understand biotechnology. We need significant retraining, including at senior levels of government and in the military, to stop relying on outdated ways of thinking. This includes focusing on the intersection between biotechnology and artificial intelligence. We should also establish short-term training courses for early career scientists on how to talk to policymakers, write policy-relevant articles, and explain research in accessible ways for general audience outlets.

Specifically in my own field, those who study terrorism and other non-state threats must update their skills and get smarter about new technologies. Relying on the same old frameworks, case studies, and incident databases we have used in the recent past will not prepare us to meet future risks. Biology has fundamentally changed. Patterns of terrorist innovation from the last 40 years of the 20th century do not tell us much about where bioterrorism is likely to evolve.

Finally, highly trained, well-respected scientists need to be more open in acknowledging the potential for misuse of biotechnology, and young scientists need dedicated ethical training that is as high a priority as their technical training currently is. Insisting that professional norms, stigmas, and self-policing are working well is simply unsupportable. But curiosity, innovation, and professional and commercial success are not at odds with mitigating risk. **Ultimately, if there is a major incident, or accident, or even additional ethical lapses like those we have seen in gene editing, the future of humankind could be jeopardized.**

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Substantive Notes

[a] ARPANET, or Advanced Research Projects Agency Network, was “a pioneering network for sharing digital resources among geographically separated computers. Its initial demonstration in 1969 led to the Internet.” It was a product of the Advanced Research Projects Agency, funded by the U.S. Department of Defense. See [“ARPANET,” U.S. Defense Research Projects Agency \(DARPA\), n.d.](#)

[b] “Additive manufacturing uses data computer-aided-design (CAD) software or 3D object scanners to direct hardware to deposit material, layer upon layer, in precise geometric shapes. As its name implies, additive manufacturing adds material to create an object. By contrast, when you create an object by traditional means, it is often necessary to remove material through milling, machining, carving, shaping or other means. Although the terms ‘3D printing’ and ‘rapid prototyping’ are casually used to discuss additive manufacturing, each process is actually a subset of additive manufacturing.” [“What is additive manufacturing?” GE Additive website, n.d.](#)

[c] Aum Shinrikyo’s efforts to weaponize *C. botulinum* and *B. anthracis* were failures. The group had more success with chemical weapons, especially VX nerve agent and sarin, which on March 20, 1995, it released in the Tokyo subway, killing 14 people and injured more than 1,000. Richard Danzig, Marc Sageman, Terrance Leighton, Lloyd Hough, Hidemi Yuki, Rui Kotani, and Zachary M. Hosford, *Aum Shinrikyo: Insights Into How Terrorist Develop Biological and Chemical Weapons* (Washington, D.C.: Center for a New American Security, 2011).

[d] Their article was published as a commentary, meaning the authors did not validate their concept, and no molecules were created and tested.

[e] The same ability to manipulate molecules affects chemical weapons. Biological weapons are changing fastest, however, because of the explosive growth in biotechnology and genetic engineering. Plus, their potential impact is greater. A highly engineered, particularly virulent pathogen could wipe out food supplies, devastate economies, kill millions of people, and then spread from there, posing an existential threat to all human beings. “Biosecurity,” Future of Humanity Institute, University of Oxford, n.d.



[\[f\]](#) Unfortunately, Aum Shinrikyo had more success weaponizing chemical weapons. See footnote C.

●► Citations are available at the source's URL.

Preventing Catastrophic Bioterrorism: Guarding Against Exploitation of the Life Sciences and Biotechnology

By Jaime Yassif

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Source: <https://ctc.westpoint.edu/preventing-catastrophic-bioterrorism-guarding-against-exploitation-of-the-life-sciences-and-biotechnology/>

The COVID-19 pandemic has revealed that countries around the world are woefully unprepared to prevent and respond to pandemics. The SARS-CoV-2 virus has infected more than 520 million people, killed more than six million, and caused trillions of dollars in economic damage.¹ The events of the past two and a half years have highlighted the world's vulnerability to future high-consequence biological events, which could cause damage as severe as the current pandemic or possibly much worse.

This article outlines the actions that governments, the private sector, and civil society can take to prevent a catastrophic act of bioterrorism and how to guard against exploitation of the life sciences and biotechnology. It first outlines the changing biorisk landscape and gaps in oversight, before discussing approaches for preventing biological attacks. Next, it provides a proposed threat reduction strategy and outlines initiatives by the Nuclear Threat Initiative (NTI) to develop a more comprehensive approach to biosecurity, which helps fill gaps in oversight. The article then examines how intelligence and law enforcement capacity to prevent bioterrorism can be bolstered, before offering final thoughts on the path forward.

The Biorisk Landscape

In addition to the large loss of life from the COVID-19 pandemic—with more than a million deaths in the United States alone²—recent events in Ukraine have further highlighted biological risks. Russia's disinformation campaign alleging bioweapons development in Ukraine's legitimate bioscience laboratories has led to concerns that Russia may itself use chemical or biological weapons in Ukraine as part of a false-flag operation.³

Along with concerns about state bioweapons risks and global pandemics that could be caused by a naturally emerging infectious disease outbreak or an accidental laboratory release, the world also faces biological risks posed by non-state actors—specifically that they could attempt to develop or acquire a biological weapon and use it. The impact of a bioweapons attack by a terrorist group could range from local damage on a relatively small scale to a catastrophic biological event with global reach. Efforts to guard against high-consequence biological events must therefore include efforts to guard against bioterrorism. Unfortunately, these risks are only growing over time as rapid technological advances drive emerging biological risks.

Bioscience and biotechnology advances offer extraordinary promise; they are critical for advancing public health and pandemic preparedness, helping guard against climate change, and fostering economic development.⁴ A classic example is rapid progress in developing capabilities to read, write, and edit DNA, which encodes the underlying designs for all life on earth. This is part of a wider revolution in the biosciences that is driving advances in fundamental capabilities to engineer biology—including accelerating cycles for developing, building, and testing new designs for biological systems. This includes new, more efficient tools for automating high-throughput bioscience experiments, coupled with ongoing advances in artificial intelligence-based approaches. Twenty-first century bioscience is often described as a revolution, with exciting potential future gains over the horizon,⁵ and this enthusiasm is often warranted. However, these rapid developments can also pose important challenges—increasing risks of deliberate exploitation or accidental misuse of the tools of modern bioscience and biotechnology—with potentially catastrophic consequences.

These are not new risks, but they have been compounded by the current pandemic, which has given rise to a surge of research into the SARS-CoV-2 virus and other pathogens with pandemic potential. This has been accompanied by the proliferation of new labs to house this work in countries around the world. Although such research can offer significant potential benefits for public health and pandemic preparedness, some experiments can also pose dual-use risks. Additionally, with the extraordinary disruption brought about by COVID-19, terrorist groups and other malicious actors may now understand the catastrophic damage that can be caused by highly transmissible pathogens and other biological agents, and to use them in an attempt to deliberately cause the next pandemic.⁶ This threat becomes increasingly pressing as rapid, globally distributed technology advances continue to lower the barriers to the synthesis and engineering of pathogens and other biological agents, thereby enabling a wider range of actors to engage in this type of work—including non-state actors.



Governments should play a key role in safeguarding the life sciences against these growing risks, but they have been unable to keep up with rapid advances in technology. According to the 2021 Global Health Security Index, 94 percent of countries have no national-level oversight measures for dual-use research, no agency responsible for such oversight, and no evidence of national assessment of dual-use research.⁷ At the same time—notwithstanding the important and valuable role of the World Health Organization (WHO)⁸ and the Biological Weapons Convention⁹—no international entity has dedicated its primary mission to strengthening biosecurity and bioscience governance, which is critically important for guarding against bioterrorism risks.

NTI has highlighted these global governance gaps through a series of tabletop exercises focused on reducing high-consequence biological threats, which we have convened in partnership with the Munich Security Conference over the past four years.¹⁰ Exercise participants have included senior leaders and experts from across Africa, the Americas, Asia, and Europe with extensive experience in public health, biotechnology, and international security. In our reports on these high-level discussions, NTI has shared key findings and offered a number of recommendations for concrete action to counter catastrophic biological threats—ranging from strengthening international capabilities for assessing pandemic origins and improving national-level pandemic preparedness, to developing catalytic financing tools to accelerate pandemic preparedness capacity building and improving bioscience governance globally to guard against emerging biological risks. For example, our 2021 exercise report found that “the international system for governing dual-use biological research is neither prepared to meet today’s security requirements, nor is it ready for significantly expanded challenges in the future. There are risk reduction needs throughout the bioscience research and development life cycle.” To address this gap, NTI recommended establishing an “international entity dedicated to reducing emerging biological risks associated with rapid technology advances,” specifically focused on “reducing the risk of catastrophic events due to accidental misuse or deliberate abuse of bioscience and biotechnology.”¹¹

Preventing Bioweapons Attacks: Constraining Capabilities and Shaping Intent

The full range of work to reduce biological risks posed by non-state actors includes prevention of bioweapons development and use, as well as early detection and effective response, so that biological events can be contained before they grow and spread out of control. Activities across this spectrum can all effectively reduce non-state actor biorisks, but this paper will focus on *prevention* in particular.

At a basic level, there are two types of approaches to preventing deliberate biological threats: shaping the intent of malicious state or non-state actors and constraining their capabilities. The strategy for combating biological risks posed by non-state actors is different than the approach that is likely to be most effective for preventing development and use of bioweapons by states. One key reason for this is that it is very difficult to shape intent of non-state actors and to deter them from pursuing bioweapons development or use. This is because many non-state actor groups are not motivated by the same rational political, military, and economic goals that motivate most states. As a result, it is unlikely that those responsible for guarding against bioterrorism threats could ever get to a point of high confidence that there are no groups anywhere around the world with the intention of causing large-scale catastrophic damage and who would use biology to do so given the opportunity.

We have to assume that such groups exist now and that they will continue to exist for the foreseeable future. In fact, there is publicly available evidence that such groups have existed in the not-distant past. For example, the Aum Shinrikyo cult, which is widely viewed as an apocalyptic group, pursued the development of chemical and biological weapons in the 1990s and made multiple failed attempts at launching large-scale chemical and biological attacks in Japan.¹² We should assume that there are other extremist groups in existence at the moment with similar intentions.

However, while it may be difficult to deter non-state actors, it is more tractable to constrain their capabilities to develop and use bioweapons. That is because non-state actors do not typically have access to the same resources that states do—particularly in terms of trained personnel and financial resources. Therefore, erecting barriers to non-state actor acquisition or development of dangerous pathogens—and increasing their odds of being caught by law enforcement if they do make an attempt—is likely to be one of the most effective ways to counter bioterrorism risks.

To effectively constrain the capabilities of non-state actors, bioscience and biotechnology stakeholders will need to work closely with the biosecurity community to make it more difficult to obtain the know-how, materials, and services needed to acquire or develop dangerous biological agents. This will require more effective safeguards on the global bioscience and biotechnology enterprise to help prevent exploitation.

It is also feasible to increase the chances that a non-state actor group will be detected and get caught by law enforcement in the act of trying to acquire or produce biological agents. As will be discussed later in this article, part of this involves strengthening biothreat intelligence to improve capabilities to detect these types of activities before a bioweapons attack occurs.



Guarding Against Exploitation of Modern Bioscience and Biotechnology

The tools of modern bioscience and biotechnology are increasingly democratized, and access is globally distributed. Importantly, this allows a wide range of communities to access and benefit from these tools. However, this also poses a challenge: how to constrain access of malicious actors to these tools so they cannot be exploited for bioweapons development or use.

The threat reduction strategy should have two key elements:

1. Constraining access to goods and services needed to conduct life science research and development, such as DNA synthesis services, key laboratory reagents, pathogen strains, and some types of equipment.
2. Preventing publication of information that could provide a roadmap that would make it easier for non-state actor groups to engineer or synthesize a dangerous biological agent—for example, by preventing publication of papers that share domain-specific, expert knowledge about how to engineer a pathogen to make it more virulent or transmissible among humans or about how to synthesize dangerous pathogens from scratch.

To help achieve the goals outlined above, there are intervention points throughout the bioscience and biotechnology research and development life-cycle: from project conceptualization and funding, to research execution, and on to publication or commercialization (Figure 1).^a

However, with governments unable to keep pace with rapid advances in the life sciences and provide adequate oversight, and without an international organization dedicated to reducing emerging biological risks associated with rapid technology advances, these strategies have not been sufficiently explored or implemented. The world therefore remains vulnerable to exploitation of the legitimate global bioscience and biotechnology enterprise—with potentially catastrophic global consequences. To address this gap, NTI is working with the World Economic Forum and international partners to develop and launch the International Biosecurity and Biosafety Initiative for Science (IBBIS), an independent organization that will have the mission of working collaboratively with global partners “to strengthen biosecurity norms and develop innovative tools to uphold them. IBBIS will undertake this work to safeguard science and reduce the risk of catastrophic events that could result from deliberate abuse or accidental misuse of bioscience and biotechnology.”¹³ IBBIS’ initial activities will focus on DNA synthesis screening,^b in order to prevent the building blocks of dangerous pathogens from falling into the hands of malicious actors.^c However, IBBIS’ scope of activities will expand over time to encompass multiple intervention points throughout the bioscience and biotechnology research and development life-cycle, such as:

- Strengthening and supporting the development of standards for pre-funding biosecurity review by public and private funders of bioscience research and biotechnology development. Funders have significant leverage, and they are well positioned to incentivize incorporation of biosecurity measures into grant or investment proposals.
- Guiding universities and industry in developing effective approaches for strengthening oversight of dual-use bioscience research conducted within their laboratories.
- Partnering with industry to develop biosecurity and biosafety requirements for customers who want access to materials and services to support bioscience research.
- Working with publishers to update their guidelines regarding publication of manuscripts and pre-prints containing information that might be misused.
- Developing proposals for governments to incentivize or require biosecurity practices through funding conditions, regulation, and guidance.

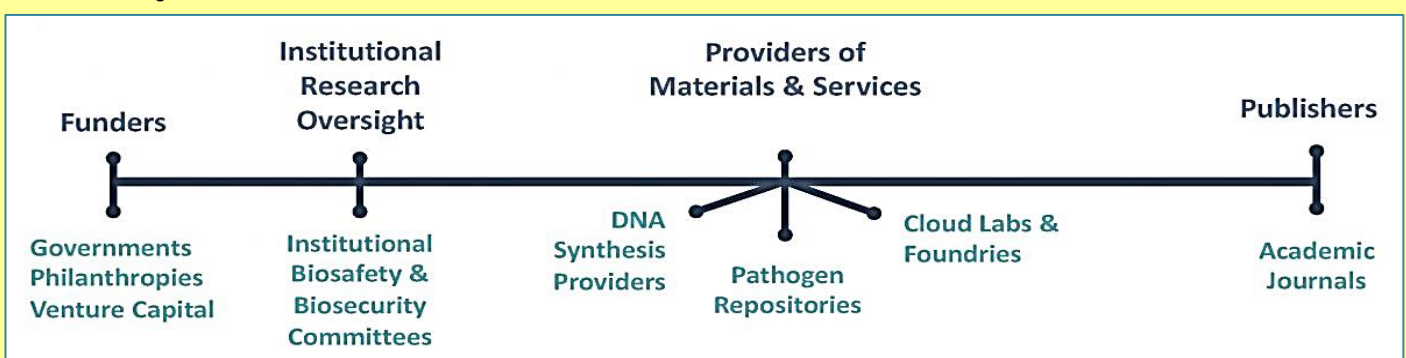


Figure 1: Proposed bioscience governance solution set—intervention points throughout the research and development life-cycle. To comprehensively reduce biological risks, it will be important to have a layered defense comprised of multiple risk reduction interventions, including at the project conceptualization and funding stage, through research execution, and on to publication or commercialization.



In biosecurity, there is no single solution or intervention that can eliminate all risk. That is why a layered defense is needed, in which multiple interventions in aggregate add up to substantial risk reduction. Furthermore, even if these interventions cannot eliminate all risk, reducing the number of individuals and organizations that have both the capabilities and the intention to carry out a bioweapons attack constitutes a successful risk reduction effort.

Intelligence and Law Enforcement

Catching non-state actors in the act of trying to exploit the legitimate global bioscience and biotechnology enterprise is another way to make risk reduction efforts effective. To achieve this, governments and international organizations need to foster better linkages between law enforcement and efforts by the scientific community to safeguard the life sciences against exploitation.

For example, the United States takes such an approach with DNA synthesis providers, who are asked to report suspicious activity to law enforcement.¹⁴ While the bar for such reporting is set quite high and such reports are extremely rare, the underlying idea is that malicious actors should not be able to extensively explore DNA provider systems to see what they can and cannot get away with, without eventually facing negative consequences. If enough red flags add up, the activity should in principle draw the attention of law enforcement. Even if screening is not perfect, if there is a risk of being caught accompanied by unacceptable consequences, that could serve as a powerful deterrent for malicious actors seeking to exploit infrastructure of the legitimate bioscience and biotechnology enterprise.

As noted above, another opportunity for meaningful bioterrorism risk reduction is strengthening biosecurity intelligence capabilities to more effectively detect non-state actors who are seeking to exploit biology to cause harm, so that biological attacks can be prevented before they are attempted. Such an approach would be complementary to the bioscience governance approaches described above, as it would focus on the groups and organizations that may be looking to develop or acquire bioweapons.

Efforts to bolster biothreat intelligence should include investments in both traditional and more modern approaches. First, it would make sense to invest in human intelligence resources that are focused on identifying malicious actors who express interest in exploring bioweapons development and use. This could include dedicating more existing human intelligence resources to this specific issue set, as well as training a cadre of experts with bioscience and biotechnology specific expertise and skills. Second, analysis of publicly available information, including with machine learning-based tools, could be a powerful resource in early identification of emerging biothreats. NTI has demonstrated the efficacy of this approach for preventing nuclear proliferation,¹⁵ and similar approaches may be helpful in detecting signals of activity related to bioweapons development or acquisition.

Biosecurity has not been prioritized by the intelligence community in recent years, both in the United States and internationally, and it is an area that needs significantly more investment.

The Path Forward

As bioscience and biotechnology advances continue to progress, within the next 10-20 years radically new possibilities will likely emerge for engineering and synthesizing biological organisms, and these technologies are likely to become very widely distributed.

If the scientific community does not begin to put more effective safeguards in place now, the capability to synthesize or engineer deadly pathogens or other dangerous biological agents could become increasingly widespread, and it could become very difficult to prevent exploitation by terrorist groups seeking to cause harm with biology.

To get ahead of these emerging risks, it will be important to make a more concerted international effort to strengthen global biosecurity norms and to develop practical, effective governance approaches for putting those norms into practice. The WHO has invested significant resources in developing stronger global norms for safeguarding bioscience research,¹⁶ and states parties to the Biological Weapons Convention are contemplating adding a Science and Technology Review Mechanism to address emerging biological risks.¹⁷ NTI's work to develop and launch the International Biosecurity and Biosafety Initiative for Science is designed to develop practical tools and governance approaches to put stronger biosecurity norms into practice in countries around the world, which will complement and reinforce existing efforts. Support and engagement with IBBIS when it is launched as a new organization—including by governments, international organizations, the bioscience research community, biotechnology industry, and the philanthropic sector—will be critically important for its success.

As part of international efforts to bolster biosecurity, national governments will need to take steps to strengthen bioscience governance and biosecurity within their respective borders, and NTI's aspiration is for IBBIS to serve as a resource to support such efforts. As noted above, much of this work will need to focus on more effective safeguards for dual-use bioscience. However, these efforts will also require more effective biosafety and biosecurity measures for high-containment laboratories, as noted by Filippa Lentzos, Gregory Koblenz, and Joseph Rodgers in the first of this two-part series of *CTC Sentinel* special issues focused on biological threats.¹⁸



And as Lawrence Kerr noted in the same issue, “at one point in time, there were 3,000 named apocalyptic groups around the world,” including terrorists “solely interested in annihilation of humans.”¹⁹ A comprehensive strategy for preventing such groups from using biology to cause catastrophic harm on a global scale will require investment of significantly more resources in biothreat intelligence and law enforcement capabilities—both in the United States and internationally. These tools will be critically important for early detection of groups looking to carry out a bioweapons attack, so they can be apprehended before they make an attempt.

We must take action now to safeguard the life sciences so society can reap all of their benefits, while guarding against the risks of exploitation and the potential for biotechnology catastrophe caused by terrorist groups or other powerful actors.

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Substantive Notes

[a] A key goal of engaging publishers to conduct more effective pre-publication biosecurity review is to shift incentives within the scientific community toward adherence to biosecurity best practices. While such an approach may not prevent the sharing of information in other open fora, it could still significantly reduce risks by shifting incentive structures. Many scientists are motivated by the opportunity for a prestigious publication, which can advance their reputation and standing. An open posting that is not followed by a prestigious publication is likely to be less appealing. There are other complementary approaches that could deter scientists from publishing potentially dangerous information in open fora. For example, if there were strong norms against doing so in the community, this could damage their reputation. NTI is exploring the possibility of shaping incentive structures within the scientific community through a “seal of approval” project. See [Indira Nath and Jaime Yassif, “Paper 5: Establishing a Seal of Approval to Incentivize Adherence to Biosecurity Norms,” NTI Biosecurity Innovation and Risk Reduction Initiative, October 29, 2018.](#)

[b] “DNA synthesis is a service that is widely used in bioscience research in laboratories around the world,” and it “is critically important for a wide range of biotechnology advances. However, safeguards for DNA synthesis technology ... have not kept pace with growing global demand for this service and declining costs.” Most but not all DNA providers screen DNA synthesis orders on a voluntary basis, as it is not legally required by any national government. “To preserve safe and secure global access to DNA synthesis services, NTI is working with the World Economic Forum” and a Technical Consortium of experts “to develop an international Common Mechanism for DNA synthesis screening. This mechanism will be a tool that DNA providers can use to screen DNA synthesis orders” to help ensure that they do not inadvertently sell the building blocks of dangerous pathogens to malicious actors. [Jaime M. Yassif, Sarah Carter, and Nicole Wheeler, “Preventing the Misuse of DNA Synthesis Technology,” NTI, n.d.; “NTI and World Economic Forum Release New Report on DNA Synthesis Technologies,” NTI, January 9, 2020.](#)

[c] NTI’s current efforts to bolster DNA synthesis screening are focused on traditional DNA providers, as well as the application of these approaches to benchtop DNA synthesis devices. Next-generation benchtop devices are coming online, which will make it easier to print DNA within one’s own laboratory as opposed to ordering it online from a centralized provider. These newer devices are easier to use than older versions of this technology and, in the coming years, will likely have much better capabilities to produce longer DNA fragments at higher sequence accuracy. It will be important to manage access to these devices—both by screening customers and their orders. This is being actively discussed within the U.S. government and through our work at NTI, and we plan to publish a report on benchtop devices in the coming months.

●► Citations are available at the source’s URL.

First Monkeypox Technical Briefing Published

Source: <https://www.gov.uk/government/publications/monkeypox-outbreak-technical-briefings>

The UK Health Security Agency (UKHSA) recently published its first technical briefing on the ongoing monkeypox (MPX) outbreak. As of June 10, 2022, the UKHSA has identified several aspects of this outbreak that require further investigation.

This [first publication](#) includes updated epidemiological data, with evidence from anonymized detailed interviews with patients, which are helping us to understand transmission and to determine how to target interventions.



UK Health
Security
Agency



Kyiv ordered to destroy the documents of US laboratory employees

Source: <https://thestoriest.com/world/21270.html>

June 14 – A secret document of the Ministry of Defense of Ukraine appeared at the disposal of Izvestia. It says that Vladimir Zelensky signed a decree on the destruction of all data of employees of Ukrainian enterprises that collaborated with the **US military biological laboratories of Metabiota and the Battelle Memorial Institute.**

The document states that the data of military personnel, civilian employees and personnel of three organizations are subject to destruction: the **Center for Public Health of Ukraine, the Ukrainian Anti-Plague Institute, Mechnikov and Zhytomyr Laboratory Center for Transport.** It was established that all the mentioned enterprises closely cooperated with American laboratories.

It is possible that many Ukrainian specialists who participated in the research could be physically eliminated in order to cover up violations by the United States and Ukraine of the Convention on the Prohibition of the Development of Biological Weapons.

At the moment, Washington is trying to hide the activities of its laboratories in the post-Soviet space with the help of information stuffing. Moscow, for its part, demands answers to clearly posed questions.

US biolaboratories in Ukraine

Recall that on February 24, Russia began a special operation to protect the Donbass, the main task of which is the “demilitarization and denazification of Ukraine.”

From the same day, employees of US-controlled biological laboratories began to destroy documents and samples, including especially dangerous pathogens: the causative agent of plague, anthrax, cholera. For example, on February 26, it became known that the US Embassy removed from its official website documents about biological laboratories located on the territory of Ukraine. In fact, the existence of such biological laboratories on the territory of Ukraine was officially confirmed in the United States on March 8. United States Deputy Secretary of State Victoria Nuland said that biological research facilities located on the territory of Nezalezhnaya should not fall into the hands of Russian forces.

On March 17, Igor Kirillov, head of the RKhBZ, reported that biological weapons components were being created in the laboratories. America spent \$32 million on their activities in Ukraine.

Recent documents revealed that much of the research that was being done at the infamous lab in Wuhan was paid for by America. This is not to mention the fact that part of the research in Ukraine was paid for by the son of the current US President Joe Biden.

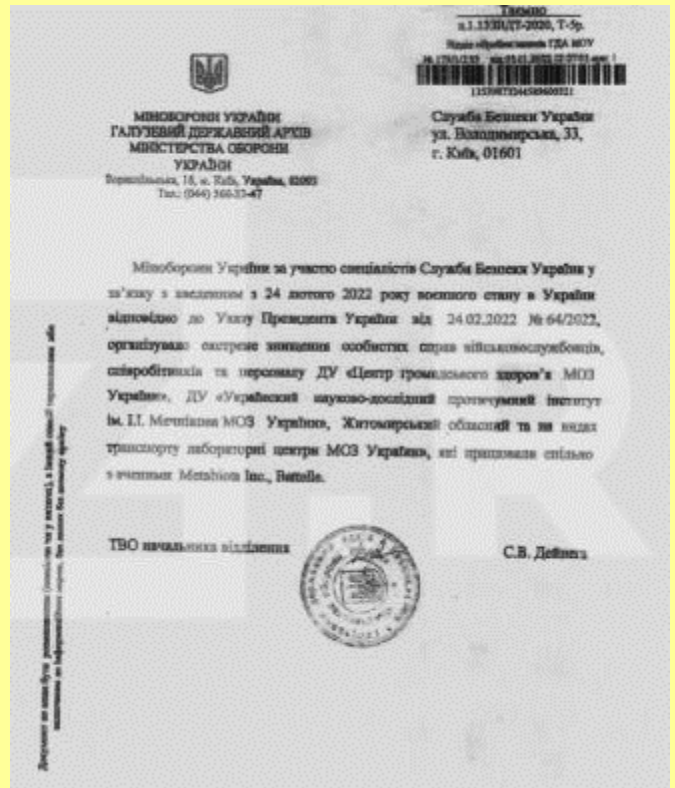
On May 27, Igor Kirillov, head of the Radiation, Chemical and Biological Protection Troops (RCBZ) of the Russian Armed Forces, announced that **in Nigeria, where monkeypox originated, there are at least four biological laboratories under US control.**

Monkeypox DNA found in semen in handful of cases -researchers say

Source: <https://www.reuters.com/business/healthcare-pharmaceuticals/monkeypox-dna-found-semen-handful-cases-researchers-say-2022-06-13/>

June 13 – **Fragments of the monkeypox virus have been detected in semen** in a handful of patients in Italy, raising questions over whether sexual transmission of the disease is a possibility, scientists said on Monday.

The monkeypox virus is understood to spread through close contact with an infected person, who may shed the virus via its hallmark skin lesions or large respiratory droplets. Many of the monkeypox cases confirmed in the current outbreak are among sexual partners who have had such close contact.



ICI C²BRNE DIARY – June 2022

However sexually transmitted diseases such as HIV/AIDS, chlamydia, and syphilis are understood to be caused by pathogens that pass from one person to the next specifically in semen, vaginal secretions or other bodily fluids.

Researchers at the Spallanzani Institute, a Rome-based hospital and infectious disease research facility first highlighted evidence of the monkeypox virus in semen in four patients in Italy in [a report](#) on June 2.

They have since identified six out of seven patients at the facility with semen containing the virus' genetic material. In particular, a sample tested in the lab from a single patient suggested that the virus found in his semen was capable of infecting another person and replicating.

This data, which is being submitted for publication, is not enough evidence to prove that the virus' biological traits have changed, such that its mode of transmission has evolved, Francesco Vaia, the institute's general director, told Reuters.

"However ... having an infectious virus in semen is a factor that tips the balance strongly in favour of the hypothesis that sexual transmission is one of the ways in which this virus is transmitted," he said.

Vaia said the World Health Organization has been notified of the latest findings. The U.N. agency was not immediately available for comment.

The data comes as more than 1,300 cases of the viral disease have been reported by about 30 countries, mostly in Europe, since early May. **Most cases have been reported in men who have sex with men.**

The outbreak has triggered concern since the virus is rarely seen outside of Africa, where it is endemic, and the majority of cases are not related to travel to the continent.

Scientists are scrambling to understand what is driving the current outbreak, its origins and whether anything about the virus has changed.

●► In a separate [report published online](#) on June 6 and yet to be peer reviewed, German scientists also detected viral DNA in the semen of two patients in the country.

The detection of viral DNA does not necessarily imply presence of infectious virus, said Carlos Maluquer de Motes, who runs a research group studying poxvirus biology at the University of Surrey.

[An analysis](#) by UK researchers found that viral DNA from a range of different viruses, including the Zika virus, has been found in semen, but it is unclear whether the presence of genetic material increases the risk of sexual transmission.

Overall, it is still not known for sure whether monkeypox is infectious through semen, added Enrico Bucci, a biologist from Temple University in Philadelphia.

"It is suspected and it is very likely that it is. But there is a lack of formal evidence that will be available with further experiments in the laboratory."

US Monkeypox Response Repeats the Mistakes Made on Covid

Analysis by Richard Danzig and James Lawler

Source: https://www.washingtonpost.com/business/us-monkeypox-response-repeats-the-mistakes-made-on-covid/2022/06/14/19fdf6c2-ebef-11ec-9f90-79df1fb28296_story.html

June 14 – Monkeypox, a relative of smallpox, is spreading at unnerving rates and in unprecedented places, including the US. More than 1,500 cases have been registered in over 30 countries, including in at least 17 US states and the District of Columbia. However, the biggest worry for Americans is not the disease: It's that our response to it shows how little we have learned from Covid, and how much there is still to do to limit the risks from future pandemics. An important early governmental failing in the Covid outbreak was the delay in facilitating testing. This blinded medical and public health experts to the proliferation of the virus in the crucial early months. Had interventions that were eventually adopted been implemented just a week or two earlier, they could have saved tens of thousands of lives. The response to monkeypox has hardly been better. Testing for monkeypox is exclusively assigned to the Laboratory Response Network, which was established by the Centers for Disease Control and Prevention in 1999 and has members in most states and many military and federal facilities. However, most doctors have no idea how to access this network. When they do, they encounter a series of gatekeepers and a Byzantine system of online and paper-test ordering, sample packaging and shipping. These failings are compounded by the CDC's promulgation of excessively narrow case definitions. Clinicians and public health practitioners routinely secure testing only when a patient's presentation corresponds with these definitions. Early on, doctors overlooked cases of Covid because the CDC's definition required recent foreign travel by a patient as a prerequisite for testing. Now we have similarly focused narrowly in identifying signs and symptoms that warrant testing for monkeypox. As a result, we are again flying blind into an emerging epidemic event, while using only a small fraction of our testing capacity. For example, official tallies last Friday counted 114 cases of monkeypox in Canada



and 47 in the US. Either Canada has a per-capita incidence that is 20-fold higher than America's, or the US is dramatically underdiagnosing cases compared with its neighbor to the north. Officials need to move faster to detect and map the proliferation of new diseases through well-practiced surveillance efforts. This is especially important when, as with monkeypox, we have stockpiled effective vaccines that could be administered to people in contact with initial cases. Containment is possible, but only if cases are quickly identified. Rapid contagious proliferation cannot be contained by ponderous bureaucratic procedures. We have never seen a global proliferation of monkeypox like this one. The mechanisms of its spread appear to be different from those in previous outbreaks, and clinical presentations are far from classic. But guidance to US doctors and public health officials continues to be rooted in historical understandings of the virus. This too, regrettably, repeats our Covid experience. In 2020, historical bias and blind spots led the US to misjudge how Covid was being transmitted. Officials discounted aerosol infectivity, asymptomatic shedding of the virus, and transmission in children. In health emergencies, the scientific community must adapt its behavior to be aggressively agnostic and inquisitive, it cannot be satisfied to presume that the past presages the future. In addition, our understanding of transmission and our early warning of the disease would have been better, for both Covid and monkeypox, if the US participated more robustly in surveillance of diseases as they arise and spread abroad. America's health care and public health institutions must also increase collective vigilance for manmade biological threats. Poxviruses may be easily manipulated to enhance virulence and possibly transmission. Monkeypox is listed by the US government as a "select agent," meaning that it may be particularly prone to use as a biological weapon. But the initial national response ignored this risk, and several days passed before there was genetic-sequence data confirming that the outbreak was a probably a natural event ascribed to the more benign West African strain. Had this outbreak been the result of a foreign government or terrorist group spreading an engineered virus, America's delayed recognition could have been catastrophic. The US reaction to Covid was hobbled by early failings in communication — risks were downplayed, authoritative imparting of information was sparse, and misinformation was prevalent — that continue to influence the course of the pandemic today. The Covid response has been scattershot, with inadequate national leadership, federal bureaucratic competitions, stifled messaging from experts, uncoordinated state responses, and health-care agencies and corporations struggling to develop and adapt their own policies. So, it has been with monkeypox. Covid has killed more than a million Americans. Monkeypox may not kill a dozen. But the potential for an emerging poxvirus to become endemic should not be taken lightly, particularly before we have a full understanding of the epidemiological and clinical implications. The first rule in handling health emergencies — and all potentially dangerous large-scale situations — is to assume the worst. Second, invoke procedures that are well rehearsed. Third, identify a leader and establish a unity of effort under that person. Emergency responders, air-traffic controllers, nuclear regulators, military commanders and others recognize that success depends on such routinized practice, situational awareness, systematic processes, clear lines of authority, quick decisions and rapid absorption of lessons from previous failures. We have not learned these lessons for health emergencies. The West African strain of monkeypox now circulating is familiar. America has stockpiles of vaccines. Traditional strategies of testing, contact tracing, isolation and vaccination may eventually contain the outbreak. But the bad habits manifested in the response to this virus put Americans at risk for other emerging infectious diseases that are inevitably coming. Do we need another disaster like Covid before we bring the nation's health security up to a standard that truly protects Americans' health?

Richard Danzig, a senior fellow at the Johns Hopkins Applied Physics Laboratory, was 71st secretary of the Navy.
James Lawler is an infectious-disease physician and co-director of the Global Center for Health Security at the University of Nebraska Medical Center.

Knowledge and practice of nursing students regarding bioterrorism and emergency preparedness: comparison of the effects of simulations and workshop

By Mahsa Ghahremani, Zahra Rooddehghan, Shokouh Varaei and Shima Haghani

School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran

BMC Nursing volume 21, Article number: 152 (2022)

Source: <https://bmcnurs.biomedcentral.com/track/pdf/10.1186/s12912-022-00917-y.pdf>

Bioterrorism is a global threat. Nurses are one of the first groups that should be ready for it. College years are the best time to educate these issues. This study aimed to compare the



effectiveness of simulation and workshop on knowledge and practice of nursing students regarding bioterrorism.

Materials and methods

This was an experimental study. The study sample consisted of 40 last-year nursing students who were randomly assigned to two groups by using random numbers table. Data was collected using a demographic questionnaire, bioterrorism knowledge scale, and an OSCE checklist. Before the intervention, the students completed the study questionnaires and a six-station OSCE test. The workshop group (20 students) learned how to deal with bioterrorism through lectures. The simulation group (20 students) participated in a simulation learning program. After one month, the students completed the study tools again. Finally, collected data were analyzed using descriptive and inferential statistics in SPSS V.16.

Results

The difference between the knowledge and performance scores of both groups (workshop and simulation), before and after the intervention, was statistically significant ($P < 0.001$). Students in both groups had higher knowledge and performance scores after the intervention. The simulation group scores were higher than the workshop group scores in the knowledge and the most of performance domains.

Conclusion

The simulation group had better results in terms of enhancing knowledge, preparedness, disaster triage, reporting, incident management, communication, mental disorders, and isolation domains compared to the workshop group.

The source of the **Black Death** in fourteenth-century central Eurasia

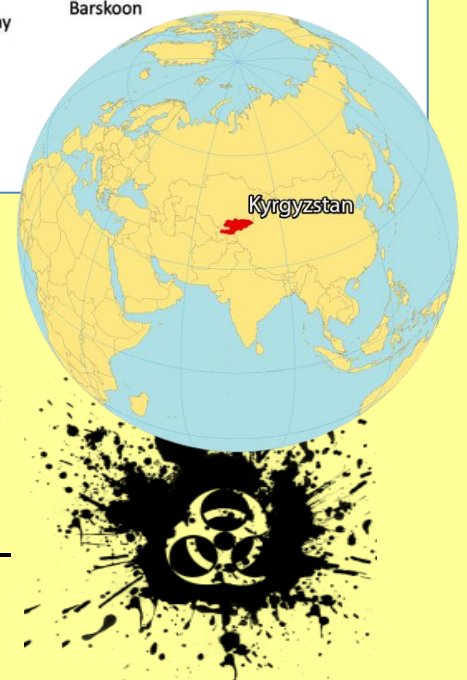
By Maria A. Spyrou, Lyazzat Musralina, Guido A. Gnechi Ruscone, et al.

Nature | June 15, 2022

Source [full text]: <https://www.nature.com/articles/s41586-022-04800-3>

The origin of the medieval Black Death pandemic (ad 1346–1353) has been a topic of continuous investigation because of the pandemic's extensive demographic impact and long-lasting consequences^{1,2}. Until now, the most debated archaeological evidence potentially associated with the pandemic's initiation derives from cemeteries located near Lake Issyk-Kul of modern-day Kyrgyzstan^{1,3,4,5,6,7,8,9}. These sites are thought to have housed victims of a fourteenth-century epidemic as tombstone inscriptions directly dated to 1338–1339 state 'pestilence' as the cause of death for the buried individuals⁹. Here we report ancient DNA data from seven individuals exhumed from two of these cemeteries, Kara-Djigach and Burana.

Our synthesis of archaeological, historical and ancient genomic data shows a clear involvement of the plague bacterium *Yersinia pestis* in this epidemic event. Two reconstructed ancient *Y. pestis* genomes represent a single strain and are identified as the most recent common ancestor of a major diversification commonly associated with the pandemic's emergence, here dated to the first half of the fourteenth century. Comparisons with present-day diversity from *Y. pestis* reservoirs in the extended Tian Shan region support a local emergence of the recovered ancient strain. Through multiple lines of evidence, our data support an early fourteenth-century source of the second plague pandemic in central Eurasia.



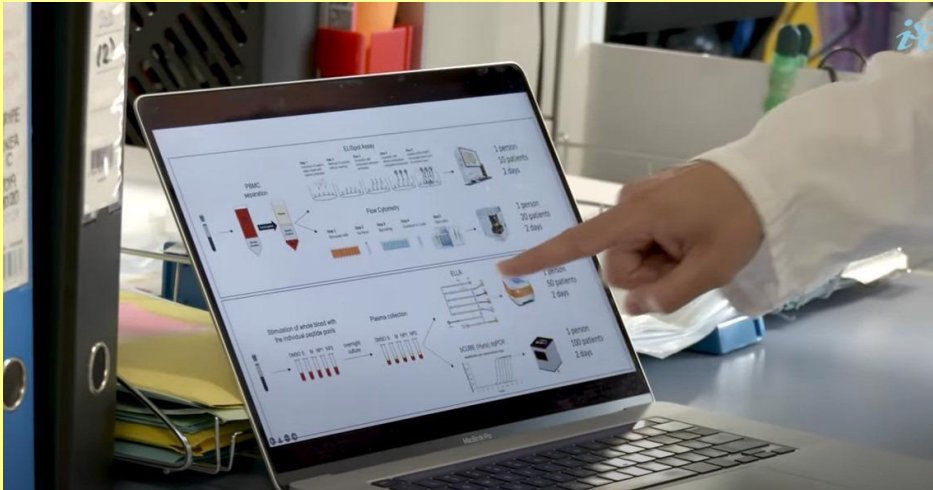
Blood Test Aims to Measure COVID Immunity

Source: <https://www.medscape.com/viewarticle/975703>

June 15 – A small blood sample and 24 hours might be all that's needed to find out how strong your [immune system](#) is against a first or repeat [coronavirus](#) infection.

Scientists created a test that indirectly measures your T-cell response — an important, long-term component of immunity that can last long after antibody levels fall off — to a challenge by the virus in [whole blood](#).

The test mimics what can be done in a formal laboratory now but avoids some complicated steps and specialized training for lab personnel. This test, researchers say, is faster, can scale up to test many more people, and can be adapted to detect viral mutations as they emerge in the future.



The test, called **dqTACT**, could help predict the likelihood of "breakthrough" infections in people who are fully vaccinated and could help determine how frequently people who are [immunocompromised](#) might need to be re-vaccinated, the authors note.

Infection with the coronavirus and other viruses can trigger a one-two punch from the [immunity](#) system — a fast antibody response followed by longer-lasting cellular immunity, including T cells, which "remember" the virus. Cellular [immunity](#) can trigger a quick response if the same virus ever shows up again.

The new test adds synthetic viral [peptides](#) — strings of amino acids that make up proteins — from the coronavirus to a blood sample. If there is no T-cell reaction within 24 hours, the test is negative. If the [peptides](#) trigger T cells, the test can measure the strength of the immune response.

The researchers validated the new test against traditional laboratory testing in 91 people, about half of whom never had COVID-19 and another half who were infected and recovered. The results matched well.

They also found the test predicted immune strength up to 8 months following a second dose of COVID-19 vaccine. Furthermore, T-cell response was greater among people who received two doses of a vaccine versus others who received only one immunization. Studies are ongoing and designed to meet authorization requirements as part of future licensing from the FDA.

► The [study](#) explaining how all this works was published online June 13 in *Nature Biotechnology*.

WHO to Rename Monkeypox Due to Stigma Concerns

Source: <https://www.medscape.com/viewarticle/975681>



June 15 – The World Health Organization announced Tuesday that it will rename the monkeypox virus after a group of scientists voiced concerns that the name is "discriminatory and stigmatizing."

The virus has infected more than 1600 people in 39 countries so far this year, the WHO said, including 32 countries where the virus isn't typically detected.

"WHO is working with partners and experts from around the world on changing the name of monkeypox virus, its clades, and the disease it causes," Tedros Adhanom Ghebreyesus, PhD, the WHO's director-general, said [during a press briefing](#).

"We will make announcements about the new names as soon as possible," he said.

Last week, more than 30 international scientists urged the public health community to change the name of the virus. The scientists [posted a letter](#) on Friday, which included support from the Africa CDC, noting that the name should change with the ongoing transmission among humans this year.



"The prevailing perception in the international media and scientific literature is that MPXV is endemic in people in some African countries. However, it is well established that nearly all MPXV outbreaks in Africa prior to the 2022 outbreak have been the result of spillover from animals and humans and only rarely have there been reports of sustained human-to-human transmissions," they wrote. "In the context of the current global outbreak, continued reference to, and nomenclature of this virus being African is not only inaccurate but is also discriminatory and stigmatizing," they added.

As one example, they noted, news outlets have used images of African patients to depict the pox lesions, although most stories about the current outbreak have focused on the global north. The Foreign Press Association of Africa [has urged](#) the global media to stop using images of Black people to highlight the outbreak in Europe.

"Although the origin of the new global MPXV outbreak is still unknown, there is growing evidence that the most likely scenario is that cross-continent, cryptic human transmission has been ongoing for longer than previously thought," they wrote.

The WHO has listed two known clades of the monkeypox virus [in recent updates](#) — "one identified in West Africa (WA) and one in the Congo Basin (CB) region." The group of scientists wrote that this approach is "counter to the best practice of avoiding geographic locations in the nomenclature of diseases and disease groups."

The scientists proposed a new classification that would name three clades in order of detection — 1, 2, and 3 — for the viral genomes detected in Central Africa, Western Africa, and the localized spillover events detected this year in global north countries. More genome sequencing could uncover additional clades, they noted.

Even within the most recent clade, there is already notable diversity among the genomes, the scientists said. Like the new naming convention adopted for the coronavirus pandemic, the nomenclature for human monkeypox could be denoted as "A.1, A.2, A.1.1," they wrote.

The largest current outbreak is in the UK, where health officials have detected 524 cases, according to the [latest update](#) from the UK Health Security Agency.

As of Tuesday, 72 cases have been reported in the US, including 15 in California and 15 in New York, according to the [latest CDC data](#).

Also on Tuesday, the WHO [published interim guidance](#) on the use of smallpox vaccines for monkeypox. The WHO doesn't recommend mass vaccination against monkeypox and said vaccines should be used on a case-by-case basis.

The WHO will convene an emergency meeting next week to determine whether the spread of the virus should be considered a global public health emergency.

"The global outbreak of monkeypox is clearly unusual and concerning," Tedros said Tuesday. "It's for that reason that I have decided to convene the emergency committee under the International Health Regulations next week to assess whether this outbreak represents a public health emergency of international concern."

EDITOR'S COMMENT: When monkeypox was confined to Africa it was ok to be named monkeypox. Now that white populations are infected, it is a stigma! Just another WHO brilliant decision proving that politics is equally important to public health...

More than One Thousand Genes Linked to Development of Severe COVID-19

Source: <https://www.genengnews.com/topics/translational-medicine/more-than-one-thousand-genes-linked-to-development-of-severe-covid-19/>

June 16 – Researchers from the University of Sheffield and Stanford University say they have discovered that there are specific genetic signals in people who develop severe coronavirus infection.

It is known that age, body mass index, and pre-existing health problems account for some of the disparities, but genetics also plays a significant role. The current study "[Multiomic analysis reveals cell-type-specific molecular determinants of COVID-19 severity](#)," published in *Cell Systems*, aimed to address why some people with COVID-19 become seriously ill or die, while others have few, if any, symptoms.

The scientists used a machine learning tool named RefMap, which can find patterns in vast amounts of data, to help identify the genetic basis for complex and poorly understood diseases. They identified more than 1,000 genes linked to the development of severe COVID-19 cases that required breathing support, or were fatal. They were also able to identify specific types of cells in which those genes act up.

The study is one of the first to link coronavirus-associated genes to specific biological functions.

"The determinants of severe COVID-19 in healthy adults are poorly understood, which limits the opportunity for early intervention. We present a multiomic analysis using machine



learning to characterize the genomic basis of COVID-19 severity. We use single-cell multiome profiling of human lungs to link genetic signals to cell-type-specific functions,” write the investigators.

“We discover >1,000 risk genes across 19 cell types, which account for 77% of the SNP-based heritability for severe disease. Genetic risk is particularly focused within natural killer (NK) cells and T cells, placing the dysfunction of these cells upstream of severe disease. Mendelian randomization and single-cell profiling of human NK cells support the role of NK cells and further localize genetic risk to CD56bright NK cells, which are key cytokine producers during the innate immune response. Rare variant analysis confirms the enrichment of severe-disease-associated genetic variation within NK-cell risk genes.

“Our study provides insights into the pathogenesis of severe COVID-19 with potential therapeutic targets.”

“During the research we discovered the genetic architecture underlying coronavirus infection, and found that these 1,000 genes account for three quarters of the genetic drivers for severe COVID-19,” said Johnathan Cooper-Knock, PhD, National Institute for Health and Care Research (NIHR) clinical lecturer in the department of neuroscience at the University of Sheffield and co-author of the study. “This is significant in understanding why some people have had more severe symptoms of COVID-19 than others.”

Michael P. Snyder, PhD, principal investigator in the department of genetics at Stanford, led the study in collaboration Stanford genetics instructor Sai Zhang, PhD, and Cooper-Knock, who is currently a Stanford visiting scholar.

The research process

The research team used several large data sets to unpack the genetics behind severe COVID-19. The first data set contained genetic information from healthy human lung tissue. The data helped identify gene expression in 19 different types of lung cells, including epithelial cells that line the respiratory tract and are the first defense against infection.

Other data came from the COVID-19 Host Genetics Initiative, one of the largest genetic studies of critically ill coronavirus patients. The researchers looked for genetic clues in the data—single nucleotide polymorphisms—that might indicate if someone is at a higher risk for severe COVID-19. They tracked whether some mutations occurred more or less often in COVID-19 patients with severe disease.

Mutations that continued to appear, or were notably absent, in the patients who developed severe COVID-19 suggested those variations might be behind the infection’s severity.

But genetic mutations on their own can be difficult to interpret. To better understand their findings the team used other data describing which regions of the genome are important for different cell types within lung tissue. By overlapping the mutations onto the cell-specific genomes the researchers could pinpoint which genes were dysfunctioning and within which cell types.

Risk genes

The researchers also wanted to know which types of cells harbored faulty gene expression. Through their machine learning tool, they determined that severe COVID-19 is largely associated with a weakened response from two well-known immune cells, i.e., natural killer (NK) cells and T cells. NK cells and a subtype called CD56 bright are considered the most important.

“NK cells, which humans are born with and are the body’s first line of defense against infection, are known for their ability to destroy viruses and cancer cells,” noted Cooper-Knock. “NK cells also help produce a range of immune system proteins called cytokines. One cytokine, interferon-gamma, is a key activator of immune cells. Acting in concert with interferon-gamma, NK cells mount an immediate and coordinated defense against viral infections.

“NK cells are like the generals directing the war. They mobilize other immune cells, telling them where to go and what to do. We found that in people with severe coronavirus infection, critical genes in NK cells are expressed less, so there’s a less robust immune response. The cell isn’t doing what it’s supposed to do.”

Stanford’s Snyder likened COVID-19 risk genes to harmful variants of the BRCA genes that predispose some people to breast and ovarian cancer.

“Our findings lay the foundation for a genetic test that can predict who is born with an increased risk for severe COVID-19,” he said. “Imagine there are 1,000 changes in DNA linked to severe COVID-19. If you have 585 of these changes, that might make you pretty susceptible, and you’d want to take all the necessary precautions.”

Cooper-Knock pointed out that drugs that kickstart sluggish NK cells are already proposed to treat some types of cancer. “The drugs bind to receptors on the NK cells and trigger them to have a more robust response,” he explained, noting that trials of NK cell infusions for severe COVID-19 are underway.”



A Pharmaceutical Scientist Explains How Drugs Know Where to Go in The Body

By Tom Anchordoquy

Source: <https://www.sciencealert.com/a-pharmaceutical-scientist-explains-how-drugs-know-where-to-go-in-the-body>

June 18 – When you take aspirin for a headache, how does the aspirin know to travel to your head and alleviate the pain?

The short answer is, it doesn't: Molecules can't transport themselves through the body, and they don't have control over where they eventually end up.

But researchers can chemically modify drug molecules to make sure that they bind strongly to the places we want them and weakly to the places we don't.

Pharmaceutical products contain more than just the active drug that directly affects the body. Medications also include "inactive ingredients," or molecules that enhance the stability, absorption, flavor and other qualities that are critical to allowing the drug to do its job.

For example, the aspirin you swallow also has ingredients that both prevent the tablet from fracturing during shipping and help it break apart in your body.

As a [pharmaceutical scientist](#), I've been studying [drug delivery](#) for the past 30 years. That is, developing methods and designing nondrug components that help get a medication where it needs to go in the body.

To better understand the thought process behind how different drugs are designed, let's follow a drug from when it first enters the body to where it eventually ends up.

How drugs are absorbed in the body

When you swallow a tablet, it will initially dissolve in your stomach and intestines before the drug molecules are [absorbed into your bloodstream](#). Once in the blood, it can circulate throughout the body to access different organs and tissues.

Drug molecules affect the body by [binding to different receptors](#) on cells that can trigger a particular response.

Even though drugs are designed to target specific receptors to produce a desired effect, it is impossible to keep them from continuing to circulate in the blood and binding to nontarget sites that potentially cause unwanted side effects.

Drug molecules circulating in the blood also degrade over time and eventually leave the body in your urine. A classic example is the strong smell your urine might have after you eat asparagus because of how quickly your kidney clears [asparagusic acid](#). Similarly, [multivitamins](#) typically contain riboflavin, or [vitamin B2](#), which causes your urine to turn bright yellow when it is cleared.

Because how efficiently drug molecules can cross the intestinal lining can vary depending on the drug's chemical properties, some of the drugs you swallow never get absorbed and are removed in your feces.

Because not all of the drug is absorbed, this is why some medications, like those used to treat high blood pressure and allergies, are [taken repeatedly](#) to replace eliminated drug molecules and maintain a high enough level of drug in the blood to sustain its effects on the body.

Getting drugs to the right place

Compared with pills and tablets, a more efficient way of getting a drug into the blood is to inject it directly into a vein. This way, all the drug gets circulated throughout the body and avoids degradation in the stomach.

Many drugs that are given intravenously are "[biologics](#)" or "[biotechnology drugs](#)," which include substances derived from other organisms.

The most common of these are a type of [cancer](#) drug called [monoclonal antibodies](#), proteins that bind to and kill tumor cells. These drugs are injected directly into a vein because your stomach can't tell the difference between digesting a therapeutic protein and digesting the proteins in a cheeseburger.

In other cases, drugs that need very high concentrations to be effective, such as [antibiotics for severe infections](#), can be delivered only through infusion.

While increasing drug concentration can help make sure enough molecules are binding to the correct sites to have a therapeutic effect, it also increases binding to nontarget sites and the risk of side effects.

One way to get a high drug concentration in the right location is to apply the drug right where it's needed, like rubbing an ointment onto a skin rash or using [eyedrops for allergies](#). While some drug molecules will eventually get absorbed into the bloodstream, they will be [diluted enough](#) that the amount of drug that reaches other sites is very low and unlikely to cause side effects.



Similarly, an inhaler delivers the drug directly to the lungs and avoids affecting the rest of the body.

Patient compliance

Finally, a key aspect in all drug design is to simply get patients to take medications in the right amounts at the right time.

Because remembering to take a drug several times a day is difficult for many people, researchers try to design drug formulations so they need to be [taken only once a day or less](#).

Similarly, pills, inhalers, or nasal sprays are more convenient than an infusion that requires traveling to a clinic for a trained clinician to inject it into your arm.

The less troublesome and expensive it is to administer a drug, the more likely it is that patients will take their medication when they need it.

However, sometimes infusions or injections are the only effective way that certain drugs can be administered.

Even with all the science that goes into understanding a disease well enough to develop an effective drug, it is often up to the patient to make it all work as designed.

[Tom Anchordoquy](#) is a Professor of Pharmaceutical Sciences @ University of Colorado Anschutz Medical Campus.

WHO chief 'believes Covid DID leak from Wuhan lab' after a 'catastrophic accident' in 2019 despite publicly maintaining 'all hypotheses remain on the table'

By Glen Owen (Political Editor For The Mail On Sunday)

Source: <https://www.dailymail.co.uk/news/article-10930501/WHO-chief-believes-Covid-DID-leak-Wuhan-lab-catastrophic-accident-2019.html>

June 18 – The head of the [World Health Organisation](#) privately believes the Covid pandemic started following a leak from a Chinese laboratory, a senior Government source claims.

While publicly the group maintains that 'all hypotheses remain on the table' about the origins of Covid, the source said Tedros Adhanom Ghebreyesus, director-general of the World Health Organisation (WHO), had recently confided to a senior European



politician that the most likely explanation was a catastrophic accident at a laboratory in Wuhan, where infections first spread during late 2019.

The Mail on Sunday first revealed concerns within Western intelligence services about the Wuhan Institute of Virology, where scientists were manipulating coronaviruses sampled from bats in caves nearly 1,000 miles away – the same caves where [Covid-19](#) is suspected to have originated – in April 2020. **The worldwide death toll from the Covid pandemic is now estimated to have hit more than 18 million.**

The WHO was initially criticised for its deferential approach to China over the pandemic, as well as a willingness to accept Beijing's protestations that claims of a

laboratory leak were just a 'conspiracy theory'.

However, in the absence of any compelling evidence of 'zoonotic' spread – the process by which a virus leaps from animals to humans – it is now adopting a more neutral public stance.



Dr Tedros updated member states on the pandemic this month, admitting: ‘We do not yet have the answers as to where it came from or how it entered the human population.

‘I’ve seen better seals on my fridge!’ Shock photos inside Wuhan lab which stores 1,500 virus strains

By GLEN OWEN
POLITICAL EDITOR

IT IS a rare glimpse inside the Chinese laboratory at the centre of mounting international suspicion about the Covid-19 pandemic – and will do nothing to dispel fears that it was caused by a catastrophic leak which has been covered up by Beijing.

Pictures from inside Wuhan’s secretive Institute of Virology show a broken seal on the door of one of the refrigerators used to hold 1,500 different strains of virus – including the bat coronavirus which has jumped to humans with such devastating effect.

The pictures, first released by the state-owned China Daily newspaper in 2018, were published on Twitter last month, before being deleted. One comment attached read: ‘I have seen better seals on my refrigerator in my kitchen.’

The Mail on Sunday revealed a fortnight ago that Ministers now fear that the pandemic could have started as the result of a leak. Last week, this newspaper also disclosed that the institute had undertaken coronavirus experiments on bats captured more than 1,000 miles away in Yunnan, funded by a \$3.7 million grant from the US government to sequence the Covid-19 genome.

‘This could prove to be costliest cover-up ever’

has traced it to the bats found only in those caves.

Our revelations led to Donald Trump being quizzed at a press conference last week about the leak theory, to which the President replied: ‘We are doing a very thorough examination of this horrible situation.’

Mr Trump also played on Friday evening to scotch US funding for the Wuhan institute.

Meanwhile, US Secretary of State Mike Pompeo has demanded that Beijing come clean over whether the virus had leaked from the lab. He said: ‘There is still lots to learn. The US government is working diligently to figure it out.’

He added that one of the best ways that China could find to cooperate would be ‘to let the world and let the world’s scientists know exactly how this came about, exactly how this virus began to spread.’

Suspicion of Chinese cover-up increased further after the Washington Post reported that US diplomats in Beijing had written cables about the Wuhan laboratory.

DOES THIS LOOK SECURE TO YOU?

DAMAGED: A worker at the lab with a sample from the fridge which, circled, can clearly be seen to have an ill fitting seal

US intelligence sources say that shortly after the coronavirus outbreak began, officials at the lab destroyed samples of the virus, erased early reports and suppressed academic papers – and tried to pin the blame on Wuhan’s wet market, where wild animals are sold for consumption.

The sources believe that ‘Patient Zero’ was an intern at the lab, who

spread the virus into the local population after infecting her boyfriend (the source described it as ‘the costliest government cover-up of all time’).

After initially accepting the wet market theory, intelligence officials in the US, Britain and Canada are increasingly focusing on the Wuhan institute, not least because of the level of concealment required for the bats in Yunnan to have infected animals in Wuhan, which then passed it on to humans.

Following a video meeting of the G7 nations on Thursday, French

President Emmanuel Macron said: ‘There are clearly things that have happened that we don’t know about.’

The World Health Organisation, which faces allegations of complicity with Beijing over the pandemic, has also been criticised for quickly accepting and propagated the wildlife market theory.

Although British Government sources say that the evidence suggests that the virus was ‘zoonotic’ – originating from an animal – that is still compatible with the theory that it first passed to humans as a result of an accident by scientists studying it in a laboratory.

However, one political source said that there was ‘growing scientific curiosity’ over the symptoms of a marked loss of taste and smell in many victims of Covid-19. This, they say, ‘only might indicate a level of human interference’, the source said.

Beijing insists that the fact that the country’s primary virology institute is based in the city at the centre of the outbreak is just coincidence, dismissing links to the laboratory as ‘baseless conspiracy theories’.

In a letter to The Mail on Sunday today (see Page 123), a Chinese Embassy spokeswoman says: ‘There has never been any cover-up, nor was cover-up ever allowed to happen. The relatively low Covid-19 death toll in China proves that the containment measures are effective. Strict lockdown measures have effectively slowed down the spread of the virus and minimised the cases of infection.’

‘Understanding the origins of the virus is very important scientifically to prevent future epidemics and pandemics. ‘But morally, we also owe it to all those who have suffered and died and their families. The longer it takes, the harder it becomes. We need to speed up and act with a sense of urgency.’

‘All hypotheses must remain on the table until we have evidence that enables us to rule certain hypotheses in or out. This makes it all the more urgent that this scientific work be kept separate from politics. The way to prevent politicisation is for countries to share data and samples with transparency and without interference from any government. The only way this scientific work can progress successfully is with full collaboration from all countries, including China, where the first cases of SARS-CoV-2 were reported.’

It was suggested Covid ‘could easily have escaped while being analysed’ by scientists

Last year, the WHO established the Scientific Advisory Group for the Origins of Novel Pathogens (Sago) to outline which studies would be needed to identify the origins of SARS-CoV-2 – as Covid is scientifically known – and to ‘create a global framework for studying the origins of emerging and re-emerging pathogens’.

An original probe into the outbreak by the WHO was resisted fiercely by China, leading to a report that concluded the SARS-CoV-2 virus probably passed to humans from a bat via another unidentified species.

But after 14 nations including the UK, US and Australia criticised its findings as being heavily compromised, Dr Tedros admitted the report’s flaws and ordered a new process.

The Government has taken a cautious approach to apportion blame for Covid – something that China-sceptics attribute to a fear of offending Beijing. However, American intelligence has placed the secretive Wuhan laboratory at the centre of its analysis.

Former US Secretary of State Mike Pompeo claimed that workers at the institute had fallen ill with Covid-like symptoms in autumn 2019 – weeks before the alarm was raised, and said that as part of military projects its scientists were experimenting with a bat coronavirus very similar to the one that causes Covid.

A WHO spokesman said: ‘Dr Tedros has been consistently saying all hypotheses remain on the table as scientists pursue their work.’

CHINA IN THE DOCK 5-PAGE SPECIAL

By GLEN OWEN
POLITICAL EDITOR

MINISTERS fear that the coronavirus pandemic might have been caused by a leak from a laboratory in the Chinese city of Wuhan.

The claim was described as ‘baseless conspiracy theories’ by the Chinese Embassy in London last week, but it has not been dismissed as ‘unfounded’ by the Foreign Office.

Senior Government sources say that while the balance of scientific advice is still that the deadly virus was first transmitted to humans from live animals at the Wuhan market, a leak from a laboratory in the Chinese city is ‘no longer being discounted’.

Beijing insists that the virus ‘originated’ in the live animal market and did not use mice that the virus first spread to humans after leaving the laboratory.

The member of China, which receives detailed classified briefings from the security services, said: ‘There is a credible alternative view (the zoonotic theory) to the market theory. It is not conclusive that there is that laboratory.’

Wuhan is home to the Institute of Virology, the most advanced laboratory of its type in the Chinese mainland. The 1,300m sq institute, based five miles from the infamous wildlife market, is supposed to be one of the most secure topological units in the world. The state-run Peoples Daily newspaper said in 2018 that it was capable of conducting experiments with highly pathogenic microorganisms such as the deadly Ebola virus.

US intelligence sources believe the institute is a hotbed of ‘leak’ activity. They suggest that the virus’s genome was 96 per cent similar to one occasionally found in bats.

‘It could easily have escaped while being analysed’

But despite its reputation for high security, there have been unverified local reports that mice at the institute became infected after being sprayed by bleach, and then can spread the infection into the local population.

A second institute in the city, the Wuhan Centre for Disease Control, which is barely three miles from the market – is also believed to have carried out experiments on animals such as bats to examine the transmission of coronavirus.

American biosecurity expert Professor Michael Douglas, of Rutgers University in New Jersey, said that while the evidence suggests Covid-19 may have been created in one of the Wuhan laboratories, it could easily have been spread elsewhere.

Prof Douglas said he has seen evidence that scientists at the Centre for Disease Control and the Institute of Virology studied the viruses with only ‘level 2’ safety precautions, which is only equivalent to level 1 – which typically only mild infectious diseases are studied.

He said: ‘Virus collection, culture, isolation, or animal infection would pose a substantial risk of infection to a lab worker, and from the lab worker then to the public.’

He concluded that the evidence left ‘basic evidence that coronavirus is a lab construct, but no basis to rule out an accident.’

A study by the South China University of Technology concluded that the virus was likely to have leaked through shortly after its creation. The research paper was removed from a social networking site for scientists and researchers. Ironically, when the wildlife market was closed in January, a report appeared in the Beijing News identifying Huang Yanning, a researcher at the Institute of Virology, as ‘patient zero’ – the first person to be infected.

The claim was described as ‘baseless conspiracy theories’ by the Chinese Embassy in London last week, but it has not been dismissed as ‘unfounded’ by the Foreign Office.

In 2019, a leak from a Chinese laboratory led to an outbreak of severe acute respiratory syndrome (SARS), killing one in five and infecting nine others. The Chinese government said the leak was a result of negligence and five senior officials at the Chinese Centre for Disease Control and Prevention were punished.

Last night Downing Street said it did not expect claims the virus came from a Chinese laboratory.

The Chinese Embassy declined comment, but in a letter to the newspaper today (see Page 106), it said it was ‘not in a position to comment on how the Chinese would face a virus outbreak, the embassy’s Zhang Hong writes: ‘Such reports completely disregard the tremendous efforts and huge sacrifices of China and its people, and deny China’s significant contribution to global public health and safety.’

As Zhou adds: ‘China wasted no time in identifying the virus’s pathogen, sharing its genetic sequence with the World Health Organisation, taking the most effective, strict and sharing objectives with other countries in need, and providing assistance to more than 120 countries, including the UK, and to four international organisations.’

● Ministers study startling new theory in security briefings

● Claims staff ‘got infected after being sprayed with blood’

DID THE VIRUS LEAK FROM A RESEARCH LAB IN WUHAN?

CHINA OWES £351BN DEBT TO BRITAIN, SAYS THINK TANK STUDY PAGES 14-15

IS HEAD OF THE WORLD HEALTH ORGANISATION BEIJING LACKEY? PAGES 16-17

WHO mass gathering COVID-19 risk assessment tool: generic events, version 3

Source: <https://www.who.int/publications/i/item/WHO-2019-nCoV-Mass-gathering-RAtool-2022.1>

June 16 – The *WHO mass gathering COVID-19 risk assessment tool - generic events* has undergone a third revision. Version 1 was published on 20 March 2020 under the title “Mass Gathering risk assessment COVID-19: key considerations” and Version 2 was published on 10 July 2020 under the title “WHO Mass Gathering COVID-19 Risk Assessment Tool - Generic Events”.

The content of the tool has been updated to reflect new WHO technical guidance and new evidence on both COVID-19 pandemic and mass gatherings, as well as feedback from end-users. This revision of the risk assessment tool was developed and reviewed by the WHO Mass Gathering Technical Expert Group with input from WHO area-specific technical teams. The expanded tool includes eight tabs: 1. Instructions; 2. Assessment Overview; 3. Decision Tree; 4. Risk Evaluation; 5. Risk Mitigation; 6. Decision Matrix; 7. Risk Communication; and 8. Reviewer Sign Off. There is an additional tab with a glossary and list of abbreviations.

The *WHO mass gathering COVID-19 risk assessment tool* version 3 includes newly published research and evidence from WHO pertaining to areas such as improved SARS-CoV-2 diagnostics, vaccines, variants of concern (VoC), ventilation considerations, and risk communication and community engagement and infodemic management (RCCE-IM) event strategies. Following lessons learned from previous mass gatherings held during the COVID-19 pandemic period the risk evaluation and risk mitigation questions and statements respectively decreased attention to venues cleaning/sanitation measures, decreased personal protection equipment (PPE) considerations except for mask use, increased measures on the quality of masks, newly included ventilation considerations, increased attention to physical distancing measures, to surveillance screening testing for events and developing detailed testing protocols, as well as included travel restriction considerations for host countries.

Further effort was made to visibly connect the questions from the risk evaluation pillar to statements in the risk mitigation pillar for end-users to understand how risks may arise during a mass gathering and what actions can be performed to mitigate such risks.

The risk communication pillar was significantly enhanced with the principles of the risk communication and community engagement and infodemic management to be used to develop the mass gathering strategy.

Despite Low Monkeypox Risk, Vaccine Developers Prepare

Source: <https://www.genengnews.com/virology/coronavirus/despite-low-monkeypox-risk-vaccine-developers-prepare/>

June 20 – Cases of monkeypox (likely soon to be dubbed MPXV by the World Health Organization) are proliferating worldwide, but many experts say it seems unlikely to develop into a pandemic like COVID-19, AIDS, or SARS.

The Centers for Disease Control & Prevention (CDC) says the [risk to the U.S. population](#) is low. Nonetheless, the World Health Organization (WHO) Director-General tweeted on June 14 that he is convening a meeting June 23 to determine whether the expanding outbreak constitutes a global health emergency.

“Does monkeypox have the potential to become a pandemic of significant proportion?” Cesar Arias, MD, PhD, co-director of the Center for Infectious Disease at Houston Methodist, asks. “The answer, as with any transmissible virus, is yes, but whether that will happen is the million-dollar question. Transmission is occurring (outside the regions in which it is endemic) and the magnitude of the transmission is unknown. After what we experienced these past three years, we should be cautious.”

David Dodd, chairman, president, and CEO of GeoVax, is optimistic. “It’s an issue, but it likely won’t become a pandemic like COVID-19. There probably is an element of hysteria to it right now.” His confidence is based on a body of research into monkeypox going back at least two decades, its method of transmission, and the availability of vaccines and therapeutics to counter this virus.

Two vaccines available in United States

The CDC says the vaccines developed against smallpox also offer 85% protection against monkeypox. Currently, there are two vaccines approved for smallpox in the U.S., **Jynneos™ and ACAM2000**. Of them, **only Jynneos is approved for monkeypox**.

Bavarian Nordic’s Jynneos is a nonreplicating modified *vaccinia Ankara* (MVA) vaccine that is FDA-approved for both smallpox and monkeypox. The company received an order from BARDA for 500,000 liquid-frozen doses for delivery this year. Receipt of that order will increase the U.S. stockpile to 1.9 million doses. Most of Bavarian Nordic’s remaining bulk Jynneos vaccine will be freeze-dried into approximately 13 million doses by 2025. The vaccine, known as Imvanex® in the U.K., was delivered to England in 2018 in response to a monkeypox outbreak there.

ACAM2000 is a second-generation smallpox vaccine developed by Sanofi Pasteur Biologics. This live vaccinia-based vaccine is licensed to immunize people at high risk of contracting smallpox. It is part of the U.S. Strategic National Stockpile for smallpox.



GeoVax considered monkeypox even before the outbreak. “We already have published in peer-reviewed journals that our MVA vaccines, in addition protecting animal models against HIV and other infections, also prevents monkeypox,” Dodd says. “We are validating our COVID-19 vaccine (CM04S1) now, which, is in Phase II trials, [and we] also will address the monkeypox virus.” Likewise, “Moderna is investigating potential monkeypox vaccines at a preclinical level, using its mRNA platform,” Luke Mircea-Willats, corporate spokesperson, says.

Others are watching the situation carefully. “Inovio Pharmaceuticals produced preclinical data on a monkeypox vaccine, published in the [Journal of Infectious Diseases in 2010](#),” corporate spokesman Jeff Richardson says. “There has been no further work on this particular vaccine since that publication.” Inovio is monitoring the outbreak of this and any other infectious disease threats, with the potential of applying its DNA medicines platform as applicable.

Mass vaccination not needed

As yet, Arias says, “I don’t see real evidence of airborne transmission. It is not associated with sexual behaviors either, but with proximity to active, infective, skin lesions.” The CDC says monkeypox is transmitted through direct contact with infectious sores, scabs, or bodily fluids from those infected. So, unless the virus becomes airborne—which the WHO says is possible but uncommon—wearing masks won’t affect transmission.

Vaccination also is recommended after exposure. To prevent the onset of monkeypox, the vaccine must be administered within four days of exposure. When given up to 14 days after exposure, however, vaccination may ease the symptoms but not prevent disease onset.

Baby Boomers and GenXers shouldn’t assume they’re protected from monkeypox or smallpox. “It is unlikely that the first-generation vaccine for smallpox, which was administered [until 1972](#) in the United States, will withstand a new challenge,” Arias says. “The newer vaccines seem to work [better]. The question is whether we have enough, if this gets out of hand.”

Antiviral meds ready, too

If it does spread, antiviral therapies are available. Siga Technologies’ **antiviral drug, TPOXX[®] (tecoviromat), is approved to treat monkeypox in Europe**. “TPOXX blocks the spread of virus while allowing the induction of a protective immune response,” Dennis Hruby, CSO, tells *GEN*. “The approved course of therapy is two oral doses per day for 14 days.” It recently received FDA approval for an intravenous version for those who cannot easily swallow pills.

Although TPOXX is not FDA-approved for use in the United States against monkeypox, it may be used under an expanded access protocol to treat monkeypox during an outbreak. It already has been used on at least one patient during the current outbreak, Hruby adds.

Vistide[®] (cidofovir) by Gilead Sciences, is approved for the treatment of cytomegalovirus retinitis in AIDS patients and also holds expanded access protocol authorization for monkeypox, as does vaccinia immune globulin intravenous (VIGIV).

Additionally, an expanded access—investigational new drug application (EA-IND) [is being prepared](#) for a fourth therapy, Tembexa[®] (brincidofovir) by Chimerix, for monkeypox. (The intention to sell Tembexa to Emergent BioSolutions was announced in early May.)

Scientists watch closely

During the COVID-19 pandemic, scientists frequently pointed out that the science was changing, while trust in public health officials waned. Going forward, Dodd says, earning the public’s trust “is less about getting the information right or wrong and more about being transparent,” and pivoting as needed. “People are much more accepting of that.” So, as long as the experts admit when they are wrong and adjust their strategies to adapt to new information, they can regain—and maintain—the public’s trust, he suggests.

While no can accurately predict what will happen regarding the monkeypox outbreak, it merits close scientific observation.

“Monkeypox is a serious infection and can be fatal,” Anne Rimoin, PhD, professor of epidemiology and director of the UCLA Center for Global and Immigrant Health, said in a [Q&A](#) blog post. She has studied monkeypox for some 20 years and says transmission patterns are changing. Specifically, it is expanding beyond the areas of Africa in which it is endemic. In fact, the current outbreak is “the [largest-ever](#) outside of Africa.”

Transmissibility and fatality depend on the clade, with the Central Africa/Congo Basin clade associated with 6% to 10% mortality and the West African clade with 1% to 3.5% mortality. Access to vaccines and therapeutics improves those risks, however. “There haven’t been any fatalities in high-income settings,” she points out. “There are vaccines and treatments, and the world is more aware of what it takes to contain outbreaks.

“The risk of monkeypox to the general public is low. It is still a rare infection...and it is unlikely that most people in the U.S. will ever come in contact with it,” Rimoin says.



A Possible Biomarker for COVID-19 Cognitive Impairment

June 16, 2022

Source: <https://www.medrxiv.org/content/10.1101/2022.06.07.22276020v1.full.pdf>

The [study](#) covered in this summary was published on medRxiv.org as a preprint and has not yet been peer reviewed.

Key Takeaways

- This study demonstrated that participants with previous SARS-CoV-2 infections had mild to moderate cognitive impairment up to 4 months after diagnosis, independently of baseline cognitive function.
- Mild cognitive decline is associated with **kynurenine pathway** (KP) activation, suggesting KP metabolites are a potential biomarker and therapeutic target.

Why This Matters

- This study is the first comprehensive evaluation of the pathogenesis of post-acute COVID-19 cognitive function in unvaccinated patients who were confirmed by PCR to have SARS-CoV-2 infection.
- KP activation is the first biomarker that has the potential to be used to evaluate and monitor patients for post-acute COVID-19 cognitive impairment and decline.

Study Design

- The study enrolled 128 unvaccinated participants with nasopharyngeal swab-confirmed SARS-CoV-2 infection through the Sydney St. Vincent's Hospital COVID-19 ADAPT prospective study.
 - The average age of the participants was 46.6 years (range, 20 – 79 years).
 - 42% of participants were women.
- Cognitive and olfactory function along with blood cytokine level, neurobiomarkers, and KP metabolites were assessed 2, 4, and 12 months after confirmed diagnosis.
- Lung function, physical health, and mental health were assessed 2 months post diagnosis.
 - Participants were divided into three acute severity groups that were based on acute COVID-19 illness history.

Key Results

- Overall cognitive performance significantly declined ($P < .001$).
 - Cognitive impairment was more common among participants who reported anosmia 2 months post diagnosis ($P = .05$).
- Mild to moderate cognitive impairment was observed in 16% of participants 2 months after diagnosis; in 23% 4 months after diagnosis; and in 26% 12 months after diagnosis.
- Cognitive decline was significantly associated with KP metabolites, quinolinic acid, 3-hydroxyanthranilic acid, and kynurenine ($P < .001$).

Limitations

- The overall sample size was small, as was the subsample of patients with severe cases.
- The sample was restricted to higher socioeconomic populations of Sydney, and the findings may not be generalizable to all patient populations.

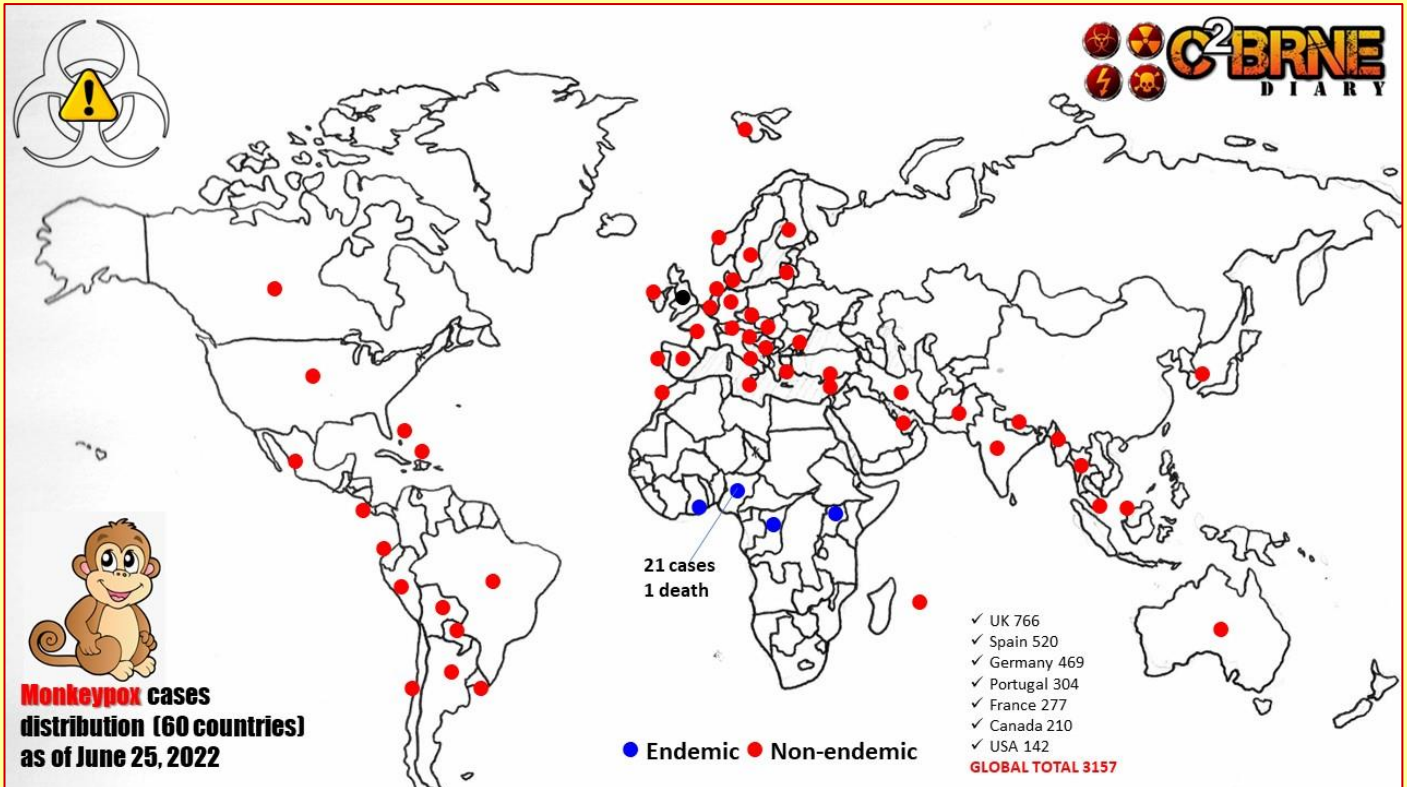
Disclosures

- This study was funded by the St. Vincent's Hospital ADAPT study at St. Vincent's Centre for Applied Medical Research.
- The published article contains a listing of authors' relevant financial relationships.

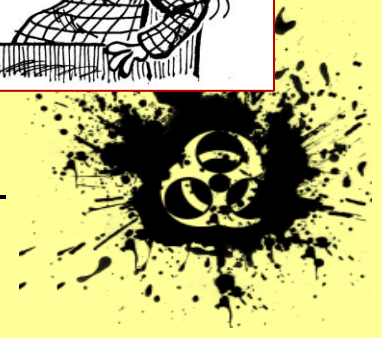
This is a summary of a preprint [research study](#), "Post-acute COVID-19 Cognitive Impairment and Decline Uniquely Associate With Kynurenine Pathway Activation: A Longitudinal Observational Study," written by Lucette A. Cysique from the St. Vincent's Centre for Applied Medical Research in Australia and colleagues.



Perhaps it is time to start worrying?



Data [source](#)



Women significantly more likely to develop long COVID than men

Source: <https://newatlas.com/health-wellbeing/long-covid-women-men-case-study/>

June 21 – A new review article has discovered females are much more likely to suffer from long COVID than males. The findings are curiously distinct from earlier studies that show men more often experience severe acute disease from COVID-19 compared to women.

One of the more interesting observations that arose early in the pandemic was the tendency for men to suffer more severe cases of COVID-19 than women. As time passed a [number of subsequent studies verified the early observations](#). Not only were men more likely to test positive to COVID-19, they were more likely to be admitted into intensive care and ultimately die compared to women. Some studies hypothesized psychosocial and behavioral factors could mostly explain this sex-based disparity in COVID-19 impact. However, other researchers [pointed to some fundamental biological differences](#) that could potentially account for the heightened severity of acute disease in men.

This new research interestingly flips the table on those prior findings. While males may be more likely to experience severe acute disease it seems females are more likely to suffer from persistent long-term COVID-19 symptoms.

Tracking several thousand published studies encompassing over one million patients, the new research found women were 22 percent more likely to suffer from long COVID compared to men. Alongside that, the research found long COVID symptoms slightly differed between men and women.

“In patients who experienced long COVID syndrome, ENT [ear, nose & throat], GI [gastrointestinal], psychiatric/mood, dermatological, neurological, and other complications (primarily rheumatological complications and fatigue) were significantly more likely in female patients while endocrine and renal complications were significantly more likely in male patients,” the researchers note in the new study.

As with prior studies investigating sex-based differences in COVID-19, it's unclear whether these observations are underpinned by biological or social factors. The study notes there are several social and cultural factors that could play a role in this disparity.

Occupations where women are more predominant, such as nursing or teaching, could expose them to the virus in ways that are more likely to lead to long COVID, the researchers hypothesize. Or there may be gender-based disparities in access to acute health care, leading to more long-term consequences from SARS-CoV-2 infections.

Biological differences between males and females could also be playing a role in the long COVID sex disparity. The researchers hypothesize the same immune response that protects women from acute disease could be what is amplifying the predominance of long COVID.

“Differences in immune system function between females and males could be an important driver of sex differences in Long COVID syndrome,” the study explained. “Females mount more rapid and robust innate and adaptive immune responses, which can protect them from initial infection and severity. However, this same difference can render females more vulnerable to prolonged autoimmune-related diseases.”

Perhaps the biggest issue highlighted in this new study is the lack of sex-disaggregated data in current COVID-19 research. The vast majority of published work reviewed in the new study did not offer sex-based data on its cohorts.

The researchers indicate this lack of sex-specific data in COVID-19 research is likely hindering our ability to understand the disease and develop more effective treatments. The study concludes with a call for a greater focus on sex-specific data in future published research.

“The lack of studies reporting sex-disaggregated outcomes for COVID-19 speaks to the need for further, large-scale research that includes sex as an analytical variable and that reports data by sex,” the researchers conclude. “Devising basic research and clinical trial protocols using sex-specific methodologies, with a primary objective of prospectively evaluating aspects of COVID-19 by sex, will fill critical information gaps. A thorough understanding of how biological sex is influencing COVID-19 will have important implications for clinical management and mitigation strategies for this disease.”

► The new study was published in the journal [Current Medical Research and Opinion](#).

EDITOR'S COMMENT: Still dubious if “long Covid” begins after the initial contact with the virus or it is a progressive complex process deteriorating the bodily systems?

Is cholera and polio back?



Summer 2022

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