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# CBRNE NEWSLETTER TERRORISM

E-Journal for CBRNE & CT First Responders



Rio 2016™



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**CBRNE-Terrorism Newsletter – 2016©**

July 2016

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### Editorial

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

*Editor-in-Chief*  
CBRNE-Terrorism Newsletter

*Dear Colleagues,*

### What a month!

Almost all nasty things happened in July! From military coup (Turkey) to airport attacks (Turkey) and mass gathering terrorist attacks (France) all the way to sniper attacks against police officers (USA).

Below is an outline of our crazy Planet in constant pain:

- ☑ **UK:** Brexit was the main issue and the biggest surprise of the century. Main characteristic was the fact that those voted did not thought that their single vote will count!
- ☑ **Brazil:** (1) Man was arrested over “planned airport terror attack” in Sao Sebastian (near capital Brasilia); (2) “Black Lives Matter” moves to Rio for the Olympics; (3) US Navy Adm. Kurt Tidd warned about the presence of IS in Latin America; (4) Four people denied accreditation for the Olympic Games as linked with terror groups; (5) Brasil jihadist group Ansar al-Khilafah pledged allegiance to IS (first time ever in South America); and (6) Pro al Qaeda group calls for knife attacks against US, France, Israel and UK athlets during the Olympiad.
- ☑ **Somalia:** Terrorist attack against hotel in Mogadishu – no special issue for mainstream media; it is only Africa!
- ☑ **Turkey:** Both a military coup that is not completely over yet and a terrorist attack against Ataturk International Airport in Istanbul.
- ☑ **Bangladesh:** Bloody terrorist attack against café in Dhakka – again no special coverage by media.
- ☑ **S. Arabia:** Suicide blast in the holly city of Medina.
- ☑ **Iraq:** VBIED attack in a busy shopping mall in Baghdad – no special coverage despite the high death toll (>250); usuall staff for this part of the world.
- ☑ **IS:** A new chapter in allien invators' atrocities – Nour-al-din el-Zanki fighters (fighting Assad), beheaded (and filmed) a young boy accused to be a spy!
- ☑ **France:** Terrorist attack with a truck playing human bowling bloodshed Bastille Day (July 14<sup>th</sup>) in Nice. Again problems identified remained problems identified: only one Municipality Police patrol car was blocking the entrance of Promenade des Anglais during festivities (*Liberation*, FR) ...
- ☑ **EU:** 91% of EU citizens believe IS will pose threat to Europe in next 5 years (“Project 28” survey by the Szazadveg Foundation).
- ☑ **USA:** Five police officers were murdered by sniper in Dallas, TX. Similar attacks against police personnel in Missouri, Georgia and Tennessee.
- ☑ **Germany:** Ax attack by IS terrorist inside a train. Second attack in a Munich shopping mall (Olympia) in the district of Moosach (July 22).
- ☑ **Indonesia:** The most wanted Islamist militant (Abu Santosa) was killed by security forces.



- ☑ **Australia:** Terrorist rammed underground security in Sydney's police department (Merryland) with a car full of gas cylinders and burned himself when the VBIED did not detonated as planned.

**Threats and Trends:** (1) A possible target for the future: Basilica of San Petronio in Bologna, Italy (with its famous Mohamad in Hell fresco); (2) IS shifts strategy from building territory to spreading terror worldwide when they lost 12% of their grounds in Syria and Iraq (the size of Ireland); (3) Women terrorists are returning to Europe as refugees and are expected to be involved in near future attacks; (4) There is a shift in weaponry used in current and future terrorist attacks – knives, axes, hatchets, cars, trucks, light airplanes or motor-oil spread on asphalt are extremely difficult to detect and highly disruptive.

**And some promising news:**

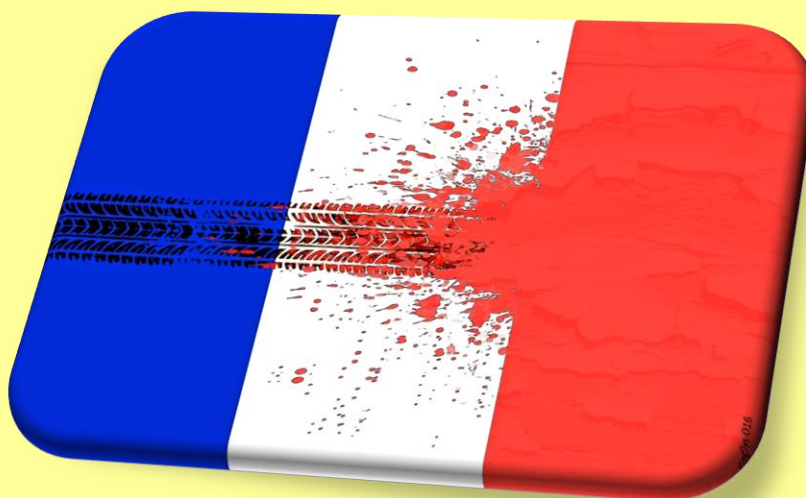
- **CBRNE forensics:** NUI Galway won €4.8 mil EU funding for project ROCSAFE (Remotely Operated CBRNe Scene Assessment and Forensic Examination)
- **Nerve agents detection:** KU Leuven developed a new electronic nose (based on metal-organic frameworks [MOFs]) able to detect pesticides and nerve gases
- **CWA identification:** New method developed for the identification of CWAs (via poly methacrylic acid-co-ethylene glycol dimethacrylate that "sticks" to CWA molecules) at concentrations of 0.1 µg/mL
- **Anthrax prevention:** Anthrax capsule vaccine (by USAMRIID) completely protects monkeys from lethal inhalation anthrax
- **Zika virus:** Current Zika virus epidemic in Latin America is likely to burn itself out within 3 years.



Next month Rio Olympic Games will catch our attention and we all hope that they will run smoothly and without any terrorist incidents. Given the fact that CBRNe preparedness is minimum (based only on military capabilities) and that the medical sector is not CBRNe prepared (based on open sources – could be the big secret of the Games) we pray for sports to prevail and enjoy this mega sports event from Home!

Take care First Responders! Be more actively involved in planning and decisions' making since only you face the enemy in the eyes!

*The Editor-in-Chief*





## One picture = 1000 words

Source: <http://www.hurriyetdailynews.com/us-embassy-in-ankara-flies-lgbt-flag.aspx>



June 24 – The United States Embassy of Ankara raised a rainbow flag alongside the U.S. flag at its residence on June 24 to show solidarity with the LGBT community. “During Pride Week I’m proud to fly this flag at our residence in Ankara. It reminds all of us that human rights are universal rights and belong to everyone, no matter who they love,” read the caption of the photo shared by U.S. Ambassador to Ankara John Bass on its Instagram account. Recently, an LGBT flag was previously unfurled at the U.S. Consulate General in Istanbul building to commemorate the victims of Orlando shooting, the worst such attack in the country’s history which left 49 dead and scores wounded.

**EDITOR’S COMMENT:** US Embassy supports LGBT week in Turkey – a gesture explaining many things modifying daily life in our suffering planet...

## Europeans’ attitudes to migration do not depend on net migration levels

Source: <http://www.homelandsecuritynewswire.com/dr20160627-europeans-attitudes-to-migration-do-not-depend-on-net-migration-levels>

June 27 – **A new study by the Center for Social Investigation (CSI) at Oxford University has analyzed attitudes to immigration across twenty-one European countries and finds that negative attitudes do not appear to be linked with net migration rates.** Some countries with high immigration levels are also very positive about migrants, such as Norway, while other countries like the Czech Republic and Hungary that have low immigration have populations

with negative attitudes. Based on interviews with around 40,000 men and women, the nationally representative data collected by the European Social Survey in 2014-15 also reveals that U.K. attitudes toward immigration are slightly less positive than the average for the countries in the sample, but they are more positive about how migrants contribute once they are living in the United Kingdom.



The U.K.'s attitudes to immigration overall were at a level similar to that of France and Belgium. But also, in line with most other countries, U.K. responses have become slightly more positive when asked whether their country was "made a worse or better place to live by people coming over to live here from other countries." The U.K. average score was just over 5 out of 10 (where 10 is better), a slight improvement on the score in 2002-03.

The University of Oxford says that the report,



"How do Europeans differ in their attitudes to immigration?" finds that the **Czech Republic, Hungary, and Portugal, were the least positive about immigration.** While most European countries saw an increase in the belief that migration had improved their country since 2002-03, Austria (which just narrowly avoided a far right electoral victory) and the Czech Republic are "notable exceptions," says the report. Meanwhile, the Scandinavian countries and Poland have the most positive attitudes to immigration.

At an individual level, the highly educated and the young tend to have more favorable attitudes to immigration than elderly people, or those with less education or low incomes. According to those surveyed, a migrant's racial and religious background was relatively

unimportant. They said they preferred migrants who showed a commitment to the way of life in their country, an ability to speak the language, and migrants with skills. Professionals were preferred to unskilled laborers, with this distinction appearing to be far more significant than a migrant's country of origin. All else being equal, however, those surveyed said they would welcome migrants from within Europe over those from outside of it. Jewish migrants were preferred to Muslims, who in turn would be made more welcome than Roma migrants. Roma migrants were regarded as amongst the least popular, in a similar way to unskilled laborers from poor non-European countries.

Study author Professor Anthony Heath, emeritus Professorial Fellow at Nuffield College and Director of CSI, says: "Immigration continues to be one of the most pressing political issues in Europe, including the UK, and this survey shows that the factors influencing public attitudes towards migrants are complicated and varied. Attitudes do not appear to be closely linked to net migration figures as we find European countries with the highest levels of immigration also have positive attitudes and vice versa. We also find that Europeans in this sample are not against migrants per se: some migrants appear to be more welcome than others, depending on what they have to offer. Personal backgrounds have a strong influence on opinions, with older people tending to be more negative than the young, many of whom have grown up with a greater level of cultural diversity around them. The more educated are more likely to welcome migrants, while the less educated and those on lower incomes appear to be among those who feel most threatened, both symbolically and in terms of their job security and future livelihoods."

— Read more in Anthony Heath and Lindsay Heath, [\*"How do Europeans differ in their attitudes to immigration?" CSI 24, Center for Social Investigation, Nuffield College, Oxford, June 2016\*](#)).

## Refugees can offer economic boost to host countries

Source: <https://www.ucdavis.edu/news/refugees-can-offer-economic-boost-their-host-countries>

June 27 – Refugees are often considered an economic burden for the countries that take them in, but a new study conducted by UC Davis with the United Nations World Food Program indicates that refugees receiving aid — especially in the form of cash — can give their host country's economy a substantial boost.



The researchers found that these economic benefits significantly exceeded the amount of the donated aid.

UC Davis [notes](#) that the findings come as refugee numbers around the world are growing. In 2015, an estimated 15.1 million people were displaced from Syria and other locations around the world due to civil conflict or natural disaster, reaching a 20-year high, according to the United Nations High Commission for Refugees.

The new study, published in the [Proceedings of the National Academy of Sciences](#), examined the economic impact of three camps in Rwanda, housing refugees from the Congo. In

conditions, they still are productive and can interact with their host country's economy in positive ways," Taylor said.

### Local impact of cash aid in two refugee camps

In the two cash-aid camps, each adult refugee received an annual amount of \$120 and \$126, respectively, transferred to accounts linked to cell phones provided by the World Food Program. The researchers found that each additional adult refugee in either of those two camps increased the annual real income in the local area by \$204 and \$253, respectively. This was equivalent to 63 percent and 96 percent

increases, created by each refugee in the two cash-aid camps, for the average per-capita income of Rwandan households neighboring the camps.

[Illustration of the positive impact of migration on public expenditures](#) // [Source: theconversation.com](#)

Most of that monetary "spillover" into the surrounding economy

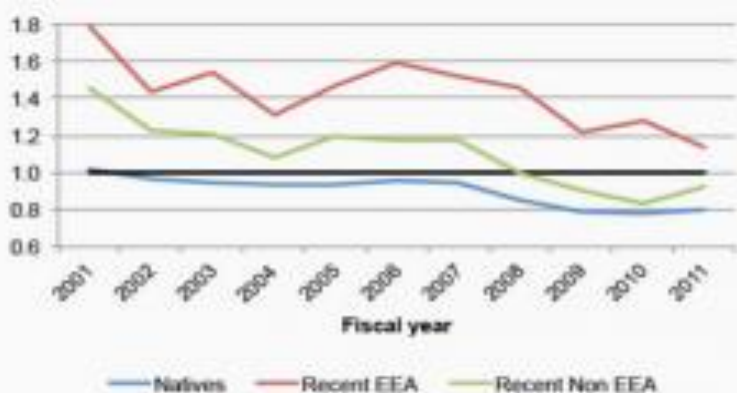
occurred when individuals and businesses within the camps purchased goods and services from businesses and households outside of the refugee camps, the researchers reported.

Refugee households inside the camps accounted for 5.5 percent of the total income within the 10 km radius of the three camps. And, 17.3 percent of the surveyed businesses outside of the camps reported that their main customers were refugees living in the camps.

### Local demand increased income nationally

Looking beyond the immediate area, the researchers found that the demand and spending generated locally by the refugees also raised the overall incomes and spending levels for the host country, Rwanda.

Each refugee in the two cash-aid camps boosted annual trade between the local economy and the rest of Rwanda by \$49 and \$55, the researchers reported.



Note: the black horizontal line indicates revenues equal expenditures

two of the camps, refugees received aid from the United Nations World Food Program in the form of cash, while in the third camp the refugees received the same value of aid but in donated food.

The researchers used economic modeling methods, based on local surveys, to simulate the impact of the refugees on the host-country economy within a 10 km (6 mile) radius of the three refugee camps. They found that cash aid to the refugees had a greater positive impact on the host nation's economy than did in-kind food aid.

"The findings of this study run contrary to the popular perception that refugees are helpless and dependent on food aid," said J. Edward Taylor, the study's lead author and a UC Davis professor of agricultural and resource economics.

"Our data support recent studies suggesting that although refugees have undergone forced migration and are often living in destitute





**In-kind food aid had less economic impact**

The economic impacts were smaller in the camp whose refugee residents received in-kind food aid rather than cash aid. In that camp, the refugees were given allotments of maize, beans, cooking oil and salt, designed to meet their minimum calorie requirements.

The researchers found that 89 percent of the refugee households in that camp sold part or all of their food allotments outside of the camp. Overall, food items totaling one-fifth of the value of the distributed food aid were eventually sold, often for significantly less than the local retail price.

This practice diversified refugees' diets, by providing them with cash to buy a variety of foods. But it reduced the value of the food aid to the refugees and, by increasing the local food supply, put downward pressure on food prices in the area. Local food producers found themselves competing with cheap foods that had been provided to the refugees as aid.

As a result, the economic impact of each refugee housed in the in-kind food aid camp was just \$145, compared to \$204 and \$253 mentioned above for refugees in each of the two cash-aid camps.

And in-kind food aid resulted in only a \$25 increase per refugee in annual trade between

the local economy and Rwanda's national economy, compared to \$49 and \$55 per refugee in each of the respective cash-aid camps.

**Lessons for future refugee aid**

Taylor and colleagues noted that resettlement of refugees varies greatly around the world, ranging from isolated camps to refugee communities that are well integrated with host-country economies. The researchers suggest that their findings apply most directly to the more than 50 percent of United Nations-supported refugees who live in camps. The vast majority of refugees (86 percent) are hosted by developing countries.

"Our findings indicate that when refugees in these camps are given the opportunity to interact with the economy around them, they can create positive income spillovers for the host-country households and businesses," Taylor said, noting that the Congolese refugees in Rwanda appeared to generate significantly more income than the cash aid they received.

"These findings suggest that a shift from in-kind to cash aid could provide greater economic benefits for the countries that are hosting refugees, if local farmers and traders are able to meet the higher food demand," he said.

— Read more in J. Edward Taylor et al., "Economic impact of refugees," [\*Proceedings of the National Academy of Sciences\*](#) (20 June 2016).

**Don't believe the Brexit prophecies of economic doom**

By Isaac Tabner

Source: <http://www.homelandsecuritynewswire.com/dr20160629-don-t-believe-the-brexit-prophecies-of-economic-doom>



June 29 – The shock and horror at the Brexit vote has been loud and vociferous. Some seem to be reveling in the uncertainty that the referendum result has provoked. The pound falling in value, a downturn in markets – it lends credence to the establishment's claims before the referendum that a Leave vote would lead to economic Armageddon.



But there are plenty of reasons to reject the consensus that Brexit will be costly to the U.K.'s economy. Even though markets appear stormy in the immediate aftermath of the vote, the financial market reaction to date has more characteristics of a seasonal storm than of a major catastrophe.

We were told that the consensus of economic experts were overwhelmingly opposed to a Brexit. Lauded institutions – from the IMF, OECD to the Treasury and London School of Economics – produced damning forecasts that ranged from economic hardship to total disaster if the U.K. leaves the EU. Yet 52 percent of the British electorate clearly rejected their warnings.

Something that my professional experience has taught me is that when an “accepted consensus” is presented as overwhelming, it is a good time to consider the opposite. Prime examples of this are the millennium bug, the internet stock frenzy, the housing bubble, Britain exiting the European exchange rate mechanism (ERM) and Britain not joining the euro. In each of these examples, the overwhelming establishment consensus of the time turned out to be wrong. I believe Brexit is a similar situation.

### **Downright dangerous**

The economic models used to predict the harsh consequences of a Brexit are the tools of my profession's trade. Used properly, they help us to better understand how systems work. In the wrong hands they are also downright dangerous. The collapse of the hedge fund Long-Term Capital Management in 1998 and the mispricing of mortgage backed securities leading up to the 2008 financial crisis are just two of many examples of harmful consequences arising from the abuse of such models.

The output of these often highly sophisticated models depends entirely upon the competence and integrity of the user. With miniscule adjustment, they can be tweaked to support or contradict more or less any argument that you want.

The barrage of dire economic forecasts that were delivered before the referendum were flawed for two main reasons. First, they failed to acknowledge the risks of remaining in the

EU. And second, the independence of the forecasters is open to question.

Let's start with the supposed independence of the forecasting institutions. While economists should in theory strive to be independent and objective, Luigi Zingales from the University of Chicago provides a compelling argument that, in reality, economists are just as susceptible to the influence of the institutions paying for their services as in other industries such as financial regulators.

### **Peer pressure**

Another challenge faced by economists is presented by the nature of the subject matter. Economics is a social science which, at its heart, is about the psychology of human social interactions. Many models try to resolve the difficulties that human subjectivity causes by imposing assumptions of formal rationality on their models. But what is and is not rational is subjective. In further recognition of this difficulty the sub-discipline of behavioral economics has evolved.

Herding is a concept that has been used to rationalize financial market bubbles and various other behavior. It describes situations in which it seems rational for individuals to follow the perceived consensus. Anyone who has found themselves in a position where the majority of their company has a radically different view to their own will have experienced the difficulty of standing out from the crowd.

In 2005-06, various people (including myself) presented the view that house prices would crash. While some audiences were sympathetic, the majority view at the time was both hostile and derisory. Challenging the received wisdom exposes you to feelings of isolation.

Received wisdom among academia has been that the EU is a force for good that should be defended at all costs. Respected colleagues are incredulous that anyone with their education and professional insights could think otherwise and remain part of the academic “in” crowd. In such an environment, it is very difficult to challenge this orthodoxy.

I – and the bulk of the U.K. population – might have been





convinced by the pro-Remain economists if they had been a little more honest about the limitations of their models, and the risks of remaining inside the EU.

### Market reactions

Despite reports of markets crashing following the Brexit result, when you put the current level of volatility in context of other shocks, market conditions are not as bad as they might seem. The FTSE 100 is still higher than it was barely two weeks ago and the more U.K.-focused FTSE 250 is currently higher than it was in late 2014. This is the kind of volatility that markets see two or three times a year.

The volatility index for the U.S. S&P, known as the VIX or the “fear gauge”, is what is widely used to measure how uncertain global financial market participants are about the outlook for stocks. When the Brexit result was first announced, the VIX moved sharply, but has since settled in the mid-20s. To put this in context, the all-time average is 20.7, the all-time closing low is 8.5 and the all-time closing high on Black Monday in 1987 was 150. More recently during the financial crisis, it reached a closing high of 87.2 in November 2008.

Other financial indicators also moved rapidly as the referendum results came through. On the face of it, the Japanese market suffered a severe shock falling almost 8%. However, the 8% fall in the Japanese stock market is almost exactly matched by an 8 percent gain of the

Japanese yen relative to the pound. Therefore, the net effect for U.K.-based investors in Japanese equities is close to zero.

The fall in the value of the pound following the Brexit result is also not as bad as it may first appear. The size of the fall was exacerbated by the previous day's assumption that Remain would win. There is also precedent for a dramatic fall – after the ERM crisis – which proved beneficial for many British exporting companies and arguably helped sustain the economic recovery of the 1990s.

A lower pound benefits companies that add most of the value to their products inside the U.K., and companies that sell their produce on international markets. This includes exporters like pharmaceutical company GlaxoSmithKline, drinks company Diageo, and technology company ARM – all of which saw stock price gains on the morning after the vote. Companies that rely on imports and add little value within the U.K. will be hardest hit in the short term as they adapt to the exchange rate volatility.

There will undoubtedly be winners and losers from the U.K.'s decision to leave the EU. But indexes for volatility are already lower than they were in February this year, suggesting that markets are not abnormally worried about the outlook, and U.K. government borrowing costs are at an all-time low. This is further reason to reject the pre-referendum consensus that Brexit would bring economic doom.

*Isaac Tabner is Senior Lecturer in Finance, University of Stirling.*

## Obama Designates Gay Bar As Latest National Monument

Source: <http://www.breitbart.com/big-government/2016/06/24/president-obama-makes-gay-bar-national-monument/>

June 24 – **President Barack Obama announced his decision to designate the site of the Stonewall Uprising for gay rights in New York City as a national monument.**

The Stonewall Inn was a gay bar that was raided by the New York City police department to enforce a law making it illegal to sell alcoholic drinks to homosexuals. Gay Americans rioted in response, organizing activists and rallies across the country in support of gay rights in America.

In a YouTube video, Obama recalled the 1969 riots, praising the gay rights activists that reacted to the Stonewall arrests.

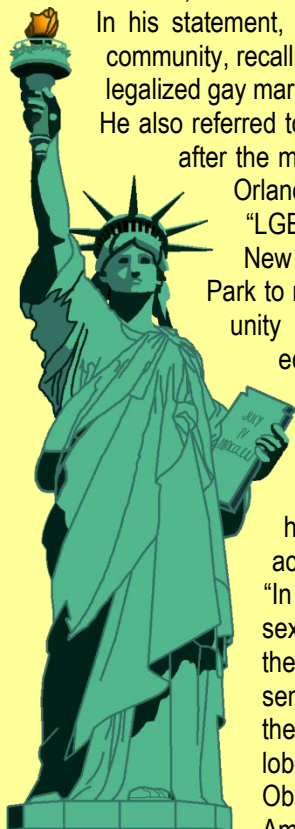
**“Stonewall will be our first national monument to tell the story of the struggle for LGBT rights,” Obama said. “I believe our national parks should reflect the full story of our country — the richness and diversity and uniquely American spirit that has always defined us. That we are stronger together, that out of many we are one.”**



According to the White House, the national park will include the Stonewall Inn and Christopher Park



across the street; about 7.7 acres of land.



In his statement, Obama recognized Christopher Park as a gathering place for the LGBT community, recalling that there were celebrations and weddings there after the Supreme Court legalized gay marriage in 2015.

He also referred to those who mourned at the park after the mass shooting at a gay nightclub in Orlando earlier this month.

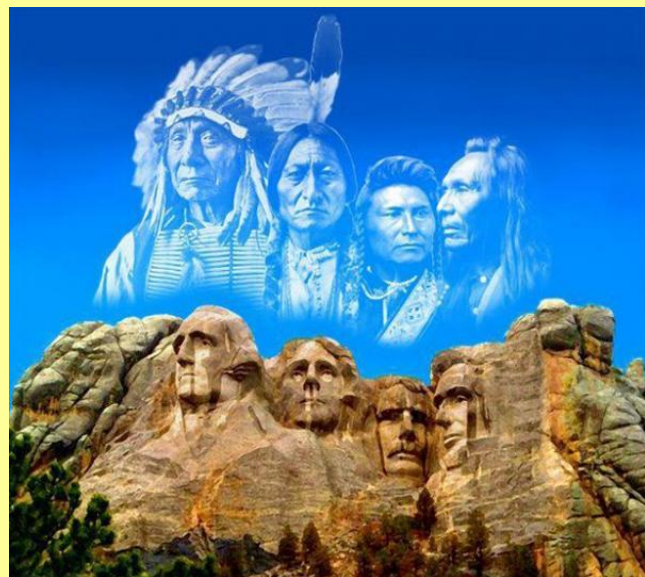
"LGBT people and their supporters in New York headed again to Christopher Park to mourn, heal, and stand together in unity for the fundamental values of equality and dignity that define us as a country," he said.

Obama also recalled the persecution that gay Americans suffered under the law before homosexuality became widely accepted.

"In some States, adults of the same sex caught having consensual sex in their own home could receive sentences of up to life in prison or be confined to a mental institution, where they faced horrific procedures, such as shock therapy, castration, and lobotomies," he said.

Obama celebrated the progress America had made regarding LGBT Americans, but admitted that there was more that the country could do.

"There is important distance yet to travel, but through political engagement and litigation, as well as individual acts of courage and acceptance, this movement has made tremendous progress toward securing equal rights and equal dignity," he wrote.



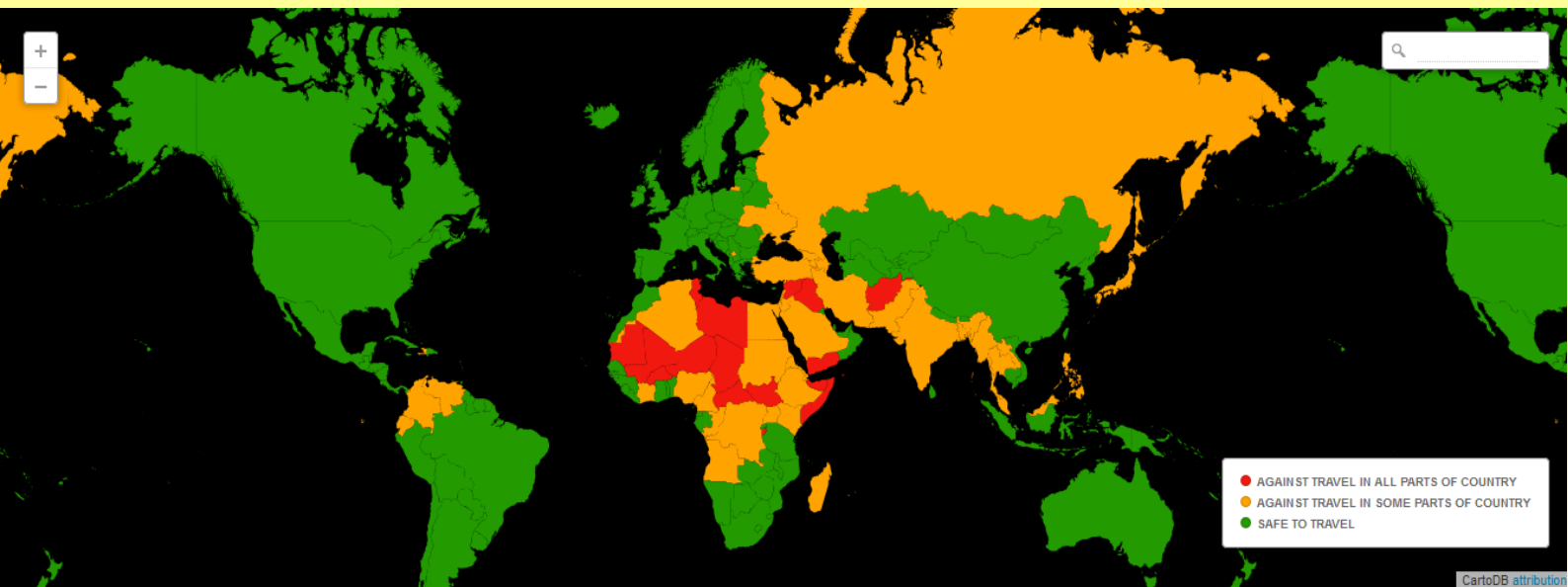
**EDITOR'S COMMENT:** A nation with such a short history (1776), might/should be more carefull when nominating "national monuments".





## Foreign Office Advice travelers for world countries' safety

Source: [https://louisdore311.cartodb.com/viz/69741d6e-4041-11e6-89c5-0e3a376473ab/public\\_map](https://louisdore311.cartodb.com/viz/69741d6e-4041-11e6-89c5-0e3a376473ab/public_map)



**EDITOR'S COMMENT:** Mexico, Brazil, South Africa in GREEN? Seriously???



## 'Foreign Men' Blamed After Mass Sex Assault At Music Festival, Youngest Victim Just 12 Years Old

Source: <http://www.breitbart.com/london/2016/07/03/foreign-men-blamed-after-mass-sex-assault-at-music-festival-youngest-victim-is-12-years-old/>



July 03 – The actual number of girls attacked during the weekend festival are thought to be much higher, as within many of the 35 reports received by police, there are thought to be multiple complainants. Police started to receive reports from young women during the Kalstad 'Putte i Parken' (Party in the Park) on Friday and Saturday night, reports Svenska Dagbladet, with 24 received during the festival and another 11 coming afterward.



The complaints are understood to focus on children being kissed, and “groped on the chest and buttocks”, according to a police source.

Early reports in Sweden’s mainstream press, including the best-selling *AftonBladet* newspaper simply identified the assailants as “unknown males”, however as victims and witnesses have come forward a clear picture of systematic abuse by migrants males has emerged.

Speaking to the *Expressen* newspaper with her mother, one 15-year-old girl who went to the party with her friends said: “I stood and danced when a guy came up from behind and held me down. he started humping against my body, it was horrible”.

The paper described how she had visited with six young friends — five of whom were also molested by what it calls “foreign youths”. The young woman said: “A guy ran his hand between the legs of one of my friends, and when she went to a bouncer, she was asked if she was drunk. I don’t know what the bouncers are doing there if they can’t help when people do this”.

The victim said when she reported her own abuse to security, he shrugged off the incident, saying it was just a thing “that happens in the audience” at festivals. The mother of the 15-year-old girl told the paper several other events of “sexual harassment” could have been avoided if the bouncers present at the even had done their jobs properly.

Sweden’s *FriaTider*, one of the first news outlets to reveal the foreign origin of the attackers reports **the youngest victim is just 12-years-old, with the others aged between 14 and 17-years-old.**

The promoter of Putte i Parken said after the event he found the behaviour of his staff unacceptable and said they should lose their security licences.

Two teenagers have been arrested and released in relation to the attacks.

Alexandra Larsson (pictured) told MailOnline she was molested on Friday night having been looking forward to attending the festival for months.



These latest sex attacks against young European women by migrant males comes just days after Swedish police, mindful of the migrant sex attacks at the Stockholm music festival over the past two summers, launched a new “Don’t Touch Me” wrist-band for young girls. *Breitbart London* reported earlier this week that “unaccompanied youth migrants from the Middle East” were responsible for attacks at the Stockholm, Arvika, Emmaboda, and Bråvalla music festivals over the past ten years.

**Stockholm authorities and festival organisers were accused of knowing about the attacks but decided not to speak up about them, because it would have been “irresponsible” to highlight migrant sex crime.**

Migrant sex attacks at music festivals are not limited to Sweden. *Breitbart London* reported in June on a similar attack at the Schlossgrabenfest music festival in Darmstadt, Germany, which was likened to the Cologne attacks in which over 1,000 men and women were assaulted and robbed.

At Schlossgrabenfest, 26 young women reported being sexually assaulted by “Pakistani asylum seekers” who acted in packs of ten, isolating individual woman from their friends before “touching” them.

## Religious Intolerance in the Gulf States Dateline

By Hilal Khashan

*Middle East Quarterly* – Summer 2016

Source: <http://www.meforum.org/6044/religious-intolerance-in-the-gulf-states>

**Interest in the state of Middle East Christians has largely focused on the quality of their lives in the Levant, Egypt, and Southern Sudan, predominantly Christian areas before the rise of Islam that still contain sizeable Christian minorities. By contrast,**





**little attention has been paid to Christians in the Arabian Peninsula, which had no indigenous Christian presence in Islamic times.**

However, the oil boom of the 1970s created a tremendous demand for foreign labor in the Persian Gulf rentier states. Unsurprisingly, the number of workers needed to drive the emerging economies of the Gulf states was bound to include significant numbers of Christians. There are now more than three and a half million expatriate Christians working in the six Gulf Cooperation Council (GCC) states, mostly Catholics from the Philippines, India, and Pakistan. As their numbers increased, the question of how—or whether—to allow them to openly practice their faith became a significant issue.

### The Current Status of Arabian Christianity

In the West, the freedom to worship in any way one chooses has been a bedrock value at least since the late eighteenth century.



Rev. Andrew Thompson (right), the senior pastor of Abu Dhabi's St. Andrew's Church, astonishingly told a local newspaper that it is "easier being a Christian here [in Abu Dhabi] than it is back in the United Kingdom."

Lingering anti-Catholic and anti-Jewish restrictions in Europe or North America notwithstanding, the general trajectory has been one of

growing tolerance for the modalities of faith. Perhaps the most notable example of this is also one of the earliest: the First Amendment to the U.S. constitution, which made illegal "prohibiting the free exercise" of any religion by the federal government.

Because of its deep-rooted nature within their societies, Westerners tend to frown on other societies that do not share the same ethic. Yet given the Middle East's importance to their strategic and economic interests in the post-World War II era, Western chancelleries turned a blind eye to the glaring gap between believing in freedom of religion and interacting with those who flagrantly violated this principle. It was only after the 9/11 attacks and the attendant "war on terror" that Muslim intolerance of other faiths began to come under greater scrutiny.

Thus, an editorial in a British news-paper laments that Christians in the countries of the GCC are virtually "servants, abominably treated. Their religion must be practiced in secret, with converts threatened with death."<sup>[1]</sup> Another writer went on to explain the emotional significance of this denial of a basic human right:

Most of the Christians who have come here have done so in order to find work in the Arab lands, and as a result, the majority live alone, having left their spouses and families back in their home country. As a result the parish, and also their Catholic faith, is like a piece of home for them."<sup>[2]</sup>

The welfare of Christians in Saudi Arabia is particularly pressing because the government bans all non-Islamic religious practice alongside an aversion to non-Wahhabi Islamic creeds.

Yet the severity of the lack of Christians' right to unencumbered religious freedom is all too often camouflaged by their own clerics who fear antagonizing the Gulf authorities. Rev. Andrew Thompson, the senior pastor of Abu Dhabi's St. Andrew's Church, astonishingly told a local newspaper that it is "easier being a Christian here [in Abu Dhabi] than it is back in the United Kingdom."<sup>[3]</sup> According to Bill Schwartz, canon of the Anglican Church of the Epiphany in Doha: "In the Gulf, excluding Saudi Arabia, government attitudes are more [ones of] religious tolerance than religious freedom."<sup>[4]</sup>

Spreading the Gospels through missionary activity is also severely curtailed among the member states of the GCC. Roy Verrips, the South African administrator of the Evangelical United Christian Church of Dubai, addressed this in diplomatic terms: "We respect and work within the boundaries they set for us" noting that his church had no issue with its



members talking to others about Christianity in a private capacity.<sup>[5]</sup> In Bahrain, the authorities allow priests to spend time with Christian workers living on work sites and to join together in worship. However, "any form of mission among Muslims is forbidden everywhere [in the GCC states]."<sup>[6]</sup>



The first church in Kuwait was built in 1931, known as the "National Evangelical Church," but there remains an acute lack of churches in the country. Every Friday in Kuwait City, 2,000 Christians cram into the 600-seat Holy Family church or listen outside to the mass, prompting the Catholic bishop to worry about a stampede.

The acute lack of churches to accommodate the spiritual needs of the numerous Christian denominations in the GCC states is another serious matter. While the church space problem is ubiquitous in the Gulf region, the following example indicates its magnitude. Every Friday in Kuwait City, 2,000 Christians cram into the 600-seat Holy Family church or listen outside to the mass relayed on loudspeakers, prompting their Catholic bishop, Camillo Ballin, to worry about a stampede: "If a panic happens, it will be a catastrophe ... it is a miracle that nothing has happened."<sup>[7]</sup>

Limits on the number of allowed churches and entry restrictions on Christian clerics hinder the ability of priests to serve their congregations adequately since each one of them has to celebrate several masses at the weekend, and many parishes also have very distant outstations. The work of the priest is taken above all in this sacramental service, for in addition to the celebration of Mass, there are also baptisms, marriages, and funerals.<sup>[8]</sup>

Bishop Paul Hinder, who oversees Catholic churches in the GCC states and Yemen, noted the role of lay volunteers in keeping the church going: "It is a Church resting on the shoulders of the laity."<sup>[9]</sup>

### Islamic Notions of Religious Tolerance

What are then the underlying causes of this predicament?

For Muslims there is no deity but God. This is the lens through which they interpret all other religions, and this view explains why many Muslims do not understand Christianity. For them, the Qur'an is the final word of God. By and large, Muslims may tolerate some latitude in the ability of Christians to exercise their religious duties within the frame-work of the legally and institutionally inferior "protected communities" (or *dhimmis*), but the Christian faith must not be given the chance to flourish.

The Christianity of the Qur'an was embroiled in a debate about the nature of Christ, leaving the impression that its followers disagreed about what their faith actually consisted of. As a consequence, early Muslims considered Christianity a blasphemous interpretation of the nature of Jesus, who is presented in the Qur'an as a prophet but not the son of God. This perception persists and has lost none of its intensity.

Religious pluralism as understood in the West does not exist anywhere in the Gulf region, and limited forbearance is probably the best that Christians can hope for in these deeply conservative countries. However, on paper, the GCC states do practice religious tolerance. Thus, the sultanate of Oman has been seen as one of the most tolerant in the peninsula. Christian worship is protected through that country's Basic Law, which prohibits discrimination based on religion and considers it a criminal offense to defame any faith. Similarly, the Kuwaiti constitution theoretically provides for religious freedom. But reality tells a different story. In 2014, according to the official figures, locals accounted for some 1.2 million of Kuwait's 4-million-





strong population while expatriate Muslims totaled another 1.8 million and expatriate Christians about 700,000 (the remaining residents belonged to polytheistic religions).<sup>[10]</sup> Yet the emirate has over 1,000 mosques and only seven churches; also, the government imposes quotas on the number of clerics and staff in legally authorized churches and pressures Kuwaitis to refrain from renting apartments or villas for use as unofficial churches.<sup>[11]</sup>

Likewise, Article 32 of the United Arab Emirates (UAE) constitution guarantees the "freedom to exercise religious worship ... in accordance with established customs and provided it does not conflict with public policy or violate public morals."<sup>[12]</sup> That final caveat—"provided it does not conflict with public policy or violate public morals"—is the crucial stipulation; however, it flips constitutional provisions on their heads. Even in states run by autocrats—or perhaps precisely because they are run by autocrats—public opinion in these matters counts for a great deal. In the UAE and other GCC states, government capacity to grant true religious freedom to Christians is highly restricted because their devout publics are still not at ease with such freedoms. Indeed, while Saudi Arabia stands out as the single GCC state that openly does not tolerate religious diversity, last year's gesture of the crown prince of Abu Dhabi, the country's effective ruler, to grant the land for a Hindu temple is a singular manifestation of pragmatism that does not necessarily demonstrate public approval.

### Indigenous and Imported Christian Denominations

Another important factor explaining the GCC attitude toward religious pluralism in the peninsula is that until relatively recently, there were few non-Muslims for the inhabitants to encounter. Muslim tradition holds that, shortly before his death, the Prophet Muhammad expressed the view that in Arabia there should be only one religion, namely Islam. While a few pockets of non-Muslims held out for a period of time—the Jews of Khyber and the Christians of Najran, near Yemen<sup>[13]</sup>—shortly after Muhammad's death one of his immediate successors, the caliph Umar, is said to have finished the job. Whether the eradication of non-Muslims from Arabia took place in precisely this fashion is less relevant than the reality, which is that there are few native Christians in the Persian Gulf states apart perhaps from several hundred in Kuwait, Oman and Bahrain.<sup>[14]</sup>



There are few native Christians in the Persian Gulf. The Protestant Church in Oman, above, is a branch of the Reformed Church of America, which began work in Oman in 1893. The church ministers to more than one thousand believers from sixty countries

The modern history of Christianity in the Persian Gulf goes back to 1893 when a group of Christians arrived in

Oman and bought a large building with a plot of land that they obtained as a gift from the sultan. This group, members of the Reformed Church of America, came for missionary purposes. A Catholic church, St. Peter and Paul, was founded there only in 1977, followed by an Orthodox, a Syriac Orthodox, and a Coptic church.

Bahrain claims to have the oldest church building in the Gulf region. Known as the National Evangelical Church, it was erected in 1906 by an American evangelical missionary of the Reformed Church in America.

In Kuwait, the establishment of the National Evangelical Church dates back to 1931. A Coptic church was built in 1958, later followed by an Armenian one. Even this limited Christian presence has for some years been the object of fierce political battles between



the Kuwaiti emir and the Islamists. Wahhabi Salafism established itself in Kuwait following the Kuwait-Najd war of 1919-20; and while it is a minority movement, it wields enough influence to slow down the spread of religious tolerance in Kuwait.

At least two-thirds of the Christians in the GCC work in Saudi Arabia where they are completely cut off from contact with the church or clerical representatives. Unconfirmed reports claim that there are thousands of converts to Christianity in the desert kingdom who cannot profess their new faith because renouncing Islam is punishable by death.<sup>[15]</sup>

### Effects on Foreign Communities

Although there is no clear-cut tie in the Gulf region between religious intolerance and the abuse of migrant workers, the fact that so many foreigners in the region are non-Muslims and from the lowest socioeconomic rungs likely plays a role in the attitude of the authorities toward notions of religious pluralism.<sup>[16]</sup> Abuse of non-citizen workers is wide-spread in the GCC states, as in many other countries around the world. In the Gulf states, abuse is not religion-specific even though it may overlap with religious intolerance at times.



Kenyan domestic workers in Saudi Arabia have reported mistreatment ranging from food and sleep deprivation to corporal abuse and molestation. In February 2015, family members of a Kenyan woman accused the woman's Saudi employer of beating and torturing her to death. Above, family and friends carry her casket.

In truth, it is perhaps much easier to demand greater

freedom of worship for Christians in the Gulf states than to curtail the abuse of foreign workers, irrespective of their faith, because such behavior is culturally embedded in the Arabian legacy of slavery. During its imperial moment in the Persian Gulf, the British government, torn between liberal politics and economic interests "generally tended to tolerate the institution of slavery in eastern Arabia."<sup>[17]</sup> And while slavery was eventually abolished in most Gulf states, it persisted until 1964 in Saudi Arabia and 1970 in Oman, and the culture of slavery continues to pervade the region, especially in Saudi Arabia where it is "woven into the fabric of the psyche of the kingdom."<sup>[18]</sup> In one of the countless episodes of abuse, Kenyan domestic workers in Saudi Arabia told disturbing stories of their abuse that ranged from food and sleep deprivation to corporal abuse and molestation.<sup>[19]</sup>

GCC officials persistently deny charges of abuse and dismiss them as cheap propaganda, but given the tight government censorship in the GCC states, which has long stymied local press outlets and journalists, there is little doubt that the full extent of abuse there is well under wraps.<sup>[20]</sup> That migrant workers continue to flood the labor market in the Gulf states helps defuse the pressure on the GCC states to deal with the issue.

Nevertheless, Gulf officials are keen on avoiding conflicts with the West over issues of abuse as well as religious freedom. Despite certain signs of displeasure among the locals, the Qatari leadership has tried over the last few years to promote the image of a modern state, building the Education City by Qatar (in 1997) and sponsoring major sport events in a drive for carving out a niche for itself on the world map. Thus, when Qatar opened the Church of Our Lady the Rosary in 2008, a government official expressed the hope that it would "send a positive message to the world."<sup>[21]</sup> This, to be sure, does not prevent the emirate from closely monitoring the activities of Christian congregations, prohibiting them from advertising religious services but not banning them outright. In a similar step toward normalization and modernization, the UAE established



diplomatic relations with the Holy See in 2007. According to Christian leaders, the Gulf governments struggle to strike a balance between the needs of their ever-growing foreign communities and the demands of their more conservative subjects.<sup>[22]</sup>

A striking example of this struggle can be seen in a highly controversial fatwa issued in 2012 by the Saudi grand mufti, Sheikh Abdulaziz al-Sheikh, calling for the destruction of all churches in the Arabian Peninsula. Except for scant condemnation from Iraqi, Lebanese, and Egyptian Christians, Arab officials kept silent on such a serious issue. "How could the grand mufti issue a statement of such importance behind the back of his king?" was the naïve response by Christian bishops in Germany, Austria, and Russia.<sup>[23]</sup> The answer is that the Saudi royal family invariably appeases the country's powerful religious establishment because Wahhabi clerics provide it with the religious legitimacy it needs to rule. But opposition to building churches and Christian schools is also linked to conspiracy theories. Building churches in the name of freedom of worship is viewed with suspicion as it is frequently asserted that Westerners aspire to alienate Muslims from Islam by opening missionary schools in their countries. Opponents fear that church building will strengthen the hand of Christian missionaries and thereby prevent the spread of Islam among foreign workers while simultaneously sowing confusion and doubt in the minds of the Gulf population about Islamic norms and values.<sup>[24]</sup>

### Conclusion

**The GCC states go to great lengths to enhance their religiously-based popular culture and heritage as a means of asserting both sovereignty and political legitimacy.** The UAE, for example, grounds its political authority in a deeply-rooted social contract that cements the ties between leaders and the citizenry with authentic traditions and norms.<sup>[25]</sup> These refer to the preservation of time-honored customs and values that are based on ethnic purity and religious uniformity. Saudi Arabia has taken this religious legitimization one step further by claiming a form of pan-Islamic leadership centered around its guardianship of Islam's two holiest sites.<sup>[26]</sup>

The influx of foreign workers into the Gulf states—ranging between 50-90 percent of the total populations—poses a serious threat to the future of the indigenous social order by eroding the traditional values that provide the main pillar of regime legitimacy.<sup>[27]</sup> Riyadh claims foreign workers to be less than a third of the population; however, Saudi statistical yearbooks are misleading. The most recent population figure places the country's total population at 30.8 million people, including 33 percent expatriate workers.<sup>[28]</sup> Saudi population estimates make no reference to the dependents of the expatriates or illegal workers. Saudi economic expansion relies "exclusively on the efforts of foreign workers, which official statistics tend to grossly underestimate."<sup>[29]</sup> It is unlikely to have occurred to the GCC leaders that the foreign workforce would become a permanent feature, albeit at the bottom, of their demographic mosaic.<sup>[30]</sup>

The truth is that, notwithstanding the odd allusion to citizenship extension to expatriates, there is no intention whatsoever to integrate them, let alone any Christians into the fabric of GCC societies. Nor is there practically any chance that Saudi Arabia will allow the building of churches in the kingdom because it carries the risk of undermining the Saud dynasty's traditional, religiously-grounded legitimacy, one that is already showing signs of erosion.<sup>[31]</sup>

Furthermore, as long as local Christian leadership maintains its timorous approach, lack of external pressure will just keep the status quo in place. This approach is best exemplified by Camillo Ballin's response to a Kuwaiti parliamentarian's call for the destruction of existing churches: "You have nothing to fear from us. We are partners in life. We respect your laws and your traditions."<sup>[32]</sup> Elsewhere in the GCC states, the ruling elites will continue to extend calibrated gestures of goodwill to non-Muslims, yet it would be delusional to expect them to transcend their traditional perception of Christians as *dhimmis* and grant them unfettered freedom of religion, let alone fully fledged political rights and equality.<sup>[33]</sup>

► References are available at source's URL.

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## How Does Islam Really View Women?

Source: <https://www.clarionproject.org/analysis/how-does-islam-really-view-women>



July 04 – If you do any reading at all about women in Islam, you are sure to be quick to realize that there are typically two camps of thought on the matter. One that expresses an almost overly respectful view of women, and the other that takes the opposite view, i.e. that women are essentially slaves to men. But, of course, both of these views cannot be correct, and most likely, the truth is somewhere in the middle. So, what is the truth of the matter?

This is the question that a writer at Swissinfo recently sought to gain some insight in by interviewing three Swiss women who are Muslim converts. These women claim to have comprehensive knowledge of the Quran. In the article, we learn that while things like Female Genital Mutilation (FGM) are not Islamic in origin, men are allowed to have multiple wives (up to four) as authorized by the Quran.

As for the ever controversial head garb, the women state that a hijab is required, whereas a veil or niqab is not. Also, women are allowed to work, but are not required to, unlike men who are required to work and provide for their families.

Unfortunately, while these things may be backed by the Quran, they are not exactly what many Muslims believe. A recent poll conducted by the Pew Research Center found that “Muslims in most countries surveyed say that a wife should always obey her husband. In 20 of the 23 countries where the question was asked, at least half of Muslims believe a wife must obey her spouse.”

The analysis accompanying the poll highlights the fact that “attitudes toward gender issues may be influenced by the social and political context in which Muslims live.” Interestingly enough, however, the analysis also states that “overall, the survey finds that Muslims who want sharia to be the law of the land in their country often, though not uniformly, are less likely to support equal rights for women and more likely to favor traditional gender roles.”

Without doing an in depth study of the Quran and Hadith (the compiled sayings of the Islamic prophet Mohammed) it is impossible to gain a comprehensive understanding of the role of women in Islam.

But we can gain some important insights from these analyses and polls -- most importantly, that some views of women that are thought to be Islamic actually stem from the cultures in a given country and not the religion itself. This means that the two, culture and religion, interact with each other and create new social mores, thus making it more difficult to identify where certain attitudes and beliefs come from. While this may seem obvious, it is something that many of us fail to remember.

It is important to realize that there are more factors than just religion. We can refrain from making wrongful assumptions and exacerbating the unstable relationship that Islam and the West currently have. In addition, this realization can also help us find better solutions in our fight against extremism.

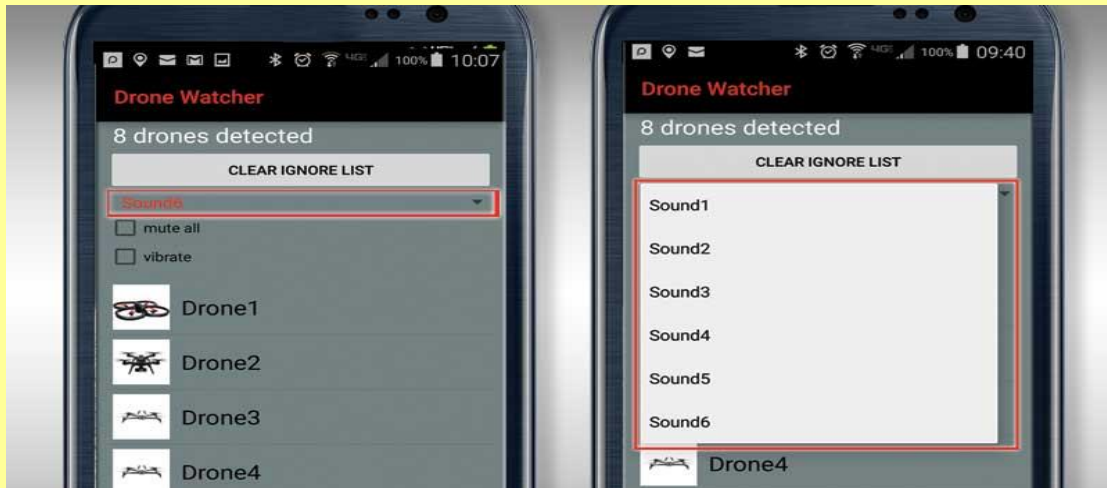
After all, before one can solve a problem, one must properly identify it.



## New App Allows For Thorough Drone Detection

Source: <http://i-hls.com/2016/06/new-app-allows-for-thorough-drone-detection/>

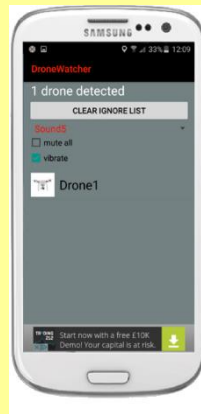
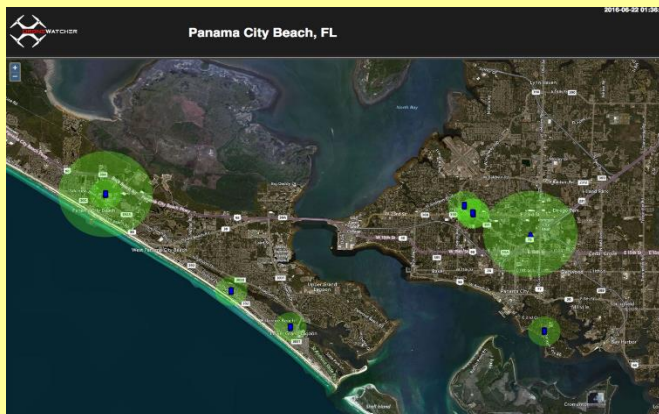
June 29 – There are apps for everything. Flashlights, sharing photos, talking with your friends – if you can think of it, there's probably already an app for it. And now, there's even an app for spotting drones. DeTect has announced the free public release of its DroneWatcher app that gives your smart devices



(only Android for now) the ability to detect consumer drones and small unmanned aerial vehicles (UAVs).

**DroneWatcher** detects, monitors, tracks, alerts, logs data, and records information on 95% of commercially available drones using advanced signals intelligence technology developed by the Panama City-based DeTect. It has some nifty alert options, including letting you know when a [drone](#) is spotted within 400 to 800m from you, detecting the type of drone and its ID. The latter is particularly useful if you need to record and document [drone](#) incursion on your property to alert authorities.

While the benefits for home- and small business-owners seem obvious, DeTect says that the app can



provide significant benefits for protecting public events, outdoors and indoors alike. Stadium sports, golf tournaments, rallies, fairs, and indoor and outdoor concerts could all benefit from the added security of knowing exactly where the flying objects around the event are.

The app could even be used for some pretty serious and taxing applications, like beefing up security at power plants, prisons, sea- and airports, government facilities, and the like.

**Together with DeTect's DroneWatcher RF and HARRIER Drone Surveillance Radar, this could be perhaps the most comprehensive and thorough drone detection solution on the market.**

The DroneWatcher app is **available for free** on the Google Play™ app store.







## Bill O'Reilly reveals unseen photos of Barack Obama in traditional Muslim dress and claims they were taken at his half-brother's wedding

Source: <http://www.dailymail.co.uk/news/article-3678209/Bill-O-Reilly-reveals-pictures-young-Obama-Islamic-wedding-claims-emotional-attachment-Muslim-world-hurt-USA.html>

### Key points:

- O'Reilly released previously unseen images of Obama at a Muslim wedding
- Believed to be from wedding of Obama's half-brother in the early 1990s
- Fox host said the pictures prove he has 'deep emotional ties' to the religion
- Claimed this has 'hurt the USA' because Obama has failed to combat ISIS

## Brazil's Olympic costs running 51% over budget, report warns

Source: <http://www.ft.com/cms/s/0/ef122cb6-43d6-11e6-864d-01c0167ff470.html#axzz4DihUP8a6>

July 07 – **Brazil's Olympic Games are running 51 per cent over budget with an expected cost blowout of \$1.6bn, even as the country is sinking under its second year of recession**, a study from Oxford University has found.



The study warned that even with its expected massive overspend, the total cost of Brazil's games at \$4.6bn was still modest compared with the outlay of some previous hosts, such as

London and Barcelona, making the Olympics one of the riskiest investments a city could make.

"When Rio decided to bid for the Olympics, the Brazilian economy was doing well," said the study led by Professor Bent Flyvbjerg, of Oxford's Saïd Business School. "Now, almost a decade later, costs were escalating and the country was in its worst economic crisis since the 1930s with negative growth and a lack of funds to cover costs."

'Hosting the games is not unlike building a church for one single, glorious wedding celebration'

The study's conclusions, which were vigorously denied by the Rio 2016 organising committee, come as Brazil is facing multiple crises.

The Olympics host state of Rio de Janeiro is struggling with a financial

crisis that is limiting its ability to pay police salaries and keep hospitals open while at the national level, leftwing president





Dilma Rousseff, has been suspended impending an impeachment process.

The financial crisis striking the Rio state government is so severe it warned last month of a potentially calamitous security situation during the games, forcing the equally cash-strapped federal government to stump up more funds.

*FirstFT* is our new essential daily email briefing of the best stories from across the web

The Oxford study looked at 15 editions of the summer Olympics, since Rome in 1960, and 15 of the winter games. It concluded that hosting the event was the most costly and financially risky “megaproject” a city could undertake.

It found an average cost overrun of 156 per cent in real terms, the highest of any type of megaproject in the world, with no edition of the Olympics during the study period having met its budget and nearly half exceeding it by more than 100 per cent.

in fact \$4.1bn, 35 per cent less than the \$6.4bn projected in the original bid. Of this amount, slightly more than half was the budget of the Rio 2016 organising committee, which was 100 per cent privately funded.

The other half was the city’s investment in sporting facilities, such as the arenas and athletes villages, which were 60 per cent privately funded.

Education workers hold a rally in Rio demanding better labour conditions and protesting the money spent on the Olympics

The Rio 2016 organising committee said it ran a “balanced budget”, undertaking cuts if the need arose, and anticipated no cost overruns.

“This report serves only one goal; to speculate on an overrun and create negative publicity,” Rio 2016 said.

The report acknowledged that the Rio games had brought the cost of the Olympics back to the historical average after the blowout events



**The most expensive summer games were London 2012 at \$15bn and winter games Sochi 2014 at \$22bn. The average cost of hosting the summer games was \$5.2bn and the winter games \$3.1bn.**

“Host governments and the International Olympic Committee have not been transparent about the true cost and cost overrun of the games,” the study said. “For example, the UK government claimed that the London Games came in under budget, but the real cost overrun for London was 76 per cent, or \$6.5bn.” However, the Rio city government of mayor Eduardo Paes said the cost of the games was

of London and Sochi.

**The projected cost per athlete of Rio was \$400,000 compared with an average of \$600,000 and a high of \$1.4m for London. The worst cost overrun was Montreal in 1976 at 720 per cent and the lowest Beijing in 2008 at 2 per cent for the summer games.**

“The high average cost overrun for the games, combined with the existence of outliers, should be cause for caution for anyone considering hosting the games,” the report warned, saying a requirement that governments guarantee payments for cost



overruns was equivalent to writing a blank cheque.

**Such cost overruns left Montreal with 30 years of debt and in the case of Athens**

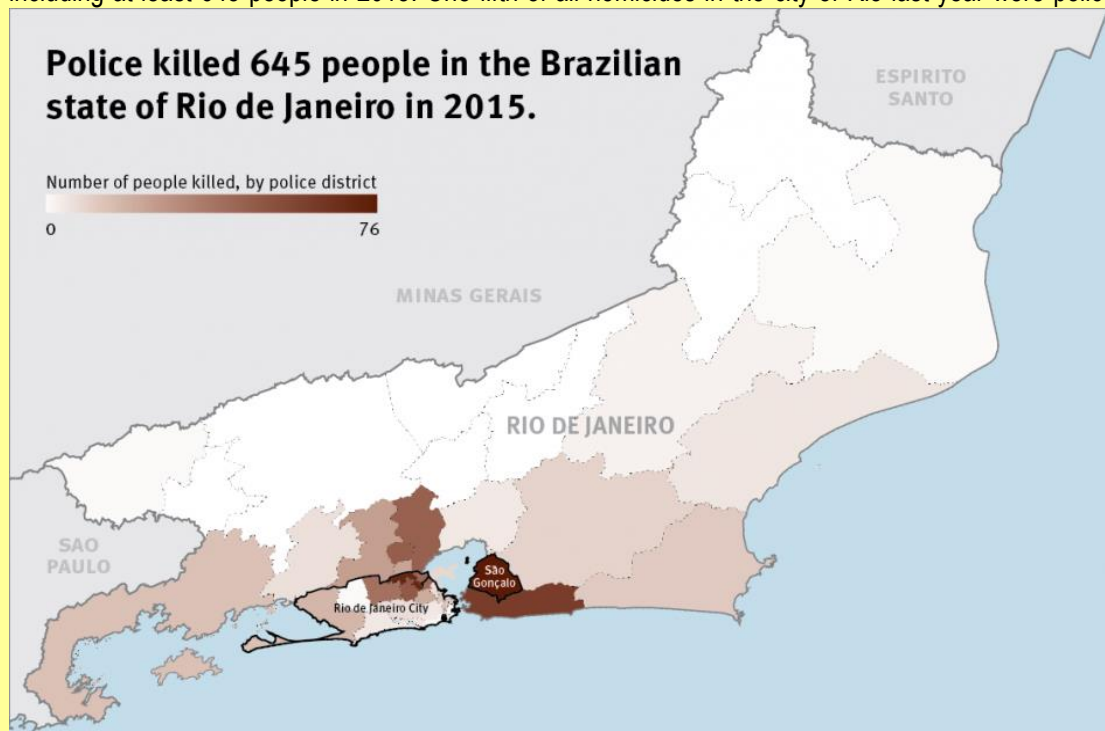
**helped plunge Greece into its near decade-long financial and debt crises.**

## “Good Cops Are Afraid”

Source: <https://www.hrw.org/report/2016/07/07/good-cops-are-afraid/toll-unchecked-police-violence-rio-de-janeiro>



July 07 – Police in the state of Rio de Janeiro have killed more than 8,000 people in the past decade, including at least 645 people in 2015. One fifth of all homicides in the city of Rio last year were police



killings. Three quarters of those killed by police were black men.

The Rio police report nearly all such killings as legitimate acts of self-defense in response to attacks by suspected criminals. Given that police in Rio often face real threats of violence from heavily-armed gangs, many of these killings are likely the result of the legitimate use of force.

Many others, however, are in reality extrajudicial killings. Police shoot at unarmed people. They shoot people in the back as they are fleeing. They execute people who have been detained with a bullet to the head.



Police officers involved in these unlawful killings routinely seek to cover up their criminal behavior. They threaten witnesses. They plant guns on their victims. They remove corpses from crime scenes and deliver them to hospitals, claiming they were trying to “rescue” them.

Human Rights Watch first documented this pattern of killings and cover-ups in our 2009 report *Lethal Force*, which exposed 35 cases in which there was credible evidence that police officers sought to cover up unlawful killings. Since then we have documented an additional 29 such cases, including 12 that occurred in the past two years. In these 64 cases, a total of 116 people lost their lives, including at least 24 children.

The 64 cases reflect a much broader problem, according to local justice officials, who told Human Rights Watch that a large number of the “shootouts” reported by police in the state in recent years were in fact extrajudicial executions. Official government data supports this conclusion.

To understand the causes and consequences of these killings, Human Rights Watch conducted in-depth interviews with more than 30 police officers, most of whom serve in *favelas*—as the city’s low-income neighborhoods are known—with high numbers of reported shootouts. Several recounted their experiences with the use of lethal force; two described participating in extrajudicial executions.

Unlawful killings by police take a heavy toll—not only on the victims and their families—but also on the police force itself. The killings fuel cycles of violence that endanger the lives of all officers serving in high-crime areas, poison their relationships with local communities, and contribute to high levels of psychological stress that undermine their ability to do their jobs well.

The officers responsible for unlawful killings and cover ups are rarely brought to justice. The state’s attorney general, Marfan Martins Vieira, told Human Rights Watch he believed a large percentage of the reported shootouts were “simulated,” but conceded that his office had prosecuted only a “very small” number of police killings. He blamed this failure on the poor quality of the investigations conducted by the state’s civil police.

It is true that, under Brazilian law, criminal investigations are initiated by investigators within the state’s civil police force, and that those investigations have been woefully inadequate. However, responsibility for ending this impunity ultimately lies with Rio de Janeiro’s Attorney General’s Office, which has legal authority to oversee the work of the police investigators, as well as to carry out its own investigations.

After releasing *Lethal Force* in 2009, Human Rights Watch presented its findings and recommendations in multiple meetings with authorities in Rio de Janeiro—including the then-governor, public security secretary, and the attorney general. In the years since, the authorities have implemented several of our recommendations as part of a much broader effort to improve policing in the state.

This broader effort—whose centerpiece was the implementation of a community policing model in high-crime areas—initially showed great promise. The numbers of police killings and overall homicides decreased significantly between 2009 and 2013. But this effort now appears to be unraveling, in large part because the state failed to address what is perhaps the most important factor in allowing unlawful police killings to continue: impunity.

Rio authorities have recently taken several steps to improve how cases involving police killings are handled—including, most notably, the creation of a special prosecutorial unit focusing on police abuse. These measures could have an important impact, but only if the state attorney general and public security secretary take additional steps—outlined in this report—to strengthen them. If, instead, these initiatives are allowed to fall short, it will be very hard for Rio to make real progress in reducing unlawful police killings and improving public security.

### Police Officers’ Accounts of Executions

Human Rights Watch’s interviews with more than 30 Rio police officers revealed a routine disregard for international standards, Brazilian law, and internal police regulations governing the use of lethal force. Officers attributed the excessive use of lethal force to a pervasive “culture of combat” and corruption within military police battalions.

Several military police officers recounted their own involvement in violent encounters, including two who told of direct participation in executions. One described his participation in an operation in which a fellow officer executed a suspected drug trafficker as he lay





injured on the ground, and said he feared he would be killed if he reported what happened. Another recounted an incident in which he and other police officers set an ambush for suspected gang members, gunning them down as they fled from other officers, then planted guns on their two victims as they lay dead and dying in the street. He also described participating in torture, an abduction, and receiving payoffs from criminals.

### Unlawful Police Killings and Cover Ups

Human Rights Watch found substantial credible evidence that many persons killed in alleged shootouts were in fact executed by police officers.

**In a majority of the 64 cases we examined, the officers' accounts of the shootings appeared incompatible with the autopsies or other forensic reports.** In at least 20 cases, the autopsy reports detailed gunshot residue patterns consistent with the victim having been shot at point blank range. In other cases, witness testimony or other evidence indicated there was no shootout.

In June 2015, for example, military police reported that they had injured a man in a shootout in the Morro da Coroa favela. The police took the man to the hospital, where he died. Yet an autopsy showed he had been shot seven times, at least once at point-blank range. And a witness at the scene of the shooting reported having seen the victim injured but alive on the ground, hearing a single burst of gunfire shortly after the police arrived, and three hours later seeing police take the victim's lifeless body away.

While it is impossible to determine the precise scope of extrajudicial executions by police, official government statistics are consistent with the view of local criminal justice officials that the practice is widespread. The high number of police killings—more than 8,000 since 2006—is all the more dramatic when viewed alongside the comparatively low numbers of non-fatal injuries of civilians and police fatalities in those same incidents or areas of operation. This disparity suggests that in many cases police report killings as the result of armed confrontations that did not happen.

For each officer that died while on duty in Rio in 2015, police killed 24.8 people, a rate that is more than double that of South Africa and triple that of the United States. The disparity was even more dramatic in the 10 police districts with the highest number of reported “shootouts”: the police units in these zones were responsible for 483 killings in 2015 while suffering 15 police fatalities. Moreover, Rio police killed five people per each person they injured from 2013 to 2015, the reverse of what one would expect.

In the 64 cases we documented, police officers sought to cover up the criminal nature of the killings. One common technique was to remove a shooting victim's corpse from the crime scene, deliver it to the hospital, and claim that the removal was an attempt to “rescue” the victim. These false “rescues” serve to destroy crime scene evidence while providing a veneer of good faith on the part of the police.

In some cases, police officers forged evidence by placing a gun in the victim's hand and firing it, or planting drugs on the victim. Some officers threatened witnesses to discourage them from reporting what they have seen. In a case from July 2011, for example, police officers tortured and killed the 14-year-old son of the witness of an earlier execution in the Salgueiro favela as a means to intimidate her, according to prosecutors.

### Impunity for Police Killings and Cover Ups

**Only eight of the 64 cases that Human Rights Watch examined went to trial, and only four cases ended with convictions of police officers involved in the killings.** In 36 of the 64 cases, prosecutors did not even seek indictments despite credible evidence that the police sought to cover up an unlawful killing.

All the state justice officials with whom Human Rights Watch spoke—including the attorney general—said police officers responsible for unlawful killings are rarely brought to justice. Official data lends support to their assessment, though a lack of up-to-date and reliable information makes it difficult to determine the precise scale of this impunity. The Attorney General's Office reported to Human Rights Watch that it had filed charges in only four—or one-tenth of one percent—of the 3,441 police killings recorded between 2010 to 2015 (though in fact we documented 15 cases from these years in which prosecutors filed charges). The most



recent state-wide study of prosecutions of police killings, coordinated by Michel Misse, a professor at Rio de Janeiro's Federal University, found that of all the killings by police that occurred in 2005, prosecutors had, by 2007, filed charges in less than 1 percent.

Police investigators routinely fail to conduct proper inquiries into police killings, disregarding basic tenets of homicide investigation. In 52 of the 64 cases we examined, there was no record of the police investigators ever having conducted a crime scene analysis. Often they do not question all police officers involved in a killing, do not seek out and interview non-police eyewitnesses, and do not conduct basic forensic tests.

Brazil's Constitution grants the Attorney General's Office the legal authority to exercise "external control" of the police forces. This includes making sure the civil police conducts thorough and professional investigations when there is evidence that police themselves have committed crimes. Prosecutors have several tools at their disposal to ensure that police conduct more thorough investigations—from institutional pressure, to referral of officers who fail to conduct or impede investigations for disciplinary action, to, in extreme cases, criminal prosecution for malfeasance. Yet Rio's Attorney General's Office has consistently failed to use these tools and fulfill its constitutional responsibility.

Where civil police do not conduct adequate investigations, moreover, the Attorney General's Office has the power to conduct its own independent inquiries, hear witnesses, and obtain evidence. However, the Attorney General's Office has rarely used that power to investigate police killings.

Prosecuting police killings in Rio is possible, as was demonstrated in São Gonçalo, the state's second largest city, between 2008 and 2001, when a judge, a prosecutor, and civil police officers made a concerted effort to address the issue. Prosecutors filed charges against 107 military police officers—about 15 percent of the troops in the military police battalion in São Gonçalo during that period. The number of police killings in the city subsequently dropped by 70 percent. Some police officers had warned that this effort to promote accountability would impede police work and result in a rise in crime, but the number of robberies and overall homicides in São Gonçalo also declined. Progress came to a halt when the judge was murdered by some of the police officers who were facing prosecution. In the absence of accountability, the number of police killings climbed again and is now higher than in 2008.

### **Toll of Police Killings on Law Enforcement**

To serve as a military police officer in Rio can be extremely dangerous, largely due to the heavily-armed and violent criminal gangs that operate in many of the city's low-income neighborhoods. **Officers interviewed by Human Rights Watch described having to face these gangs with poorly-maintained weapons and vehicles, as well as inadequate training that leaves them unprepared to respond to life-threatening situations.**

Illegal killings by fellow officers make an already dangerous job even more so. One reason, police officers said, is that gang members are less likely to surrender peacefully to police when cornered if they believe they will be executed while trying to surrender or once in custody.

Unlawful killings may also stoke anti-police sentiment, which may motivate criminals to kill police whenever they have the opportunity, even targeting officers who are off-duty. Several officers told Human Rights Watch that they avoid public transportation and do not carry their police identification while off-duty. The fear of being recognized as police officers during robberies, and killed, pushes officers to draw their guns quickly if they happen upon a robbery while off-duty, even if they are facing several criminals alone, police officers told Human Rights Watch. Some police officers are killed in the ensuing shootouts, which explains why one in six people killed during robberies in Rio is an off-duty police officer.

Unlawful police killings have another, more immediate impact on police units: the perpetrators' fellow officers must choose between keeping quiet and even participating in the cover up—and thus breaking the law themselves—or speaking up and facing reprisals that can be deadly.

Two police officers told Human Rights Watch that they felt pressured by superiors to participate in unlawful killings. The Disciplinary Code of the Military Police of Rio de Janeiro offers them little choice but to comply if that pressure takes the form of a direct order: it does not protect a police officer who refuses to obey illegal orders.



The biggest disincentive to reporting or objecting to their fellow officers' crimes is the threat of death at the hands of the officers involved in misconduct. Several members of the military police told Human Rights Watch that they would not report fellow officers for fear those officers would kill them or attack their families.

Participation in unlawful killings or cover ups with impunity may also have an insidious impact on police officers' overall conduct. Rio officers who can successfully rationalize their own misconduct may find it easier to cross the line the next time. They may also be more likely to engage in corruption and other crimes, several officers said.

Multiple studies have found that Rio's military police officers suffer from very high levels of psychological stress. And yet, in Rio de Janeiro, mental health care for military police officers is very limited. Some 70 psychologists provide counseling to the 48,000-member military police—a ratio of 1 for every 686 officers—and there are no psychiatrists. Very few officers see a psychologist after participating in a violent encounter.

Police abuses also undermine public security by driving a wedge between the community and the police. The current difficulties faced by the community policing units—called Pacifying Police Units (UPPs)—show how mutual mistrust opens the door to an increase in violence. UPPs led to a decrease in crime and police killings initially, but unlawful killings and other police abuses have played a central role in the unraveling of the project.

### Key Recommendations

**Authorities in Rio de Janeiro have recently taken important steps to address the problem of police killings. In addition to the creation of the special prosecutorial unit focusing on police and prison abuses—called the GAESP—civil police are now assigning cases of police killings to its three homicide divisions, and military police have instituted a pilot program to outfit military police with “body worn cameras.”**

These steps, while welcome, fall far short of what is needed to end impunity for unlawful police killings and cover ups, and break the cycle of violence that has prevented Rio's police from properly protecting the communities they serve.

### Ending Impunity for Unlawful Police Killings and Cover Ups

**Rio de Janeiro's Attorney General's Office** should:

- Assign more prosecutors to the GAESP.
- Provide the GAESP with technical support from forensic experts.
- Seek commitment by civil police to inform the GAESP of police killings within 24 hours.
- Authorize GAESP prosecutors to intervene in the investigation of all police killings in the state.
- Instruct the GAESP to visit the sites of police killings.
- Instruct the GAESP to pursue vigorous investigations and prosecutions of cover ups.
- Instruct the GAESP to exercise effective oversight over civil police investigations.

**The civil police** should:

- Improve the quality of the homicide divisions' investigations.
- Alert the GAESP of cases involving police killings immediately.
- Investigate evidence of cover ups by police.
- Grant homicide divisions the authority and resources necessary to investigate all police killing cases in the state.

**The military police** should:

- Implement its body-camera project throughout the state.
- Apply protocols and operating procedures in its body-camera project that promote transparency while also protecting privacy.

**Brazil's Congress** should:

- Approve a bill, 4471/2012, that seeks to improve investigations of killings by police nationwide.





### Improving Working Conditions for Military Police

The military police should:

- Provide psychological support for police officers after shootouts.
- Identify and address other factors causing undue stress to police officers.

► Read the rest of this article at source's URL.

### UK Considers Training UAV Pilots On Its Own

Source: <http://i-hls.com/2016/07/uk-considers-training-uav-pilots-on-its-own/>



July 08 – The UK is due to purchase in excess of 20 new Reaper-derived Certifiable Predator B UAVs, and is considering introducing its own training system to support this.

As the number of slots available to foreign allies at the US Air Force's unmanned air vehicle training school continues to be limited, the UK is considering establishing its own domestic capability, ahead of a planned acquisition of a new fleet of remotely piloted aircraft.



**According to UASVision, Royal Air Force personnel are currently trained to operate the service's 10-strong fleet of General Atomics Aeronautical Systems Block 1 MQ-9 Reapers at Holloman Air Force Base in New Mexico, but the USAF's well-known UAV pilot shortage has forced it to ration the slots available, prioritising its own needs.**

MQ-9 and MQ-1 training is provided by CAE. Gene Colabatistto, group president for defence and security, says that conversations

are under way to help understand what the UK would require.

Other operators of the MQ-9 are also considering their options in light of the USAF availability challenges. Italy has already acquired a zero flight simulator from CAE to carry out training domestically. Italy operates the Predator and will soon operate the Hammerhead, but has not yet made a decision on its training requirements for the latter.

It has been predicted for some time that Rome may position itself as a training hub for UAVs, offering the simulator capability – plus available airspace – to other nations.



CAE has also bid for UAV training work in the United Arab Emirates. Training will be provided to pilots with no prior experience.



## Drones in support of the elder

Source: <https://www.washingtonpost.com/news/innovations/wp/2016/07/08/drones/>

Tom Davis started a side business that collects aerial images for real estate and entertainment companies using drones, but his company Aerial Anthropology has found a new focus of late. The Cleveland-based firm now



uses drones to show people with terminal illness and living in hospice their beloved locations, such as a childhood hometown or favorite vacation spot, one final time. "They're watching live on a screen while the drone is actually at their location of choice," Davis said. "They can interact and say let's go over here, let's go a little higher, let's go out on the water." Davis said patients are grateful for the visual escape, and he now hopes to expand the concept beyond Ohio.

## "Fora Temer!" Paste's Guide to the Brazilian Political Crisis

Source: <https://www.pastemagazine.com/articles/2016/07/fora-temer-pastes-guide-to-the-brazilian-political.html>



July 10 – Brazil is rapidly approaching a historic milestone: in August, Rio de Janeiro become the first South American city to ever host the Olympic Games. But there's another, less auspicious, Olympic milestone that will be crossed soon, too: Brazil will be the first country to feature two host presidents at its opening ceremony. Dilma Rousseff, the country's president and self-proclaimed "mother" of the Rio Olympics, has been



suspended from office and is awaiting trial in what her supporters say amounts to a coup. The organizer of her ouster, her former vice-president Michel Temer, has been asked by Olympic organizers to preside at the opening ceremony as the country's interim president—but Rousseff has been granted an invitation well.

The country's National Congress has become a battleground between Rousseff's Workers' Party against its opponents on the right, with politicians of all stripes drowning in a massive corruption scandal. These concerns are all underscored by a substantially downtrodden economy. The upcoming Olympic spotlight attracts the attention not only of Brazilian authorities, but of nations and organizations from around the world, which unsatisfied citizens might exploit to voice their dissatisfactions. So what can visitors and viewers expect from the Brazilian public at the world's biggest international sporting event?

The context of the country's woes is lengthy. Rousseff was officially suspended on May 12, and now must wait for her impeachment trial, which is due to happen sometime within 180 days of the suspension. The public has responded to Temer's ascension to the presidency in many ways, most commonly with the phrase *Fora Temer*, which means "Temer, Get Out." This tagline has popped up all over the country in the form of graffiti, posters, tweets, and in speeches, a shorthand for what many consider to be an illegitimate government.

Rousseff stands accused of mismanaging federal funds and distorting national economic performance. She has denied these accusations, and in June independent auditors hired by the senate found these allegations to be without merit. Rousseff's party, the Worker's Party or PT, ushered in an unprecedented era of economic growth thanks to its consensus-based approach to governance. Rousseff worked hard to establish an anti-corruption reputation, but her tenure as the chairwoman of the Petrobras board when nearly 20 billion Reais ([US\\$5.3 billion](#)) was illegally exchanged in the form of bribes has called that reputation has come into serious question.

**The web of corruption in Brazil is far-reaching, due to a long history of economic inequality and invulnerable politicians. Combating white-collar crime is nearly impossible.** Many in Brazil's National Congress enthusiastically supported Rousseff's impeachment under the guise of condemning corruption—yet more than 150 of those same Senators and Deputies are under investigation for crimes ranging from illegal enrichment to even to attempted murder. The Petrobras corruption investigation is known as Operação Lava Jato (Operation Car Wash), because one of the first money-laundering fences the authorities discovered executives using was a car wash business.

Petrobras, officially known as Petróleo Brasileiro SA, is an oil & gas giant that played a large role in energizing Brazil's economy in the past decade. The corruption within it [took the form of a cartel](#), in which Petrobras leaders allowed a group of construction companies to massively overcharge them in their development contracts. Construction executives would keep the surplus from these contracts, and return some of it to Petrobras leaders, as well as helpful politicians, as kickbacks. They would also keep some for themselves. Since Petrobras is state-run, these bribes often took the form of campaign donations. Even though Rousseff denies any knowledge of corruption while she was chairwoman, many have suggested that she is guilty not only of financial negligence, but abusing the public-private ownership structure of Petrobras and funding her election campaigns with stolen money. Furthermore, the same companies that organized this cartel with Petrobras are now expected to build the majority of Olympic infrastructure and stadiums.

**Brazil's political crisis began to receive international attention around the same time that the world eagerly turned its gaze towards Rio in anticipation of the Summer Games.** Demonstrating the unbelievable growth the country had experienced recently was a major element of the Brazilian bid for the Olympics, yet Brazil, despite having the strongest South American economy, has been struggling through one of its worst recessions in almost a century. Mario Andrada, the Organizing Committee director of communications, has claimed that **"no other country in Olympic history has lived through such difficult political times so sharply close to the Games."**

While some are busy buying tickets or following the torch, student and Salvador local Heron Sena has been participating in an occupation of Salvador's Ministerio da Cultura building, protesting the Temer interim presidency. While he admitted Dilma Rousseff is far





from perfect, he believes the impeachment is more than just a coverup for the Lava Jato investigation, as many suspect — Sena believes it is an effort to keep Brazilian policy centralized within the same small elite group, and furthermore, that it is part of an international containment of the progressive left's advances all across Latin America. Protesting this is so important to him, and the other 50 or so participants of the occupation, that they refuse to leave the building until Temer steps down.

With so much at stake, one would expect Rio 2016 to be the perfect soft-diplomacy platform for Brazil to take a big step in the right direction—except the country remains divided about what the right direction is. Further, most within the occupation were dismissive about the significance of the Olympics to them, and especially didn't expect the Games to bring any tangible changes to their own lives. “We already know about the prejudice events such as the World Cup will leave in an underdeveloped country”, Sena explains, “and our occupation could not have any sort of presence [at the Olympics] because the law does not allow it.”



Their occupation began in response to Michel Temer's inauguration almost immediately, and the Salvador team here quickly united with 11 different cities occupying in similar fashion through mediums such as [Facebook](#) and Twitter. They host gatherings most weekends, which give the impression of just another samba party from a distance. The drumming and singing is overpowering, but upon arrival, it's clear there is nothing casual about their parties. The chants, the speeches, the dances, the slam poetry, the musical performances — it's all in protest. Their Twitter videos capture the experience well, and most are entertaining just from the sheer talent of the protestors. In one of the final moments one Saturday night, a girl and her cross-dressing friend concluded their speech by spontaneously and completely undressing on stage, earning the most vigorous applause, and the longest “Fora Temer!” chant of the night.

Their weekend events were certainly entertaining, but the occupation's real purpose is to organize workers, artists and other cultural movements to collectively speak out their dissatisfaction for Temer's government, which they all consider to be illegitimate. And almost all participants saw potential for the Olympic spotlight to facilitate change in combatting corruption throughout the country and worldwide. The unprecedented amount of international journalists focusing on the country will all be untainted by the suppressive Brazilian media. There's no doubt their focus will be the athletic events, Sena conceded, but if there is a bigger story to be found in dismantling the country's corruption, who is there to stop them from exposing it?



Oppression and corruption are not exclusive to Brazil, nor is the struggle to remove dishonest politicians. Yet with any knowledge of the country's exceptionally elaborate system of corruption, the hundreds of convictions that have already allowed for [93 convictions](#) offer some encouragement for change, and they show how this summer could be a huge victory in the name of justice. "Corruption is a very serious problem, so the investigation should not be obstructed in any way, even if our national reputation is demoralized, even if companies do not invest in Brazil," said Sena. "If we preserve our image, and by extension these politicians, we will sacrifice a lot of more essential things." Other participants passing through the building stopped to nod their heads in agreement upon hearing these words. To them, the Olympics offers the unique opportunity to finish a historic exposure of the country's biggest problems, rather than flaunting Ipanema beach and Christ the Redeemer as if life was still business as usual.

Despite such potential, most of the students expressed anxiety at even the suggestion of protesting their government at the Olympics because of anti-terrorism laws in place for the event. Brazil has no history of conventional terrorism, nor any real connection with existing political conflicts overseas, yet security chief for the state of Rio de Janeiro, Jose Mariano Beltrame, [has publicly stated that](#) "terrorism is the number one worry" for the Games. A total of 85,000 security personnel will be employed for the event, making it the [most extensive security operation in the country's history](#). And since the passing of ambiguous legislation that blurs the distinction between protest and terrorism, concerns have arisen that civil society's fundamental rights may be restricted throughout the Games. This worried Sena, who believes that as long as Temer remains in power, the chances of erratic, violent crime will be higher. Correspondingly, he believes, the Temer administration would not refrain from exploiting a public terrorist attack or other similar tragedies to justify the suspension of civil liberties.

Jessica Carvalho, a 27-year-old who recently moved to Salvador from São Paulo, offered more insight into the possibility of protest at the Olympics. She is not a direct participant of the Fora Temer movement because she has been traveling most of this year, but she has been involved in civil protest throughout her life, most prominently in the widespread 2013 protests that led to millions marching on the streets of Brazil's biggest cities. While students and citizens mostly prioritize eliminating corruption, Carvalho believes the government has a large interest in maintaining a reputation. "The media still wants to sell Brazil as a happy place," she explained, noting that events like the World Cup and the Olympics are perfect examples to do just that. To demonstrate her point, she discussed her experience engaging in some of the first protests of 2013; back then, she noticed that the mass of peaceful protesters were often ignored by the media in favor of the loners who violently confronted police. Similarly, she and her friends would see images on social media of the same aggressive individual photographed on different sides of the same protest, inciting violence in both.

The conclusion she drew was that the government or opposition parties paid people to create a chaotic, dangerous environment in order to dissuade protests. Repressing dissenting opinions is not new in Brazil; while the government has still not acknowledged these accusations, Reporters Without Borders has [cited 190 attacks on journalists](#), mostly by the police, within those same 2013-2014 protests. This is among many reasons RWB labeled Brazil one of the most dangerous places on the continent for journalists. Carvalho sees no possibility for any protest at the Olympics, and believes "the reputation of Brazil is not something we have control over."

**The Games themselves have become a source for protest.** In some cases, Olympic infrastructure has come [at the expense of entire communities](#), justifying evictions without compensation. Brazil is muddling through very serious problems that have escaped its Congress for years. But that doesn't mean this is the end — corruption has never been properly exposed on such a grand scale, civil society is arguably as politically-informed as ever, and of course, the Olympics have never been hosted in South America before. This summer could be one of the most significant transformations in Brazil's modern history. The absence of protest at the Games, moreover, does not signify the absence of civil discontent within the country. Make sure to look beyond the gates of Olympic Park to grasp the reality of life in Brazil in August.



## Ending extortion: Researchers develop a way to stop ransomware

Source: <http://www.homelandsecuritynewswire.com/dr20160712-ending-extortion-researchers-develop-a-way-to-stop-ransomware>

July 12 – Ransomware — what hackers use to encrypt your computer files and demand money in exchange for freeing those contents — is an exploding global problem with few



solutions, but a team of University of Florida researchers says it has developed a way to stop it dead in its tracks. The answer, they say, lies not in keeping it out of a computer but rather in confronting it once it is there and, counterintuitively, actually letting it lock up a few files before clamping down on it.

“Our system is more of an early-warning system. It doesn’t prevent the ransomware from starting ... it prevents the ransomware from completing its task ... so you lose only a couple of pictures or a couple of documents rather than everything that’s on your hard drive, and it relieves you of the burden of having to pay the ransom,” said Nolen Scaife, a UF doctoral student and founding member of UF’s Florida Institute for Cybersecurity Research.

UF notes that Scaife is part of the team that has come up with the ransomware solution, which it calls CryptoDrop.

Ransomware attacks have become one of the most urgent problems in the digital world. The FBI issued a warning in May saying the number of attacks has doubled in the past year and is expected to grow even more rapidly this year.

It said it received more than 2,400 complaints last year and estimated losses from such attacks at \$24 million last year for individuals and businesses.

Attackers are typically shadowy figures from other countries lurking on the Dark Web and difficult, if not impossible, to find. Victims include not only individuals but also governments, industry, health care providers, educational institutions and financial entities.

Attacks most often show up in the form of an email that appears to be from someone familiar. The recipient clicks on a link in the email and unknowingly unleashes malware that encrypts his or her data. The next thing to appear is a message demanding the ransom, typically anywhere from a few hundred to a few thousand dollars.

“It’s an incredibly easy way to monetize a bad use of software,” said Patrick Traynor, an associate professor in UF’s department of computer and information science and engineering at UF and also a member of the Florida Institute for Cybersecurity Research. He and Scaife worked together on developing CryptoDrop.

Some companies have simply resigned themselves to that inevitability and budgeted money to cover ransoms, which usually must be paid in Bitcoin, a digital currency that defies tracing.

Ransomware attacks are effective because, quite simply, they work.

Antivirus software is successful at stopping them when it recognizes ransomware malware, but therein lies the problem.

“These attacks are tailored and unique every time they get installed on someone’s system,” Scaife said. “Antivirus is really good at stopping things it’s seen before ... That’s where our solution is better than traditional anti-viruses. If something that’s benign starts to behave maliciously, then what we can do is take action against that based on what we see is happening to your data. So we can stop, for example, all of your pictures from being encrypted.”

Scaife, Traynor and colleagues Kevin Butler at UF and Henry





Carter at Villanova University lay out the solution in a paper accepted for publication at the IEEE International Conference on Distributed Computing Systems and presented 29 June in Nara, Japan.

The results, they said, were impressive.

“We ran our detector against several hundred ransomware samples that were live,” Scaife said, “and in those case it detected 100 percent of those malware samples and it did so after only a median of 10 files were encrypted.”

And CryptoDrop works seamlessly with antivirus software.

“About one-tenth of 1 percent of the files were lost,” Traynor said, “but the advantage is that it’s flexible. We don’t have to wait for that anti-virus update. If you have a new version of your ransomware, our system can detect that.”

UF notes that the team currently has a functioning prototype that works with Windows-based systems and is seeking a partner to commercialize it and make it available publicly.

— Read more in Nolen Scaife et al., “CryptoLock (and Drop It): Stopping Ransomware Attacks on User Data” ([paper presented at the 2016 IEEE 36th International Conference on Distributed Computing Systems, Nara, Japan, 29 June 2016](#)).

## July: Tourism’s Trying Half-Month

By Dr. Peter Tarlow

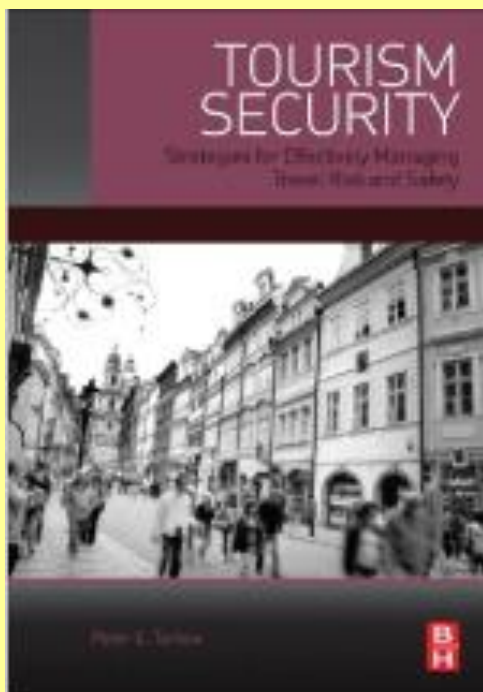
President of Tourism & More, Inc

College Station, Texas

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

The month of July has not been an easy month in the world, and especially in the world of tourism. Until recently, tourism oriented nations experienced one or another form of crisis on a tri or bi-monthly or monthly basis. During the last few weeks, the crisis du mois seems to have become the crisis de la semaine (the crisis of the week).

During the last few weeks, the Middle East, especially Iraq and Saudi Arabia, and the Asian sub-continent have witnessed an upsurge of violence. Attacks have not only been against tourist hotels but also against restaurants, in such diverse places as Dacca, Bangladesh and Bagdad Iraq. In both cases patrons were attacked and tourists (or foreigners), taken hostage and murdered. Last month terrorists began to shoot restaurant patrons in Tel Aviv, Israel, and only the quick action of the other patrons stopped the attack from being worse.



**Tourism Security** is an invaluable resource for private security professionals, police departments that serve tourist destinations, and tourism professionals who work in hotels, at attractions, casinos, at events and in convention centers.

Also during this first half July tourism officials are still dealing with the disappearance of the Air Egypt plane over the Mediterranean Sea. In the United States the tragic killing of two African-American men provoked street manifestations around the nation and the murder of police officers in

both Texas and Tennessee. Europe continues to deal with a continental-wide crime wave and the latest terrorist attack in Nice, France. The Nice attack occurred in southern France’s most important tourism city on Bastille Day and the start of the summer



tourism season. In Turkey there was a failed coup d'état with hundreds either dying or injured. To add to the tourism industry's challenges there is Brazil where the Summer Olympics Games are to be held in the midst of a major crime wave coupled with an economic and political crisis, and where the possibility of a police strike during the 2016 Olympics plus a series of medical issues threatens the Olympic Games' success. Visitors will be "treated" with seeing some 85,000 soldiers on the streets of Rio de Janeiro. South America must also deal with Venezuela as that country continues its downhill slide into both hunger and political turmoil and with the aftermath of Ecuador's earthquakes. To round out the month's first fortnight, in the USA both major political parties are holding their well televised national conventions with thousands of protestors promising violence.

### A Word of Caution

Terrorism, a phenomenon that has existed in various forms for over 400 years, is a highly complex topic. It is so complex that there is a whole scholarly literature dedicated to understanding it and its impact on both tourism and world economies. This short article does not provide an extensive analysis of the topic but rather seeks to raise important questions for contemplation by those in the tourism industry.

Furthermore, despite the public's desire for total travel and tourism security and safety, no one can guarantee a pain-free and totally secure travel experience. Even the best experts cannot predict every act of terror and no one can control a free media. Especially in an age of terrorism risk is not only part of the travel and tourism experience, risk it is also a part of life.

The following article then does not provide a recipe for travel and tourism safety for anyone particular part of the industry. It is strongly recommended that tourism experts consult on a continuous basis with travel security experts before implementing any policy decisions. To do less is to place the traveling public in undue risk.

### Dealing with an Age of Violence

The Tourism Industry, if it is to survive in an ever changing and more challenging world will need to consider various paradigm shifts. Among these shifts are the following:

**The tourism industry needs to come to the sad but true realization that it is not merely collateral damage within the world of terrorism, but rather that tourism is one of terrorism's principal targets.** Tourism stands for everything that threatens terrorists. Tourism is about open societies in which we

judge each person on his or her merits. Terrorism is just a modern form of Nazism, where people are judged not by who they are but to which social, national, or religious group they belong.

**The tourism industry will have to find a way to creatively protect its customers, without creating so many travel difficulties that travel becomes unbearable.** Currently tourism safety and security are more about "security-theater" than about real security. Airport security is often reactive and haphazard at best. All too often those working in it are often poorly trained and paid resulting in personnel whose actions are all too often unprofessional.

**Tourism education will need to include courses on tourism safety and security.** These courses are rarely taught. Once again, universities are not keeping pace with a changing world. This lack of cutting edge thought combined with political correctness means that future leaders in tourism will not be prepared to deal with a changing world.

**The tourism industry needs to become much more knowledgeable about terrorism and violence.** The media and politicians from all sides of the spectrum continue to use misleading words such as "lone wolf" or "lone wolf attacks". These terms are not only misleading, but also often dangerous and misleading. The use of a false narrative creates either a sense of ennui, despair, or "mis-actions". Tourism officials need to get beyond political correctness and as the Egyptian government has done, actually identify culprits and then begin to face ideological warfare.

**Tourism officials must learn to coordinate their marketing strategies with their security experts.** Most tourism centers



have a great deal of demographic information. Yet often various tourism departments fail to share information with each other. Just as security professionals must realize that their actions impact the way that tourism is marketed and thrives, so too must marketing experts come to realize that they must coordinate their campaigns with their tourism security experts. To make matters worse, too many tourism entities lack a tourism safety and security manager or department.

Tourism security experts must realize that no two tourism entities are the same and that tourism needs individualized security tailored to a particular locale rather than a one-size-fits-all approach. This realization means that security experts need to take into account such variables as: language spoken by visitors at specific locales, visitors' age ranges, and visitors' special physical needs. Because the list of variables is almost infinite, the best forms of risk management need to be employed so as to gain the most protection from available resources.

**Tourism marketers will have to come to the realization that these problems cannot be covered over.** No matter how much money the tourism industry spends are feel-good marketing, it cannot market away terrorists' threats to the industry. Currently marketers dominate the tourism industry. Marketers tend to find lots of money for advertising but never seem to have the funds to promote security. The tourism industry says it is interested in protecting its clients, but rarely are words turned into action. Instead, a great deal of caring is expressed during a crisis and then once the crisis passes the industry returns to business as usual.

**Tourism officials need to know when to discourage tourism.** Although it is almost impossible to predict a specific terrorist attack, such as that which occurred in Nice, France, other manifestations are predictable. The absolute best protection is not to be at that

locale. This statement does not mean that we should not travel. As noted above merely living is a form of risk-taking. It does mean that certain geographic sections of the world have specific risks and that tourism officials must be aware of those risks, explain the risks honestly, take measure to mitigate the risks and have a recovery plans in place should the risk occur.

**The tourism industry needs to have real recovery plans in place.** This means that medical plans need to be coordinated prior to a terrorist attack and not as an after-thought. For example, if your community has a manor stadium or other areas with large crowds, be sure that there is both an evacuation plan and a triage plan put in place. Practice these plans and know what are their weaknesses. Make sure that there is a communication plan in place and a way to get needed cash or lines of additional credit for visiting victims.

These are only a few of the generalities that tourism leaders will need to consider now and into the future. **Terrorism and acts of criminality and violence cannot be solved with nothing more than innovative marketing.** These social cancers must be faced, diagnoses and defeated. If a modicum of certainty we can predict that locations such as Europe and parts of the Middle East will see higher levels of terrorism. The United States has numerous explosive situations throughout the country. These social sores can ignite in a form of societal spontaneous combustion. Latin America lives on the verge of crime, terror and corruption.

These are real problems that deserve the attention of all who care about the world's largest peacetime industry. If the tourism industry chooses to face these issues head-on then it shall become a major force for peace in the world, but if it chooses a form of marketing-ostracism than it may expect further bloodshed and negative headlines. The choice is up to us.

*Peter Tarlow, Ph.D., Sociology, Texas A&M University; President and founder, Tourism & More; world-renowned speaker and expert specializing in such areas as the impact of crime and terrorism on the tourism industry, event and tourism risk management, and economic development.*





## U.K. reviews security measures for large outdoor events

Source: <http://www.homelandsecuritynewswire.com/dr20160719-u-k-reviews-security-measures-for-large-outdoor-events>



July 19 – **Amber Rudd, the new British home secretary, told the House of Commons that she has ordered a full review of the security measures taken to protect large outdoor events such as festivals and other public gatherings.** The review comes in the wake of the attack in Nice on revelers celebrating Bastille Day.

Rudd said that additional security measures will be put in place, including **what is known as the “national barrier asset” when police assess that there is a risk of vehicle attacks.**

Rudd said: “On Friday, following the attack in Nice, the police and the security and intelligence agencies took steps to review our own security measures and ensure that we have robust procedures in place, and I am receiving regular updates. All police forces have reviewed upcoming events taking place in their regions to ensure that security measures are appropriate and proportionate.

“I can also tell the house that the United Kingdom has considerable experience in managing and policing major events. Extra security measures are used at particularly high profile events, including — where the police assess there to be a risk of vehicle attacks — the deployment of measures known as the national barrier asset.

**“This is made up of a range of temporary equipment – including security fences and gates – that enable the physical protection of sites.”**

The *Guardian* notes that the temporary security barrier system has been used since 2004 to protect high-profile locations or events, such as conferences of political parties, from potential attacks involving the use of vehicles.

**A modular, quick-to-assemble 9-foot-high fencing has been used to protect the London Olympics, NATO summits, and the French end of the Channel tunnel to prevent incursions.**

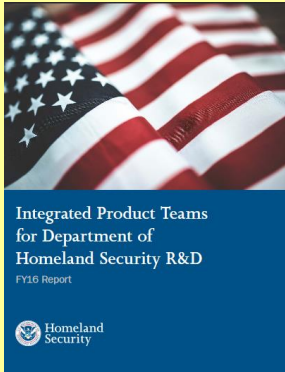
In the Commons, Rudd’s condemnation of the Nice attack received cross-party support. Shadow Home Secretary Andy Burnham said: **“Unlike other attacks, this one wasn’t planned by a cell with sophisticated tactics and weapons. A similar attack could be launched anywhere at any time, and that is what makes it so frightening, and so difficult to predict and prevent.”**

Burnham urged Rudd to protect police budgets and called for a review of the Prevent program, which was designed to tackle radicalization but which, he said, was creating a climate of mistrust.



## DHS report highlights R&D priorities for technologies used in the field

Source: <http://www.homelandsecuritynewswire.com/dr20160719-dhs-report-highlights-r-d-priorities-for-technologies-used-in-the-field>



July 19 – The Department of Homeland Security has released the [Integrated Product Teams for Department of Homeland Security R&D Fiscal Year 2016 Report](#). The report identifies twenty-four focus areas for technological research and development (R&D), which fall under five mission areas: aviation security, biological threats, border security, cybersecurity, and counter-terrorism.

S&T says that the Integrated Product Teams (IPTs) are chaired by component executives and composed of senior-level representatives from across DHS. In support of Secretary Johnson's Unity of Effort initiative, IPTs have centralized how the Department gathers R&D data and determines the most effective solutions for addressing homeland security challenges.

"Threats to our homeland are evolving quickly, and DHS operators need technologies that will best support their efficient response," said DHS Under Secretary for Science and Technology Dr. Reginald Brothers. "Now that we have established the IPTs, DHS has a central process to allow our stakeholders to provide feedback on the varying technologies they need on the ground."

In August 2015, the secretary asked S&T to lead the IPT effort, supported by DHS components chairing different IPTs according to issue area. The IPT Chairs convened representatives from multiple components to advise where needs are greatest in their respective mission areas, and how DHS operators would be best served.

The IPTs then identified where technological advances could enhance the way operators secure the U.S. ports, borders, critical infrastructure and communities, such as the ability to identify and classify biological threats more quickly and with greater precision on the ground.

For example, in the report, the Bio Threat IPT identifies needs in rapid warning, identification, and characterization of biological threats for three DHS components. S&T notes that while U.S. Customs and Border Protection, the Federal Emergency Management Agency and the U.S. Secret Service would field future technologies for differing uses, the Bio Threat IPT was able to consolidate otherwise independent requirements into joint projects.

The IPTs will follow an annual cycle that will help inform future research and development projects, procurements, and budgets for the benefit of the entire Department, which in turn will help DHS to carry out its vital missions.

## Saudis Announce a Turn Away from Wahhabi Cultural Vandalism

By Stephen Schwartz

Source: <http://www.meforum.org/6120/saudis-turn-away-from-wahhabi-cultural-vandalism>

July 19 – The rulers of Saudi Arabia have announced a new program for cultural renovation of architecture associated with the life of Muhammad. As described in the leading pan-Arab daily *Asharq Al-Awsat*, a Saudi Commission for Tourism and National Heritage (SCTH) has begun planning rehabilitation of sites in Mecca, the direction of prayer for

Muslims around the world, and Medina, which includes the Prophet's Shrine, where Muhammad is said to be buried.

The restorations would include Jebel Al-Nur, the "Mountain of Light" in Mecca, where Qur'an is believed to have been first revealed to Muhammad, and





locations where he is said to have sojourned. Jebel Al-Nur is a key topic in this discussion. In Medina, sites identified with battles fought by the Muslims, and four early mosques, are due for reorganization and restructuring. Museums drawing on Islamic military history and other themes will be opened and guides to the attractions provided.

The endeavor has been endorsed by Prince Sultan bin Salman, the 60-year-old son of the current ruler, King Salman. Prince Sultan is best known for having traveled in 1985 on the U.S. space shuttle *Discovery*. SCTH president Saad Al-Rashed will head the undertaking.

If carried out, the effort will represent a break with the doctrines of the Wahhabi sect that has maintained a close alliance with the Saudi monarchs for more than two centuries, and is the official Islamic theological dispensation in the desert kingdom. Wahhabi iconoclasts have been infamous as wreckers of the heritage of Islam and other religions. They argue that

with Shia Islam, in that Shia and Sufi adherents alike honor Muhammad and other spiritual figures, rather than Allah alone.

In their zealous condemnation of ritual respect paid to outstanding Muslims, Wahhabis further decry such practices as an imitation of Christians, for the love the latter show toward Jesus. After the Saudi conquest of Mecca and Medina in the mid-1920s, tombs in the sacred cemeteries housing the remains of Muhammad's family and early companions were [levelled](#). The same addiction to demolition was seen in the Taliban assault on the Bamiyan Buddha statues in Afghanistan in 2001, and in its most spectacular form, on September 11 of that year, in the wrecking of the World Trade Center towers and the crash of a hijacked jet into the Pentagon. Those structures were additionally viewed as "idols" by the Wahhabis of Al-Qaida.

In an excess of [metastasized Wahhabism](#), these destructive urges are visible in the devastation of the pre-Islamic legacy of Palmyra in Syria last year by the terrorists of the so-called "Islamic State" (ISIS), who also blow up Shia and Sufi installations.



The Cave of Hira on the "Mountain of Light," the site where Muhammad is said to have received his first revelations from God.

protection of architectural assets, including sacred structures, is "idolatry" prohibited by Islam. Those so accused are judged to have abandoned Islam and are subject to execution. The Saudis and Wahhabis invaded and sacked the Shia Muslim holy cities of Karbala and Najaf in today's Iraq, following the emergence some 250 years ago of Muhammad Ibn Abd Al-Wahhab, the preacher for whom the fanatical creed is named. This violence against Shias, whom Wahhabis condemn as alleged apostates from Islam, and their monuments was repeated frequently. To the Wahhabis, the contemplative traditions of Sufism constitute another form of "polytheistic apostasy," along

The Saudi regime seems to have decided suddenly to adopt a new perspective on the matter, having hitherto [neglected](#) to restrict Wahhabi interference with Islamic heritage. "Saudi modernization" is a convoluted process at best. While the house of Saud long allowed the Wahhabi clerics to hinder visits to Islamic religious sites, they did not censure as "idolatry" the recent erection of grotesque and garish hotels and malls surrounding and dwarfing the Kaaba, the black stone cube at the center of the Grand Mosque of Mecca, and the ground where Islam originated. Seen from above, the Kaaba is now a tiny structure far overshadowed by a Stalinesque clock tower. To facilitate construction of the clock tower, an





entire hill and the Ottoman fortress on which it sat, protecting the Grand Mosque since Ottoman times, were bulldozed.

King Salman Bin Abd Al-Aziz, in power beginning last year, and succeeding his half-brother, the reforming King Abdullah, [promised](#) after he ascended the throne that he would continue on the path of positive change pursued by Abdullah. Of course, real social reform—[allowing women to drive](#), for example—is impossible without curbing the power of the Wahhabi clerics. Despoliation of Islamic historical structures is the most obvious symbol of Wahhabi radicalism.

The blind Wahhabi Grand Mufti of Saudi Arabia, Abdul Aziz Ibn Abdullah Bin Baz [1910-99], known for his intransigent views, issued two *fatwas* against participants in Muslim pilgrimages to Mecca visiting and praying at places traditionally seen as appropriate for such devotions. In the first, Bin Baz opined that walking up Jebel Al-Nur to a cave known for Muhammad's revelation was a "means leading to [polytheism]," and must be banned. The restriction is not enforced, but the steep climb up the steps of Jebel Al-Nur, in raging heat, is daunting to most pilgrims.

The second such *fatwa* by Ibn Baz was more sweeping, and summarized the Wahhabi hostility to historic preservation. It stated, "It is impermissible to exaggerate the importance of historical sites and buildings, because this might lead to [polytheism]. The laypeople may be tempted to believe that such places are blessed, and be driven to commit acts of disbelief. . . . It is, therefore, obligatory to neglect and abandon such a deed and to warn against it." The "acts of disbelief" execrated by Ibn Baz consist of commemorative prayers to Muhammad and other Muslims deemed virtuous.

Arab media reporting on the new Saudi approach to the Islamic legacy lack any reference to three of the most controversial issues involving the cultural legacy of Mecca and Medina. These are the identification and reconstruction of houses in Mecca, in one of which Muhammad was reputedly born and another where he is thought to have lived with his wife Khadijah; ongoing Wahhabi demands for a desecration of Muhammad's tomb and shrine in Medina by removal of an Ottoman

dome constructed over it, and rebuilding of the cemeteries obliterated in the 1920s. The latter subject produces annual protests at the Royal Saudi Embassy in Washington, mainly by Shia Muslims.

Why have the Saudis now adopted a public stance in such contrast with the Wahhabi mischief that lasted so long? Prince Sultan is famous for his "correction" of Ibn Baz, who preached as unchallengeable Islamic dogma that the earth was a flat disk around which the sun rotated. Challenged on this medieval view, Ibn Baz did not hesitate to argue that being blind, he believed the evidence of his feet rather than what others told him. After his trip on *Discovery*, Prince Sultan told Ibn Baz he had seen the earth and the sun and that Wahhabi astronomy was wrong. Ibn Baz could not defy a member of the royal house.

Prince Sultan has affirmed that the new preservation enterprise will reflect a dedication to "a manner that serves . . . Islam; besides preserving those sites as an integral part of the great history of our religion." But throughout its history, the Saudi regime and their Wahhabi partners have acted as if they hate Muhammad and Islam. European chroniclers of the Wahhabi movement in the 19th century described the phenomenon as a rebellion against Islam altogether.

The most obvious reason for the promised new turn may be that it is part of King Salman's commitment to austerity and a reduction of the Saudi dependence on energy income, with the price of oil falling. To propel economic diversification, the king may hope that tourism in the kingdom will expand. A less obvious motivation may be a desire to adequately shield Mecca and Medina from terrorism. King Salman holds the title "Custodian of the Two Holy Mosques," but his position was challenged internationally by the July 4 bombing near the Prophet's Shrine in Medina. Outrage over the failure of the Saudi rulers to protect Mecca and Medina has led leading Indian Sufis to call for the [liberation](#) of Hejaz, the Arabian province in which the cities are located.

In the past, the Saudi royals reined in the Wahhabis when necessary. Given the threat of ISIS, such an action is once again



needed, and the conflict over the preservation of Islamic heritage cannot but dramatize the

situation profoundly.

*Stephen Schwartz is executive director of the Center for Islamic Pluralism in Washington, DC, and a fellow at the Middle East Forum.*

## Strong Cities Network

Source: <http://strongcitiesnetwork.org/>

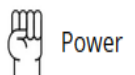
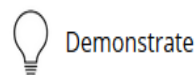
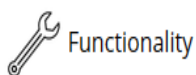
Launched at the United Nations in September 2015, the Strong Cities Network (SCN) is the first ever global network of mayors, municipal-level policy makers and practitioners united in building social cohesion and community resilience to counter violent extremism in all its forms.

Led by the [Institute for Strategic Dialogue](#), the SCN strengthens strategic planning and practices among municipal-level policy makers and builds the capacity of local practitioners to prevent the spread of violent extremism in all its forms. The network catalyses, inspires and multiplies community-centric approaches and action to counter violent extremism while respecting the fundamental rights of citizens.

The risk of violent extremism – across racial, ideological, political and religious motivations – is a concern for families, communities and governments. Across the world, cities are on the front-line of building resilience to violent extremism. The SCN recognises that cities are uniquely positioned to safeguard their citizens from polarisation and radicalisation through partnerships with local communities. Mayors and municipal-level policy makers must work closely with their communities to identify and address the methods used by violent extremists to recruit, radicalise and mobilise targeted individuals. A growing number of cities and other sub-national authorities across the world have developed – or are interested in developing – local prevention and intervention programs that build social cohesion and resilience against all forms of violent extremism.



### WHAT WE DO



To do this, cities require a network that facilitates systematic exchange of good practice, expertise and lessons learned. The SCN fulfils this need by connecting and empowering cities through its global network and online information and training hub.

The SCN operates from the assumption that communities and local governments are both part of the solution to address violent extremism. The SCN is driven by a number of fundamental principles:

1. A commitment to address violent extremism in all of its forms
2. A recognition that violent extremism and prevention efforts should not be associated with any particular religion, nationality or ethnic group
3. A commitment to work in partnership with local communities, on an inclusive, collaborative, and non-discriminatory basis and in compliance with international human rights standards

The SCN has been established exclusively for policy makers and/or practitioners operating at city, municipal or sub-national levels. Membership to the network is completely free of charge.





## Military Wife Gets Frustrated With Soldier Husband For Not Cleaning Up... Then She Looks At His Boots

Source: <http://conservativetribune.com/military-wife-gets-frustrated/>

It is often said that being a member of the United States military is one of the toughest jobs on the planet. What is often overlooked is an equally difficult job — being the spouse of a service member. Deirdre A. Sanford's husband is in the military, and Deirdre would often get upset with him when he would come home after a long day, make a mess around the house, and not want to help clean up (not an uncommon side effect of being a male).

One day when Deirdre was about to lose it, she picked up her husband's boots and looked at the soles of them. She saw that he had worn a hole in his 6-month-old boots, and she suddenly had an awakening.

"I almost cried. Not because he ruined them ... but because it took me this long to realize what he always told me when I would yell at him for not doing anything around the house," the military wife wrote in a Facebook post.

In her Facebook post, which has gone viral with over 10,000 shares, Deirdre encouraged other women to appreciate their husbands and to be a little more understanding.

"The point I'm trying to get across is appreciate your husbands more. I know they make messes, and sometimes it is unacceptable. But they do so much for us. They provide for our family, they protect us, and the sole reason we have freedom," she wrote.

"You are their rock, and they are yours. So next time you wanna yell at your husband because he left his PT's in the hallway, go look at the bottom of his boots," she concluded.

This post doesn't give military men an excuse to sit around in their underwear and shoot spitballs at the wall, but it is nice to know that some women appreciate a hard-working spouse.



## Hard to believe!



WikiLeaks

Leaks News About Partners

### Fwd: Re: About our missile tactics

From: adnansen3@gmail.com  
To: akim@akparti.org.tr, cumhurbaskanligi@tcceb.gov.tr  
Date: 2014-08-10 18:40  
Subject: Fwd: Re: About our missile tactics

Asagida fuze taktigimiz ve filistine de gonderdim

----- Yönlendirilen ileti -----

Gönderen: "Adnan şen" <adnansen3@gmail.com>

Tarih: 10 Ağu 2014 23:37

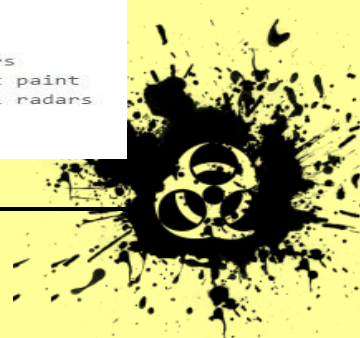
Konu: Re: About our missile tactics

Alici: "palestine.copenhagen@gmail.com" <palestine.copenhagen@gmail.com>

Osman Kastamonulu

Cover missile with carpet 3 times and cover with double glazing(no air between glazing, deaerated) there must be cylindrical and round edges and agonic missile. Our target is insulating and sound-absorbing missile and it mustn't reflect sound and electromagnetic waves back  
10 Ağu 2014 12:47 tarihinde "Adnan şen" <adnansen3@gmail.com> yazdı:

Our missile must be painted with light blue or grey . So, israil radars  
> won't find missile with electromagnetic waves and especially we must paint  
> our missile's corners and so, we can do insulator missile and israil radars  
> can't find it.  
>







## CBRNE: What Would Ramazzini Have to Say?

By Frank G. Rando

Source: <http://www.cbrneportal.com/cbrne-what-would-ramazzini-have-to-say/>

June 25 – Ramazzini, being a very progressive physician, analyzed the tradecrafts and work environments of workers in a variety of occupations and deduced that occupations and the work environment can influence health and disease. Ramazzini, and his predecessors such as Hippocrates (“The Father of Medicine”) and Paracelsus (“The Father of Toxicology”) made great preliminary strides in what has become known as the medical specialty of occupational and environmental medicine (OEM).



**Bernadino Ramazzini** was born in Capri, Italy in 1633. While still a medical student at the University of Parma he penned a treatise on the diseases of occupations published in 1700; *De Morbis Artificum Diatriba* (Diseases of Workers). Ramazzini has been credited with being “The Father of Occupational Medicine”.

Environmental and occupational medicine are uniquely wide-ranging medical specialties that consider the impacts of work and the environment on human health. Work plays a major role among our many human activities. In the work environment, individuals can be exposed to toxic and corrosive industrial chemicals toxic dusts and aerosols, biohazards, hazardous physical agents, such as ionizing radiation, mechanical trauma and emotional and traumatic stress. Any of these exposures may induce disease and disability immediately or with a latency period of years to decades.

Environmental and occupational medicine are specialties confronting rapid change. Each year, hundreds of new synthetic chemical compounds are developed by the chemical industry and are added to the 80,000 chemicals and to the over 10,000,000 mixtures, formulations and blends already in commerce. On several occasions, inadequately tested and harmful toxic substances have been released into the workplace and the environment without proper adequate prior assessment for their potential for toxicity.

Workers are typically the first to be exposed, and the consequences of exposures to both well-known agents, as well as untested substances and technologies fall most heavily on the vulnerable members of our society, such as infants, children and the elderly.

As recent events have elucidated, all workers in all occupations are at risk from terrorist actions and political violence. This includes the more recent and prevalent use of firearms and improvised explosive devices (IEDs). Terrorism and political violence, with the potential use of CBRN agents, has emerged as a complex, multifaceted threat largely as the result of converging issues in security, international relations and public health, which include the following:

- Changes in the international order
- Changes in the ideology and “practice” of terrorism and political violence
- Changes in the capacities and capabilities of health care systems and the public health infrastructure to cope.

► Read the rest of this article at source’s URL.

*Frank G. Rando possesses over 30 years of real world experience as a public safety professional, clinician, educator, emergency and crisis manager, author and consultant in the areas of tactical, disaster and operational medicine, weapons and tactics, law enforcement /criminal investigations, counterterrorism, hazardous materials management and emergency response, toxicology,*



*environmental safety and health, and health care and public health emergency management.*

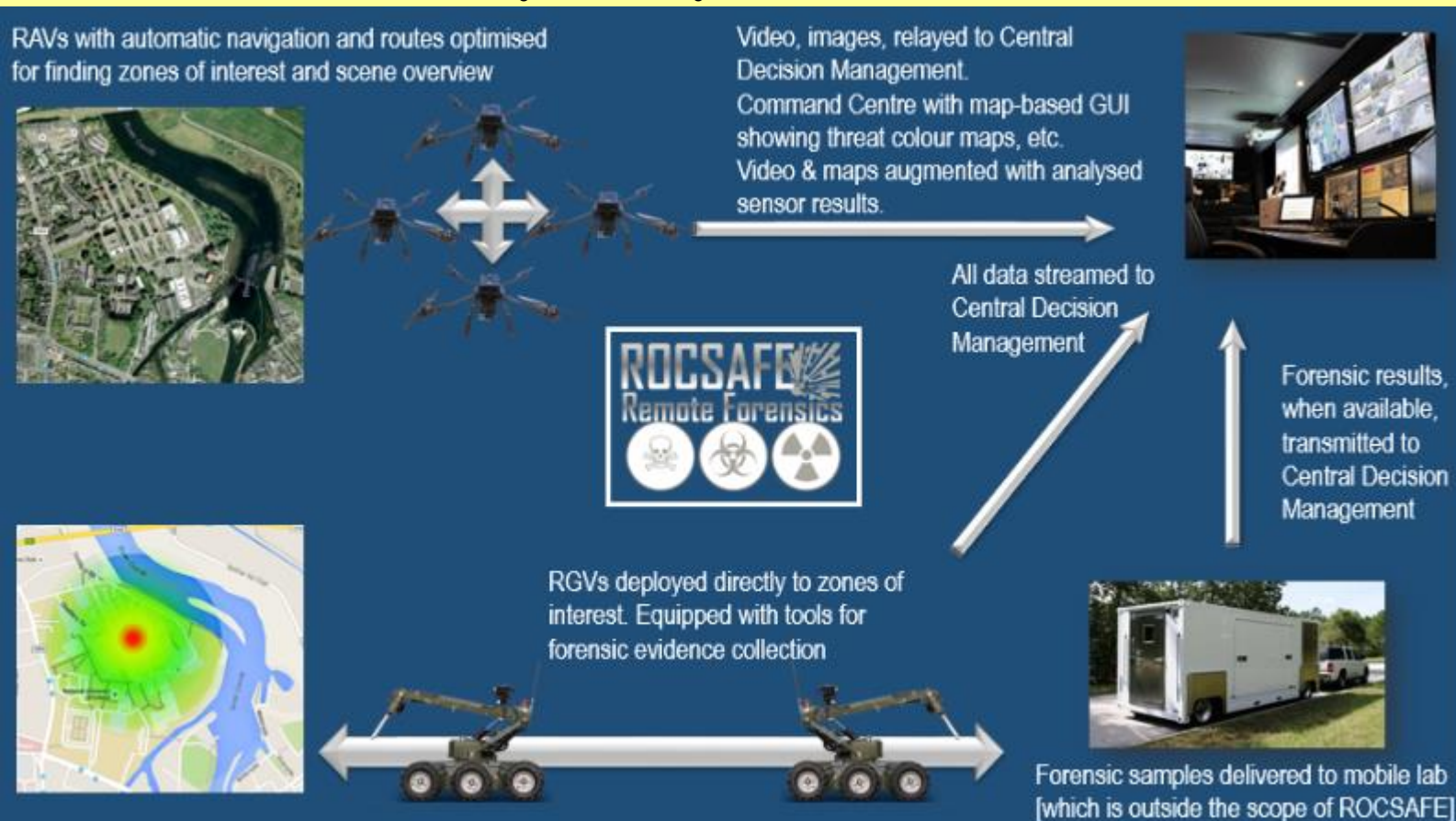
## International Project Led By National University of Ireland Galway Awarded €4.8 Million in EU Funding



**20 June 2016:** A team led by NUI Galway has been awarded €4.8 Million in Horizon 2020 EU funding for their project ROCSAFE (Remotely Operated CBRNe Scene Assessment & Forensic Examination), which will use robotics and intelligent reasoning to gather forensic evidence in the event of a chemical, biological or nuclear incident.

Led by Dr Michael Madden from the College of Engineering & Informatics at NUI Galway, the ROCSAFE project will focus on developing ICT and Security software to gather forensic intelligence in the event of a terrorist attack.

ROCSAFE's overall goal is to fundamentally change how CBRNe (chemical, biological, radiological and nuclear defense events) are assessed, and ensure the safety of crime scene investigators, by reducing the need for them to enter dangerous scenes to gather evidence.



There are 13 partners in total involved in the ROCSAFE project across Ireland, Italy, Portugal, Spain and Germany, along with a wider set of advisory board members.

CBRNe accidents or terrorist attacks are a low probability but of high consequence. In the aftermath of a CBRNe event, the principles that govern the response mission are:

- Protection of Life
- Elimination/Reduction of Threat
- Protection of Property





- Preservation of Evidence
- Restoration of Normal Activities

ROCSAFE focuses specifically on three of these principles: the protection of life, the elimination/reduction on of the threat, and the preservation of evidence. By building a mobile remotely operated system, ROCSAFE can protect personnel by removing the need for them to go on-scene to identify threats, detect the presence of forensic material, and collect forensic material.

In order to safely respond to a threat, it must first be identified. To do this, the scientific team will adapt robotic air and ground vehicles to carry cameras and innovative sensors for the identification of CBRNe materials. To preserve evidence, they will equip the vehicles with tools to enable the careful and methodical collection of forensic materials and will develop procedures that are appropriate to remotely operated vehicles (ROVs), to preserve the integrity of the evidence chain.

Using robotic aerial vehicles (RAVs) that will be remotely managed and semi-autonomous, ROCSAFE will quickly gain a visual overview of the scene and identify hotspots. This will enable responders to quickly set up a perimeter to protect bystanders and start managing the scene. The RAVs will be equipped with cameras (operating in the visible and infra-red ranges) and sensors for detection of radiation/nuclear, chemical and biological threats. Data from these will be relayed to a Central Decision Management unit in real-time.

The Central Decision Management will provide data analytics and decision support software to ensure all available data is presented in the Command Centre, which will be located in a safe zone near the periphery of the incident, to the on-scene commanders in an intuitive and easy to assimilate manner. The Central Decision Management will include an innovative approach, which will be able to adapt to the evolving situation over time as information arrives from sensors and cameras, and the people on the scene provide inputs.

ROCSAFE will use state-of-the-art ground vehicles that are specifically designed for hazardous scenes, and will include the development of tools and procedures for gathering forensic material and evidence. The challenges in forensic evidence collection are to remove the possibility of cross-contamination and to ensure the integrity of the evidence chain.

This process will ensure that CBRNe scenes are assessed more rapidly and thoroughly than is currently possible, and that forensic evidence and material is collected in a manner that stands up in court, and all without sending personnel into zones of high risk.

► For more information on ROCSAFE contact Dr Michael Madden, College of Engineering & Informatics, NUI Galway on [michael.madden@nuigalway.ie](mailto:michael.madden@nuigalway.ie) or 091 493797.

**4ENSIC**

**EDITOR'S COMMENT:** The Editor as Research Associate @ Center for Security Studies (KEMEA –Athens, Greece) participated in the submission of a similar proposal (4ENSIC) for this topic that graded high but did not get the final EU approval. Our congrats to NUI – looking forward for their solution in this complex approach.

FCT-3-2015





## Is the West prepared for an Islamic State attack?

By Arabinda Acharya

Source: <http://thebulletin.org/west-prepared-islamic-state-attack9553>

In January 2006, Singapore conducted Exercise Northstar 5, a drill designed to educate the public about chemical, biological, radiological, and nuclear attacks—and how best to respond to them. In April 2015, authorities followed up with another drill, [Northstar 9](#). The Southeast Asian city-state has also



established a specialist agency, the Chemical, Biological, Radiological, and Explosive Defence Group, as well as a Community Emergency Preparedness Program. Most important, it has built shelters—in the rapid-transit system, in schools and community centers, and in the Housing Development Board buildings in which most Singaporeans dwell—for the public to use in the event of an attack. In addition



to other life-saving facilities, the shelters feature “protective blast doors, decontamination facilities, ventilation system[s], power and water supply systems and dry toilet system[s],” according to the Singapore Civil Defence Force.

At a time when the Islamic State could be eyeing European targets for a chemical-

weapons attack, Western countries could take a lesson from the island nation. Most countries in the West remain alert to the possibility of an attack involving weapons of mass



destruction, and indeed have the ability to prepare for such scenarios, yet their current planning lacks specifics in terms of policies, procedures, and resources. In many countries, response preparations focus primarily on military operations and force-protection measures, including the safety of first responders, while plans involving the civilian population and infrastructure do not receive adequate attention. And while preventative measures might make an attack less likely, that is no excuse for this lack of preparedness.

### Prevention vs. Preparedness

Much has already been written about terrorists and the threat of weapons of mass destruction, yet most attention has been on the possibility of groups like Al Qaeda and now Islamic State acquiring and using such weapons. A number of [studies](#), [testimonies by top intelligence officials](#), and [statements of political leaders](#) suggest that Islamic State is intent on using some forms of chemical, biological, nuclear, or radiological weapons, especially in Europe and the United States, and may even be in possession of the expertise, technology, money, and materials to do so. Less attention is given to our preparedness to deal with the consequences of a such an attack. Indeed, preparedness remains largely neglected due to the perception that a strike of this kind still poses significant technical and logistical challenges to non-state actors, even though, according to a December 2015 European Parliament [briefing](#), Islamic State has overcome the financial constraints.

It is true that, strategically, the first step in preparing for an attack is preventing one from happening in the first place—by denying terrorists access to dangerous materials and devices. This requires intelligence coordination not only among different agencies in a particular country, but also with other countries to target sources, conduits, and criminal facilitators.

It's also true that such an attack is relatively unlikely. [According to one assessment](#), a radiological device (such as a dirty bomb) poses big obstacles in terms of acquiring materials and accessing targets; pathogens for biological weapons can “rapidly be detected” by concerned authorities; and the delivery of chemical weapons requires local resources that could be especially hard to get in Europe and North America due to the rather robust surveillance networks in place. Moreover, most major incidents involving chemical, biological, radiological, or nuclear destruction have come

about due to state actors, human error, or natural calamity, and those involving non-state actors, from the 1995 Tokyo subway attack to the 2001 anthrax letters in the United States, have either failed or had very limited impact.

Yet countries should still have a plan for when prevention fails. The response to such an incident depends on a number of factors—including the type of weapon used, the delivery method, and the location of the attack—and involves everything from organizing cleanup, decontamination, and evacuation to providing special medical facilities and medications, protective equipment, shelters, and expert personnel. It also involves having in place the means to restore normalcy and public confidence as quickly as possible.

### How ready is Europe?

Europeans have made some efforts to prepare for an attack, but as journalists Aline Robert, Jorge Valero, and Nicole Sagener explain, most of these remain policies that have not actually been implemented yet. Responsibility to address the threat remains primarily with individual states, which is problematic since broad policies to deal with the threat and allocation of resources are done at the EU level, making it difficult for policies and practices to be consistent. Country-specific responses might be inadequate, especially when these need robust expertise, information, and intelligence sharing.

Moreover, there is as yet no European Union legislation to target or control chemical, biological, radiological, or nuclear substances that could specifically be used as a weapon of mass destruction, except the use of chemicals as [“explosives precursors.”](#) (Although it is worth noting that most countries around the world rely on piecemeal legal or executive instruments for their response plans rather than such general legislation.) There have been some efforts, however, by



different European Commission agencies to detect misuse of such substances and develop crisis-management plans. And the 2003 [Strategy Against Proliferation of Weapons of Mass Destruction](#) and the 2005 [Counter-Terrorism Strategy](#) also seek to deal with terrorists' access to such materials.

Apart from adopting of UN Security Council Resolution 1540, which commits member states to have and enforce appropriate and effective measures against proliferation of chemical, biological, radiological, or nuclear weapons, and establishing the [Chemical Biological Radiological and Nuclear Risk Mitigation Centres of Excellence Initiative](#), the EU has also adopted an [Action Plan](#) delineating procedures for prevention, detection, preparedness, and response. The plan seeks new systems and technologies to deal with multiple types of threats—known in the industry as “all hazard” threats—that require major coordination among government, the private sector, and the public. European plans involve, among other things, decontamination, post-incident diagnosis, and increasing social resilience in the event of an attack. At a country-specific level, Britain's counterterrorism strategy highlights measures to deny terrorists access to chemical, biological, radiological, and nuclear materials, to prevent attacks, to respond promptly and effectively to incidents, and to recover from them as quickly as possible. The UK has also codified a “[Model Response](#)” to guide emergency services in the event of an attack.

As a 2014 European Commission [report](#) pointed out, however, there is a need to do more—especially in terms of creating a better strategy to anticipate, deter, and manage these kinds of incidents, as well as in terms of cultivating effective public-private dialogue that engages all stakeholders.

#### What about America?

In the United States, the Environmental Protection Agency oversees chemical, biological, radiological, and nuclear threats. The country has a fairly long history of exposure to such dangers. Since 1998, more than 1,300 incidents of lost, stolen, or abandoned devices with radioactive substances have been reported, any of which

could have been used to make an improvised radiological weapon. Domestic preparedness against such incidents dates back to the Cold War era and intensified after the March 1995 Tokyo subway attacks, the April 1995 Oklahoma City bombing, and the post-9/11 anthrax letters in the fall of 2001. The [National Strategy for Chemical, Biological, Radiological, Nuclear, and Explosives Standards](#) seeks to establish intra-agency coordination and to develop standards for equipment performance, interoperability, and voluntary training and certification, with a view to improving preparedness and response capabilities at the federal, state, and community levels. According to the government, the range of professionals involved in protecting and responding to threats has expanded beyond specialized military units to include “local first responders, including police, firefighters, emergency medical services, hazardous materials response units, and bomb squads.” There has also been a significant growth in the “technological options as well as the number and types of equipment used by responders.”

But there is a perception that, as in Europe, intentions and policies do not match actual performance. As the National Strategy acknowledges, the domestic preparedness in terms of procurement of required equipment is “confronted with a complex array of technical specifications, capabilities and choices” and with overlapping efforts involving research and development of new technologies, forensics, and performance specifications to manage an incident involving weapons of mass destruction. Additionally, different agencies are acting on their own in terms of R&D for new technologies and equipment and in terms of developing protocols for first-responder protection, cleanup, and forensics, resulting in overlaps and wasted resources.

#### What should be done?

The lackluster preparedness in Europe and the United States could be explained in terms of the prevailing belief about the low probability of terrorists obtaining, improvising, and deploying a chemical, biological, radiological, or nuclear device. This also explains why finding the best practices to





manage the consequences of such an attack by a non-state actor continues to be largely a theoretical discussion.

Managing the aftereffects of an incident involving weapons of mass destruction is quite different from managing a conventional terrorist attack with guns and explosives. Authorities must consider the toxicity of agents, the nature of different contaminations, the lengths of effects, and the scale of cleanup operations. They must also prepare plans for restoring public confidence and a sense of normalcy. An additional, related challenge is the need for intelligence coordination for improved monitoring of dangerous materials. This must involve the government, the private sector, and the general public, as well as international cooperation, yet governments ought to shoulder the bulk of the burden, provide resources and expertise, and coordinate among the diverse players involved.

Responding to the threat of chemical attacks by Iraq during the first Gulf war, Israel prepared its citizens by providing information about the risk, supplying gas masks and antidotes, and building sealed rooms for cover. However,

given the complexity and unpredictability of the threats today, response preparedness must go beyond this. Governments must take steps to strengthen detection capabilities when it comes to dangerous substances and insider threats. They must equip first responders, rescue services, security forces, and health professionals with the proper tools and training. And they must enact robust measures that integrate response procedures, facilitate rapid analysis of suspicious materials, and establish secure databases for the exchange of information and best practices among different agencies at the local, national and international levels.

Most countries in Europe and North America continue to be caught flatfooted by traditional terrorist attacks. Unlike Al Qaeda, Islamic State operates in identifiable territories that could be targeted and reclaimed with a united and a determined effort that unfortunately continues to elude the international community. This is all the more reason for Western nations to guard against—but also prepare to respond to—chemical, biological, radiological, and nuclear attacks by non-state actors.

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## From Factors to Actors: Enhancing the Reliability of CBRN Analysis

*CBRNe World Magazine*

By Breiger Ronald Lauren Pinson and Gary Ackerman

Source: [http://u.arizona.edu/~breiger/Breiger\\_et\\_al\\_CBRNeWorld\\_April\\_2016\\_ms.pdf](http://u.arizona.edu/~breiger/Breiger_et_al_CBRNeWorld_April_2016_ms.pdf)

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### From Factors to Actors: Enhancing the Reliability of CBRN Analysis

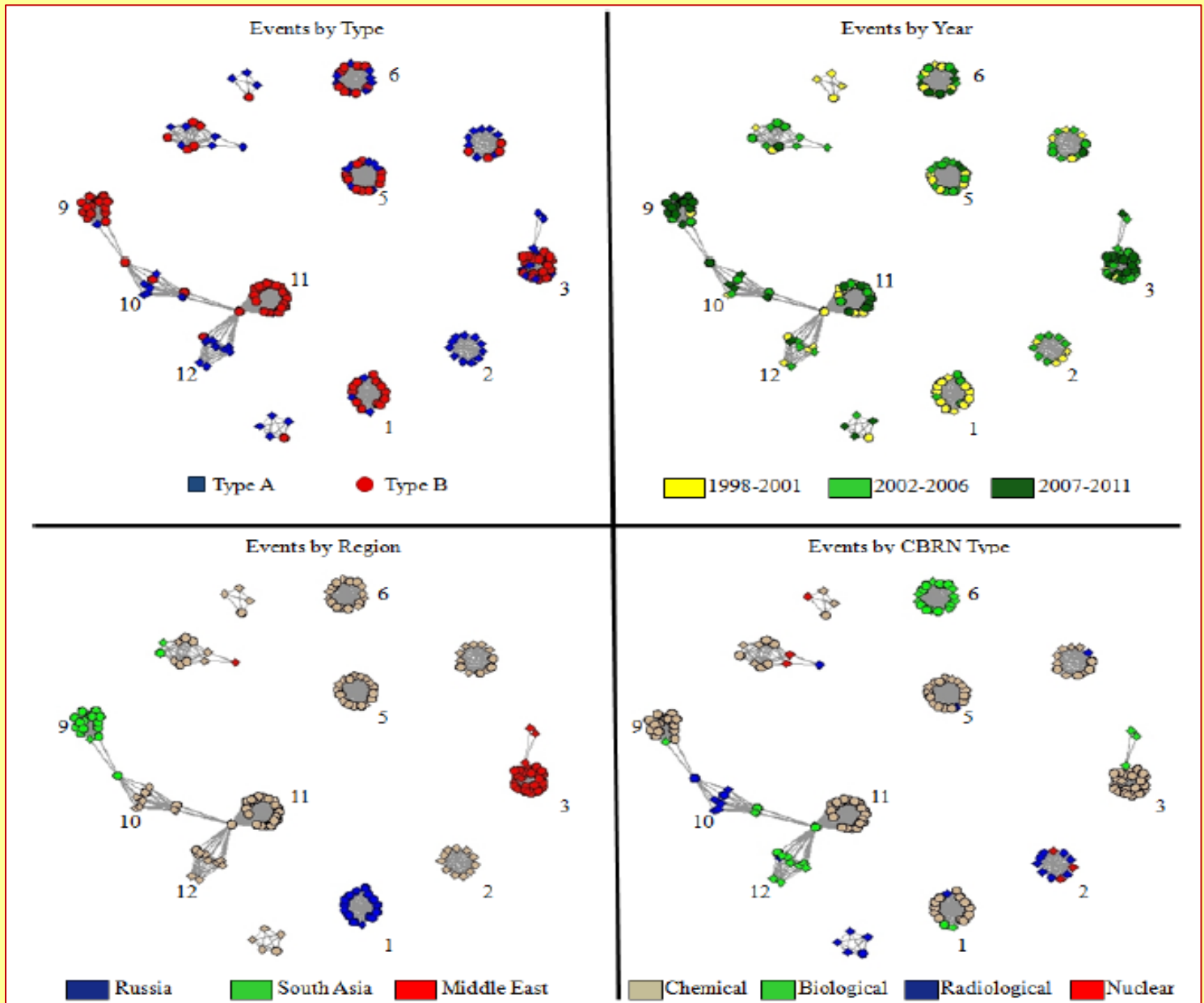
by Ronald Breiger, Lauren Pinson, and Gary Ackerman

Considerable debate in recent years among researchers and policymakers has focused on the growing potential of terrorist groups to acquire and use chemical, biological, radiological, and nuclear (CBRN) materials in attacks. The reliability of analyses of CBRN events is an important concern at two levels: the data on which analyses are based, and the quantitative modeling of those data. At each of these levels, recently developed procedures that we highlight in this article allow for increased nuance in threat assessment and aid in the identification of multiple threat scenarios.<sup>1</sup>



**POICN: A Database for CBRN Events involving Non-State Actors**

The POICN database—Profiles of Incidents involving CBRN agents by Non-state actors—is a relational, open-source database including information on international and domestic terrorist plots, acquisitions, and attacks during the period 1990 to 2015 that involve CBRN agents. It is the most comprehensive



open-source, unclassified dataset of CBRN incidents perpetrated by ideologically motivated non-state actors. The POICN database is currently comprised of 534 discrete cases coded across 162 event specific variables, 11 perpetrator variables, and 29 variables describing aspects of the agent acquisition process. The categories of events recorded in POICN include proto-plots, 6 plots, attempted acquisitions, and actual or attempted use of an agent.

► Read the full paper at source's URL.

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## Electronic nose detects pesticides, nerve gas

Source: <http://www.homelandsecuritynewswire.com/dr20160706-electronic-nose-detects-pesticides-nerve-gas>

July 06 – **Detecting pesticides and nerve gas in very low concentrations?** An international team of researchers led by Ivo Stassen and Rob Ameloot from KU Leuven has made it possible.

The MOF used in this study consists of organic molecules (*in grey and black*) and metal ions (zirconium, *in purple*). Between these molecules are little holes that can absorb the **phosphonates** (*in yellow*). © KU Leuven - Centre for Surface Chemistry & Catalysis

The best-known electronic nose is the breathalyzer. As drivers breathe into the device, a chemical sensor measures the amount of alcohol in their breath. This chemical reaction is then converted into an electronic signal, allowing the police officer to read off the result. Alcohol is easy to detect, because the chemical reaction is specific and the concentration of the measured gas is fairly high. But many other gases are complex mixtures of molecules in very low concentrations. Building electronic noses to detect them is thus quite a challenge.

KU Leuven says that researchers from KU Leuven have now built **a very sensitive electronic nose with metal-organic frameworks (MOFs)**. “MOFs are like microscopic sponges,” postdoctoral researcher Ivo Stassen explains. “They can absorb quite a lot of gas into their minuscule pores.”

“We created **a MOF that absorbs the phosphonates found in pesticides and nerve gases**. This means you can use it to **find traces of chemical weapons such as sarin or to identify the residue of pesticides on food**. This MOF is the most sensitive gas sensor to date for these dangerous substances. Our measurements were conducted in cooperation with imec, the Leuven-based nanotechnology research centre. The concentrations we’re dealing with are extremely low: parts per billion – a drop of water in an Olympic swimming pool – and parts per trillion.”

**The chemical sensor can easily be integrated into existing electronic devices**, Professor Rob Ameloot adds. “You can apply the MOF as a thin film over the surface of, for instance, an electric circuit. Therefore, it’s fairly easy to equip a smartphone with a gas sensor for pesticides and nerve gas.”

“Further research will allow us to examine other applications as well,” Professor Ameloot continues. **“MOFs can measure very low concentrations, so we could use them to screen someone’s breath for diseases such as lung cancer and MS in an early stage.** Or we could use the signature scent of a product to find out whether food has gone bad or to distinguish imitation wine from the original. This technology, in other words, offers a wide range of perspectives.”

— Read more in I. Stassen et al., “Towards metal–organic framework based field effect chemical sensors: UiO-66-NH<sub>2</sub> for nerve agent detection,” [Chemical Science](#) (24 May 2016).





## Chilcot report: Bush says 'world is better off' without Saddam as Blair mounts Iraq war defence – as it happened

Source: <http://www.theguardian.com/politics/live/2016/jul/06/chilcot-report-live-inquiry-war-iraq>



July 06 – Sir John Chilcot's 6,000-page report on the Iraq war and occupation delivered a crushing verdict on Tony Blair's decision to join the US invasion, finding a cascade of mistakes and bad strategy that led to years of devastating mismanagement and strife.

### Key findings include:

- Blair deliberately exaggerated the threat posed by Saddam Hussein; the UK chose invasion before it had exhausted peaceful options; [British intelligence produced "flawed information"](#); the US ignored UK advice on postwar planning; the British military was [poorly prepared for war](#), Blair ignored warnings, [kept his cabinet in the dark](#) and had no plans for occupation.
- The report revealed secret letters between Blair and George W Bush, including one in which the then prime minister pledged to the US president: "[I will be with you, whatever](#)." Six days after invasion, he added: "This is the moment when you can define international politics for the next generation: the true post-cold war world order."
- Blair responded by saying: "[I express more sorrow, regret and apology than you can ever know or believe](#)." But the former prime minister insisted he made the right decision. "I believe it is better we took that decision. I acknowledge the mistakes and accept responsibility for them," he said. "As this report makes clear, there were no lies, there was no deceit."
- Bush defiantly [insisted the decision to invade was the correct one](#). "Despite the intelligence failures and other mistakes he has acknowledged previously," a spokesperson said, "President Bush continues to believe the whole world is better off without Saddam Hussein in power."
- Blair rejected [at least nine findings of the report](#), including that war was "not a last resort", that the UK and US undermined the UN, that an insurgency was predictable and that the military and intelligence services share some blame.
- Labour leader Jeremy Corbyn apologised on behalf of the party. He apologised to Iraqis, British soldiers and to "[the millions of British citizens who feel our democracy was traduced and undermined](#)" by the way in which the decision to go to war was taken".
- Reg Keys [called Blair's statement the "ramblings of a madman"](#), saying the former prime minister misled parliament and that his son and other soldiers died in vain.
- Lord Butler and [others made limited defenses of Blair](#), with many saying that he exaggerated the reliability of intelligence but acted in good faith and did not lie. The US diplomat in charge of the occupation in 2003 [agreed with several key findings](#) but also argued that the decision to invade was justified.
- Many Iraqis met the report [with the grim sense that it only articulated the obvious](#): that western hubris and incompetence had created the conditions for years more of strife, including Sunday's bombing, which killed an estimated 250 people in one of the worst atrocities of postwar Iraq.





## Chemical Suicides a Danger to EMS

Source: <https://www.acep.org/Content.aspx?id=82246>

Oct 2011 – **A novel method of suicide – which poses nearly as much danger to rescue personnel as to victims - appears to be gaining popularity in the United States.**

Ten chemical suicides in cars occurred in the United States from 2006 to 2011, according to a report by the U.S. Agency for Toxic Substances and Disease Registry (ATSDR).

The victims mixed various household chemicals and cleaners to produce toxic gases inside a car, and died from inhaling the fumes, the report said (MMWR 2011;60:1189-90).

**The paper shows an upward trend in chemical suicides in automobiles:** One occurred in 2006, one in 2007, four in 2009, and four in 2010. But there's no way of knowing the true numbers, said Dr. Eric Lavonas, associate director of the Rocky Mountain Poison and Drug Center, Denver, and an emergency physician at the Denver Health Medical Center.

"There is no question in my mind this is an upward trend, especially in the past year and a half or so," he said in an interview. "This is an emerging phenomenon and we are seeing more and more cases - each one as tragic as the one before."

The ATSDR drew its data from the 2006-2009 Hazardous Substances Emergency Events Surveillance system and from the 2010 data from the National Toxic Substance Incidents Program. A chemical suicide case was defined as suicide or attempted suicide using mixed chemicals in an automobile, noted lead author Ayana Anderson, a public health official with the Centers for Disease Control and Prevention.

The 10 incidents, which occurred in Connecticut, Florida, New York, North Carolina, Utah, and Washington, resulted in 9 deaths. One person began the attempt but then aborted the action. Four rescue personnel were also affected. Two experienced respiratory irritation, but symptom data were not available for the other two, Ms. Anderson and her colleagues noted.

Nine of the incidents occurred in residential areas, where a total of 85 people were evacuated; 32 required decontamination.

In addition to household cleaners, the victims used an assortment of chemicals, including ammonium hydroxide, aluminum oxide, hydrochloric acid, potassium ferrocyanide, sodium hypochlorite, sulfur, sulfuric acid, and trichloroethylene.

The victims for whom an exact age was available ranged from 22 to 69 years. No exact ages were available for four victims, but two were younger than 18 years and two were older than 18, the report said. Most victims (7) were male.

This suicide method kills quickly, said Dr. Lavonas, who has been involved with two cases not noted in the report. **"One good, deep lung-full of hydrogen disulfide causes almost immediate loss of consciousness and cessation of heart and brain activity within minutes."** However, the fumes will linger in an enclosed space, endangering emergency personnel who move into a scene without following proper hazardous material protocol.

Because of its effectiveness, most victims are dead by the time emergency responders arrive, so the biggest concern is protecting emergency responders. "Toxic gases will make their way through a structure in unpredictable ways. When we hear about these cases, we need to make sure we just have one dead body. We don't want our rescuers becoming secondary victims in their efforts to help someone."

**If a victim is alive at the scene,** decontamination is necessary before resuscitation can begin. "This consists of off-gassing the patient by getting them out of their clothing and running a fan over them," he said. While there is no antidote for hydrogen disulfide poisoning, cyanide poisoning can be treated with hydroxocobalamin.

**Signs of chemical suicide** are a rotten-egg smell around the car or any enclosed space that can contain gas, said Dr. Paul Pepe, chief of emergency medicine at the University of Texas Southwestern Medical Center, Dallas. "Suspensions should be high if the person looks very dead in the car and has locked themselves in, especially if the



windows are taped closed," he said in an interview. Other signs are a car that is not running and that is parked in the open - not in the garage - and printed signs taped to the inside of the car windows. These could be biohazard signs or notes warning emergency responders of toxic gases.

Both physicians agreed that the 10 victims noted in the report are certainly an underestimate of the true incidence. But, they said, chemical suicide in cars is likely to remain relatively uncommon for several reasons, including the difficulty of finding the necessary chemicals, Dr. Pepe said.

The method also involves a lot of time and planning, Dr. Lavonas added.

"There are a lot of steps needed to research it, gather the materials, and set it up. These hours spent preparing indicate someone with very serious suicidality. Unfortunately, this nonimpulsive component means that it will be very difficult for the mental health community to impact."

Time is actually one of the most tragic issues about these acts, he said. "All of that time spent in preparation could have been spent in trying to get help."



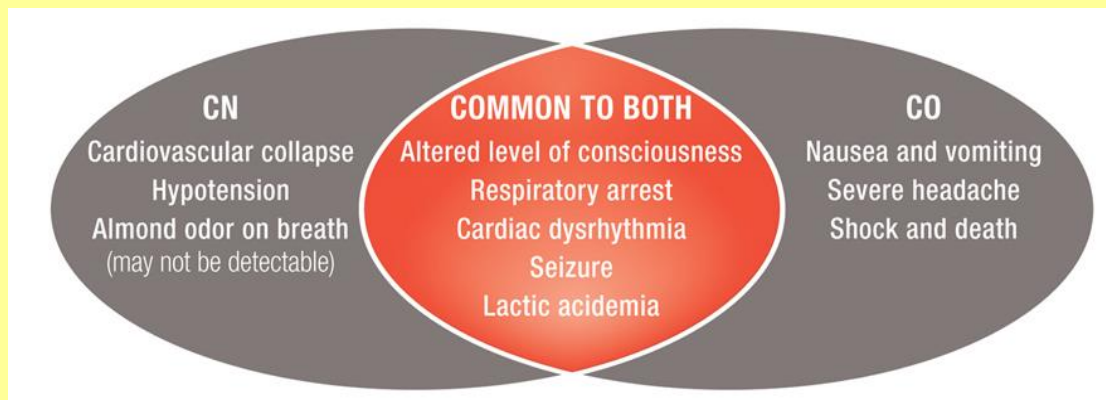
## Don't Overlook Cyanide Poisoning in Smoke Inhalation

Source: <https://www.acep.org/Clinical---Practice-Management/Don-t-Overlook-Cyanide-Poisoning-in-Smoke-Inhalation/>

May 2007 – Think about cyanide in the differential diagnosis of anyone who's severely ill from smoke inhalation, urged Dr. Marc Eckstein at a conference sponsored by the Washington Chapter of the American College of Emergency Physicians.

"Cyanide as a component of smoke is an emerging problem, one that hasn't been well appreciated until recently," said Dr. Eckstein of the University of Southern California, Los Angeles. "If you've got patients who arrive at your ED from a residential structure's fire and they're sick, the first thing you think about is probably hypoxia and/or carbon monoxide toxicity."

Recent studies suggest that cyanide is a greater component of smoke from residential fires than previously thought, he added at the meeting, also sponsored by the Institute for Emergency Medical Education.



Cyanide is the product of the combustion of common materials. Substrates for hydrogen cyanide are natural and synthetic substances containing carbon and nitrogen, such as wool, silk, cotton, and paper and some plastics and other polymers - "things found arguably in every home in America," he said. That makes the release of hydrogen cyanide highly probable and to be expected in closed-space fires.

How do you diagnose a patient with cyanide poisoning? "The symptoms are pretty nonspecific; basically, they're any of the symptoms you'd expect from hypoxia," he explained (see table).





### Signs of Cyanide Poisoning From Smoke

#### At Low Inhaled Concentrations

Faintness  
Flushing  
Anxiety  
Excitement  
Perspiration  
Vertigo  
Headache  
Drowsiness  
Tachypnea  
Dyspnea  
Tachycardia

#### At Moderate/High Concentrations

Prostration  
Tremors  
Cardiac arrhythmia  
Convulsions  
Stupor  
Paralysis  
Coma  
Respiratory depression  
Respiratory arrest  
Cardiovascular collapse

"Things that, classically, we've learned about, you usually can't hang your hat on," he cautioned. "Obviously if you smell bitter almonds, think cyanide; but that's very unreliable." Bright red retinal veins and arteries and bright red blood on a normal peripheral blood stick are helpful but not specific. While it could be hydrogen sulfide, it also could be anything that poisons the cytochrome oxidases and prevents the body from utilizing oxygen. Suspect cyanide poisoning in any person exposed to smoke in a closed-space fire, with soot in the nose or mouth, altered mental state, or hypotension, Dr. Eckstein said. "I have to suspect cyanide as a potential culprit when I see soot in the

nose or mouth. But it doesn't tell me that that's the problem."

A major challenge in diagnosis is that carbon monoxide and cyanide poisoning are clinically indistinguishable in the field. And no technology presently exists to identify cyanide in smoke at the scene; there is no rapidly returnable diagnostic test for cyanide, he said. "How many people can get a cyanide level at their hospital? I can't. So if it's a level I can't get, can I treat someone presumptively for cyanide poisoning? Not safely."

A retrospective study of Paris residential fires found that elevated plasma lactate levels are useful as a surrogate marker for elevated cyanide levels in fire victims who do not have severe burns (N. Engl. J. Med. 1991;325:1761-6).

Cyanide's mechanism of action blocks aerobic metabolism; cells immediately starve for oxygen and die, and no amount of supplemental oxygen can overcome the deficit in affected cells. "Because the body shifts over to an anaerobic metabolism, not surprisingly your lactate levels are going to be high," Dr. Eckstein noted. "Get lactate levels; with lactate greater than 10 mmol/L, think about cyanide."

Because presumptive diagnosis and empiric treatment are necessary, he said, "the trick to an antidote for cyanide is that you can't hurt the patient if you're wrong because you're using surrogate markers." Antidotes need to be safe when administered in the context of multiple poisonings, Dr. Eckstein added.



The cyanide antidote kit, or CAK (also known as the Taylor Kit, the Lilly Kit, and the Pasadena Kit), contains three active components: amyl nitrite, sodium nitrite, and sodium thiosulfate. But it has substantial limitations, he cautioned.

"Usually most of the cases in which you've had to use it were probably suicide attempts, where someone had a known cyanide exposure," Dr. Eckstein said. "We can't use CAKs presumptively for cyanide poisoning because of the

nitrites." Nitrites displace oxygen from hemoglobin to form methemoglobin, he explained, which reduces the blood's oxygen-carrying capacity. "If we're wrong and the patient is



hypoxic and has carbon monoxide poisoning, and now I've induced methemoglobinemia, I'm going to worsen the hypoxia."

The other main side effect of nitrites, he pointed out, is that they drop blood pressure. "So if I have someone who's in profound shock, he's hypoxic, and I think maybe it's cyanide poisoning, if I treat him with the CAK and give him the nitrites, I may kill him," Dr. Eckstein said. "This is something I can't use without an actual level of cyanide, which I can't get." The sodium thiosulfate component of the kit has a late onset of action, he added, which may not be effective.

But help is on the way. Cyanokit, which contains hydroxocobalamin, was approved late last year by the Food and Drug Administration for the treatment of known or suspected cyanide poisoning. It may provide a safe and rapid alternative for treatment of known or suspected cyanide toxicity, he said.

The antidote of choice in France, hydroxocobalamin can detoxify cyanide in smoke-inhalation victims without compromising the oxygen-carrying capacity of the blood or causing hemodynamic instability, Dr. Eckstein said. A vitamin B12 precursor, hydroxocobalamin (vitamin B12a) chelates cyanide to form cyanocobalamin (vitamin B12) which is excreted in the urine. Side effects are transient, and sodium thiosulfate may be coadministered. "They've been using hydroxocobalamin in France for more than 10 years," he said. "They actually have physicians riding ambulances out there, and they all swear by this."

## Market Predictions for CBRN and Hazmat Industry

Source: <http://www.hazmatmag.com/hazmat/market-predictions-cbrn-hazmat-industry/1003274292/>

July 07 – Research Corridor, a market research company out of the U.S.A. recently published a report entitled [CBRN & HAZMAT Incidents Decontamination Market – Global Trends, Market Share, Industry Size, Growth, Opportunities, and Market Forecast – 2015 to 2022](http://www.hazmatmag.com/hazmat/market-predictions-cbrn-hazmat-industry/1003274292/). The industry research study scrutinizes the chemical, biological, radiological and nuclear defense (CBRN) and hazardous materials (HAZMAT) incidents decontamination market by different segments, companies, regions and countries over the forecast period 2015 to 2022.



The market report offers a primary overview of the CBRN & HAZMAT Incidents Decontamination industry covering different product definitions, classifications, and participants in the industry chain structure. The quantitative and qualitative analysis is provided for the global CBRN & HAZMAT Incidents Decontamination market considering competitive landscape, development trends, and key critical success factors.

### The questions answered in the report include the following:

- What was the CBRN & HAZMAT Incidents Decontamination market size in 2013 and 2014?
- What are the estimated growth trends and market forecast for 2015 – 2022?
- What will be the Compound Annual Growth Rate of CBRN & HAZMAT Incidents Decontamination market during the forecast period?
- Which segments (product type/applications/end-use/technology) were most attractive for investments in 2014?
- How are these segments expected to fare during the forecast period 2015 – 2022?
- Which manufacturer/vendor/provider in the CBRN & HAZMAT Incidents Decontamination industry was the market leader in 2014?

### Geographic Coverage

- North America CBRN & HAZMAT Incidents Decontamination Market Revenue and/or Volume
- Europe CBRN & HAZMAT Incidents Decontamination Market Revenue and/or Volume
- Asia Pacific CBRN & HAZMAT Incidents Decontamination Market Revenue and/or Volume
- Middle-East and Africa CBRN & HAZMAT Incidents Decontamination Market Revenue and/or Volume
- Latin America CBRN & HAZMAT Incidents Decontamination Market Revenue and/or Volume





## New method helps identify chemical warfare agents

Source: <http://www.homelandsecuritynewswire.com/dr20160714-new-method-helps-identify-chemical-warfare-agents>

July 14 – A new method for extracting, enriching, and identifying chemical warfare agents from oils and other organic liquids could help government officials and homeland

both water-repellant, which is often the case. Elsevier says that in the new study, researchers from the Defense Research and Development Establishment in India developed a method that overcomes this challenge using iron oxide nanoparticles.

“The horrifying capabilities of chemicals like sarin have been shown in many incidents related to the military and terrorist activities,” said Dr. D. K. Dubey, corresponding author of the study from the Defense Research and Development Establishment. “Our research is an advancement in the state-of-the-art analytical techniques needed to verify the agents

used in the field, to save mankind from the menace of chemical warfare agents.”

**The researchers decorated iron oxide nanoparticles with a substance called poly methacrylic acid-co-ethylene glycol dimethacrylate. This made the particles more “sticky,” helping them attach more easily to the chemical warfare agent particles in the samples. They tweaked different aspects of the extraction method and eventually were able to identify the agents at low concentrations of about 0.1 micrograms per milliliter.**

“Extracting hydrophobic chemicals, like these agents, from a hydrophobic background, like organic liquids, is a tough challenge to achieve analytically,” said Dr. Dubey. “But efficient and sensitive analytical methods are pivotal in the early detection and identification of toxic agents, so we wanted to take on this challenge. Our new method allows the efficient identification of chemical warfare agents in organic liquids; we hope it will be helpful for the international community involved in verifying and preventing the use of these devastating chemicals.”



security protect civilians more effectively from their deadly effects. The method, published in *Journal of Chromatography A*, uses nanoparticles to capture the chemicals.

Chemical warfare agents are powerful noxious chemicals that have been used as weapons of mass destruction. They can be nerve, blister, choking, blood, or psychochemical agents, acting on the nervous system, skin, lungs, blood, or brain, respectively. The most lethal are nerve agents classified as G-agents (sarin, soman, tabun, and cyclosarin) and V-agents (VX). Earlier this year, a senior Israeli official confirmed that Syria's regime had used the nerve gas sarin against Israeli fighters. In 2013, the agent had been used to kill 1,400 people in Damascus.

The Chemical Weapons Convention was established to prevent attacks like this, and its enforcement relies on monitoring and identification of chemical warfare agents. The increasing use of agents like sarin means improved tests are needed to identify agents in samples taken from the environment so that people can be protected from their effects.

Finding trace amounts of a chemical warfare agent in a sample can be challenging, especially if the agent and the liquid it is in are



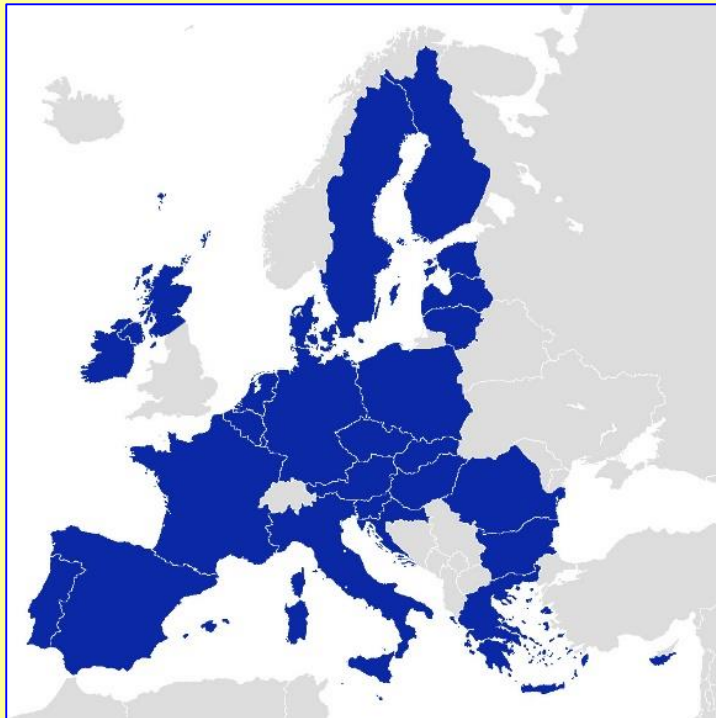


— Read more in Varoon Singh et al., “Analysis of chemical warfare agents in organic liquid samples with magnetic dispersive solid phase extraction and gas chromatography mass spectrometry for verification of the chemical weapons convention,” *Journal of Chromatography A* 1448 (27 May 2016): 32-41 (doi: 10.1016/j.chroma.2016.04.058); also see D. K. Dubey, “How a simple method could help save people from nerve gas attacks,” *Elsevier Connect* (13 July 2016).

## European counterterrorism legislation calls for protecting victims of CBRN attacks

Source: <https://homelandprepnews.com/biological-threats/19268-european-counterterrorism-legislation-calls-protecting-victims-cbrn-attacks/>

July 14 – **The European Parliament has taken an important step toward protecting victims of potential biological, chemical and other types of terrorist attacks in the European Union with its new draft counterterrorism directive** that is being negotiated this week.



The European Parliament’s Civil Liberties, Justice and Home Affairs Committee approved amendments to its directive on combatting terrorism on July 4, aiming to criminalize the planning of terrorist attacks and strengthen victims’ rights. The draft counterterrorism directive was first presented by the European Commission late last year in response to the November attacks in Paris.

“The threat of terrorism is real,” Romanian Member of the European Parliament (MEP)

Monica Macovei told Homeland Preparedness News. “It happened. And it could be only the beginning, so we have to be prepared. We are already quite late in these preparations so this directive is needed and it is welcome.”

Macovei said that she is confident that member states will agree to adopt the amendments in the draft directive.

“Member states see the danger,” Macovei said.

Portuguese MEP Ana Gomes added that the legislation includes a number of critical recommendations to combat terror. One such recommendation highlights CBRN terrorist attacks, she said in an interview, referring to chemical, biological, radiological and nuclear threats.

Combatting terror attacks is made more complicated by the threat of so-called lone wolves who intend to commit a terrorist act on their own.

“It’s a matter of time before anyone could seek to use the existing easy means to actually launch a terrorist attack” with a

biological or chemical substance, Gomes said. “It could be anthrax but there are also many other possibilities.”

“It is clear that Daesh and other terrorist groups have long harbored ambitions to launch CBRN attacks,” Gilles de Kerchove, EU counterterrorism coordinator, said in written remarks to Homeland Preparedness News. “Indeed there is clear evidence from Syria and Iraq that Daesh has used



chemical weapon munitions. EU and member states regularly discuss how they can effectively combat this threat.”

The European Parliament’s Chief Negotiator Monika Hohlmeier has a mandate to negotiate the final text of the counterterrorism directive with the European Council, which includes heads of state for 28 EU member governments. An exception is Denmark, which will not participate in the negotiations on the directive. The European Commission, the EU’s executive body, serves as a facilitator in the negotiations.

Negotiations began this week and will likely continue after the summer recess in September.

**The directive is considered a vital tool in preventing terrorism by criminalizing acts related to preparing for an attack, such as traveling abroad for the purpose of participating in a terrorist group. Receiving training with the intent to make explosives, firearms, or noxious or hazardous substances would also be a criminal act, as would public incitement or praise of terrorism and financing of terrorist activities.**

**The counterterrorism directive also seeks to offer a broad range of help for terror victims. EU member states would need to ensure that specific services to assist and support victims of terrorism are in place. Support would include medical and physical treatment, including countermeasures for nuclear, biological or chemical attacks.**

**The directive would also provide emotional and psychological support, such as counseling, as well as legal advice, to victims. Support would extend to victims who returned to their home countries if they were caught in a terrorist attack while visiting another EU country.**

Hohlmeier said during a press conference after the vote that the legislation calls upon member states to use their best efforts to avoid a wide range of terrorist threats, such as biological, chemical or nuclear threats. She added that it is important for member states to protect their citizens as much as possible from these types of terror attacks.

Gomes said that current action plans by member states to combat potential CBRN attacks are flawed.

“I don’t know that there have been very serious preparations for the possibility that a biological attack could take place – to prevent it, to prepare, to respond to it – I’m not aware that a majority of our members are really doing what it takes,” Gomes said.

Additionally, today’s drone technology heightens the need for more stringent terrorism countermeasures.

**“It can be quite easy to weaponize a drone with biological substances,”** Gomes added.

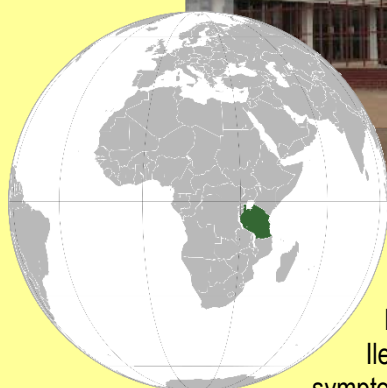
Some of the important changes that member states need to make to combat terror, Gomes said, are improving information gathering from intelligence services, more training for police, and strengthening the interoperability among different types of law enforcement agencies.



## Tanzania: Two Districts On High Alert After Mysterious Illness Kills Seven

Source: <http://allafrica.com/stories/201606200925.html>

June 20 – Seven people have died and 14 were in quarantine at Dodoma Regional Hospital following an outbreak of an unidentified disease in Chemba and Kondoa districts, the government announced yesterday.



The Minister for Health, Community Development, Gender, the Elderly and Children, Ms Ummu Mwalimu, said the government became aware of the outbreak last Monday through the office of the Dodoma Regional Medical Officer.

It all started when nine members of the same family in Mwaikisabe Village, Chemba District, became ill after reportedly **eating meat from a cow** that was slaughtered after breaking

one of its legs.

However, other people who also ate the meat were unaffected, prompting doubts on whether the animal was the source of the disease.

Nine other people from Soya, Itolwa, Kelema Balai, Gubali, Chemka, Kintima and Ilesi villages in Chemba District and one from Ubembeni in Kondoa District developed symptoms that were similar to those experienced by the nine relatives in Mwaikisabe Village.

**"Patients suffer from vomiting and diarrhoea and their eyes and skin turn yellow. They also complain of aching stomachs."**

"So far, 21 people have been reported with these symptoms and seven have died. To prevent the disease from spreading further, the remaining patients have been quarantined at Dodoma Regional Hospital, while others are at Kondoa District Hospital," Ms Mwalimu said.

She, however, allayed fears that the mysterious disease could be anthrax.

"The symptoms seen in the patients are **not consistent with anthrax.**"

Medical experts have also ruled out an outbreak of yellow fever, and were examining the possibility of the illness being Rift Valley fever.

The Dodoma Regional Medical Officer, Dr James Kiologwe, said the disease could have been caused by **aflatoxins**, which are toxic metabolites produced by certain fungi. Aflatoxins have been associated with a number of diseases, such as aflatoxicosis in livestock and humans.

## FDA completes pre-approval inspection of Emergent BioSolutions' anthrax vaccine manufacturing facility

Source: <http://www.homelandsecuritynewswire.com/dr20160629-fda-completes-preapproval-inspection-of-emergent-biosolutions-anthrax-vaccine-manufacturing-facility>



June 29 – Gaithersburg, Maryland-based Emergent BioSolutions Inc. last week announced that the U.S. Food and Drug Administration (FDA) had completed its **Pre-Approval Inspection (PAI) of Building 55, the company's facility for large-scale manufacturing of BioThrax (Anthrax Vaccine Adsorbed)**. At the conclusion of the inspection,





the company received a No Action Indicated decision and no Form 483 observations.

The company notes that successful completion of the PAI is one of the requirements for Building 55 licensure in connection with the company's supplemental Biologics License Application (sBLA) recently accepted by the FDA. The sBLA has a Prescription Drug User Fee Act (PDUFA) target action date of August 15, 2016.

"Emergent is pleased to have reached this critical milestone in our BioThrax comparability program. The positive outcome from this pre-approval inspection is a testament to our employees' tireless efforts, to our substantial financial investment in Building 55, and to our strong partnership with BARDA," said Adam Havey, executive vice president and president, biodefense division at Emergent BioSolutions. "We look forward to timely completing the process for securing FDA licensure of our facility."

The BioThrax comparability program is fully funded at \$104 million by the Biomedical Advanced Research and Development Authority (BARDA) within the Office of the Assistant Secretary for Preparedness and Response in the U.S. Department of Health and Human Services.



## Anthrax capsule vaccine completely protects monkeys from lethal inhalational anthrax

Source: <http://www.homelandsecuritynewswire.com/dr20160629-anthrax-capsule-vaccine-completely-protects-monkeys-from-lethal-inhalational-anthrax>

June 29 – Vaccination with the anthrax capsule — a naturally occurring component of the bacterium that causes the disease — completely protected monkeys from lethal anthrax infection, according to a study



published online this week in the journal *Vaccine*. **These results indicate that anthrax capsule is a highly effective vaccine component that should be considered for incorporation in future generation anthrax vaccines.**

USAMRIID reports that *Bacillus anthracis*, the bacterium that causes anthrax, is recognized as one of the most significant bioterrorism threats. It produces three main components that allow it to cause disease — lethal toxin, edema toxin, and capsule. During anthrax infection, the bacterium invades and grows to high concentrations in the host. The capsule

surrounds the bacterium and prevents it from being ingested and destroyed by the white blood cells, thus allowing anthrax infection to progress. The toxins are thought to act mainly by damaging the body's natural defense mechanisms.

Current human vaccines for anthrax are based on the protective antigen component of the anthrax toxins. Scientists at the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) have extensively studied protective antigen, demonstrating that protective antigen alone confers protection in animal challenge studies with both rabbits and monkeys.

However, according to senior author Arthur M. Friedlander, M.D., of USAMRIID, concerns about reliance on a single antigen — as well as the issue of protecting against anthrax strains that may be vaccine resistant — have prompted the search for additional vaccine components. Bacterial capsules are commonly used in licensed vaccines for other diseases, including certain types of pneumonia and meningitis.

Friedlander's group had already demonstrated in published studies that the anthrax capsule plays a role in conferring protection. In their current work, the team describes testing a higher dose of the capsule vaccine in monkeys against a



lethal aerosol challenge with anthrax spores. All the animals receiving the capsule vaccine survived while all non-vaccinated animals succumbed to the disease.

"In the 140-year history of research on anthrax there have been two previous types of vaccine, the last one licensed in 1970," Friedlander said. "This new capsule vaccine is expected to work

against possible vaccine-resistant strains of anthrax and to protect individuals who may not respond optimally to protective antigen alone.

**In addition, it could be combined with protective antigen to create a multi-component vaccine that may enhance the efficacy of protective antigen-based vaccines."**

— Read more in Donald J. Chabot et al., "Protection of rhesus macaques against inhalational anthrax with a *Bacillus anthracis* capsule conjugate vaccine," *Vaccine* (18 June 2016).

## MERS-CoV in S Arabia (July 2016)

Source: <http://www.moh.gov.sa/en/CCC/PressReleases/Pages/default.aspx>

As of 13:00 [1 PM] today [3 Jul 2016], there have been a total of:1431 laboratory-confirmed cases of MERS-CoV infection, including:

- 599 deaths [reported case fatality rate 41.8 percent]
- 800 recoveries, and
- 32 currently active cases [including 17 asymptomatic infections].

## Liberia: Nyenswah warns motorcyclists not to use PPEs as raincoats

Source: <http://allafrica.com/stories/201607011141.html>

June 30 – Tolbert Nyensway, Deputy Health Minister for Disease, Surveillance and Epidemic Control, has **warned motorcyclists to stop using personal protective equipment (PPE) as raincoats.**

Nyensway, speaking on Tue [28 Jun 2016] at the Buchanan City, Grand Bassa County, at a ceremony marking the handing over of logistics, infrastructure and assets deployed during the Ebola outbreak response in Liberia to the Government by the United Nations World Food Program (WFP), said millions of US dollars have been spent to purchase the PPEs for Liberia during the outbreak of the Ebola [2014] epidemic, and it was not prudent for motorcyclists to use them as raincoats.

Nyensway called on officers of the Liberia National Police to arrest and turn over to the Ministry of Justice for prosecution any motorcyclists caught using the PPEs as raincoats.

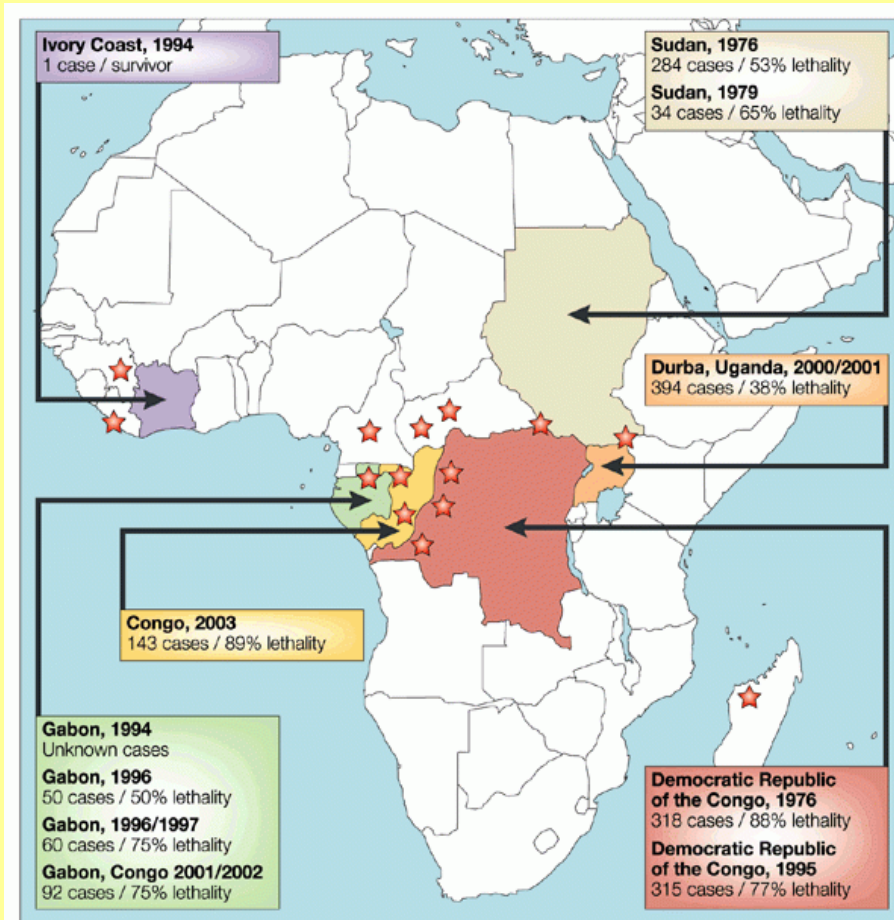


## Lessons of 1976 Ebola outbreak analysis are relevant today

Source: <http://www.homelandsecuritynewswire.com/dr20160701-lessons-of-1976-ebola-outbreak-analysis-are-relevant-today>

July 01 – With the recent Ebola epidemic in West Africa reviving interest in the first outbreak of the deadly hemorrhagic fever 40 years ago, scientists led by Dr. Joel Breman of the Fogarty International Center at the National Institutes of Health have released a report highlighting lessons learned from the smaller,

hospitalized in late August 1976 at Yambuku Mission Hospital in the Democratic Republic of Congo (DRC) — known as Zaire at the time — as the first Ebola patient. It describes how “several dozen patients...developed a similar febrile hemorrhagic syndrome and died in about one week, as did many of their contacts.”



A month after “patient zero” was hospitalized, blood taken from a Belgian midwife-nun who had contracted the virus was sent to Belgium for analysis. Within days of the nun’s death, the area where the outbreak was occurring was placed under quarantine and Yambuku Hospital was shut down on the advice of Zairean, Belgian and French health officials.

In total, there were 318 cases of Ebola in 1976 and 280 deaths in an outbreak that lasted less than 11 weeks. In the recent West Africa outbreak, there were 11,310 deaths out of nearly 29,000 cases, and the epidemic lasted more than two years — almost 10 times as long as in 1976. The death rate in 1976—88 percent—was much higher than in the recent outbreak in Liberia, Guinea, and Sierra Leone — around 50 percent.

The report also tries to settle the debate over who “discovered” the Ebola virus in 1976. Local Zairean, Belgian and French doctors and

health officials were the first to see and assess patients in Yambuku, while the Institute of Tropical Medicine in Antwerp, Belgium, received the first Ebola specimens and recovered what they called “a Marburg-like virus.” However, it was the Centers for Disease Control and Prevention in the United States that identified and recognized a new, unknown virus that fulfilled the criteria for discovery of a new virus, according to the report.

more quickly contained 1976 outbreak. **“Key to diagnosis in 1976 was the relatively quick clinical recognition of a severe, possibly new disease by national authorities,”** according to Breman and his co-authors. “International notification and specimen provision occurred within five weeks from onset of the first cases; this did not occur in the 2013-2016 epidemic, when the delay was over three months.”

The Fogarty International Center notes that the report, published in the *Journal of Infectious Diseases*, identifies an adult male who was

health officials were the first to see and assess patients in Yambuku, while the Institute of Tropical Medicine in Antwerp, Belgium, received the first Ebola specimens and recovered what they called “a Marburg-like virus.” However, it was the Centers for Disease Control and Prevention in the United States that identified and recognized a new, unknown virus that fulfilled the criteria for discovery of a new virus, according to the report.

Researchers give specific credit to Drs. Patricia Webb, James





Lange, and Karl Johnson, of the CDC's Special Pathogens Branch.

As for what carried the virus into DRC in the first place, investigators in Zaire determined at the time by questioning community leaders, people recovering from Ebola and the families of 1976 victims about their contact with animals that bats were not the vector. However, in the forty years since the first Ebola outbreak, fruit bats have been found to be probable reservoirs for filoviruses — the type that causes Ebola — and the Ebola genome and antibodies have

been found in bat and rodent species in East and West Africa.

More extensive preparations, including improved screening capabilities, are needed to detect and manage future outbreaks promptly, the scientists recommend. Primary prevention through strengthened prediction models, detection, response, control mechanisms, and international cooperation and coordination are essential for all countries in Africa and elsewhere where Ebola and new and re-emergent pathogens are sure to surface again.

— Read more in Joel G. Breman et al., "Discovery and Description of Ebola Zaire Virus in 1976 and Relevance to the West African Epidemic During 2013–2016," [\*Journal of Infectious Diseases\*](#) (29 June 2016).

## New study sheds light on how some survive Ebola

Source: <http://www.medicalnewstoday.com/releases/311378.php>

July 01 – **A first-of-its-kind Ebola study yields clues to how some people are able to survive the deadly virus and suggests possible avenues for treatments that could save more lives.**

Researchers at Centers for Disease Control and Prevention, Emory University School of Medicine, and University of Nebraska Medical Center analyzed the immune responses of Ebola patients treated in the United States. Their study was recently published online in the *Clinical Infectious Disease Journal* in the article entitled, "Kinetic Analysis of Biomarkers in a Cohort of U.S. Patients with Ebola Virus Disease."

"These findings are encouraging and underscore how crucial it is to continue the fight against Ebola," said CDC Director Tom Frieden, M.D., M.P.H. "We must come up with new ways to keep people safe and combat diseases that threaten our health."

Ebola virus causes a severe and often fatal infection that can include fever, diarrhea and unexplained bleeding. Despite the fact that more than 30,000 individuals have acquired EVD since it was discovered in 1976, the medical and scientific community still does not have a clear understanding of the mechanisms by which Ebola causes such severe illness.

This is the first time researchers have been able to study Ebola virus disease (EVD) using samples taken from patients during both their

illness and recovery. In the seven U.S. patients, researchers tracked 54 different markers of immune-system activity from hospital admission until the day of discharge. Among the seven patients, five had moderate EVD and two had severe EVD requiring mechanical ventilation and dialysis.

"We were able to identify the particular components of patients' immune systems that successfully fought off the virus," said lead author Anita McElroy, M.D., Ph.D., who is a guest researcher in CDC's Viral Special Pathogens Branch and an Emory physician and faculty member. "These are the parts of the immune system that we need to tap into to develop new therapies."

The results show patients with severe EVD had high levels of virus in their blood and out-of-control immune responses leading to destruction of healthy tissues, multisystem organ failure, shock, and, in most cases, death. In contrast, patients with moderate EVD had strong, healthy immune responses that were able to control the virus. All of the patients with moderate illness and one patient with severe illness survived.

**It is unclear why exactly some people's immune systems respond more effectively to viruses.** Possible contributing factors include genetics and whether or not a person has other illnesses or



conditions. Identifying which parts of the immune system malfunction in severe EVD cases as well as the parts that function well in

the moderate cases could lead to the design of therapies that might theoretically inhibit the disease's progression.

*Article: Kinetic Analysis of Biomarkers in a Cohort of US Patients With Ebola Virus Disease, Anita K. McElroy et al., Clinical Infectious Disease Journal, doi: 10.1093/cid/ciw334, published online 27 June 2016.*

## Zika virus identified in brain and placenta tissue, strengthening link to birth defects

Source: <http://www.medicalnewstoday.com/releases/311350.php>

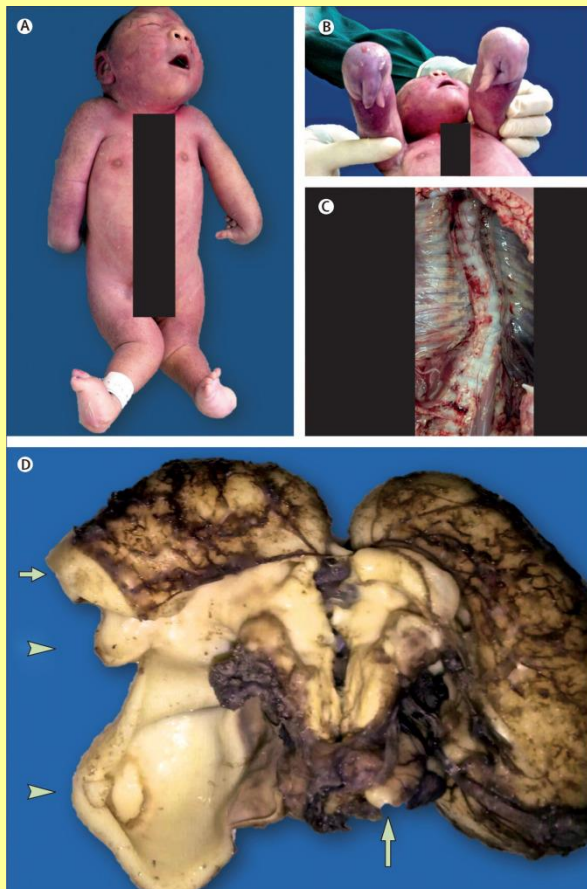
June 30 – **New research, published in *The Lancet*, reveals that Zika virus has been detected in the brain tissue of a deceased 2-month-old baby in Brazil who was diagnosed with microcephaly, in the brain tissue of two newborns who died shortly after birth, and in the placenta tissue of two fetuses that were spontaneously aborted.**

The small study provides further evidence that Zika virus infection in the first trimester of pregnancy can result in placental and foetal damage and loss, and early insight into the effect of Zika virus infection on fetuses. Further studies are now needed to understand the exact mechanism of transmission.

Since the start of the Zika virus outbreak in Brazil in March 2015, there have been 7,343 cases reported cases of microcephaly, of which 1,271 have been confirmed. Fifty-seven of the microcephaly cases were fatal.

In this paper, Dr Sherif R. Zaki from the Division of High Consequence Pathogens and Pathology (DHCPP), Centers for Disease Control and Prevention, Atlanta, USA, and colleagues, analysed tissues from three post-mortem cases and two placentas. All five mothers reported symptoms of Zika virus infection during the first trimester of pregnancy. In three cases (two newborns who died within hours of being born, and one who died at two months), microcephaly was detected during pregnancy or at birth. The two other cases were fetuses spontaneously aborted at 11 and 13 weeks gestation.

In the three fatal cases, Zika virus antigens were detected in the neurons and glial cells. Analysis of brain tissue showed damage and degeneration of cells, microcalcification (calcium deposits), and cell death. The authors say that the absence of a substantial inflammatory response in the brain and any specific structural effects appear to distinguish Zika virus infection from other infections, such as herpes, that are associated with microcephaly.



(A, B) Case 1 showing craniofacial malformations, including microcephaly, flat nasal bridge, anteverted nares, and features of fetal akinesia deformation sequence with upper and lower limb contractures and valgus deformities. (C) Case 2 at autopsy showing levoscoliosis and gross examination of the brain (D) displaying two underdeveloped hemispheres with lissencephaly (short arrow) and ventriculomegaly (arrowheads) of the lateral ventricle. Cerebellar hypoplasia is also evident in the exposed left cerebellar hemisphere (long arrow).

No evidence of Zika virus was detected outside the central nervous system in the heart, liver, spleen,



kidney or cartilage. All three cases showed a range of birth defects, including craniofacial malformations and a range of brain abnormalities.

Zika virus antigens were also detected in the placental tissue of the two aborted cases. Tests on all five cases were negative for the presence of dengue virus antibodies and tested negative for other infections including rubella virus, *Toxoplasma gondii*, and herpes. Genetic analysis of the Zika virus samples showed the greatest match to strains isolated in Brazil during 2015.

The authors say that the mechanism by which Zika virus may cause abnormalities is not yet understood, but that it's likely the result of the virus attacking the nervous system with subsequent damage to the brain and muscle impairment.

"There are a number of viral infections, including herpes and rubella, which are known to cause birth defects, especially if infection occurs in the first trimester of pregnancy. But, until now, there have been no reports of a mosquito-borne virus that could cause severe birth defects," says lead author Dr Zaki. "Zika virus is an evolving epidemic, and many important questions remain to be explored. We are continuing to investigate the possible spectrum of neurological defects in infants and various abnormalities in placental tissues, and further studies will now need to look at whether there is a link between birth defects and Zika virus infection during the second and third trimester of pregnancy, and understand the mechanism of transmission." <sup>1</sup>

Writing in a linked Comment, Dr Drucilla J Roberts from the Massachusetts General Hospital, Department of Pathology, Boston, MA, USA, and Dr Matthew P Frosch from the C S Kubik Laboratory for Neuropathology, Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA, say: "Although the US Centers for Disease Control and Prevention has concluded that Zika virus causes microcephaly and other foetal brain defects, demonstration of Zika virus in tissues is sparse...Additional detailed pathological studies are needed to properly elucidate the full spectrum of congenital Zika syndrome. Work remains to confirm Zika virus infection as causal in perinatal complications and should include histopathological examination of available tissues at various gestational ages. This report highlights that we can learn much about the pathogenesis of Zika virus congenital infection through careful pathological investigation, but leaves us with many questions for study."

This study had no funding.

*Article: [Pathology of congenital Zika syndrome in Brazil: a case series](#), Roosecelis Brasil Martines, MD†, Julu Bhatnagar, PhD†, Prof Ana Maria de Oliveira Ramos, MD, Helaine Pompeia Freire Davi, MD, Silvia D'Andretta Iglezias, MD, Cristina Takami Kanamura, MSc, M Kelly Keating, DVM, Gillian Hale, MD, Luciana Silva-Flannery, PhD, Atis Muehlenbachs, MD, Jana Ritter, DVM, Joy Gary, DVM, Dominique Rollin, MD, Cynthia S Goldsmith, MGS, Sarah Reagan-Steiner, MD, Yokabed Ermiyas, MPH, Tadaki Suzuki, MD, Prof Kleber G Luz, MD, Wanderson Kleber de Oliveira, MSc, Robert Lanciotti, PhD, Amy Lambert, PhD, Wun-Ju Shieh, MD, Dr Sherif R Zaki, MD, The Lancet, doi: 10.1016/S0140-6736(16)30883-2, published online 29 June 2016.*

## Yellow Fever: A Vaccine-Preventable Infectious Disease Emergency

Source: <http://ecdc.europa.eu/en/publications/Publications/yellow-fever-angola-joint-ecdc-mission-report-2016.pdf>

In the modern era, when one speaks of infectious diseases spread by *Aedes* mosquitos, dengue and chikungunya are the first to come to mind, as they are currently very clinically relevant. That changed with the appearance and explosive spread of Zika in the Western Hemisphere. However, even more recently the world has been reminded, in a major way, of the original infectious disease found to be spread by an *Aedes* mosquito: yellow fever.





Since late 2015, a yellow fever outbreak has been ongoing in the African nation of Angola, with thousands of cases accruing and travelers to several other nations, including China, being diagnosed. Like other mosquito disease-infected travelers in areas with the requisite mosquito present, they can seed local mosquito populations and spark local outbreaks. The seriousness of the Angolan outbreak has prompted the World Health Organization to convene its emergency committee.

### Majority of Yellow Fever Cases Asymptomatic

Yellow fever is a flavivirus, and, like many members of this family, the majority of infections with this virus (85%), spread via the *Aedes aegypti* mosquito, are asymptomatic or mild. If a person is severely symptomatic, however, infection can culminate in fatal hemorrhagic fever. There is no specific antiviral treatment for the virus.

Yellow fever is endemic in many nations in Africa and South America, and these cases lead to nearly 80,000 deaths annually. In areas of endemicity, the yellow fever vaccine is the chief means of prevention. Vector control activities are also crucial.

### Vaccine Shortage

The control of this outbreak has been plagued by vaccine shortages. Mass vaccination with the yellow fever vaccine is being used as a

major means to extinguish the outbreak; however, the yellow fever vaccine stockpile does not have enough doses to cover the population adequately, leading to the recommendation to dilute the vaccine to stretch supply and later provide a 2nd booster dose (which isn't needed if the full dose is administered).

### A Vaccine-Preventable Outbreak

This yellow fever outbreak is notable for being entirely vaccine preventable. The fact that it occurred underscores the limitations of the world's ability to rapidly (and effectively) respond to an infectious disease emergency. An outbreak of this magnitude and with this degree of morbidity and mortality should not have been possible given that an effective vaccine has been available for several decades, its manufacture is well established, and it is stockpiled.

### Reference

European Centre for Disease Prevention and Control. *Mission Report: Assessing the Yellow Fever Outbreak in Angola*. European Medical Corps mission undertaken in the framework of the European Union Civil Protection Mechanism, 10-20 May 2016. Stockholm: ECDC; 2016.

## Is gun violence actually a public health issue?

Source: <http://www.macleans.ca/news/is-gun-violence-actually-a-public-health-issue/>

### Gun violence is killing 30,000 Americans a year. Why not treat it like smoking? Or heart disease?



of federal funding is harming firearms research in the United States, and what that means for public opinion.

For over two decades, there has been a virtual freeze on gun violence research in the United States. In 1996, Congress passed a bill preventing the use of federal funds for studies that advocate gun control, which was widely interpreted as preventing all research into firearm violence. Though U.S. President Barack Obama reversed the order in 2013, Congress continues to block dedicated funding. And this data deficit is posing a significant complication for those hoping to find a solution for America's gun-death epidemic.

Dr. Michael Siegel, a professor of Community Health Sciences at Boston University, stresses that gun violence is a public health problem. But before preventative measures can be taken, he says, Americans need research. On Friday, *Macleans*'s talked to Siegel about how the lack



*Q: Why do you think of gun violence as a public health issue?*

**A:** In public health we are concerned about the major causes of death. There are really two things that make something a public health issue. One is the burden of disease on the population and the second is the fact that we can do something to prevent it. So, if you look at smoking: Why is it a public health issue? Because, number one it's killing 400,000 Americans every year and number two, there are interventions that we can do on a societal level to reduce smoking... The same should be true of firearms. They're killing 30,000 people a year — about one-third of those are homicide and about two-thirds of those are suicides — but there are things we can do about it. It's clearly a societal problem, there are clearly societal approaches to it.

*Q: In order to treat gun violence as a public health issue, you note that Americans need to first accept there's a problem, and that it's preventable. That seems like a difficult task, as there's a significant population that doesn't appear to agree.*

**A:** That's the way the government has treated it. If you read how politicians react to these tragedies that keep happening, the usual response is, "our thoughts and prayers are with the victims," rather than "I'm going to put an end to this, and I'm going to put an end to this tomorrow." With a terrorist attack, our actions are typically very very different: "this will never happen again," "not on our soil," "we'll do everything we can to prevent this." But certainly the everyday violence that is killing many many people, and disproportionately African Americans, is [deemed] acceptable in society. It really is.

*Q: Over time, public sentiment towards serious health concerns like HIV and smoking has shifted. Will that happen with gun violence?*

**A:** That's exactly what needs to happen. The social norms regarding gun violence have to change. The way we view guns as a society and their role in society has to change. Those are social changes that take time but I do believe they can happen. Thirty years ago, when I started getting involved in tobacco

control ... everybody would have said, 'C'mon that's impossible.' But it happened. And I think the same is true of firearms violence.

*Q: In the cases of HIV and smoking, public sentiment changed in large part due to significant research and data. How can America get to the 'acceptance' stage if there's very little research?*

**A:** Well you're exactly right. We can't. That's the problem. When you cut off the research you basically cut off the ability to put the kind of information out there that is needed in order to facilitate social change. Social change with regard to smoking didn't happen on its own. It didn't occur because it was a natural progression, it happened because of a concerted effort on the part of public health practitioners, government, educational institutions, and community who basically committed themselves to tackling the tobacco epidemic.

*Q: Is the problem one of not enough research, a need for better research, or improved communication of research that's already out there?*

**A:** Unfortunately, the stage we're at with gun violence research is basically that we need more research. We're not at the stage where the problem is we're not communicating what we have, or we're not doing the right research. The problem is just that there's not enough research being funded. The budget for CDC research on gun violence is basically zero. It's not an issue of the CDC doing the wrong research, or they're not communicating, they're just not doing anything.

*Q: Aren't there other centres that can do the research?*

**A:** Even with other centres, the question is always, 'Who is going to fund it?' The federal government is basically not funding it. One of the things President Obama did was, by executive order he ended the long-term ban on federal funding for firearms research, which is great. But the problem is the government agencies and Congress still have to allocate the money, the funding, and right now my understanding is that there's



only about \$2 million a year that's being used for funding for firearms research. So even though the government technically is allowed to fund it, it's obviously not a priority if we're only spending a drop in the bucket on it.

**Q: How little research is there really?**

**A:** I can compare it to other fields. I've worked in the tobacco field and I've worked in the alcohol field and there are literally thousands and thousands of articles on tobacco. ... In alcohol [the amount of research is] a little smaller than tobacco, but there's still a fairly large literature. When I got into these fields, the

first thing I did was to try to review all the literature. For smoking it has basically taken me twenty years to really become familiar with the literature, there's so much of it. With alcohol it actually took significantly less time. Within about four years I was pretty well versed in the literature. With firearms, it took literally about a month. There just wasn't that much. Within a month I basically had seen and read the bulk of what was out there. So it's not even close. It's not a coincidence. It's a direct result of the lack of funding over the last two decades.

## Malaysians' Rejection of Vaccines Fans Fears of Disease Surge

Source: <http://www.medscape.com/viewarticle/865762>

July 07 – **More children are falling victim to contagious diseases in Muslim-majority Malaysia, worrying health authorities as parents reject immunization programs for fear the vaccines used infringe strict religious rules.**

The deaths of five children in June from diphtheria, a disease that can be prevented by vaccines, provoked an outcry among doctors and spurred calls for an edict by religious authorities to compel Muslim families to immunize children.

"Our concern is, if it's left uncontrolled, in the long-term we might see a significant effect on the nation as a whole," Health Minister S. Subramaniam told Reuters in an interview.

Although Muslim religious authorities have waived the stringent halal requirement if suitable vaccines are not available, concerns have redoubled recently that some may contain substances such as pig DNA, forbidden by Islam.

Pediatrician Musa Mohamad Nordin said there was a lot of misinformation in Malaysia's Muslim community, mostly ethnic Malays who form 61 percent of a population of about 30 million that includes substantial ethnic Chinese and Indian minorities.

"I'm upset, and also saddened, that some religious teachers are spreading rumors that vaccines contain a composition that is not permissible by Islamic jurisprudence," added Musa, a member of Malaysia's Federation of Islamic Medical Associations.

Only a relatively small number of families have rejected vaccinations, but their number has more than doubled in the past three years to reach 1,541 in 2015, Subramaniam said, which is reflected in a rise in vaccine-preventable diseases, from diphtheria to measles.

As with anti-vaccination movements elsewhere, many Malaysians who refuse vaccinations worry about potential side effects or efficacy, Subramaniam said. It is not clear what provoked the suspicions over pig DNA.

But three-quarters of the parents who rejected immunization last year in the northern state of Kedah, which has the highest rates of vaccine refusal in Malaysia, cited doubts over their halal status, a survey showed.

Malaysia's highest Islamic body, the National Fatwa Council, has ruled vaccination permissible under Islamic law, even allowing vaccines with non-halal components, in the absence of halal alternatives.

The council has not yet decided on an edict of mandatory vaccinations for Muslims, Federal Territory Mufti Zulkifli Mohamad Al-Bakri said in an interview.

"On the whole, we find that vaccines have been very beneficial to society," Zulkifli added.

### Parents' rights

Last Sunday, parents at a vaccination forum on the outskirts of Kuala Lumpur, the capital, recounted the side effects their children suffered.





Parents should have the right to refuse vaccination, said alternative medicine practitioner Arif Faizal, 36.

"There is no law compelling mandatory vaccines, and even on the global level, very few countries support such a move," he told Reuters.

Others felt vaccinations were essential, however.

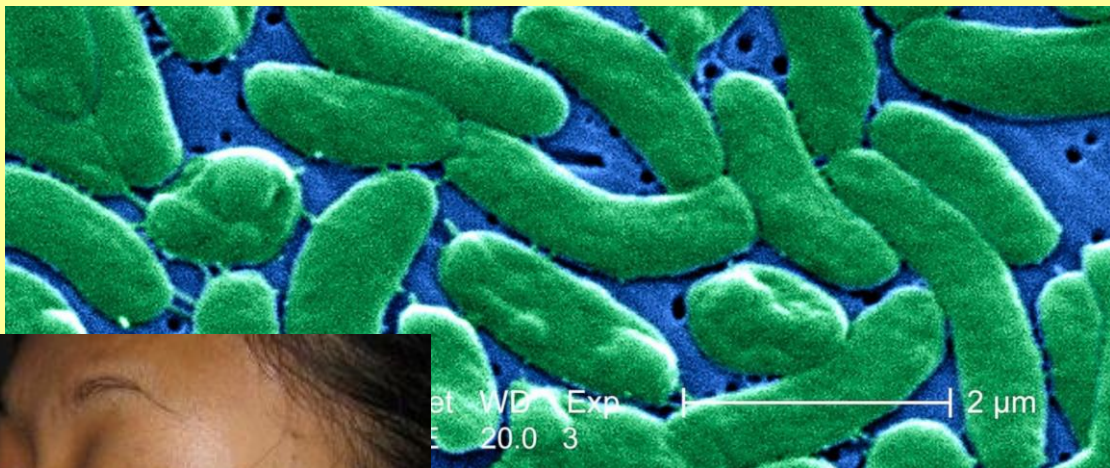
"As Muslim parents, we have a responsibility to protect our children," said Wan Normaniza Wan Hasan, a teacher and mother of six.

## Researchers find answer to countering bio-weapons

Source: [http://www.swissinfo.ch/eng/toxin-breakthrough\\_researchers-find-answer-to-countering-bio-weapons/42293786](http://www.swissinfo.ch/eng/toxin-breakthrough_researchers-find-answer-to-countering-bio-weapons/42293786)

July 13 – **Researchers at the University of Bern have claimed a breakthrough in finding effective treatments against bioterrorist weapons by discovering exactly how such toxins penetrate cell membranes and attack the cells.**

Using the new generation of digital cameras for electron microscopes, molecular biologists tracked how



the toxin aerolysin morphs itself during deadly attacks on cells. The findings could also form the basis of new drugs for Alzheimer's and a range of other diseases.

Researchers discovered how aerolysin, which is produced by the flesh-eating *Aeromonas hydrophila* bacteria, latches onto cells then takes on a 'bow and arrow' shape to puncture the membrane before hooking on, entering the cell and destroying it.

The water-soluble toxin normally attacks the gut or open wounds, causing sepsis. The way it initially forms around the cell inhibits the cell's ability to repair the damage being

inflicted, the report states.

"Aerolysin can transform itself like a quick-change artist", said Benoît Zuber, who led the research along with Alone Lacovache. "Understanding these changes should be very useful to design new and more potent drugs against diseases resulting from *Aeromonas* infection."

This could include anti-toxin treatments for pathogenic bacteria used by terrorists as bio-weapons, the university added in a statement.

Mapping the way such bacteria and toxins attack cells has so far not been possible using even the most sophisticated technology, such as x-ray crystallography and nuclear magnetic resonance. It has only been brought to light using the most advanced digital cameras designed for electron microscopes.



## Hundreds of safety incidents with bioterror germs reported by secretive labs

Source: <http://www.usatoday.com/story/news/2016/06/30/lab-safety-transparency-report/86577070/>

July 01 – **Laboratories reported more than 230 safety incidents with bioterror viruses and bacteria last year, hundreds of workers were monitored for potential exposures and a handful of labs had their permits suspended because of violations that raised “significant concerns for imminent danger,”** according to a report released Thursday by federal lab regulators in response to a White House call for greater public transparency.

Background checks by the FBI stopped 16 individuals that posed security risks – including six convicted felons, two fugitives and a person found to be a “mental defective” -- from working in labs where they’d have access to pathogens such as those that cause anthrax, Ebola, plague and botulism, the report said.

But in their first-ever public report, regulators continue to keep secret the identities of the labs that had serious safety accidents and faced enforcement actions when working with what the government calls “select agent” pathogens because of their potential to be used as bioweapons.

**The report even keeps secret the widely reported name of the Army’s Dugway Proving Ground lab in Utah, which last year was discovered to have been mistakenly sending specimens of live anthrax – labeled as killed – to dozens unsuspecting labs across the country and around the world.** The report only describes the lab as an entity of the federal government and doesn’t name the type of live pathogen that was shipped.

The kind of aggregate information in the report “remains useless to communities who want to know how safely their local laboratories are operating and what is being done to correct problems,” said Beth Willis, a citizen lab safety advocate in Frederick, Md., where several large biodefense labs are located at the Army’s Fort Detrick. “The lack of progress toward meaningful transparency is astonishing.”

Federal lab regulators said the report provides a broad picture of safety and oversight of labs

working with these kinds of pathogens. It’s part of “a journey to increase transparency,” said Daniel Sosin, acting director of the Centers for Disease Control and Prevention’s Division of Select Agents and Toxins, which co-runs the federal lab regulation program with the U.S. Department of Agriculture.

“I think the very important message here that will come across is that the vast majority of labs are doing well and following the regulations,” Sosin said.

Sosin said that providing lab-specific information, at least at this time, would have negative effects on the relationship between regulators and lab operators, potentially resulting in a reluctance to disclose incidents as required. He said the program is encouraging voluntary disclosures of incidents by labs, such as those in the federal government, who are willing to lead by example.

**An ongoing USA TODAY Network investigation that began last year has revealed that more than 100 labs working with potential bioterror pathogens have faced secret federal sanctions for safety violations, yet regulators allowed them to keep experimenting while failing on inspections, sometimes for years.** Despite federal officials’ efforts to keep secret the identities of these troubled labs, reporters revealed they have included [several prestigious institutions](#) – including [some of the CDC’s own labs](#).

In October, White House science and homeland security advisers [issued sweeping directives for improving lab safety](#) in the wake of several high-profile lab incidents at federal labs. The White House directive, citing USA TODAY’s reporting, also called for federal laboratories to “develop and adopt a policy of transparency, to the maximum extent feasible, regarding both the agents used and laboratory incidents.” And it set a June deadline for a first annual report with aggregate data to be made public.



"We are encouraged by the progress agencies are making towards achieving the objectives of the October 29, 2015 memorandum," the White House said in a statement late Thursday. The objectives included "transparency, swift incident reporting and accountability to the public" as well as strong inventory management, the statement said.

Richard Ebright, a biosafety expert at Rutgers University in New Jersey, said the report

provides some interesting information. But, he said, "the failure to disclose identities of facilities with exposures, losses, suspensions, and referrals for civil and criminal investigations renders the report basically useless to state governments, local governments, and members of the public attempting to assess the safety and security of facilities in their communities."

#### Among the statistics in the report:

- Labs filed 233 reports of potential releases of regulated pathogens, such as needle sticks, bites by lab animals or failures of protective worker safety equipment. Of these, 199 were potential occupational exposure incidents that resulted in 908 lab workers being provided medical assessments, tests or preventative treatments. Most of the workers, 712, were in diagnostic medical and veterinary labs that were not expecting to encounter a clinical specimen of a regulated pathogen.
- Two workers at an unnamed federal lab were exposed to *Coxiella burnetii*, a bacterium that causes Q fever, a disease primarily of cattle, sheep and goats that can also sicken people. While most will recover, some can have serious complications including pneumonia, inflammation of the liver or heart, miscarriage or pre-term delivery. While no lab incident was identified and neither had shown any symptoms, antibodies indicating possible exposure were discovered during routine testing.
- One worker at an unnamed academic lab tested positive for possible exposure to *Brucella* bacteria during an annual screening test. The worker had experienced no known lab incident and has never demonstrated any symptoms.
- Regulators received 12 reports of potential losses of pathogen specimens, which the FBI later determined were either inventory records errors or samples mistakenly sanitized and discarded as waste.
- Six lab operators – one private, two commercial, two federal government and one non-federal government -- were put into a federal corrective action plan program "to address serious and recurrent findings that do not present an imminent risk to public health and safety."
- Four entities were referred for potential enforcement actions and those investigations are still underway. Three labs had their registrations suspended
- The most commonly registered pathogens include plague bacteria, anthrax, avian influenza virus, as well as lesser known bacteria such as *Francisella tularensis* and *Burkholderia pseudomallei*.



In response to requests since last week made by USA TODAY, five of six federal agencies that operate labs on Thursday voluntarily provided at least some information about select agent incidents that had occurred in their own labs during 2015. However the Department of Homeland Security said it needed a federal Freedom of Information Act (FOIA) request when asked for information about what transparency actions it had taken in response to the White House directive and how many

incidents the department's biodefense labs had experienced. Agencies often take months and sometimes years to release records under the FOIA.

In contrast, the CDC, USDA and the National Institutes of Health provided synopses describing select agent incidents that have occurred in their labs in 2015. The Department of Defense provided some more general information about its labs'





incidents. The FDA said it had no incidents last year with select agent pathogens.

CDC labs in Atlanta reported seven incidents that included a dropped frozen tube of avian influenza, inventory discrepancies with vials of influenza viruses and a worker's air-purifying respirator that stopped working. The answers provided to USA TODAY by CDC's lab operations division disclosed that the two workers who showed possible signs of Q Fever exposure were at a CDC lab, even though the lab wasn't disclosed in the new federal report, which was prepared by a different regulatory division at the agency.

NIH labs in various parts of the country had six reported select agent incidents in 2015. Among them: At the NIH Integrated Research Facility at Fort Detrick, Md., a worker's spacesuit-like protective gear sustained damage to a tip of a glove while handling food and water bottles in a room where primates were infected with Ebola. The worker's inner glove remained intact.

At the same NIH facility, there were two additional incidents involving potential employee exposures to untreated wastewater from labs working with Ebola and Nipah viruses. Multiple employees were put on fever watches in the two incidents. "No employee illness occurred," the synopsis said about one of the two waste water incidents. In the other incident, a leaky valve dripped waste water onto an employee's head. "The affected

employee, and all personnel responding to the incident, were all placed on a fever watch," the synopsis said.

NIH officials were unavailable Thursday to provide additional information about the incidents or when they occurred.

The USDA said its labs had eight select agent incidents in 2015, including specimen inventory discrepancies, a small leak in a wastewater treatment facility and a technician who received preventative treatment after having "reddish fluid" seep through the seams of their protective equipment while euthanizing and taking samples from a duck infected with a dangerous strain of avian influenza virus. The fluid was later determined to be negative for the virus, the USDA's synopsis said.

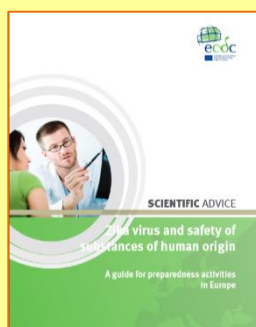
**The Department of Defense said its six research labs that work with select agents have reported 37 incidents since January 1, 2015. Twenty of the incidents involved failures of personal protective equipment used by lab workers, such as holes in gloves or seam tears in suits.** Other incidents

included a technician who was scratched by an animal, a dropped culture plate and a mechanical failure due to a loss of electrical power, according to a statement issued through an Army spokesperson. No infections resulted from the incidents, the statement said, and actions were taken to prevent recurrence of the incidents.

► Read the USA TODAY NETWORK's full "Biolabs in Your Backyard" investigation: [biolabs.usatoday.com](http://biolabs.usatoday.com)

## Zika virus and safety of substances of human origin – A guide for preparedness activities in Europe

Source: <http://ecdc.europa.eu/en/publications/Publications/Zika-virus-safety-of-substances-of-human-origin.pdf>



The objective of this document is to guide the preparation and implementation of national preparedness plans for the safety of substances of human origin during outbreaks of Zika virus infection, both in affected and non-affected areas.

This document includes key elements to be considered in the risk-based decision-making process of mitigating the threats to the safety of substances of human origin posed by Zika virus. It also identifies supporting tools and information sources available at the EU level, either from ECDC or the European Commission's Directorate-General for Health and Food Safety.



## Zika epidemic likely to burn itself out within three years

Source: <http://www.homelandsecuritynewswire.com/dr20160715-zika-epidemic-likely-to-burn-itself-out-within-three-years>

July 15 – **The current Zika epidemic in Latin America is likely to burn itself out within three years,** suggests new research.

The findings, from scientists at Imperial College London, also conclude the epidemic cannot be contained with existing control measures. The team, who published their findings in the journal *Science*, predict the next large-scale epidemic is unlikely to emerge for at least another ten years — although there is a possibility of smaller outbreaks in this time.

Professor Neil Ferguson, lead author of the research from the School of Public Health at Imperial, explained: “This study uses all available data to provide an understanding of how the disease will unfold - and allows us to gauge the threat in the imminent future. Our analysis suggests that Zika spread is not containable, but that the epidemic will burn itself out within 2-3 years.”

ICL says that in the study, Ferguson and colleagues from the Medical Research Council Centre for Outbreak Analysis and Modelling at Imperial, collated all existing data for Zika transmission across Latin America. The team then used this information, alongside data on similar viruses such as dengue, to build a mathematical model to represent the current epidemic, and future waves of transmission.

Using this model, the team calculated the current epidemic would end within two to three years, due to the fact people are unlikely to be infected with Zika twice.

Ferguson explained: “The current explosive epidemic will burn itself out due to a phenomenon called herd immunity. Because the virus is unable to infect the same person twice - thanks to the immune system generating antibodies to kill it — the epidemic reaches a stage where there are too few people left to infect for transmission to be sustained.

“Using our model, we predict large-scale transmission will not restart for at least another ten years - until there is a new generation in the population who have not been exposed to the Zika virus. This mirrors other epidemics, such as chikungunya - a similar virus to Zika —

where we have seen explosive epidemics followed by long periods with few new cases.”

**The Zika virus is carried by the *Aedes aegypti* mosquito, but the team cautioned any large-scale government programs to target the mosquitoes may have limited impact.**

“The virus is very similar to the dengue virus, and transmitted by the same mosquito. But previous experience with dengue has shown controlling spread to be incredibly difficult. Also, efforts to contain the epidemic would have needed to have been implemented much earlier in the current Zika epidemic to have a major effect - but by the time we realized the scale of the problem it was too late.”

He added **any efforts to slow spread of the virus may in fact prolong the current epidemic:**

“Slowing transmission between people means the population will take longer to reach the level of herd immunity needed for transmission to stop. It might also mean that the window between epidemics - which we predict may be over a decade - could actually get shorter.”

And while the potential end of the epidemic is no doubt positive, it does raise issues for vaccine development, adds Professor Ferguson: “If our projections are correct, cases will have dropped substantially by the end of next year, if not sooner. This means by the time we have vaccines ready to be tested, there may not be enough cases of Zika in the community to test if the vaccine works.”

He suggests one option may be to recruit ‘sleepers’ for vaccine trials across the globe. These centers would obtain, in advance, the lengthy legal and ethical approval needed for a trial. Then if there is a Zika outbreak in its area, a center would be ready to begin a vaccine trial straight away.

However, Ferguson highlighted there are still many questions to answer about Zika — and therefore many caveats to making predictions: “In a worst case scenario Zika would become endemic in Latin America in the long-term, which would mean



smaller, frequent outbreaks. A key issue is we don't understand why the Zika virus affected Latin America in such an explosive way. One possibility is climate may have in some way aided spread of the virus, as spread coincided with an El Nino event. Genetic mutation of the virus might also have played a role, although early data currently give limited support for this hypothesis."

Ferguson added that previous exposure to dengue might also have played an important role in the current Zika epidemic. Some research, including [recent studies](#) from an Imperial team, has suggested **prior dengue exposure may amplify Zika infection in a person**.

"This is an effect called Antibody Dependent Enhancement and is of significant concern. It is too early to say whether dengue exposure affects the risk of getting Zika or the clinical

consequences of infection, but this needs to be urgently examined in future research. We also need to understand why South East Asia, which also has high rates of dengue, has not experienced a similar Zika outbreak."

He added more research is urgently needed. "One research priority is to fully understand the extent of Zika transmission, and what proportion of people in Latin America - and across the globe have been infected. To do this we need to assess past exposure to Zika by testing blood from representative samples of at-risk populations for the presence of antibodies to the virus. We and other groups are working on such studies at the moment."

"There are currently more questions surrounding Zika than answers - and only through a coordinated global research effort will we find the answers we desperately need."

— Read more in Neil Ferguson, "Countering Zika in Latin America," [Science](#) (14 July 2016).

## Vic Health using Defence algorithm to predict flu outbreaks

Source: <http://www.itnews.com.au/news/vic-health-using-defence-algorithm-to-predict-flu-outbreaks-430948>

July 18 – An analytics tool developed by the Department of Defence's science and technology branch to guard against bioterrorism has found a new home in public health, thanks to a collaboration between its creators and Victoria's health department.

**EpiDefend** is an algorithm created by Defence scientist Tony Lau and his team. It uses a 'particle filtering' technique of statistical analysis to crunch through historical data on lab-confirmed flu cases, anonymised patient data from GPs, and collections of environmental data records to predict the spread of naturally occurring influenza.

Up until now it has been used to identify organic disease outbreaks in order to differentiate them from more sinister causes, such as maliciously distributed viruses or bioterrorism.

But the Defence team has now stumbled onto a mutually beneficial partnership with Victorian health authorities, who want to use EpiDefend ahead of next year's flu season to predict when and where influenza will break out, and to target their resources accordingly.

The upside for the Defence scientists is that they will now get to test their algorithm on a much greater volume of real-life health data than ever before.

They have already had the opportunity to refine the tool thanks to a collaboration with the University of Melbourne's school of population and global health, which gave them access to the institute's health and disease data sets.

"Given the exponential increase in electronic data collection and our algorithm's ability to dig into these very rich streams of information, the approach has the potential to provide a breakthrough in disease forecasting," Lau said.

"Our team's goal is dual-purpose: we want to fulfil our defence charter, protecting our forces against intentionally released biological agents, but disease forecasting will also support the national security and public health areas."

He said the algorithm can now accurately predict a flu outbreak up to eight weeks in advance.





**EpiDefend is currently being trialled by the health department in sites across Victoria and NSW.**

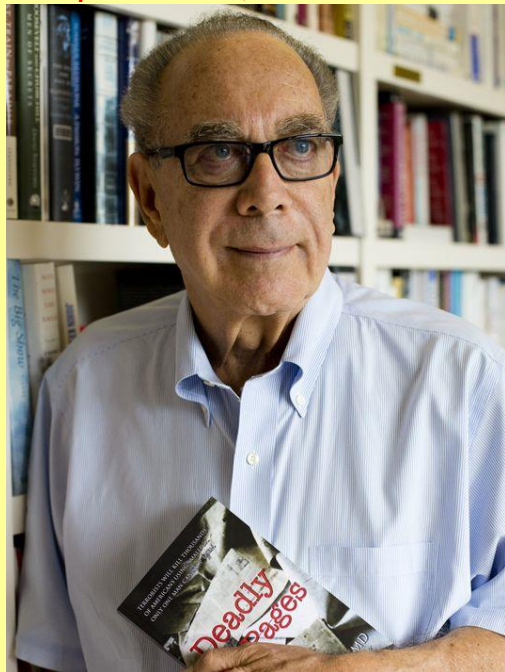
The Defence team recently received a \$1 million grant from the US Department of Defense for the work, which will allow it to create two new postdoctoral positions dedicated to the anti-bioterrorism efforts.

## Naples man writes bioterrorism thriller about fictional local hero

Source: <http://www.naplesnews.com/story/life/2016/07/19/naples-man-writes-bioterrorism-thriller-fictional-local-hero/86939478/>

July 19 – In his debut novel, the fate of thousands of Americans rests in the hands of a retired Neapolitan tasked with thwarting terrorists' hell bent on spreading smallpox in a biological attack. Leslie Norins hopes the book, titled "Deadly Pages" can serve as both a thrilling read and chilling reminder of the real potential of the threat.

"The vaccine's immunity only lasts years, so if you were vaccinated in childhood pre 1980, you aren't protected now," Norins said. "We're in a very precarious place if an attack does come."



He should know. After 30 years in the medical industry, much of them writing different type of hospital newsletters, Norins, 79, understands how a virus spreads and what kind of protections are in place. So when he got the idea for the book, he set out to find a coauthor whose storytelling abilities combined with his knowledge could make for a plausible plot.

He landed on Thomas Hauck who he said wrote the bulk of the book based on Norin's idea for a plot and main character. Norins said he then edited Hauck's work to make sure the narrative was possible as it relates to the science.

But Norins said you don't need that level of expertise to understand the book if you accept three basic facts about how smallpox is spread, the fact that there is no

treatment and that there exists a vaccine for protection.

"Then the thriller unfolds," he said.

The book's main character is Martin Riker, a former US Army officer and expert at the Centers for Disease Control and Prevention, is called out of retirement after a Syrian man who recently came to the States dies of the smallpox virus. The doctor soon learns that a group of terrorists plans to spread the virus to readers of the New York Times by adding strains of the virus to ink at the printing press.

"Research has shown that just one or two particles is enough to start the infection in people," Norins said. "So you don't have to drown in ink."

There's also a little love story wound in for Riker, whose beau considers moving to sunny Naples by the end, Norins said.

Norins got the idea for the book back in the late '90s when he read the true story of a Russian defector who revealed his country's WWII plans for biological warfare including smallpox. That got Norins thinking about the ramifications in a society that has largely dismissed smallpox as a concern.



"I knew the virus was deadly," he said. "I started the book in earnest about a year ago and a lot of the ideas had sort of been gelling."

Norins created his own publishing company called Medvostat LLC to have the book printed. It's for sale online through Amazon and Barnes & Noble. He hopes to continue publishing other works through Medvostat, whether they're works he writes, edits or inspires in some way.

Originally from Baltimore, Norins went to Johns Hopkins and later Duke Medical School. He headed a lab at the CDC for nine years before falling in love with medical writing. He started his own medical newsletter in 1974 and would go on to oversee 80 before he closed his company in 2002. Norins has lived full time in Naples since 1990.

Norins is already working on a sequel to the book, starring Riker, the local hero who is called back to Washington D.C. for another high-level medical crisis. The book will also be published by his press, Medvostat LLC.

#### ► EDITOR'S NOTE (on survivability of variola virus outside host organism)

Source: <http://macroecointern.dk/pdf-reprints/WaltherEwald2004.pdf>

Substrate*†	Immediate source	Light†	Temperature‡†	Durability§	References
Variola virus					
exudate	patient	dark	R (15–30 °C)	\$13 y	Wolff & Croon (1968)
exudate	patient	dark	R	97–417 d	Downie & Dumbell (1947)
exudate	patient	indirect	R (20–24 °C)	\$530 d	MacCallum & McDonald (1957)
exudate	patient	indirect	R	\$196 d	Downie & Dumbell (1947)
exudate	patient	dark?	30 °C	60–185 d	MacCallum & McDonald (1957)
glass	vesicle fluid	dark	R	84 d	Downie & Dumbell (1947)
glass	vesicle fluid	indirect	R	35 d	Downie & Dumbell (1947)

\* 'Exudate' refers to the false membrane that forms on the mucous surface during diphtheria and the crusts that form during smallpox.

† 'Fabric' includes textiles and their raw materials, such as cotton and linen.

‡ A question mark indicates that the particular information was not stated explicitly; if descriptions of materials and methods yielded a best guess, that best guess precedes the question mark.

§ R = room temperature.

§ The values refer to the maximum durations over which viable pathogens were found for individual replicates.

|| Studies that were ended before maximum durability was ascertained. y = years, d = days.

¶ Time for 99.99% reduction of survival as calculated from the exponential decay equation.

## Using gels for biological decontamination

Source: <http://www.homelandsecuritynewswire.com/dr20160720-using-gels-for-biological-decontamination>

July 20 – Removing chemical, biological, radiological, and toxic contaminants from a range of surface types could be as easy as peeling off a sticker thanks to research conducted by scientists at the U.S. Army's Edgewood Chemical Biological Center (ECBC) and industry partner CBI Polymer. Jointly, ECBC and CBI Polymer researchers explored how a HydroGel can be modified to decontaminate surfaces contaminated with biological agents such as spores of *Bacillus anthracis*, which are capable of

causing anthrax disease in humans and animals.

ECBC notes that HydroGel is a biosynthetic polymer that can be sprayed, painted, or poured on a surface. HydroGel then dries into a film, which can be peeled away and disposed of with little to no threat to the environment or the operators. The peeled gel does not generate any water waste and traps any toxic contaminant, such as biological spores, which removes the threat





of the agent reaerosolizing. **Conventional decontamination** methods involve spraying soapy water and liquid sporicidal agents, which generates a high volume of wastewater that could flow into drains and be added to the environment or be otherwise difficult to safely collect and dispose of. These methods also pose a threat to the operators if residual waste gets sprayed on them.

**CBI Polymer created HydroGel to remove toxic material from hard surfaces in an**



**industrial setting.** The ease of use, safety, and significantly reduced burden to the environment caused ECBC scientists to explore whether HydroGel could be applicable



as a sampling tool for biological contaminants on surfaces. In 2013, ECBC entered a

Cooperative Research and Development Agreement (CRADA) with CBI Polymers to create modified HydroGel formulas that could decontaminate biological spores. Led by senior research biologist Vipin Rastogi, ECBC researchers developed two advanced formulas, called DeconGel, that can successfully decontaminate multiple surfaces of biological agent.

**A game-changer for infrastructure decontamination**

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) was researching how to decontaminate a subterranean environment such as a subway station, if contaminated by virulent biological spores. Rastogi and Garry Edgington, Chief Scientist and Vice President for Research and Development at CBI Polymers, felt that DeconGel could be a great solution for that situation. Donald Bansleben, an S&T Program Manager, sponsored the collaboration between CBIP/Metis and ECBC for the subway application.

Rastogi and his team conducted research that proved that DeconGel could remove biological spores from four surfaces commonly found in subways: steel, aluminum, concrete and tile.

“Underground train stations are very complex with all types of curves and angles. There are multiple types of surfaces next to each other that are architecturally challenging,” Rastogi said. “A technology such as DeconGel, which is easy to apply in hard to reach places, could be a real game changer for this scenario-specific decontamination.”

Bansleben feels that DeconGel could be helpful in decontamination efforts. “A universal decontaminant does not exist, but DeconGel can be another tool in the toolkit for remediation of biological agent contamination,” he said.

**Better collection of biological samples from surfaces**

Lisa Smith, an ECBC research biologist, and Rastogi were very curious to see whether HydroGel had any potential for biological sampling applications in its original unmodified form. As a part of an internal ECBC basic research program, Smith and





Rastogi used the base HydroGel as a potential tool to collect biological agent from porous and non-porous surfaces.

"In current methods, if you suspect that a surface is contaminated you would either use a wipe or a swab to rub down the surface, collect whatever is on it and analyze it in hopes of identifying what the substance is," Rastogi said. "We wanted to answer the question: 'could the original HydroGel be used to collect, preserve, and retrieve bio samples for analysis and characterization?'"

**The difference between this HydroGel and the DeconGel use is that in DeconGel, the formulation kills the spores as gel dries into a film.** Encapsulation of the spores in HydroGel allows the spores to remain intact for forensics analysis. "The answer is yes, it is very successful," Rastogi said. HydroGel used in this way protects the sample better. While wipes and swabs are proven, successful methods, they tend to interfere with the sample by spreading it around, or at times it may not pull enough sample from the surface to enable precise contamination assessment and testing.

#### New agreements and studies

ECBC says it is in the process of initiating a new inter-agency agreement with the Environmental Protection Agency's National Homeland Security Research Center in North Carolina to compare the cost and effectiveness of sporocidal chemicals when applied as liquids, gels, and foams and predict the best option for rapid decontamination of large surfaces in the event of a bioterrorism release. **This joint program will likely start in the third quarter of FY 2016, and is a shining example of long-standing on-going partnership between the two federal agencies, which began over ten years ago in 2004.**

**In the future, Rastogi said he would like to research a composition where DeconGel could be effective for chemical agent decontamination.** "DeconGel has a lot of potential and could change a lot in the field of broad-hazard decontamination, including CBRNE threats," he said. "So we are exploring it and its uses to the fullest."

## Bio-Tech Firm PathSensors Announces New Universal BioSensor

Source: [http://www.domesticpreparedness.com/Industry/Industry\\_Updates/Bio-Tech\\_Firm\\_PathSensors\\_Announces\\_New\\_Universal\\_BioSensor/](http://www.domesticpreparedness.com/Industry/Industry_Updates/Bio-Tech_Firm_PathSensors_Announces_New_Universal_BioSensor/)



July 12 – Baltimore-based biotech firm, PathSensors, Inc., announced today the launch of its Universal BioSensor technology. Developed in partnership with the University of Maryland School of Medicine, the Universal BioSensor is a new bio threat detection platform that can use any existing antibody to rapidly develop tests for the presence of pathogens in environmental samples. The Universal BioSensor expands the range of biological agents that PathSensor's CANARY® (Cellular Analysis and Notification of Antigen Risks and Yields) biosensor can detect and significantly reduces development time cycles and costs.



“CANARY® technology has been proven to be superior for bio threat detection in terms of sensitivity, speed of detection, low false alarm rate and ease of use; with the development of the Universal BioSensor, CANARY® now has advantages over alternatives in terms of the number of pathogens it can detect,” commented PathSensors' CEO, Ted Olsen. “In addition, the

Universal BioSensor makes it faster and cheaper for us to quickly develop and deploy new bio sensors in response to new and emerging bio threats.”

Unlike prior approaches that required engineering of specific antibodies into the cell that can bind to a pathogen during the detection process, the Universal BioSensor is engineered to express a novel protein that can bind any commercially available antibody and signal within the cell in the presence of the pathogen.

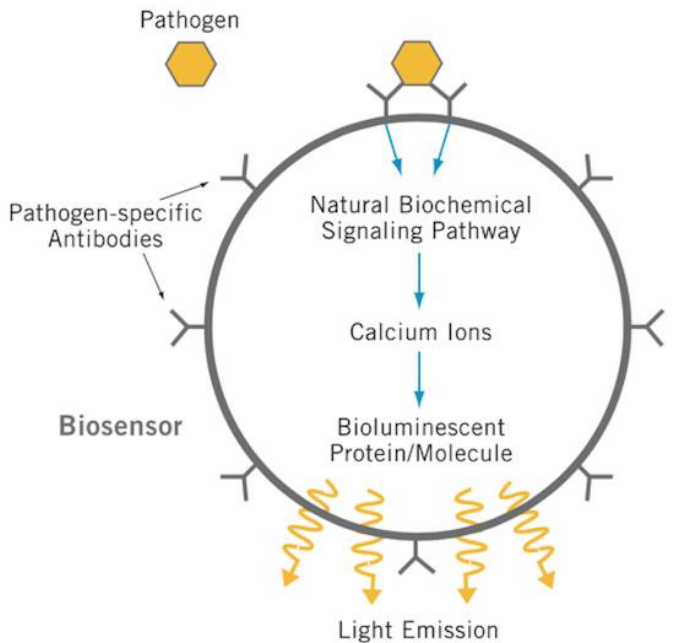
The Universal BioSensor was developed by scientists at the University of Maryland's School of Medicine, in collaboration with PathSensors, Inc. The project was funded in part by a grant from the State of Maryland.

Dan H. Schulze, Ph.D., Professor of Microbiology and Immunology, University of Maryland and lead scientist

on the project commented: “This approach provides a novel platform for detection of pathogens. It makes it possible to utilize available reagents that can target pathogens or antigens for an almost endless range of possibilities.” Dr. Schulze continued: “This shows how science can be combined with PathSensor's commercialization expertise to broadly expand the scope of pathogen testing.”

CANARY® biosensors offer a superior level of speed and sensitivity. PathSensors has a selection of reagents for the most common biothreat agents including:

- *Bacillus anthracis* (anthrax)
- Ricin
- Botulism
- *Yersinia pestis* (black plague)
- Tularemia
- Orthopox virus (smallpox)
- *Salmonella*
- *Campylobacter*



## Escobar Technologies Aims to Reinvent Medical Simulation

Source: <http://www.autodesk.com/products/fusion-360/blog/escobar-technologies-aims-to-reinvent-medical-simulation/>

July 20 – Imagine a nurse learning to start an IV on a full-body training mannequin. The plastic model is equipped with not-entirely-realistic skin and veins, it can cost \$100,000 . . . and it breaks down a third of the time. Worse, the only replacement parts come from the original manufacturer, and they cost a fortune.

That's the frustrating reality that EMT and Healthcare Simulation training clinician David Escobar faced every day in his job. With no engineering background — but a passion for both healthcare and 3D printing — he founded Escobar Technologies to address that reality with a straightforward mantra:

“There's got to be a simpler, better way to do things.”

### From EMT to Manufacturing Entrepreneur

Escobar has spent almost a decade in healthcare, starting with six years as an EMT on ambulance duty and in emergency rooms. For the past four years, he has helped to train clinicians in a simulation theater set up to mimic a hospital. Working with the expensive mannequins in that setting helps nurses, doctors and technicians improve their teamwork and communication so they can decrease medical errors in real-world situations.

The training mannequins require constant maintenance—meaning you need a full-time specialist like Escobar to keep them running. “You would never buy a \$100,000 car and be



okay with it only starting 70% of the time,” Escobar says. “We’ve accepted that as a [medical] simulation community.”

A couple of years ago, Escobar’s employer asked him to do some 3D printing—an interest that he has written about extensively on [his 3DAdvantage blog](#). As he searched online for the right tools, he started probing into the broader issues around training mannequins: Why do they break down so much? Why are online bulletin boards lit up with frustrated users? Why are there no third-party parts suppliers? “I started asking those tough questions about why we’re accepting this and why we’re not improving it,” he says.

Finally, conversations with mannequin manufacturers at an industry conference convinced him that the market was ripe for disruption. Starting his own company would give him a way to channel his passion for his work—passion that’s obvious in even a short conversation with him.

“I just think no one has stepped up to fill that void,” he says. “And that’s what we’re trying to accomplish.”

### Building a Family Business in Medical Simulation



“We,” in this case, includes his brother Joseph, a longtime designer who trained at RISD. Joseph doesn’t come from a medical background, so he and David work closely together to translate human anatomical concepts and the specifics of clinical training environments into practical designs. That’s when Joseph’s expertise in molding and sculpting comes in.

As David puts it, his brother is “already thinking ten steps ahead” when they work on designs—beyond 3D printing for prototypes to the needs of design-for-manufacturing (DFM) to make their products at a larger scale.

Right now the brothers are focused on their design for a human arm, complete with simulated skin and blood vessels. More broadly, they want to use the newest technology to create simulation products that more realistically represent human anatomy while being easier to maintain and more affordable to purchase. They want to fill a niche in the marketplace by meeting the needs of both the clinicians being trained and the technicians who must keep the equipment in good repair.

Their collaboration takes place at long distance and odd hours of the day. David lives in the Los Angeles area, while Joseph lives in Brooklyn. Besides a busy day job, David also has a wife and three children, plus full-time coursework as he finishes his degree in entrepreneurship and management.

Software, including Fusion 360 and Google Hangouts, helps the brothers squeeze in their development work around the rest of their lives. They often talk multiple times per day, starting early in the morning and going deep into the evenings.

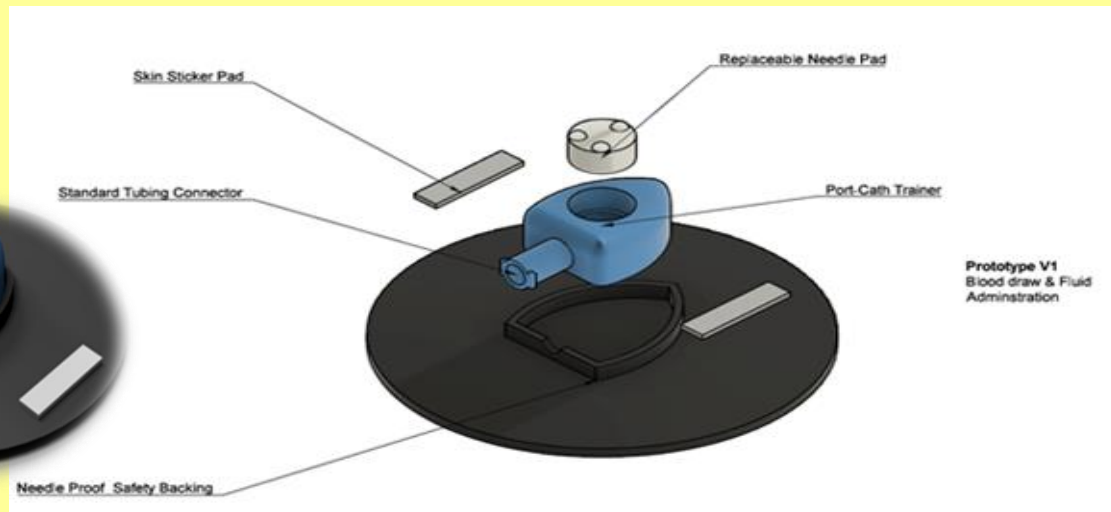




### Using Fusion 360, From Sketches to Prototypes

Fusion 360 has played a major role in the Escobars' design process. David met members of the Autodesk team at an industry event early in 2015, and quickly started using Fusion 360 heavily. Now the brothers regularly use Live View within Fusion 360 during their online design sessions.

They also use it throughout the design process, from making initial sketches, to creating joints, to animating models, to 3D printing parts for beta testing. David highlights its use for sculpting, which is particularly relevant when designing a product to mimic the human body. "A lot of human body features don't conform to geometric shapes," he says, but he's able to match the contours of the body using Fusion 360's sculpting capabilities.



He's even able to design around off-the-shelf parts, such as nuts and bolts from a hardware store. Because he can determine the perfect fit for a bolt without designing it from scratch, he reduces both design time and cost.

All of this helps the brothers iterate designs more quickly and prototype products more efficiently. "I can produce and go to prototyping using much less money," David says, which is especially important for a small startup like his that is cautious about spending investors' money.



David has also been impressed by the constant engagement of the Autodesk team in terms of both rapid feedback and steady upgrades to the product. He explains that he has spent a lot of time in the Fusion 360 user community. In his early days of using the



software, he would post a question or comment and get responses from the team within an hour, often with step-by-step videos. Along the way, he watched everything on [the Fusion 360 YouTube channel](#). Combined with the low cost of the product, he says, that “unmatched level of support” has allowed someone like him without a traditional engineering background to become a power user.

“I never would have felt comfortable doing what we’re doing if I hadn’t got my hands on Fusion 360,” he says. “It just opened up so many doors.”

### Bringing a New Medical Simulator to the Market, One Step at a Time

Right now the brothers are focused on beta testing their simulated arm with a small group of professionals from the industry. They want to make sure that their vein and artery designs really work the way they should, and that the entire product is truly simple to use.

The Escobars hope to debut the product in January 2017 at an industry conference, and David states plainly that “We hope to disrupt the market.” They have three more products in the works, too. Bringing them to market one by one will allow the brothers to transition from their other jobs to full-time startup work while it also helps clinicians. “In the end,” David says, “the clinicians are the ones that win” from increased competition in the marketplace.

In the bigger picture, the brothers also want to inspire other designers who have great ideas but haven’t yet taken advantage of the available opportunities. “There’s enough tools out there to enable everyone to be a maker, a creator,” David says, adding that “You don’t need a warehouse and a million dollars to do it.”

He finishes our interview with a simple coda that applies to any creator with a great idea: “You have something good? Take it out there.”

## HOSPITAL LOCKDOWN

By the Editor

A hospital – small or big; urban or rural; general or specialized; public or private – is a significant asset in all societies worldwide; perhaps the most significant of all not only in daily life but especially during



disasters or man-made incidents (conventional or asymmetric). Although hospitals are expected to be prepared to counter all emergencies – from a persistent cough to a sarin nerve gas exposure – we all know that this is not the case. If this happens then hospital lockdown pose as a one-way street mainly because there is life after a disaster and hospital’s role would be equally important with actual involvement during the

disaster’s process. In that respect, a contaminated hospital will become part of the problem and not part of the solution. During an emergency situation there are patients, medical staff and support personnel inside the hospital that need to be protected and served in the best possible way. Many believe that lockdown is just closing the gates of the hospital. This short article will explore the various forms of hospital’s lockdown and the procedures that need to be planned and followed.



**What is a hospital lockdown?**

*“Lockdown is the process of controlling the movement and access, both entry and exit, of people (staff, patients, and visitors) around a site or other specific building/area in response to an identified risk, threat or hazard that might impact upon the security of patients, staff and assets or, indeed, the capacity of that facility to continue to operate. A lockdown is achieved through a combination of physical security measures and the deployment of personnel.”*

There are three elements of a lockdown:

- the prevention of entry of people to a site/building;
- the prevention of exit of people from a site/building;
- the prevention of movement of people within a site/building.

These elements result in either exclusion or containment of staff, patients, and visitors. Examples of possible lockdowns involving exclusion and containment are:

- lockdown of an Emergency Department may be called after a member of a youth gang has entered seeking treatment. When other gang members arrive, the nurse in charge may decide to lockdown the department to prevent an escalation of trouble. The aim of such a lockdown is exclusion;
- the arrival of a large number of self-presenting casualties from a chemical, biological, radiological and nuclear (CBRN) incident may result in a hospital lockdown to avoid risk of contamination of the building and people (staff, patients, etc.). The aim of such a lockdown is containment.

A lockdown may be characterized as:

- partial (static or portable);
- progressive; or
- full.

**Partial lockdown**

A partial lockdown can exist when a specific part of a site, a specific building, or part of a building is subject to lockdown. A partial lockdown can also exist when entry restrictions are placed on a specific site or building to control the flow of people into it e.g. via identification checks. Such a scenario is also known as 'controlled access.' In both these cases, the partial lockdown can be characterised as 'static,' i.e. the partial lockdown is maintained at a specific part of a site or building and it remains there. Any decision to implement a partial lockdown will normally be the initial response to an incident.

**Portable lockdown**

A partial lockdown which may originally have been “static” in nature may evolve into a “portable” lockdown. A portable lockdown can exist when an ongoing lockdown is moved from one location on a site or in a building to another. An example of such a portable lockdown may follow the self-presentation of a victim of gang related violence. Aware that other gang members may attend the Emergency Department to continue the dispute, the nurse in charge may call a departmental lockdown. However, an Emergency Department lockdown cannot be sustained indefinitely. The victim may therefore be moved to a secure ward/room where similar lockdown principles can be applied.

**Progressive/incremental lockdown**

A progressive lockdown, which can also be called incremental lockdown, is a step-by-step lockdown of a site or building that is implemented in response to an escalating scenario. A decision may be taken to lockdown an Emergency Department following the receipt of specific intelligence, e.g. a white powder incident. Subsequent intelligence updates may require lockdown of other departments to avoid the risk of contamination. In such a situation, an organisation should be able to systematically expand lockdown across its various departments. Ideally, a progressive lockdown should be implemented in an ordered manner. There may be occasions when this may not be possible. For example, contaminated self-presenters seeking medical treatment may attempt to gain access to a building through a variety of entry points. While a progressive lockdown will still be a suitable response to this situation, this lockdown will be characterised as modular as it occurs at separate and potentially unconnected locations around a site or within a building.





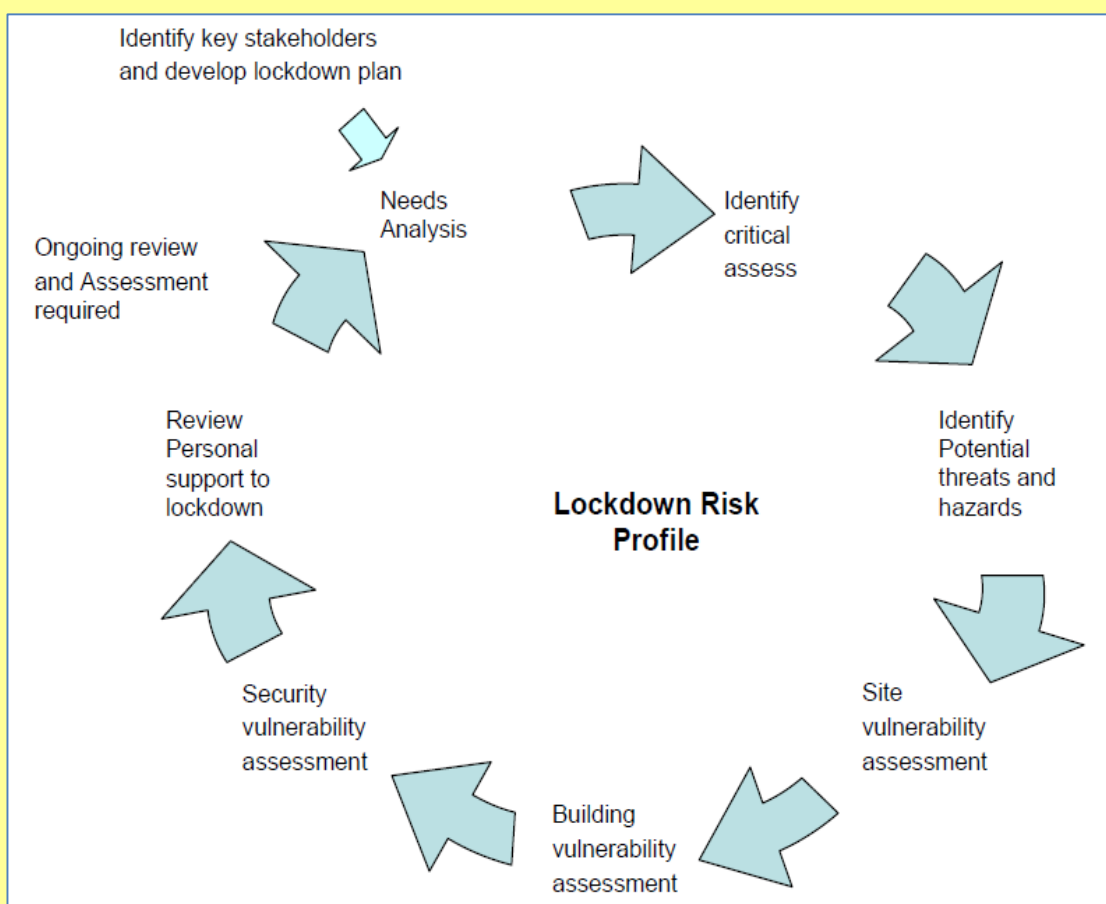
If a progressive lockdown is undertaken, managers should be aware that while lockdown actions may remove risk from one part of a site or building, they can result in unexpected consequences in other areas. The exclusion of self-presenters from a particular entry point may result in these individuals seeking entry from another entrance. Such circumstances must be considered when preparing to lockdown.

### Full lockdown

A full lockdown is the prevention of freedom of entry to, and exit from, either an entire site or an entire building

It is important to note that, regardless of the nature of the lockdown or whether it is a full, partial or progressive, the broad objective is always the same. A lockdown should be used to ensure the safety and security of staff, patients, public, property and assets.

### The development of a lockdown profile



### An alternative classification might also be used:

**a. Total Lockdown:** This is the highest level of facility and perimeter security. During a total lockdown, ALL perimeter doors are secured and NO ONE is allowed to enter or exit the facility. Security personnel or designees will be assigned to key entrance/exit points.

### b. Controlled Lockdown (five types):

**Type I – Controlled Lockdown/Exit Only:** During a controlled lockdown/exit only, ALL perimeter doors are secured. Security personnel/designees are assigned to ALL perimeter doors. Each person attempting to leave would be screened, as defined by this policy.



**Type 2 – Controlled Lockdown/Entry Only:** During a controlled lockdown/entry only, ALL perimeter doors are secured and security personnel/designees are assigned to these doors. Each person attempting to enter would be screened, as defined by this policy, by security staff.

**Type 3 – Controlled Lockdown with Entry/Exit:** During a controlled lockdown with entry/exit, ALL perimeter doors are secured and security personnel/designees are assigned to ALL entry/exits. Each

person attempting to enter or exit would be screened in accordance to this policy.

**Type 4 – Partial Lockdown:** During a partial lockdown, ALL foot traffic is directed towards pre-designated controlled entrances/exits (Main Lobby, Emergency Triage/Trauma doors). Security or designee will maintain control at these locations. Each person attempting to enter or exit would be screened in accordance to this policy.

**Type 5 – Emergency Department Lockdown:** This type of lockdown is used to regulate entry/exit to the Emergency Department only. All doors and elevators leading to and from the Emergency Department will be secured. Security personnel and/or designees will be assigned to these areas. The Emergency Department Physician, Director, or designee, Administrator on Call, or the Incident Commander would make the decision to lockdown the Emergency Department.

### Critical asset profile

There are resources and services in every organisation that will be considered critical assets. Such assets must be protected. On healthcare sites, the critical assets can be both physical (i.e. buildings and facilities) and non-physical (i.e. staff, patients, and visitors).

It is recommended that plans take into consideration:

- the measures already in place to protect these groups from threats and hazards;
- what makes these groups vulnerable in any given scenario;
- what measures can be implemented to address these vulnerabilities.

In order to determine which assets are critical, it is necessary to draw up an inventory of possible assets then consider how critical each asset is to the functioning of the organisation, the service it provides, and the consequence for the organisation if the asset was lost.

### Risk Management

Organisations should carry out site specific risk assessment of their capability to lockdown. The development of lockdown plans that consider national and local risks will help ensure that such plans compliment the plans of other agencies.

### Threat and hazard assessment

It is recommended that the full range of threats and hazards should be considered during the development of lockdown plans.

- a threat refers to a malicious event instigated by a group or individual which has the potential to cause injury or loss or damage to an asset (e.g. terrorist and technological attacks);
- a hazard is a source of potential danger or adverse condition;
- natural hazards are events such as floods, landslides, and storms;

The following questions should be considered during the development of lockdown plans:

- does the local geography contain any hazards?
- are there any local industrial sites that store/handle hazardous materials?
- are hazardous chemicals transported via the local road or railway system?
- are there people related threats e.g. are there individuals or groups of individuals whose alcohol-induced behaviour may regularly result in departmental lockdown?
- are there buildings that may be more likely to require lockdown, e.g. buildings with laboratories that contain radio-active materials?

The following sources of information should be consulted during the development of a threat and risk assessment:



**CBRNE-TERRORISM NEWSLETTER – July 2016**

- the organisation's Risk Register;
- the Community Risk Register from the local SCG;
- the local Police force's counter terrorism and security advisor.

It is recommended that a scenario is developed for each threat and hazard. Developed scenarios

Threat scenario	A bomb is brought on to an NHS site and detonates
Likelihood (low, medium, high)	Low
Likelihood assumptions	Random bag searches are conducted
Impact (low, medium, or high)	High
Impact assumptions	Possible mass casualties including fatalities

should be assessed in terms of likelihood and anticipated impact. It is recommended that all lockdown

Malicious threats to persons	Malicious threats to buildings and estates	Malicious threats to property	Potential lockdown hazards
Violence against staff, patients, and visitors	Vandalism	Theft of hospital assets and personal property	Flood
Abuse against staff, patients, and visitors	Unlawful entry	Adulteration of clinical supplies and products	Fire
Terrorism	Terrorism	Terrorism	Contamination ex-Chemical, Biological, Radiological and Nuclear (CBRN) incidents

scenarios are considered in terms of their likelihood and their impact.

### Vulnerability assessment of people, property and assets

A risk analysis needs to be carried out on the individual assets (both physical and non-physical) on the critical asset inventory to identify vulnerabilities. It is suggested that the persons responsible for security lead on this analysis in consultation with clinical staff.

The results from these risk analyses may be categorised as:

- a high risk site/building or part of site/building is a high-profile site/building which contains a critical asset, either physical or non-physical, and the site/building and security profile is inadequate to facilitate lockdown;
- a moderate risk site/building or part of site/building is a moderate-profile site/building, the asset is important but not critical and the building and security profile is marginally adequate but could be improved;
- a low risk site/building or part of site/building is not a high-profile site/building which does not contain a critical asset and the existing building and security profile is adequate.

### How easy is to lockdown a hospital?

#### Physical considerations

The following paragraphs provide guidance on the physical aspects of a healthcare site that need to be considered. Specifically, concentrating on the development of site and building profiles and describes the development of security profiles. These profiles focus





on the vulnerabilities in terms of the site, building, and existing security arrangements respectively.

#### *Site profile*

The development of a site profile concentrates on the physical geography of the healthcare site.

##### Site profile checklist

- location;
- area and perimeter;
- site characteristics;
- landscape summary;
- local road access;
- access and egress points including unofficial access and egress points;
- public transport access;
- traffic movement around site;
- neighbouring land use;
- car parking facilities;
- number of buildings on site;
- power supply.

#### *Building profile*

Organisations should review the lockdown capability (partial, progressive, or full) of a building and how such a lockdown would be achieved.

##### Building profile checklist

- description of building's current use;
- basic shape of building;
- height of building and number of floors;
- use of each floor;
- general condition of building;
- review of corridors;
- access and egress points;
- car parking facilities for building;
- review of external and internal doors;
- review of fire doors;
- review of external and internal windows;
- review of air conditioning facilities and vents;
- power provision.

#### *Security profile*

The development of a security profile should concentrate on the existing security measures currently in place. When assessing an organization's capability to lockdown a healthcare site or building, it may be useful to consider the facility in terms of concentric rings.

##### Outer perimeter

This profile should consider the distant reaches of the site and involve an assessment of the fencing, natural barriers (e.g. wooded areas), secure fencing, and the availability of CCTV and lighting.

##### Building perimeter

This profile should include car park facilities and areas immediately surrounding the building. Security measures that should be considered include lighting, alarms, CCTV, fencing, locking devices for external doors and windows, defensive planting, and the



access control measures that are in place. The profile should also identify any vulnerabilities in the measures around the perimeter .

**Special attention should be given to doors and locks as they must be sufficiently robust to support and sustain a lockdown. Locks should be strong enough to withstand pressure that may result from significant public disorder scenarios. It is recommended that locks should be risk-assessed to ensure an appropriate level of security. Similar attention should be also given to windows and ground glass surfaces able to withstand vandalism or intrusion attempts.**

#### Building interior

This profile should cover the entire interior of the building. Such areas for consideration include internal windows and doors and their ability to be locked, access and intrusion alarms, CCTV, access control measures, and lighting.

It is recommended that these 'rings' enclose the critical asset so that the robustness of security measures increases towards the asset. In this way, there can be multiple sets of concentric rings within a single site depending on the location of critical assets. The adoption of such an approach to security builds on the military concept of "defense in depth."

#### Security profile checklist

- review of external doors;
- review of buildings;
- review of internal doors;
- review of the building interiors;
- review of windows;
- review of CCTV;
- review of security lighting;
- review of alarms on specific buildings;
- review of car parking security;
- number of security officers;
- role and responsibilities of security officers.

#### Lockdown manpower requirements

Although some lockdowns will be facilitated and supported by physical measures, in reality lockdown can be a labour-intensive exercise. The speed at which a lockdown can be achieved, expanded and moved will, in most cases, be reliant on human activity. It is therefore essential to consider what human intervention will be needed to support a lockdown at the planning stage. The number of staff needed to support a lockdown should be considered. This number will be proportionate to the size of the site/building and the assessed risk situation. The numbers of other key staff (e.g. estates/facilities and clinical) should also be considered. Staff involved in the different levels of command should also be identified.

#### Lockdown risk profile

The information collected can be assessed to determine the lockdown capability of a site/building. (whether full, partial or progressively). The checklist below summarises the information that should be collected.

#### Lockdown risk profile checklist

- identify key stakeholders;
- complete needs analysis;
- identify critical assets;
- identify potential threats and hazards;



- carry out a site vulnerability assessment;
- carry out a building vulnerability assessment;
- review personnel required to support a lockdown.

### Preparing a lockdown plan

Development of a lockdown profile can provide management with a picture of the organisation's lockdown capability and capacity. This section describes the issues that need to be considered when preparing a lockdown plan. The issues that need to be considered include:

- command and control roles;
- staff roles and responsibilities;
- stakeholder management;
- training and development;
- the practical security measures needed to support a lockdown;
- testing regime.

### Stakeholders involved in a lockdown

Preparation for lockdown of a site/building requires considerable thought. Various internal and external stakeholders should be involved in the preparation. The extent of this involvement will depend on the nature of the lockdown.

- Security Manager/Person responsible for Security
- Operations Management/Emergency Planning Officer
- Health and Safety Officer
- Estates/Facilities
- Emergency Department Clinical Lead
- Human Resources
- Media and Communication Officers
- Strategic Coordinating Group
- Ambulance and Fire Services – especially in CBRN incidents
- Police
- Mutual aid

Lockdown situations may require a multi-agency response. It is vital that any lockdown that requires such a response e.g. a full lockdown of a large site has support and participation from the relevant external agencies.

It is important to note that physical support from external agencies cannot be relied upon. The nature of the incident will determine the level of support an organisation can expect to receive from key external stakeholders. A dynamic risk assessment of the incident will determine if or when external stakeholders are called. Some incidents that result in a lockdown can be dealt with internally e.g. the behaviour of an intoxicated individual in an Emergency Department) and some will require the assistance of external agencies e.g. a CBRN incident.

### Training

Staff should receive appropriate training on the various types of lockdown and their own roles and responsibilities within these. It is vital that all staff know what is expected of them during a lockdown (e.g. staff that are assigned to operate radios must be adequately trained in their use). Such training should be subject to regular refresher training on an appropriate basis. Although this guidance is primarily aimed at those staff responsible for security and their training needs and roles and responsibilities are addressed below, many of the general principles outlined in the following paragraphs can also inform the training needs for other members of staff.

### Testing

A lockdown plan can be tested by:

- **Table-top exercises** (simulates real-life situations without risks to service provision);

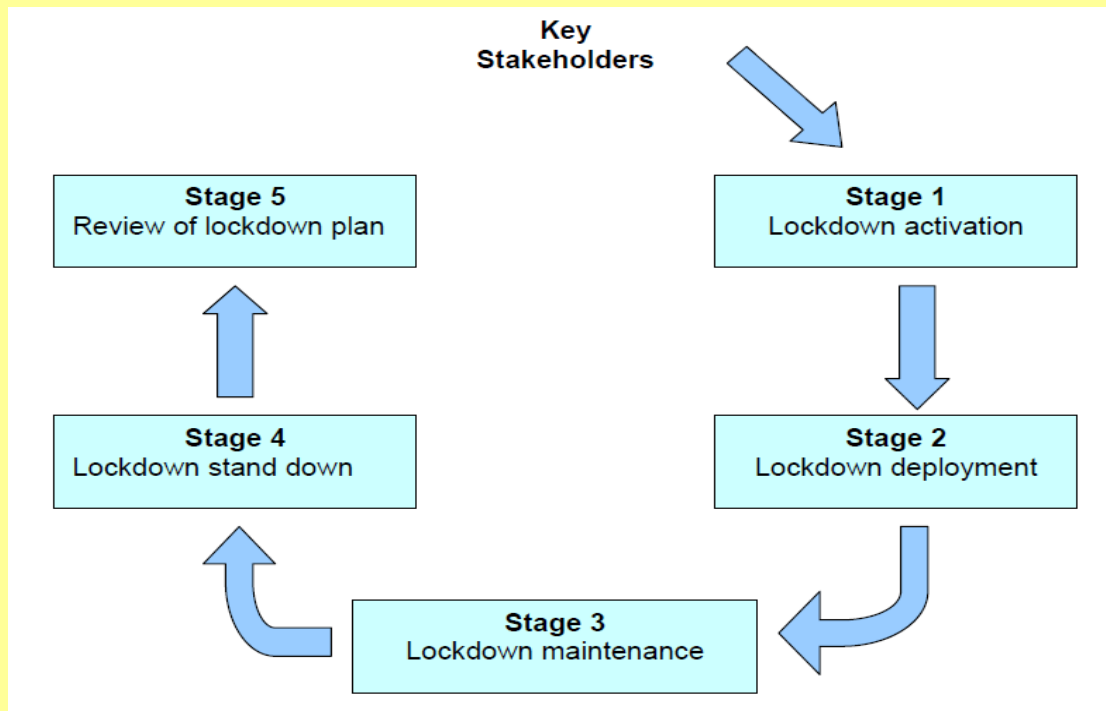




- **Live exercises** (provide staff with real experience of situations. However, care must be taken to ensure that the exercise does adversely affect normal service provision.)

**Scenario example:** Following a CBRN incident in the local vicinity, casualties start to self-present at the Emergency Department. The site has only limited lockdown capability and only the critical assets can be secured.

The primary aim of a lockdown plan exercise is the evaluation of the plan's effectiveness to meet its



requirement to partially, progressively, or fully lockdown a site/building. Evaluation of the exercise may identify gaps that need to be addressed, e.g. the building infrastructure may need to be improved. Live drill should be conducted not only during working hours but also during off working hours, national holidays/vacation period/weekends and during the night. Drill should also be conducted with minimum notification – just exactly how disaster happen in real life.

### Response (lockdown in a major incident)

The decision to lockdown a site/building should be guided by the following four principles:

- the protection of staff, patients, visitors, and assets;
- the isolation of a threat or hazard;
- the establishment of a safe distance between staff/patients/visitors/assets and a threat or hazard;
- the neutralisation of a threat or hazard.

The decision to lockdown may be taken if any of the conditions above is required. It is the internal/external threat/hazard which determines the resource needed. Different lockdown drivers, e.g. a CBRN incident, flooding, the abduction of a child, or a violent patient, may result in different lockdowns in terms of size, duration, and supporting resource needed.

A lockdown in response to a CBRN incident supports the management of self-presenters at a site/building. The ability to lockdown provides a means of managing overall surge and protects staff, patients, visitors, and assets from cross-contamination. The dangers of cross-contamination and the difficulties of responding to a terrorist incident were illustrated by events following the nerve poison attack on the Tokyo underground in 1995. This incident showed the potential strain a healthcare provider can be put under in the aftermath of such a CBRN terrorist incident.



A lockdown that results from a CBRN incident will be quite different from other lockdowns. It will likely be geographically larger and extend beyond the boundaries of the national health system's site. The lockdown will also likely be part of a wider cross-agency response. There will be a greater emphasis on crowd control. A site may potentially have to deal with large numbers of self-presenting P2 and P3 casualties (severity: P1>P2>P3 [walking]) and the "worried well" (up to 10 times the usual number of casualties – expected ratio: 1 to 5).

Lockdown of a site or building due to a CBRN incident may require specific security actions and staff may require specific training. Staff may be required to use protective suits and provide assistance with the initial marshalling of casualties to designated waiting areas prior to decontamination and then to chaperone casualties to the decontamination area.

It may be necessary to secure the dirty and clean routes to and from a site or building during a CBRN incident. Relevant staff may need to be positioned at the entrance of the clean side of the decontamination area to ensure that the security of the clean side is maintained and is not breached by potentially contaminated patients.

#### **Authority to call a lockdown**

The authority to initiate a lockdown will depend on the nature of the incident. A nurse in charge of an Emergency Department may need to make the decision following a brawl between youths on a Friday night. It is recommended that action cards are provided to aid such a decision. The action card should outline how the lockdown should be called, the specific access controls that need to be activated, and which third parties need to be informed. It is further recommended that such action cards are kept in the relevant staff station area.

In the case of a major incident, the determination to declare and/or initiate total or controlled lockdown will be at the discretion of the President of the Hospital or designee, Security Manager, and/or Incident Commander. Declarations of lockdowns may be made in respect to and in conjunction with local or federal public health officials, first responders, and/or emergency managers.

#### **Time of a lockdown**

The success of a lockdown may depend upon the time of day that it is initiated. A lockdown called at two o'clock on a Sunday morning may be harder to achieve because there may be fewer staff on duty. Conversely, fewer patients/visitors are likely to be on-site at this time which may make a lockdown easier to maintain. Best practice guidance suggests that lockdown scenarios should be trialled when the organisation is at its most vulnerable in terms of staffing etc. Such practice is likely to help develop resilience.

#### **Alerting hospital's staff**

There are a number of ways to alert staff that a lockdown plan is going to be or is activated. These include:

- pagers;
- phones;
- e mail system;
- use of a special signal;
- internal switchboard.

Whatever system is used, it should be fast. Since there are risks associated with all of these forms of communication, contingency plans should be in place to provide a back-up in case of failure, inaccessibility etc. A "human messenger" might also be included in the plan (as a last resource).

#### **Safe and control zones**

In the event that a major incident results in a lockdown, it may be appropriate to identify safe zones/control zones. Safe and control zones are rooms or areas which people can occupy or use in the event of an incident. Such zones can also be used for crowd management. People can be siphoned off into these zones for their protection. This can be



of particular significance when surges in people are expected on site. The nature of the event will determine the location of these safe zones/control zones, e.g. building construction and proximity to high-risk areas will determine bomb and blast safe zones. It should be noted that safe/control zones may need to be “portable” as they may have to be moved if there is a risk of contamination.

In addition to the above, a room should be identified which has a landline telephone, is lockable and ideally has minimal windows. This will be the safest area in the event of a major assault against the building. Although unlikely, it is preferable to have identified this room prior to it being required.

### **Security**

Lockdown is a response to a specific threat or hazard. Any resulting security response will be in addition to normal security activities. It may be necessary to undertake extra security patrols to ensure that the lockdown is not breached at particular vulnerable points. The frequency and route of such patrols should be identified and agreed at the lockdown planning stage.

### **Cordons**

In the event of a major incident e.g. a terrorist attack, the use of cordons may be used to provide controlled access for self-presenting patients to a site/building. In such circumstances, the controlled access of patients can assist systematic triage. Careful consideration should be given to the location of such cordons and how they can be effectively staffed. Decisions relating to the placement of cordons should be made in collaboration with the police who are the only individuals that can enforce such a cordon.

### **Traffic management**

Traffic management may be necessary during a lockdown. The use of signage may not be sufficient and may need to be supplemented. Staff may still be required to direct traffic to ensure flow through the site or to the appropriate car park. In the event of a CBRN incident, potential casualties may arrive via car which may, or may not, be contaminated. The best location for these vehicles is likely to be outside the site perimeter. Such a parking area should be identified and agreed with stakeholders.

### **Human resources**

The numbers of staff needed during a lockdown will depend on the nature and size of the incident. Lockdowns can be small, medium, or large-scale depending on the type of incident. The number of staff needed will be dependent on a number of variables relating to the size of the site, number of buildings, access and egress points, and existing security arrangements. Organisations should assess the number of staff required for different scenarios. Such manpower assessments should be subject to regular review.

The nature of the lockdown may affect the number of personnel available. In the event of a major incident such as a CBRN incident, staff may be unable to get into work or may choose not to come into work because of the perceived risks to themselves. Contingency plans should consider this possibility and make arrangements to accommodate it. Organisations with contracted-out security officers should have the ability to call on additional security staff during a lockdown. This provision should be included in the contract with the security company. Such contracts should clearly state the obligations in the event of a lockdown, e.g. call-off contracts, response times, cost of additional staff to support a lockdown etc.

### **Media handling**

Major incidents that result in a lockdown are likely to be of interest to the media. Organisations should have a robust media policy in place. This policy should ensure that, where possible, members of the media are chaperoned to a safe location out-with the lockdown area. Staff may be required to keep the media at a safe distance and keep them informed.

Organisations that do not have a crisis communication plan in place are strongly recommended to develop one as soon as possible. It is further recommended that the





Security Manager/person responsible for security is involved in the development of such a plan. Organisations are also recommended to exercise their communication plan to ensure that the plan is effective and to facilitate learning.

### **Crowd management and control**

Members of the public involved in a lockdown may feel anxious when they are increased by the nature of the lockdown, e.g. a CBRN incident. It is likely that public cooperation will be proportionate to the period of lockdown and their perception of the risk to themselves.

It is recommended that appropriate phrases are developed to assist staff who may be required to provide information to the public involved in a lockdown situation. For example, in the case where an agitated individual wishes to leave a site or building under lockdown and this may put that individual or others at risk, a statement such as *“For your own safety, you should stay on site/in the building”* may be appropriate.

There may be various circumstances when a lockdown can be breached. A breach of a lockdown is more likely to occur when anxious members of the public demand to be let out of the site or building to return home. If members of the public demand to leave a locked down site/building, as previously discussed, legally it is not possible to stop them (see Section 2). In this situation, an organisation should consider identifying a pre-arranged secure route out of the site or building that leads to a specific exit with robust security measures in place.

### **Business continuity during a lockdown**

Business Continuity Management (BCM) is a continual process that prepares organisations to prevent, wherever possible, respond to, and recover from disruptions or incidents regardless of the nature and size or the type of impacts they may have. BCM concentrates on the maintenance of the organisation's essential business deliverables in the event of a major event or disruption. While a lockdown plan may interface with and support a number of major incident responses, e.g. the management of mass casualties and evacuation procedures, it may also support ongoing business continuity, e.g. the exclusion of contaminated individuals from a site/building may allow ongoing service provision to continue. Similarly, the containment of individuals within a lockdown may prevent the spread of contamination which can also support the organisations business continuity arrangements.

### **Evacuation**

Evacuation and lockdown plans can be mutually supportive. If a lockdown continues to the point where the organisation can no longer adequately function, then a partial or full evacuation may be necessary.

An electronic copy of the “Emergency lockdown/evacuation plan” should also be held centrally by the hospital's supervising organization (e.g. Ministry of Health or Emergency Health Operations Center) providing architectural and services drawings along with IT web maps such as Google Earth and Google Map or equivalent.

### **Legal framework**

Containment or restriction of movement of people inside the hospital should be consistent with existing national legislation that planners need to explore during their related work to secure the hospital. If people elect to exit, they must be directed to the safest route out of the building. A lockdown, although a temporary measure, could still be construed as depriving a person of their liberty and as such, the existing legal framework should be borne in mind. But what if those choosing to leave are contaminated? A difficult scenario to handle but concrete actions need to be predicted to deal with this and similar complex situations.

### **Recovery**

A recovery plan should be developed to explain how ‘business as usual’ will be restored after a lockdown. The following should be considered during the development of such a plan:



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- who is responsible for each aspect of the recovery?
- when and in what order functions need to be restored?
- where staff and patients are to be relocated if areas of the site/building are not functioning?
- what resources are available for the recovery process?

The Security Manager/person responsible for security and their staff should also ensure the security of buildings during the recovery process.

**Sources:**

- ✓ **Hospital Lockdown: A Framework for NHSScotland.** Strategic Guidance for NHSScotland; Health Facilities Scotland; Facilities Management – June 2010.
- ✓ **Lockdown Policy.** Somerset Partnership. NHS Foundation Trust (version 2.3) – March 2016.

