The National Security Impact of Crimes Using Chemical Agents

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Summary

Chemical attacks are not normal crimes as they have important consequences for national and international security, but they are also crimes that law enforcement authorities are obliged to investigate and, if possible, resolve through national criminal procedures. Salisbury case highlights the complexity of an investigation. Although, there are now sufficient cases of attacks with chemical agents to justify a systematic response, however, there still remains a doubt whether that law enforcement authorities are prepared for criminal cases with national and international security implications.

On 20 August 2020, the political activist and anti-corruption campaigner Alexei Navalny was taken seriously ill on board an internal flight in Russia. Mr Navalny was flown from Russia to Germany on 22 August to receive specialist medical care. At the time of writing the cause of his illness is not confirmed, but German doctors treating Navalny report that he was probably poisoned.[1]

Asia and Europe have recent experiences of sophisticated chemical agents being used to carry out assassinations or assassination attempts: the VX nerve agent was used to kill North Korean leader Kim Jong Un's half-brother, Kim Jong Nam, at the Kuala Lumpur International Airport in Malaysia in 2017; and toxic chemicals were used to attack Sergei Skripal, a former Russian intelligence agent, in Salisbury, United Kingdom, in 2018.[2] This is not the first time that Mr Navalny has been the focus of, an alleged poisoning, in 2019 he filed a complaint with Russian federal investigators that he had been poisoned in police custody. In 2019 Bulgarian authorities re-opened a criminal investigation on learning that a Russian intelligence officer linked to the Skripal attack was in Bulgaria at the time of a 2015 poisoning in Sofia.[3]

Following the attack on Mr. Skripal, British authorities concluded that 'the Russian Federation was responsible for an attempted murder here in our country' which focused attention on state liability for criminal acts carried out on foreign territory.[4] Such attacks are not normal crimes because they have important consequences for national and international security, but they are also crimes that law enforcement authorities are obliged to investigate and, if possible, resolve through national criminal procedures.

The implications extend beyond the direct victim: the use of toxic chemicals in public spaces causes collateral damage and puts many people at risk, and multidisciplinary teams set up from various state agencies are required to work quickly to respond to these attacks. The decontamination operation in Salisbury took over a year to complete and the direct costs are estimated at USD 40 million. The government paid USD 17 million to compensate local businesses during the period when they were unable to operate, but the true indirect costs—for example, the number of tourists deterred from visiting the city after the attack—are certainly much higher.[5]

Heightened awareness of the disruption caused by, criminal use of toxic chemicals may have increased the risk of transnational mass impact terrorist attacks. The cost of decontamination in a small rural city in England like Salisbury would be magnified many times in a major international city. If a key location such as the main financial district was attacked, it would not be practical to close the area for more than 12 months.

Responding to an Attack

The best way to reduce risk is to prevent highly toxic chemicals from falling into the wrong hands, and effective chemical security and chemical safety are essential prerequisites for the modern chemical industry. However, it cannot be excluded that additional attacks on politically exposed individuals will occur on foreign soil in the future. Moreover, 'grey zone' attacks that are not easily classified as acts of war may occur in the context of heightened geopolitical competition or state support may be provided to transnational terrorist groups.

A forensic awareness should be encouraged in public health authorities, emergency services and the law enforcement community so that potential criminal intent behind an event is considered until the possibility can be disregarded.[6] Authorities need to be coordinated so that information about a suspicious incident can be communicated and the alarm can be raised for appropriate responders at the earliest moment.

Items that form part of an investigation must be safely decontaminated while preserving forensic evidence. Samples that could be evidence in a criminal trial must be transported to analytical laboratories while ensuring a secure chain of custody. However, authorities with different responsibilities must be able to work in a crime scene and an investigation must not interfere with work to reduce risks to public health.

The complexity of an investigation was illustrated in the Salisbury incident. Although a very small quantity of toxic chemical was used in the attack, 12 locations were identified in different parts of the city with varying degrees of contamination.[7] Security cameras are ubiquitous in UK cities, which allowed authorities to trace the movements of the most contaminated individuals. Had the victims of the attack died, and without the aid of security cameras, the task of finding contaminated locations would have been much more difficult.

The specialist military units tasked with decontamination were trained to decontaminate hard surfaces (mainly metal) to a level where vehicles could rejoin military operations. Decontaminating softer surfaces such as plastics, fabrics and wood was a new challenge, and disposal of all contaminated structures was not an acceptable (or affordable) option.[8]

The decontamination effort was guided by political decisions using the metric of no risk

to the public. However, zero-risk is unobtainable from a technical perspective or can only be achieved at a prohibitive cost. Senior political decision makers need to understand risk metrics and develop an appropriate public communication strategy. The European Union is currently sponsoring the development of *How Clean is Clean* standards and defined mass decontamination procedures. However, there is still a need to develop methodologies for designing a sampling plan and to assess the level of contamination against established risk criteria, including tools to assess residual risks of secondary exposure and acceptable levels of contamination.[9]

There is a growing recognition of the role that chemical forensic analysis can play in investigating crimes. The use of natural science in criminal justice is already essential, but alongside classical applications such as the analysis of DNA, fingerprints, ballistics or fibres, forensic science is expanding to see how analysing chemical, biological and radioactive substances can help identify their origin, method of manufacture and potential connections to criminal use. Forensic toxicology uses documented research techniques and methods, but recommended operational procedures still need to be agreed internationally for sample preparation, data analysis, reporting, quality control and proficiency tests.[10]

The nature of recent attacks means that the appropriate response could be political and diplomatic through international organizations such as the United Nations or the OPCW, or it could be through an international law enforcement cooperation framework such as the International Criminal Police Organization (INTERPOL). Data analysis and reporting must be able to prepare documents that national authorities can use to support their work in either of these international frameworks.

Concluding observations

There are now sufficient cases of attacks with chemical agents to justify a systematic response, but it is not clear that law enforcement authorities are prepared for criminal cases with national and international security implications.

How would the political and law enforcement dimensions of a case be harmonized? Who would be responsible for managing the legal aspects, and what bodies of law would apply? Who would investigate suspected cases and how are investigators trained? What specialized technical capacities are available to the authorities? If a criminal case led to prosecution, which court would have jurisdiction and which judges would preside? How would international cooperation be organized to bring a criminal case?

To promote effective response there is an urgent need to identify the elements of a national system for investigation and attribution, including certified methods for evidence collection and analysis. International organizations such as INTERPOL have a role to play in providing training and knowledge to national judicial and law enforcement authorities.

National plans need to be tested and further upgraded through a systematic programme of exercises to ensure that they would function as expected if faced with a real contingency. Where possible the exercises should use live agents and include scenarios involving cross-border cooperation.

Endnotes:

1 '5 Things We Know About the Navalny "Poisoning" So Far', *The Moscow Times*, 25 August 2020.

2 Fei Su and Ian Anthony eds., *Reassessing CBRN Threats in a Changing Global Environment*, SIPRI, Stockholm, June 2019.

[3] Michael Schwirtz, 'Bulgaria Reopens Poisoning Case, Citing Possible Link to Russia and Skripal Attack', *New York Times*, 11 February 2019.

[4] *Prime Minister Theresa May gives an oral statement to Parliament on National Security and Russia*, 26 March 2018.

[5] Department for Environment, Food and Rural Affairs, UK Government, *Clean up work completed in Salisbury*, 1 March 2019.

[6] *Crime scene and physical evidence awareness for non-forensic personnel*, UN Office on Drugs and Crime, New York 2009.

[7] Nina Notman, 'Gargantuan clean-up effort after Novichok nerve agent poisoning laid bare', *Chemistry World*, 6 November 2019.

[8] Liam Collins, A Modern Day Nerve Agent Attack: Military Lessons from Salisbury, Modern War Institute, 10 July 2019.

[9] European Commission, *Chemical, biological, radiological and nuclear (CBRN) cluster*, Horizon 2020 Work Plan 2018–20, 27 October 2017.

[10] Paula Vanninen, Hanna Lignell, Harri A. Heikkinen, Harri Kiljunen, Oscar S. Silva, Sini A. Aalto, Tiina J. Kauppila, 'Chemical Forensics', in Maurizio Martellini and Ralf Trapp eds. *21st Century Prometheus*, (Springer Nature: Cham, Switzerland, 2020).