



Commemorative ribbons hung outside a church at Copley Square

UNITED UNDER FIRE

THE BOSTON MARATHON BOMBINGS

By Dr Gary Choa

Boston is the last place I would have expected a senseless act of terrorism to occur. After living there for almost a year while pursuing my studies in Harvard University, I found it a scholarly city. Home to Harvard, Massachusetts Institute of Technology (MIT) and several other well-known universities, Boston is a place for browsing numerous used bookstores, reading in the cafes, and spending hours discussing ideas with the like-minded. It is an idyllic and peaceful place filled with a youthful energy of discovery, diversity and tolerance from students of all nationalities who come here on a common quest for knowledge.

Disaster strikes

On Monday, 15 April this year, at about 3 pm, rumours of a bombing during the annual Boston Marathon started spreading in school. The use of both laptops and handphones is usually banned in class, but students were openly surfing the Internet for confirmation and updates of the alleged bombing. "It must be a hoax" was a common response. However, deep down, given the new reality of the world we live in, we all feared the worst. Then tweets and photos of the devastation started appearing online, posted by witnesses at the marathon. Two bomb explosions had occurred along Boylston Street at 2.50 pm, which was close to the finishing line of the marathon, where crowds of supporters and spectators were gathered.

At the end of class, the professor announced a message from the university: we should go straight home, contact classmates who we knew took part in the marathon, or went to support or observe it, and inform the university if anyone was known to be injured or could not be contacted. Police could not confirm if there might be further possible bomb threats. Thankfully, those who were at the marathon sent out text messages and Facebook posts to say they were safe and uninjured. The normally leisurely ten-minute walk home from school took on a new sense of urgency as I passed other people in shock and disbelief.

The next few days were tense, as the full extent of the consequences of the bombings was gradually reported. In total, there were three deaths (an eight-year-old American boy, a 23-year-old female student from China studying at Boston University, and a 29-year-old American woman), 264 casualties, and 14 who required traumatic amputations – some lost both their lower limbs. Thankfully, no one from my school was injured, although some of the students from China knew the Chinese female victim personally. The authorities confirmed the bombs were made from pressure cookers containing metal shrapnel and nails, but had initially no leads on the culprits, so they appealed to the public for information on any suspicious persons or activities they might have noticed. By Wednesday, 17 April, the police released

Photos: Dr Gary Choa

surveillance camera footage of two male suspects carrying black backpacks.

On Thursday night, at about 10 pm, a text message came from MIT: there had been a gun shooting on campus – students were advised to stay clear of the campus. I received the message while on the subway, heading home from a Harvard student event. A fellow passenger, who must have also received the same message, voiced my unspoken thoughts when she asked her friend if the shooting could be related to the Boston Marathon bombings. It turned out that it was. The two suspects – later identified as brothers – had robbed a convenience store within the MIT campus, and fatally shot an MIT police officer. The elder brother was killed in the ensuing gunfight, while the younger one managed to escape in a hijacked car.

The events culminated on Friday when the city went into lockdown mode as the manhunt for the remaining perpetrator continued. All modes of public transport ceased operations, citizens stayed home, and businesses were closed. Project meetings supposed to be held in school were conducted from home instead through Google Hangout. I looked out of my window to a normally busy street, but now empty and devoid of people or vehicles. Meanwhile, the news on TV provided minute by minute updates on the progress of the manhunt led by SWAT teams out in full force.

By 6 pm, the manhunt came to an end when the surviving brother, injured and hiding in a boat stored in the backyard of a local house, surrendered to the police. After being holed up at home the entire day, people came out onto the streets and celebrated. Crowds lined the streets and cheered.

Preparedness is key

Atul Gawande, a professor of Surgery at Harvard, later wrote in the *New Yorker* that due to the presence of medical personnel already at the scene for routine medical cover of the marathon, hospitals had practically no time between receiving the news of the bombing and when the first casualties began to turn up at their emergency departments.¹ The bombings occurred at 2.50 pm and casualties started arriving at 3.08 pm. Massachusetts General Hospital, Brigham and Women’s Hospital, Beth-Israel Deaconess Medical Centre (BIDMC)

and Boston Medical Center each received about 20 to 30 severe casualties, sometimes seven to eight victims at a time.

Given the number of casualties and those who had severe enough injuries that required amputations, it was remarkable that there were no deaths from those injured. The three who died were killed at the scene. Through interviews with doctors involved in the response, Gawande identified the key reason for this remarkable achievement: the preparedness of the hospitals and the staff in the post-9/11 world. As Richard Wolfe, chief of BIDMC’s emergency department, was quoted as

saying in Gawande’s article: “everybody spontaneously knew the dance moves”.

In Singapore, all restructured hospitals undergo biennial mass casualty response exercises conducted by the Ministry of Health (MOH). The scenarios range from industrial accidents, to intentional mass injuries from bombings or chemical attacks. At the national level, multiagency response exercises involving MOH, hospitals, police, Singapore Civil Defence Force, Ministry of Defence and numerous other government agencies are conducted to test and practise coordinated responses to emergencies.

But there are always those who view such exercises as a nuisance to daily routines or take them lightly as play-acting. The Boston Marathon bombings should remind us that such scenarios can

no longer be dismissed as impossible or even improbable. As in Boston, it can happen in Singapore when we least expect it. And the only way to be prepared for its occurrence is to earnestly practise and rehearse our response to it in incremental steps, always learning from the gaps revealed in previous exercises and improving on them. And as Gawande’s article emphasises: everyone should know their role and each other’s role.

But beyond the medical skills needed to treat the injured, hospital capacity required to manage mass casualties, and preparedness of government agencies involved in emergency response, the Boston Marathon bombings taught me another equally crucial lesson: *the importance of resilience in the community involved.*

In Boston, there was neither panic nor incrimination.



Words of support on a chalkboard outside a Boston restaurant

Although concerned, Bostonians remained collected and followed instructions from the authorities while waiting for answers. Even though the two brothers were profiled as Muslim and from Chechnya, Bostonians did not incriminate the religion or ethnicity, but placed the responsibility of the act squarely on the misguided thinking of these two individuals.

Everybody was ready to chip in and help. A local stationary and supplies store I visited asked each customer to donate a dollar to the bombing victims' fund, after they had made their purchases. There were signs of gratitude, support and encouragement everywhere: "Boston, we love you", "We believe in Boston", and "Never give up". Bostonians were determined not to be covered by this act of terrorism.

On 25 May, victims of the bombings, along with those who were unable to finish the marathon on 15 April because of the bombings, took part in a final mile run to complete the race. I have no doubt that next year's Boston Marathon will have even more participants than this year's.

Prime Minister Lee Hsien Loong called for vigilance in a Facebook post on 20 April, and also commented on the "grace and unity" of the Bostonians. I wholeheartedly agree with that. **SMA**

Reference

1. Gawande A. *Why Boston's hospitals were ready*. *The New Yorker* 17 April 2013. Available at: <http://www.newyorker.com/online/blogs/newsdesk/2013/04/why-bostons-hospitals-were-ready.html>. Accessed 1 August 2013.



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Floral tributes placed at the site of the bombing