

Letter from Glasgow

HEAT WAVE

It is now over 55 years since my parents emigrated from India (from Delhi to be precise) to Scotland. I have spent most of those in Glasgow although I did 10 years of penance in Edinburgh, studying and working. The reason why my parents migrated was, ultimately, economic which makes our family 'economic migrants' so detested by right-wingers in the UK, Europe and the USA. However, my parents always said that the most important reason for leaving India was not to make money *per se*, but rather it was to ensure that we, the children, had opportunities in the UK for our education and, to a lesser extent, an opportunity for us to travel and experience the world.

Well, I did do the education bit and the travel bit. In particular, I have had the chance to travel widely in Europe and North America, including Chicago, which I have visited a few times for family reasons. Of all the American cities, I like Chicago the most, even more so than the cultural melting pot that is New York with its round-the-clock buzz. Chicago is the city of Barack Obama who, whatever you think of his policies, offered a thoughtful and dignified presidency. He also sent an important message about, and to, African-American people in the USA. Moreover, Chicago, for culture buffs, is the city of jazz and is associated with the modernist architects Frank Lloyd Wright and Mies van der Rohe. What's not to like about Chicago?

Hence, when a colleague mentioned a book about Chicago, which looked at the response to a natural disaster, a heat wave, I was intrigued.¹ It is not often you review a book 16 years after it was published, but reading it made me think about the natural occurrences and how society deals with them, about public health's responsibilities, politicians, the media, people dying needlessly and people dying alone.

Klinenberg is a sociologist and subtitles his book as a 'social autopsy'. I would argue that 'Heat Wave' is an epidemiological and public health account of the heat wave that killed several hundred people in a few days. Personally, I would make it essential reading for all public health students. In summer of 1995, Chicago suffered a heat wave that caused massive disruption to the city. It lasted several days from 12 July 1995. There were temperatures over 100 °F (38 °C) with the heat index (the 'felt air temperature' which includes the effect of humidity) being higher than that. The heat wave resulted in street surfaces becoming distorted, bridges being hosed down to prevent locking, power cuts and deaths. During the week, 14–20 July 1995, there were 521 recorded heat-related deaths and 739 excess deaths. Indeed, the heat-related deaths are likely to have been an underestimate.²

People are aware of the natural disasters that afflict the USA. They are brought vividly to us on our television screens through 24-hour news coverage, in our newspapers and on social media. If you ask people what they can remember of natural disasters in the USA, they may mention hurricanes, floods, earthquakes, tornadoes, wildfires and snow storms, but relatively few will, I suspect, mention heat waves. Yet, more people die in heat waves in the USA than any other natural disaster, and it is estimated 400 people on average die due to the effects of heat. In the USA, definitions of a heat wave vary by region, but it is usually defined as a period of at least two or more days of excessively hot weather.³

Klinenberg describes the heat wave from the reporting on 12 July 1995 in the *Chicago Sun-Times* newspaper of an imminent

heat wave. At first, it was treated as merely an extended period of hot weather with the usual advice of using air conditioners, drinking lots of water and 'remaining cool'. Things changed quickly with the heat wave becoming more serious and the demand on electricity resulted in power cuts, fire hydrants being opened resulted in loss of water to some areas and deaths from the heat became apparent.

In the book, Figure 7 (page 7) describes the epidemiology of the heat wave in the form of the epidemic curve with excess and heat-related deaths in July 1995. Three tables show the heat-related deaths by race and ethnicity (Table 1, page 19), age-specific and age-adjusted heat-related death per 100 000 population rates by race and ethnicity (Table 2, page 19) and age-adjusted heat-related death rates per 100 000 population rates by sex (Table 3, page 20).

It will come as little surprise that those who died from the heat were disproportionately: older (73% were aged over 65 years of age); African-American (the ratio of Black-to-White victims was 1.5:1) and men (55% of all victims). People of Latin origin (from Central and South America) seemed to be relatively protected, perhaps due to close family and social networks. Klinenberg analysed the findings and concluded that the underlying issue was one of poverty and deprivation. Some in India may find it hard to believe that one of the richest countries in the world had significant proportions of the population who were afraid to use their air conditioners (if they had them) because of the cost, that social networks for older people in particular (and more so for African-American people) were weak and that their isolation was neither recognized nor addressed adequately by the city authorities.

The Mayor of Chicago, politicians and the media tried to present the heat wave merely as a freak meteorological occurrence—an Act of God—as a way of deflecting criticism of the actions of the city authorities. A heat wave is, *ipso facto*, a meteorological occurrence, and what is referred to as the 'urban heat island' results in higher night-time temperatures in cities, so Chicago suffered from this effect.⁴ However, a heat wave's consequences can be modified even more so in a wealthy country such as the USA. Klinenberg noted the things that could have been done to limit the effects of the heat wave. These included:

1. Being appropriately prepared and having an effective plan of action
2. Providing timely warnings to people
3. Ensuring ambulance and health services can cope with any surge in need
4. Focusing more resources on those at greatest need, i.e. the poorest neighbourhoods and people
5. Providing services to the elderly (including work that could and should have been undertaken on an ongoing basis before any heat wave) and identifying isolated older people
6. Ensuring that poor people had access to, and transport to and from, the air-conditioned neighbourhood cooling centres that were opened by the city authorities.

One interesting observation was that the Cook County Chief Medical Examiner, Dr Edmund Donoghue, came under pressure. Dr Donoghue, who drew attention to the heat-related deaths, was attacked by politicians and the media who tried to discredit him because the deaths implied criticism of the city authorities and the

city. Dr Donoghue stuck to his views, based on the evidence that was apparent in his autopsy rooms, and resisted the political and media pressure to play down the deaths that were happening. He was vindicated when subsequent analyses indicated that, if anything, heat-related deaths during the heat wave had been underestimated.²

Klinenberg also mentions that some people died alone. While it is easy to criticize family, friends and neighbours for 'not doing enough' to look after people, it is a sad comment on society as a whole that this can happen. Even sadder was the fact that after the heat wave was over, the bodies of 41 people remained unclaimed and these were buried in a mass grave.

There are so many lessons from the heat wave in Chicago, but we are not always good at learning lessons. Gary Younge wrote in the *Guardian* newspaper lately, about some issues such as Windrush and Grenfell in the UK, Hurricane Katrina in New Orleans, African-Americans being shot in the USA and Syrian refugees drowning in the Mediterranean.⁵ What links these things, he said, was that 'the privileged look the other way until outrage about a specific injustice injects a sense of urgency'.

Younge is talking about more general issues that (should) outrage us, but his thoughts are equally applicable to injustices or outrages related to health and public health issues. To ensure action is taken and injustice is corrected, we need to hold all those responsible to account—including politicians, policy-makers and healthcare workers. We can make a small start by following Dr

Donoghue's example and ensuring we follow the evidence in health and public health, even if it is uncomfortable for politicians and the media.

Conflicts of interest. None declared

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