



Smart cities: health and safety for all

On June 14, 2017, a tragic fire decimated the lives of hundreds of Grenfell Tower residents, prompting a public enquiry into how a man-made disaster of this scale occurred in one of the world's wealthiest cities.¹ The burnt out skeleton of the tower now stands as a symbol of growing inequality and injustice in the UK, casting a shadow over government policies towards the quality and availability of social housing.² Although almost £20 billion has been spent on essential repairs to social housing since 2002, 10% of these buildings continue to pose inherent health and safety risks to residents in substandard accommodation.² Overall, the most neglected housing was found to be private accommodation rented by people living on welfare benefits.² Poverty, coupled with a lack of political willpower, has put innocent lives at risk, and further cuts to public spending place society's most vulnerable individuals, including 300 000 people with disabilities, in danger of future disasters.³ A critical assessment of the health and safety of vulnerable populations in UK cities is well overdue.

The UK Government has committed to improving this situation by signing up to the UN Sustainable Development Goals.⁴ These goals include promoting healthy lives and wellbeing by making cities inclusive, safe, and sustainable by 2030. Evidence⁵ indicates that over the next decade, major cities such as London, New York, and Beijing will need to invest US\$8 trillion in infrastructure alone to meet the challenges associated with a rapidly urbanising population. Innovative technology-driven approaches to urban planning support the design of so-called smart cities, which aim to be self-sufficient and sustainable in

a world where 75% of the population is projected to live in urban settings by 2050, with increasingly scarce resources.⁶ From analytical tools that can rapidly predict potential faults with infrastructure, to intelligent design of built environments that can filter air pollutants, technology has a promising role in improving housing and built environments and consequently public health.

Smart city projects,⁶ which aim to generate positive social impact, have attracted substantial investments over the past few years. However, most existing research in this area has focused on the potential economic benefits of technologies in smart cities, rather than the broader needs of citizens, and the potential health benefits. One reason for this is that smart city plans have so far been led by the private sector, which has been reluctant to prioritise the importance of public health. By contrast, in cities led by local governments but advised by civil society and health policy makers, such as Medellin in Columbia, improvements in population health have been observed, but these examples are sparse and must be scaled.⁷ Differences between private and public housing in building codes, which establish norms for design and quality of construction, have also been overlooked in planning as a social determinant of health, with potential detriment to the sustainability of smart cities.⁸ Hence, minimal consideration of public health from the outset of smart city development not only risks realisation of public health benefits, but also exacerbation of inequalities, with further marginalisation of vulnerable communities.

If wealth-creating cities, such as London, intend to transform the prospects of all its citizens, then development of the built environment and governance in planning and design must also reflect this intent. However, the tragedy at Grenfell Tower is a stark reminder

of the threats widening inequalities pose to the safety, security, and social fabric of our society. Although the public response to the Grenfell Tower disaster shows the positive potential of grassroots civil society, these movements must be supported and catalysed by the public health community to ensure civil society is a key player in city planning. The codesign of smart cities with multiple stakeholders, and most importantly, with public health interest at its core, offers an opportunity to form the foundation for a more inclusive and healthier society. By engaging health policy makers and civil society, smart city initiatives are more likely to be effective and will prove instrumental in achieving their intended success.

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**Faheem Ahmed, Na'eem Ahmed, Axel Heitmueller, Muir Gray, Rifat Atun*
faheem.ahmed@doctors.org.uk

NHS England, London SE1 6LH, UK (FA); St George's Hospital, London, UK (NA); Imperial College Health Partners, London, UK (AH); University of Oxford, Oxford, UK (MG); and Harvard T.H. Chan School of Public Health, Boston, MA, USA (RA)

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