CITIES on the FRONTLINE

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The University of Manchester

RESILIENT CITIES NETWORK

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Cities for a Resilient Recovery:
International Lessons on recovery from COVID-19

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What is the weekly briefing on Cities for a Resilient Recovery?

Each week the University of Manchester brings together relevant international practices and examples on recovery from COVID-19. The weekly briefing is curated by the Resilient Cities Network to bring key lessons and examples targeted for resilience officers, emergency planners and other city practitioners. The structure of the briefing follows the City Resilience Framework - specifically the four drivers that cities have identified as mattering the most when a city faces chronic stresses or sudden shocks - Health and Wellbeing, Economy & Society; Infrastructure & Environment; and Leadership & Strategy.

Highlights of the week

In this weeks' briefing we highlight how to integrate planning for other shocks such as natural disasters whilst maintaining physical distancing; how to manage for students to return to universities; the opportunities for data and digital tools for both response and recovery efforts as well as reflective learning; and the importance of leading by example to build trust.

As other crises loom and disasters continue to occur, The Lancet shares guidance on how to build contingency for continued pandemic mitigation – crucial for known disaster hotspots. Large-scale population movements and communal shelters are part and parcel of natural disaster response but are hardly compatible with the physical distancing measures required to halt COVID-19 transmission. Therefore, disaster response plans need to be adapted accordingly.

In the U.K. as well as many other places in the world, students are beginning to return to university and moving into their shared housing. In the U.K., around 40 universities have already reported COVID-19 outbreaks, according to the Office of Students, leading to various lockdowns and suspension of face-to-face teaching. Considering student welfare and reducing potential transmission requires a coordinated effort, including the local voluntary sector, social media influencers, and local authorities.

Lastly, various sources point out the use of data and digital tools to manage the crisis - from economic impact dashboards and local surveys to GIS and artificial intelligence. Understanding and visualising data, such as GIS can aid with, can help convey information to the public as well as support resource allocation during COVID-19

response. AI can be used to detect and interpret data to manage emergencies, such as recognising patterns in compounding factors associated with COVID-19 transmission (for example urban poverty) to provide early warning.

Health and wellbeing: Everyone living and working in the city has access to what they need to survive and thrive

Consider implementing sensory devices to monitor indoor air quality in organisations. COVID-19 is reported to spread via airborne transmission. Engineering controls that can target airborne transmission may be a useful overall strategy to limit infection risk indoors. Air monitoring systems can detect conditions amenable to spreading diseases such as COVID-19. Consider installing air monitors to:

- Assess information on CO_2, dust, volatile organic compounds, temperature, humidity, and other information on the environment to warn users when there is increased risk of spreading respiratory infections.
- Use air quality information to make informed decisions about safe use of buildings and facilities, and to communicate the impacts of environmental factors on human health.

Source: https://docs.google.com/document/d/1JWeD1AaIGKMPry_EN8GjIqwX4J4KLQIAqP09exZ-ENI/preview#

Consider how to manage the return of university students during COVID-19. In many places in the world, university students are beginning to return to communal housing located in residential areas. This, alongside rising COVID-19 infections in younger people and fatigue for COVID-19 restrictions, requires consideration of student welfare, and the management of potential transmission. Consider:

- Who should lead the management of a new community of students in cities (e.g. voluntary sector, universities, local authority) including responsibilities for welfare checks, test and trace, GP registration, and food distribution to student households if they are required to isolate
- Providing a point of local support for students, outside of their academic institution, for students who may have moved away from home. Consider partnership with local voluntary sector to coordinate with the local authority such as the OneSlough project which uses 'Community Champions' to provide information and resources to residents
- How the potential movement of students will be managed e.g. if they become ill and decide to go back home, and the impacts of this on potential transmission in two communities i.e. where they reside as students, and their home
- Targeting local online social media influencers to reach younger audiences to communicate COVID-19 messaging and promote track and trace.

Sources: https://www.theguardian.com/world/2020/jun/26/more-young-people-infected-with-covid-19-as-cases-surge-globally
https://www.theguardian.com/world/2020/aug/13/global-report-covid-19-spikes-across-europe-linked-to-young-people
https://www.publichealthslough.co.uk/campaigns/one-slough/
https://theconversation.com/why-the-uk-government-is-paying-social-media-influencers-to-post-about-coronavirus-145478

Economy and Society: The social & financial systems that enable urban populations to live peacefully, and act collectively

Consider using digital tools to track unemployment rates and economic vulnerability. Assessing projected job losses and economic vulnerability as a result of COVID-19 can be supported by using digital tools informed by official national statistics. Tools such as the Kentucky COVID-19 Economic Impact Dashboard can provide information on (un)employment by tracking industries that have experienced the greatest job losses nationally. Dashboards like these point users to a single, accessible, authoritative source for information. This helps organisations to maintain situational awareness and communicate critical information. For the economy, consider using digital tools like dashboards to:

- Evaluate the needs of local economies more closely and to develop policy responses tailored to the unique needs of each locality
- Evidence the need to support and fund aspects of economic recovery that are monitored by the dashboard
- Share data with other relevant stakeholders that also see the impacts of economic vulnerability e.g. health and education sectors

- Use the data for strategic planning and staffing purposes to anticipate and meet demand for services in different regions of the state
- Provide the public and businesses with data on economic vulnerability, alongside signposting them to other relevant information e.g. transmission rates in their area, COVID-19 testing facilities.

Source: https://datasmart.ash.harvard.edu/news/article/kentuckys-covid-19-economic-impact-dashboard-enabling-cross-state-communication-and

Consider developing response plans to COVID-19 that incorporate risk to public safety from extremist behaviour. Since the start of the pandemic there has reportedly been an increase in extremist narratives from a variety of groups. People (including vulnerable people who have been severely socially or economically impacted by the pandemic) are at risk of extremism which creates future security challenges. Organisations should remain vigilant about new and emerging threats to public safety and develop response plans that incorporate risks of extremist behaviour. Consider:

- Local assessments of old and new manifestations of local extremism which may have been exacerbated or triggered by the pandemic. Consider the form it takes, (potential) harm caused, and scale of mitigation or response strategies needed
- Developing interventions for those most susceptible to extremist narratives, this may include new groups e.g. a rise in far-right groups, and conspiracy theory groups committing arson on 5G towers as they believe them to be the cause of COVID-19
- Assessing groups which have become more at risk since COVID-19 and increased public protections measures and support for these groups e.g. East Asian and South East Asian (since COVID, hate crimes towards this group has increased by 21%)
- Developing COVID-19 cohesion strategy to help bring different communities together to prevent extremist narratives from having significant reach and influence
- Working with researchers and practitioners to build a better understanding of 'what works' in relation to counter extremism online and offline. This should include consideration of dangerous conspiracy theories, and their classification based on the harm they cause.

Sources: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906724/CCE_Briefing_Note_001.pdf
https://amsterdamsmartcity.com/posts/international-monitor-of-urban-approaches-dealing

Infrastructure and Environment: The man-made and natural systems that provide critical services, and protect and connect urban assets, enabling the flow of goods, services, and knowledge.

Consider how to ensure continuity of pandemic mitigation strategies during concurrent disasters. Planning for the mass gathering of people after a disaster amid COVID-19 is essential to mitigate the transmission of disease. Mass gatherings may occur at health facilities, evacuation shelters, or distribution centres supporting the immediate needs of those affected by a disaster. Consider adapting plans for mass gatherings at sites such as health facilities to accommodate COVID-19 safety measures including:

- Identify facilities for phased relocation of hospitalized patients to manage the influx of new patients considering risks of COVID transmission
- Outline capacity arrangements for on-site emergency care, and special care options for people with pre-existing conditions who are at increased risk of the virus
- Identify resources for further disease outbreaks to counter the increased burden of additional infections and strains on resources (e.g. PPE) that are needed to mitigate COVID-19 transmissions
- Revise estimates of requirements for shelters and transportation for mass movement of people. Increase estimates by at least a 3-times to account for physical distancing
- Maintain an inventory of available dwellings (e.g. school buildings, community halls, places of worship) that will allow enough space for socially distance emergency accommodation
- Plan for distribution centers that distribute basic necessities such as food and medicine. Consider capitalizing on community engagement at these sites to continue pandemic risk communication.

Source: https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30175-3/fulltext

Consider using a geographic information system (GIS) to provide spatial and geographic data that can assist local response and recovery from COVID-19. GISs use computer-based tools to allow users to create interactive queries, edit and analyse spatial data and to visually share results by presenting them as maps or other infographics in real-time. During COVID-19 GISs have been used to reveal patterns and trends to help communicate information to the public, develop forecasting tools to identify trends in the virus' transmission, and to support resource allocation during COVID response. Consider using GIS to:

- **Develop publicly available maps**. In Singapore, a publicly available real-time map updates on the current situation in public spaces. This can help residents to plan their activities safely e.g. show how busy public spaces are and the location of less busy spaces
- **Provide near real-time updates of estimated wait times at Accident & Emergency.** In Northern Ireland, a dashboard is updated hourly by NIDirect (an official government website) that provides information on open hospitals and wait times
- **Inform people about changes in business operations and location of key services.** In New Zealand, officials built a map that shows open businesses and whether or not the organization's operations have been impacted e.g. reduced hours or closures
- **Develop self-reporting health systems.** In Switzerland, public health officials built a crowdsourcing application for people to anonymously self-report their health status. In addition, they can report their post code, age, size of household, living situation, and pre-existing health conditions. The results are shown on a map that health officials can use to assess gaps in confirmed cases and areas where people are self-reporting symptoms, and to identify areas for intervention.

Sources: https://datasmart.ash.harvard.edu/news/article/covid-19-response-gis-best-practices-across-globe
https://datasmart.ash.harvard.edu/news/article/covid-19-response-gis-best-practices-local-government
https://datasmart.ash.harvard.edu/news/article/covid-19-response-additional-gis-best-practices-local-government

Consider how Artificial Intelligence (AI) can be used to support emergency management activities such as those used during COVID-19. AI uses computer systems to perform tasks associated with human intelligence. This can be used to help detect and interpret patterns useful for managing emergencies. Explore with AI experts how AI may be used in COVID-19 mitigation, preparation, response and recovery:

- **Mitigation:** To recognize patterns in the environment to provide early warning e.g. data on compounding factors associated with COVID-19 infection such as urban poverty to provide information on potentially high risk areas
- **Preparation**: To analyse patterns in natural and social phenomena, and run emergency simulations to develop detailed emergency management plans
- **Response and Recovery:** To sort situational information from social media, and surveillance cameras (fixed, drones, satellites) to determine where response is needed, and to support coordination of recovery activities.

Source: https://www.tiems.info/images/pdfs/TIEMS_2020_Newsletter_August_.pdf

Consider how to build public trust and confidence by leading by example. In extraordinary times people turn to their leaders for guidance and reassurance more than ever before. Leading by example helps to unite, connect, and guide people in consistently working towards a common goal. Leading by example requires clear, and visible communication of appropriate behaviours. This may include issues such as regular handwashing, adhering to social distancing guidelines, rules on travel, and adhering to isolation and quarantine measures. For example, on facemasks:

- In schools. If headmasters want parents to wear facemasks when they collect children from the playground, then teachers should wear facemasks when they take children into the playground for collection
- In shops. If shops want customers to wear facemasks, then shop workers need to wear facemasks
- In public. If politicians /police/ local authorities want public to wear facemasks, then they should also do so.

Consider conducting local and national surveys to study how COVID-19 is changing daily life. In the UK, first-person accounts of living through the 2020 COVID-19 pandemic have been collected to better understand how people respond to pandemics and how to help people cope better in the future. This is particularly important if viral epidemics become more common. This type of research can form an important digital archive for future researchers. Consider working with local and academic organizations to develop an online survey to collate people's experiences on:

- How COVID-19 and the measures to control it are affecting and shaping interactions between individuals in society
- The effect of the pandemic on community wellbeing, quality of life and resilience
- The impact of digital technology on community responses to the spread of coronavirus
- The impact of the pandemic on how and where support can be accessed
- How people with physical and mental health problems, and disability, and those who are facing inequality or discrimination have been impacted.

Sources: https://www.youngfoundation.org/workwithcommunities/community-covid-you/
https://nquire.org.uk/mission/covid-19-and-you/contribute
https://ourcovidvoices.co.uk/

For more international examples please register @ ambs.ac.uk/covidrecovery
Join the Coalition of Cities for a Resilient Recovery here

If you would be willing to contribute your knowledge to this briefing series (via a 30-minute interview) please contact Duncan.Shaw@manchester.ac.uk

Useful webinars

Key webinars on how cities are building resilience in the face of the pandemic and other shocks & stresses.

Date	Webinar Title (Click to register or to access materials)
15 September	Make or Break: The Implications of COVID-19 for crisis financing
17 September	Inclusion of Persons with Disabilities in the COVID-19 Response: Applying the IASC Guidelines
24 September	Cities on the Frontline Speaker Series: Predicting and Monitoring Hotspots
8 October	Cities on the Frontline Speaker Series: Risk and Crisis Communications
13 October	Local Government Authority: What does the future of commercial activity look like post COVID-19?
21 October	How a digital boost can help small businesses survive and thrive in the wake of COVID-19