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Learning from Covid-19: the inextricable link between health and housing

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If there is a health requirement as much as a cause of inequality that the pandemic has cruelly brought to light, it is that relating to housing. For the author, humanitarian actors must integrate this requirement.

The coronavirus pandemic has highlighted the way that a health crisis can drastically impact everything that we do. It has showcased the absolute importance of a secure and stable home to keep us out of harm's way. As Covid-19 has engulfed the whole world, we have found our most powerful weapon to defend against the virus has been the capacity to distance ourselves from others and halt its spread. Countries, States, and cities have all declared various forms of stay-at-home orders. With health systems stretched, and in the absence of a vaccine, our homes are our strongest defence against this deadly disease.

For those of us with stable housing, this has brought home the importance of having a comfortable indoor environment in which to live, work, and relax. It has also demonstrated how a health crisis such as the Covid-19 one can permeate every aspect of our lives. It is not just a health crisis, but an economic, political and social crisis. It is also, for many people around the world living in displacement or informal settlement conditions, a housing crisis.

For those around the world who find themselves in insecure housing conditions, the threat of Covid-19 – and many other health, economic, and social threats – becomes exponentially greater. As demonstrated by governmental reliance on lockdowns to help contain the virus, our homes represent our greatest ally in fighting the spread of diseases. This is only true, however, if we plan our homes and settlements appropriately.

Rethinking resilience?

When people talk about resilience in the built environment, they often mean what I will refer to as "hard resilience", or the capacity of a structure to withstand external stressors. If struck by an earthquake or hurricane, will the building remain standing? Builders, architects, engineers, and those working in the humanitarian sector have become very good at building structures that are resilient in this traditional sense. There is ample guidance available for all those working in the built environment to ensure that hard resilience standards are met and best practice is followed. However, when it comes to considering resilience in a broader sense – e.g. societal resilience to external stressors such as mass population movement (as is the case with global urbanisation), political unrest, or public health crises (such as Covid-19) – the impact that the built environment can have on our capacity to weather the storm is less well understood.

For example, figures from *Our World in Data* show that over the last two decades, earthquakes have proven to be by far the deadliest natural hazard in terms of loss of life globally, accounting for over 700,000 deaths between 2000 and 2018[1]. However, this is largely as the result of large one-off

[1] Hannah Ritchie and Max Roser, "Natural Disasters", *Our world in data*, November 2019, https://ourworldindata.org/natural-disasters#natural-disasters-kill-on-average-60-000-people-per-year-and-are-responsible-for-0-1-of-global-deaths

events that drastically elevate the toll of such disasters. For instance, in 2010, the devastating Haiti earthquake, one of the worst on record, is estimated to have killed up to 316,000 people alone (although this high figure is disputed) and to have displaced a further 1.5 million – an unmitigated humanitarian disaster on a barely fathomable scale[2]. However, the following year, 20,000 people were killed by earthquakes globally, and in 2012 that number fell to just 718 people[3].

In contrast, major health threats often kill far greater numbers of people, and whereas a devastating earthquake on the scale of Haiti may be a once-in-a-generation event, the chaos wrought by disease outbreaks is replicated year-on-year. According to the World Health Organization, communicable diseases such as respiratory infections, diarrhoeal diseases, and tuberculosis killed upwards of 5 million people globally in 2016 alone[4]. When a significant disease outbreak occurs, these figures can rise exponentially. For instance, just seven months after the Covid-19 crisis was declared a pandemic, the best estimates are that this novel virus has added by almost 1.3 million deaths to the global disease death toll[5]. Compare this to the estimated average of 35,000 annual deaths from earthquakes – which kill significantly more people than other natural hazards, such as hurricanes and flooding – and the scale of the health threat becomes clearer.

In this context, it becomes important to ask whether or not a building that can survive a severe earthquake or a severe hurricane, but which has not been built to address the threat of disease spread, can really be considered resilient at all. The question of what constitutes a resilient home environment is one that has received significant attention in the humanitarian sector prior to the pandemic, but Covid-19 has accelerated the need for humanitarians, development actors and citizens alike to grasp the interplay between our living environments and our health[6].

Protecting health in an urbanising world

The link between urbanisation and the spread of contagious diseases is clear. With the global urban population expected to reach 6.3 billion people by 2050, up from 4.2 billion today, health professionals are deeply aware of the need to consider health threats in urban planning to combat the greater risk of disease spread in a more urban world[7].

Preventing disease in cities requires a broad approach (which is beyond the scope of this article), to address issues such as overcrowding, water and sanitation, waste management, and public behaviours. Strong public health messaging, such as that seen in countries around the world encouraging people to avoid large groups and stay at home can only get us so far. It becomes indeed very difficult to stay at home if "home" doesn't meet our needs.

Housing contexts and health outcomes

The final defence against myriad health threats is the housing unit itself. The home has taken on new importance in this era of lockdowns and social distancing, but the impact that housing can have on our health is still underappreciated. With initial evidence in the UK suggesting that lack of access to quality

[2] Juliette Benet, "Behind the numbers: the shadow of 2010's earthquake still looms large in Haiti", *International Displacement Monitoring Centre*, January 2020, https://www.internal-displacement.org/expert-opinion/behind-the-numbers-the-shadow-of-2010s-earthquake-still-looms-large-in-haiti

[3] Hannah Ritchie and Max Roser, "Natural Disasters", art. cit.

[4] World Health Organization, "Causes of death", *The Global Health Observatory*, 2016, https://www.who.int/gho/mortality_burden_disease/causes_death/top_10/en

[5] Worldometers Coronavirus Death Toll Tracker, 11 November 2020, https://www.worldometers.info/coronavirus/coronavirus-death-toll

[6] UK Shelter Forum 24, "Health and Shelter", agenda and presentations, 10 May 2019, http://www.shelterforum.info/uk-shelter-forum-24-presentations

[7] Émilie Alirol *et al.*, "Urbanisation and infectious diseases in a globalised world", *The Lancet*, 11/2, February 2011, p.131-141.

housing is an exacerbating factor for the coronavirus pandemic, this link must be addressed by policy makers, researchers, and practitioners alike to ensure we are delivering appropriate housing solutions to meet global health needs[8]. The Building Research Establishment has previously undertaken research into the cost of poor-quality housing in the UK, estimating that the cost to society of leaving England's poor housing unimproved is £18.6 billion, with an additional £1.4 billion a year being spent by the UK's National Health Service on poor housing-related illnesses and injuries[9]. With the additional cost of Covid-19, this societal burden of poor-quality housing is set to increase.

In a humanitarian context, the costs associated with poor quality housing are more difficult to determine, but the trends appear similar. A recent report from InterAction has found that housing deprivation increases the risk of disability or severe illness by 25% across a lifetime[10]. In contrast, good quality housing interventions can have a positive effect on both physical and mental health[11]. Very basic interventions, such as the addition of flooring or the use of appropriate passive ventilation designs, can reduce the likelihood of respiratory disease and vector-borne diseases. The development of housing that meets or exceeds minimum size standards and allows for access to appropriate sanitation facilities can reduce contagion of infectious diseases and decrease the likelihood of diarrhoeal diseases. All of these simple solutions are well understood in humanitarian practice but are worth prioritising in the wake of the current pandemic, as measures that can protect against pre-existing health threats will also defend against Covid-19.

However, the downstream benefits of considering health in housing solutions are perhaps less well-articulated. We know that access to stable, secure housing is one of the key determinants of mental wellbeing, but beyond security of tenure, the indoor environment of the home can dramatically impact the mental health of inhabitants[12]. With many of us around the world spending more time indoors than ever, the quality of the environment in which we find ourselves living, working, socialising, and relaxing has never been more important.

For humanitarians who are working with limited resources in difficult conditions, turning a shelter into a house, or a house into a home, can seem like an impossibly complex task that is potentially out of scope. However, by viewing quality housing as an ally in the battle for healthier communities, humanitarian priorities shift.
The *Towards healthier homes in humanitarian settings* report provides a detailed overview of current understanding of health in the shelter sector[13]. One of the key recommendations to emerge was a need for greater collaboration across disciplines in matters related to health[14].

This collaborative approach represents one of the current challenges for the sector in developing healthy homes that meet the needs of inhabitants. The cluster system encourages siloed work, which is necessary for drawing expertise to specific problems faced in humanitarian contexts, but also means that cluster groups sometimes struggle to engage with practitioners outside their own area of expertise. This could be a reason for the historic focus on "hard resilience" discussed above, and, whilst ensuring high quality solutions are developed for more traditional housing problems, means that finding interventions to meet social, economic, or health concerns can be more difficult. So how can the humanitarian sector collaborate more effectively to share expertise across disciplines?

Collaborating for healthy homes

[8] Brent Poverty Commission, "A fairer future: ending poverty in Brent. Recommendations from the Brent poverty commission", July 2020, https://www.brent.gov.uk/media/16416717/poverty-commission-report-launched-17-august-2020.pdf
[9] Mike Roys *et al.*, *The full cost of poor housing,* BRE Press, 2016, https://www.brebookshop.com/details.jsp?id=327671
[10] Fiona Kelling, "The wider impacts of humanitarian shelter and settlements assistance key findings report", InterAction, 2020, https://www.humanitarianlibrary.org/resource/wider-impacts-humanitarian-shelter-and-settlements-assistance-key-findings-report
[11] *Ibid.,* p.7-8.
[12] *Ibid.,* p.10.
[13] Sue Webb, Emma Weinstein Sheffield and Bill Flinn, *Towards healthier homes in humanitarian settings: proceedings of the multi-sectoral shelter & Health learning day 14 May 2020*, Care International, CENDEP/Oxford Brookes University, https://insights.careinternational.org.uk/media/k2/attachments/CARE_CENDEP_Towards-healthier-homes-in-humanitarian-settings_Aug-2020.pdf
[14] *Ibid.*, p.42.

Designing and building homes in a humanitarian context that protect inhabitants from health threats, whilst also providing opportunities for households to thrive, is a difficult challenge. We know that better indoor environments not only improve physical health but can have real impacts on mental wellbeing, but despite this, there is still limited guidance for developing housing that can support improved mental health in inhabitants. For those of us who have found our homes becoming surrogate offices, social spaces, and recreational areas during the pandemic, the importance of liking your indoor environment has never been clearer. For individuals suffering from displacement due to humanitarian crises, the need to *feel* safe and happy at home may be more important than objective physical safety.

Understanding this difference is key to ensuring that housing meets the needs of its inhabitants. The psychological dimension comprises just one element of the health dimension of housing, and the health dimension is just one dimension vying for attention alongside social, economic, environmental and myriad other issues that face a household in crisis. Very quickly, the task at hand becomes overwhelming. As the InterAction report notes and the response to Covid-19 demonstrates, shelter can act as a catalyst for improvement of many issues when these issues are addressed explicitly in shelter programming.

Collaboration across disciplines, sectors and cultures is key to ensuring each individual project meets these lofty goals. The report already mentioned proposes the formation of an "Environmental Health" inter-cluster working group, bringing together expertise from the shelter, health, and WASH clusters[15] to attempt to tackle health impacts of housing. There are several initiatives that aim to bring environmental, social, and housing issues together in a holistic way (BRE Trust's QSAND sustainability tool is one of them), but these fall short of helping to overcome the difficulty in cross-sectoral collaboration.

Experts in different disciplines often speak very different professional languages, and different programme priorities result in highly varied modes of data collection and assessment. In attempting to utilise the *Cost of Poor Housing* methodology to examine health and shelter outcomes in Moria refugee camp (in Greece), BRE Trust found that accessible data was severely limited. The relevant data is likely collected but is not effectively shared[16]. What is needed is a more systematic method of sharing data across organisations, in a way that can be effectively utilised by different clusters who are addressing different elements of the response.

Developing effective data collection and sharing mechanisms will enable a more streamlined approach to tackling issues affecting beneficiaries, but the time and resources required to achieve these is well beyond the capacity of humanitarian organisations. BRE Trust has had some success in bringing knowledge and expertise to the sector in order to support operations, but has also encountered many challenges and is continuing to work with partners to improve our capacities in this area. Our experience is not unique. A previous InterAction report examining barriers between academic and practitioner collaboration highlights the difficulties in cross-sectoral partnerships[17].

We may not yet have the solutions to overcome collaboration barriers, but Covid-19 can hopefully provide a catalyst for addressing this. If nothing else, it has become clear that health and housing are not issues to be dealt with by doctors and engineers, but multifaceted issues that require widespread input for outcomes to be successful.

Covid-19 has elevated housing to a key ally in protecting us against health risks. Optimising its capacity to do this requires the expertise not just of shelter and health specialists, but of academic researchers, field practitioners, and inhabitants. It will be a difficult challenge to tackle, but Covid-19

[15] Sue Webb, Emma Weinstein Sheffield and Bill Flinn, "Towards healthier…", *op. cit.*, p.41.
[16] Anna Gatti, "The cost of poor camp design on refugee health", BRE Trust, https://www.bretrust.org.uk/knowledgehub/the-cost-of-poor-camp-design-on-refugee-health
[17] Mohamed Hilmi. "Academic-Practitioner Forum Actions and Recommendations", InterAction, 2019.

has demonstrated that it is a vital necessity that we do so.

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