

‘Interventions must be low-cost, low-tech, and paired with a public health message’

An interview with Peter Williams, Founder and Executive Director, ARCHIVE Global, New York, USA



The evidence that concrete floors reduce diarrhoea (second-biggest cause of death among under-5s in Bangladesh) is very solid. It's one of those things the world has known for a long time, but hasn't yet found the will to act on. Photo • Courtesy archiveglobal.org

ARCHIVE (Architecture for Health in Vulnerable Environments) Global is a non-profit organisation working worldwide to improve housing for health. Founder and Executive Director Peter Williams talks to *Early Childhood Matters* about using design to tackle malaria in Cameroon, diarrhoea in Bangladesh and tuberculosis in London, and the importance of understanding local nuances in finding solutions that can be scaled up.

Why did you choose to focus your organisation on the relationship between urban design and infectious disease?

There is ample evidence linking all kinds of physical and mental health issues to living conditions, but some of those issues get more attention than others. If you go to a meeting about the urban design – child health nexus in New York, for example, you'll tend to find the

talk is about obesity. That's a big and important issue, and 'active design' has a role to play: think of, say, the way staircases in tall buildings tend to be hidden out the back, rather than made into an attractive feature of the building that encourages people to take the stairs instead of the elevator.

But the danger is that other important issues get overlooked. Frankly, we're not saying anything new in pointing out the link with infectious diseases – it's been known for decades. Where we're trying to make a difference is in getting people to take it more seriously and to adapt solutions for local specifics. It's a sad reality that most diseases that kill under-5s are preventable, and many of them are strongly influenced by living conditions. Until governments, international organisations and big foundations address head-on the

need to change paradigms in urban design, we're not going to see the kind of progress we want.

What are some of the ways in which you're using design to tackle infectious disease?

One of our projects is in Yaounde, the capital city of Cameroon, a country in which half of all deaths in children under 5 are due to malaria. The usual response to malaria is to distribute bed-nets, but we found that in practice most people weren't using them. So we're looking at ways to stop mosquitoes from getting into houses, by screening windows, doors and eaves. Of course, this has to be part of a systemic approach that looks also at conditions outside the four walls of the home, like adequate drainage to prevent stagnant water in which mosquitoes can breed. The project has screened 120 houses so far.

Another example: many houses have dirt floors, which are breeding grounds for bugs that cause diarrhoea, hepatitis and typhoid. We have a project in Bangladesh called 'Health from the ground up', which is working to replace mud floors with concrete floors in 500 houses by next year. Diarrhoea is the second-biggest cause of death among under-5s in Bangladesh, quite apart from the cumulative effect that repeated bouts of illness have on children's physical and mental development. The evidence that concrete floors reduce disease is very solid. It's one of those things the world has known for a long time, but hasn't yet found the will to act on.¹

How much does it cost to put down a concrete floor? Is it something the average Bangladeshi who lives in a mud house can afford?

As with many pilot schemes, it is expensive to begin with, but the hope is that as the issue gets increasing attention, people will find ways to bring the costs down. In our project, it's currently costing just under 400 euros to replace a dirt floor with a concrete one, and we're asking families to contribute around a tenth of that. But we're also working with BRAC University to see how we can bring the cost down by including local waste products in the concrete mix. We're confident that we can approximately halve the cost in the next few months, as well as contributing to local waste

management in the process. Specific solutions that reduce costs will always differ from place to place, which is why it's important to work with local institutions. More generally, as demand for any product grows, entrepreneurs have the incentive to look for ways to make it more affordable. A major part of our work is to get involved with families and communities to help them understand why it's a good idea to have a concrete floor, say, or to screen their windows. We're already seeing in Cameroon that the market is responding to demand we've helped to create, with some local entrepreneurs setting up in business to make and fit screens. Ultimately this has to be affordable and self-sustaining, rather than relying on grants forever.

And it's not only health benefits, by the way, which give homeowners an incentive to improve their properties by doing things like laying a concrete floor. A house is an asset, and it's often easier for people to access small loans and other financial services if they can add value to that asset. That's a motivation that shouldn't be underestimated.

So you see the way to scale up as being through increased awareness and demand, rather than through governments imposing the kind of detailed building codes we see in developed countries?

I'm generally an optimistic person, but I'd be surprised if in the next 20 years you'd see all new houses in a country like Cameroon being built with screens as standard because of a government building code. While I'm an architect myself and I believe architects add value, the reality is that the vast majority of homes worldwide – certainly over 95% – haven't been built with the input of architects, and that will continue to be the norm.

I see the kind of work we're doing as work communities should be doing for themselves, rather than requiring government oversight. Interventions must be low-cost, low-tech, and paired with a public health message. And we need to be working with governments to try to make sure that what we do is consistent with their strategies. One of the most important areas where governments can help is tenure. In Cameroon, for example, we've been engaging to persuade the government to drop plans to

demolish houses in a slum area, and instead to work with the residents to help incentivise and enable them to improve the quality of their residences.

You can't expect someone to invest in screening their windows or laying a concrete floor if they're worried the authorities might demolish their house.

And that's not the only common threat to tenure. In many countries, sadly, tenure is gender-specific. If you're a woman and your husband dies – a situation that's all too common in many African countries that have been ravaged by HIV/AIDS – then you can lose title to your land.

Land tenure is a really complicated issue in many countries; there's often no central register of land rights – it varies hugely from culture to culture. You may have some formal practices, laid down under law, which grant land rights – but there are also often traditional laws and customs accorded by tribal chiefs, and other customary ways in which people get tenure.

Even in the same community, some people may have legal tenure while others don't. One of the requirements we have for a household to take part in our projects is that they are able to show proof of tenure. That's necessary to protect our work, but it's always a source of sadness when someone isn't able to take advantage of the opportunity. The issue of tenure is a global one that requires bold leadership, but sadly it isn't going to be resolved any time soon.

You also have projects in developed countries – in the London boroughs of Brent and Newham, and in Camden, New Jersey. What are the issues there?

In Brent and Newham the issue is tuberculosis – they have the highest rates in Western Europe, and the quality of housing is a factor in that. Damp, poorly ventilated and overcrowded houses provide breeding grounds for disease to spread. Camden is one of the poorest areas in the USA, and the issue we're tackling there is asthma. In households making less than USD 35,000 a year, nearly 17% of children suffer from asthma; in households making USD 75,000 or more, that figure is under 8%. Factors associated with poor-

quality housing – dust mites, rodents, inadequate ventilation – can be important triggers for asthma. And it's a problem with far-reaching implications: for example, about 12 million school days a year are lost because of asthma.

Some of the living conditions can be staggering. In our London project I met an Eritrean woman who had sought asylum in the UK from fighting in her home country. The local council had placed her in privately rented accommodation, a studio flat, and as soon as you walked in you could feel how thick and damp the air was. Her ceiling was literally black with mould – it seems there was a toilet leaking in the upstairs flat. We asked if she'd complained to the landlord, and she said she had – but all he did was paint over it, which of course does no good whatsoever.

This, presumably, is an area where there really is a role for government.

I'm not always in favour of looking to legislation for solutions, but there needs to be an adequate system in place to hold landlords accountable for the quality of the accommodation they rent out. There's a common perception that social housing, or council housing as it's called in the UK, is the worst-quality housing around; but in my experience, it tends to be much better maintained than some private rented accommodation.

As always, part of the issue is awareness – we held a workshop for 400 tenants in London in 2010 on the relationship between relative humidity and respiratory disease, and the actions they can take to minimise the problem, such as opening windows regularly and drying wet clothes outside. And we encourage them to take up the issue with landlords: in London there are associations of private tenants which can be a force to be reckoned with. As always, it's a matter of understanding the nuances of who the local stakeholders are, and how they can make a difference.

Note

¹ More information on ARCHIVE's projects can be found at: <http://archiveglobal.org/>