

Green Recovery Dialogues

Sebastien Chastin, Glasgow Caledonian University - Transcript

See the video at <https://youtu.be/YqODGqVd8w8>

SLIDE 1: COVID-19. An incredible opportunity! Sebastien Chastin, Professor of Health Dynamics. People, Place and Systems.

Good day and thank you very much for inviting me to this forum. My name is Sebastian Chastin. I'm a professor at Glasgow Caledonian University and at Ghent University in Belgium. I study really, what the dynamics of people's health is in relation to the places and the systems they live in. And I wanted to share some ideas about why I think COVID-19 and the temporary measures put in place are an incredible opportunity for us to go forward and recover from this pandemic.

SLIDE 2: Images of research about planetary health including an article in The Lancet and the figures of People killed annually by physical inactivity - 5,300,000; Smoking – 5,000,000; Mosquitoes – 725,000; snakes - 50,000; sharks – 10.

Talking about the pandemic, actually COVID has killed about a million people so far. Unfortunately we know that this is going to continue. But we need to put this in the perspective of planetary health essentially. And if we think about what we die of as a species, the top of the list is actually physical inactivity. The Lancet in 2012 called physical inactivity, a pandemic. There are more people killed by the fact they're not moving enough than by smoking, mosquitoes, or by communicable diseases as it turns out. So I think this opportunity with COVID can also help us solve some incredible problems we have in terms of health, that are pre-existing.

SLIDE 3: Images of research mortality data in relation to communities near canals in north Glasgow

And there is good evidence that if we organise our urban assets well, that we can actually, not only improve the public health, the health of people from a public health point of view, but also decrease some health inequalities. And this is, for example, a recent example in Glasgow. We conducted a retrospective analysis of the impact of the regeneration of the canals in north Glasgow and we were able to show that actually that regeneration led to a net decrease in mortality rates across near the canal. But also that the communities closer to the canals that had larger health problems, actually that gap in health equity was reducing, even reversed, due to the regeneration of the canal. So if we use urban assets carefully and well, we can actually increase the community resilience to health problems.

SLIDE 4: Images of research data in physical activity and COVID-19 – resilience to infectious disease

But, not only this, our recent studies we've done - which is unfortunately still under review - tells us that if we are increasing the physical activity in the population that also increases the population's resilience towards infectious disease. Through a review of existing research we were able to show that if the population adhered to physical activity guidelines, the risk of contracting an infectious disease is decreased by 30% and the risk of them dying of an infectious disease, such as COVID-19, is also reduced by 30% so it is worth investing in this as part of all the measures that we can put in place to fight that specific virus. But that tells us, also, that physical activity is something worth investing in in the long run.

SLIDE 5: Rapid and impressive adaptations. Photos from around Glasgow of new cycle lanes, and the questions: Do they work? Will they work?

So I was really impressed by the adaptations that were made to, particularly to mobility, around the city out of the pandemic by Glasgow City Council. It was really rapid and impressive and I really enjoyed and I think I welcome these changes. But as a scientist I always want to carry on immediately knowing but do these things actually work? And will they still work later and can we exploit them? And how do we know they work? But what we can learn from this is probably how to operate differently and do things differently to make us more resilient and maybe more clever.

SLIDE 6: Adapt and experiment. Photos of a brick wall and a Lego brick wall.

So the fact that we have these temporary measures, we can actually use them to continue adapting. Rather than starting building things in hard bricks that are permanent fixtures of our cities, we can think about more in terms of Lego bricks. Having these temporary things that can be moved around, adapted. And that immediately gives us the opportunity to experiment really quickly. And, if we can experiment, that means then we can get some evidence about what works and doesn't work.

SLIDE 7: Connected (systems thinking) Photos of a cycle lane, a water tank + tree + microchip = lego bricks

We can then connect this, also, to the rest of the system and stop thinking in isolation just, maybe just about mobility, but think about how our health is connected to planetary health. So the things we are doing, how they are connected to the climate, they are connected to the environment, they are connected to diseases, connected to the economy, to the water system, and other things. So we can think how we can change these temporary measures that we put in place very rapidly from using plastic disposable things. So, going from plastic fantastic to something that is actually more circular and that takes into account planetary health. So, we can think of simple solutions like some of these water containers that are left everywhere and we can use them as sponges inside, planting some greenery inside to replace the orange cones. But we can go a bit further because that would not only increase biodiversity in a town and probably contribute to water management. But we could also exploit the fact that in Scotland we have one of the best internet of things system in Europe, if not the world, to maybe including this some technology that will help us then get some, essentially green Lego bricks - green smart Lego bricks - that we can then use to experiment, and change, and adapt. Because we know there are other challenges coming after COVID: the recessions and climate change. So we are probably going to have to change things very quickly and we want to do it in an informed way and understand what are the consequences of these changes we have made. What works and what doesn't.

SLIDE 8: Evidence based practice and policies. Photo of a Lego brick wall.

Scientific approach:

- **Controlled trial**
- **Big data (invest in evaluation)**
- **Internet of Things**
 - **Planetary health**

Understand mechanism. Adverse effects.

So that could lead us to actually have evidence-based practice and policies if we adopt a more experimental but also scientific approach. The fact that we have these 'Lego bricks' now means that we can actually conduct some things like controlled trials rather than simply putting a measure in

place and measuring afterward what would happen. I would think it would be worth investing some money in evaluation, proper evaluation with some control trials and some baseline data so we can see the impact of the measures, any adaptations we make. And we can connect that to big data and recurring, routinely-collected data from other systems - the health system, the water system, the economic system - so that we can really fully understand the impact we do not, just in isolation. Have we increased the number of cyclist? Yes, probably but what is the impact of that over the whole scale of the city, and on the scale of the country, and on the scale of the planet? And that will allow us to really understand mechanisms that will allow us to do better adaptations. But also, more importantly, understand some of the adverse effects that we didn't plan for and that could come back and bite us.

SLIDE 9: Positive. Photos of a red 'Road closed' sign and a green sign with the word 'Road Open to' and graphics of people walking, on a scooter, in a wheelchair, and a bicycle.

And I think which maybe can learn to be a bit more positive. We see loads of signs saying 'road closed' and beautiful cycling lanes there: but what about 'road open'? What about more positive things about trying to engage the public in the fact that we are now developing the cities of the future in a positive way for ourselves and the planet?

SLIDE 10: Inclusive and engaged. Graphic of several hands building with Lego bricks captioned co-creation 101. 'Stanford Medicine' logo and title 'Our Voice: Citizen Science for Health Equity'.

Scientific approach

- **Robust methodologies**
- **unbiased**

And we probably want to take the opportunity to be more inclusive and engaged. And there are some beautiful things done by the Council, by Sustrans about getting feedback from communities but again I think it's the opportunity we have now to adopt a more scientific approach with more robust methodology. Who are the people we are asking? Is that feedback biased? Unbiased? Are we getting a picture that will advantage certain communities? It's interesting that in Glasgow, well, it's Kelvin Way - that is the most beautiful and that's in the middle of the, probably the most, wealthy part of the city. How transportable is that to other parts of the city? We need to understand this. And we need to probably use more citizen science approach. We collaborate with Stanford University with a process called Our Voice about health equity, about how you adapt the environment really asking people in the most difficult communities, the people that are the most hard to reach. We need better methodology about co-creation, to avoid co-creation being hijacked by people that are the most able to control these kind of processes. So, if we have a bit more scientific approach and robust approach to this, we can take the opportunity of these adapted temporary measures, we can actually learn a lot of valuable lessons and make our policies and practice a lot more evidence-based.

SLIDE 11: Thank you. Sebastien.chastin@gcu.ac.uk

Thank you very much for listening. I'm looking forward to the discussion. This is my email address and again I'm part of Glasgow Caledonian University, the university for the common good.