June 2020 Think-piece written by
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A MARSHALL PLAN FOR URBAN HEALTH IN AFRICA'S CITIES:
Harnessing urban infrastructure development post-COVID-19 to build resilient systems and policies for inclusive (human and planetary) health

1. ***Creating inclusive health will require a focus on systems for health***, an umbrella term for factors and systems that determine health. Within this umbrella, the healthcare system, a necessary and vital component, is part of the broader systems of health that influence health such as urban development.

2. Achieving ***population health will also require a focus on urban areas*** (Figure 1) because:
    - The rapid urbanisation across Africa is characterised by a growing number of people are living in dense informal settlements with unsafe human settlements and inadequate waste and water infrastructure that increase disease vulnerability and the risk of transmission and persistence of infectious and non-communicable disease
    - The large sprawl of these rapidly growing settlements is pushing the boundaries of human settlements and contributing to re-emergence of infectious disease and zoonotic disease transmission as human and animal environments intersect in new ways
    - These factors are driving an emerging NCD epidemic alongside ongoing infectious disease burden.
    - COVID-19 has revealed significant flaws in our existing urban infrastructure, with systems that reduce resilience to food insecurity and streets that prioritize motorised traffic making physical activity for leisure or travel unsafe in many cities.

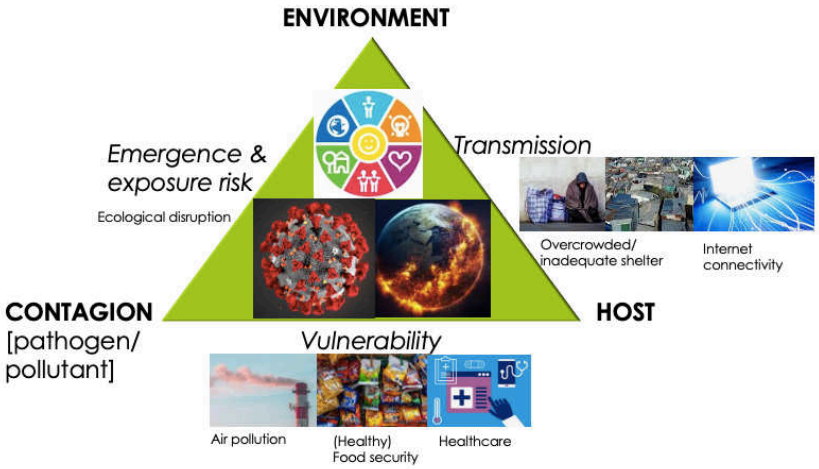

Figure 1: Interplay between human host, contagion and environment and the impact on risk of disease. (Developed by T Oni).

3. The young demographic of the continent is often touted as a key strength that will drive the development of the continent. However, ***the increasing exposure of young people to these unhealthy cities is threatening this potential as we are observing a rise in non-communicable diseases (NCDs) at increasing earlier ages, diseases that increase vulnerability to infectious diseases and drive premature mortality and morbidity.***

4. Fragile health systems conspire with social, cultural, policy and economic contexts to ensure that African countries are way-off track to achieve global targets for NCD prevention and management, resulting in significant (largely out of pocket) expenditure when care is needed, with poorer households spending more of their per capita household income on NCDs. The result? An exemplar is diabetes. Even if countries meet the SDG goal of decreasing mortality from diabetes by one-third, or if they reduce age- and sex-specific prevalence to their 2010 levels (a key aim of the WHO NCD Global Action Plan) the economic burden of diabetes in 2030 will still be 61% higher than in 2015[1]. In South Africa, the estimated costs for implementation of local guidelines to achieve reasonable access to care for cardiovascular diseases would

[1] Bommer C, Sagalova V, Heesemann E. Global Economic Burden of Diabetes in Adults: Projections From 2015 to 2030. Diabetes Care. 2018;41(5):963–70.

substantially impact on the ability of the health system to care for other illnesses.[2] For most African countries, to achieve true Universal Health Coverage (UHC) to manage NCDs by 2030 would require an unprecedented investment in health services that cannot be compensated for by economic growth. The crippling cost implications of waiting to address NCDs downstream in the healthcare system are clear. In the context of limited resources, ***addressing upstream determinants will translate to long term savings by ultimately reducing the burden of diseases that need to be addressed within the healthcare system.*** Countering the notion that this is impossible given that African countries are struggling to achieve narrow definitions of UHC, I argue African countries cannot afford NOT to explore innovative approaches to reduce the need for healthcare to reduce healthcare costs in the long term.

5. *A* ***health foresight approach[3] to long term prevention of comorbidities is a critical to building resilient systems for health***; however majority of systems are optimised for short term and/or sector siloed outcomes without meaningful engagement with the health implications resulting in missed opportunities to create health at best, and actively contributing to disease and disease risk at worst.

6. A major ***barrier to this far-sighted approach is problem-blindness****,* driven by the disconnect in time and space between exposure and outcome, especially for diseases with a long time arc. For example, there is a disconnect between the work of urban developers today and hospitalisations due to asthma and heart disease exacerbated by air pollution, exposure to damp environments and lack of access to safe built environments for physical activity, with a resulting siloed accountability for long term health.

7. The second ***barrier to optimising systems to create health is siloed accountability (and financing) for health***, with the healthcare sector largely held responsible for population health, while sectors that drive health do not measure the health impact of decisions and actions.

8. ***There is a need for significant reform of governance for health to build inclusive systems for health***, including a re-think of:
    - What comprises a health system?: towards a more inclusive systems for health approach
    - How we define health infrastructure?: incorporating infrastructure across systems for health such as urban physical and social infrastructure
    - Who is accountable for equitable inclusive creation of health in the long term?: beyond healthcare actors to include actors across all systems for health.

9. What do we mean by resilience (Figure 2)? While COVID-19 presents a new and acute health emergency, we would be remiss to not consider the sustained health emergencies that have plagued African countries for a long time. As such, efforts to build resilient and inclusive systems for health should adopt the lens of emergency response. However, there are significant limitations in considering resilience as an endpoint. The reality is that ***many of the shocks and stressors that drive acute and protracted health emergencies arise out of intentional choices by actors across sectors from local to global. Therefore critical to building resilience is not simply adaptation to cope with shocks and stressors as an endpoint, instead confronting the upstream choices and decisions that weaken resilience by driving the system towards disease and ecological disruption.*** In this context, efforts to build resilient systems for health would focus on strengthening the ability of systems (and all actors within these systems) to create sustainable, sustained and inclusive human and planetary health.

10. ***I argue for the need for health foresight[3], focusing on re-thinking urban infrastructure, development and planning as critical health infrastructure***; with integrated governance mechanisms for inclusive health.

11. Policies for inclusive health post-COVID-19 have the opportunity to operationalise these quotes: "***Health is everybody's business". "All ministers have a health portfolio". "All urban development practitioners and funders are health professionals" .*** The whole-of-society disruption due to the COVID-19 pandemic with its tragic consequences, presents an opportunity for African countries to adopt an innovative whole-of-

[2] Basu S, Wagner RG, Sewpaul R, Reddy P, Davies J. Implications of scaling up cardiovascular disease treatment in South Africa: a microsimulation and cost-effectiveness analysis. The Lancet Global Health. 2019;7(2).

[3] https://qz.com/africa/1839019/covid-19-how-to-plan-for-africas-next-health-emergency/

government approach to developing and implementing policies with all sectors explicitly tasked with creating health and reducing disease risk.

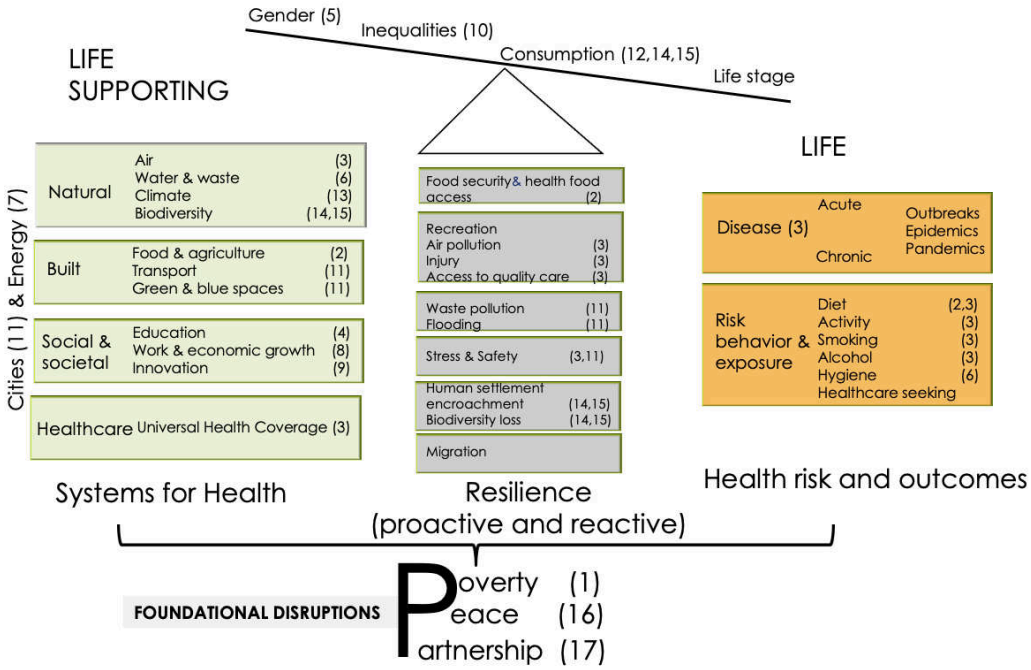

Figure 2: Integrated governance of interdependent health risks (numbers in brackets represent Sustainable Development Goal numbers). (Developed by T Oni).

12. Urban health prevention is even more challenging due to the "*wrong pocket problem*" where the sector that benefits from the intervention (i.e. the health sector) is not the same as the sector(s) that bear the cost of implementing the intervention (e.g. construction, urban development).

13. Financing institutions have a vital role to play in ***investing in systems for health***[4]. Uniquely for an economic crisis, the pandemic requires a slowing of the economy for public health interventions to be effective. All of these approaches, which are aimed at producing transformation at the level of the system, will require financial capital as fuel. COVID-19 disruptions have created space for impact solutions to mitigate the immediate short term effect of the pandemic and public health response. This embrace of innovative solutions will need to be extended to the policy space to re-calibrate systems for health.
    - Could economic stimulus interventions pre-condition deliberate and measurable strategies to incorporate the impact on health and environment as performance indicators into public and private sectors?
    - What if contribution to health became the primary performance indicator of urban infrastructure development?
    - What if incentives such as tax breaks were aligned with disease burden attributable to manufacturing, transport and trade?
    - What if a surge of impact investment deployed post-pandemic prioritised health goals over short term returns?

14. ***We can't avert a next pandemic with the same logic and systems that got us to this point.*** This unprecedented challenge to orthodoxy can be unsettling and overwhelming. However, there has been a rapid increase in social experimentation and solution design to mitigate the immediate short term effect of the pandemic and public health response. For achieve long term inclusive health, this embrace of innovative solutions will need be extended to the policy and investment/financing space to re-calibrate systems for health, bringing more diverse innovators into the health and health-adjacent sectors.

[4] https://www.project-syndicate.org/commentary/covid19-impact-investment-to-improve-global-public-health-by-tolullah-oni-et-al-2020-04?barrier=accesspaylog

15. The pandemic should motivate those in the finance/investing community to reconsider how financial capital is mobilized and deployed, driven by asking where the costly health problems lie, considering who is best placed to prevent disease, exploring creative strategies to incentivise intersectoral policy and finance collaboration. It is in everyone's interest to encourage progress toward access to health-enabling environments in addition to high-quality health care, because, ultimately, health is the foundation supporting every aspect of society, including the economy.

16. ***From flattening disease curve to lowering baseline healthcare need[5]:*** Beyond addressing the immediate health emergency, post-COVID-19 planning and re-set requires that we focus on long-term solutions. There must not be another return to business as usual. We need to start building robust, inclusive systems that account for all the social determinants of communicable and chronic diseases, which will continue to plague the poorest and most marginalized communities around the world.

17. ***Health does not trickle down.*** The interconnected nature of the systems that influence health mean that policies that target one part of the system to create health may have unintended second-order consequences on other parts of the system that could be deleterious to health. This complexity highlights the importance of data and metrics to measure the impact of innovative policies and strategies on health as this cannot be assumed to trickle down from good intentions.

18. ***Measures of health spend should reflect systems that are largely responsible for preventable ill-health.*** Currently the primary measure of health is healthcare spend. While this is an essential indicator in the context of unmet need for healthcare, there is a notable lack of measures of health creation across sectors e.g. indicators developed to assess the influence on health of the bullet point suggestions in point 10 above. Figure 2 exemplifies how these indicators could be developed, working from right of the diagram identifying the health/environmental challenge being addressed, and moving leftwards to find leverage points, considering the behaviours and exposures that would need to be measured, and the policies and interventions that would need to be developed to address these. Innovative approaches to participatory data collection at scale could be explored leveraging the significant resource of Africa's young population.

19. ***How will we know we are succeeding; and how do we avoid harm?*** In the context of innovative approaches, a learning mindset is critical. Partnerships between policy actors and researchers is key to co-designing interventions, leveraging the academic resource across Africa to develop health foresight tools with accurate feedback loops to anticipate and measure second order consequences, and developing early warning signs of health risk that can be addressed before disease erupts. The partnerships have already begun with a growing community of practice from 8 cities across Africa recently convened by my research group to explore collaborations for healthy cities[6] in Africa to provide training, share learnings, exchange experiences and explore strategies to address these barriers.

20. ***Bolder action for health in Africa:*** Pre-COVID-19, based on lessons from the emerging NCD epidemic across Africa, I have previously written a policy brief on the need for Bolder Action for Health in Africa[7]. This brief included recommendations for governments and the research community.

21. Post-COVID-19 requires even bolder action ***to health-proof the future of cities and future-proof cities in Africa[8]***

22. ***A Marshall plan for planetary health: the case for emergency health foresight[3].*** It is important that the timely and responsive commitments to addressing the acute manifestation of the consequence of systems failures, demonstrated in the emergency responses to the COVID-19 pandemic, are extended with the same degree of urgency to health foresight. In the long term, health foresight endeavours should aim to address the social, economic, political and ecological emergencies that contribute to current and future health

[5] https://www.weforum.org/agenda/2020/04/on-earth-day-heres-what-covid-19-can-teach-us-about-improving-our-planetary-health/
[6] https://stias.ac.za/2020/02/richeafrica-workshop-on-healthy-cities-report-now-available/
[7] https://council.science/current/news/new-policy-position-paper-calls-for-bolder-action-on-health-in-africa/
[8] https://www.nature.com/articles/s41591-020-0788-5

emergencies. It is vital that we grapple with complex evolving realities and environments that increase risk of persistence of old, and emergence of new diseases; and the delicate balance between human and ecological wellbeing. In so doing, we quickly realise that:

- We cannot address this or any future health or environmental emergencies without addressing their social, economic and political determinants
- Response cannot be restricted to the health sector but instead a whole-of-society approach required, with unprecedented collaboration and cooperation[9] across sectors, cities, countries and regions
- It is as short sighted to focus on development at the detriment to health, as it is to focus on health at the detriment to ecological boundaries
- ***All 5 operational strategies (Infrastructure development, Regional integration, Private sector development, Governance and accountability, Skills and technology) of the African Development Bank's High 5 are directly related to creating health as a means of improving the quality of life for the people of Africa.***

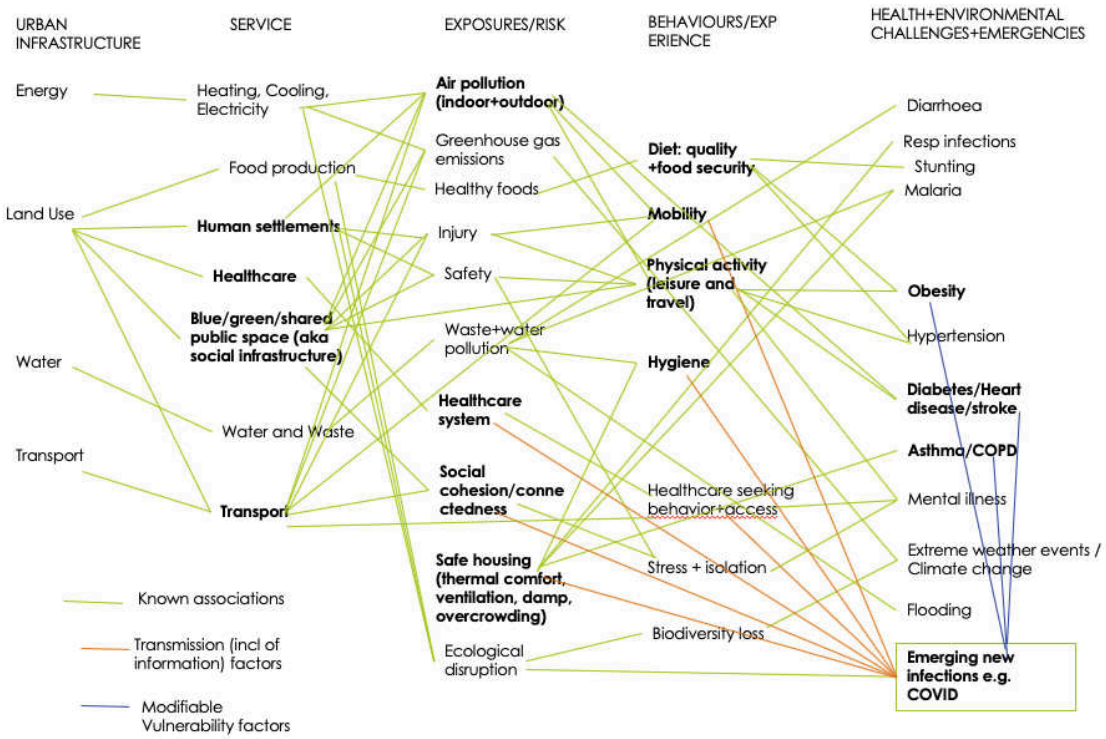

Figure 3: Health Foresight Theory of Change. (Developed by T Oni).

23. ***"If we focus on what is, we are condemned to repeating what was. But if we focus on what is possible, we stand a chance of transcending what is"***[10] This requires a systems-based approaches to prevention to reduce the risk of emergencies and (if they occur) prevent disasters. Core principles of such an approach include:
    - The need for clear leadership and shared vision
    - Recognition of the need for various urban sectors such as agriculture, transportation, energy, housing, trade and industry to work together to achieve health outcomes
    - Risk sharing, with stakeholders investing in and benefiting from cross-sectorial collaboration also sharing costs
    - Innovative strategies to incorporate the impact on health and environment as performance indicators into public and private sectors
    - A focus on both curative and preventive aspects of health
    - A collaborative learning partnership between policy actors, researchers, civil society organisations and financing organisations.

[9] https://www.weforum.org/agenda/2020/05/here-s-how-science-diplomacy-can-help-us-contain-covid-19/
[10] https://www.nature.com/articles/s41591-020-0788-5