

The case for planetary health prevention

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ABSTRACT

The lack of preparedness and the adoption of a reactive approach underlie many mistakes in handling the COVID-19 pandemic. We need a vision with a proactive approach to planetary health prevention, that is suited for addressing the neglected systemic determinants of health which generate disease, inequality and environmental degradation, and capable of anticipating known and unknown risks, and foreseeing possible threatening scenarios. To achieve a healthy, equitable and sustainable future, it is time to make health prevention planetary.

The social and economic effects of COVID-19 are devastating. According to UNICEF, the first year of the pandemic elicited a sharp increase in children who had been left hungry, isolated, abused and anxious. Education, access to health services and the mental health of hundreds of millions of children have also been affected.¹ International Labor Organization (ILO) estimates the global additional employment losses for 2020 to 114 million jobs, making the COVID-19 pandemic the most severe employment crisis since the Great Depression.² UNICEF also estimated that by the end of last year of the pandemic, an additional 83–132 million adults were likely to have been undernourished, and 370 million children worldwide likely missed 40% of in-school meals.³ According to the UN, between 150 and 175 million people were likely to fall

into extreme poverty due to the epic fallout from the pandemic.⁴ The social disruption caused by the pandemic, not only entails a dramatic loss of human life, but also a great intensification of health inequalities, whose reduction remains a global health priority. Early this year, the UN Secretary-General António Guterres acknowledged this ‘*Tsunami of suffering*’, and that ‘...*the most vulnerable have suffered the most. Those left behind are being left even further behind*’.⁵

Yet, pandemics are an expected, and predictable outcome of globalisation, and the way in which we live, work, trade, travel, grow food and consume animals, and alter environments. During the last three decades, around 200 new infectious diseases have broken out, including 5 coronavirus epidemics in the 21st century.⁶ Examples of the globalisation of human viruses from animals during the last decades, include Zika and HIV, and more recently two coronaviruses such as those causing the Middle East respiratory syndrome-CoV, and the SARS-CoV, which affected numerous locations around the world, but with a much lower level of transmission than the SARS-CoV-2 that produces COVID-19. It is the systemic interaction of multiple determinants that makes the emergence of new dangerous pandemics very likely, and reaction to their implications very challenging. To respond to this challenge, a new concept of global health prevention is needed. A vision with capabilities of anticipating risks, and foreseeing possible, yet unknown, threatening scenarios, while maintaining focus on equity.

The concept of prevention in public health has largely evolved during the last decades. It started with the classical primary (measures to prevent the onset of diseases), secondary (actions to predict and stop their progress) and tertiary (measures to reduce the consequences of disease) levels of prevention, described by Leavell and Clark in the late 1940s,⁷ and has expanded to include the more recent ‘quaternary prevention’ (ie, avoiding medical harm) proposed by Jamouille and Roland,⁸ and the less known ‘primordial

prevention’ coined by Toma Strasser to refer to the prevention of risk factors for cardiovascular disease. Strasser argues that ‘...*real grassroot prevention should start by preserving entire risk-factor-free societies from the penetration of risk factor epidemics*’, and even concludes that ‘...*the only definitive way out is prevention*’.⁹ These two latter types of prevention are particularly significant in the case of COVID-19. For example, during the pandemic we have seen the neglect of quaternary prevention and the precautionary principle (to support protective action when there is not complete evidence of a risk), despite the likely damage caused to people’s health and well-being by the increase of unemployment, precariousness and poverty, especially in the most deprived groups and countries. More than 30 years ago, the social epidemiologist Rose argued in favour of population-based prevention strategies, by shifting the entire distribution of risk factors to reduce risk in all segments of the population.¹⁰ Yet Rose’s population strategy is blind to inequality,¹¹ because it does not consider the option of changing the shape of the curve in a way that reduces the distances among socioeconomic groups.¹² Also, pseudo-high-risk prevention strategies (ie, making preventive strategies to healthier and broader strata of the population) pose similar problems to high-risk strategies, without any of the benefits of population-based strategies.¹³ While the boundaries between types of prevention are blurred, current population-level prevention strategies are ‘reactive’ because they often neglect systemic and global determinants of sustainable health equity. Yet, the conditions that generate global health risk, exposure and susceptibility include intertwined upstream social and environmental macrodeterminants of health from many fields,¹⁴ ‘the causes of the causes’ in Rose’s words.

A planetary health prevention vision should be capable of anticipating new problems, and envisioning the worst scenarios, but also launching the most positive healthy actions; hence such prevention strategies should be suited to handle high degrees of uncertainty, and be able to act based on prior lessons and the best modelling strategies while empirical evidence is still being gathered.¹⁵ Holding action until current prevention theories are exhaustively proven (eg, as with tobacco causing lung cancer), may no longer be a viable option when faced with newly emerging pandemics and other planetary threats. The Sixth Panel on Climate Change assessment report points out that inequality and

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climate injustice today are worse than in 2013, as we now live in a world where the richest 1% of the world's people is responsible for more than twice the emissions of the poorest half of humanity. And while the poor have contributed relatively little to emitting greenhouse gas emissions, they are also expected to be disproportionately affected, and in consequence we will see an increase in inequalities.¹⁶ Meanwhile, we need to create preventive structural solutions against new possible and even unknown pandemics by preventing their likely causes. For example, in order to achieve the 2030 Sustainable Development Goals, long-term preventive strategies must be applied to try to address the underlying challenges of food security and malnutrition, precarious employment, social protection to all, safe migration routes, the ecosocial crisis and climate change vulnerability as all those are key social determinants of health.¹⁷ All of this will not only help prevent and be more prepared for possible new pandemics, but to achieve the Sustainable Development Goals and a better planetary health. This vision should guide policies that seek to address the systemic and interconnected political, ecological, economic and cultural determinants of health that generate disease, inequality and environmental degradation. To achieve a healthy, equitable and sustainable future, it is time to make health prevention planetary.

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