

containment of the global pandemic. At present, vaccines seem to be the most important and effective long-term intervention we have at hand to contain a potentially deadly virus that will most probably continue to circulate in the human population for the foreseeable future.<sup>4</sup>

I declare no competing interests.

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### Authors' reply

We thank Carsten Krüger for the opportunity to further elaborate on the important aspects raised in his Correspondence.

First, we are definitely concerned about the impact of lockdowns and continued severe restrictions on the various aspects of human life mentioned. That is precisely why we are committed to the goal of pursuing low case numbers.<sup>1</sup> These are necessary to ease restrictions moderately without jeopardising millions of lives and livelihoods.<sup>2</sup> The argument is straightforward: uncontained spread would lead to high numbers of deaths and many cases of so-called long COVID, not to mention overburdened health-care systems with collateral impact for everyone. The central idea supporting strong lockdowns and thus rapid case reduction is that strong and effective lockdowns minimise the duration of negative social impacts. In a follow-up statement with coauthors from the humanities and

social sciences, we go into more depth on these important socioeconomic aspects.<sup>3</sup>

Second, we welcome all efforts towards international cooperation and coordination on this matter. Indeed, with this initiative, we hope to promote more cooperation rather than narrow national perspectives. The common legal and institutional framework of the EU allows for a comprehensive joint strategy that can be implemented immediately. A global strategy follows more easily from this important first step. The statement further points to challenges specific to Europe, such as open borders and highly interconnected societies and economies. However, considering that settings of countries all around the world might display larger differences, all these arguments can be immediately generalised to a more global perspective.

Vaccinations play a central role in pandemic response. Nonetheless, it will be a while until vaccination takes full effect, and hence we need a sustainable strategy for the coming months and years.<sup>3</sup> The vaccination effect will not be sustainable until all people worldwide have had access to vaccination, further underscoring the importance of international cooperation. Further factors that diminish or slow vaccination progress include obstructions in vaccine production and delivery, the possibility of transmission despite vaccination, and the emergence of escape variants that bypass immunity.<sup>3</sup> The latter might even require further vaccine development and the restarting of vaccination programmes. In light of all this, it is necessary that restrictions continue to be maintained for the time being. Hence, low case numbers in the coming months or possibly years, at least below ten per million people per day, have clear benefits for all—for public health, society, and the economy.<sup>3</sup>

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