Granich and colleagues 1 concludes that the theoretical model by Reuben 2 and Halperin 3 sex workers.

The model would have been stronger had it costed concrete programmes to reduce these barriers and support people’s ability to access services. Without attention to such programme, the model would not achieve the posited uptake necessary to achieve its goals. If efforts to determine the model’s potential are deemed worthy of study, it is imperative that not only HIV testing and treatment be scaled up, but also programmes to protect and promote human rights of people living with and vulnerable to HIV. 3 Additionally, people living with and affected by HIV should be involved.

We declare that we have no conflict of interest.

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Reuben Granich and colleagues 4 suggest universal HIV testing and immediate treatment of those found positive, which is indeed “a bold move away” 4 from the current approach of treatment on the basis of clinical need and prevention through behavioural education.

Granich and colleagues’ modelling results depend heavily on the validity of assumptions about future or unrealised events. For example, they assume that, with treatment, infectiousness fell to only 1% of untreated infectiousness. They also assume a yearly dropout rate of 1.5%, which would seem overly optimistic for a long-term “universal” programme. A sensitivity analysis with these model parameters would have allowed us to see how different values might affect the results qualitatively. Scientifically, their results merely indicate some possible future scenarios—if antiretroviral therapy strikingly lowers the infectivity of treated patients, if long-term compliance is sufficiently high, and if this programme does not lead to significantly more risky behaviour by the population owing to a false sense of security.

Furthermore, to remedy the inadequacies of implementing a universal testing programme, one could consider the experience of Cuba, where extensive random testing accompanied by contact tracing of infected individuals has resulted in a high HIV detection rate, estimated by two different methods at around 77% 1 and 80%, 4 respectively. This has resulted in Cuba having a significantly lower HIV prevalence than its neighbours in the Caribbean Basin; 1 Moreover, contact tracing is less costly than universal testing, and hence is an ideal complement to large-scale intervention programmes in developing countries.

We declare that we have no conflict of interest.

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2 Garnett GP, Baggaley RF. Treating our way out of the HIV pandemic: could we, would we, should we? Lancet 2009; 373: 9–11.
In their important and provocative article,1 Reuben Granich and colleagues argue that universal voluntary HIV testing and immediate antiretroviral therapy, irrespective of the degree of immune suppression, could eliminate HIV from countries where the infection is highly prevalent. However, we agree with Geoffrey Garnett and Rebecca Baggaley2 that this approach could strongly shift the benefits of treatment from the individual to the population.

Although current HIV treatment guidelines favour earlier treatment, the risks and benefits of treatment for people with CD4+ cell counts above 350 per μL are unknown. Trials of therapy for patients with higher counts are yet to begin.

Within the field of communicable diseases, we are aware of little precedent for the approach of “treating for the common good”. Treatment of diseases such as tuberculosis might have the effect of decreasing transmission, but the primary goal is to decrease morbidity and mortality for the affected person. A better analogy might be found in immunisation programmes—eg, rubella vaccination of infants and children aims to reduce exposure among pregnant women. However, there is still a clear benefit and minimal risk for the individual vaccinee.

The World Medical Association international code of medical ethics states that “A physician shall act in the patient’s best interest when providing medical care.”3 If we are to deviate from this basic principle, we will need a robust ethical model for balancing individual and societal benefits.

We declare that we have no conflict of interest.

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3 Garnett GP, Baggaley RF. Treating our way out of the HIV pandemic: could we, would we, should we? Lancet 2009; 373: 9–11.


In our theoretical paper, and are encouraged by the ongoing discussion about how best to use antiretroviral therapy for HIV prevention. These comments signal that more research is needed.

The hypothetical approach that was modelled need not be interpreted as putting public health in competition with individual health. There is increasing evidence of individual benefit from earlier initiation of antiretroviral therapy, and the optimum time to start therapy remains uncertain. Only research can determine conclusively whether the modelled approach would benefit individuals by reducing HIV transmission and HIV disease, or whether drug toxicity and other considerations would outweigh advantages.

We agree that operational challenges in high burden, resource-constrained settings are formidable. The paper was a hypothetical exercise and further research is required to assess whether the studied approach has merit. We also agree that ethical and human rights issues need to be addressed, along with technical and financial considerations, as the concept of antiretroviral therapy for HIV prevention is further developed. We stress that other prevention modalities would continue to have a role, including ethical partner notification, as appropriate.