Universal access to antiretroviral therapy may be the best approach to 'Do no harm' in developing countries: the Brazilian experience [CORRESPONDENCE]

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Popp and Fisher [1], in their correspondence to AIDS titled 'First, do no harm: a call for emphasizing adherence and HIV prevention interventions in active antiretroviral therapy programs in the developing world', questioned the wisdom of recent efforts to broaden access to HIV treatment in resource-limited settings, and warned that developing countries could become a 'veritable "Petri dish" for new, treatment-resistant HIV strains', in the absence of 'state-of-the-art behavioral science-based adherence interventions'. They argued that both systemic and individual obstacles to adherence must be addressed before antiretroviral therapy (ART) is introduced. We disagree with this argument on both scientific and ethical grounds.

Whereas Popp and Fisher correctly listed obstacles to effective treatment (e.g. inadequate healthcare infrastructure, lack of potable water), it is an error to assume that these conditions are universal throughout least-resourced and developing nations. Adequate infrastructure exists in many areas, particularly in urban areas throughout Latin America, Africa, Asia and eastern Europe. What have been lacking are affordable medications and a funding mechanism to sustain medication supplies. Without these two crucial factors, other important issues such as patient adherence and provider training remain painful abstractions.

Rather than generalize, we believe it is important to look at countries such as Brazil, which has made ART available at no cost to all eligible patients through its public healthcare system since 1996. The Brazilian system of public hospitals and clinics, although better than that of many other poor and developing countries, suffers from many of the systemic deficiencies cited by Popp and Fisher [1]. Despite those difficulties, the introduction of therapy has brought about a 50% decline in mortality and a 60% decrease in inpatient hospital days caused by HIV [2]. These outcomes offer hope to similarly situated countries that currently confront high seroprevalence epidemics.

Poor medication adherence to ART is widely recognized in the developed, as well as the developing, world as a serious obstacle to optimal clinical outcome. Popp and Fisher [1] cited data suggesting that rates of adherence are comparable in the USA and Brazil [3]. We have recently looked at adherence among men and women on ART in the public healthcare system in Rio de Janeiro, Brazil. In an interview survey of 200 men and women receiving ART in healthcare facilities ranging from university hospitals to community clinics, we found that 82% of individuals reported greater than 90% adherence [4]. These data were collected using a non-random convenience sample recruited in public health hospitals and non-governmental organizations. Medication adherence was assessed by a modified version of the ACTG self-report questionnaire [5]. Although not population-based or randomized, the sample reflects the demographic profile of patients in treatment in the major urban centers of Brazil [6]. It is particularly significant that these relatively high levels of adherence were reported by patients accessing medical care via a public health program. Although a subset of participants may have accessed community education (provided by non-governmental organizations) on treatment issues, including the importance of adherence, none received state-of-the-art science-based behavioral interventions aimed at ensuring adherence. In general, adherence counselling consisted of that which was provided routinely by primary care providers. Our preliminary data suggest that adherence to ART in the developing world can be as good, if not better, than that seen in industrialized nations where ART has been available for many years. These findings have important implications for potential outcomes of the widespread distribution of ART in resource-limited regions of the world.

Ideally, effective behavioral interventions would accompany ART in all parts of the world. The data from our study suggest that even in the absence of such specialized interventions, and in the context of a public healthcare system in a developing country, patients are able to adhere at levels adequate enough to attain significant clinical success. So although it is always important to 'first, do no harm' as advocated by Popp and Fisher [1], we must also be careful to do no harm by withholding effective therapies from large groups of individuals who are as

capable of benefitting from their effectiveness as their peers in the industrialized world. Unless public health officials want to consider withholding access to ART in all countries, including all developed nations, until populations can demonstrate outstanding levels of adherence, they should not be withheld on these grounds from subsets of the world's population. Holding individuals in poorer nations to a different standard than those in wealthier nations, we believe, violates basic principles of human rights and equity.

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