Comment on: The DART Trial: ‘The Doctor’s Dilemma’ revisited

Ian Woolley* and Rupa Kanapathipillai

Department of Infectious Diseases, Monash Medical Centre, 246 Clayton Road, Clayton, Victoria 3168, Australia

*Corresponding author. Tel: +61395944564; Fax: +61395944533; E-mail: ian.woolley@monash.edu

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Sir,

Optimal monitoring strategies for HIV treatment and care require assessment of the utility of interventions, which may include cost-effectiveness analyses.1 In their excellent overview of the published and unpublished work of the DART trial, Nunes et al.2 cite the work of Gilks and colleagues3,4 demonstrating the cost-effectiveness of the clinically driven monitoring arm.

Cost-effectiveness in this context is assessed on a gross domestic product (GDP) per capita basis, which varies between regions and countries.5 In these WHO guidelines assessment of cost-effectiveness deems an intervention ‘cost-effective’ if it has a cost-effectiveness ratio less than three times the per capita GDP. Thus (using 2005 international dollars) the threshold for cost-effectiveness in one region of Africa is $5086 and in another it is $6461, whereas in Europe it may be as high as $91 318.6 In this case a more intensive monitoring strategy for HIV care is likely to become cost-effective in a region where the threshold is between that found in Africa and that in the richer parts of Europe.

Walenisky et al.7 have outlined the limitations of published cost-effectiveness analyses and highlight the important issue of using GDP as the index. How relevant is the GDP estimation when HIV/AIDS interventions in resource-poor countries are frequently supported by external donors? Haacker8 reports that expansion of HIV/AIDS programmes in sub-Saharan Africa is primarily driven by external funding, accounting for >80% of AIDS-related spending in nine countries, including Uganda, one of two nations included in the DART trial.9 How should a large international donor use this information? Presumably there is a prima facie case that all lives have equal value to them and the relative cost of an intervention in two different sites will not be weighted by local GDP but by lives expected to be saved per unit of investment.

At a national level, funds from local sources will be likely to be allocated according to local criteria. Using such criteria it may be possible that an intervention becomes cost-effective in an area of a country that is relatively well off but not in the poorer areas. It seems unlikely that a government would use similar principles, say, to formally allocate funds according to one GDP per capita in a richer region like Rio De Janeiro or Cape Town relative to poor rural regions in, for example, rural areas of north-east Brazil or Mpumalanga.

There are important considerations for donors and governments in monitoring that are not evaluated by the DART trial.9 As noted by Nunes et al.,2 most of the first-line regimens used in the trial were not those currently recommended in resource-poor settings, where non-nucleoside reverse transcriptase inhibitor (NNRTI)-based regimens are very commonly used in combination with nucleoside reverse transcriptase inhibitors.10 When such regimens fail, NNRTI resistance is frequently seen, which is likely to significantly increase the cost of antiretroviral interventions, given the comparative cost of protease inhibitor-containing second-line regimens.11 Some degree of monitoring of antiretroviral resistance is important from a public health point of view and early intervention to reduce the spread of resistance is also likely to have its cost. By its nature the DART trial is unable to calculate either the rate of NNRTI resistance to be expected or the value of earlier treatment switching to prevent widespread circulation of resistance in the community, and the calculation of future costs of resistance is not included in the analysis.

Though a breakthrough in some ways, the DART trial, like many studies, is likely to leave dilemmas for those who fund treatment as well as those who prescribe it.

Transparency declarations
None to declare.

References


6 http://www.who.int/choice/costs/CER_thresholds_regions.xls (26 April 2011, date last accessed).


