

Correction to letter on VMMC by Professor Peter S Millard



To the Editor: I thank Professor Millard for his interest^[1] in my article^[2] on some ethical aspects surrounding voluntary medical male circumcision (VMMC). He presents Table 1 (study data), which has a range for the Kenyan relative risk reduction (RRR) and the number needed to prevent HIV infection (NNT) but he presents no range of values for South Africa and Uganda. In addition, he does not present the point estimate and 95% confidence intervals for the RRR and NNT. Finally, he does not show how the RRR and NNT were calculated. By him presenting Table 1 in this way, one cannot readily make like for like comparisons.

I provide here, so that Table 1 can be interpreted in a more informed manner, (see Table 2 and the supplementary appendix (available at: <http://dx.doi.org/10.7196/sajbl.413>), the source of my data^[3], and the methods used for calculation^[4,5] (I do not include 95% confidence intervals so as to facilitate comparison of the two tables). The source of my data is a meta-analysis which is generally regarded as the highest level of evidence^[6]. The two meta-analyses^[3,7] on the three VMMC randomised controlled trials^[8-10] used rigorous methodology to directly assess the three trials. On the

other hand, Table 1 is central to Professor Millard's correspondence; however he does not provide sufficient information on how he came up with this table. Table 1 inflates the NNT for South Africa and Uganda and deflates the Kenyan NNT creating the notion that NNT varies widely and is unstable.

Professor Millard writes: 'The RRR is stable over wide variations in the risk of the population being studied, while the NNT varies widely with risk.' In brief, $NNT = 1/(RRR \times \text{control event rate})$ ^[4,5]. Thus if the RRR is unstable, then the NNT will also be unstable. Please see the additional file (an infographic) for further details. (available at: <http://dx.doi.org/10.7196/sajbl.414>)

Scientific endeavour is advanced by discussion; I welcome Professor Millard's response, more so regarding his methodology and presentation style for Table 1. I hope he can make his methods publicly available for scrutiny, as I have done for mine.

Gwinyai Masukume

Division of Epidemiology and Biostatistics, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa
parturitions@gmail.com

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Table 1. From Peter S Millard^[1]

Study location	HIV incidence in control group (%)	Relative risk reduction (%)	Number needed to prevent HIV infection
Kenya	4.2	53 - 60	40 - 47
South Africa	2.1	60	80
Uganda	1.3	50	149

Table 2. For comparison with Table 1.

Study location	n	Intervention	Control	Absolute risk reduction (%)	Relative risk reduction (%)	Number needed to prevent HIV infection
Kenya	2 780	19/1 388*	46/1 392	1.9	59	52
South Africa	3 128	20/1 546	49/1 582	1.8	58	55
Uganda	4 996	22/2 474	45/2 522	0.9	50	111

*19/1388 means that there were 19 HIV positive participants out of 1 388 participants in the intervention (VMMC) arm of the trial (see supplementary appendix for calculations).