

## COCHRANE CORNER

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'Cochrane Corner' in the August SAMJ offers evidence relating to articles published in this issue, namely 'Improving access to antiretrovirals in rural South Africa – a call to action', 'Multimorbidity, control and treatment of non-communicable diseases among primary healthcare attenders in the Western Cape, South Africa' and 'Prevalence of tobacco use among adults in South Africa: Results from the first South African National Health and Nutrition Examination Survey', and the editorial by Yach and Alexander, 'Turbo-charging tobacco control in South Africa'.

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This 'Cochrane Corner' offers evidence relating to articles published in the August issue of SAMJ, namely 'Improving access to antiretrovirals in rural South Africa – a call to action',<sup>[1]</sup> 'Multimorbidity, control and treatment of non-communicable diseases among

primary healthcare attenders in the Western Cape, South Africa'<sup>[2]</sup> and 'Prevalence of tobacco use among adults in South Africa: Results from the first South African National Health and Nutrition Examination Survey',<sup>[3]</sup> and the editorial by Yach and Alexander, 'Turbo-charging tobacco control in South Africa'.<sup>[4]</sup>

### Task-shifting from doctors to non-doctors for initiation and maintenance of antiretroviral therapy

(Summary prepared by T Kredo, with M McCaul and J Volmink.)

About 30 million people living with HIV worldwide are eligible for antiretroviral therapy (ART), but less than half access treatment.<sup>[5]</sup>

Healthcare worker shortages are an impediment to increasing patients' access to ART. This is of particular concern where the burden of disease is greatest and the number of doctors is limited. To improve access, some low- and middle-income countries have initiated programmes that support the delivery of ART by non-specialist healthcare providers. However, some have raised concerns that this may cause more harm than good. In this Cochrane column, we highlight a Cochrane review<sup>[6]</sup> that evaluated the quality of initiation and maintenance of HIV/AIDS treatment in models that shift care from doctors to non-doctors. The results of this review informed the recommendations of the WHO consolidated guidelines for ART in 2013.<sup>[7]</sup>

A comprehensive search conducted up to March 2014 identified all relevant controlled trials and cohort studies comparing doctor-led to other health worker-led delivery of ART.

Four randomised controlled trials and six cohort studies are included, all conducted in Africa.

When nurses initiate and provide maintenance ART, there is no difference in death at 1 year (risk ratio (RR) 0.96, 95% confidence

**Table 1. Summary of findings: task shifting of HIV care for maintenance only – 12 months' follow-up**

**Population:** HIV-infected patients on antiretroviral therapy

**Settings:** Low- and middle-income countries

**Intervention:** Doctor v. nurse or clinical officer for maintenance of antiretroviral therapy

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	Number of participants (studies)	Quality of the evidence (GRADE) <sup>†</sup>
	Doctors	Non-doctors			
Death (RCTs)	23 per 1 000	20 per 1 000 (14 - 30)	RR 0.89 (0.59 - 1.32)	4 332 (2 studies)	+++ Moderate <sup>§1</sup>
Death (cohorts)	15 per 1 000	3 per 1 000 (1 - 12)	RR 0.19 (0.05 - 0.78)	2 772 (1 study)	+++ Very low <sup>§2</sup>
Loss to follow-up (RCTs)	28 per 1 000	36 per 1 000 (26 - 49)	RR 1.27 (0.92 - 1.77)	4 332 (2 studies)	+++ Moderate <sup>§3</sup>
Loss to follow-up (cohorts)	42 per 1 000	14 per 1 000 (8 - 28)	RR 0.34 (0.18 - 0.66)	2 772 (1 study)	+++ Very low <sup>§2</sup>

CI = confidence interval; RCTs = randomised control trials; RR = risk ratio.

\*The basis for the assumed risk (e.g. the median control group risk across studies) is provided in footnotes. The corresponding risk (and its 95% CI) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95% CI).

<sup>†</sup>GRADE: Working group grades of evidence:

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important effect on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important effect on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

<sup>§1</sup> Downgraded by 1 for imprecision. There was a low number of events (<300) and the 95% CI includes appreciable harm and benefit.

<sup>§2</sup> Downgraded by 1 for imprecision owing to low event numbers (<300).

<sup>§3</sup> Downgraded by 1 for imprecision. There was a low number of events (<300) after adjusting for clustering in the Fairall *et al.*<sup>[8]</sup> 2012 study.

interval (CI) 0.82 - 1.12, one trial, cluster adjusted  $n=2\ 770$ ; high-quality evidence), with probably lower rates of loss to follow-up (RR 0.73, 95% CI 0.55 - 0.97, moderate-quality evidence).

When doctors initiate ART and nurses provide maintenance, there is probably no difference in death compared with doctor-led care at 1 year (RR 0.89, 95% CI 0.59 - 1.32, two trials, cluster adjusted  $n=4\ 332$ , moderate-quality evidence), with probably no difference in the rate of loss to follow-up (RR 1.27, 95% CI 0.92 - 1.77, moderate-quality evidence).

When maintenance therapy is provided in the community, there is probably no difference in mortality at 1 year when doctors deliver care in the hospital or specially trained field workers provide home-based maintenance of ART (RR 1.0, 95% CI 0.62 - 1.62, one trial, cluster adjusted  $n=559$ , moderate-quality evidence), and probably no difference in loss to follow-up (RR 0.52, 95% CI 0.12 - 2.3, moderate-quality evidence).

Travel costs for patients are lower where task-shifting occurs closer to patients' homes. Evidence suggests that the implementation of the strategy may increase health system costs, in particular related to training and supervision.

## Conclusion

Shifting responsibility for providing ART from doctors to adequately trained and supported nurses or community health workers probably does not decrease the quality of care and may decrease the number of patients lost to follow-up.

## Motivational interviewing for smoking cessation

(Summary prepared by M McCaul, with T Kredon and J Volmink.)

Smoking kills.<sup>[9]</sup> Fortunately, several pharmacological and non-pharmacological interventions are available to help smokers quit.<sup>[10]</sup> Motivational interviewing is a psychotherapeutic approach for effecting behaviour change. It originated in the treatment of alcohol abuse as 'a directive, client-centred counselling [approach] for eliciting behaviour change by helping clients to explore and resolve ambivalence'.<sup>[11]</sup> Here we highlight a Cochrane review<sup>[12]</sup> that updates the original 2007 review investigating whether motivational interviewing promotes

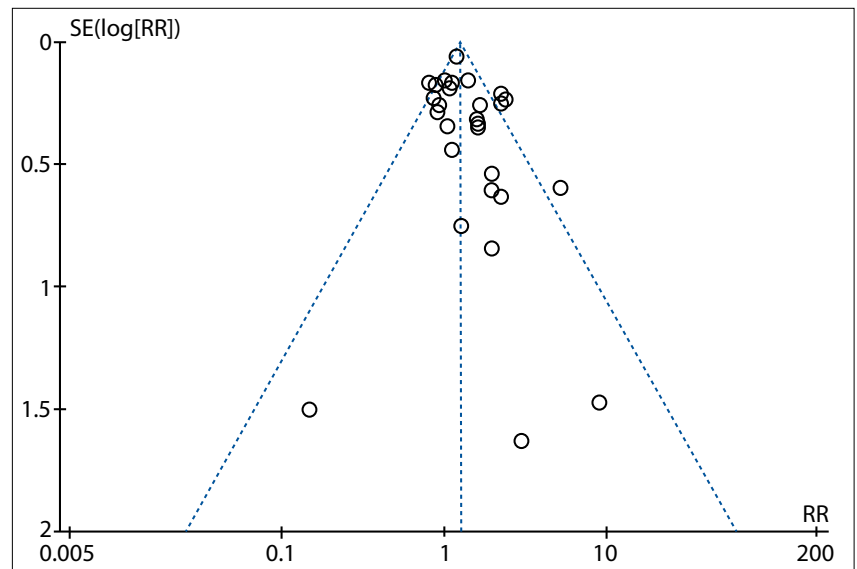


Fig. 1. Funnel plot of motivational interviewing v. brief advice/usual care: All trials, outcome: smoking cessation: longest duration and strictest definition of abstinence.

smoking cessation compared with simple advice or usual care.

A comprehensive search conducted in August 2014 identified all relevant randomised controlled trials evaluating the effects of motivational interviewing for smoking cessation.

Twenty-nine trials are included (14 added since 2007), all of which provided data for meta-analysis.

Motivational interviewing for smoking cessation is moderately effective compared with brief advice or usual care, using the strictest definition of abstinence and longest follow-up period (at least 6 months) (RR 1.26, 95% CI 1.16 - 1.36, 28 trials,  $n=16\ 803$ , moderate-quality evidence).

Subgroup analysis by type of therapist indicated that interventions delivered by general practitioners (RR 3.49, 95% CI 1.53 - 7.94, two trials,  $n=736$ ) may have larger effects than those delivered by nurses (RR=1.24, 95% CI 0.91 - 1.68, five trials,  $n=2\ 256$ ) or counsellors (RR 1.25; 95% CI 1.15 - 1.36, 22 trials,  $n=13\ 593$ ).

Larger effects were found with sessions lasting <20 minutes (RR 1.69, 95% CI 1.34 - 2.12, nine trials,  $n=3\ 651$ ) than with sessions >20 minutes (RR 1.20, 95% CI 1.08 - 1.32, 16 trials,  $n=10\ 306$ ).

The authors noted variations in study quality and treatment fidelity, as well as between study heterogeneity and the possibility of publication or selective reporting bias (Fig. 1).

## Conclusion

Motivational interviewing appears to be modestly successful in promoting smoking cessation, compared with usual care or brief advice.

- Gray A, Conradie F, Crowley T, et al. Improving access to antiretrovirals in rural South Africa - a call to action. *S Afr Med J* 2015;105(8):638-640. [http://dx.doi.org/10.7196/SAMJnew.8265]
- Folb N, Timmerman V, Levitt NS, et al. Multimorbidity, control and treatment of non-communicable diseases among primary healthcare attenders in the Western Cape, South Africa. *S Afr Med J* 2015;105(8):642-647. [http://dx.doi.org/10.7196/SAMJnew.7882]
- Reddy P, Zuma K, Shisana O, Jonas K, Sewpaul R. Prevalence of tobacco use among adults in South Africa: Results from the first South African National Health and Nutrition Examination Survey. *S Afr Med J* 2015;105(8):648-655. [http://dx.doi.org/10.7196/SAMJnew.7932]
- Yach D, Alexander E. Turbo-charging tobacco control in South Africa. *S Afr Med J* 2015;105(8):637-638. [http://dx.doi.org/10.7196/SAMJnew.8032]
- Kredon T, Adeniyi FB, Bateganya M, Pienaar ED. Task shifting from doctors to non-doctors for initiation and maintenance of antiretroviral therapy. *Cochrane Database Syst Rev* 2014;7:CD007331. [http://dx.doi.org/10.1002/14651858.CD007331.pub3]
- Joint United Nations Programme on HIV/AIDS (UNAIDS). Global Report 2013. <http://www.unaids.org/en/resources/campaigns/globalreport2013/globalreport/> (accessed 27 January 2014).
- World Health Organization (WHO). Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection: Recommendations for a Public Health Approach. Geneva: WHO, June 2013. <http://www.who.int/hiv/pub/guidelines/arv2013/download/en/> (accessed 15 March 2015).
- Fairall L, Bachmann MO, Lombard C, et al. Task shifting of antiretroviral treatment from doctors to primary-care nurses in South Africa (STRETCH): A pragmatic, parallel, cluster-randomised trial. *Lancet* 2012;380:889-898. [http://dx.doi.org/10.1016/S0140-6736(12)60730-2]
- Keating C. *Smoking Kills: The Revolutionary Life of Richard Doll*. Oxford: Signal Books, 2009.
- Coleman T, Králiková E, Himmerová V. ABC of smoking cessation. Use of simple advice and behavioural support. *Cas Lek Cesk* 2004;143(10):713-715. [http://dx.doi.org/10.1136/bmj.328.7436.397]
- Miller WR. Motivation for treatment: A review with special emphasis on alcoholism. *Psychol Bull* 1985;98(1):84-107. [http://dx.doi.org/10.1037/0033-2909.98.1.84]
- Lindson-Hawley N, Thompson TP, Begh R. Motivational interviewing for smoking cessation. *Cochrane Database Syst Rev* 2015;3:CD006936. [http://dx.doi.org/10.1002/14651858.CD006936.pub3]

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