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**Evaluating the implementation of *Options for Health* in the Western
Cape: An intervention aimed at increasing ARV adherence and
reducing sexual risk among people on ARVs in Cape Town, South
Africa**

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Abstract

Background: *Options for Health* is an evidence-based intervention for reducing sexual risk behaviour among people living with HIV. *Options* has been proposed as a feasible strategy for integrating HIV prevention with care and supporting adherence to antiretroviral treatment in the public healthcare sector in the Western Cape. **Aim:** To determine the feasibility of this intervention for strengthening the antiretroviral adherence counselling programme delivered by lay counsellors in Western Cape clinics. **Methods:** Six studies were conducted as a part of this thesis. Study I monitored the extent to which the intervention reached intended recipients over 13 months of implementation. In Study II counsellors were interviewed to determine barriers to delivery. Study III involved an evaluation of standard care adherence counselling practice. Study IV determined the ability of counsellors to effectively deliver the *Options* counselling protocol following training. Study V investigated the impact of ongoing technical support on counsellors' ability to effectively deliver the *Options* protocol. Study VI determined the impact of the *Options* training and supervision programme on lay counsellors' basic counselling practice. **Results:** Nine percent of patients who were intended to receive the intervention did receive the intervention. Factors impacting delivery included structural barriers representing a challenge to the delivery of any counselling in this setting. The evaluation of standard care counselling practice revealed a low level of basic skill among lay counsellors. Counsellors were unable to effectively deliver some elements of the *Options* counselling protocol following training. Ongoing technical support improved counsellors' proficiency in some elements of *Options* but not others. The counselling practice of counsellors having received the *Options* training and supervision programme was more consistent with a client-centred approach than that of counsellors who did not receive the programme. **Conclusion:** Weaknesses in the current lay counselling programme for adherence mean that this programme lacks the capacity to accommodate an intervention like *Options for Health*. These must be addressed to increase the potential of this programme for improving health outcomes. The ability of lay counsellors to deliver counselling for behaviour change may be limited, but this thesis shows that their practice can be improved to a level which has the potential to impact health behaviour change.

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List of abbreviations

ART	Antiretroviral therapy
ARV	Antiretroviral
ATICC	AIDS Training, Information and Counselling Centre
BCC	Behaviour Change Counselling
BMI	Brief Motivational Intervention
CTCH	Cape Town City Health
DoH	Department of Health
HCT	HIV Counselling and Testing
ICC	Intraclass Correlation
IMB	Information, Motivation and Behavioural Skills
KZN	Kwa-Zulu Natal
LHW	Lay Health Worker
MI	Motivational Interviewing
MITI	Motivational Interviewing Treatment and Integrity Tool
NGO	Non-Governmental Organisation
NSP	National Strategic Plan
ORF	<i>Options</i> Record Form
PI	Principle Investigator
PLWH	People Living with HIV
RCT	Randomised Control Trial
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
TB	Tuberculosis
USA	United States of America
VCT	Voluntary Counselling and Testing

INTRODUCTION

Chapter 1

Introduction to the *Options for Health: Western Cape Project*

South Africa has the largest burden of HIV/AIDS in the world, where heterosexual sex is the main driver of the epidemic, followed by mother-to-child transmission (Shisana et al., 2009). While HIV prevention interventions have traditionally targeted those at risk for exposure to HIV, prevention efforts are increasingly focusing on people living with HIV (PLWH) in order to reduce their risk of onward transmission (Bunnell, Mermin, & De Cock, 2006). For example, the provision of antiretroviral (ARV) treatment to HIV-positive individuals has been shown to reduce the risk of transmission of the virus to their sexual partners (Anglemyer, Rutherford, Baggaley, Egger, & Siegfried, 2012) and is being promoted as one strategy for achieving widespread prevention of HIV. A number of interventions designed to reduce transmission risk behaviour among PLWH have also been developed and tested. Strengthening health systems to address more effectively the basic health needs of poor and vulnerable populations is currently an international priority (Peters, El-Saharty, Siadat, Janovsky, & Vujicic, 2009), and the implementation of evidence-based strategies can contribute to this goal. Evidence-based HIV prevention interventions¹ may increase the effectiveness of prevention efforts over and above locally developed interventions that have no evidence of efficacy (Collins et al., 2010). It is well-known, however, that health research findings often fail to translate in to practice and in to meaningful patient outcomes (Damschroder et al., 2009). There is thus a need for understanding service delivery processes and the contextual factors that impact the implementation and effectiveness of innovative programmes in these settings (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). This thesis describes the implementation and evaluation of an evidence-based intervention aimed at reducing sexual risk behaviour and increasing ARV adherence among PLWH on treatment in Cape Town, South Africa.

Background

In sub-Saharan Africa (SSA), where 67% of PLWH reside (UNAIDS, 2009),

¹ An evidence-based intervention is defined as a behavioural intervention with scientifically proven evidence of efficacy (Lyles, Crepaz, Herbst, & Kay, 2006). Efficacy refers to the extent of effects produced by interventions when implemented under ideal conditions. This is in contrast to effectiveness, which refers to the extent to which effects are produced when the intervention is implemented under-real world conditions in natural settings (Marchand, Stice, Rohde, & Becker, 2011).

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antiretroviral therapy (ART) has recently become widely available. With assistance from the Global Fund to Fight AIDS, Tuberculosis and Malaria and The Presidents Emergency Plan for AIDS Relief, South Africa has rapidly scaled up the availability of ART and now has the largest ARV treatment programme in the world (Nattrass, 2006; Shisana et al., 2009). By mid-2008 an estimated 547 000 South African adults and children were receiving ART (Adam & Johnson, 2009), including over 60 000 adults in the Western Cape (Western Cape Department of Health, 2009). This ambitious roll out will not only improve quality of life among those living with HIV, but also has implications for the progression of the epidemic: When blood-plasma viral load is suppressed (under 400 copies per ml) the risk of HIV transmission through unprotected sex has been found to be substantially decreased (Anglemyer et al., 2011; Attia, Egger, Müller, Zwahlen, & Low, 2009). Adherence is the most important predictor of viral suppression (Bangsberg et al., 2000; Paterson et al., 2000). Sub-optimal adherence can lead to virologic failure and the development of drug resistance (Arts & Hazuda, 2012). Levels of ARV adherence in South Africa have generally been found to be high (that is, above 90%) (for example, Murphy et al., 2012; Nachega et al., 2004; Orrell, Bangsberg, Badri, & Wood, 2003). Levels of adherence fluctuate over time though (for example, Byakika-Tusiime et al., 2009), and sustained efforts to maintain high levels of long-term adherence are necessary (Fatti, Meintjies, Shea, Eley, & Grimwood, 2012).

While monitoring and support for adherence are already recognised as important components of standard HIV care (Amico, 2011; Harman, Amico, & Johnson, 2005), HIV prevention efforts focused on reducing sexual risk behaviour are just expanding to include a focus on PLWH (Rose, Gutin, & Reyes, 2011). Internationally there is a call for the integration of HIV prevention into HIV clinical settings (see for example Centres for Disease Control and Prevention, 2003; Remien et al., 2008). South Africa has a highly successful clinic-based programme aimed at the prevention of mother-to-child transmission (Goga et al., 2010) but prevention among other groups of PLWH is not a strong focus in the National Strategic Plan (NSP) on HIV, STIs (sexually transmitted infections) and TB (tuberculosis) (South African National AIDS Council [SANAC], 2011). HIV prevention for PLWH (referred to variously as “positive prevention”, “secondary prevention” and more currently “positive health, dignity and prevention”) is referred to only briefly in the NSP in relation to the objective of developing a patient-centred pre-ART package for PLWH not yet requiring ART. While this is obviously an important target group for positive prevention, so is the population of people who are

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currently receiving ART. Eisele et al. (2008) found similar rates of unprotected sex among men and women on ARV treatment as compared to men and women waiting to start ARV treatment in Cape Town. Overall, 40% of men (n=315) and 46% of women (n=609) reported having had unprotected sex at last sex. Although follow-up of the cohort of patients on ART one year later revealed a significant decrease in the number of people reporting unprotected sex at last sex (from 44% to 23%) (Eisele et al., 2009), a sizeable proportion continued to engage in unprotected sex. While the risk of transmission with a suppressed viral load is low, it is not zero (Wilson, Law, Grulich, Cooper, & Kaldor, 2008) and the acquisition of other STIs can increase infectivity (Kalichman, Di Berto, & Eaton, 2008; Kalichman, Pellowski, & Turner, 2011). There is also concern for the onward transmission of drug-resistant strains of HIV, as this might compromise the effectiveness of ART regimens and programmes (Hamers et al., 2011).

In general, and despite spending more on health than any other African country, South Africa has poor outcomes on key health indicators (National Department of Health [NDoH], 2010a), much of which is due to the impact of HIV/AIDS (NDoH, 2010b). Combating HIV/AIDS is thus a national priority; the latest NSP aims to reduce new infections by at least 50% by 2016 (SANAC, 2011). While the previous NSP also aimed to reduce new infections by half by the year 2011, this target failed to be reached (Colvin, 2011). Prevention efforts thus need to be strengthened. In order to improve health outcomes on key indicators, South Africa's primary healthcare system is being restructured to improve access and better meet the healthcare needs of the population. The role of evidence-based practice for contributing to this process and improved health outcomes is acknowledged in the mission of the strategy for re-engineering to provide quality care that is effective and evidence-based (NDoH, 2012). The restructuring of the health system is an opportune time to move towards integrating behavioural HIV prevention with HIV care.

Interventions for Positive Prevention

Over recent years a number of behavioural HIV prevention interventions for PLWH have been developed and tested, and there is substantial evidence that these can effectively reduce HIV transmission risk behaviours. For example, a meta-analytic review of randomised controlled trials (RCTs) revealed that interventions targeting PLWH significantly reduced unprotected sex and decreased acquisition of other STIs (Crepaz et al., 2006). Interventions that had the most significant impact were shown to be based on behavioural theory (specifically social cognitive and learning theory, cognitive

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behavioural coping, the Information-Motivation-Behavioural (IMB) Skills model and the theory of planned behaviour), to provide skills building and address related concerns such as medication adherence and mental health. They were also those delivered to individuals on a one-to-one basis by healthcare providers or professional counsellors, and in settings where PLWH receive medical services. Results from another meta-analysis of RCTs by Johnson, Carey, Chadoir, and Reid (2006) also showed reduced sexual risk behaviour (specifically increased condom use) among PLWH who were intervention participants. Interventions included in this meta-analysis were found to be more successful when they included motivational and behavioural skills enhancements.

The one-on-one interactions regularly occurring between medical providers and patients in HIV clinical care settings offer the ideal opportunity to integrate risk-reduction counselling into care (Rose et al., 2011). While many positive prevention interventions have been delivered in community and group settings, so-called “second generation” positive prevention interventions are focusing on the use of brief counselling techniques delivered in the context of routine clinic care by healthcare providers (Brown & DiClemente, 2011; Gilliam & Straub, 2009). Those that have been evaluated for efficacy have shown positive results. For example, Richardson et al. (2004) tested the efficacy of a brief safer-sex counselling intervention called *Partnership for Health*, provided by clinic staff during medical visits. Providers delivered gain- or loss-framed messages (that is, messages that emphasised the positive or negative consequences of protective behaviour) and discussed safer-sex goals and risk reduction behaviours. Counselling was supplemented with a written brochure. While no effect was found for those participants reporting one sexual partner at baseline, unprotected sex was significantly reduced among participants reporting two or more sex partners at baseline. Several clinics in the United States of America (USA) have adopted this approach to positive prevention on the basis of these findings (Collins et al., 2010; Rose et al., 2011).

A second intervention called *Positive Steps* was developed and implemented by Gardner et al. (2008) in seven clinics in the USA. *Positive Steps* consists of a behavioural screener for sexual risk behaviour, a provider-initiated discussion of safer sex, a provider-initiated risk-reduction plan and brochure with prevention messages and strategies. A longitudinal cohort of patients (N=767) completed questionnaires at baseline, 6 and 12 months. Results indicated a significant reduction in unprotected sex from 42% at baseline to 23% at 12 month follow-up.

A third intervention, the *HIV Intervention for Providers* intervention, was

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implemented and evaluated in four primary care clinics in the USA by Rose et al. (2010). For this study, providers were trained to assess patients for sexual risk and to intervene to reduce any identified risk. The *HIV Intervention for Providers* intervention integrated components from various health models such as the IMB model of behaviour change, the theory of planned behaviour and harm reduction. Results from their RCT revealed a significant increase in the assessment of sexual activity and provider-patient discussions on safer-sex. In terms of patient sexual behaviour, a significant decrease in the number of sexual partners was observed, although the decline in transmission risk behaviour did not achieve statistical significance.

The evidence for the efficacy of positive prevention interventions delivered within the context of routine clinic visits looks promising, although the above three interventions have all been developed and tested in the USA. Bärnighausen et al. (2011) caution against assuming that evidence from the developed world is applicable to other settings. Not only is it possible that the theories of behaviour on which interventions from developed settings are based are not universally valid, but resource-intensive interventions delivered to individuals in less developed settings may be difficult to implement because of high patient loads and restricted resources (Bärnighausen et al.). One study by Kurth et al. (2012) suggests that the integration of HIV prevention with care might be feasible in low-resource, African healthcare setting. In this study, the authors piloted a counselling intervention among 90 nurses delivering HIV care in clinics in Kenya. The counselling model included an ARV adherence and sexual-risk assessment, STI screening, risk reduction messages, and developing behaviour plans to support adherence and reduce sexual risk. Results indicated that 60% of nurses assessed sexual risk behaviour with 75% of patients following intervention training, compared to 25% of nurses at baseline. Similarly, 62% of nurses developed a plan for reducing HIV transmission risk with 75% of patients following training, representing a significant increase of 37 percentage points from baseline. Conclusions that can be drawn from this study are limited by the short period of follow-up (two months) and use of self-report data however. The intervention was also not evaluated for effectiveness in terms of patient outcomes. In addition, adherence (and other HIV prevention) interventions in SSA are often not delivered by medical professionals such as nurses (Bärnighausen et al.).

Based on the above, there is some question as to how effectively evidence-based interventions such as *Partnership for Health*, *Positive Steps*, and the *HIV Intervention for Providers* intervention would be implemented within the context of low-resource primary

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healthcare settings. Little research has focused on the development of positive prevention interventions for clinic settings in developing countries (Cornman et al., 2008). *Options for Health* is another one of the few theory- and evidence-based positive prevention interventions designed in the USA to be implemented within the context of HIV clinical care. This intervention differs to those described above in that it is the only one that has been implemented and evaluated within a low-resource setting - in South Africa in particular.

The *Options for Health* intervention. Developed in the USA, the *Options for Health* intervention provides a framework for healthcare providers for assessing and addressing patients HIV transmission risk behaviour. In the USA the intervention has been used to target sexual and drug-use risk, but it has been adapted for use in South Africa where target behaviours have been sexual risk and alcohol use within a sexual context.

The theoretical basis of the *Options* intervention. The *Options for Health* intervention is based on the IMB model of behaviour change, which holds that risk reduction information, motivation and behavioural skills are fundamental determinants of behaviour change. In this model HIV risk behaviour is understood as the result of deficits in an individual's HIV prevention information, motivation and/or behavioural skills (Fisher & Fisher, 1992). Figure 1 depicts the relationship between the constructs in the model. Here it can be seen that information and motivation are hypothesised to work independently to affect the use of behaviour skills that results in behaviour change. Information and motivation may also have a direct effect on behaviour when complicated or novel behavioural skills are not necessary to effect change.

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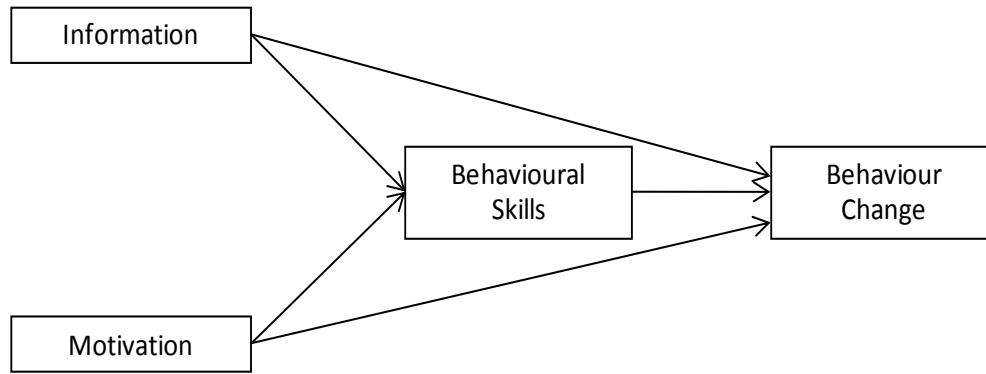


Figure 1. The Information-Motivation-Behavioural (IMB) skills model of behaviour change. Adapted from “Changing AIDS-Risk behaviour,” by J. D. Fisher and W. A. Fisher, 1992, *Psychological Bulletin*, 111(3), p. 465

The constructs of the IMB model are regarded as highly generalisable (Fisher & Fisher, 1992) and have in fact been validated in relation to sexual risk behaviour in a variety of populations and contexts (for example, Anderson et al., 2006; Bryan, Fisher, Fisher, & Murray, 2000; Mittal, Senn, & Carey, 2012; Scott-Sheldon et al., 2010; Walsh, Senn, Scott-Sheldon, Venable, & Carey, 2011; Zhang et al., 2011) including STI clinic patients in Cape Town, South Africa (Kalichman et al., 2006). The model has also been used and validated in relation to various other health behaviours including ARV adherence (for example, Amico, Toro-Alfonso, & Fisher, 2005; Starace, Massa, Amico, & Fisher, 2006).

The *Options* counselling protocol (described in the following section of this chapter) employs Motivational Interviewing (MI) techniques to identify and address clients’ IMB deficits in order to move them towards behaviour change (Cornman, Christie, Amico, Cruess, & Shepherd, 2007). MI is an evidence-based, client-centred approach to enhancing an individual’s personal motivation to change (Miller & Rollnick, 2002). In counselling, client-centred interactions are characterised by collaboration, and clients are regarded as experts in their own lives with the resources and strength to solve their own problems (Britt, Hudson, & Blampied, 2004; Egan, 2002; Hettema, Steele, & Miller, 2005). The counsellors’ task is to help the client to feel competent to solve their own problems (Egan; Hettema et al.). The approach of MI is characterised by a particular interpersonal style or “spirit” of delivery and several general principles, while the technical aspects of delivery include strategies to elicit motivation and core communication skills (Emmons & Rollnick, 2001). In evaluations of the extent to which providers of MI demonstrate “MI spirit”, it is generally measured by the presence of three

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variables: “evocation”, “collaboration” and “autonomy/support” (Anstiss, 2009). Evocation refers to the extent to which the clinician conveys an understanding that motivation (and the ability) for change lie within the client, and works to elicit and enhance it (Moyers, Martin, Manuel, Miller, & Ernst, 2007). Collaboration refers to the extent to which the interaction appears to occur between two equal partners, and autonomy/support the extent to which the clinician supports and encourages the client as the active decision-maker (as opposed to trying to control their behaviour or choice) (Moyers et al.). General principles guiding the approach include a) expressing empathy, b) developing discrepancy between the client’s goals and current behaviour, c) avoiding argumentation, d) “rolling” (or working) with resistance (as opposed to confronting it) and e) supporting self-efficacy for change (Emmons & Rollnick). Competence in several core communication skills is required, including the skilful use of open-ended questions and reflective listening statements and making affirmations (also referred to as “MI consistent” statements) (Anstiss). Strategies used to help the client to explore their feelings around behaviour change and to elicit motivation include eliciting change talk (that is, client speech that indicates desire/ability/reasons/commitment to change), assessing importance and confidence (or readiness-to-change), exploring options, and negotiating plans of action (Anstiss). MI is well suited to healthcare settings where communication regarding health behaviour is often related to specific behavioural aims because, unlike other client-centred approaches to counselling, it is geared specifically towards health behaviour change (Britt et al.; Hettema et al.). Because of this focus it is described as being “directive” in nature - the clinician directs the session towards resolving the mixed feelings a client may have around changing their behaviour (Rollnick, Kinnersley, & Stott, 1993). (It is important that this not be confused with a “directing” approach, which is characterised by information-giving and advice (Rollnick et al., 2005).)

That MI is an advanced counselling technique is apparent from the brief description of principles, strategies and communication skills provided above. Indeed, true MI is time-intensive and is a technique suitable for use by professionals such as psychotherapists (Lane et al., 2005). Adaptations of MI have thus been developed for use in brief consultations that occur in medical and healthcare settings (Lee et al., 2010). These interventions, referred to as Brief Motivational Interventions (BMIs) or Behaviour Change Counselling (BCC), omit some of the more psychotherapeutic elements of the parent method and focus on helping the client “to talk through the why and how of

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change” (Lane et al., p. 167). Many of the skills and principles from MI still apply in BMIs and BCC, including the demonstration of empathy and respect for client autonomy and choice, the development of action plans for behaviour change (Lane et al.; Lee et al.), the spirit of the interaction (Rollnick & Miller, 1995), and the concept of readiness-to-change (Rollnick & Heather, 1992). In MI, motivation to change is conceptualised as a state of “readiness” to change that can fluctuate; readiness represents the extent to which a client is willing and able to effect change at a particular time (Miller & Rollnick, 2002). Importance (a proxy for willingness) and confidence (or ability) are two constructs commonly used to assess client’s state of readiness-to-change. Theoretically clients low in importance and confidence will not feel ready to change, while clients high in both will feel ready (Lane & Rollnick, 2009). Clients falling somewhere in the middle on one or both constructs are likely to be ambivalent about changing their behaviour (Lane & Rollnick). In such cases it is the task of the clinician to elicit the client’s reasons for and concerns about change, and to assist them in resolving this ambivalence. It has been suggested that this concept may explain why the strategy of giving advice for behaviour change is limited in its effectiveness: Clients not ready to change their behaviour will resist advice that assumes that they are ready, or should be ready, to change (Rollnick et al., 1993). The method thus requires flexibility on the part of the provider, because the selection of a plan for change must be tailored to the client’s individual level of motivation (Rollnick & Heather). The approach thus also allows for small, incremental steps towards an ultimate goal which may be, for example, 100% adherence. Depending on the client’s progress in terms of the selected plan, the client and provider can work together to move forward along the continuum of readiness-to-change towards the desired goal (Rollnick & Heather).

The Options for Health counselling protocol. First *Options* counselling sessions (referring to the first meeting between the counsellor and client) are intended to be brief, collaborative discussions aimed at reducing HIV transmission risk behaviour. A step-by-step protocol provides a framework for exploring the dynamics of client risk behaviour and developing an individualised risk reduction plan (Fisher et al., 2004). Originally consisting of nine steps, the *Options* counselling protocol has been adapted by the developers of the intervention for use in South Africa. Table 1 presents the adapted protocol for first *Options* sessions which consists of eight steps. Designed to be delivered within busy clinic settings, the counselling protocol for first sessions is intended to take about 15 minutes to deliver (Cornman et al., 2007).

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Table 1. *The Options for Health Eight-Step Counselling Protocol for First Sessions*

Step	Activity
1	The counsellor introduces the discussion of safer sexual (or drug use) behaviour to the client.
2	The counsellor assesses the client's sex- or drug-related HIV risk behaviours.
3	The counsellor assesses importance and confidence in order to evaluate the client's readiness to change their risk behaviour: <ol style="list-style-type: none"> The client rates the importance of changing their behaviour on a scale of 1 to 10, where 1 = <i>not at all important</i> and 10 = <i>very important</i>; The client rates their confidence that they could change their behaviour if they chose to, on a scale of 1 to 10, where 1 = <i>not at all confident</i> and 10 = <i>very confident</i>.
4	The counsellor decides whether to focus on improving the client's importance or confidence using the following algorithm: <ul style="list-style-type: none"> If both importance and confidence equal 9 or 10, explore any barriers to change; If importance is less than 7, explore importance and ignore confidence for the time being; If importance is equal to, or greater than 7, explore the one with the lower rating.
5	The counsellor identifies the client's barriers to consistently practising safe sex or drug use behaviour by asking: <ol style="list-style-type: none"> "You gave yourself a score of [#] for importance/confidence, why did you give yourself a [#] and not a lower score?" "What would have to happen in order for your importance/confidence score to increase?"
6	The counsellor and client discuss various strategies for overcoming barriers and moving towards behaviour change.
7	The counsellor and client negotiate a plan of action which is then documented on an <i>Options</i> "action plan" card and given to the client.
8	The counsellor documents the details of the session on the standardised <i>Options</i> record form which is then filed in the client's medical folder for use in follow-up counselling sessions.

Note. Adapted from "*Options* Intervention Protocol Manual: A step-by-step guide to risk reduction counselling with PLWHA" by D.H. Cornman, S. Christie, K. R. Amico, S. Cruess, and L. Shepherd, 2007, University of Connecticut, Storrs, CT.

Options discussions are intended to be individualised and based on the client's readiness-to-change their current risk behaviour. Here the importance and confidence ratings (Step 3) are critical to determining the client's readiness-to-change, as well as their particular barriers to change (Fisher et al., 2004). The constructs of importance and confidence correlate with the client's levels of information, motivation and behavioural skills (Cornman et al., 2007). For example, a client who feels that practising protected

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sex is of low importance is likely to possess inadequate information about the risks associated with unprotected sex, and/or has low motivation to change. In contrast, a client with little confidence in their ability to practice protected sex is likely to have insufficient behavioural skills and/or low motivation (Cornman et al.). Upon identifying where the client's deficits lie, the provider and patient work on strategies for overcoming them (Fisher et al.), and details of the counselling session are documented on an *Options* Record Form (ORF). This form is attached as Appendix A to this thesis.

In follow-up *Options* sessions, the focus is on progress towards achieving the action plan agreed upon in the previous session. Follow-up sessions should take as little as 5 to 10 minutes to complete (Cornman, et al., 2007). The protocol for follow-up sessions is presented in Table 2.

Table 2. *The Options for Health Protocol for Follow-Up Counselling Sessions*

Step	Activity
1	Review the plan as recorded on the <i>Options</i> record form from the last visit.
2	Explore what progress (if any) the client made towards achieving the agreed-upon plan.
3	Reinforce any progress that was made towards achieving the plan.
4	Discuss barriers if no (or limited) progress was made.
5	Reassess importance and confidence (if relevant).
6	Negotiate a new or revised action plan if necessary.

Note. Adapted from “*Options* Intervention Protocol Manual: A step-by-step guide to risk reduction counselling with PLWHA” by D. H. Cornman, S. Christie, K. R. Amico, S. Cruess, and L. Shepherd, 2007, University of Connecticut, Storrs, CT.

Evidence for the acceptability, feasibility and efficacy of the Options for Health intervention. Following elicitation research in which HIV care clinicians expressed support for the idea of a clinician-delivered HIV prevention intervention (Fisher et al., 2004), *Options* was implemented within routine HIV clinical care in the USA as part of an efficacy trial to reduce sexual risk behaviour among PLWH attending clinical care. Fisher et al. (2006) selected one of two high-volume, inner city HIV care clinics in which to implement the intervention. The second clinic functioned as a standard care control². Patients at each clinic saw their healthcare providers for regularly scheduled visits every

² “Standard care” refers to the strategies that characterise intervention, monitoring and healthcare activities in general clinical care in a particular setting. These activities may vary between clinics, communities and countries (Amico, 2011).

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other month. Clinicians (specifically physicians, physician-assistants and nurses) in the intervention clinic were trained in *Options* and directed to implement the intervention at the end of every clinic visit with every patient enrolled in the study, unless other medical concerns precluded this. Participants (N=497) completed questionnaires on sexual risk and drug-use behaviour at baseline and at 6-month intervals over 18 months. Analysis revealed a significant reduction in the number of unprotected sex acts occurring among intervention arm participants over the duration of the study, from a mean of 7.5 per participant to a mean of 1.5. In contrast, a significant *increase* in such acts was observed among control arm participants. In addition, intervention arm participants displayed a significant decrease in unprotected sex acts with partners of HIV-negative or unknown status, while control arm participants increased such behaviours. Intervention participants also decreased the number of HIV-negative or HIV status unknown partners with whom they had unprotected sex, although this did not reach statistical significance.

The extent to which *Options* was acceptable to clinicians in this study is reported by Fisher et al. (2004) in a separate paper. This was assessed by comparing the number of visits by participants in the clinical trial to the number of visits in which the protocol was delivered, as measured by the number of ORFs received. Over the 18 months of the study, *Options* was implemented in 73% (n= 1068) of 1455 medical visits. More pressing medical concerns prevented delivery in 23% of visits. Nevertheless, only 6% (n=14) of participants never received one *Options* session. This is because the repeat clinic visits that are a feature of chronic care allow more than one opportunity for exposure. Should other medical concerns prevent delivery in one clinic visit, *Options* can potentially be delivered at the next clinic visit. Further review of the 1068 ORFs completed showed that protocol delivery involved an average of 6 of 9 steps. Because not all steps are critical, the implementation of each was reviewed. An assessment of sexual and drug use risk behaviour occurred in 95% of *Options* sessions, importance and confidence were rated in 83% and 82% of sessions respectively, generating strategies for increasing importance and confidence in 53% and selecting a plan of action in 66% of sessions. Exit interviews confirmed that the intervention was acceptable to patients.

Results from the above study were among the first providing evidence for the acceptability and efficacy of clinician-delivered HIV prevention intervention delivered in a clinical care settings (Fisher et al., 2006). Following this, an adaptation of the *Options for Health* intervention was piloted in a RCT in an HIV care clinic in Kwa-Zulu Natal (KZN), South Africa, by the developers of the intervention. The pilot was conducted to

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determine the feasibility, fidelity and efficacy of the intervention in a South African clinic setting. Interviews with clinic staff and patients in the preparation phase of the study ruled out the possibility of doctors delivering the intervention because of a lack of time (Cornman et al., 2008). Instead lay ARV adherence counsellors who also met with patients at each clinic visit were trained to deliver the intervention. Cornman et al. randomly assigned three of five ARV adherence counsellors to the intervention, while the remaining two counsellors continued to deliver the standard care service. Upon being recruited into the study, participants were randomly assigned to one counsellor and completed outcome assessments at baseline and six-month follow-up. Participants reported a total of 688 sex events in the 3 months preceding the baseline assessment, 171 of which were unprotected. Among participants who received the intervention there was a significant decrease in the number of unprotected sex events reported, from an average of 2.64 per person to 0.40 at follow-up. As in the previous study by Fisher et al. (2004), a marginally significant increase in such events was observed among participants in the control condition. Review of the ORFs (reported in more detail in Chapter 3) revealed that the intervention could be delivered with fidelity, and patients expressed positive feelings around the intervention in exit interviews.

More recently *Options* was implemented by Peltzer, Tabane, Matseke, and Simbayi (2010) within the context of the HIV Voluntary Counselling and Testing (VCT) service at 13 public health clinics in Mpumalanga, South Africa. Following post-test counselling, patients (N=488) were recruited into the study by fieldworkers and referred back to their counsellor for the first of three planned *Options* sessions. Enrolment was capped at four participants per day because of counselling resource constraints. The subsequent counselling sessions were to be spaced over a two month period, and follow-up assessments took place at four months. Twenty-six lay VCT counsellors were trained over three days to deliver the intervention, and were reimbursed R10 (US\$1.2) for each session and ORF completed. Researchers assessed the impact of the intervention among participants on constructs associated with the IMB model as well as sexual behaviour. Results revealed a significant increase in HIV/AIDS related knowledge, risk reduction intentions (motivation), risk reduction skills and self-efficacy (confidence). In addition participants reported a significant reduction in unprotected sex, multiple partners, transactional sex and alcohol or drug-use in a sexual context. Review of the ORFs (also described in more detail in Chapter 3) revealed that the intervention was delivered in the majority of sessions with participants and with considerable fidelity. In exit interviews,

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counsellors (n=10) reported having benefitted from the intervention by having gained knowledge, communication and counselling skills. They also felt that the intervention was easy to implement and that its methods were simple.

The apparent success of *Options* in KZN and Mpumalanga is held as evidence that the implementation of a HIV risk reduction intervention for PLWH can be implemented within routine HIV care in South African public health care clinics, and with fidelity by lay counsellors after relatively limited training (Cornman et al., 2008; Peltzer et al., 2010). As an intervention that holds promise for reducing the transmission of HIV, *Options* should be moved further along the research continuum from successful implementation under controlled research conditions to implementation under conditions of everyday, routine practice in primary healthcare clinics. A next step in this process is to determine the feasibility of integrating this intervention into standard care practice under real-world conditions, and the sustainability of *Options* in this context. The implementation and evaluation of *Options for Health* in the Western Cape is the focus of this thesis, and is described in the sections of this chapter that follow.

The *Options for Health: Western Cape Project*

Options for Health was implemented in the Western Cape in collaboration with the Cape Town City Health (CTCH) Department and the Provincial Department of Health (DoH) in response to the finding by Eisele et al. (2009) that as many as 45% of people initiating ARV treatment in public health clinics in Cape Town had had unprotected sex at last sex. The implementation and evaluation of *Options* in Cape Town clinics was known as the *Options for Health: Western Cape (Options: WC)* project, and involved two teams:

- 1) The *Options: WC* implementation team: This team consisted mainly of researchers responsible for the implementation of *Options* in Western Cape clinics. As the Principle Investigator (PI) on the project, Sarah Dewing (SD)³ was responsible for organising implementation activities, including the adaptation of intervention materials, development of training programmes and materials, liaising with stakeholders and the training and supervision of counsellors. The development of programmes for training and supervision was done in collaboration with Michelle Wanless (MW) and Joanne Croome (JC), who also worked as training and supervision facilitators on the project. MW and JC are self-employed counselling psychologists

³ SD is a researcher in the Health Systems Research Unit at the Medical Research Council of South Africa.

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with previous experience in training lay counsellors for the Provincial DoH. Cathy Mathews (CM)⁴, Nikki Schaay (NS)⁵, Allanise Cloete (AC) and Leickness Simbayi (LS)⁶ assisted in planning the intervention implementation, the development of training materials and the facilitation of training.

- 2) The *Options*: WC evaluation team: This team consisted of five researchers (SD, CM, NS, AC and LS) and one full-time data collector (NM). As the PI, SD was responsible for the study design and protocol, managing data collection, analysis, interpretation and the reporting of results. Various other individuals provided assistance at specific time points. For example, JC and MW assisted in coding transcripts for analysis, and up to 11 additional, part-time and temporary data collectors were employed to assist in data collection. Two research assistants provided voluntary assistance for specific studies conducted as a part of this study (these are described below); one (MS) in the coding of transcripts and the other (SB) in data collection.

The implementation of *Options* in this study was funded by the Centres for Disease Control and Prevention, while evaluation activities were funded by the Medical Research Council of South Africa. CTCH and the Provincial DoH approved the implementation of the intervention in some ARV clinics provided that the programme was the subject of evaluation. A decision as to whether the intervention should be rolled out to remaining ARV adherence counsellors and ARV clinics in the Western Cape would be based on evaluation findings. Implementation activities were thus designed to mimic those that would be undertaken should CTCH and the Provincial DoH take it over. The strategy for delivery also had to fit in with current clinic processes. It is generally understood that doctors and nurses working within South African public healthcare facilities have limited time available for consultation with patients, thus the feasibility of implementing *Options* within the context of these meetings is poor. The more appropriate delivery system as identified by Cornman et al. (2008) is the ARV adherence counselling support programme that is mandatory in all ARV clinics in the Western Cape (Pienaar et al., 2006). Delivered in all clinics by lay counsellors, this programme offered the opportunity to integrate *Options* and HIV prevention into ARV treatment and care.

⁴ CM is a researcher in the Health Systems Research Unit at the Medical Research Council, and the Department of Family Health and Medicine at the University of Cape Town.

⁵ NS is a researcher in the School of Public Health at the University of the Western Cape.

⁶ AC is a researcher in the HIV/AIDS, STI and TB research programme at the Human Sciences Research Council, and LS is the director of this programme.

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Adherence Counselling Support in the Western Cape

In South Africa, individual counselling following ARV initiation is one of the main strategies for supporting adherence in the public sector. Counselling has been a key component of South Africa's response to the HIV epidemic since HIV/AIDS activities were integrated into primary healthcare services and the first national strategy for dealing with HIV/AIDS was developed (Richter, van Rooyen, Solomon, Griesel, & Durrheim, 2001). Intended to prevent HIV transmission and reduce the personal and social impact of HIV infection, the provision of counselling was envisioned to occur along the continuum of care from pre-infection to after death (Richter, Durrheim, Griesel, Solomon, & van Rooyen, 1999). Initially though the majority of counselling taking place within healthcare settings was pre- and post- HIV-test counselling delivered as part of the VCT programme (Richter et al., 1999). In the early 1990s the National DoH opened AIDS Training, Information and Counselling Centres (ATICCs) across the country to offer counselling in relation to HIV testing (Richter et al., 2001). In 1995, three ATICCs based in KZN were involved in a pilot project to explore the feasibility of using lay health workers (LHWs) to deliver HIV/AIDS counselling (Richter et al. 1999). LHWs are individuals carrying out functions related to health care delivery, trained in some way in the context of the intervention, but who have no formal professional, paraprofessional certificate or degreed tertiary education (Lewin et al., 2005). Unemployed people from local communities were trained and located within healthcare settings to provide pre- and post-test and ongoing counselling (Richter et al., 2001). Following the success of the pilot project, the lay counsellor project was extended throughout the country the following year with the aim of training 30 lay counsellors per province (Richter et al., 1999).

The move to include LHWs in public healthcare settings is a response to increasing service needs and shortages of professional health workers (not only in relation to HIV services) (Schneider, Hlope, & van Rensburg, 2008). Referred to as "task shifting", the delegation of responsibilities to the "lowest" category that can successfully perform them is one way in which capacity for health service delivery is expanded in many countries across the world (Schneider et al.). Currently there are an estimated 65 000 LHWs operating in South Africa, including 2 010 adherence counsellors (NDoH, 2012). Despite having been the main driver of LHWs, the government has avoided employing them directly and instead they are employed and managed through government-funded non-governmental organisations (NGOs) (Schneider & Lehmann, 2010). In 2000 the government began providing grants to expand VCT in health facilities

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and since then there has been a rapid increase in the number of state-supported NGOs employing LHWs (Schneider & Lehmann). LHWs are now a significant presence within South African healthcare settings and counselling has been extended and integrated into other services such as the provision of TB and ARV treatment. It was mentioned that South Africa's primary healthcare system is currently being re-structured to more effectively meet the healthcare needs of the population - LHWs will continue to play an integral part of health service delivery. In the revised model of primary healthcare delivery there is a move away from the current "specialist" LHW model however, where lay counsellors are associated with a particular programme (for example, VCT, TB or ARV treatment), towards a "generalist" LHW model. The new primary healthcare plan envisions one lay counsellor per clinic who is responsible for treatment adherence support for HIV, TB and other chronic diseases, as well as pre- and post-HIV test counselling and post-trauma counselling (NDoH, 2010b).

Standard care for adherence counselling-support. South Africa's large scale ARV treatment programme relies heavily on LHWs to prepare patients for treatment and for providing adherence support (Doherty & Coetzee, 2005). All HIV lay counsellors working within public healthcare facilities in the Western Cape are required to have received training at the Western Cape ATICC. Here HIV lay counsellors are trained in Egan's (2002) *Skilled Helper* model of counselling behaviour. This is the predominant model used in HIV counselling in the public sector across the nine provinces of South Africa (van Rooyen, Richter, Coates, & Boettiger, 2009). Egan's model represents a client-centred, problem-management approach to counselling where the relationship between counsellor and client is one of collaboration, and the task of the counsellor is to assist the client to explore personalised alternatives and responses to their situation. The model is applicable to a diverse range of client issues and has been promoted internationally as a treatment method in various contexts including counselling around sexual abuse (Hall & Lloyd, 1993), careers and workplace counselling (Coles, 2003; Franklin, 2003; Kidd, 2003) as well as counselling within primary health care (Hudson-Allez, 1997) and the training of nurses and health professionals (Arnold & Boggs, 1995; Freshwater, 2003). Despite the widespread use of this model in counselling practice, there is no research pertaining to its effectiveness as a behaviour change intervention in any setting (Newnham-Kanas, Morrow, & Irwin, 2010). Egan's model is further described in Chapter 4 as a part of the background to the study presented in that chapter.

The duties of adherence counsellors are divided between patients initiating ARV

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treatment, with whom they conduct a series of treatment “work-up” sessions, and patients already on treatment, with whom they conduct “follow-up” counselling sessions. The format for treatment work-up sessions as trained by ATICC at the time that the implementation of *Options* was being planned is described in Table 3. These sessions involve mainly the provision of information required to prepare the patient for treatment, and patients are intended to attend these sessions one week apart from each other.

Table 3. *Format for Counselling Sessions Conducted in Preparation for ARV Treatment Initiation as Trained by ATICC*

Session	Topics/activities
1	HIV and ARV knowledge; the importance of disclosure to someone who can function as a treatment supporter; substance abuse and a healthy lifestyle; client responsibility/ownership for treatment; assessment of social circumstances (including employment and disclosure status, living situation); verbal contract taking ownership of treatment; booking a follow-up appointment.
2	Address any areas of concern; assessment of stress, depression, substance use, pill-taking behaviours and experiences; ownership of treatment and health; adherence issues; referral bookings (if necessary); booking a follow-up appointment.
3	Address any areas of concern; adherence issues; drug resistance; pregnancy intentions and safer sexual practice; recap important issues (ownership of treatment and health, disclosure, adherence issues); referral bookings (if necessary).
4	(Conducted on day of treatment initiation.) Introduction to prescribed ARVs and pill-taking schedule; adherence issues including side effects and drug interactions, the use of daily planner and pill box; referral bookings (if necessary).

Note. Adapted from a handout provided as a part of the 10-Day ARV Therapeutic Counsellor Training Course delivered by ATICC. The successful completion of this course is required in order to practice as an ARV adherence counsellor in government healthcare facilities.

Follow-up counselling sessions are conducted with patients identified as being in need of adherence support by clinic staff. These include patients who are treatment non-adherent (having missed or taken incorrect doses) and/or programme non-adherent (having missed clinic visits by days/weeks or having defaulted from the treatment programme for longer periods of time). Generally patients are identified as such by staff

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(nurses, counsellors or patient advocates) and passed on to be seen by a counsellor. Only following counselling are they able to be seen by the doctor if required, or to collect their treatment at the pharmacy. It was mainly within the context of these follow-up counselling sessions that the *Options: WC* implementation team intended the *Options* intervention to be delivered. This strategy limited the population of patients who would receive the intervention to only those identified as being non-adherent, however a plan for delivery that included all ARV clinic patients was not feasible because of high patient loads, overburdened clinic staff and the disruption to clinic flow that would result. Given the relationship between adherence, viral load and sexual infectivity, this sub-group is a high priority in terms of positive prevention. Some research suggests that poorly adherent patients are also those more likely to engage in risky sexual behaviour than patients who are optimally adherent (for example, Ndziessi et al., 2012). For these reasons, delivery to poorly adherent patients in the context of ARV follow-up counselling sessions was deemed by the *Options: WC* implementation team to be the most feasible and appropriate strategy for implementation.

The Implementation of *Options for Health* in the Western Cape

Originally the implementation of *Options* in the Western Cape was intended to integrate sexual risk reduction with HIV care as done by Cornman et al. (2008) in KZN. A pilot study in which *Options* was implemented in one Cape Town clinic revealed the need for a revised approach however. In this study conducted by Dewing et al. (2011), one lay ARV adherence counsellor was trained in the intervention and instructed to use the *Options* protocol to address sexual risk behaviour with all patients referred for follow-up adherence counselling sessions. In total, only 31% of patients referred for counselling received the intervention over the 15 weeks of the study. The increase in time spent with each patient as a result of adding a discussion on sexual risk behaviour into standard care adherence counselling was one of the main reasons why patients did not receive the intervention. Based on concurrent discussions with representatives from CTCH and the Provincial DoH for whom improving adherence was a priority, it was decided that adherence should be included as a target behaviour of the intervention. As such it was decided that counsellors should use the *Options* protocol to address non-adherence with *all* patients referred for follow-up counselling. *Options* would be used to address sexual risk behaviour in the context of treatment work-up sessions (see Table 3, Session 3) and in follow-up counselling sessions as deemed appropriate by counsellors. In this way delivery would be more consistent with current practice and the probability of the *Options*

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protocol being forgotten or ignored due to lack of time and other competing issues (such as poor adherence) would be reduced.

At the time the *Options: WC* project was being planned there were 11 NGOs employing lay ARV adherence counsellors located within clinics around the Western Cape. The *Options: WC* evaluation team randomly selected four of these NGOs to take part in the implementation and evaluation of the programme, and all agreed to participate. The remaining NGOs were intended to serve as controls for the purpose of comparison. Together these four NGOs employed 39 ARV adherence counsellors located within 21 ARV clinics in Cape Town. These 21 clinics represented 26% of all ARV clinics (N=80) in the Western Cape at the time of implementation. All 39 of these counsellors took part in the *Options: WC* training programme, and all 21 clinics were involved in the implementation of the intervention by association with these counsellors. It is difficult to determine the extent to which these 39 counsellors are representative of the population of clinic-based lay counsellors in South Africa as the demographic profile of this cadre of health worker is unclear. It is known that the majority of LHWs in South Africa are women (Daniels, Clarke, & Ringsberg, 2012; Lehmann & Sanders, 2007). Similarly the majority (n=34) of the 39 counsellors taking part in *Options: WC* were women. Typically LHWs in Southern Africa have little or no secondary education (Friedman et al., 2007; Lehmann & Sanders), but the majority (n=26) of counsellors taking part in the current study had completed Grade 12 schooling. It is a requirement of the Provincial DoH that individuals trained as clinic-based counsellors are in possession of a Grade 12 education. Most (n= 27) of the 39 counsellors were first-language Xhosa speakers; the remaining 8 were first-language Afrikaans speakers. In terms of age, 5 counsellors were in their 20s. Most (n=14) were between the ages of 30 and 39 years, and 11 counsellors were between the ages of 40 and 49 years. Four counsellors were older than 50 years.

The *Options: WC* training and supervision programme. In preparation for the implementation of *Options for Health* in Cape Town facilities, a five-day master training course was facilitated by one of the developers of the *Options* intervention (namely Dr Deborah Cornman) in January 2008. Participants included lay-counselling trainers from ATICC, members of the *Options: WC* implementation and evaluation teams, trainers and managers from various NGOs as well as the Clinical Programme Co-ordinator from Metro District Health Services⁷.

⁷ MDHS is the directorate of the Provincial Government of the Western Cape responsible

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A five-day (35 hour) training programme for lay counsellors was developed by the *Options: WC* implementation team based on the master training programme, experience of lay-counsellor training and findings from the pilot study by Dewing et al. (2011). More detail on the training programme is provided in Chapter 5.

In moving an intervention from research into practice settings it is recommended that training approximate naturalistic training conditions and is typical of the training provided under ordinary circumstances (Roy-Byrne et al., 2003). This was attempted to the greatest extent possible. While training was held at ATICC over five days, ATICC did not have the capacity to conduct the training themselves. The *Options: WC* training programme was thus facilitated by the two external trainers that were a part of the *Options: WC* implementation team (JC and MW), as well as local experts in the field of MI.

In the week following the initial five-day training, members of the *Options: WC* implementation team met with the mentors (psychologists and social workers) contracted by the participating NGOs to provide monthly mentoring with counsellors. The aim of the meeting was to introduce mentors to the project and the *Options* counselling protocol so that they would be able to provide support for counsellors taking part in the project. Mentors were given feedback on the training that took place and were provided with the protocol manual and intervention materials (ORFs, importance and confidence ladders and so forth). Mentors were asked to “check-in” with *Options*-trained counsellors at monthly group meetings and to report any problems/challenges back to the implementation team.

The evaluation of the *Options: WC* programme. Part of the South African National DoH’s current attempt to strengthen primary healthcare service delivery involves the provision of quality care that is effective and evidence-based (NDoH 2012). In the medical field, the “evidence-based medicine” movement has been accompanied by an increase in “translational research” which is focused on bridging the gap between basic science and clinical medicine (Keramaris, Kanakaris, Tzioupis, Kontakis, & Giannoudis, 2008). In the social sciences, the translation of knowledge (developed by means of basic science) in to treatment applications (that is, clinical medicine) is akin to the process of developing interventions and testing their efficacy in randomised clinical trials. For researchers in the field of public health, it is the second phase of translational research

for the provision of a comprehensive, district-based primary healthcare service (http://www.westerncape.gov.za/eng/your_gov/6072).

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that is focused on translating research in to practice settings that is of interest however (Woolf, 2008). Although there is a substantial body of literature addressing methods to promote health behaviour change, there is comparatively little on the potential of these to be translated in to practice.

The implementation of evidence-based practice is a challenge. Because real-world settings allow for less control over implementation than research settings, the efficacy of an intervention cannot guarantee its effectiveness in practice (Lyles et al., 2006). Many promising health interventions face substantial barriers to effective implementation in practice settings (Glasgow & Emmons, 2007; Grol & Grimshaw, 2003; Norton, Amico, Cornman, Fisher, & Fisher, 2009; Panisset et al., 2012). Attention to the process of implementation is thus regarded as essential to determining the external validity and value of evidence-based interventions (Durlak & DuPre, 2008; Roy-Byrne et al., 2003). In determining the extent to which interventions can be successfully implemented in practice, implementation evaluation makes the following important contributions to programme development:

- It provides important information regarding programme feasibility - a programme that is difficult to implement with fidelity in practice has low feasibility (Dusenbury, Brannigan, Falco, & Hansen, 2003).
- It has a role to play in strengthening health systems and policy - if policy-makers are not aware of the problems incurred in the implementation of interventions, then they risk wasting financial and human resources on inadequate or ineffective programmes and policies (Fagan, Hanson, Hawkins, & Arthur, 2008; Panisset et al.).
- It can also be used to improve the chances of successful implementation - if barriers and facilitators to implementation are identified, strategies to address and utilise these can be developed (Panisset et al.).

There are key variables related to how effective an intervention is likely to be when scaled-up and implemented in practice settings. These include a) fidelity - or the extent to which delivery is consistent with the original programme, b) dosage - that is how much of the intervention is received by the target population, c) reach - or the extent to which the target population is engaged in the programme d) quality - referring to how well the programme components are delivered, e) participant responsiveness – the degree to which the intervention holds the interest of recipients and f) programme differentiation

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– the extent to which a programme’s theory and practice can be distinguished from other programmes (Dane & Schneider, 1998; Durlak & Dupre, 2008). Deficiencies in these areas may have a negative impact on programme outcomes (Dane & Schneider) and can be related to a variety of factors. Some factors affecting the implementation of new practices or programmes in healthcare settings include a focus on more urgent medical issues (Whitlock, Orleans, Pender, & Allan, 2002), high workload (Grol & Grimshaw, 2003; Johnson, Jackson, Guillaume, Meier, & Goyder, 2011), a lack of time (Franks, Hardiker, McGrath, & McQuarrie, 2012; Whitlock et al.), inadequate training (Johnson et al.; Whitlock et al.), a lack of support (Franks et al.; Whitlock et al.), and limited resources (Dane & Schneider; Johnson et al.). With regard to the promotion of evidence-based practice, another important question to consider is what kinds of providers are able to successfully deliver what types of intervention components (Dane & Schneider; Fixsen et al., 2005; Glasgow, 2003). In particular the ability of LHWs to deliver prevention interventions has been raised as a potential barrier to effective programme implementation (Dane & Schneider; Glasgow). For this cadre of health worker the importance of training for successful delivery is emphasised (Remien et al., 2008), as well as documentation of the extent to which intervention components are delivered consistently (Glasgow). In light of the National DoH’s (2010b) plans to expand the roles of lay counsellors to include adherence support for various chronic medications as well as other types of counselling, research regarding the ability of LHWs to deliver counselling effectively is now perhaps even more demanding of attention than it previously was.

Based on a comprehensive review of prevention interventions implemented in real-world (but not only medical) settings, Durlak and DuPre (2008) have identified contextual factors that consistently influence the implementation process. These factors are categorised as: 1) community context, 2) provider characteristics, 3) innovation characteristics, 4) organisational capacity, and 5) training and technical assistance. While organisational capacity and training and technical assistance lie at the centre of effective implementation, all factors interact in a variety of ways that influence implementation, and contribute to the overall capacity of a setting to implement and sustain effective interventions. This model provides a useful framework for the majority of the current evaluation which sought to determine factors affecting the implementation of the *Options* intervention in Cape Town clinics. The model is described in more detail in Chapter 3, and from here it is drawn throughout the remainder of the thesis.

Options for Health was implemented in the WC in an attempt to enhance the

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potential of the ART programme for HIV prevention by promoting ARV adherence and reducing sexual risk behaviour among people on treatment. The *Options: WC* project aimed to strengthen the standard care adherence counselling programme by changing the counselling model used in standard care practice, from Egan's (2002) *Skilled Helper* model to the *Options* model, which has proven efficacy for health behaviour change. The project was also intended to integrate HIV prevention with care. As such, this thesis contributes to the literature of translational research and the implementation of evidence-based interventions in practice settings. Broadly, the evaluation of *Options: WC* was intended to determine the potential value of the *Options* intervention for practice. An outcome assessment was planned to determine the impact of *Options: WC* on levels of adherence at participating clinics, but this study could not be conducted before funding for implementation ended. This is because the intervention was not implemented such that an impact on behavioural outcomes was likely to be observed (see Chapter 2).

The next section of this chapter describes the specific aims of the *Options: WC* evaluation and explains the structure of this thesis.

The Aim of this Thesis

This thesis aimed to determine the feasibility of implementing the *Options for Health* intervention within standard care adherence counselling practice in low-resource, primary healthcare ARV clinics in the Western Cape, as well as the impact of the *Options: WC* programme on counselling skills and practice.

Specific Aims and Structure of the Thesis

While a protocol had been developed beforehand, the evaluation of the *Options: WC* programme changed and grew over the years of the study in response to study findings as well as feedback and observations from the field. Such an evolutive evaluation approach is not unusual when implementing new programmes in complex environments (Fagen et al., 2011; Gamble, 2008). Where it is not entirely clear what needs to be done in order to roll out a programme effectively, the flexibility of this approach allows for adaptations supporting the programme's development to be made in response to increased learning (Gamble). In total, six studies were conducted as a part of this evaluation and thesis. These studies are described briefly below in terms of their aims, and the evolution of the evaluation:

- 1) Study I: This study aimed to monitor the extent to which the target population (that is, patients referred for follow-up adherence counselling) received the intervention over the 13-month period of implementation (intervention reach and

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dosage).

- 2) Study II: In response to preliminary findings from Study I which indicated that coverage was low, Study II aimed to understand the factors impeding counsellors' use of the *Options* counselling protocol.
- 3) Study III: In response to findings from Study II in which counsellors described reverting to standard care counselling practice in response to barriers to the implementation of *Options*, Study III aimed to determine what is being delivered as standard care in adherence counselling sessions.
- 4) Study IV: This study aimed to determine the fidelity with which counsellors were able to implement the *Options* intervention following the initial five-day training programme (intervention quality and fidelity).
- 5) Study V: This study aimed to determine the impact of refresher training and monthly supervision on counsellors' ability to implement the *Options* counselling protocol (intervention quality).
- 6) Study VI: This study aimed to determine whether the *Options: WC* programme had an impact on adherence counselling practice that could have resulted in improved patient adherence.

An overview of the studies that were conducted as a part of this thesis is presented in Table 4. This thesis is structured as eight chapters. Following the conclusion of the current introductory chapter, each of the six studies is presented separately in Chapters 2 to 7, before a general discussion is held in Chapter 8⁸.

Ethical Considerations

All studies conducted as a part of this evaluation were detailed in one initial study protocol. Ethical approval for this protocol was obtained from the Human Research Ethics Committee at the University of Cape Town. As the evaluation evolved, amendments to the protocol were drawn up and submitted for ethical approval as necessary. Following approval by the Human Research Ethics Committee, approval for the conduct of research activities within ARV clinics was obtained for each of the primary healthcare facilities involved by the CTCH and the Provincial DoH where appropriate. Informed consent procedures regarding NGOs, counsellors and clinic patients are detailed in relation to each study presented in Chapters 2 through 7.

⁸ Because of the large number of uncommon abbreviations used in this thesis, all abbreviations will be spelt out in full the first time they occur in each chapter.

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Table 4. *An Overview of Studies Conducted as Part of this Thesis*

Study (Ch)	Research Question	Study Design	Participants	Data Collection
I(2)	What coverage was achieved by <i>Options: WC</i> ?	Longitudinal descriptive	39 ARV adherence counsellors	Record review
II(3)	What factors influenced the implementation of <i>Options</i> by counsellors?	Cross-sectional	15 ARV adherence counsellors	Semi-structured interviews
III(4)	What is being delivered as standard care counselling for adherence support?	Cross-sectional	39 ARV adherence counsellors	Audio-recordings of counselling sessions
IV(5)	To what extent were counsellors able to implement the <i>Options</i> counselling protocol following training?	Cross-sectional	39 ARV adherence counsellors	Audio-recordings of counselling sessions
V(6)	To what extent did <i>Options</i> counsellors' practice improve following refresher training and monthly supervision?	Cohort analysis	26 ARV adherence counsellors	Audio-recordings of counselling sessions
V1(7)	What impact did the <i>Options: WC</i> programme have on counsellors' counselling practice?	Cluster-randomised trial	23 <i>Options</i> -trained counsellors and 32 comparison ARV adherence counsellors	Audio-recordings of counselling sessions

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Chapter 2

Coverage Achieved by *Options for Health: Western Cape*

As mentioned in the previous chapter, the extent to which an intervention reaches its target population is referred to as the coverage, or reach, of a programme. With an intervention like *Options*, target population participation needs to be kept at an acceptable level if it is to have any chance of contributing to the prevention of HIV. Monitoring coverage is important, particularly at the beginning of a new programme, because it alerts implementers to the need for corrective action should coverage fall below an acceptable level (Rossi, Lipsey, & Freeman, 2004). As one aspect of effective implementation, coverage is also an indicator of the readiness of a programme for outcome evaluation. This chapter reports on a study aimed at determining the extent to which *Options* was delivered to those patients who should have received it.

Background

Options for Health has been successfully implemented within routine clinical care, although within the context of a randomised control trial (RCT), at a hospital-based antiretroviral (ARV) clinic in Kwa-Zulu Natal (KZN), South Africa (Cornman et al., 2008). Process data collected as a part of the evaluation that was conducted indicated that the intervention was delivered to a total of 103 patients in 99% of routine patient visits. On average, 2.5 visits were delivered per participant over a six month period. Cornman et al. argue that the high rate of coverage and the fact that most patients received at least one follow-up counselling session demonstrate the operational feasibility of implementing an HIV risk-reduction intervention for people living with HIV within the course of routine HIV clinical care in this setting. More recently Peltzer et al. (2010) implemented *Options for Health* within the voluntary counselling and testing (VCT) service provided by 26 lay counsellors at 13 primary health care clinics in Mpumalanga, South Africa. Process data indicated that *Options* was delivered to 360 patients in 98% of counsellor-patient encounters, with an average of 2.3 sessions being delivered per patient over a two month period. While three sessions per patient had been planned, counsellors were unable to deliver a third session in most cases as patients generally did not return for appointments. Only 24% of patients received a third counselling session. Peltzer et al. suggest that lack of transport, employment, family responsibilities and poor quality counselling (some patients reported “negative emotions” at exit interviews) may have contributed to the failure of patients to return. One advantage of the ARV clinic setting over the VCT programme is that patients are required to return to the clinic on a regular basis as a part

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of the treatment programme, whereas patients attending clinics for VCT are generally not enrolled in long-term care. ARV clinic patients should thus be more likely to receive follow-up sessions if required. Unfortunately it is not clear what proportion of patients returned for first and second follow-up sessions in KZN. Nevertheless, behavioural outcome data from these two studies suggest that two sessions per person are enough to be effective.

Research focused on outcomes imposes an infrastructure that is not necessarily present in everyday practice (Rohleder & Swartz, 2005), and considerable support is usually provided to achieve fidelity of implementation (Dusenbury et al., 2003; Rubak, Sandbæk, Lauritzen, & Christensen, 2005). Indeed, implementation in the two above-mentioned studies was not strictly according to routine practice: In Mpumalanga counsellors were compensated financially for each *Options* session completed, and the number of sessions conducted was capped at four per day. In KZN counsellors were observed “in vivo” for adherence to the *Options* protocol, and supervision was provided on a weekly basis by a member of clinic staff (Cornman et al., 2008). In Mpumalanga counsellors received monthly support visits from both trainers and research staff (Peltzer et al., 2010). Generally support of this intensity is not available to clinic-based lay counsellors. The implementation of *Options: WC* differed from the KZN and Mpumalanga studies in that implementation was not incentivised, ran over a longer period of time, included multiple sites and a larger number of lay counsellors. To the greatest extent possible, *Options: WC* was implemented in line with training and supervision practices provided as part of the standard care programme for adherence counselling. This meant that (at least initially) counsellors were not visited by the *Options: WC* implementation team for supervision and support. When it was implemented, *Options*-specific training and supervision was designed to match the frequency and intensity of such activities as provided by the AIDS Training, Information and Counselling Centre and their employing organisations. Adherence to treatment was included as a target behaviour of the intervention and, in this regard, the *Options* model was intended to replace the counselling model used in standard care practice for adherence support.

Options: WC was implemented within routine ARV adherence counselling practice for a total of 13 months, from June 2009 until end-June 2010, in 21 ARV clinics in Cape Town. The study presented in this chapter aimed to determine the coverage of the intervention over this period, specifically a) the total number of *Options* sessions delivered to eligible patients, b) the number of follow-up *Options* sessions delivered, and

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c) the number of *Options* sessions delivered focusing on sexual risk behaviour. This data, monitored on a monthly basis, was intended to alert the *Options: WC* implementation team to the potential need for activities aimed at encouraging delivery as well as the progress of the project towards readiness for outcome evaluation.

Method

Study Design

The aim of this study was to determine the extent to which the intervention was delivered to the target population over the period of implementation. The target population was defined as all patients currently receiving ARV treatment and referred for counselling for poor adherence. The design was a longitudinal, descriptive study in which coverage data was monitored on a monthly basis.

Population and Sampling

As described in the introduction, *Options: WC* was implemented by 39 lay ARV adherence counsellors from 4 of 11 randomly selected non-governmental organisations (NGOs) employing ARV adherence counsellors in the Western Cape. Data for this study was collected for all of these 39 counsellors, who were located within 21 ARV clinics around Cape Town.

Data Collection

At the end of each month, all HIV lay counsellors working within public healthcare facilities complete a data sheet on which they record how many patients they have seen during the month for various reasons. For ARV adherence counsellors, this includes the number of patients seen for problematic adherence. These sheets are faxed through to their employing NGOs, where the data is collated and submitted to Metro District Health Services. For the evaluation of *Options: WC*, the use of this routinely collected data to determine the size of the target population was recommended by representatives from Cape Town City Health (CTCH) and the Provincial Department of Health (DoH)⁹. Programme records are a commonly used source of data in evaluation, particularly where the extent to which a programme is reaching the target population is under observation (Hatry, 2010; Rossi et al., 2004). The benefit of this data for evaluators is that it eliminates the need for new and potentially expensive data collection strategies (Hatry). Potential problems are that this data may provide only a partial amount of what is required to measure the outcomes of interest and can be of poor quality; the latter is a

⁹ Routinely collected data (also referred to as programme or agency record data) describes data that is regularly collected and recorded by an organisation regardless of whether an evaluation is taking place (Hatry, 2010).

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problem particularly when information is obtained from different sites and organisations (Hatry). In the current study, the use of routine data was deemed by the *Options: WC* evaluation team to be the most efficient and cost-effective option for monitoring coverage given the potential size of the target population, the period of implementation and the number and geographic spread of facilities involved. Samples of the data sheets from each NGO were obtained, and some counsellors and all NGO staff members responsible for collating the data on a monthly basis were asked to confirm the different types of patients being recorded under the various column headings. These data sheets appeared to record the exact data needed to determine the size of the target population for *Options: WC*.

As a part of the *Options* counselling protocol, counsellors are required to complete an *Options* Record Form (ORF) documenting details of sessions with each patient counselled. This data was used to determine the number of patients having received the intervention. For the evaluation, counsellors were supplied with pads of ORFs printed in carbon-copy. Counsellors were instructed to place one copy in the patient's medical folder as per the *Options* protocol, and one copy in a folder that was supplied by the *Options: WC* evaluation team. These copies were collected from all counsellors at the end of each month for the period June 2009 to June 2010. At each collection, counsellors were also asked to estimate how many ORFs they had lost or not completed since the last collection.

Data Handling and Analysis

The number of ORFs collected from each counsellor each month was entered into MS Excel, as was the data relating to the number of patients seen for problematic adherence by each counsellor each month. The statistics sheets completed by counsellors on a monthly basis differed slightly by NGO, and some NGOs changed their reporting format during our period of data collection. For clarity, the handling of the routine data used to assess coverage is described below by NGO.

***Options* NGO 1.** In terms of adherence counselling, NGO 1 routinely recorded the number of patients seen by each counsellor for what was termed "ARV follow-up counselling." Counsellors confirmed that this referred to patients seen for poor adherence. Reporting for NGO 1 remained consistent over the study period. Intervention coverage for each counsellor was thus calculated on a monthly basis as a percentage:

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$$\frac{(\text{ORFs collected} + \text{ORFs not completed} + \text{ORFs lost})}{\text{"ARV follow-up counselling"}} \times 100$$

Options NGO 2. Up until September 2009, NGO 2 routinely recorded the number of patients seen for “ARV follow-up counselling” when a new category for “defaulters”, was added. The latter category refers to those patients who return to the clinic to re-start ARV treatment after having dropped out of the treatment programme (generally for a period of two weeks or more). Up until September 2009 the percentage of eligible patients receiving *Options* was calculated as described for NGO 1; after this time coverage was calculated including the number of “defaulters” in the denominator.

Options NGO 3. Up until December 2009, NGO 3 collected data on the number of patients seen by counsellors for “ARV counselling (not VCT or follow-up)” as well as the number of “total defaulters recalled”. “ARV counselling” was confirmed to refer to patients seen for poor adherence. From January 2010 the category of “total defaulters recalled” was dropped and only the number of patients seen for “ARV follow-up counselling” was recorded. Coverage for counsellors was thus calculated using the two categories combined as the denominator until January when it had to be calculated using “ARV follow-up counselling” only.

NGO 3 closed down at the end of March 2010. Counsellors remained at their facilities and their contracts were taken over by another NGO not involved in the *Options: WC* project. As a result, coverage data was not collected for these counsellors during the last three months of implementation.

Options NGO 4. In terms of adherence counselling, NGO 4 collected data on the number of patients seen as “returned defaulter” and “existing client” until November 2009. “Existing client” was confirmed as referring to patients seen for poor adherence. As of December 2009 the reporting format changed: the new data sheet omitted these two categories and included the category “ARV follow-up counselling” only. Thus, until December, coverage was calculated using “returned defaulters” combined with “existing clients” as the denominator, when it was calculated using “ARV follow-up” only.

In some cases the number of ORFs for a particular month were found to exceed the number of patients who, according to the statistics submitted to NGOs, would have been eligible for *Options*. It is possible that these “extra” *Options* sessions had taken place within the context of treatment initiation counselling, although this cannot be known for sure. In such cases it was assumed that all eligible patients had received *Options* and the

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data was altered to indicate 100% coverage.

Results

This part of the evaluation was disrupted when, some months into implementation, it was discovered that a RCT evaluating the efficacy of an intervention aimed at increasing adherence was taking place at one of the 21 clinics involved in the implementation of *Options: WC*. Two *Options*-trained counsellors were located at this clinic, but it meant that this clinic had to be withdrawn from the present project. Data collected from this clinic was not included in the analysis. Data is thus presented for 37 of 39 ARV adherence counsellors located within the remaining 20 ARV clinics.

One intended use of the data collected as a part of this study was to alert the *Options: WC* implementation team to the need for activities to encourage delivery. The levels of coverage being observed on a monthly basis were deemed to be inadequate. In response, actions which included the provision of refresher training, site visits, and the implementation of monthly supervision sessions were taken to try and improve the number of patients reached. Results are presented below in relation to these activities, so that their impact may be observed.

To What Extent was *Options* Delivered to the Target Population?

Coverage over the 13 months of implementation was poor. In total (that is, across all sites and counsellors), *Options* was delivered to nine percent of patients who should have received the intervention (N = 14,540). Figure 2 presents the percentage of the target population receiving *Options* each month across all sites and counsellors. Here coverage can be seen to have ranged from a maximum of 34% in June 2009 to a minimum of 3% in June 2010.

In response to the drop in coverage observed over the first three months of implementation as well as observations from the field, a two-day refresher training course was held in October 2009. This is associated with an increase of eight percentage points in November 2009, which then dropped off again in the following month (Figure 2).

At the request of counsellors and in a further attempt to influence coverage, site visits were conducted by the principle investigator (PI) in January/February 2010 in order to introduce the *Options* intervention to ARV clinic staff. These visits are associated with an increase in coverage from 5% in December/January to 11% in February 2010, before it dropped off again the next month (Figure 2).

Monthly supervision sessions of one hour each were implemented from March 2010 until June 2010 with the aim of increasing counsellors' competence with regard to

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the *Options* counselling protocol and problem solving around barriers to its use. Coverage remained relatively low during this period and the intervention reached as few as three percent of eligible patients in the last month of implementation.

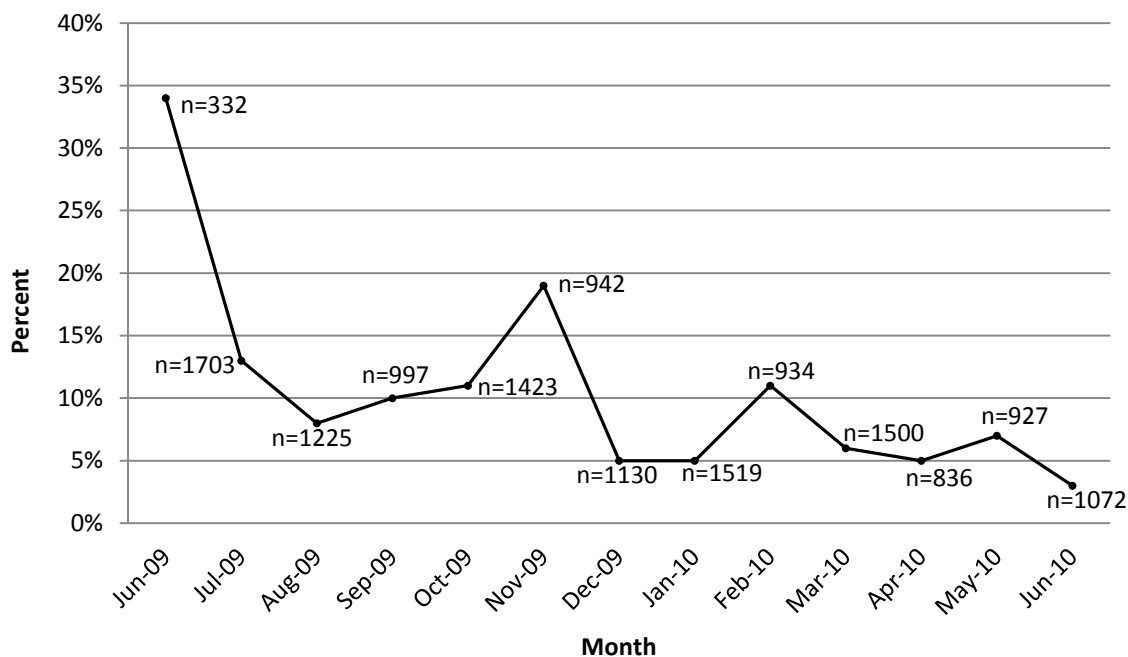


Figure 2. Intervention coverage over thirteen months of implementation. This figure presents the percentage of the target population receiving *Options: WC* counselling sessions across all sites and counsellors over 13 months of implementation. Data from April 2010 until June 2010 excludes nine counsellors and five clinics associated with NGO 3, which closed down at the end of March 2010.

In monitoring the number of patients seen for poor adherence each month it was observed that some counsellors were recording very high numbers of patients. For example, one counsellor reported having seen as many as 436 patients for ARV adherence follow-up counselling the month of January 2010. In response to this observation, the evaluation team conducted an investigation into the way in which counsellors were completing their data sheets. In the methods section of this chapter it was explained that data collected by counsellors under the categories of “existing client” and “ARV follow-up counselling” was used to determine the size of the target population for the *Options: WC* intervention. The evaluation team understood these categories to include the number of patients seen for counselling for poor adherence exclusively. During the investigation conducted after January 2010, some counsellors reported that they were including other types of patients in these categories as well, for example those who were seen only for pill counts and/or routine check-ins. Two counsellors (including the counsellor having seen 436 patients in January 2010) reported counting *all* patients

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they had seen for the month under “ARV follow-up counselling”, that is, patients seen for VCT, prevention of mother-to-child transmission, pill counts, check-ins and so forth. The implication of this finding is that the target population of *Options: WC* has been over-estimated and that coverage has subsequently been under-estimated.

How Many Patients Received *Options* Follow-Up Sessions, and How Many *Options* Sessions were Focused on Sexual Risk Behaviour?

In Table 5, data regarding a) the total number of *Options* follow-up sessions and b) the total number of *Options* sessions focusing on sexual risk behaviour conducted at each clinic over 13 months is presented in relation to the total number of *Options* sessions conducted. In total, 1332 ORFs were collected over 13 months of implementation. Of these, 126 (9%) were for follow-up *Options* sessions (Table 5). Thus only 10% of patients seen for a first *Options* session received a second, or follow-up, *Options* session. Forty-nine (4%) of 1332 *Options* sessions conducted focused on sexual risk behaviour. Unfortunately it is not possible to tell whether these 49 sessions were done in the context of counselling for treatment initiation or follow-up adherence counselling sessions.

Table 5. *Total Number of Options Sessions, Follow-up Sessions and Sessions Focused on Sexual Risk Behaviour Conducted Per Clinic Over 13 Months*

ARV clinic location (n=20)	Total no. of <i>Options</i> sessions conducted	Total no. of follow-up <i>Options</i> sessions conducted	Total no. of <i>Options</i> sessions focusing on sexual risk behaviour conducted
Clinic 1	121	14	3
Clinic 2	35	0	5
Clinic 3	21	0	0
Clinic 4	110	24	4
Clinic 5	37	1	3
Clinic 6	42	11	4
Clinic 7	134	8	4
Clinic 8	24	0	0
Hospital 1	35	1	4
Hospital 2	37	2	2
Hospital 3	141	15	1
Hospital 4	8	0	0
Hospital 5	13	0	1
Hospital 6	21	4	0
Hospital 7	34	0	0
Hospital 8	33	0	1
CHC 1	41	4	6
CHC 2	6	2	0
CHC 3	92	10	7
CHC 4	347	30	4
	1332	126	49

Note. CHC = Community Health Centre.

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Discussion

In contrast to the near-perfect levels of coverage found by Cornman et al. (2008) and Peltzer et al. (2010) in their studies, counsellors involved in the implementation of *Options: WC* delivered the intervention in a mere 9% of counselling sessions conducted over a period of 13 months. Only three percent of all *Options* sessions conducted during this time focused on sexual risk behaviour. In addition, only nine percent of patients who received a first *Options* session attended a follow-up *Options* session. This is in comparison to KZN where patients received an average of 2.5 sessions each over six months, and Mpumalanga where patients received an average of 2.3 sessions each over two months. Failure to achieve high target participation is a common problem faced by social interventions (Rossi et al., 2004). A review by Durlak and DuPre (2008) of over 500 studies suggests that the expectation of near-perfect implementation of interventions in real-world settings is unrealistic - few studies have reported levels of more than 80%. The coverage achieved by *Options: WC* was so low however, that an effect on patient outcomes is unlikely to have been seen. Further, the potential effect of *Options: WC* was likely compromised by the low dosage of *Options* delivered to patients. Findings from KZN and Mpumalanga suggest that as few as two sessions are sufficient to produce statistically significant behaviour change; it seems unlikely that one *Options* session would have a significant impact on behaviour, although it is not impossible. In Mpumalanga there were 117 (33%) patients who attended only one *Options* session. It would be useful to know the impact of this group on the study's outcome results, but this data was not presented.

In addition to compromising the intervention's potential effectiveness, the low coverage and dose achieved by *Options: WC* suggests the presence of significant and unanticipated barriers to the implementation of the intervention in this setting. In most cases activities intended to improve coverage appeared successful, although any improvement was small and temporary (see Figure 2). This suggests that barriers to the implementation of the intervention were not effectively addressed by site visits, refresher training and ongoing supervision. The low level of implementation in terms of sexual risk behaviour also has implications for the promotion of the *Options* intervention as one way in which sexual risk reduction can be integrated into HIV clinical care in South Africa's primary healthcare system. One possible reason for the lack of delivery in this regard is that counsellors were not instructed to deliver *Options* in all adherence counselling sessions, but only when they deemed it appropriate. Further research into the reasons why

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Options was not used to a greater extent for addressing sexual risk behaviour is needed before any conclusive statements can be made in this regard.

Options was implemented in the Western Cape in an attempt to move this intervention further along the continuum from research towards routine practice, and the differences in coverage achieved by the KZN, Mpumalanga and *Options: WC* studies reflect the impact of real-world contexts on programme implementation. For example, the supervision and performance monitoring that was implemented by Peltzer et al (2010) and Cornman et al. (2008) to increase the internal validity of their outcome evaluations likely had a significant effect in terms of ensuring a high level of delivery.

The role of the larger (political) context in which programmes are implemented in the real-world is indicated in the current study as well. For example, counsellors in Mpumalanga were financially compensated for each *Options* session and ORF completed. The apparent effectiveness of this incentive strategy speaks to a larger issue of contention regarding remuneration and LHW (lay health worker) programmes in South Africa. This is that the stipends¹⁰ paid to LHWs are considered to be inadequate compensation for the work that is required of them. Counsellors also regularly experience significant delays (sometimes up to four months) in the payment of these stipends. In interviews aimed at assessing their satisfaction with the intervention, counsellors in Mpumalanga suggested that the DoH should increase the financial compensation for the work that they do, including the implementation of *Options for Health* (Peltzer et al.). Peltzer et al. admit that lay counsellors “will most likely not implement additional interventions (on top of their already defined duties) without financial, structural or personnel assistance” (p. 384), even if it is within the scope of their practice. If counsellors perceived *Options* as adding to their workload, inadequate remuneration may be one factor contributing to the low level of implementation of *Options: WC*. Healthcare systems are complex environments and barriers to change can arise at various levels (Grol & Grimshaw, 2003). While the pilot study conducted in one Cape Town clinic alerted the *Options: WC* implementation team to some of the barriers to integrating conversations about sexual risk into adherence counselling, ARV adherence was only added to the programme as a target behaviour after this pilot study had been completed. As such, the barriers to using *Options*

¹⁰ Stipends are a form of financial remuneration, but distinct from wages or a salary in that they do not represent payment for work performed and are lower than what would be expected as a permanent salary for the same work. These are payments that are intended to allow a person to be (partly or wholly) exempt from salaried employment so that they may undertake work that is normally unpaid and/or voluntary (Stipend, 2011).

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as a part of adherence counselling practice are not known. Further research is thus required to determine the barriers to integrating both sexual risk reduction and the *Options* counselling model into adherence counselling practice.

A limitation to this study turned out to be the poor quality of data routinely collected from counsellors by NGOs. As a result, the size of the target population is not accurately represented, and the data presented here is an under-estimate of the proportion of eligible patients who did in fact receive *Options* counselling. Prior to the evaluation of *Options: WC* efforts were made to determine the definitions used for categories of patients, and NGO staff confirmed the categories used for tracking patients with problematic adherence. In hindsight, it is obvious that these definitions should have been confirmed with each and every counsellor at this time as well. While some counsellors were asked for confirmation prior to data collection, miscommunication meant that they agreed to counting patients with poor adherence under particular categories, but omitted to mention including other types of patients in these same categories as well. Unfortunately the extent to which coverage is likely to be underestimated could not be determined from the data. Near-perfect implementation may not be necessary for effective implementation, as Durlak and DuPre (2008) have observed that positive results are often obtained with levels around 60%. Despite the limitations in the data used in this study, it is considered unlikely that the coverage achieved by *Options: WC* was, in reality, even near 60%.

Conclusion

This study has highlighted the importance of monitoring programme performance for programme management in terms of an aspect of implementation that is apparently as simple as the number of people reached. Particularly in the beginning stages of implementing a new programme, monitoring coverage quickly indicates the need for corrective action to ensure that the programme is being delivered as intended (Durlak & Dupre, 2008; Rossi et al., 2004). This data also provides a measure of the effectiveness of intervention strategies aimed at increasing coverage. Despite various efforts to improve the coverage achieved by the *Options: WC* programme, the current study showed a failure to reach the majority of the target population. The implication of this is that the feasibility of implementing this programme within the context of the standard care programme for adherence counselling may be poor.

Coverage data is important for determining the readiness of a programme for outcome evaluation. There is the risk that an outcome evaluation that is conducted before

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a programme is sufficiently established will produce results that establish a programme as ineffective (Durlak & Dupre, 2008; Fixsen et al., 2005). On the basis of the data collected during this study, plans to conduct an assessment of the impact of the *Options: WC* intervention on ARV adherence at 12 months following implementation were abandoned by the evaluation team. The implications of this type of data for programme management, development, and evaluation are significant – it is thus important that it is accurate. The poor quality of data being collated by counsellors and NGOs is a limitation not only to this study, but to the monitoring and evaluation of this component of the ARV treatment programme by CTCH and the Provincial DoH. More accurate data collection in this regard could be used to contribute to the strengthening of service provision in the province. For example, routine data accurately representing the number of patients counselled for poor adherence would provide valuable information regarding the prevalence of sub-optimal ARV adherence in the Western Cape. This information could be used to target sites for intervention activities, research studies, and additional support (more counsellors could be allocated to busier sites for example).

Finally, this study highlights the importance of effectiveness research in moving evidence-based interventions into practice settings. The relatively low level of coverage achieved *Options: WC* suggests the influence of factors not encountered in the RCT conducted by Cornman et al. (2008) in a comparable setting. A key question for the promotion of *Options* as a feasible intervention for this setting is what it would take to effectively implement *Options* within the context of routine adherence counselling practice. Thus, while effectiveness research is important in determining intervention outcomes in real world settings, it is also important in terms of understanding implementation. The coverage data collected as a part of this study indicate that implementation activities intended to facilitate coverage were ineffective in producing sustainable increases in delivery, and that it would take more than refresher training, supervision and informing all ARV clinic staff of the project to achieve effective implementation. Further research investigating the barriers to integrating HIV prevention and the *Options* model into the ARV adherence counselling programme is required so that implementation strategies may be tailored to address these. In this way, the future implementation of evidence-based interventions like the *Options: WC* programme within this setting may stand a better chance of producing positive outcomes.

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Chapter 3

Barriers to Implementation

The previous chapter presented data suggesting that the feasibility of incorporating the *Options for Health* intervention into routine practice within low-resource, primary health care settings may be poor. *Options* was not used to address sexual risk behaviour, and delivery of the counselling protocol failed to become routine (or even regular) practice during antiretroviral (ARV) adherence counselling. Nevertheless, there is a need for effective, integrated HIV prevention and care, and understanding challenges to the practical implementation of evidence-based interventions in real-world settings is important in achieving this (Dolcini et al., 2010; Panisset et al., 2012). The study described in this chapter focused on factors that negatively affected the integration of the *Options* counselling protocol into routine adherence counselling from the perspective of counsellors tasked with implementation.

Background

Healthcare systems have been described as ideal settings for interventions such as Behaviour Change Counselling (BCC). This is because the repeated contact between healthcare providers and recipients during routine chronic care offers the opportunity to monitor progress, adjust behaviour change plans, sustain motivation, and maintain positive change (Fisher et al., 2006; Whitlock et al., 2002). For this reason the model of chronic care used by antiretroviral therapy (ART) programmes is felt to provide the opportunity to achieve more effective prevention with people living with HIV (PLWH) via the delivery of behavioural interventions aimed at transmission-risk reduction and more effective ART adherence (Cornman et al., 2008; Remien et al., 2008). Clearly, though, there is a need to identify and address barriers to the integration of transmission-risk reduction and care into routine practice in order for this opportunity to be realised.

There are numerous structural and contextual factors that pose challenges to the implementation of effective, coordinated sexual risk reduction and care programmes, including the traditional practice of separating these two agendas (Remien et al., 2008). This is particularly the case in South Africa, where sexual risk reduction among PLWH is not a strong component of the country's HIV prevention efforts. Koester et al. (2007) have reported on challenges faced by 15 clinic-based projects that implemented integrated transmission-risk reduction and care as part of an HIV Prevention with Positives in Clinical Settings Initiative in the United States of America (USA). Prevention

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interventions were based on theories and models including the Transtheoretical Model of Behavioural Change, Motivational Interviewing (MI), Social Cognitive Theory, and the Information-Motivation-Behaviour skills theory of behaviour change. The model of delivery to be used in each of the 15 clinics was selected by individuals responsible for implementation of the interventions. Interventions were delivered by healthcare providers (doctors and nurses) at four sites, by specialists (social workers, case managers and health educators) at three sites, and by peers (current or former clinic patients) at three sites. Five sites implemented a mixed model in which interventions were delivered by a combination of providers and specialists. Some interventions were delivered during routine clinic visits while others required clinic visits separate from routinely scheduled appointments, and included a minimum of four (individual or group) counselling sessions.

Challenges related to intervention delivery by healthcare providers were similar to those faced by other new programmes in healthcare settings described in the introductory chapter to this thesis. These included time constraints and clinic flow, the need for training and skill-building in risk assessment and behavioural counselling, and a lack of motivation/support. In three of four sites where interventionists were themselves physicians at the clinics, they were able to leverage their power over clinical practice and use their relationships with clinic staff to build support for the programme. In contrast, the interventionist at the remaining site where the intervention was delivered by healthcare providers and specialists was not a medical doctor, and appeared to have no power to influence providers' participation. In this site training was poorly attended and providers were reluctant to be involved as the clinic already had a department charged with the responsibility for addressing HIV prevention with patients. Interventions delivered solely by specialists faced fewer barriers: Extensive effort to gain buy-in from providers was not necessary, and they were not asked to take on extra responsibilities or have additional demands on their time other than to refer patients to the specialist. Koester et al. suggest that the specialists required less convincing around the need and importance of implementing behavioural interventions because they were counsellors or educators by training and profession. The main concerns here were around the recruitment and retention of patients, particularly where patients were required to return for counselling sessions outside of their scheduled clinic visits. Challenges faced by peer-delivered programmes revolved mainly around hiring (who qualified to work as a peer) and retention, training (which needed to be intensive) and supervising. Challenges faced by mixed model interventions were resolved to varying degrees depending on the willingness

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of clinic staff to help smooth patient flow, change standard care procedures, and facilitate the enrolment of patients into the intervention

The above research provides insight into the challenges that can be expected with implementation of clinic-based positive prevention interventions. However, barriers to integrating HIV prevention and care in African settings are possibly different to those found in clinics in the USA. Rose et al. (2011) explain that differences between countries' HIV epidemics, health systems and infrastructure mean that not all aspects of interventions developed in the USA will be relevant or will translate well to other settings. For example, in settings such as South Africa where primary healthcare clinics are generally understaffed and oversubscribed, the delivery of healthcare does not proceed as it is conceptualised and delivered in high-resource settings (Rose et al.). In South Africa lay counsellors are placed within HIV clinics specifically to relieve the burden of counselling and support activities from professional staff. The use of this cadre of healthcare worker is unique in comparison to settings in developed countries such as the USA, where interventions are more commonly delivered by professionals such as doctors, nurses and pharmacists (Bärnighausen et al., 2011). Based on their knowledge of the HIV epidemic in Mozambique, Rose et al. speculate around models of positive prevention that may be best suited to developing countries. They suggest that interventions delivered by healthcare clinicians may be most effective, as these individuals are respected as a source of information and guidance. While these authors, as with many others, do not define their use of the word "clinician", this term is generally accepted to refer to healthcare professionals such as doctors and nurses. However, because clinician time with patients is limited, Rose et al. recommend the use of short, individually tailored prevention messages. The authors warn that models using approaches that are time intensive, "such as the motivational interviewing used by the *Options Project* [italics added]" (p. 48), may not be feasible in these circumstances.

There are numerous obstacles to changing practice in healthcare settings which occur at various levels and are associated with patients, providers, the healthcare team and organisational context as well as the wider environment (Grol & Grimshaw, 2003; Norton et al., 2009). In Chapter 1 Durlak and DuPre's (2008) model for effective implementation was introduced. The authors identified contextual factors related to five categories that consistently influence the implementation process. Factors associated with the community context include prevention research that should provide basic information regarding dissemination to communities, the availability of funding, and the political and policy

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context. In terms of characteristics associated with providers, perceptions related to the need for and benefits of a programme are influential, as well as self-efficacy and skill proficiency. Innovation (or programme) characteristics influencing implementation are the extent to which the programme is adaptable and can be modified to fit providers' needs, and compatibility (that is, contextual fit or congruence). There are a number of factors associated with organisational capacity, all of which contribute to the extent to which organisational atmosphere is conducive to trying new approaches. They include, among others, a positive work climate, norms regarding change, the extent to which an organisation is able to integrate a new programme and shared vision (or staff buy-in). Leadership and managerial/supervisory/administrative support are also important requirements in this area. Finally, training and technical support are activities that ideally occur after required resources have been secured, and after the status of the other influential factors has been deemed conducive to effective implementation as far as possible.

Developing sufficient capacity is essential for the effective implementation of a new programme (Durlak & DuPre, 2008). Barriers to implementation need to be identified so that strategies promoting the integration of the programme can be tailored to address them (Grol, 1997; Grol & Grimshaw, 2003). Durlak and DuPre's work provides a comprehensive framework for guiding the assessment of factors affecting programme implementation. The study presented in this chapter aimed primarily to determine factors negatively influencing the integration of *Options* into routine ARV adherence counselling practice, both in terms of addressing adherence and sexual risk behaviour. Previous research has revealed some barriers to the implementation of *Options* in terms of addressing sexual risk behaviour (mentioned in Chapters 1 and 2) but barriers to the routine use of the *Options* model for addressing problematic adherence are unknown. Findings are presented according to Durlak and DuPre's framework for effective implementation and, as such, may have relevance for the implementation of other interventions using lay healthcare providers as well.

Method

Study Design

The low level of coverage observed in Study I during the first few months of implementation served as the instigation for the current study. The aim of this study was to determine the factors responsible for counsellors' minimal use of *Options* in their practice. The *Options: WC* evaluation team sought to understand counsellors' experiences

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in implementing the intervention, particularly with respect to what prevented them from using the protocol to address non-adherence and sexual risk behaviour. For this reason semi-structured interviews were selected as the method for this study. Combining pre-determined questions with the opportunity for exploration of participant responses, the semi-structured interview allows for uniformity in the type of data gathered from respondents as well as the opportunity for respondents to express their individual experience. Because barriers to implementation may have differed between sites, semi-structured interviews would allow for this information to emerge.

Population and Sampling

Of the 39 lay ARV adherence counsellors trained in *Options* in June 2009, 31 were still involved in the project at the time the interviews were being arranged in January 2010. Given limited resources in terms of time, staff and funding for transcription and translation, it was decided that not all 31 counsellors would be interviewed. Thirteen counsellors were thus randomly selected to take part using names drawn out of a container. The number of *Options* sessions conducted by these counsellors during the period June 2009 to January 2010 ranged from 2 to 33, with a mean of 13. In addition to the 13 randomly selected counsellors, two counsellors were purposively included because of the relatively large number of *Options* counselling sessions they had conducted (114 and 233 sessions each by the end of the implementation period). It was hoped that these two counsellors would reveal information around factors that facilitated the use of *Options* in routine practice. In total, 15 counsellors were thus interviewed as a part of this study. These 15 counsellors were located within 10 of the 20 ARV clinics involved in the implementation of *Options: WC* at the time.

Data Collection

Semi-structured interviews were conducted by two data collectors and took place between January 2010 and April 2010. One data collector (NM) was employed full-time as a part of the *Options: WC* evaluation team, and had interviewing training and experience on previous studies. A first-language Xhosa-speaker, NM had developed rapport with counsellors over the months in which she visited their clinics to collect *Options* Record Forms (ORFs) as part of Study I. She was thus familiar with some of the difficulties faced by counsellors in their work and in relation to the *Options* counselling protocol. The second data collector (SB), also a first language Xhosa-speaker, was a volunteer from another research unit at the Medical Research Council. SB had received training and experience in the method of interviewing as a part of her university studies.

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The principle investigator (PI) developed the interview schedule, and trained the two data collectors on the background to the study, the intervention protocol, and the interview schedule. Interviews were conducted and audio-recorded at counsellors' clinics. Two interviews were conducted in a combination of English and Xhosa, and the remainder were conducted in either Xhosa (n=5) or English (n=8) exclusively. Interviews ranged from between 30 and 90 minutes in length. Interviews were transcribed verbatim by a professional transcription service and transcripts were translated into English by NM and SB where necessary. Translations by NM were checked for accuracy by SB and vice versa, and no major corrections were required.

The interview guide was developed by the PI around a basic knowledge of some of the difficulties being faced by counsellors. This knowledge had been gained from anecdotes brought in from the field on a monthly basis by NM. Counsellors were asked:

- What made it difficult for them to use *Options*;
- How their patients were responding to *Options*;
- To describe times when they had consciously decided not to use *Options*;
- To describe times when it was easier for them to use *Options* (and things that made it easier for them to use *Options*);
- How they manage patients with whom they do not use *Options*;
- What prevented them from using *Options* for managing sexual risk behaviour in treatment work-up sessions;
- What prevented them from using *Options* for addressing sexual risk behaviour in follow-up counselling sessions.

Data Handling and Analysis

Identifying information was removed from all transcripts by the PI. For quotes presented in the results section that follows: punctuation has been included for ease of reading; words of clarification, where necessary, have been added in brackets; the omission of words is indicated by three ellipsis points; names have been replaced with pseudonyms; and counsellors are identified by letters of the alphabet.

Thematic analysis was used to highlight the key factors affecting the use of the *Options* counselling protocol by counsellors (Green & Thorogood, 2004). Analysis commenced with a read-through of complete interviews, and notes regarding similarities and differences in experiences were made. Elements of the coding scheme to be applied to the data were predetermined by the interview schedule, but other codes and themes were allowed to emerge from the data. Participants' explanations and justifications were

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coded according to these using coloured markers before being cut up, grouped together and pasted onto A3 sheets of paper. The PI coded and analysed all 15 transcripts. Three other members of the *Options: WC* research team (CM, NS and AC) read the transcripts of two different and randomly selected interviews each. Their reading of these transcripts informed a discussion in which the themes arising from the analysis were informally presented by the PI. This was in an attempt to ensure that no relevant data had been excluded from the analysis.

Results

Themes identified in interviews with counsellors are presented below according to the category of variables with which they can be associated in Durlak and DuPre's (2008) framework for effective implementation.

Provider Characteristics

In general, providers who support the need for a programme, and who have the requisite skills, are more likely to deliver that programme at higher levels of dosage or fidelity (Durlak & Dupre, 2008). The perceived benefit of a programme is also important here. Six of the 15 counsellors interviewed in the current study indicated that *Options* had improved their practice and the quality of their engagement with patients (the other nine counsellors did not comment on this). Counsellor C, for example, described how she had had “a bad tone and attitude” when seeing the same patients regularly referred for adherence counselling, because she had to repeat information she had already given them. *Options* helped to alleviate some of this kind of frustration because of its emphasis on collaboration between counsellor and client, and the recognition that the decision to change lies with the client:

[*Options*] took a burden from my shoulder because now it is not about me...it is about a patient and the patient has to say all the options, all the plans...if they don't want ARVs, they just say they don't want ARVs, if they feel like [it, then] they can try again, so it's not about me, it's about them. (Counsellor B)

Of the six counsellors, others spoke about how the language and approach associated with MI had improved their counselling skills. This had a positive impact on their counselling experience:

Ever since we came from *Options*, because the counselling we were doing at first we feel, shame, if you remember we were using [words like] “must”, things like that and you know, we were harsh. (Counsellor

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D)

For me it has benefitted me in terms of my skills, it enhances the way I also do talk...it's very professional. (Counsellor E)

In sessions my clients were happy and feeling open to telling me everything...because they see that *Options* is not shouting at them the way we did, a person feel free to tell you everything. (Counsellor F)

Some of these counsellors also spoke about having had a patient return after making some progress on an action plan developed in a previous session and expressed the belief that *Options* works: “We need to do that [*Options*] because it helps” (Counsellor G). Despite positive feelings towards the intervention, *Options* was not delivered to a large proportion of the target population by these six counsellors, indicating the presence of factors with a more significant and negative impact on their use of the intervention protocol. The other nine counsellors interviewed did not comment on their support for the programme.

Innovation Characteristics

Programmes that are adaptable and that can be modified to fit the needs of providers and organisations are more likely to achieve a higher level of implementation than those that are not (Durlak & DuPre, 2008). Effective implementation is also more likely when a new programme is compatible with the organisation's priorities and existing practices. The extent to which counsellors perceived the *Options: WC* programme to be compatible with standard care adherence counselling practice appears to be one factor which influenced their use of the protocol. For example Counsellor A, who rarely delivered *Options* during the period of implementation, explained a challenge she experienced in delivering the intervention: “The sister [nurse] said I must give adherence counselling, that is where ... I found some of the difficulty, must I do adherence now? Must I do *Options* now? To choose one of the two, see.” For this counsellor the *Options* intervention appeared to be diametrically opposed to standard care practice. While the distinction between *Options* and “adherence” or “normal” counselling based on Egan's (2002) model is one that was made by other counsellors as well, another counsellor who delivered *Options* on a more regular basis than Counsellor A expressed a more flexible view. In response to a question about how she thought the *Options* and Egan's counselling models compared, she said:

You know there are so many challenges I do not want to lie, you need

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to apply the skills that you have, I am not going to say which one is... better than the other...because you sometimes find out that you are cornered, “what else can I use”? So all of these tools that you have, you must use them. (Counsellor C)

For this counsellor, *Options* simply represented a different method for achieving the same goal.

One specific area in which some counsellors felt that *Options* was incompatible with their practice was in relation to Step 1 of the protocol. Here the counsellor should ask for the client’s permission to proceed with the discussion around adherence (or sexual risk behaviour). Counsellor K observed that asking permission to continue with the counselling session meant that patients stop seeing it as something they have to do:

You know what, that permission thing, it’s ... really making things difficult ... because once you ask the permission to the patient, and said “how long is it gonna to take?” and [you] say “five minutes”, [then they say] “oh, huh uh, I’m in a hurry, no, I need to be at work, my boss already phoned me and then I can’t wait for another five minutes.” (Counsellor K)

According to clinic (and Provincial Department of Health (DoH)) protocol, adherence counselling is mandatory for patients identified as poorly adherent. The counsellors’ request for permission to continue with the session offered patients the opportunity to decline. When patients did decline, counsellors were left in the difficult position of not being able to deliver the service they are expected by other clinic staff to provide.

It was acknowledged in the introductory chapter to this thesis that discussions around sexual risk behaviour are not routine practice in counselling sessions with poorly adherent patients. Rather, counsellors will address this issue mainly with patients whose viral load has increased (in the context of adherence, this could indicate unprotected sexual activity) or who present with symptoms of a sexually transmitted infection. When asked about whether they were using *Options* to talk to follow-up patients about sexual risk behaviour, counsellors said that they continued to do this mainly when unprotected sex was indicated, and not as a matter of routine. They also reported that generally patients do not admit to engaging in any sexual risk behaviour. Counsellor K laughed as she said: “we don’t really have the patients that are having the sexual problems, our patients are using condoms but all you find out after six months or three months, the patient is pregnant!”

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For counsellors, use of the *Options* model was not always compatible with the problems their patients presented with. Counsellors described situations and types of patients for whom they did not feel *Options* was appropriate; many counsellors revealed an understanding of the *Options* model that was limited to particular types of non-adherence. As a result it seems that counsellors were missing opportunities to deliver the intervention. Some counsellors did not feel that *Options* was appropriate for what were perceived to be “once-off” problems or “valid” reasons for poor adherence:

Like most of our patients they default, they go to Eastern Cape... and it's something that happens once a year ... and the patient tells you that , “no, it was because of the death of my grandmother”... so what's the use of using *Options* in that case? (Counsellor K)

Patients having forgotten to take treatment doses for very particular reasons were not perceived to have a problem, and one counsellor felt that doing *Options* and coming up with action plans to improve adherence was of little use to people like truck drivers because it was unlikely that they would come back for a follow-up visit.

Regardless of contextual compatibility, changing practice is difficult and the more complex the changes required, the more difficult it is likely to be. During her interview Counsellor E spoke candidly of the difficulty in adopting *Options* as the main method for counselling patients with adherence difficulties: “change is very painful because you have to change from the old style that you use...it was not easy to do *Options*, sometimes I forget it... it's not easy to let it go, what you have.” Another counsellor who described *Options* as being quite similar to Egan's (2002) model still described the change in practice as follows: “It's like we changing the left-hand writer to be a right-hand writer” (Counsellor I). This suggests that while some counsellors were aware of the similarity in approaches, there were (at least some) aspects of *Options* which may have been experienced as more difficult.

From counsellors' interviews it appears that, for some, elements of *Options* were integrated into routine practice and were implemented to the extent that they met counsellors' needs. For example, some counsellors reported sometimes using particular aspects of the *Options* intervention:

Even if I don't do *Options* properly ... then I will ask a person... “yeah, tell me how important is it for you to take your treatment?” That means I'm trying to search from this client by using one of the *Options* tools. (Counsellor J)

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Three counsellors reported having adopted particular skills associated with MI and found them to be useful regardless of whether they were using the *Options* protocol or not. One counsellor particularly liked the concept of asking for permission as a helpful way to begin a discussion on a sensitive topic. Counsellors' adaption of *Options* involved not only the eight-step protocol but the strategy for implementation as well. This appeared to be related to the integration of *Options* into a "theory of practice" which included beliefs around the types of patients and problems that the intervention was appropriate for.

Durlak and DuPre (2008) acknowledge that the extent to which a programme stimulates the interest of recipients affects programme effectiveness, but the influence of recipient characteristics is not included in their framework for effective implementation. Patient characteristics constitute potential challenges to intervention delivery in medical settings (Grol & Grimshaw, 2003), and this was a predominant theme in counsellors interviews.

Patient Characteristics

Counsellors did not feel that *Options* was appropriate for all patients referred to them with adherence problems: "the *Options* training helped me [but] not in all my patients you see, because some of my patients ... put it like this, I got these older patients you see, now I must explain [to] them about this *Options*" (Counsellor L). Another counsellor said:

Sometimes the other ones [patients] are uneducated and then you really have to use illustrations...to make the patient understand what you talking about...it's really sometimes difficult and you see, I don't see *Options* will work here, how am I going to explain this and that?
(Counsellor K)

In addition to the elderly and uneducated, counsellors reported reverting back to their "old style" of counselling with patients who they described as "difficult." These were patients who did not understand how the readiness-to-change assessment worked, who were non-responsive, or who denied having a problem with their adherence (despite incorrect pill counts).

A recurring statement in counsellors' interviews (and throughout the period of implementation) was that patients did not understand the readiness-to-change ladders. Having to try and explain the ladders until patients give scores that the counsellor can work with, increased the time spent on the session and could have resulted in *Options*

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being abandoned mid-way through:

Sometimes there are difficult patients, where you try to make this thing easy but you find no, it's difficult for him or her so I'm gonna prefer, it's better to go back ... to my [traditional] adherence [counselling], and use it then it's easy. (Counsellor H)

Like we've got bergies [homeless people - SD] that come in and out here taking treatment, they come drunk and whatever you say they don't care ... they come not interested, you ask them questions, they just shut up as if you are sitting with a doll. (Counsellor J)

Oh like there are times when a person will say "I take my pills" ... but the percentage [adherence calculation] is not saying that they are taking their pills ... I try Egan's model, I told her it's important to take pills and explain what shows if she takes the pills and the bloods that are taken, the virus is going to be seen like viral load is suppressed and CD4 count is going to be seen by increasing if she is taking her pills. (Counsellor O)

For Counsellor O, Egan's (2002) model appears to be equated with information-giving. This is of interest because anecdotal evidence suggests that adherence counselling in the Western Cape consists more of the provision of information and advice than trying to overcome barriers to behaviour change. This issue is further investigated in Study III.

Patient resistance to counselling also had the effect of increasing the time pressure experienced by counsellors in some cases. This seemed to be related to a resistance to counselling in general which made it challenging for counsellors to use *Options* with particular people. Counsellors described patients as being unwilling to attend counselling sessions and reported that they would complain when called in for (any) counselling:

You see some of them they will always say, "no, I don't want to go to the counsellor again because its wasting my time" or "I'm in a hurry" and all that, you see, they don't want to come. (Counsellor L)

Most of the clients they don't have time...some of them are working, some of them have children at home, some of them stay far... (and so) they want to come here just for the doctor...the pharmacy then he want to go home. (Counsellor A)

Resistance to counselling was also expressed in patients' superficial agreement with counsellors. For example one counsellor explained how some patients would agree to the session but that: "they don't feel to do the *Options*, they just tell us what we want to

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hear...they will give me all ten [on the importance and confidence ladders]...these people just want to tell me just to get out you know” (Counsellor A).

Organisational Capacity

General organisational features associated with implementation include work climate, norms regarding change, the extent to which an organisation can incorporate a new intervention into existing practices and processes, and the extent to which members share a belief in the value and purpose of the intervention (Durlak & DuPre, 2008). The one theme that arose with regard to factors that made it easier for counsellors to implement *Options* was a supportive clinic environment. Counsellor G explained: “We are a team, like we work together ... whenever Sister X sees someone with a high viral load or who’s defaulting ... she send that person to me ... the same with Sister Y.” Generally counsellors described the role of other clinic staff in relation to patient referral for counselling, and did not elaborate on how the support of other staff enabled them to implement *Options* in their counselling sessions. A supportive environment was obviously an important issue however. Some counsellors listed an *unsupportive* environment as something that made it difficult for them to implement *Options*. For example, Counsellor E described how her team had responded to hearing about *Options* in a way that resulted in more work being required of her: “It was like a competition ... immediately when we introduce *Options* to them, we sat with them and did feedback about our training ... immediately they task[ed] another doctor to develop a [new counselling record] form” (Counsellor E). This counselling form was to be completed in addition to the ORF. Counsellors appreciated other staff members who took an interest in their work. Some felt that clinic staff needed to be more involved in the implementation of *Options*, and that all staff should be trained in the intervention: “If there can be those ones that are in charge that understands it clearly, I think maybe they can draw the strategy that can also help the counsellor to do that *Options*” (Counsellor K). What seems to be at issue here is counsellors’ low status within the clinic hierarchy, and their subsequent inability to effect the organisational and practice changes required by *Options*:

I’m positive *Options* can work if they can start there [at the top] and you must also know that we are, I don’t know what I can call us, we are minors from these people so anything that comes from us, they don’t listen to it – even the [lack of] space thing, the clinic was extended ... everybody has got a room but no one cared to give us a room.
(Counsellor J)

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Among factors related to organisational capacity is the need for effective leadership and managerial support (Durlak & DuPre, 2008). It was mentioned in the introduction that Cape Town City Health and the Provincial DoH supported (in principle) the implementation of *Options*. The Clinical Programme Co-ordinator from Metro District Health Services who was well-known to counsellors attended the last day of each of the five-day *Options* training courses (the 39 counsellors were trained in two groups). This was in order to indicate the health authorities' support for the programme to counsellors. In their interviews though, counsellors expressed the desire for support at lower levels as well. For example, counsellor J indicated the need for support from the facility manager and other ARV clinic staff members:

It's difficult for us to continue *Options* because the nurses, it seems as if they don't understand anything about *Options* ... if this can start up and go down, not start down and go up ... then they can know about the forms and everything, even when they [the *Options: WC* implementation team] came here to introduce *Options* to the manager, the manager promised that he is going to look after us to see that we are doing *Options* (but) I never saw the manager coming in ... asking us how we are doing on *Options* because he ... doesn't even check what is going on, on the ARV side. (Counsellor J)

The most significant barriers to the implementation of *Options* as reported by counsellors related to the inability of ARV clinics to incorporate the intervention into existing practice. Clinic practices and processes, such as a lack of space (in some clinics), high patient loads, the absence of a system of referral for counselling, and a lack of time, were identified as the main causes. These barriers indicate the poor capacity of primary healthcare clinics to accommodate a counselling programme.

A lack of dedicated counselling space. Of the 15 counsellors interviewed, 5 were from facilities in which space was limited and there were no/too few dedicated counselling rooms:

At first I did start doing *Options for Health* and I, I saw that it is very useful for the clients, that I did but I didn't continue doing it because it was difficult because of the time and the space for me to continue doing *Options*, but I saw it is working. (Counsellor J)

For two counsellors the lack of a dedicated counselling room meant that they did not always have their *Options* materials with them:

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We never have a room...and then once you get a room and then you only take the patients' file, then when you are there you thought, "oh, my *Options* tools are down there"...then I think that "oh, I see this person needs *Options* but I can't go and fetch the tools now, I'm gonna see this patient and then let this patient go...because you've been struggling looking around for the room already. (Counsellor K)

For all of these counsellors however, it was the limited amount of time that they were able to spend with each patient as a result of not having a dedicated counselling room that was the main problem:

I'm in the doctors room...then the doctor opens and gets in ... "finish up I'm here to see, I want to see a few patients before I go to see the wards ... so please finish up" you know, so you, you've got maybe six patients that are waiting for you, so in any case you gonna try to fit those six patients before that time the doctor comes [back] in. (Counsellor K)

One counsellor explained that the room she shared with two other counsellors was also used to conduct patients' pill counts (the implication is that there is generally a number of people present in the room). She also described the impact of time pressure associated with using other staff members' rooms on *Options*:

You get someone's place [room] ... and [then] someone want her space to work, so you think *Options* is eight steps, you need to have time with a person and you need to have time for recording down in those folders [ORFs], sometimes I do *Options* and do not record it down. (Counsellor O)

A lack of designated counselling space is a problem commonly faced by clinic-based HIV counsellors in South Africa (Evans, 2008; Richter et al., 1999; Rohleder & Swartz, 2005). Counsellors in the current study described conducting counselling sessions in broom cupboards and behind fabric screens in busy waiting areas. The use of spaces such as these, including shared consulting rooms, is associated with compromised privacy and breaches of confidentiality (Richter et al.; Rohleder & Swartz).

High patient loads. Counsellors reported finding it difficult to do *Options* when the clinic was busy because they felt the need to rush through the pile of folders belonging to patients waiting to see them. Sometimes the pressure to hurry was imposed by clinic routine: "You see because sometimes I ... got a lot of people and sometimes the pharmacist, she's working half day you see, so we must push, so I don't have enough

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time” (Counsellor L)¹¹. The pressure associated with having a high patient load meant that counsellors would fall back on what they are used to doing: “the number of people we see, it’s too much ... we do our...the normal counselling, we do it before we even know it” (Counsellor M). Counsellor G said: “especially there are times when I’m tired then I feel no, I’ll (rather) just go ahead with my counselling sessions than do *Options* ... say like we are seeing about over a hundred people.”

Lack of a system of referral for follow-up counselling. Counsellors experienced the ORFs as a burden: Feelings were that they took too much time to complete and that there was already enough paperwork that they had to do. Not only were the ORFs a burden, but they were perceived as an unnecessary one. Counsellors mentioned that it was very rare to get a patient back for a follow-up counselling session. As a result, one counsellor said that she did not see the point of having to write up the details of each and every counselling session conducted. The inability to follow-up on patients was sometimes a result of patient resistance:

We will see that person now ... you give her a follow-up date but she won’t come back to you, she will run away even if she’s here at the clinic, you’ll see someone hiding here, she doesn’t want to come back, I don’t know why. (Counsellor J)

Generally though, patients are referred for counselling as and when there were discrepancies in their pill counts, their viral loads increased, or they missed appointment dates. There is thus no guarantee that a patient seen one month for counselling will be seen again by the counsellor at their next clinic visit. The lack of follow-up had a further impact in that counsellors were unable to determine the impact of their work on patients: “I don’t know [if] it’s working, I just fill form and a patient go home ...it’s very seldom for me to get a patient for [a] second [session]” (Counsellor N). The lack of a system for follow-up in clinic-based HIV counselling has been identified in other South Africa studies, and the inability to determine the effectiveness of counselling sessions is potentially de-motivating for counsellors (Evans, 2008; Nulty & Edwards, 2005). In the current study a lack of motivation is likely to compound the effect of the various other factors challenging the ability of counsellors to implement the *Options* intervention.

***Options* requires too much time.** The main barrier to the use of the *Options*

¹¹ As mentioned in the first chapter of this thesis, poorly adherent patients are required to be seen by the counsellor before they can be seen by the doctor and/or be sent to fetch their pills at the pharmacy.

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counselling protocol was reported as a lack of time. This theme runs through the data presented above and explains why counsellors did not use *Options* to address problematic adherence or sexual risk behaviour in counselling sessions with patients on treatment. This was also the reason why counsellors did not use the *Options* protocol to address sexual risk behaviour in the context of treatment work-up sessions; counsellors felt that using *Options* to address sexual risk behaviour in this context was not feasible as a result of the imbalance between the amount of information they had to deliver, and the time available to do it in:

They [patients] have to do go through three counselling sessions before they start medication so in counselling [session] one you need to explain, you need to make sure that the client understands why they come to the ARV site ... you need to find out about disclosure and social circumstances, everything ... Then when they come for their for second session that is counselling [session] two, that is where you tell them now how will they take their ARVs and you need to make sure that they can still remember what you said in counselling [session] one because before you start counselling [session] two you need to ask them if they have any questions concerning now their first counselling you did because by the end of all these three counselling sessions a client needs to know exactly how must they take their ARVs ... explain to them about follow-up dates and everything, so it's a lot of work for us and then on top of that lot of work there is *Options*. (Counsellor M)

Counsellors thus preferred to continue giving information on sexual risk behaviour and to conduct condom demonstrations within this context as per standard practice.

Training and Technical Assistance

Training for programme providers is a core component for successful implementation (Barwick, Bennett, Johnson, McGowan, & Moore, 2012). One counsellor mentioned the time that had lapsed between training and her first opportunity to deliver the eight-step protocol as a challenge:

It's nice by that time you are trained, there you understand, when you come to the clinic you don't get people, defaulters, you forget again everything...sometimes I forget to use that thing of [Importance and Confidence] ladders...instead I found myself doing my first adherence. (Counsellor H)

In general though counsellors were silent on the extent to which they felt the training provided had equipped them with the ability to effectively implement *Options*, and none expressed a desire for ongoing technical assistance or support.

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Discussion

This study identified a number of barriers to the implementation of the *Options*: WC programme that account for the low levels of coverage and dosage observed in Study I. Durlak and DuPre's (2008) model of effective implementation provides a comprehensive framework for guiding the assessment of programme implementation. The model draws attention to the interaction between influential factors at various levels extending as far as macro-level factors such as politics and policy, allowing for a greater understanding of the dynamic context into which a programme is inserted. On an individual level, the integration of *Options* into an existing theory of practice appeared to facilitate the implementation of the intervention. Counsellors who incorporate the model into their repertoire of counselling practices as one method for addressing poor adherence may be more likely to deliver the intervention than counsellors who do not. On the other hand, the evolution of counsellors' theory of practice to include ideas about the types of problems and patients that *Options* could be used for had the effect of limiting the delivery of the intervention to a sub-sample of the intended target population. The characteristics of patients were salient here too, in that the manner in which patients' responded to the *Options* protocol affected the extent to which it was delivered. It is thus argued that patient characteristics are an important addition to Durlak and DuPre's model for effective implementation when transferring interventions from developed countries into developing countries, and from Western-European populations to sub-Saharan African populations.

While the intervention was not always fully implemented, some counsellors described having adopted some aspects of the *Options* counselling protocol (particularly those associated with MI) into their routine practice. The one element of the protocol counsellors spoke about omitting was the completion of the ORF, and here the way in which various factors interact to influence practice is evident: Counsellors reported that they did not complete ORFs when they were pressed for time, and the poor likelihood that patients would be seen for a follow-up *Options* session meant that these forms were also of little value to counsellors. The ORFs were one of the more challenging aspects of the protocol for counsellors – systematic and accurate note-taking has been identified as an area of weakness for South African HIV lay counsellors (Evans, 2010; Richter et al., 1999). Added to this is the fact that note-taking is not an activity required by the standard care adherence counselling programme, and it is not surprising that ORFs were not completed for every *Options* session conducted. Inadequate documentation of counselling

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sessions is not a problem specific to lay counsellors however. In their evaluation of the implementation of a risk reduction counselling intervention by medical providers and support staff at seven clinics in the USA, Gardner et al. (2008) observed that counselling was documented for less than half of patients who reported having received sexual risk reduction counselling¹². Providers admitted that they did not always document sessions on the forms that were to be placed in patients' folders, although reasons for this were not specified. Importantly the record completion rate at one clinic that had built the counselling forms into the electronic medical record system was substantially higher than other clinics which had not (79% as compared to rates of between 15% and 67% at other clinics). The use of electronic records as opposed to paper may have been easier for providers, but it is also possible that this move signalled a formal commitment on the part of the clinic to the programme, making it more likely that providers would take the time to systematically document sessions. In light of the known weakness among lay counsellors for accurate record-keeping however, any attempt to formalise systematic record-keeping among lay counsellors must be accompanied by adequate training and technical support.

While poor proficiency potentially contributed to the non-completion of ORFs, counsellors did not mention finding the forms difficult to complete. This was related to a general silence on the extent to which they felt competent to deliver any one of the eight-steps of the counselling protocol. The provision of training and technical assistance is a core component of effective implementation, and the possibility that the training provided as a part of the *Options: WC* project was not sufficient for counsellors to become proficient in the protocol must be considered. MI is an advanced counselling approach and it has been shown that lay counsellors generally do not achieve proficiency in the technique following brief training (Evangeli et al., 2009; Mash, Baldassini, Mkhathswa, Sayeed, & Ndapeua, 2008). An evaluation of counsellors' ability to deliver the *Options* protocol following training was conducted as a part of this thesis and is presented in Chapter 5.

Even if providers are convinced of the benefits of a new programme, and are proficient in its techniques, changing practice is difficult - particularly if the clinic environment is not conducive to change (Durlak & DuPre, 2008; Grol & Grimshaw, 2003). The most significant barriers to the implementation of *Options* identified in this

¹² Types of medical providers used to implement the intervention are undefined but are likely to have included doctors and professional nurses.

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study were related to organisational capacity to accommodate the programme. These barriers have implications not only for the *Options: WC* programme, but for the implementation of any BCC counselling programme in this setting. For counselling interventions aimed at behaviour change, the likelihood of achieving the intended effect has been shown to be increased if there is more than one counsellor-client encounter (Rubak et al., 2005). The standard care adherence counselling programme lacks a system of referring patients for follow-up counselling sessions. Should a patient on treatment happen to be seen by a counsellor following an initial counselling session, it is unlikely to be a “follow-up” session as such. Follow-up is important because, while some barriers to optimal adherence are perhaps more easily dealt with relative to others (for example, forgetfulness versus non-disclosure), it provides the opportunity for individuals to work towards change at a pace that is realistic and achievable for them. In terms of BCC, a lack of follow-up means that there is no opportunity to monitor progress, to provide encouragement or to work in small, incremental steps towards an ultimate goal while adjusting ineffective behaviour change plans along the way. The implementation of any referral system for follow-up counselling in this setting would need to be accompanied by an assessment of impact on patient load however. Counsellors in this study reported being overwhelmed by their current patient loads, and this had a negative impact on the amount of time counsellors had available for counselling patients.

A chronic shortage of space is a challenge faced by most public healthcare clinics in Cape Town and elsewhere in South Africa. The lack of a basic requirement such as dedicated counselling space is a constraint to the delivery of counselling because it infringes on privacy, confidentiality, and the time available for each client. Any discussion around private and sensitive matters such as sexual risk behaviour and reasons for poor adherence is inappropriate where privacy and confidentiality cannot be guaranteed. Shortage of space is perhaps one of the more difficult barriers for the Provincial DoH to address, as the resources required to expand clinic buildings are significant. While some clinics in Cape Town have made provision for counselling by placing wooden sheds outside of the main clinic building, this is not ideal and is an option only where there is space available on clinic premises.

A lack of time was a predominant theme in counsellors’ interviews, and the main stated barrier to the use of the *Options* counselling protocol for addressing poor adherence and sexual risk behaviour, and thus to integrating prevention with care. Because counsellors work within clinics where daily tasks centre on the enrolment and retention of

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people on ARVs, it is likely that counsellors perceive their role primarily in terms of supporting adherence. This, in combination with restrictions in time, likely contributed to counsellors' limited use of the *Options* protocol for addressing sexual risk behaviour with poorly adherent patients. Where time is short counsellors' are understandably unlikely to deliver more than what is absolutely required. Limited time is a factor common in most healthcare settings, and has even been identified as a barrier to integrating positive prevention with HIV care in settings that are not characterised as low-resource (for example, Morin et al., 2004; Patel et al., 2009). Koester et al. (2007) do not specify how provider concerns regarding time were addressed in clinics involved in implementing positive prevention in the USA, and the extent to which providers delivered risk reduction messages to patients at sites where time was a concern was not included in their report. In medical settings where time is an issue, near-full coverage of positive prevention interventions may be unachievable, even when delivered by providers (such as ARV adherence counsellors) who are dedicated to patient counselling services. Nevertheless efforts to boost and maintain coverage at the highest level possible should be undertaken. One strategy that has been shown to improve the likelihood that patients attending HIV clinics receive sexual risk reduction messaging is the establishment of procedures for guiding the provision of such interventions into practice (Morin et al.). For example, in a study assessing the receipt of HIV prevention counselling in 16 clinics in the USA, Myers et al. (2004) found that 69% of 118 patients attending clinics with written procedures for positive prevention received risk reduction counselling. In clinics with no such procedures, 45% of 100 patients received HIV prevention counselling. In the Western Cape, ARV adherence counsellors are required by protocol to address sexual risk behaviour in the third counselling session conducted as a part of the treatment initiation process (see Table 3). In contrast, sexual risk behaviour is not a required focus of counselling sessions conducted with patients already on treatment.

In the current study, counsellors reported reverting to standard care counselling practice when time was limited. *Options* is (in theory) more time efficient than Egan's (2002) model which is intended to be delivered in a 20 to 30 minute session¹³, although counsellors in Mpumalanga reportedly delivered the *Options* intervention in 20 to 30 minute sessions (Peltzer et al., 2010). In practice, the time for an *Options* session may

¹³ This is the time period that AIDS Training, Information and Counselling Centre envisions for counselling sessions conducted according to Egan's (2002) model. While it is probably possible to deliver a session in less time, the ability to manage this would likely depend on a strong focus on time efficiency during training (Hudson-Allez, 1997).

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vary according to the complexity of the patient's problem, the counsellor's proficiency with the eight-step protocol, and perhaps even the patient's ability to participate meaningfully in the readiness-to-change assessment. Counsellors may thus generally require more than 15 minutes to deliver the protocol, although counsellors' anecdotes and emphasis on time pressure also suggest the possibility that they could spend less than 15 minutes with each patient as well. The amount of time that counsellors are spending with patients needs to be assessed. This information could be used to guide decision-making around whether interventions (such as *Options*) are feasible in this regard or not. Alternatively strategies to increase the amount of time available for counselling sessions may need to be developed and tested.

In addition to the lack of formal support in the form of policy and procedure for the integration of sexual risk reduction counselling into ARV clinic care, interviews with counsellors suggest that the implementation of *Options: WC* suffered from a lack of on-site leadership and involvement by other clinic staff. Initially counsellors were trained in the *Options* intervention and given the responsibility for informing the clinic team about the programme and implementing it within their clinics. It was only after counsellors were interviewed in this study that site visits in which clinic staff were introduced to the intervention by implementation team members were made. In hindsight this was a poor strategy for introducing a new programme into the clinic setting, particularly one to be delivered by lay counsellors. The devalued status of clinic-based lay counsellors within the South African healthcare system is widely acknowledged in the literature (for example, Peltzer & Davids, 2011; Rohleder & Swartz, 2005; Schneider et al., 2008; Schneider & Lehmann, 2010) and speaks to the larger political context in which lay counselling in South Africa is situated. Despite their centrality to clinic functioning, lay counsellors are not clinic staff and are excluded from human resource and service planning (Schneider & Lehmann).

Counsellors in the current study experienced their low status through a lack of the provision of basic counselling requirements (such as dedicated space and privacy), but other ways in which this is manifest include the provision of limited training and support (Evans, 2010) and poor (and sometimes delayed) remuneration. While no counsellors raised the issue of remuneration in the current study, this is a long-standing issue for lay health workers (LHWs), and one that has been found to impact on absenteeism, morale and performance (Black, Sprague, & Chersich, 2011; Peltzer & Davids). Financial remuneration was also a factor that facilitated the implementation of *Options* in

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Mpumalanga (Peltzer et al., 2010).

In their interviews in the current study, counsellors referred to their inability to influence clinic practice and expressed the desire for staff members in authority to be involved in programme delivery. Evidence for the potential positive impact of involving the ARV clinic team in implementation is provided by the brief increase in delivery that was associated with the site visits that were conducted to introduce staff to the *Options* intervention (Study I). What was missing perhaps was the sustained presence of an individual to rally and maintain support for the programme, and to encourage collaborative problem-solving around implementation barriers. The presence of such an individual (a “programme champion”) is recognised as a facilitating factor for effective implementation by Durlak and DuPre (2008, p. 337), and was a facilitating factor in the implementation of clinic-based positive prevention interventions reported on by Koester et al. (2007). Ideally this individual would be a member of clinic staff but, given the structure of LHW involvement in the healthcare system, is perhaps more realistically an external (as opposed to an internal) champion.

Because counsellors were randomly chosen for participation in this study, potential differences in barriers between clinic settings are not highlighted. For example, the most significant barriers to implementation in hospital-based ARV clinics may be different to the most significant barriers in ARV clinics located with community health centres. Another limitation to the findings from this study is that not much was revealed in the way of differences between the two counsellors (and their respective clinics) that used *Options* to a greater extent than the others. While the interview schedule included questions to elicit counsellors’ perspectives on what facilitated their use of *Options*, the inclusion of only two counsellors regularly using *Options* may have inhibited the emergence of dominant themes in this regard. Findings focused on barriers to implementation do provide some indication as to what should occur differently in future implementations of interventions within this programme.

Conclusion

This study has determined that the capacity of primary healthcare ARV clinics to implement and sustain a programme like *Options: WC* is poor. The most significant barriers to the implementation of the programme as identified by counsellors were structural in nature, and included a lack of space, time, and a system of referral for follow-up counselling. Of great importance is the fact that these barriers not only have negative implications for the implementation of any BCC intervention in this context, but

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that they represent weaknesses in the standard care counselling programme as well. They are thus a threat to the effectiveness and quality of service that is currently being delivered as standard care in ARV clinics in the Western Cape. The lack of systematic follow-up with patients referred for counselling raises the question as to what is being (and can be) achieved in terms of promoting adherence in one-off meetings between counsellors and patients. Also, that counsellors revert to standard care counselling practice when pressed for time raises the question as to what is actually being delivered as standard care counselling. In theory, Egan's (2002) model requires more time than the *Options* model for delivery. Based on the findings from this study, it seems unlikely that standard care counselling is being delivered as intended. Anecdotal evidence suggests that current adherence counselling in the Western Cape consists more of the provision of information and advice than problem-solving barriers to behaviour change. An evaluation of standard care counselling practice is required in order to further understand the context into which the *Options: WC* programme was inserted, and to determine the quality with which the standard care model for HIV counselling is being delivered by lay counsellors. Such an evaluation is presented in the following chapter.

That sexual risk behaviour is not a routine focus of counselling with patients already on ARV treatment is a challenge to the integration of positive prevention interventions in this setting and a missed opportunity for HIV prevention. The integration of sexual risk reduction into the ARV treatment programme needs to be managed in the context of a formal commitment by the health service to transmission-risk reduction among PLWH. The weak focus on sexual risk reduction among PLWH in South Africa's National Strategic Plan to combat HIV/AIDS is in contrast to the emphasis on this strategy for reducing transmission in the USA for example. Here the Centres for Disease Control and Prevention has assigned the highest programmatic priority to positive prevention interventions in their national HIV prevention plan (Myers et al., 2004). Again organisational barriers will need to be addressed before provider-delivered sexual risk reduction interventions are likely to be effectively implemented.

The *Options for Health* intervention was implemented by the *Options: WC* implementation team in a sample of Cape Town clinics with the intention that the local health authorities would take over implementation and roll the programme out to remaining clinics based on evidence of its effectiveness. Studies I and II have indicated the presence of significant difficulties associated with the implementation of this counselling model within the context of routine adherence counselling practice however.

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Findings from these studies raise the question pertinent to health authorities as to what kind of counselling service for adherence support could be implemented effectively in this setting. Policy-makers and researchers need to be aware that any attempt to strengthen the adherence counselling programme in the Western Cape (and elsewhere) in terms of what happens *within* counselling sessions needs to be accompanied by strategies to address the organisational short-comings that affect the delivery of these sessions. The implementation of evidence-based counselling models, training and strategies aimed at improving the performance of counsellors will otherwise have limited effect.

University of Cape Town

STANDARD CARE COUNSELLING PRACTICE

Chapter 4

Standard Care Counselling for ARV Adherence Support

The study presented in the previous chapter revealed one of the main barriers to the implementation of *Options* to be a lack of time in which to deliver the eight-step protocol. Where time was in short supply counsellors reverted to delivering standard care counselling, that is, counselling according to Egan's (2002) model. Since the *Options* model is, in theory, more time efficient than Egan's model in which counsellors are trained, this raises the question: What is being delivered as standard care adherence counselling? Compatibility, or the extent to which a new programme "fits" with an organisation's priorities and existing practices, was identified in the previous chapter as one characteristic influencing the implementation of new programmes (Durlak & DuPre, 2008). The *Options* model appears to be a good fit for standard care model of counselling practice: On paper, the stages of the *Options* model correspond closely to those of Egan's model. In practice though, how well *Options* fits with standard care counselling practice will depend on the extent to which counsellors adhere to Egan's model. This chapter presents a study aimed at determining what is being delivered by antiretroviral (ARV) adherence counsellors as standard care counselling practice in sessions with patients.

Background

Monitoring and support for ARV adherence are recognised internationally as important components of HIV care (Amico, 2011; Harman et al., 2005). Much research has focused on the development and efficacy of interventions for supporting adherence to long-term medications including ARVs. Several types of interventions have been shown to improve adherence. Like those interventions that have been shown to be effective in reducing sexual risk behaviour among people living with HIV (described in Chapter 1), interventions that are successful in improving adherence have been observed to share commonalities in delivery systems - they are most commonly patient-centred and incorporate specific strategies associated with motivational interviewing, cognitive behavioural therapy or learner-based models (Amico, Harman, & Johnson, 2006). Successful patient support and education strategies have been identified in a review of studies conducted in the USA (United States of America), Europe and Australia. For example, strategies targeting practical medication management skills have been found to be more successful in terms of adherence outcomes than interventions based on cognitive behavioural therapy and motivational interviewing (MI) approaches (Rueda et al., 2006).

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In general, practical medication-management interventions are aimed at improving participants' ability to manage their treatment. As such, they focus on medication information, tailored drug schedules, side-effect management and the use of reminders. In addition, participants are assisted in identifying and addressing barriers to adherence. Other features of successful strategies include delivery to individuals as opposed to groups and delivery over longer periods (12 weeks or more) of time (Rueda et al.).

There is a growing interest in standard care programmes for adherence support, to the extent that it has been suggested that an understanding of these programmes could inform the development of evidence-based interventions that are responsive to the circumstances in which they are to be implemented (Amico, 2011). Generally standard care programmes for ARV adherence support have not been targeted for evaluation as interventions in their own right, but they do appear in the literature as comparison controls in ARV adherence intervention trials. In a review of the quality of standard care provided in such trials, de Bruin, Viechtbauer, Hospers, Schaalma, and Kok (2009) found higher levels of quality of standard care to be related to positive treatment outcomes. While the kind and quality of standard care was found to vary considerably between studies, their findings indicate that standard care for adherence support can be effective.

Individual counselling for adherence support has been identified as one of the more common strategies adopted by HIV treatment programmes both in the USA (Amico, 2011) and Africa (Chung et al., 2011; Johnson & Witt, 2007). The content and approach of these interventions varies widely, and the extent to which busy clinics and healthcare providers are able to *effectively* incorporate counselling into clinical care is not well established (Harman et al., 2005). While there is evidence that lay health workers (LHWs) can effectively deliver healthcare interventions for some health issues (for example, immunisation, respiratory infections, malaria) (Lewin et al., 2005), few studies have evaluated lay counsellors' ability to implement counselling techniques associated with interventions aimed at behaviour change.

In South Africa, individual counselling following ARV initiation is one of the main strategies for supporting adherence in the public sector. As mentioned previously, Egan's (2002) *Skilled Helper* model is the predominant model used in HIV counselling in the public sector across the nine provinces of South Africa. Despite the widespread use of this model in counselling practice, there is no research pertaining to its effectiveness as a behaviour change intervention in any setting (Newnham-Kanas et al., 2010). The model does however share features with successful interventions targeting practical medication

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management skills mentioned above: it is delivered in one-on-one sessions, focuses on problem-management and is intended to be delivered over more than one counselling session. The model is also consistent with the Centres for Disease Control and Prevention's (1993) recommendation that HIV counselling be client-centred and result in a personalised plan for behaviour change.

The Western Cape AIDS Training, Information and Counselling Centre (ATICC), as a part of the Provincial Department of Health (DoH), is responsible for training all lay HIV/AIDS counsellors working within public healthcare facilities in the province. ATICC trains counsellors using a micro-skills approach. This method divides the counsellor-client interaction into small, meaningful communication skills used to tap into the client's problem situation (Mpofu, 2006). The intention is that trainees then integrate these skills into a counselling framework (Kuntze, van der Molen, & Born, 2007) which, in this case, is Egan's (2002) three-stage model. The micro-skills approach is a dominant method used in counselling training internationally, particularly with entry-level trainees (Ridley, Kelly, & Mollen, 2011). Counsellors at ATICC are taught to use the basic verbal counselling skills presented and defined in Table 6 in carrying out the three stages of Egan's model.

Table 6. *Verbal Micro-Counselling Skills Trained at ATICC*

Skill	Definition
Open question	Questions encouraging explanation or expansion upon thoughts, feelings, experiences. May start with the following stems: how, tell me, in what way.
Closed question	Questions that can be answered with yes, no or one word phrases.
Simple reflection	Repetition or rephrasing of clients words, used to check understanding or to convey understanding of what the client has said. May reflect content or feeling.
Complex reflection	Provides a more in-depth interpretation of what the client has said, inferring unspoken meaning.

The stages of Egan's (2002) model as trained by ATICC are described in Table 7. Counsellors thus work to explore and understand the client's referral problem and to negotiate a plan for change using a combination of open- and closed-ended questions, simple and complex reflections.

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Table 7. Egan's (2002) Counselling Framework as Trained by the Western Cape ATICC

Stage 1: Exploration	Stage 2: Understanding	Stage 3: Action
The client explores the problem with the counsellor	The client gains insight into the problem	The client decides on an action plan
Counsellor's task To assist the client to ventilate the problem {tell his/ her story}	Counsellor's task To assist the client in exploring issues related to the onset and the maintenance of the problem	Counsellor's task To help client set goals and brainstorm strategies to achieve goals. To help clients to decide on action plan
Goal In assisting the client to ventilate the problem is defined and client feels listened to. Clients who are helped to tell their stories will learn about themselves.	Goal To help the client to achieve deeper level of understanding of the problem.	Goal To help the client to translate his/her goal to action plan.
Skills required Attending, listening, showing empathy, asking questions	Skills required Probing, offering information, setting goals	Skills required Brainstorming, sorting pros & cons, monitoring progress, ending the session

Note. Adapted from the PowerPoint slide, "Overview of Egan's model" by ATICC (n.d.).

Lay HIV counsellors are initially trained at ATICC in a 10-Day (60 hour) HIV/AIDS Information Course. Trainees are required to be in possession of a matric (Grade 12) certificate. After completing the information course, trainees take part in a 20-Day (120 hour) Intensive Counselling Course. This course covers basic counselling micro-skills and Egan's (2002) model. Throughout each of these courses counsellors are assessed in role-plays and their knowledge is tested by means of a questionnaire (for the Counselling Course this questionnaire includes items on counselling skills). A minimum of 60% is required to pass. The Provincial DoH requires all HIV Counselling and Testing (HCT) counsellors working in government facilities to have successfully completed both of these courses¹⁴.

After qualifying in HCT, counsellors are eligible to be nominated by their non-

¹⁴ Government policy on testing for HIV has recently been expanded to include provider-initiated testing. This model sees HIV testing offered as a part of routine practice, and not only when HIV is suspected. As a term, HCT is used to cover both provider-initiated testing and voluntary counselling and testing (Makhunga-Ramfolo, Chidarikire, Farirai, & Matji, 2011).

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governmental organisation (NGO) for participation in ATICC's 10-Day Adherence Counselling Course. The course covers information about taking ARVs; Egan's (2002) model and basic counselling skills are *not* revised. Again counsellors are assessed and a minimum of 60% is required to pass. Following this, counsellors are qualified to practice as ARV adherence counsellors within the public healthcare system. Attendance of refresher training is not a requirement of NGOs or the Provincial DoH, and ATICC currently does not offer any such courses.

The extent to which lay counsellors can adopt and implement Egan's (2002) model in relation to medication adherence is unclear, and evidence suggests that ARV adherence counselling in the Western Cape consists mainly of directive and health-advising techniques (Pienaar et al., 2006). The present study was designed to evaluate what is being delivered as standard care counselling. The intention was to determine the extent to which counsellors adhere to Egan's model, as well as their use of micro-counselling skills. Understanding what is currently being delivered as standard care counselling within sessions will reveal the true fit between the *Options* model and standard care practice, and may provide some idea as to lay counsellors' capacity to implement an evidence-based intervention such as *Options* and MI. Study II determined a number of structural level barriers to the implementation of the intervention, but inadequate provider training and poor provider proficiency are also known barriers to intervention implementation (Durlak & DuPre, 2008; Whitlock et al., 2002). Given the difficulty associated with changing practice and implementing the *Options* intervention in this context, the evaluation of what is being delivered as standard care within counselling sessions is also of interest in its own right. As mentioned above, standard care programmes are sometimes associated with positive patient outcomes. Knowing what it is that counsellors are delivering within adherence counselling sessions can inform decisions around what, if anything needs to be improved, and how.

Method

Study Design

The purpose of this study was to assess the extent to which counsellors are adherent to Egan's (2002) three-stage model in delivering standard care adherence counselling, as well as their use of micro-counselling skills. The study was designed to be cross-sectional, where audio-recordings of counselling sessions taking place with clinic patients would be collected in the month prior to the delivery of the *Options: WC* training programme. The use of "real" counselling sessions over role-plays with simulated clients

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offers the benefit of insight into what actually happens in clinic-based counselling sessions, and the manner in which counsellors relate to patients under time pressurised circumstances. It is possible that what is delivered in the clinic is quite different to what would be delivered in a role-play situation where time is less of a constraint. Also, because clinic protocol is to refer non-adherent patients for counselling, patients are involuntary counselling clients and are likely (at least in some cases) to be less cooperative and collaborative than a simulated client. It has been found that actors' responses in role-play counselling sessions are not representative of how real clients respond (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004). The use of real counselling sessions thus enhances the external validity of the findings.

Population and Sampling

The four NGOs taking part in the *Options: WC* project employed a total of 39 ARV adherence counsellors placed within 21 ARV clinics around Cape Town. Given the Provincial DoH requirements for HIV/AIDS counsellors working in public healthcare facilities, all 39 counsellors were assumed to have successfully completed the requisite training courses at ATICC as described above. Prior to the *Options: WC* training, the principle investigator (PI) visited all four NGOs to explain the project and the evaluation to the adherence counsellors. The 39 counsellors were asked to sign consent forms if they were comfortable taking part in the collection of audio-recordings. It was specified that all counsellors would attend the *Options* training course regardless of whether they agreed to take part in the data collection or not. All 39 counsellors agreed to take part in this study.

Data Collection

Counsellors completed demographic forms that were developed by the PI. Three data collectors, including NM, attended the clinics during the month of May 2009 to collect audio-recordings of ARV follow-up counselling sessions conducted by counsellors with non-adherent patients who were 18 years and older. All three data collectors were first-language Xhosa speakers and had experience working in public healthcare facilities, and ARV clinics specifically. Data collectors were trained over one day in the background to the study, the informed consent procedure and the protocol for collecting recordings as well as the use of the digital audio-recorders. Upon arrival at the clinic data collectors would notify counsellors of their presence and proceed to wait until a patient was referred for follow-up adherence counselling. Data collectors would ask the patient for permission to explain the study and, if the patient agreed, would proceed to describe

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the study and the informed consent form (Appendix B). Data collectors were instructed by the PI not to allow counsellors to ask the patient for permission to record their sessions because this would be coercive. Patients were assured that recordings would not be heard by any clinic staff members, that the only people to listen to the recordings would be a part of the research team and the transcription service. Patients agreeing to take part would sign their consent, but no (other) identifying or demographic information was taken from them. Data collectors recruited all patients referred for follow-up counselling until recordings of three counselling sessions had been received from each counsellor, or until the end of the data collection period was reached. Recorded sessions were individual (as opposed to couple) counselling sessions. Counsellors were provided with vouchers to the value of R20 (US\$2.60) for a local grocery chain in return for each counselling session recorded. Patients were not provided with incentives for allowing their sessions to be recorded. Data collectors did not sit in on counselling sessions. If a patient agreed to have their session recorded, the data collector would leave the recorder (switched on) on the desk in the counselling room and leave before the session started. The recorder was collected and switched off once the patient exited the counselling room.

Data Handling and Analysis

Audio-recordings were transcribed verbatim and translated from Xhosa or Afrikaans into English where necessary. A random selection of 10 translations was independently checked by NM for accuracy in translation. No serious inaccuracies were identified. Identifying information was removed from all transcripts by the PI. For quotes presented in the results section that follows: punctuation has been included for ease of reading; words of clarification, where necessary, have been added in brackets; the omission of words is indicated by three ellipsis points; names have been replaced with pseudonyms and counsellors are identified by numbers.

A review of tools available for assessing transcripts or audio-recordings of counselling sessions revealed none that were suitable for an analysis of counsellor adherence to Egan's (2002) model. The tools that were reviewed included the Simulated Client Interview Rating Scale (Arthur, 1999), the Stage-Based Behavioural Counselling Scale (McGrath et al., 2002), the Peer Proficiency Assessment tool (Mastroleo, Mallett, Turriss, & Ray, 2009), the Counsellor Evaluation Form (Kagee, n.d.) and the Behaviour Change Counselling Index (Lane et al., 2005). An analysis of the content of actual counselling sessions thus appeared to be the most appropriate for present purposes. Determining counsellors' adherence to Egan's model and use of micro-counselling skills

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required an analysis of manifest content. Content analysis, which involves the systematic coding of manifest content in textual data, is used to determine the presence of such characteristics as particular words, concepts, themes, phrases, or topics (Berg, 1998). Because transcripts were being analysed for features that were expected to be present, a directed approach to content analysis was used (Hsieh & Shannon, 2005) where codes to be applied to the text were largely predetermined by the PI. The codes were developed based on knowledge of Egan's model and the micro-counselling skills that lay counsellors are trained in. The codes thus represented particular skills (for example, "open question" and "simple reflection") and activities (for example, "giving information" and "brainstorming") associated with Egan's model. Some other codes were then developed on the basis of a first review of the transcripts (for example, "missed opportunity for reflection" or "confrontation"). Specific micro-skills and activities were subsequently grouped according to the stage of Egan's model they could be associated with. Thus codes that could be applied to text included "exploration: open question", "understanding: goal setting", "action: advice" and so forth. Units of analysis were counsellor utterances, defined as complete thoughts (for example, "*Why didn't you tell your father that now you are stopping your medication, not taking it anymore?*") which was coded as "understanding: open question"). Codes associated with each stage of Egan's model were then summed across all transcripts.

In total 66 recordings were collected from 32 of the 39 counsellors. Seven of 39 counsellors provided no recordings, as no patients were referred for counselling for poor adherence on days that data collectors were present. Transcripts for two of the 32 counsellors who provided recordings were excluded from the analysis: one recording had been cut-off early in the session, and the other contained evidence that the counsellor had conducted the consent procedure. These two counsellors had provided only one recording each, and so these transcripts could not be replaced.

Originally all transcripts were intended to be analysed but a restriction on resources early on in the analysis necessitated a revision of the sampling strategy. As such, one counsellor had 3 transcripts analysed each, 6 counsellors had 2 transcripts analysed each and the remaining 23 had only one randomly selected transcript analysed each. Thus in total 38 (of 64) transcripts representing the work of 30 counsellors were analysed. Transcripts were divided between two coders (JC and MW) who coded 19 of 38 transcripts each. The PI reviewed the coding on all 38 transcripts and conducted the analysis.

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Results

The majority of counsellors were female (n=26) and first-language Xhosa speakers (n=24). Four counsellors were first language Afrikaans speakers, and the remaining two were English speaking. Despite the requirement that lay counsellors be in possession of a Grade 12 certificate, 7 of 30 counsellors had dropped out of school in Grade 10 or 11. The majority of counsellors (n=23) had up to 5 years of counselling experience in the field of HIV (the range was between 1 and 10 years), and up to 2 years of experience in ARV adherence counselling specifically (n=23) (with a range of 1 to 4 years).

While all 30 counsellors had been trained by ATICC in adherence counselling, not all counsellors had attended the two courses required to practice as HCT counsellors. Four counsellors had not attended the 10-Day HIV/AIDS Information Course, and 6 counsellors had not completed the 20-Day Intensive Counselling Course. Reasons for this are unknown.

Recordings for the sessions that were analysed ranged from as few as 3 minutes to as many as 38 minutes in length. Most (n=29) sessions were 15 minutes or less. The average time for sessions was 12 minutes.

Egan's Model Stage 1: Opening the Session and Exploration

In Stage 1 and after opening the session, the counsellor's task is to help the client to ventilate their problem using their micro-counselling skills (Table 7). A total of 306 utterances were coded and associated with this stage. In opening the counselling session, 6 counsellors (20%) were described as being confrontational and/or patronising. For example one counsellor opened the session by saying: "Cindy, I am of the understanding that you are now late, a month late [for your clinic visit]...and I hope that it does not happen again because this is for your health" (Counsellor 20).

Open questions are considered an appropriate way to open a session because they provide the opportunity for the client to define the issue (Daniels & Ivey, 2007). Nineteen counsellors (63%) used an open question at the beginning of the session to explore the referral problem, and this was done well in most cases. For example: "Sister says you haven't taken your tablets as you are supposed to, what went wrong then?" (Counsellor 7). Two counsellors used open questions to check their patient's¹⁵ understanding of

¹⁵ In recognition of the medical setting in which adherence counselling is situated, the term "patient" is used to refer to individuals receiving counselling from adherence counsellors in this study. The term "client" is used to refer to recipients of counselling in general.

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information relating to HIV/AIDS and/or ARVs. While one counsellor appeared to be making a genuine attempt to assess how much the patient already knew, Counsellor 22 used this technique in a patronising manner:

- Counsellor: What were you told at the clinic when you coming, before you start your medication?
 Patient: They told me -
 Counsellor: What did the counsellor say to you about this medication?

The use of closed-ended questions is appropriate for gaining clarity and eliciting specific detail. Counsellors however generally relied on closed questions following the opening question: a ratio of 3.3 closed questions for each open question was calculated for this stage. Seven counsellors (23%) engaged in series of closed-ended questioning that appeared interrogative, with one counsellor asking as many as 30 closed questions consecutively. One counsellor (Counsellor 15) explored his/her patient's referral problem particularly well and displayed a skilled use of open and closed questions:

- Counsellor: Okay, tell me how are you finding the treatment from when you started taking it? Maybe while you were pregnant up until after you gave birth?
 Patient: Wait, I was pregnant but I didn't notice anything while taking it, I mean I didn't have a problem, I didn't get sick.
 Counsellor: Oh, you didn't have a problem?
 Patient: huh uh [no], but now I got sick and I had a cramp I am always having a headache after I gave birth.
 Counsellor: Okay, but that didn't disturb you in taking the pills?
 Patient: It disturbed me a little now that I've come to get them.
 Counsellor: What exactly disturbed you?
 Patient: It's stress you see, the stress of thinking that you are sick and what is making you sick....

In total 58 simple reflections were associated with this stage in 21 transcripts (that is an average of 3 per session). The majority of these (62%) were well done, such as in the following example from Counsellor 15:

- Patient: ...and the father I am staying with, you see this also contributes to the problems in my house.
 Counsellor: So if I am hearing you correctly, at this minute there's a lot that is stressing you.

The remaining 38% of reflections were merely repetitions of patients' words. This

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behaviour is referred to as parroting and does little to facilitate understanding or express empathy. No complex reflections were coded for this stage.

In coding dialogue associated with exploration, abrupt changes in topic were observed in the transcripts of 40% (n=12) of counsellors. This lack of skill in framing changes in the direction of the session creates an interrogative feel where the counsellor is in control of the interaction:

- Counsellor: Take your tablets, right? Take it regularly. You know you must take it every day for the rest of your life
- Patient: Yes
- Counsellor: Right? Every day, so that your body won't have problems and build up resistance tomorrow, if the body rejects the tablets, then the tablets can't achieve what we want them to achieve, right?
- Patient: Yes, I understand
- Counsellor: And then, you can of course get more infections and get more ill and so on, tell me, do you use a condom?
- Patient: Yes
- Counsellor: Every day?
- Patient: Every time we have sex, yes.
- Counsellor: When you have sex?
- Patient t: Yes
- Counsellor: Because you know the importance of -
- Patient: Yes, I know about it
- Counsellor: We have spoken about it already
- Patient: Hmm
- Counsellor: Right, I'm only emphasising it
- Patient: Hmm
- Counsellor: That you must always use it if you don't want more viruses in your body-
- Patient: Yes
- Counsellor: Then you must condomise [*sic*]
- Patient: Okay
- Counsellor: And in terms of alcohol and drug abuse?

The use of stigmatising language (“drug abuse”) in the above quote is inappropriate; this particular term was used by one other counsellor as well. Seven counsellors (23%) did not engage in an exploration of the referral problem before going on to provide information as a part of Stage 2.

Egan's Model Stage 2: Understanding

In Stage 2, the counsellor's task is to help the client to explore issues related to the onset and the maintenance of the referral problem. Activities associated with this stage include probing, offering information and setting goals (Table 7). A total of 1039 utterances were coded and associated with this stage. Again counsellors relied on the use

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of closed questions, asking a ratio of 3.1 closed questions for each open question that was asked.

Complex reflections are an advanced counselling skill and ATICC trainers have acknowledged in communication with the PI that most lay counsellors will find this skill difficult to implement. Three complex reflections were observed in three different transcripts, while the majority of reflections used in this stage were simple (n=131). More than half (72%) of these simple reflections were used for fact-checking and were presented in the form of closed-questions. The remaining 28% represented parroting. Most reflections were thus of content as opposed to feeling. In addition, 26 “missed opportunit(ies) for reflection” were coded, the majority (58%) of which were related to statements made by patients which revealed underlying emotions such as guilt, sadness and pain. This example is from Counsellor 28:

- Counsellor: So, and why, can you tell me why did you stop your medication?
- Patient: Because also the doctor here told me to leave this clinic and I should never ever come back to this clinic, she doesn't want me here.
- Counsellor: Hmm? Okay I understand that, but remember when you first started did they explain to you how important is this medication?

Forty-two statements were coded as confrontational in this stage. These were made by almost half (43%) of counsellors. The majority of these counsellors (69%) were confrontational in more than one instance, with one counsellor making as many as 12 such statements in one session. Examples include this statement from Counsellor 2: “Okay sister...so I will ask you to do what next time? To pull up your socks so you don't meet with me again”, and this statement from Counsellor 16:

Okay, in all that you are saying there is nothing that satisfies me...and you must know that by not speaking the truth...I don't know if you [did] get the pills or [if] you didn't get [the pills], and I don't want to believe what you are saying...there is nothing here to convince me that you have taken your treatment.

In addition, 14 separate statements were coded as judgemental. These were made by 10 counsellors (33%), 6 of whom had also made confrontational statements. Half of these counsellors (n=5) used more than one judgement per session. The following is an example of a statement that was coded as judgemental: “It amazes me that you are

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forgetting [to take your pills] considering you started [treatment] in 2007, 2008 and it's 2009 now" (Counsellor 19).

In total, 378 instances of information-giving were coded across all 38 transcripts (that is an average of 10 per session). Only four percent of information giving was coded as inappropriate because it did not relate to the focus of the session and/or was not applicable to the patient's situation. The majority (75%) of information was appropriate in that it was relevant to the patient's situation, and was well-given (respectfully and in digestible "chunks"). Twenty-one percent was coded as appropriate but poorly-given. "Poorly given" referred to instances of information that involved many concepts being introduced in large indigestible chunks, involved stigmatising language or insensitive statements regarding illness and death, was delivered in a patronising way or was unclear. Examples below come from Counsellor 2 and Counsellor 19 respectively:

It's important to be adherent, to know what will happen when you forget your pills because ... once you are drug resistant ... it's not easy to say, now brother there's nothing we can do, now go home and wait for the day.

As I explained to you that if you don't take [your ARVs] at the right time, really the virus increases and the pills won't help, do you understand? The virus increases and multiplies and now that you didn't take the medication within those ten minutes it will equate to weeks do you understand?

The activity of goal-setting is key to the change process in Egan's (2002) model as clients are encouraged to move away from current difficulties by imagining what the future could look like. By describing what they need or want for their future, counselling clients set the agenda for change. None of the 38 counselling sessions analysed in this study contained evidence of goal-setting in relation to patients' adherence or health.

Egan's Model Stage 3: Action and Ending the Session

In Stage 3 the counsellor's task is to help the client to brainstorm strategies to achieve set goals and to decide on an action plan. Skills include brainstorming, sorting pros and cons, and ending the session (Table 7).

Brainstorming provides a pool of potential strategies from which the client can choose a plan for change that they feel best fits their resources, environment and timetable (Egan, 2002). None of the 30 counsellors in this study facilitated the development of more than one strategy for improving their patient's adherence. No counsellors

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encouraged patients to consider the pros and cons of various courses of action. Six of 30 counsellors (20%) asked their patient for their own ideas as to how they might overcome the barrier to their adherence. In two cases this constituted a superficial attempt to involve the patient in the counselling process however. The following example of this is from a session conducted by Counsellor 12 with a mother whose child is on ARVs:

- Counsellor: So as the child defaulted what are your plans so that what has happened cannot happen again?
 Patient: I am going to stop working.
 Counsellor: But things are important now as the child is going to start treatment again ... when a child is using ARV's the one [that is] supposed to stay in the fridge must be in the fridge. The one [that] stays out of [the] fridge, it is important not to place direct [in] the sun...

The remaining 24 counsellors (80%) offered information and/or their own advice. Advice related to strategies for overcoming barriers to adherence included the use of reminders and pill boxes, rescheduling treatment times, planning pill-taking around work and travel and attending the clinic before scheduled visit dates if necessary. In many cases the advice appeared to be appropriate to what was known about the patient's situation. In some cases though, counsellors minimised or neglected to take in to account the difficulties associated with the course of action they were recommending. Regarding one patient's difficulty in getting time off work to attend the clinic, Counsellor 26 advised:

So it's important to take your medication every day okay, not to default even if your manager ask you to, tells you that you can't [leave work], then you just tell him that you need to come to the clinic, it is very urgent because of your health okay?

Another counsellor advised the use of condoms with no recognition of the difficulties associated with introducing the use of condoms in to sexual relationships: "please, you must condomise [and] drink your ARVs every day, because it's not going to help to drink ARVs while you are not condomising, it's not gonna help, so you must use condoms please, alright?" (Counsellor 21).

Instances of advice were regularly intermingled with instances of information-giving, and during the analysis it became clear that the provision of information was a technique being used by counsellors to encourage patients to adhere. This strategy is apparent in the following quote from Counsellor 7, where advice is underlined:

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Let's say you drink a tablet and you throw up half an hour after that, then you don't have to anymore because it has dissolved in your blood...but you must always try...no matter how ill you feel, you must still drink your tablets because...what will happen is that your body will build up a resistance right?

In addition to interspersing information with advice, some counsellors employed warnings around the consequences of non-adherence and not taking ARVs seriously. Another technique used by some counsellors was to minimise the difficulty associated with behaviour change. The following example is from Counsellor 17:

- Counsellor: You have to ask yourself the question, what is most important to me, right?
- Patient: Yes.
- Counsellor: In this instance, your health is ...very important, so you must invest in your health by taking [your treatment], that's all you have to do... I don't think that's asking too much... I'm not saying your concerns are not ...important ... but what I'm asking of you here now, it doesn't take a lot of effort.
- Patient: Yes.
- Counsellor: We are only asking you to take your tablets every day...and it's not hard work to do that.
- Patient: To do that, that's true, yes.
- Counsellor: It's not difficult, you just take it out and swallow it, so that you can enjoy better health and go back to work.

Finally counsellors engaged in moralising and appealed to what they assumed to be important to the patient in order to encourage behaviour change, for example

Counsellor 18:

- Counsellor: If you already have [HIV] you must know the ways of accepting it, to accept is [to know] that it's not curable, you must look forward, life is going on, do you have children?
- Patient: Yes I have a child.
- Counsellor: You must know that you are living for your child, you must [know] that you are looking after him and he needs to be raised...

Moralising is generally considered to be inappropriate within a counselling relationship.

Overall Impression: Progression Through the Counselling Session

The results regarding the skills and techniques used by counsellors presented

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above provide a fragmented picture of what happens in ARV adherence counselling sessions. In order to provide a more comprehensive picture of the manner in which these sessions are conducted, three session transcripts were randomly selected for qualitative description. These three sessions are described in Table 8 in terms of the techniques and phases used by the counsellor in moving through the session. The reliance on the provision of information for encouraging adherence is evident in these, as is the directing nature of the sessions.

Table 8. Three Randomly Selected Transcripts Described in Terms of the Phases and Techniques used by Counsellors in Moving Through Their Counselling Session

Counsellor 17 commenced the session in a friendly manner, questioned the patient around the reason for her non-adherence, gave information on the consequences of non-adherence (that is, drug resistance and second-line treatment) and warned that there was no third-line of treatment if the second-line failed. The counsellor went on to advise that it was important to take ARVs and minimised the difficulties associated with ARVs and pill-taking, before questioning the patient around her income and work, alcohol, drug and condom use. Before ending the session the counsellor reminded the patient of the contract and promise she had made with the clinic when she initiated ARV treatment (this was to take her treatment correctly). The counsellor thanked the patient, thereby ending the session.

Counsellor 25 greeted the patient and explored the reason for the patient's non-adherence, which was because of the development of a side-effect. The counsellor went on to give information about side-effects and advised the patient not to stop taking the pills and to come in to the clinic, before giving information on the consequences of non-adherence (that is, increased viral load and drug resistance). The patient argued that s/he did not want to take the particular ARV that was causing the side-effect, in response to which the counsellor re-issued the advice to come in to the clinic and informed the patient that the doctor would "cure it". The counsellor gave information on the benefits of ARVs (that is, increased CD4 count and lowered viral load) and moralised ("do you want to live a long life with your children?"). The counsellor gave information in response to questions asked by the patient around his/her pill-taking schedule, and again advised the patient to come in to the clinic when s/he experienced any problems. The counsellor thanked the patient, thereby ending the session.

Counsellor 32 began the session by confronting the patient and accusing her of being "careless" because she did not arrange for someone to collect her treatment when she couldn't make her scheduled visit date. The counsellor went on to give information on the consequences of non-adherence (that is, increased viral load, tuberculosis, drug resistance). The counsellor then asked the patient to promise that she wouldn't forget to take her ARVs because it was important. The counsellor did not properly end the session (or switched off the recorder before ending the session).

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Discussion

This evaluation of the extent to which ARV adherence counsellors adhere to Egan's (2002) model has shown that standard care adherence counselling is not being delivered as expected. Generally counsellors in this study displayed good knowledge around HIV and ARV treatment, and instances of good counselling technique were observed. In general though, counsellors' micro-counselling and communication skills are poor: counsellors rely heavily on closed questions, and simple reflections often take the form of parroting. Counsellors displayed a lack of skill in changing the direction of the counselling session, and questioned patients in the manner of an interrogation.

More importantly though, counsellors' practice has been shown to deviate from the approach in which they are trained in two main ways. The first is that their practice is not client-centred. Counsellors contravened core principles of client-centred counselling such as the demonstration of respect and positive regard by issuing warnings, moralising, casting judgements and patronising patients. While confrontation can be used as an advanced counselling skill (Strong & Zeman, 2010), counsellors in this study used confrontation in ways that expressed judgement and condescension. The counsellor-patient relationship was observed to conform more to that of the traditional patient-provider relationship, characterised by high provider control and authority, and where the patient's role is passive and dependant (Everett-Murphy et al., 2011). These findings are consistent with findings by Richter et al. (1999) who, in an evaluation of HCT counselling conducted over 10 years ago, found that lay counsellors relied on a directing, health-advising approach as well.

The second way in which counsellors' practice deviates from the approach in which they are trained is that counselling sessions do not conform to Egan's (2002) three-stage model. While not specifically designed to effect health behaviour change, Egan's model has the potential to be applied in a way that is consistent with approaches that have been shown to be successful in promoting ARV adherence. In applying the model to the problem of non-adherence for example, Stage 2 would focus on identifying barriers to optimal adherence. The counsellor and patient would then brainstorm ways in which to address these (and which may include practical medication management strategies) as part of Stage 3. It is these activities that are most absent from standard care adherence counselling practice however.

The majority of counsellors opened their counselling sessions by exploring the referral problem, and then proceeded into Stage 2 which consisted mainly of information-

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giving. No counsellors engaged patients in setting goals for their adherence or their health as a part of this stage. For Egan (2002), goals are of great motivational value and provide clients with incentives to search for strategies to achieve them. Goal-setting triggers action and is thus an important link between Stages 2 and 3 of the model. Goal-setting has become a feature of many healthcare interventions and there is some evidence that suggests it is a useful method for facilitating positive behaviour change in relation to over-weight management, diet and physical activity (Cullen, Baronowski, & Smith, 2001; Pearson, 2012; Shilts, Horowitz, & Townsend, 2004) and also alcohol use (Lozano & Stephens, 2010). In terms of chronic disease there is some research around the efficacy of goal-setting for diabetes control, although goals are generally related to diet and exercise as opposed to medication adherence (for example, De Walt et al., 2009; Miller, Headings, Peyrot, & Nagaraja, 2012). Brainstorming and assessing pros and cons are similarly important activities associated with Stage 3; counsellors did not engage in this activity. For Egan, brainstorming stimulates creative thinking around strategies for goal-accomplishment, and engages clients in coming up with and evaluating possible ways forward. Counsellors in this study employed directive techniques in order to address patients' non-adherence instead, most commonly providing information and advice. The use of these techniques has also been identified among HIV nurse-counsellors working in Soweto, South Africa (Stein, Steinberg, Allwood, Karstead, & Brouard, 1997). Nurse-counsellors felt that the provision of information was essential but also insufficient to effective health promotion; guidance, in the form of advice-giving and persuasion is also required. Where a lack of knowledge regarding ARVs and the requirements of ARV regimens is a barrier, the information-giving approach is appropriate (Tugenberg, Ware, & Wyatt, 2006). There is a danger in providing advice within healthcare consultations though, in that it can be met with patient resistance, superficial agreement or rejection (Heritage & Sefi, 1992; Kinnell & Maynard, 1996; Rollnick et al., 1993; Salter, Holland, Harvey, & Henwood, 2007). There is also little evidence to suggest that this is an effective way in which to promote medication adherence. For example Wilson et al. (2010) investigated the ability of American physicians to perform effective ARV adherence counselling with sub-optimally adherent patients. Through audio-recordings of consultations, the authors found that much of the physicians' speech associated with adherence was directive in nature; physicians urged patients to undertake certain actions. This approach had no clinically (or statistically) significant impact on patients' adherence. High provider emphasis on the importance of optimal adherence has also been associated

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in another study by Tugenberg et al. with patient concealment of missed doses, and missed appointments in order to avoid confrontation.

Based on the above it would seem that those features most likely to contribute to the potential effectiveness of Egan's (2002) model for promoting ARV adherence are those features that are not present in standard care counselling for adherence support. Behaviour change and counselling theory also suggests that the main strategies that are employed by counsellors for managing poor adherence are likely to be largely ineffective (and potentially counter-productive). This raises the obvious question as to how effective standard care counselling for adherence support is likely to be. There is however an intriguing possibility here, linked to evidence for what works with patients from developed settings and sub-Saharan Africa (SSA) settings (Bärnighausen et al., 2011). In examining the applicability of client-centred counselling to non-Western cultures, Languani (1997) has written of the theoretical assumptions that underlie the approach. He argues that the idea of a relationship between a client and counsellor that is equal and collaborative stems from the fundamental notion of individualism, a concept that is of little value among other (community-based) societies. Many SSA cultures have been characterised as collectivist and as favouring deference to authority (Beugre & Offodile, 2001). In this context, it is possible that information and advice given by a person of authority can be an effective way in which to address non-adherence. There is some evidence supporting this possibility. Participants interviewed in a study in Tanzania described advice from service providers as one of five factors positively influencing their motivation to adhere to their ARV regimen - patients perceived providers as referent authorities whose advice they should follow without question (Watt et al., 2009). It must be noted though that these patients were highly adherent and relatively new on antiretroviral therapy, and are unlikely to represent the larger population of people on treatment. Nevertheless the possibility that the provision of advice is an effective strategy for encouraging adherence in SSA settings should be considered, and some attempt to investigate this should be made in future research.

One benefit of using real counselling sessions for this study was that the recordings collected from clinics provide an idea of the time that counsellors are spending with patients referred for counselling for problematic adherence. It has been suggested that the time pressure, in combination with the poor chance that patients will be seen for follow-up counselling sessions, may contribute to shaping HIV lay counsellors' practice in a more goal-oriented, urgent and directive direction (Richter et al., 1999). Recordings

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taken in the current study show that counselling sessions can be as short as 3 minutes in length, but can range up to 38 minutes in length as well. Presumably this variation depends on the counsellor's patient load and the complexity of the patient's problem. That the average time for a counselling session was 12 minutes supports counsellors' argument (made in Study II) that, in general, they do not spend enough time with patients to address sexual risk behaviour in addition to the referral problem of non-adherence. In theory, the *Options* counselling protocol requires 15 minutes for delivery. The average amount of time spent with patients (12 minutes) suggests that, in general, counsellors do have enough time to address non-adherence using the *Options* protocol. Of course it is possible that this data, reflecting the counselling times of one session per counsellor on one particular day, is not an accurate representation of counselling time in general. Alternatively lay counsellors may require more time than other cadres of healthcare professionals to deliver the *Options* protocol, and it is possible that provider characteristics such as self-efficacy and skill proficiency played a significant role in the low level of intervention delivery observed in Study I. Based on the lack of fidelity with which the standard care counselling model is being implemented, the coverage of Egan's (2002) model can be presumed to be as low, and probably lower, as that achieved by *Options: WC*. Poor proficiency seems to be at least partly responsible for this.

Previous research has shown that skills and knowledge acquired during training are quickly lost in the absence of refresher training (Ashwell & Freeman, 1995). HIV lay counsellors attending the required 20-Day Intensive Counselling Course at ATICC are assessed and expected to meet minimum standards in order to successfully complete the course. Presumably they can conduct a counselling session according to the three stages of Egan's model at this point, but following this Egan's model is not covered again in any ATICC courses. When counsellors train to become adherence counsellors the assumption is that they will pull the model through into their adherence counselling practice. While there is a protocol for counselling sessions provided as a part of the treatment initiation process, there is no specific guidance on what is expected in terms of counselling for patients with poor adherence. Refresher training is not provided (at least by ATICC) and is not required by the Provincial DoH. While psychologists/social workers are employed by NGOs to provide mentoring to counsellors on a monthly basis, these sessions appear to be focused on counsellors' psychological well-being and not on up-skilling in terms of counselling skills and case management.

A limitation to this study is that just one third of transcripts were checked for

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accuracy in translation. In the analysis of counselling communication, small errors in translation may have consequences for the way in which utterances are coded. Coding may also be affected by the transcriber's interpretation of whether a particular utterance constitutes a question or a statement. While the coding of each coder was reviewed by the PI, this is not an ideal measure of the reliability with which codes were applied. Ideally each translation would have been back-translated to check for accuracy, and each transcript would have been coded by more than one coder for reliability. Limited funding and the need to provide timely feedback on findings to Cape Town City Health and the Provincial DoH meant that this was not feasible.

Conclusion

Standard care counselling for adherence support in Cape Town clinics is of poor quality when judged in comparison to the model and skills in which HIV lay counsellors are trained. Thus while the *Options: WC* intervention was not delivered to a great extent by lay counsellors, Egan's (2002) model is not being delivered to a great extent either. On paper the *Options* and Egan's models are not dissimilar, and *Options* appears to be a good fit for standard care counselling practice. In reality though, standard care counselling sessions look substantially different to *Options* counselling sessions because counsellors are not delivering counselling according to Egan's model. Findings from this study explain why, when time is short, counsellors revert to standard care counselling - information and advice can be given and a counselling session concluded in as few as three minutes when necessary. The information and advice-giving model (that is, what is *actually* being delivered as standard care counselling) appears to fit the requirements of clinic-based counselling practice better than the *Options* model does. This is a further barrier in the attempt to change routine counselling practice. The low level of counselling skill observed here also suggests counsellors' needs in terms of training for *Options* may have been underestimated. In developing the *Options: WC* training programme the implementation team had assumed that, as a result of their training and practice, counsellors would possess knowledge of basic counselling communication skills and problem-management. It was further assumed that this knowledge-base would facilitate learning in the techniques associated with MI and the eight-step *Options* protocol. While the poor compatibility between the *Options* model and the model actually being delivered as standard care was a barrier to delivery, poor provider proficiency potentially contributed to the low level of delivery as well.

The implementation of the standard care programme for adherence support

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appears to suffer from many of the same problems faced by the *Options: WC* programme. It has already been argued that time pressure, a lack of space and a system of referral for follow-up represent weaknesses for both programmes. But just as *Options: WC* suffered from lack of a formal procedure for integrating positive prevention into ARV clinic care, so the standard care programme suffers from the lack of formalised guidelines for addressing poor adherence in counselling sessions. This, in combination with other factors including insufficient training and technical support, time pressure and one-off nature of counselling sessions, has probably contributed to the adoption of an information- and advice-giving approach by counsellors. It is not clear how effective this strategy is for promoting ARV adherence among people attending public healthcare clinics in South Africa. Because of the absence of evidence on the effectiveness of this strategy for behaviour change in this context, it is difficult to comment on how cost-effective the standard care lay counselling programme for adherence support is. The approach is clearly inconsistent with evidence-based strategies for ARV adherence support, however.

It has been argued that the implementation of government LHW programmes must be aligned with broader health systems strengthening in order to maintain the quality of service provision in this regard (Hermann et al., 2009; Philips, Zachariah, & Venis, 2008). The restructuring of South Africa's primary healthcare service offers the opportunity for decisions to be made regarding appropriate models for adherence counselling, for obstacles to counselling practice within clinic settings to be addressed and for the development and implementation of new or additional strategies aimed at ensuring the service is delivered as intended. Central to the process of determining what should be delivered in terms of adherence counselling support is an understanding of what lay counsellors can deliver in terms of counselling adherence counselling support. Assuming that the organisational climate was disposed towards effective implementation, for example, could lay counsellors effectively deliver the *Options* counselling protocol to patients? The study presented in the next chapter was conducted in order to determine counsellors' ability to deliver the eight-step *Options* counselling protocol following participation in training.

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Chapter 5

Quality of Delivery of the *Options* Counselling Protocol

Providers who have the skills required to deliver an innovation are more likely to implement the programme at higher levels of dosage and fidelity (Durlak & DuPre, 2008). In the previous chapter it was suggested that the intervention training needs of counsellors may have been underestimated, given the low level of counselling skill observed in delivering the standard care counselling protocol (Study III). Motivational interviewing (MI) is an advanced counselling technique, and it is possible that insufficient training was a further barrier to the uptake of *Options* among adherence counsellors. This chapter presents a study aimed at determining counsellors' ability to deliver the eight-step *Options* protocol following the five-day *Options: WC* training.

Background

In previous studies evaluating the implementation of *Options for Health* in South Africa, fidelity to the *Options* protocol was measured using completed *Options* Record Forms (ORFs) to assess the number of steps completed for each session conducted. In the Peltzer et al. (2010) study, lay counsellors implementing *Options* within the context of voluntary counselling and testing (VCT) in Mpumalanga delivered at least 7 of 8 intervention steps in most (65%) *Options* sessions. Lay counsellors implementing the intervention within the context of ARV (antiretroviral) adherence counselling in Kwa-Zulu Natal (KZN) delivered at least 7 of 8 steps in 79% of sessions (Cornman et al., 2008). Cornman et al. argue that this data supports the feasibility of using lay counsellors to deliver this intervention. One aspect of implementation not assessed by counting the number of steps completed is the ability of lay counsellors to deliver each of the *Options* steps. In the pilot study conducted in preparation for *Options: WC* (mentioned in Chapters 1 and 2) it was observed that while the counsellor had negotiated action plans with patients as a part of Step 7, this was not always done well - action plans that had been agreed upon were not always realistic and were unlikely to result in behaviour change (Dewing et al., 2011)¹⁶. Determining lay counsellors' ability to deliver the eight-step protocol in a meaningful way is important for ascertaining the feasibility and potential effectiveness of this intervention. Evidence-based interventions have core components

¹⁶ One example provided in the paper by Dewing et al. (2011) was of one patient who had reported that he did not use condoms when he was drunk. The action plan that had been agreed upon (as recorded on the ORF) was "to stop drinking and use condoms every time he has sex" (p. 908).

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that are responsible for their effectiveness; other elements can (and sometimes should) be adapted but core components cannot be ignored or changed and must be delivered (Kalichman, Hudd, & DiBerto, 2010). The core components of *Options* have not been investigated, but there is substantial evidence for the efficacy of MI and Brief Motivational Interventions (BMIs) in terms of health outcomes. This evidence suggests that it is the techniques associated with MI that are responsible for the efficacy of *Options*.

The failure to develop sufficient competence in MI, an advanced counselling technique, may be a significant barrier to transferring MI training into practice (Forsberg, Berman, Källmén, Hermansson, & Helgason, 2008). In terms of MI theory, the quality and spirit with which MI is delivered is held to be critical to the efficacy of the technique (Moyers, Martin, Manuel, Hendrickson, & Miller, 2005). Previous research conducted in the Western Cape suggests that lay counsellors generally do not achieve proficiency in the skills and spirit of delivery associated with MI. For example Mash et al. (2008) trained 38 lay and nurse counsellors in MI from 4 sites in Southern Africa. Fifteen of these participants, which included 12 lay counsellors, were from Cape Town. Counsellors were trained by researchers who themselves had been trained in MI by experts from the Motivational Interviewing Network of Trainers. Training took place over three days and focused on the theory of MI and the demonstration and practice of MI skills (unfortunately no more information regarding the training programme is provided). Following training, counsellors met with the researchers on a monthly basis over five months to reflect on their experience of using MI, and to practice and receive feedback on their MI skills. After 5 months, 24 counsellors each submitted an audio-tape of a counselling session. These were transcribed, translated into English where necessary and analysed using the Motivational Interviewing Treatment and Integrity (MITI) tool. Briefly, the MITI is a tool for assessing entry-level competence in MI and scores counsellors on global measures such as “empathy” and “MI spirit”, as well as discrete counselling behaviours such as the use of open- and closed-ended questions. (This tool is described in more detail in the methods section of this chapter.) As a group, nurse counsellors (n=20) demonstrated beginning proficiency in the MITI dimensions of empathy, MI spirit and “percent open questions”, but lay counsellors (n=18) did not achieve beginning proficiency on any criteria. Nurse counsellors almost reached the threshold of 90% that is required for beginning proficiency in terms of the percentage of behaviours that were consistent with a MI approach (for example, asking permission

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before giving advice); as a group nurses achieved 86%. Lay counsellors, in contrast, scored substantially below this at 22%. These lay counsellors were similar to those taking part in the *Options: WC* project in terms of education: most had completed Grade 12 (one had not), and six had education “higher than matric” (Mash et al., p. 54)¹⁷. Study III presented in the previous chapter indicated a low level of basic counselling skill among counsellors. Similarly in the Mash et al. study, trainers reported having observed a lower level of baseline communication skill among lay counsellors’ relative to nurse counsellors during training. Lay counsellors had required more focus on basic communication skills such as formulating open questions during training. The authors speculate that this might be responsible for lay counsellors’ poor performance in terms of MI in comparison to nurse counsellors. Starting from a lower baseline level, it is possible that lay counsellors’ post-training MITI scores may still represent an improvement over their previous practice even though they did not achieve beginning proficiency (Mash et al.) - this was not assessed. However, in terms of delivering counselling services, improvement from baseline is not the determining training outcome; meeting minimum requirements of proficiency is.

In another study, Evangelini et al. (2009) trained Western Cape-based HIV/AIDS lay counsellors in MI in a 6-session (12 hour) course. The training programme was developed and delivered by a clinical psychologist with experience in using MI with HIV-positive clients and in MI training and supervision within an HIV healthcare context. MI skills were taught in relation to a range of HIV-related health behaviours including adherence, safer sex, and disclosure. Training focused on readiness-to-change, the spirit and principles of MI, counselling micro-skills such as open questions, affirmations, reflections and summaries, and dealing with resistance. Counsellors were also taught how to provide information in a manner consistent with MI. Training methods included the modelling of skills by facilitators, role-play exercises, experiential learning exercises, written handouts, and presentations. Counsellors also took part in two individual sessions (of unknown duration) where they received feedback based on role-play exercises. Audio-recordings of role-plays, each 10 minutes in duration and conducted in the counsellors’ preferred language, were taken before and after training for 14 counsellors. These recordings were co-rated by a trained MITI rater using the MITI 2.0 and a first language Afrikaans or Xhosa speaker where necessary. In comparison to Mash et al. (2008),

¹⁷ The education level of nurse counsellors is not reported, but it can be assumed that professional nurses would be in possession of a senior (Grade 12) certificate and tertiary education (higher certificate, diploma or bachelors degree) in nursing practice.

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Evangelini et al. did conduct a baseline analysis of counsellors' skills using the MITI before they took part in the MI training. In general, counsellors scored well below the level of beginning proficiency on MITI measures at baseline and following training but, unlike in the Mash et al. study, some counsellors did achieve proficiency on certain criteria. Three counsellors (21%) achieved beginning proficiency on the dimensions of empathy and MI spirit at baseline, and this increased to 4 (29%) following training. One counsellor (7%) achieved proficiency in MI adherent behaviours (asking permission, emphasising autonomy and affirmation) prior to training; this increased to 3 (21%) following training. One counsellor achieved the threshold for proficiency in the use of complex reflections before training, and one counsellor achieved proficiency on this dimension following training (it is not clear if it was the same, or a different, counsellor). Counsellors showed improvement in the percentage of open questions asked and the ratio of reflections-to-questions asked, but this was to levels below beginning proficiency. This study indicates that, with training, lay counsellors' practice can improve to more closely approximate MI, even if the improvement is less than overwhelming. If one is able to understand how the improvement is achieved, the delivery of this evidence-based approach to health behaviour change by lay health workers (LHWs) may be feasible. It would appear though that LHWs with lower baseline levels of counselling and communication skills may require more intensive training to reach proficiency in MI than other cadres of healthcare workers. Also, some of the more concrete skills, such as asking permission before giving advice, may be easier to learn than more abstract skills (like complex reflections) which may require more time (Evangelini et al.). Given the increasing popularity of the use of MI in healthcare settings, further research aimed at determining what aspects of MI can be taught and learned in what time period is important (Madson, Loignon, & Lane, 2009).

The study presented in this chapter is an evaluation of the integrity with which the *Options* counselling protocol was delivered following training. It extends the research conducted in Mpumalanga and KZN by looking at how well counsellors delivered the eight-step protocol in addition to the number of steps that they delivered. It also includes an evaluation of counsellors' proficiency in terms of the micro-counselling skills and spirit associated with the delivery method of MI. This study was conducted with the aim of determining whether counsellors could deliver the *Options* protocol in a way that was likely to be effective following training. Results would also indicate whether poor skill proficiency was an additional factor impeding the delivery of the *Options: WC* intervention.

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This study thus represents an evaluation of the *Options: WC* five-day training programme. The variability in the extent to which studies describe the training, supervision and monitoring of therapists implementing MI (Madson, Campbell, Barrett, Brondino, & Melchert, 2005) (as well as for other evidence-based interventions) makes it difficult to determine best-training practice, particularly for lay counsellors. If the various structural barriers to counselling practice in ARV clinic settings could be addressed, it would be important to understand the training required to make lay counsellors proficient in the *Options* model. This study is thus a potential first step towards the creation of a standardised programme for training lay ARV adherence counsellors in the intervention, and the MI counselling approach.

Methods

Study Design

This study aimed primarily to determine counsellors' ability to deliver the steps of the *Options* counselling protocol in a meaningful way and in a manner consistent with the MI approach. Analysis of ORFs provides an understanding of intervention delivery limited largely to the number of steps completed (Chapter 3). Notes recorded on the ORF are not likely to indicate how well particular steps, for example the readiness-to-change assessment, were done. Other indirect methods of assessing the use of MI are also unreliable: Clinician self-report regarding self-efficacy and frequency of use of MI techniques is not correlated with performance (Evangeli et al., 2009; Miller et al., 2004). Direct measurement was thus chosen as the method of assessment in the current study, and audio-recordings of counselling sessions were taken from counsellors in the weeks immediately following training. Again the use of real counselling sessions as opposed to simulations offered the advantage of increased external validity – the characteristics of clinic patients are likely to affect counselling sessions in ways that a simulated client would not. For example it has been noted that patients do not always understand the readiness-to-change assessment, and it is important to know how counsellors manage this. The use of real counselling sessions thus indicates the extent to which counsellors are able to generalise their newly learnt skills into other settings.

Population and Sampling

All 39 lay ARV adherence counsellors from 21 clinics who took part in the five-day *Options: WC* training course had agreed to take part in the evaluation of the intervention in the month prior to training. As such, the *Options: WC* evaluation team assumed that all counsellors would take part in this round of data collection. On the last

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day of training counsellors were reminded that they would be visited by data collectors in the next few weeks and also that they could decline participation at any time.

The *Options*: WC Training Programme

In January 2008, the *Options*: WC implementation team took part in a five-day master training programme facilitated by Dr Deborah Cornman, one of the co-developers of the *Options* intervention. The training programme for ARV adherence counsellors was later developed by the *Options*: WC implementation team based on the materials delivered in this course. The master training course covered the intervention protocol, information on HIV transmission risk behaviours (sexual and injection drug use) and factors affecting safer sexual practice such as HIV-status disclosure and drug/alcohol use in a sexual context. Participants were provided with intervention manuals and certificates for completing the course, but competency in the *Options* protocol was not assessed¹⁸. The master training programme was adapted by the *Options*: WC implementation team for ARV adherence counsellors to include modules on MI, ARV adherence, gender-based violence, alcohol and drug use in relation to adherence and sexual risk behaviour, as well as the desire for pregnancy in relation to sexual risk behaviour. Counsellors were provided with the intervention manual, which had been adapted to include guidance on using the eight steps in relation to ARV adherence instead of drug-use¹⁹.

The 39 adherence counsellors taking part in the implementation of *Options*: WC were divided into 2 groups and trained over 2 consecutive weeks in June 2009. Smaller training groups of about 15 people allow for more quality time and opportunities for practising skills (da Rocha Kustner, Meyersfield, Brouard, & the Adherence Networking Group, 2011) as well as individual attention from facilitators. Teaching methods used included didactic presentations and hand-outs, experiential learning exercises, modelling (by facilitators and in video demonstrations) and role-play. Training was conducted in English. All counsellors were presumed to possess sufficient knowledge of English for this to be appropriate as all training at the AIDS Training, Information and Counselling Centre is conducted in English. Xhosa and Afrikaans translations for key concepts were generated in collaboration by facilitators and participants.

Day 1 of the counsellor training programme focused on the following topics and

¹⁸ It is not known whether this is the same training programme that was delivered to clinicians in the United States of America and/or to lay counsellors in KZN, but it is reasonable to assume that the content would not be very different.

¹⁹ The facilitators guide and the adapted *Options* manual are available on the project website at <http://www.sahealthinfo.org/motivational/healthoptions.htm>.

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skills associated with MI: ambivalence, readiness-to-change, change talk and resistance, reflective listening, asking permission, open- and closed-ended questions and providing information in a manner consistent with MI (elicit-provide-elicite). This technique involves the delivery of information in small chunks whereby the counsellor would ask the patient what they already know with regard to a particular topic (elicit), give further information if required (provide) and then check the patients' understanding of the information provided (elicit). The MI module was delivered by two guest facilitators with experience in training lay people in the MI approach. One facilitator was fluent in Xhosa. The remaining four days of training were facilitated by the two counselling psychologists who were a part of the *Options: WC* implementation team (that is, JC and MW). The principle investigator (PI) attended both weeks of training in order to document the training process and assist in the facilitation of role-plays²⁰.

On Day 2 trainees were introduced to the *Options* eight-step protocol for first and follow-up visits. The model for first sessions as it was trained is presented in Table 9. Following a step-by-step review of the protocol, participants were provided with intervention manuals, viewed video demonstrations of *Options* counselling sessions and participated in interactive role-plays conducted by the facilitators. Participants were encouraged to discuss the similarities and differences between Egan's (2002) model and the *Options* model, and they conducted their own, supervised, role-plays. Although a facilitator's guide had been developed, the trainers adapted the programme in response to observations around how counsellors were managing with the material. Because counsellors were seen to be experiencing difficulty with the eight-step protocol, the facilitators decided to cut down on theory and to increase practical experience through role-plays and modelling. Facilitators also targeted counsellors struggling with the role-plays for additional one-on-one coaching. The use of MI-consistent micro-counselling skills was a continued focus during the remaining days of training.

On Day 3 of training, trainees recapped the eight-step model and discussed the skills and steps they observed being used in video demonstrations of *Options* counselling sessions. Role-plays and group discussions focused on non-adherent patients and ways in which barriers such as medication side effects, forgetting, disclosure, alcohol and other drug use could be addressed.

On Day 4 trainees recapped the eight-step protocol again, viewed more video demonstrations and practiced the protocol in relation to sexual risk behaviour. Trainees

²⁰ The training report can be found on the *Options: WC* project website.

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brainstormed ways in which barriers to condom use and adherence could be overcome.

On the fifth and final day of the training programme trainees were paired-up to conduct role-plays (in English) which were audio-recorded for transcription and assessment. In the two weeks following training the PI visited each counsellor at their clinic to provide them with a copy of their transcript together with notes and verbal feedback on their performance in the role-play.

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Table 9. *The Options Counselling Protocol for First Sessions Focusing on ARV Adherence as Trained in the Five-Day Options: WC Training Course*

Step	What	How	Why
1	Introduce the discussion	Explain that you would like to talk about ARV adherence and ask permission to proceed with the discussion.	The patient should experience a sense of control over the session and of being respected.
2	Identify current non-adherence	Use simple open questions to explore the patient's behaviours. Avoid judging/criticising and asking a series of close-ended questions. This takes control away from patient and can come across as an interrogation.	To determine the adherence problem as quickly and efficiently as possible, and the conditions under which non-adherence occurs.
3	Assess importance and confidence to evaluate the patient's readiness to increase their adherence	<p>"On a scale of 1 to 10, where 1 is "not at all important" and 10 is "extremely important", how important is it to you to [take your ARVs every day and on time?"]</p> <p>"On a scale of 1 to 10, where 1 is "not at all confident" and 10 is "extremely confident", how confident are you that you can [take your ARVs every day and on time?"]</p>	The constructs of importance and confidence map on to the patient's levels of information, motivation and behavioural skills. Low importance usually indicates inadequate information and/or low motivation. Low confidence usually indicates insufficient behavioural skills, and sometimes low motivation.
4	Decide whether to focus on importance or confidence	Use the <i>Options</i> algorithm: <ul style="list-style-type: none"> • If importance <7, explore importance. • If importance ≥ 7, explore the construct with the lower rating. • If both importance and confidence are ≥9, explore any remaining barriers to change. 	If the patient does not view adherence as important, then it is unlikely they will be adherent even if they are confident they can do so. If adherence is important to them, but their confidence is low, they most likely require behavioural skills.
5	Identify barriers to consistently practicing safe sex or adherence	<p>"You gave yourself a score of [#] for [importance or confidence], why did you give yourself a [#] and not a lower score?" (down the ladder)</p> <p>"What would have to happen for your [importance or confidence] score to increase?" (up the ladder)</p>	By explaining why the rating is not lower, the patient presents their own argument/s for change that they regard as important and do-able (eliciting change talk). To elicit reasons for the lower score and why the patient is not adherent (barriers). This also directly identifies strategies that might be effective in increasing their adherence.
6	Discuss strategies for change	Ask the patient to come up with ideas of their own. Ideally strategies for change should come from the client –they will best know what will/won't work for them. If they are unable to come up with any, ask permission to offer some.	To identify one/more strategies that could 1) address obstacles to adherence and 2) increase the patient's readiness and ability to change.
7	Negotiate an action plan	<p>"We have talked about some possible ways to increase your adherence, would you be willing to try any of these things between now and your next visit?"</p> <p>The client should choose an action plan that they are willing to try and commit to. Plans may include "baby steps" toward optimal adherence, and even agreeing to think about changing and continuing the discussion in the next visit.</p>	To increase the probability of behaviour change by allowing the client to choose an action plan that is realistic and attainable in the context of his/her life.
8	Document the session on the <i>Options</i> Record Form	At a minimum the following should be recorded: barriers to adherence, importance and confidence ratings and the agreed upon action plan.	To ensure continuity from one session to the next by providing a record of what occurred during previous sessions.

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Data Collection

A team of 3 data collectors including NM visited the 21 clinics and 39 counsellors over a period of 3 months immediately following training in order to collect the required digital audio-recordings of *Options* counselling sessions from counsellors. These three data collectors were those who had collected audio-recordings from counsellors in the month prior to the *Options: WC* training as a part of Study III. The procedure for collecting recordings remained the same as it had been for that study. Data collectors visited each counsellor at their clinic until recordings of three counselling sessions had been received or until the end of the data collection period. When a patient was referred for counselling for poor adherence, the counsellor would inform the data collector who would conduct the informed consent procedure with the patient. Patients were assured by the data collector that their care at the clinic would not be affected should they decline to have their session recorded. Patients consenting to take part were asked to indicate their consent with a signature, but no other identifying information was taken from them. (The rate of refusal was not systematically recorded, but an insignificant number of instances of patients declining were reported by data collectors at weekly meetings with the PI.) Data collectors did not sit in on counselling sessions but left the recorder, switched on, in the room with the counsellor and patient. The data collector would retrieve and switch off the recorder only once the patient had exited the counselling room. Data collectors were instructed not to play back any of their recordings for reasons of confidentiality.

Counsellors were provided with one R20 grocery shopping voucher for one recording, an additional R10 voucher for a second recording and an additional R20 voucher for a third recording (thus the maximum that could be earned by one counsellor was R50). Patients were not provided with incentives for having their sessions recorded.

Data Handling and Analysis

Digital audio-recordings were downloaded on a weekly basis and then deleted from the recorders. On download, the files were labelled with study identification numbers allocated to counsellors to ensure anonymity. Recordings were transcribed verbatim by a professional transcription service. Because the cost of professional translation was prohibitive, transcripts were translated into English and de-identified where necessary by NM and SB (a volunteer assistant from another unit at the Medical Research Council). NM checked translations done by SB for accuracy, and vice versa. No serious disagreements regarding the translations were raised. For quotes presented in the results section that follows: punctuation has been included for ease of reading; words of

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clarification, where necessary, have been added in brackets; the omission of words is indicated by three ellipsis points; names have been replaced with pseudonyms; and counsellors are identified by letters of the alphabet, although “Counsellor A” in the current study is not necessarily the same person that “Counsellor A” was in Study II.

In total, audio-recordings were collected from 36 of the 39 participating counsellors. One recording was received from each of 10 counsellors; 2 recordings from each of 13 counsellors, and 3 recordings from each of the remaining 13 counsellors. This made for a total of 75 recorded counselling sessions. Of the three counsellors who did not contribute any recordings, two had no patients referred for counselling while a data collector was present, and one declined to take part in the study after a few weeks. Where more than one recording had been received for a particular counsellor, one transcript was randomly selected for analysis. The transcript for one counsellor revealed that their recording had been cut short near the beginning of the session, thus it was excluded from the analysis. This counsellor had provided only one recording and so the transcript could not be replaced. In total 35 transcripts, one from each of 35 counsellors, were analysed for fidelity and proficiency in terms of the *Options* protocol and MI techniques. The *Options* protocol was analysed by means of an instrument developed for this purpose by the PI, and competence in MI by the MITI 3.0.

Fidelity and proficiency in terms of the *Options* eight-step protocol.

Counsellors’ adherence to the steps of the *Options* protocol within the recorded sessions was evaluated using a coding sheet (attached as Appendix C) developed by the PI. This tool was developed based on the intervention protocol and observations made by the PI and *Options* trainers (JC and MW) of role-plays conducted by counsellors during training. Firstly, the tool aimed to determine the number of *Options* steps delivered by counsellors. Transcripts were coded for the presence (yes/no) of seven of eight *Options* steps. ORFs, completed in Step 8 of the protocol, had not been collected from the field for recorded sessions; this step was thus not included in the analysis. Steps consisting of more than one discrete activity were coded for the presence of each activity. Specifically, Step 3 was coded for the presence of both an assessment of importance and an assessment of confidence. Similarly, Step 5 was assessed in terms of whether the counsellor went “down the ladder” to elicit change talk, and then “up the ladder” to the specific barriers to adherence (Table 9). Secondly, the tool aimed to determine the proficiency with which counsellors delivered the eight-step protocol. Those steps with which counsellors had struggled during training were thus assessed for more than their mere presence/absence.

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For example, during training counsellors were observed to experience difficulty in explaining the 10-point rating scale and the behaviour that they were asking their role-play patients to rate when using the importance and confidence ladders. As such, transcripts were scored according to the clarity with which the counsellor explained the scale to their patient, and whether they were specific about the behaviour that they were asking their patient to rate them self on. The tool was piloted by the PI on transcripts that had not been selected for inclusion in the final analysis. Revisions were made until the PI was satisfied that the tool captured all information relevant to determining counsellors' proficiency in terms of the eight-step protocol for first *Options* sessions.

Proficiency in MI. A number of instruments are available for assessing provider competence in MI. In comparison to other instruments, the MITI focuses exclusively on therapist functioning as opposed to the interaction between client and therapist, and as a result it is less time consuming and easier to use (Moyers et al., 2005). Inter-rater reliability for less experienced raters in MI has even been shown to be good (Pierson et al., 2007). The MITI also limits the measurement of therapist behaviours to less complex exemplars of MI practice and, as such, it is appropriate for measuring entry-level competence in the approach (Moyers et al., 2005). The Behaviour Change Counselling Index is another tool that was considered for use in this study, as this instrument was developed to measure practitioner competence in Behaviour Change Counselling (BCC) specifically (Lane et al., 2005). (Being based on MI and omitting some of the more advanced aspects of the MI approach, *Options* is a BCC intervention). The MITI offered several advantages for this study over the Behaviour Change Counselling Index. Firstly, the MITI provides a measure of the therapist's use of micro-counselling skills, while the Behaviour Change Counselling Index does not. Lay counsellors' use of micro-counselling skills is of interest given the poor level of skill observed in Study III. Secondly, the MITI has been used to evaluate lay counsellors' performance in MI in previous research conducted in the Western Cape (Evangeli et al., 2009; Mash et al., 2008). The selection of the MITI for the current study also means that findings can be more easily compared to those of Mash et al. and Evangeli et al. Given the increasing popularity of MI in healthcare settings and the role of LHWs in promoting health behaviour in resource-poor settings, research that builds on previous work regarding the ability of LHWs to implement MI is important. Finally, while the MITI was originally validated on 20 minute segments of audio-taped counselling sessions, it has been shown to reliably detect high and low adherence to MI in samples of behaviour lasting as little as 10 minutes

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(Pierson et al.). This is important given the variability in the length of adherence counselling sessions observed in Study III.

The MITI consists of two components: global scores and behaviour counts. Global scores require the rater to assign a score from a five-point Likert scale to characterise the interaction in terms of the following dimensions: evocation, collaboration, autonomy/support, direction, and empathy (the first three of these dimensions were described briefly in the introduction). These dimensions are defined in Table 10, and are associated with proficiency and competency thresholds: a mean of 3.5 indicates proficiency, and a mean of 4 indicates competency. Scores achieved on the dimensions of evocation, collaboration, and autonomy/support are summed, and the mean of these dimensions yields a score representing the practitioner's "MI spirit."

Table 10. *Definitions of Global Scores in the MITI 3.0*

Global score

Evocation

The extent to which a clinician draws out the client's own motivation for change and focuses efforts to expand on this in the interaction.

Collaboration

The extent to which the clinician behaves as if the session is between two equal partners, and avoids adopting the position of "expert" or authority.

Autonomy/support

The extent to which the clinician supports and fosters the clients' perception of choice and avoids persuading/coercing the client in to solutions the clinician feels are appropriate.

Direction

The degree to which the clinician maintains appropriate focus on a specific target behaviour and/or directly related concerns.

Empathy

The extent to which the clinician understands, or makes an effort to understand, the clients' perspective, feelings and situation.

Note. Adapted from the Motivational Interviewing and Treatment Integrity (MITI) tool (Moyers et al., 2005).

Behaviour counts require the rater to parse clinician speech into utterances to which one of the following codes can be assigned: giving information, open/closed question, simple/complex reflection, and MI adherent/non-adherent. An utterance is

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defined in the MITI as a complete thought or idea which ends when the thought or idea is completed. A new utterance begins when a new idea is introduced (Moyers et al., 2007). For example: “You are saying you were drinking the pills but then you went to the Eastern Cape (utterance, coded as a simple reflection). I would like to ask other questions, if it’s fine, to find out what happened (utterance, coded as MI adherent).” Allocated codes are counted and combined to calculate a number of summary scores associated with proficiency and competency thresholds. Behaviour count summary scores are defined and presented, along with their associated proficiency and competency thresholds, in Table 11. Because information-giving constitutes a large part of lay counselling practice, Mash et al. (2008) created an additional summary score calculating the percentage of utterances that gave information for their study. This summary score was included in the current analysis as well.

Table 11. *Definitions and Proficiency Thresholds for Behaviour Count Summary Scores in the MITI 3.0*

Behaviour count summary score	Beginning Proficiency	Competence
<p><i>Reflection to question ratio</i> The number of all reflective statements made compared to the number of all questions asked.</p>	1	2
<p><i>Percent open questions</i> The percentage of all questions asked that are open. <i>Open questions</i> are those allowing for a wide range of responses, while <i>closed questions</i> can be answered with “yes”, “no” or similar one word responses.</p>	50%	70%
<p><i>Percent complex reflections</i> The percentage of all reflective listening statements that are complex. <i>Simple reflections</i> add little or no meaning to what clients have said, but convey understanding of the expressed thought/feeling etc. <i>Complex reflections</i> add substantial meaning to what has been said.</p>	40%	50%
<p><i>Percent MI Adherent</i> The percentage of all MI adherent and non-adherent statements that are adherent. <i>MI adherent</i> behaviours include asking permission before giving advice or information, affirming the client’s self-efficacy, emphasising the client’s control and offering supportive statements. <i>MI non-adherent</i> behaviours include advising without permission, confronting (e.g. by disagreeing, shaming, criticising) and giving orders, commands or imperatives.</p>	90%	100%

Note. Adapted from the Motivational Interviewing and Treatment Integrity (MITI) tool (Moyers et al., 2005).

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All transcripts were evaluated using the MITI 3.0 by the PI and a research assistant (MS). The PI was trained in the use of the MITI 3.0 together with the *Options: WC* trainers (JC and MW) by an expert in MI. MS was familiar with the approach of MI as a result of her medical training. MS was trained in the use of the MITI 3.0 by JC together with the PI (SD) in one six-hour session. During this session, JC, SD and MS evaluated practice transcripts and compared and discussed their respective coding. Following training MS and the PI coded three practice-transcripts individually and met to compare and discuss discrepancies. This process was repeated three times. In order to prevent coder drift²¹ during analysis, transcripts were analysed in batches of 5 and later 10, with the coders meeting to discuss coding and any discrepancies in between each batch. Ratings were not changed on the basis of these discussions. These steps were taken to ensure the reliability of codes allocated to transcripts.

Quantitative data analysis was conducted using IBM SPSS Statistics 19. Data was screened for normality using standard procedures. Non-parametric statistics were used where assumptions of normality were not met. Inter-rater agreement was estimated using Spearman's Rank-Order Correlation and the Intra-class Correlation Coefficient (ICC) for each rating category²². Data from the second coder (MS) were not further used after the establishment of inter-rater reliability.

Results

Recordings for the 35 sessions that were analysed ranged from 6 to 34 minutes in length, with an average time of 15 minutes. The variation in length could have been a function of the amount of time the counsellor had available, the number of *Options* steps that were delivered, or the complexity of the patient's problem.

The demographic characteristics of counsellors included in this analysis are presented in Table 12. Here it can be seen that most counsellors (n=26) had completed Grade 12, while the remaining counsellors had an education level of Grade 11 or less. While most counsellors (n=26) had ARV adherence counselling experience of 2 years or less, most counsellors (n=28) also had 3 years or more of counselling experience in the general field of HIV/AIDS²³. Most could thus be regarded as experienced HIV lay

²¹ Coder drift refers to the problem of change in the interpretation of coding items over time, and the coding inconsistencies that result (Wilson, 2009).

²² The ICC adjusts for chance agreement and systematic differences between raters and therefore provides a more conservative estimate of agreement than correlations (Moyers et al., 2005).

²³ This could include HIV counselling and testing and prevention of mother to child transmission counselling experience, as well as any other HIV-related counselling

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counsellors.

Table 12. *Characteristics of Counsellors (N=35) Included in the Options Counselling Protocol Evaluation*

Gender	n	Home Language	n	Highest Education	n	HIV/AIDS Counselling Experience	n	ARV Adherence Counselling Experience	n
Female:	31	Afrikaans	8	Grade 9 (or lower)	1	1 yr	3	1 yr	11
Male:	4	English	0	Grade 10	4	2 yrs	3	2 yrs	15
		Xhosa	27	Grade 11	4	3 yrs	5	3 yrs	4
		Other	0	Grade 12	26	4 yrs	5	4 yrs	3
						5 yrs	10	5 yrs	1
						6 yrs or more	8	6 yrs or more	0
						Missing data	1	Missing data	1
	35		35		35		35		35

Fidelity to the *Options* Eight-Step Counselling Protocol

Only 8 (23%) counsellors conducted all 7 of the 7 *Options* steps assessed; half of counsellors assessed (n=18; 51%) conducted 5 steps or fewer. Those counsellors who had completed all seven steps were matched to their level of education: one had completed schooling as far as Grade 10, but the rest had completed Grade 12. All eight of these counsellors had two years or less of adherence counselling experience.

The number of counsellors completing each of the seven *Options* steps assessed is presented in Table 13. Here it can be seen that less than half of counsellors selected the appropriate construct (importance or confidence) to focus on in moving forward from the readiness-to-change assessment. Less than half of counsellors conducted the two steps that follow this (Steps 5.1 and 5.2) and are also related to the readiness-to-change assessment. Steps 3.1 to 7 were analysed for more than their presence or absence because these are steps that could have been conducted, but may not necessarily have been conducted well. Counsellors' conduct of these steps is discussed further below.

experience that may have been gained in settings other than the public healthcare system.

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Table 13. *Number and Percentage of Counsellors Completing Each of Seven (of Eight) Options Steps Assessed*

Step	Activity	n	%
Step 1	Introduce the discussion	31	89
Step 2	Risk assessment	34	97
Step 3.1	Assess Importance	35	100
Step 3.2	Assess Confidence	35	100
Step 4	Select appropriate construct	16	45
Step 5.1	Elicit change talk	16	45
Step 5.2	Elicit barriers	12	34
Step 6	Discuss strategies for change	28	80
Step 7	Negotiate a plan of action	28	80

Step 3.1 and Step 3.2: Assessing importance and confidence. All 35 counsellors (100%) assessed both importance and confidence but this was not always done well. Counsellors were trained to give clear explanations regarding the importance and confidence rating scales, and to be specific about the behaviour they are asking the patient to rate (for example, “how important is it to you to take your treatment *every day and on time*?” or “to use a condom *every time* you have sex”). In terms of importance, 3 counsellors (9%) provided a clear explanation of the rating scale and were specific about the behaviour they were asking patients to rate. The majority of counsellors (n=20; 57%) provided a clear explanation of the rating scale and were reasonably clear about what they were asking the patient to rate themselves on. For example Counsellor A explained:

Okay sister, if you look here we have got this ladder ... it is written here “importance”, it is how important it is that you take your pills ...if you can measure here, you see here where it says how important it is to take your pills? From one to four it is not important. From seven, eight, nine, ten it is very important to take your pills. If you can rate yourself sister, which number would you rate yourself to show how important it is to you to take your treatment?

Twelve counsellors (34%) gave confusing explanations about how the rating scale worked, and there was a lack of clarity around what exactly they were asking patients to rate. Examples below are from Counsellors B and C respectively:

[Immediately following the risk assessment] Sister, I have two ladders here, this one shows importance of a person, this one shows the confidence of a person, so in these steps that are here in this ladder can

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you show me where you are? Where do you place yourself in these numbers?

[Immediately following a discussion around disclosure and condom use]
If they can say give yourself nine, like a score, there is a letter from nought to six that means it's important, it is important or not very important to you to make sure that you take your pills every day. For six to ten, okay, again it means it's important, how are you sure that it is important to take your pills?

In terms of confidence, 3 (9%) counsellors gave a clear explanation of the rating system and were specific about what they were asking the patient to rate. Two of these counsellors were among the three who had conducted a good assessment of importance. Thirteen counsellors (37%) explained the scoring system but were unclear about the behaviour they were asking their patients to rate themselves on. The majority of counsellors (n=19; 54%) gave neither a good explanation of the rating scale, nor were they clear about what they were asking their patients to rate. Explanations of the confidence rating provided by these counsellors revealed confusion around the concept of confidence. For example Counsellor D asked: "How sure are you that you want to take your pills?" while Counsellor E asked: "In this second [ladder], is it important?" Counsellor F asked the patient: "How sure are you (that) you're taking your pills correctly?" Five counsellors, like Counsellor E quoted above, referred to the concept of importance when assessing confidence.

In proceeding through the analysis, the PI observed that patients did not always provide scores that made sense in the context of their non-adherence. Patient scores were thus added to the notes made for each transcript. Twelve patients (34%) rated their importance and confidence at 10 each. One patient rated importance at three but insisted that her treatment was very important to her. All 12 counsellors accepted these scores unquestioningly. Ideally counsellors would have been able to manage this situation by gently pointing out the discrepancy between the patient's scores and his/her actual situation, and encouraging the patient to revise their scoring. An example of how the counsellor might do this is as follows: "you are saying that you are confident that you can take your ARVS on time everyday but earlier you said that you cannot take them when you have left the house in a hurry when your husband is drinking."

Step 4: Selecting the appropriate construct to follow-up on. In Step 4 counsellors are required to use the *Options* algorithm to select and focus on the appropriate construct in moving forward. For example in the first part of Step 5,

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counsellors should use the score selected by the patient on the construct chosen in Step 4 to elicit change talk. In *Options*, this is done by asking the patient why they did not choose a lower score on the chosen construct (referred to in the *Options: WC* training as “going down the ladder”). Following this, counsellors should elicit the patient’s specific barrier/s to change by asking the patient what would need to happen for their score to be increased (referred to as “going up the ladder”). Nineteen counsellors (54%) did not focus on the correct construct in delivering Step 5. Some of these counsellors went down the ladder on their patient’s importance *and* confidence scores. Others simply chose the wrong score, focusing on confidence (for example) when the patient’s importance score was the lowest score. Importantly these 19 counsellors included the 12 counsellors mentioned above whose patients rated themselves at 10 for each importance and confidence. In these cases it is difficult to say which is the construct that should have been focused on, because patients’ scores were not indicative of where the barrier to change lay (that is, in a lack of importance or a lack of confidence).

Step 5.1 and Step 5.2: Eliciting change talk and barriers. As mentioned above, the first part of Step 5 requires the counsellor to “go down the ladder.” The patient’s response represents an argument as to why optimal adherence is important or achievable. Again it was observed that the majority of patients did not understand this question. For the 16 counsellors (46%) who asked their patient why they had not chosen a lower score, 12 (75%) responded by reiterating their poor adherence. For example in response to one counsellor’s question regarding the patient’s confidence score (“What do you think it is that makes you to choose five, not one?”), the patient responded: “I think because other days I don’t take [my pills].” It is expected that a patient will respond to this question with a reason as to why a lower score would be unfair, for example: “I didn’t choose a lower score because sometimes I forget, but most times I do remember to take my pills.” In this way the patient is encouraged to focus on their ability to engage in the desired health behaviour, as opposed to the reasons why they cannot. The following excerpt contains a number of the issues described above, and illustrates some of the difficulty experienced by counsellors and patients in relation to the readiness-to-change assessment (although other patients didn’t express their confusion as directly):

- Counsellor: [reflecting the patient’s importance and confidence scores] You are saying you put yourself at ten in both of them?
- Patient: Because I want to be healthy.
- Counsellor: Why maybe you put yourself at ten in both numbers, why

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- maybe you not putting yourself at three or four? What are you thinking?
- Patient: I don't know I'm just putting.
- Counsellor: Okay, if you allow me maybe I can explain why you put yourself at ten okay? You put yourself at ten in Importance that shows it is very important to you, this thing, your treatment, it's only this problem you are staying alone, and you don't have someone to give you money, and here [in] Importance [but referring to Confidence], you put yourself at ten...it shows you that you are sure that you can use your treatment, it's just that you said you have this problem of staying alone and you don't have money, so that is why I am asking now, why do you not put yourself at two and three and four?
- Patient: Because I don't know how it works.
- Counsellor: Why do you not put yourself here at two or three in both ladders? What do you think?
- Patient: I don't know.
- Counsellor: Okay, do you think they are the lowest numbers, or what is happening?
- Patient: I'm not thinking, I'm [just] putting the number.

Following the first part of Step 5, most counsellors (n=23; 66%) did not elicit specific barriers to change by asking patients how their scores could be increased (“going up the ladder”). In 4 of the 12 sessions in which this question was asked, patients gave responses which indicated that they didn't understand the question and which were, nevertheless, accepted by counsellors:

- Counsellor: [reflecting on the patient's confidence score] Okay, what will we have to do to take it from a five to a seven?
- Patient: Medication.
- Counsellor: Okay that's good...okay now I want to give you, me and you gonna discuss a couple of options what we gonna do...

Step 6 and Step 7: Strategies for change and the negotiation of an action plan.

Twenty-eight counsellors (80%) facilitated a discussion around strategies for behaviour change (Step 6). Only four of these counsellors did not ask the patient for any of their own ideas. Twenty-eight counsellors (80%) negotiated a specific plan of action with patients (Step 7). Of these action plans, 21 (75%) were deemed to be appropriate in that they appeared to have the potential to effectively address what was known about the patient's barrier. Examples of cases in which the action plans were deemed inadequate are presented in Table 14.

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Table 14. *Examples of Action Plans Considered to be Unlikely to Effectively Address the Patient's Barrier to Adherence*

Barrier to adherence	Strategies discussed	Plan of action for optimising adherence
The patient stopped taking one of his ARVs for a week because he could not handle the side effect of diarrhoea anymore.	The counsellor tells the patient to speak to the doctor who must change his treatment (the patient responds that he has already been to the doctor today and is not going back now).	The counsellor states the action plan as being to discuss the problem with the doctor and to return for the next appointment date.
The patient was in the Eastern Cape, missed her clinic appointment date and ran out of pills while there.	The counsellor suggests the patient ask someone to come to the clinic for her to collect her pills, or that she come for extra pills before she leaves for the Eastern Cape.	None of the suggested plans are agreed upon and the counsellor states: "I am going to write here that you are going to stop this and that you are sure you are going to be committed to taking your treatment."
The patient missed his/her appointments when attending a previous clinic because it was too far and s/he had no money for transport. As a result s/he was transferred to the current clinic which is closer to home.	The counsellor encourages the patient to choose a new treatment buddy (the patient insists there is no one they can ask).	The counsellor asks the patient to agree to take his/her treatment properly from now on.

Fidelity to the Motivational Interviewing Approach

Results regarding counsellors' competence in terms of MI are presented following data on inter-rater agreement.

Inter-rater agreement. In order to ensure the reliability of the MITI analysis, inter-rater agreement was estimated for each rating category and results are presented in Table 15. Agreement between raters ranged from an ICC of .126 on the dimension of empathy to an ICC of .971 for closed questions. Sixty percent of ratings were in the good to excellent range. Agreement was poorest for global ratings, and empathy and autonomy in particular. Raters could not consistently agree on what support for autonomy would look like in counselling sessions conducted with the specific behavioural goal (imposed

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by clinic protocol) of increasing adherence. In terms of empathy, other studies have also found lower ICCs for this rating in relation to those for other global ratings (for example, Forsberg et al., 2007; Moyers et al., 2005) although none this low. An important difference between these other studies and the current one is the evaluation of transcripts as opposed to audio-recordings; tone of voice may contribute substantially to the reliable perception of empathy. It was decided to include data on all categories here, even the ones with low inter-rater reliability. It does mean though that one has to be cautious in making definitive statements regarding counsellors' overall counselling approach following training.

Table 15. *Agreement between Raters on Global Scores and Behaviour Counts Associated with the MITI 3.0*

	ICC	95% CI		r_s
		Lower bound	Upper bound	
<i>Global ratings</i>				
Evocation	.441	-.088	.715	.324
Collaboration	.515	.047	.754	.374*
Autonomy	.339	-.335	.669	.235
Direction ^a	-	-	-	-
Empathy	.126	-.768	.563	.125
<i>Behaviour counts</i>				
Giving information	.866	.736	.932	.508**
MI adherent	.832	.659	.916	.660**
MI non-adherent	.762	.532	.880	.603**
Closed questions	.971	.924	.987	.911**
Open questions	.788	.579	.893	.696**
Simple reflections	.671	.357	.833	.515**
Complex reflections ^b	-	-	-	-

Note. ICC = Intraclass Correlation; CI = Confidence Interval; r_s = Spearman's rho. ICCs can be categorised as follows: <.40 = poor, .40 to .59 = fair, .60 to .74 = good and .75 to 1.00 = excellent (Cicchetti, 1994).^a Statistics not computed as result of zero variance between raters: all counsellors scored the maximum score of 5 on direction. ^b Statistics not computed as result of zero variance between raters: no counsellors offered any complex reflections.

* $p < .05$

** $p < .01$

Ratings of MI competence. Data presented in Table 16 shows that direction was the only global rating on which counsellors exceeded the threshold for beginning proficiency of 3.5. On all other global dimensions, mean scores were well below the threshold for beginning proficiency, with empathy as low as 1.8. This data is based on the

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coding that was conducted by the PI. Because empathy and autonomy were those dimensions for which inter-rater agreement was poorest, the mean scores were calculated using the second rater's data for comparison. The mean score for empathy remained low at 1.9. The mean score for autonomy remained the same when using the second rater's data at 2.9.

Table 16. *Mean Scores Achieved by Counsellors on Global Ratings on the MITI 3.0*

Measure	Mean	SD	Range
Evocation	2.4	1.1	1.0 - 4.0
Collaboration	2.4	1.1	1.0 - 4.0
Autonomy/support	2.9	0.6	1.0 - 4.0
Global spirit ^a	2.6	0.8	1.3 - 4.0
Direction	5.0	0.0	5.0 - 5.0
Empathy	1.8	0.9	1.0 - 4.0

Note. "Range" refers to the range of counsellors' scores; the possible range was 1 to 5.
^aThis score represents the mean of mean scores achieved for Evocation, Collaboration and Autonomy/support.

Table 17 presents the results of counts of particular counsellor behaviours. In total, 1871 utterances were coded. Because the data was skewed, median values are presented in addition to mean values. By far the most common behaviour was asking closed questions, with one counsellor asking as many as 80 closed questions in one session (Table 17). Giving information was the next most common behaviour, with between 4 and 28 instances occurring per session. On average, 19% of all utterances coded consisted of information giving (min=7%, max=35%). No counsellors managed any complex reflections. The majority of counsellors (n=29; 83%) made statements that were inconsistent with the spirit and approach of MI.

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Table 17. *Mean Use of Particular Counselling Behaviours Assessed by Behaviour Count Using the MITI 3.0*

Behaviour	Mean	Median	SD	Range	No. of Counsellors Scoring Zero
Giving information	9.9	8.0	5.6	4 - 28	0
MI adherent	2.3	2.0	1.8	0 - 7	6
MI non-adherent	3.0	2.0	3.0	0 - 14	6
Closed questions	25.5	23.0	13.8	7 - 80	0
Open questions	5.8	6.0	2.9	1 - 13	0
Simple reflections	7.1	6.0	4.1	0 - 15	1
Complex reflections	0.0	0.0	0.0	0 - 0	35

Note. “No. of counsellors scoring zero” refers to the number of counsellors that did not exhibit a particular behaviour. For example, six counsellors made no statements that were MI non-adherent.

One-sample Wilcoxon Signed-Rank tests were used to evaluate counsellors’ summary scores in relation to the proficiency thresholds suggested by the MITI 3.0. This is a nonparametric test that compares the median of a set of numbers against a hypothetical median, in this case the MITI proficiency thresholds. Results of these tests presented in Table 18 show a significant difference between hypothetical and observed medians. Observed median values indicate that, as a group, counsellors fell well below proficiency thresholds for all criteria²⁴. Some individuals did meet proficiency thresholds on two criteria (global scores and MI adherent behaviours) however. This data is included in Table 18.

²⁴ Because of the poor agreement between raters on global ratings, one-sample Wilcoxon sign rank tests were also done using the second raters global ratings data for comparison. Results did not differ from those presented in Table 18.

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Table 18. Results of the Comparison between Counsellors' ($N=35$) Scores and Proficiency Thresholds Suggested in the MITI 3.0

	Target Median	Observed Median (Range)	Test Statistic ^a	p	No. at beginning proficiency
Global scores	3.5	2.8 (2 - 4)	66.500	< .001	9 ^b
Reflection to question ratio	1	0 (0 - 1)	0.000	< .001	2
Percent open questions	50	18 (8 - 38)	0.000	< .001	0
Percent complex reflections	40	0 (0.0- 0.0)	0.000	< .001	0
Percent MI adherent	90	44 (0 - 100)	27.000	< .001	6 ^c

Note. Hypothetical median refers to the proficiency threshold suggested by the MITI 3.0.

^aOne-sample Wilcoxon Signed-Rank test statistic. ^bOne of these nine counsellors achieved the threshold for competency (that is, a mean of 4). ^cAll six counsellors achieved the threshold for competency (that is, 100% MI adherent).
 $p < .05$

Discussion

A loss of fidelity is a well-known challenge when evidence-based interventions are transferred into practice settings (Cohen, 2008; Dusenbury et al., 2003). Counsellors attempting to deliver the *Options* intervention protocol in this study were no exception. Half of lay counsellors involved in the implementation of *Options: WC* implemented five or fewer of seven *Options* steps assessed in counselling sessions evaluated. In this study, fidelity in terms of the number of intervention steps delivered was evaluated by direct observation of one counselling session per counsellor. This is in comparison to the KZN (Cornman et al., 2008) and Mpumalanga (Peltzer et al., 2010) studies, where fidelity was monitored using ORFs collected over time. This means that the present study is not able to reach conclusions about variability between sessions and over time. This method was chosen because the *Options: WC* evaluation team intended to examine lay counsellors' ability to deliver the intervention in more depth than has previously been done. Indeed, the present findings show that while particular steps were delivered, they were not always delivered well. In fact some aspects of the eight-step protocol were so problematic for counsellors that they were rendered meaningless in terms of their theoretical underpinnings – this even though they have been “counted” as being present. These

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findings question the ability of lay counsellors to deliver this intervention with fidelity, at least following five days of training. They also indicate the importance of evaluating more than the number of steps delivered in attempting to determine the feasibility of using lay counsellors to deliver the *Options* intervention.

In BMIs, the assessment of a patient's conviction (or level of importance) regarding the need for change and their confidence regarding their ability to engage in a particular health behaviour is considered a key step that allows clinicians to provide interventions that are tailored to the patient's state of readiness and commitment to change (Goldstein, De Pue, & Kazura, 2009). In the present study, counsellors (and patients) generally struggled with this assessment in Step 3 as well as associated Steps 4 and 5. The elicitation of change talk in Step 5 is intended to increase motivation and confidence to change behaviour (Cornman et al., 2007). Counsellors' conduct of these steps suggests a lack of understanding regarding the conceptual difference between the constructs of importance and confidence, and the manner in which these related to the underlying theory of behaviour change and steps four and five of the *Options* protocol. In rating confidence, patients often appeared to choose scores reflecting what they *want* for themselves as opposed to their actual confidence in their ability to attain optimal adherence under their current circumstances. In rating importance it is also possible that patients were not making the subtle distinction between what is generally known to be important, for example taking ARVs every day, and the importance to *themselves* of taking ARVs every day within the context of their own lives. This might explain some of the patient ratings of 10 for each of importance and confidence in the context of known non-adherence.

It is important to acknowledge that most counsellors (and likely most patients) in this study were first-language Xhosa speakers. The remaining few counsellors were first-language Afrikaans speakers. While care was taken in translating important concepts such as importance and confidence from English into these languages during training, it is possible that semantic equivalence was not achieved. Counselling is a product of Western cultures and writers like Maree and Du Toit (2011) draw attention to the fact that, in counselling across cultures, not only will some concepts be absent in the language of the individual but they may also be completely foreign to the culture that s/he inhabits. In the previous chapter the cultural applicability of the values underlying Western counselling models in sub-Saharan African settings was queried, and findings from this part of the research raise the same issue. A more in-depth discussion is not possible here, but the

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possibility that the concept (and assessment) of readiness-to-change is not appropriate or helpful when counselling clients of African cultural heritage in health behaviour change should be considered.

The development of an individualised action plan for change is another key aspect of BMIs thought to be partially responsible for their effectiveness (Goldstein et al., 2009; Lee et al., 2010). Despite struggling to manage the readiness-to-change assessment, the majority of counsellors in this study did go on to discuss strategies for change with their patients. In terms of what is known about successful ARV adherence interventions, this represents an improvement over the standard care counselling practice that was observed among these counsellors in Study III where practical problem management was absent. Further, action plans were not only negotiated but the majority of plans devised were realistic and appeared to have the potential to result in behaviour change. This was judged by the PI in relation to what was revealed in session transcripts about the barriers to adherence faced by patients. If one subscribes to MI theory though, then the development of a seemingly achievable plan is unlikely to result in behaviour change if it is not matched to the individual's state of readiness-to-change (Miller & Rollnick, 1991). The negative consequences of having clients agree to actions for which they are not yet ready have been shown by Amrhein, Miller, Yahne, Palmer, and Fulcher (2003). In a psycholinguistic analysis of MI counselling sessions taken from a randomised control trial that failed to find an effect for MI on drug use, Amrhein et al. observed that motivation and commitment to change declined substantially towards the end of counselling sessions for those participants who did not respond to the intervention. The authors explain that therapists in the study delivered the intervention in accordance with a manual which, like *Options*, prescribed the development of a behaviour change plan towards the end of the session. For participants less ready to change, this was seen to elicit resistance and was associated with little change in drug use behaviour. Amrhein et al. warn that a danger associated with MI interventions that follow a prescribed script (such as the eight-step *Options* protocol) is that they can result in an inflexible approach to MI. They suggest that the delivery of MI that is not responsive to the individual's particular circumstances and state of readiness-to-change could yield worse outcomes among less motivated clients. If such evidence holds true for individuals of African cultural heritage, then counsellors' lack of ability to manage the readiness-to-change assessment in Step 3 may attenuate the effect of apparently viable plans for change, at least for some patients.

Other potential mechanisms of change in MI pertain to the counsellor's overall

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style, specific behaviours and use of specific techniques (Apodaca & Longabaugh, 2009). As a group, counsellors in this study scored well below suggested thresholds for beginning proficiency on overall style, MI consistent behaviours and communication techniques when assessed using the MITI 3.0. These findings are consistent with those of Mash et al. (2008) and Evangeli et al. (2009). Importantly though the thresholds proposed in the MITI are based only on expert opinion (Moyers et al., 2007), and the actual level of performance required to elicit behaviour change is unknown (Evangeli et al.; Mash et al.). Nevertheless ARV adherence has been found in one study of MI to be positively associated with global therapist ratings and a higher ratio of reflections to questions as measured using the Motivational Interviewing Skill Code (Thrasher et al., 2006)²⁵. In contrast adherence was negatively associated with the number of closed questions asked. This could be explained by findings from another study by Tollison et al. (2008), in which a higher number of closed questions was related to less contemplation to change, while a higher number of open questions was related to more contemplation to change. Contemplation can be regarded as a state of readiness-to-change. As in their practice prior to the implementation of *Options: WC*, counsellors in the current study relied heavily on closed questions. Counsellors also managed few simple reflections in relation to questions (no complex reflections were made). In Study III many simple reflections were observed to take the form of parroting (that is, the exact repetition of patients' speech) and, while not systematically assessed, raters perceived many of the simple reflections occurring in the current study to take the form of parroting as well. The persistent delivery of simple reflections (and parroting) is perhaps best avoided: Tollison et al. found that the use of more simple reflections in the delivery of MI has a negative effect in relation to the desired behaviour change. In their study, more simple reflections were related to *increased* drinking among college students. This relationship was attenuated by the presence of more complex reflections. In light of this research on the association between MI communication techniques and behavioural outcomes, the reliance of counsellors on closed questions and simple reflections appears less than ideal.

It is suggested that counsellors using more reflections of appropriate depth may demonstrate that they are actively listening and involved, whereas merely repeating and rephrasing client statements (that is, parroting and offering simple reflections) without the

²⁵ As the parent instrument of the MITI, the Motivational Interviewing Skill Code uses many of the same global and summary scores. These include the criteria of empathy and collaboration, ratio of reflections to questions, percent open questions, complex reflections and MI-inconsistent responses (Miller, 2000).

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balance of other interpersonal skills may cause the client to disengage from the session (Thrasher et al., 2006; Tollison et al., 2008). The implication is that individual micro-counselling skills are not responsible for outcomes on their own, but rather that they contribute to a successful or unsuccessful overall interpersonal style. MI spirit, or the interpersonal style with which MI is intended to be delivered, is argued by some to be the most critical element in eliciting behaviour change (for example Forsberg et al., 2008; Gaume, Gmel, Faouzi, & Daeppen, 2009; Rollnick & Miller, 1995; Thrasher et al.). Research evidence for the impact of overall style is mixed though. A review of studies delivering MI in relation to substance use disorders for example revealed that variables comprising MI spirit did not, by themselves, account for positive outcomes (Apodaca & Longabaugh, 2009). In contrast are findings by Thrasher et al. (mentioned briefly already) that having a counsellor who was rated higher on global therapist ratings of acceptance, empathy and affirmation was related to higher ARV adherence levels. With the exception of direction, counsellors in the current study failed to meet proficiency thresholds on global ratings and displayed particularly low levels of empathy (although raters often did not agree on the extent to which a particular counsellor appeared to be empathetic). Unlike on the other global ratings, high scores on direction do not necessarily indicate a better use of MI (Moyers et al., 2007). Arguably, high direction is a strength in the context of ARV adherence counselling delivered in primary healthcare clinics. Counsellors' consistently high scores on this dimension could represent a practical and necessary response to the time-limited and pressurised context in which they practice, and where the service they provide is intended to achieve the particular behavioural goal of increased adherence. Ideally high direction would be seen in the context of similarly strong scores on other global dimensions, which would indicate that counsellors' control of the session was not the result of an authoritative, directing approach.

Finally, some of the most consistent evidence on causal mechanisms of MI indicates that higher levels of MI inconsistent behaviours (confronting, directing and warning) lead to worse outcomes (Apodaca & Longabaugh, 2009). Furthermore, Gaume et al. (2009) have found that the avoidance of MI non-adherent behaviours is more important than the absolute frequency with which MI consistent skills are used. That is, using many MI consistent skills may have little effect if accompanied by the use of MI inconsistent skills. This would seem to support the hypothesis that it is the overall attitude of the counsellor that is important in effecting behaviour change (Gaume et al.). Thus it is very worrying that only six counsellors in the current study did not make any MI non-

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adherent statements, with at least one counsellor making as many as 14 in one session (Table 17).

Thus far the evaluation of counsellors' performance in relation to what can be considered key aspects of the *Options* intervention and MI approach suggests that counsellors were not able to implement the intervention in a manner likely to be effective following training. Research further suggests that it is difficult to suppress prior counselling habits and practices that may be inconsistent with MI (Söderlund, Nilsen, & Kristensson, 2008). For example, Evangeli et al. (2009) observed that, following MI training, counsellors retained a tendency toward pre-training behaviours, and would follow MI adherent behaviours with direction and advice. Similar patterns can be observed here in the comparison between behaviours observed in Study III and Study IV of this thesis. Behaviours that were a feature of counsellors' practice prior to *Options: WC* training (for example a reliance on closed-questions, instances of MI inconsistent behaviours such as warning, confronting and directing/advising) carried through to their post-training practice. It is possible, as Evangeli, Longley, and Swartz (2011) suggest, that lay counsellors simply require more intensive training and supervision to reach the proficiency levels required by the MITI. After all, only one day of the *Options: WC* training programme focused specifically on the theory, principles and techniques associated with MI.

A potential criticism of this part of the research, similar to what has been said about Study III, is that translations should have been done by professional translators. Practical considerations of cost made this impossible. All translations were cross-checked for accuracy however.

It is not clear exactly why inter-rater reliability was so low on the global dimensions of empathy and autonomy. It is possible that these two dimensions are more complex to judge, or it could also be that the second rater was more objective. The PI was much more involved in the implementation of the intervention, and this could have been a source of bias. After calculating inter-rater agreement, the second rater's data was not used further, except for these two dimensions. Given concern of possible bias on the PI's side, it was thought this would be a fairer reflection of counsellors' proficiency. Even so, the mean scores obtained from the two raters were very similar.

Finally, the lack of a second rater in coding transcripts for fidelity to the *Options* eight-step protocol is a limitation to that part of the evaluation. While coding for the yes/no presence of particular steps is likely to have been reliable, assessments of the

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quality with which particular steps were conducted were more subjective and could have benefitted from a second coder.

Conclusion

This study indicates that lay counsellors are not able to implement the *Options* intervention in the way it was intended following brief training. Poor proficiency is thus another factor potentially associated with the low level of programme delivery observed in Study I, even though counsellors themselves gave no indication of this in Study II. Brief training was not sufficient for counsellors to develop proficiency in the more strategic aspects of MI such as readiness-to-change and eliciting change talk, but did improve counsellors' performance with regard to problem-management.

Findings from this study add to the growing scepticism regarding the feasibility of the *Options for Health* intervention for promoting behaviour change within South African primary healthcare clinics. Condemning counsellors' ability to effectively deliver the *Options* protocol and the evidence-based counselling approach of MI is premature however. Technical assistance following training is another core component of effective implementation (Durlak & DuPre, 2008). Particularly with regard to LHW programmes, the provision of ongoing training and support is emphasised in ensuring and maintaining programme delivery of good quality. In terms of the *Options: WC* programme, additional training and supervision could build competence in the MI approach and the eight-step *Options* protocol. The study presented in the next chapter aimed to determine the impact of refresher training and monthly supervision on lay counsellors' proficiency in terms of the *Options* protocol and the counselling communication skills associated with MI. Findings from Study III suggest that the supervision that is being provided as part of the standard care counselling programme is not successful in maintaining ARV adherence counsellors' basic counselling skills.

Chapter 6

The Impact of Ongoing Support on Counsellors' Proficiency in *Options*

The studies conducted as a part of this thesis thus far have shown that few patients who should have received the *Options: WC* intervention actually received the intervention over a 13 month period of implementation (Study I). This is partly a result of the influence of a number of structural barriers to counselling practice in primary healthcare clinic settings (Study II). The negative impact of these factors on the counselling that is delivered as standard care was shown in Study III. Here counsellors were observed to possess a low level of basic counselling skill, and the main method for addressing poor adherence was the provision of information and advice. It was suggested that a lack of time, the lack of ability to follow-up on previous counselling sessions and a lack of privacy contribute to shaping counsellors practice in this way. The low level of basic counselling skill that counsellors possessed prior to the *Options: WC* training course suggests that the implementation team underestimated their training needs, and what it would take to make these counsellors proficient in the skills associated with motivational interviewing (MI) and the *Options* protocol. Study IV showed that the brief (five-day) training that was provided was not sufficient to equip counsellors with the ability to deliver the *Options* protocol with fidelity to its original design.

The provision of technical assistance following the initiation of a new programme is another factor generally associated with effective implementation, and this includes the improvement of skills where necessary (Durlak & DuPre, 2008). Given the low level of basic counselling skill observed in Study III, it is possible that lay counsellors simply require more intensive training assistance than was anticipated by the implementation team in order to achieve and maintain proficiency in MI and the *Options* counselling protocol. The study presented in this chapter aimed to determine the impact of refresher training and monthly supervision on *Options*-trained lay counsellors' ability to deliver the *Options* intervention at a 12-month follow-up.

Background

It is generally accepted that the transfer of skills learnt in training to the work setting is problematic (Ford & Weissbein, 1997). In research investigating skills transfer, the organisational environment has been identified as having a significant impact on the extent to which newly acquired skills are applied on the job (Baldwin & Ford, 1988; Blume, Ford, Baldwin, & Huang, 2010; Ford & Weissbein). Specific factors in this

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domain include the extent to which the work setting is supportive of efforts to apply new behaviours, as well as the extent to which there is opportunity to perform learned behaviours (Blume et al.; Cheng & Hampson, 2008; Ford & Weissbein). The factor which most consistently explains the relationship between the work environment and skills transfer is supervisory or managerial support for the use of new skills and knowledge (Burke & Hutchins, 2007). Supportive behaviours by managers and/or supervisors that have been associated with skills transfer include discussing and reinforcing new learning, providing coaching and opportunities for the use of learned behaviours as well as feedback on performance (Burke & Hutchins).

Recently findings and theory regarding the transfer of organisational training into practice have begun to translate into the field of medical communication skills training. Support for the link between theory (or training) and practice following initial training has been found to be a key driver for the transfer of new skills into practice. Within medical and nursing settings, clinical supervision is a main strategy used to support continuing professional development and the application of learned skills (Heaven, Clegg, & Maguire, 2006). Definitions of supervision vary widely in terms of tasks and the nature of the relationship between supervisor and supervisee. One model that is influential in healthcare and specifically nursing settings describes clinical supervision in terms of three functions which influence each other to affect the delivery of effective services: it is normative (or managerial), formative (educational), and restorative (supportive) (Kilminster & Jolly, 2000). In terms of its normative function, supervision involves a focus on the administrative aspects of the work as well as ongoing monitoring and evaluation of practice (Centre for Addiction and Mental Health [CAMH], 2008). The formative function involves a focus on knowledge and skill development, and the restorative or supportive aspect involves a focus on the practitioner's health and well-being (CAMH). The emphasis on each of these functions varies between professions (Freeth, 2007), as will the manner in which these functions are achieved.

Heaven et al. (2006) have provided evidence for the effectiveness of clinical supervision focused on skill development (the formative aspect of supervision) as an intervention for enhancing the transfer of newly acquired communication skills in medical settings. In their study, 61 specialist nurses working in cancer care were randomly allocated to receive a 3-day communication skills training workshop, either together with 4 weeks of supervision or alone. Twelve hours of supervision per nurse were provided by the two workshop trainers. This was done over a four week period in four half-day

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sessions. Supervision sessions included one hour in which the nurse could present a patient-case from the previous week and review his/her perceived performance on this case. The supervisor would then observe a patient visit after which they provided feedback on the nurse's actual performance, and facilitated a period of reflection and discussion. Audio-recordings of nurses' interviews with patients were taken at baseline, on the last afternoon of the training workshop, and three months following the training workshop. Analysis of recordings revealed that training had enhanced communication skills among all participants. Only those nurses who received the supervision programme showed any evidence of skills transfer however. The communication skills of nurses in this group were seen to improve over time, indicating the transfer of these skills into practice. These changes were not mirrored in the training-only group, where the use of some skills was even shown to decline. This study shows that even when training is effective in improving communication skills, these skills are not necessarily transferred into the workplace without further technical support.

The above research clearly has implications for the introduction of MI into medical settings. A systematic review of the effectiveness of MI training for healthcare professionals has shown that training can result in behaviour that is consistent with MI (Barwick et al., 2012). Without some support following training though, the transfer of MI skills into practice may be limited (Madson et al., 2009). One study conducted in the United States of America by Miller et al. (2004) has directly investigated the effect of ongoing support following initial training on MI practice. In their study, 140 health professionals (licensed in counselling, psychology, medicine, nursing or social work) provided audio-recordings of counselling sessions with clients before being randomly allocated to one of five MI training conditions. All 140 participants received a training manual and a series of seven MI training videotapes. In addition, a "workshop only" group received two days of training in MI. A "workshop plus feedback" group received the same two-day training as well as personal feedback on audio-taped sessions taken at baseline and on the day after training. Feedback was provided to participants using a standardised form which included information regarding their performance in relation to summary measures of proficiency from the Motivational Interviewing Skill Code. A third group, "workshop plus coaching" received up to six individual coaching sessions over four months following the two-day training workshop. In Miller et al.'s study, coaching sessions involved problem-solving around difficulties encountered by participants in using MI, as well as the demonstration and practice of MI skills via role-play

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interviewing. These sessions were delivered in 30 minutes over the telephone. A fourth group (“workshop plus feedback and coaching”) received all of the above-mentioned interventions. Finally one group was allocated to a waiting list control condition – participants were provided with the manual and training videotapes and asked to learn the method on their own. Group differences assessed at four months revealed no significant gains among control group participants, and the “workshop only” group showed marginal improvement. In contrast, the remaining three (enhanced training) groups showed large training effects. All three enhanced training groups met standards of proficiency at both four and eight month follow-ups, while participants in the control and “workshop only” groups did not meet proficiency thresholds at either. In addition, the “workshop only” group evidenced deterioration in their MI skills at four months, almost to the level of the untrained control group. This study shows that brief training can result in gains in MI proficiency, but also that ongoing support for the acquisition and maintenance of proficiency is necessary to prevent relapses in performance (Miller et al.). Coaching and feedback were effective strategies for skill development and enhancing performance in this population of healthcare professionals.

Skills transfer was once viewed as a single occurrence. Contemporary views are of transfer as an ongoing and dynamic process influenced by and influencing the work environment (van den Eertwegh, van Dulmen, van Dalen, Scherpbier, & van der Vleuten, 2012). Descriptions of the process of learning and applying MI by Swedish nurses interviewed by Söderlund et al. (2008) support this conceptualisation and provide further evidence for the role of ongoing support in facilitating this process. The nurses described a gradual refinement of their counselling skills that was enabled by the close combination of training and supervision and the implementation of what had been learned; as time went on, they felt their practice became increasingly MI consistent. The ability to discuss their MI practice with others who shared their experiences was also considered to facilitate the learning and transfer process. Nurses reported that one barrier to the integration of MI counselling skills into routine practice was the difficulty associated with changing ingrained counselling procedures - the skills associated with MI contrasted with the (expert authoritarian) approach that they were used to (Söderlund et al.). Supervision likely played an important role in reinforcing the use of newly learned, MI consistent behaviours and the (perceived) decrease in behaviours associated with an expert, authoritarian approach. Van den Eertwegh et al. suggest that the influence of the environment on the process of communication skills transfer may be particularly salient

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in medical settings where the majority of learning of communication skills occurs by means of informal processes such as role-modelling. Söderlund et al. described nurses in their study as being “socialised” in the directing, authoritarian manner associated with the traditional approach to communication taken by medical providers. Socialisation, as described by these authors, provides another explanation as to why South African lay counsellors have adopted a directing approach to addressing non-adherence. Clinic-based lay counsellors work closely with nursing staff. South African nurses have been found to use information, advice-giving and persuasion as primary strategies in counselling patients for behaviour change (Stein et al., 1997). In another study on communication styles used by South African nurses to address smoking behaviour among patients, Everett-Murphy et al. (2010) identified an expert, authoritarian approach and an information-giving approach as two main styles. Nurses adopting either of these styles advised patients on actions that should be undertaken with regard to their smoking behaviour. As such, it is perhaps not surprising that antiretroviral (ARV) adherence counsellors are addressing health risk behaviour in a similar way.

The implication of the above research for the implementation of interventions such as the *Options* and Egan’s (2002) counselling models is that support following initial training is likely to be necessary for counsellors to be able to achieve and maintain skill proficiency and intervention fidelity. Findings by Evangeli et al. (2011) are thus surprising – these researchers found that a lack of MI specific supervision and/or ongoing training following initial training *did not* have a deleterious effect on lay HIV counsellors MI skills. These results are from a 12-month follow-up study of 8 (of 17) counsellors who took part in a 12-hour MI training programme (the study in which the impact of this training was evaluated is reported in Chapter 5). Analysis of role-plays conducted at 12 months showed that counsellors’ level of MI competence was, for the most part, maintained. The majority of counsellors remained below the thresholds for beginning proficiency, but global therapist ratings and percent complex reflections were slightly improved. The limitations to this study could explain these findings. These include the small number of counsellors followed-up and the possibility of positive bias in the coding of audio-tapes: coding was conducted by the trainer and a second rater was not used to establish the reliability of coding using the Motivational Interviewing and Treatment Integrity (MITI) tool. Alternatively, and in light of the research discussed above, the structure of the training programme may account for the apparent transfer and maintenance of MI skills. Training was delivered over six, two-hour workshop sessions in

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combination with two individual feedback sessions. These took place in between workshop sessions. The training was thus structured such that counsellors would have had the opportunity to apply their new skills in between workshops and feedback sessions, and to refine them based on these training activities.

The need for ongoing supervision for ensuring that interventions are delivered as intended is recognised in relation to LHW (lay health worker) programmes in general. Despite this, inadequate support and supervision following initial training is one of the most common reasons for the failure of LHW interventions (Daniels, 2012). Lehmann & Sanders (2007) argue that the small-scale projects are often successful because they manage to implement effective support and supervision strategies. A study by Chibanda et al. (2011) provides evidence for the effectiveness of an intensive supervision programme for ensuring the effective delivery of a problem-management counselling intervention by LHWs. These researchers trained 10 LHWs from 3 clinics in Zimbabwe to implement a counselling intervention for common mental disorders such as anxiety and depression. The intervention was based on problem-solving therapy and involved problem identification and exploration (including brainstorming potential and practical solutions), action planning (zeroing in on a specific solution and how it will be managed), and follow-up (what was achieved, what were any barriers). Primary healthcare clinic patients were eligible to receive the intervention if they met criteria for these disorders as measured by the Shona Symptom Questionnaire²⁶. Results from this study showed evidence of a meaningful reduction in symptoms among clinic patients: Of participants having completed 3 or more intervention sessions, 66% recovered to below case-level on the Shona Symptom Questionnaire at 6 to 8 weeks. This intervention can be seen to share many features with the *Options* and Egan's (2002) models and, while the fidelity with which the intervention was delivered is not reported, Chibanda et al.'s study suggests that lay counsellors have the potential to effectively implement such strategies. Lay counsellors in Chibanda et al.'s study were trained in the intervention over only eight days, but the investment in post-training support was substantial. Daily peer-support meetings were facilitated by one LHW, who would then present patient cases during weekly, one-hour group supervision sessions. These sessions, in which all 10 LHWs participated, were facilitated by a nurse with counselling training. In addition a one-hour

²⁶ The Shona Symptom Questionnaire is a 14-item screening tool for common mental disorders such as anxiety and depression. Developed and validated in Zimbabwe, it is based on yes/no responses and asks about symptoms over a one week period. Participants screen positive if they score eight or more (Chibanda et al., 2011).

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group supervision session was facilitated by a clinical psychologist on a bi-weekly basis, and 45 minutes of group supervision were facilitated by a psychiatrist every 4 weeks. This programme for support was intensive and also (possibly) short-term - outcomes were measured and the study concluded at only eight weeks. Although the authors report that the City of Harare Health Department continued the intervention following this study, it is not clear if or how the programme for support was taken over.

In contrast to small-scale LHW programmes, national LHW programmes are seldom able to establish and sustain adequate levels of supervision (Lehmann & Sanders, 2007) and these programmes in particular suffer from problems regarding sustainability and the quality of service delivery (Berman, Gwatkin & Burger, 1987; Gilson et al., 1989). In South Africa, the employment of LHWs working within the public healthcare system is through NGOs (non-governmental organisations) contracted by the Department of Health (DoH) to recruit, manage and pay them. With regards to HIV counsellors, an amount of programme funding received by NGOs from the Provincial DoH is intended for the provision of support for counsellors. Each of the four NGOs taking part in the *Options: WC* project contracted professional counsellors (psychologists or social workers) to meet with counsellors on a monthly basis. These meetings are commonly referred to as “mentoring” and the professionals as “mentors”. As with clinical supervision, there are many definitions of mentoring in the literature; there is also considerable overlap in their functions. Key differences are that, while supervision can be delivered in an individual, triad or group format, mentoring generally occurs on a one-to-one basis between a mentee and a mentor who generally holds a higher position within the organisation (Mills, Francis & Bonner, 2005; Stewart & Krueger, 1996). Another difference relates to outcomes: while supervision is intended specifically to improve clinical practice, mentoring is aimed at broader outcomes which include improved practice but also professional socialisation, career progression and personal achievement (Mills et al.). Perhaps because the boundaries between these two support strategies are not clear cut, the terms often appear to be used interchangeably and it would seem that this could be the case in the Western Cape. Left up to NGOs, the delivery of support for HIV lay counsellors differs between organisations. For example of the four NGOs taking part in the *Options: WC* project, one provided both group and individual mentoring sessions on a monthly basis, while another alternated between providing individual and group sessions every month. The remaining two NGOs held monthly group mentoring sessions. It is unclear exactly what is being delivered to HIV lay counsellors in these mentoring

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meetings – access to these sessions was denied to the principle investigator (PI) on the basis of concerns regarding confidentiality. Based on anecdotal evidence from counsellors and mentors it would seem that the focus is on administration (some counsellors complained about constantly having to recap statistical reporting sheets) and support in terms of counsellors' mental well-being. These functions are obviously important but, based on findings from Studies III and IV, there is a need for a focus on up-skilling in terms of counselling practice as well.

Initially the *Options: WC* programme was intended to be implemented in the manner in which it would be rolled-out if the Provincial DoH and Cape Town City Health were to take it over, that is, in a manner as close to routine practice as possible. The provision of refresher training for counsellors is not a part of the standard care counselling programme, thus refresher training for *Options* was not included in the original implementation plan. In terms of ongoing support following training, monthly mentoring is provided a part of the standard care counselling programme. This is delivered by psychologists/social workers who are contracted by NGOs for this purpose. Originally the implementation team intended for mentors to incorporate *Options*-specific support into these routine meetings with counsellors. During implementation it became clear that refresher training and additional *Options*-specific supervision was necessary, and these were then delivered by the *Options: WC* implementation team. This chapter presents a study that was designed to determine the impact of these activities on counsellors' performance in terms of the eight-step *Options* protocol and proficiency in MI.

Methods

Study Design

Counsellors' performance in terms of the *Options* eight-steps and the MI approach was measured immediately following initial training in Study IV (referred to here as Time 1 measurement). Twelve months later, at Time 2, measures of counsellors' performance were taken again. This was following the implementation of *Options*-specific refresher training and monthly supervision.

Population and Sampling

Of 39 counsellors trained in *Options* in June 2009, 27 were available to take part in the 12 month follow-up study. Of these 27 counsellors, all but one agreed to take part. Figure 3 shows the flow of participants through this study.

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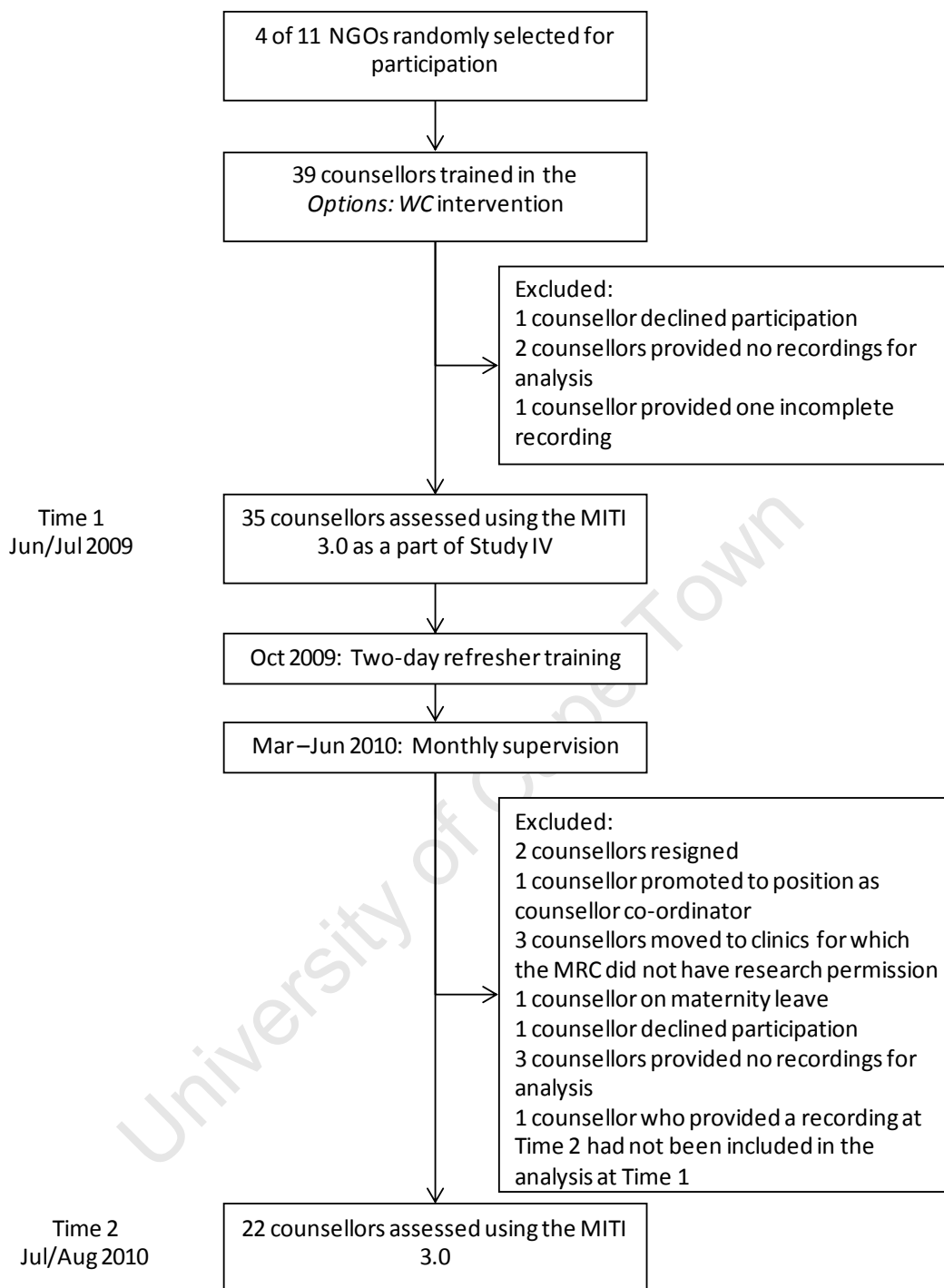


Figure 3. Flow of participants through the study.

The Programme of Support for *Options*

The programme that was implemented to support counsellors in the delivery of *Options: WC* following initial training consisted of a two-day refresher training course and four monthly supervision sessions.

Refresher training. A two-day refresher *Options* training course was held in October 2009. The decision to run this course was based on a) the evaluation of role-plays

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that were conducted on the last day of the initial five-day training, b) feedback from counsellors and NGO mentors in the months following this training and, c) a preliminary analysis of coverage data collected as a part of Study I. As was done for the initial five-day training, counsellors were divided into two equal-sized groups for refresher training. On the first day of this training the PI presented counsellors with some of the coverage data that had been collected as a part of Study I. This was intended to encourage discussion and problem-solving around barriers to implementation. To recap the eight steps of the *Options* protocol, the two facilitators (JC and MW) went on to role-play an *Options* counselling session in which the patient chose scores of 10 for each of importance and confidence. This was intended to model ways in which counsellors could effectively manage these situations. Following this, the course was divided into modules focusing on each of the eight *Options* steps. These modules made use of small group discussions, role-plays and modelling as learning techniques. For example, one module was on measuring importance and confidence (*Options* Step 3). Here the focus was on making sure that counsellors understood the difference between the two concepts and the need to be specific about the behaviour that they ask their patient to rate. Counsellors were divided into small groups and presented with patient-scenarios. The groups discussed what they could tell about the patient, specifically in terms of their readiness-to-change, from the scenario. On the second day of refresher training counsellors recapped the protocol for first sessions as well as the protocol for follow-up *Options* sessions. Training techniques on Day 2 included role-plays, video demonstration and group discussions of patient-scenarios²⁷. Communication skills associated with MI were not a specific focus of the refresher training, but were recapped within the context of the *Options* protocol and role-plays. An outline of the training programme is provided in Appendix D.

Monthly Supervision. In the week following the initial five-day *Options* training, members of the implementation team held a three-hour meeting with the mentors contracted by the four participating NGOs. At this meeting mentors were introduced to the *Options* counselling protocol and provided with feedback on the five-day training that had taken place. Mentors were asked to provide support for *Options*-trained counsellors within the context of their routine monthly meetings. Specifically mentors were asked to check-in with *Options*-trained counsellors regarding any difficulties they may be having,

²⁷ A report on the two-day follow-up training course was produced and is available on the project website: <http://www.sahealthinfo.org/motivational/healthoptions.htm>

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and to provide guidance on the use of the protocol. Mentors were encouraged to report any problems or challenges faced by counsellors (or themselves) to the implementation team. Each mentor was provided with a copy of the *Options: WC* protocol manual and intervention materials (for example, *Options* Record Forms (ORFs) and importance and confidence ladders).

The PI followed up with mentors via telephone approximately three months following this meeting in order to determine how support for the intervention was being managed. Mentors reported that one challenge to providing support for *Options*-trained counsellors was that the monthly mentoring sessions included voluntary counselling and testing, prevention of mother-to-child transmission, and other HIV lay counsellors that had not been trained in the *Options* intervention. This made it difficult for them to include *Options*-specific material in these meetings. Following the two-day refresher training course in October 2009, it was decided that *Options*-specific supervision sessions were necessary to enhance and maintain counsellors' skills and to encourage implementation. The implementation team delivered four monthly *Options*-specific supervision sessions towards the end of the evaluation period, that is, from March 2010 until June 2010. These group sessions ran for one hour each and were facilitated by either one of the two *Options: WC* trainers (JC or MW). The programme for these sessions is attached to this thesis as Appendix E. Each month supervision sessions focused on recapping the eight-step protocol, MI principles and communication skills and the integration of MI communication skills and the *Options* protocol. Learning was facilitated by means of demonstration, group discussion, fishbowl role-plays²⁸ and self-evaluation (that is, counsellors were given a rating sheet with which to evaluate their own practice in one counselling session conducted at the clinic). Facilitators also guided discussions around problem-solving barriers to the use of *Options* in counsellors' clinics.

Data Collection

A team of 12 data collectors were employed to assist with data collection for this study. Three of these data collectors, including NM, had assisted on previous rounds of data collection with counsellors. The majority were first-language Xhosa speakers; three were first-language Afrikaans speakers. All but one had previous fieldwork experience.

²⁸ Traditionally role-play activities involve two participants who demonstrate desired skills and behaviours for other participants (Curtin, 2005). In contrast, fishbowl role-plays allow all participants to be actively involved in the exercise. In this case different counsellors were asked to conduct each of the *Options* steps for one scenario, while others gave input or advice when they felt it necessary.

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Training for data collectors was facilitated by the PI over one 7-hour day and covered the background to the study, the informed consent procedure and use of the digital audio-recorders. Data collection proceeded in the same way as for Studies III and IV. Data collectors aimed to collect three audio-recordings of counselling sessions with patients referred for poor adherence from each participating counsellor. Full descriptions of the data collection procedure can be found in each of Chapters 4 and 5 under “methods.”

Data Handling and Analysis

At Time 2, audio-recordings of counselling sessions were collected for 23 of 26 participating counsellors. Two counsellors provided one recording each and five provided two recordings each. The remaining 19 counsellors provided 3 recordings each. A total of 69 recordings were collected. Of these 23 counsellors, one had not been included in the analysis at Time 1. Because his/her performance at Time 2 could not be compared to his/her performance at Time 1, this counsellor was excluded from the sample (Figure 3). Where more than one recording was received, one recording was randomly selected for transcription, translation and analysis.

At Time 1, counsellors' performance on the eight-step protocol was measured using a coding sheet developed by the PI for this purpose. This instrument is used to code for the presence of each of seven *Options* steps (the completion of the ORF that is Step 8 of the protocol was not included), as well as the quality with which particular steps are conducted. This instrument is described in Chapter 5 and attached to this thesis as Appendix C. Also at Time 1, counsellors' performance in terms of the MI approach was measured using the MITI 3.0. This instrument requires the rater to assign a score of 1 to 5 on five global dimensions (evocation, collaboration, autonomy/support, direction and empathy). Raters are then required to parse the counsellors' speech into utterances and to allocate behavioural codes to these utterances (for example, open-question, simple reflection and so forth). Allocated codes are counted and combined to calculate a number of summary scores associated with proficiency and competency thresholds. A full description of this instrument is provided in Chapter 5.

At Time 2, counsellors' adherence to the *Options* eight-step protocol and proficiency in MI was measured using these same instruments. The MITI 3.0 was applied by two raters, namely the PI and JC. As mentioned previously, both the PI and JC were trained in the use of the MITI 3.0 by an expert in the approach. In preparation for the coding of transcripts from Time 2, JC and the PI independently coded the same transcripts (that were not to be included in the study) for practice. The two raters met to compare

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their coding and discuss discrepancies in relation to the rules contained within the MITI 3.0. Final coding began when agreement of 65% was achieved.

Data analysis was conducted using MS Excel and IBM SPSS Statistics 19. Numbers of counsellors completing each of the seven *Options* steps at Time 1 and Time 2 were tabulated and percentages calculated in MS Excel. Data from the MITI 3.0 coding was screened for normality using standard procedures in SPSS. This analysis indicated that the data was not normally distributed, and non-parametric statistics were used. Paired-sample Wilcoxon Signed Ranks tests were used to investigate the difference in counsellors' MITI 3.0 scores between Time 1 and Time 2 on all MITI 3.0 measures.

This study is subject to the same limitations as Studies II, III and IV in terms of the transcription and translation of recordings. Like in Study IV, a second rater was not used to ensure the reliability of coding for the conduct of the eight-step protocol. Evaluators are often not able to implement ideal procedures and methods, often because of resource and time constraints (Rossi et al., 2004). Where the best option is not possible, Rossi et al. (2004) advocate the “good enough” (p. 238) principle. This means that the strongest possible method is chosen after having taken into account the practicality and feasibility of various methods, and the probability that the method chosen will produce useful and credible results. The use of a professional service for the transcription and translation of all audio-recordings analysed in the evaluation of *Options: WC* was prohibited by cost. The use of implementation and evaluation team members for this purpose was the next best available option. The lack of a second rater for the evaluation of counsellors' proficiency in the eight-step protocol is considered a limitation mostly with regard to the quality assessments of particular steps. These involve more subjective assessments than whether particular steps are present or not.

Results

Inter-rater agreement was estimated using Spearman's Rank-Order Correlation and the intraclass correlation (ICC) for each rating category. Results are presented in Table 19, where it can be seen that the majority of ICCs were in the excellent range. Agreement was lowest for the global ratings of “autonomy”, although it can still be considered to be fair (Cicchetti, 1994).

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Table 19. *Inter-Rater Agreement on Coding of Counsellors' (N=22) Transcripts Using the MITI 3.0*

MITI 3.0 item	ICC	95% CI		r_s
		Lower bound	Upper bound	
<i>Global ratings</i>				
Evocation	.729	.378	.884	.661*
Collaboration	.704	.321	.873	.578*
Autonomy	.510	-.108	.788	.393
Direction ^a	-	-	-	-
Empathy	.924	.812	.968	.878*
<i>Behaviour counts</i>				
Giving information	.929	.834	.970	.895*
MI adherent	.960	.856	.985	.948*
MI non-adherent	.941	.759	.980	.947*
Closed questions	.979	.951	.991	.960*
Open questions	.941	.859	.975	.883*
Simple reflections	.982	.957	.993	.968*
Complex reflections	-	-	-	-

Note. ICC = Intraclass Correlation; CI = Confidence Interval; r_s = Spearman's rho. ICCs can be categorised as follows: <.40 = poor, .40 to .59 = fair, .60 to .74 = good and .75 to 1.00 = excellent (Cicchetti, 1994). ^a Statistics not computed as result of zero variance between raters. ^b Statistics not computed as result of zero variance between raters.

* $p < .01$

All 22 intervention counsellors attended the two-day *Options* follow-up training course in October 2009, but the four monthly supervision sessions were not well attended. Of these 22 counsellors, 3 (14%) did not attend any of the four supervision sessions. Eleven counsellors (50%) attended only one session each, 4 counsellors (18%) attended two sessions each and three counsellors (14%) attended three sessions each. Only one of these 22 counsellors (5%) attended all four supervision sessions. Reasons for absenteeism were not always given. When they were, they included a clash between *Options* supervision, clinic meetings, and annual leave. In one case inclement weather had prevented the counsellor from getting to the supervision venue. In another case, where supervision had been held at an ARV clinic, one counsellor excused herself to go and make tea and never returned.

Fidelity to the *Options* Eight-Step Counselling Protocol

Table 20 presents results from the evaluation of intervention counsellors' performance in terms of the number of *Options* steps delivered at Time 1 as compared to Time 2. The number of counsellors delivering each step at Time 2 was very similar to the

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number of counsellors delivering each step at Time 1. Steps 4 and 5 remained problematic for most counsellors.

Table 20. *Number of Intervention Counsellors (N=22) Completing Each of Seven Options Steps Assessed at Time 1 as Compared to Time 2*

Step	Activity	Time 1 n (%)	Time 2 n (%)
Step 1	Introduce the discussion	20 (91)	20 (91)
Step 2	Risk assessment	21 (95)	19 (86)
Step 3.1	Assess Importance	22 (100)	22 (100)
Step 3.2	Assess Confidence	22 (100)	22 (100)
Step 4	Select appropriate construct to follow up on	9 (41)	10 (45)
Step 5.1	Elicit change talk	10 (45)	9 (41)
Step 5.2	Elicit barriers	6 (27)	7 (32)
Step 6	Discuss strategies for change	18 (82)	19 (86)
Step 7	Negotiate an action plan	18 (82)	19 (86)

Note. Time 1 refers to counsellors' performance immediately following the *Options* five-day training course. Time 2 refers to counsellors' performance 12 months later, following the delivery of refresher training and monthly *Options*-specific supervision sessions.

Table 21 presents results regarding the quality with which counsellors rated importance and confidence at Time 2 in comparison to Time 1. There was small improvement in terms of the number of counsellors who provided a good explanation of the rating scales, and who were specific about the behaviour they asked their patient to rate themselves on. In terms of rating importance, the number of counsellors who provided a good explanation of the rating system and were specific about the target behaviour increased from two at Time 1 to four at Time 2. In terms of confidence, the number of counsellors who provided a good explanation of the rating system and were specific about the target behaviour increased from one at Time 1 to six at Time 2. There was also a small improvement in terms of the number of counsellors who gave confusing explanations of the rating scales and were unclear about what they were asking their patient to rate. Whereas seven counsellors conducted a poor assessment of importance at Time 1, only two conducted a poor assessment of importance at Time 2. Similarly while 12 counsellors conducted a poor assessment of confidence at Time 1, only 7 counsellors conducted a poor assessment of confidence Time 2. Three counsellors still referred to "importance" when assessing confidence at Time 2.

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Table 21. *The Quality with which Counsellors (N =22) Rated Importance and Confidence at Time 1 as Compared to Time 2*

	Importance		Confidence	
	Time 1 (n)	Time 2 (n)	Time 1 (n)	Time 2 (n)
Good explanation of rating system AND specificity of question	2	4	1	6
Good explanation of rating system OR specificity of question	13	16	9	9
Poor explanation of rating system and it is unclear what behaviour is being rated	7	2	12	7

Note. Time 1 refers to counsellors' performance immediately following the *Options* five-day training course. Time 2 refers to counsellors' performance 12 months later. Quality was assessed using the rating scale developed and used by the PI as a part of study IV.

Twelve counsellors did not choose the appropriate construct (importance or confidence) to focus on in moving forward through the session (*Options* Step 4) (Table 20). Like at Time 1, this included 8 cases in which the patient had chosen importance and confidence scores of 10 each despite being poorly adherent. An improvement observed at Time 2 is that two counsellors were able to manage this, for example:

- Counsellor: If we can spend more time to clarify a few things so that I can understand better. We have these ladders. This one is for importance: one is not important at all, five is just important and ten is very important. Now how can you rate yourself? How important it is to you to take your medication?
- Patient: I'm at ten.
- Counsellor: Congratulations on taking that one. Now this one is for confidence, it is the same as that one. Which number can you choose to rate yourself? How confident are you to take your medication every day and on time? With confidence also, one means you are not confident at all about taking treatment on the right time, five means you are just confident and ten means you are highly confident.
- Patient: Ten.
- Counsellor: Ten. If you say ten, how do you end up here? Because the doctor said you are not taking your treatment well. Ten means you are adherent to the programme. Now you were brought here because you are not taking your treatment the way you should. So do you think you should choose ten?

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Patient: No, I'll choose six.
Counsellor: Okay. So what can we do to increase your confidence to move from six to seven or eight?

At both time points the majority of counsellors discussed strategies for change with their patients (Table 20). At Time 1 the majority of action plans agreed upon (75%) appeared to be appropriate to the patient's situation (Study IV). Similarly at Time 2: of 19 action plans developed, 15 (79%) appeared to have the potential to address the patient's barrier to adherence.

Proficiency in MI Skills and Techniques

Table 22 presents data from the analysis comparing counsellors' proficiency in MI at Time 1 and Time 2. Paired-sample Wilcoxon Signed Ranks Tests showed a significant improvement between intervention counsellors' scores at Time 1 and Time 2 on the following dimensions: evocation ($Z = 3.099, p = .002$), collaboration ($Z = 2.312, p = .021$), empathy ($Z = 2.385, p = .017$), giving information ($Z = 1.979, p = .048$), MI non-adherent behaviours ($Z = 2.753, p = .006$), closed-ended questions ($Z = 4.108, p = .000$), open-ended questions ($Z = 2.592, p = .010$) and simple reflections ($Z = 2.346, p = .019$). Median values presented in Table 22 indicate that counsellors were significantly more evocative, collaborative and empathetic at Time 2. Counsellors gave significantly less information, made fewer MI non-adherent statements, asked fewer closed- and open-ended questions and made fewer simple reflections. No significant change was observed on the remaining dimensions.

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Table 22. *The Impact of Refresher Training and Supervision on Counsellors' (N=22) Performance as measured by the MITI 3.0*

MITI 3.0 dimension	Interquartile Range			Interquartile Range			Median Change	<i>p</i>
	Median at Time 1	Lower bound	Upper bound	Median at Time 2	Lower bound	Upper bound		
<i>Global ratings</i>								
Evocation	2.0	1.00	3.00	3.00	3.00	4.00	+1.0	0.002
Collaboration	2.0	1.00	3.25	3.00	3.00	4.00	+2.0	0.021
Autonomy	3.0	3.00	3.00	3.00	3.00	3.00	0.0	0.782
Direction	5.0	5.00	5.00	5.00	5.00	5.00	0.0	1.000
Empathy	1.0	1.00	3.00	3.00	1.75	3.25	+0.5	0.017
<i>Behaviour counts</i>								
Giving information	8.5	6.00	11.00	7.00	5.00	8.00	-1.0	0.048
MI adherent	2.0	1.00	4.25	2.00	2.00	4.00	-0.5	0.864
MI non-adherent	2.0	1.00	4.25	0.00	0.00	1.00	-2.0	0.006
Closed questions	26.5	15.75	32.25	8.00	5.75	10.00	-14.5	0.000
Open questions	6.0	3.00	9.00	4.00	2.00	5.00	-2.0	0.010
Simple reflections	6.0	3.00	10.00	5.00	3.00	6.00	-3.0	0.019
Complex reflections	0.0	0.00	0.00	0.00	0.00	0.00	0.0	1.000

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In terms of MITI 3.0 summary scores, paired-sample Wilcoxon Signed Rank Test results indicate a significant difference between Time 1 and Time 2 in terms of global scores ($Z = -2.729$, $p = .006$), the reflection to question ratio ($Z = -2.410$, $p = .016$) and percentage of open questions asked ($Z = -3.673$, $p = .000$). Median values presented in Table 23 indicate that intervention counsellors scored better on these dimensions at Time 2. Table 23 includes the numbers of counsellors achieving beginning proficiency with regard to these summary scores at both time points as well. At Time 2 four more counsellors achieved proficiency on global ratings (for a total of nine counsellors). Considerably more counsellors achieved proficiency in MI adherent behaviour, increasing from 4 at Time 1 to 11 at Time 2.

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Table 23. *Counsellors' (N=22) Performance on MITI 3.0 Summary Scores at Time 1 and Time 2, and the Number of Counsellors Achieving Beginning Proficiency According to MITI 3.0 Thresholds*

MITI 3.0 summary score	Interquartile Range			Median at Time 2	Interquartile Range		Median Change	<i>p</i>	No. (%) at beginning proficiency (Time 1)	No. (%) at beginning proficiency (Time 2)
	Median at Time 1	Lower bound	Upper bound		Lower bound	Upper bound				
Global scores	2.700	2.350	3.600	3.400	3.000	3.800	0.400	0.006	5 (23)	9 (41)
Reflection to question ratio	0.250	0.100	0.325	.0350	0.275	0.500	0.100	0.016	0 (0)	0 (0)
Percent open questions	10	10	20	30	17	39	13	0.000	0 (0)	2 (9)
Percent complex reflections	0	0	0	0	0	0	0	1.000	0 (0)	0 (0)
Percent MIA	57	18	74	92	38	100	31	0.100	4 (18) ^a	11 (50) ^a

Note. These counsellors not only achieved the threshold for proficiency, but for competency as well (that is, 100% MI adherence).

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Discussion

Study IV showed that lay counsellors were unable to implement particular steps associated with the *Options* counselling protocol following initial training. In addition, the majority of counsellors failed to achieve proficiency in MI on any criteria as measured by the MITI 3.0. The current study was intended to determine the impact of refresher training and supervision on counsellors' proficiency in the eight steps and the MI approach. Results indicate improvement in some areas but not in others. In terms of the *Options* protocol, it was hoped that refresher training and supervision would improve counsellors' ability to deliver those steps representing the more strategic elements of MI, specifically Steps 3 to 5. At Time 1 (Study IV), counsellors experienced difficulty assessing readiness-to-change (Step 3), selecting the appropriate concept to focus on (Step 4) and eliciting change talk and barriers (Step 5). These steps remained a challenge at Time 2 following refresher training and supervision.

Some improvement was observed in terms of how well counsellors were able to assess importance and confidence, but less than half chose the correct construct to focus on in Step 4 and in moving through the session. For the majority of counsellors coded as choosing the incorrect construct, patients had selected scores of 10 for each of importance and confidence. This means that patients' scores did not indicate whether poor adherence was related to a lack of importance or a lack of confidence. As a result, counsellors could not know which construct they should focus on. Because this was known to be a difficulty associated with intervention delivery, strategies for dealing with this situation were a specific focus of the refresher training and supervision sessions. At Time 2 it was expected that more counsellors would be able to manage this situation using the techniques demonstrated in these sessions to encourage patients to reconsider their scores.

The number of counsellors who delivered Step 5 (eliciting change talk and barriers) did not improve from Time 1 to Time 2. This suggests that, while counsellors may have improved the manner in which they asked their patients to rate importance and confidence, they still did not understand the underlying behavioural and MI theory. Based on this one must conclude that the 53 hours of training²⁹ provided by the implementation team was not sufficient for lay ARV adherence counsellors to move beyond a mechanistic application of the *Options* counselling model. In Study II counsellors reported limited opportunity to use the *Options* protocol as the result of factors associated with the clinic

²⁹ This total is comprised of 35 hours of *Options* training over 5 days, 14 hours of refresher training and 4 hours of supervision delivered over a 4 month period.

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environment, and coverage data collected as a part of Study I confirms that the model was not routinely used. Had counsellors had the opportunity to practice the intervention and to obtain *Options*-specific feedback and supervision immediately following initial training, it is possible that their performance at 12 months with regard to these steps would have been of a higher standard, although this is not for certain.

In contrast to the low impact of refresher training and supervision on the more strategic elements of MI and the *Options* eight-step protocol, is the impact it had on counsellors' proficiency in the more basic elements of MI. Counsellors' practice at Time 2 was significantly more like MI in terms of the global dimensions characterising the approach than it was at Time 1. Counsellors showed significant change on almost all MITI 3.0 behaviour count criteria between Times 1 and 2 as well. One of the biggest changes was the increase in the number of counsellors achieving competency in terms of "percent MI adherence" (from four at Time 1 to eleven at Time 2) and the related decrease in MI non-adherent behaviour. This indicates a move towards a more client-centred counselling approach. In terms of MI, this improvement is meaningful because the avoidance of MI inconsistent behaviour may be of primary importance in effecting positive patient outcomes (Apodaca & Longabaugh 2009; Gaume et al., 2009).

Some findings clearly represent an improvement in counselling practice, but some others are more difficult to interpret in terms of counselling quality. For example, counsellors delivered significantly fewer simple reflections at Time 2 than at Time 1. Ideally this would represent a decrease in parroting, such that more of the simple reflections that were offered were considered, and contributed meaningfully to the session. Without a qualitative analysis of these statements however, it is impossible to say whether this change represents an improvement in counselling practice or not.

Another example involves information-giving: Intervention counsellors gave significantly fewer instances of information at Time 2 than at Time 1. Possibly this finding is of little practical significance – the p value was just within the limit of statistical significance at .048 (p. 140) - but it does raise an interesting issue regarding counselling in this context. Information-giving generally tends to be viewed negatively in the counselling literature (Evans, 2010). For example, Mash et al. (2008) found that participants in their study who scored higher (better) on the MITI were also those who gave less information. The implication is that, in MI, the less information that is given, the better the quality of counselling. This could be true if less information is delivered because less information is required by the patient. As Mash et al. suggest, less

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information-giving may reflect a move by participants from “educating their clients with the right packages of information to guiding their clients’ decision making by offering information when it is needed” (p. 58). Again without a qualitative analysis of what information was (or was not) given, it is not possible to judge whether this represents improvement or not.

It was mentioned briefly in the background to this study that the opportunity to perform newly learned behaviours in the workplace is one factor affecting the transfer of skills. This might partly explain the low impact of refresher training and supervision on counsellors’ proficiency in the eight-step *Options* protocol. In Study II counsellors reported that time pressure prevented them from using the *Options* protocol to a greater extent. The limited opportunity that counsellors have to perform the eight steps may weaken any positive effect that ongoing support may have. In contrast, time is not a constraint to the performance of counselling communication skills associated with MI and measured by the MITI 3.0 – these may be delivered within interactions as brief as a few minutes. Counsellors may thus have more opportunity to deliver and improve on these skills. Another plausible explanation was suggested in the previous chapter, and that is that many of the measures on the MITI represent some of the more concrete skills associated with MI. These may be easier to learn and transfer than some of the more strategic and abstract aspects of the approach. These more complex elements include the concept of readiness-to-change (*Options* Step 3), and change talk (*Options* Step 5).

It is possible that the time elapsed between the initial *Options: WC* training (June 2009) and the implementation of refresher training (October 2009) and supervision (March 2010) was too long. Evidence from the training literature suggests that delay between training and use in practice results in a significant decay of skills (Arthur, Bennett, Stanush, & McNelly, 1998). In practice, counsellors did not use *Options* to a great extent between initial and refresher training (Chapter 2). Intervention delivery following refresher training and during the four months in which supervision was provided was also low. There was no apparent decay in counsellors’ proficiency in the *Options* protocol and MI skills between Times 1 and 2, but it is possible that their practice may have improved even more significantly had monthly supervision been a feature of implementation from the start.

Rate of attendance at the monthly mentoring meetings provided as a part of the standard care programme is not known, but attendance at *Options*-specific supervision sessions appeared to suffer from a level of resistance from counsellors. Possibly

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counsellors perceived the *Options* sessions as an unnecessary demand on their time, since these sessions were focused on an intervention that they were not able to use in practice anyway. Another possibility is that this has to do with a lack of motivation among clinic-based lay counsellors in general. Low motivation among LHWs (not only in South Africa) has been related to inadequate and irregular pay, the poor selection of individuals as LHWs, lack of respect from health facility staff and inadequate support (Bhattacharya, Winch, LeBan, & Tien, 2001). Any of these issues may affect the motivation of clinic-based lay counsellors. Attendance (and reasons for non-attendance) at activities aimed at ensuring the provision of a quality counselling service should be a part of future LHW programme evaluations. This could also be a part of routine performance management for LHWs, accompanied by strategies for addressing poor attendance.

Unfortunately the design of this study does not allow for the effects of refresher training and supervision to be separated out from each other. It is possible that the benefit gained from refresher training is more or less equivalent to the impact of monthly supervision provided on its own. This has implications in terms of recommendations for practice and programme development. It could be suggested on the basis of findings from this study that both refresher training and supervision are necessary for improving counsellors' practice. The provision of monthly supervision is the responsibility of NGOs, but the development and provision of training is the responsibility of the AIDS Training, Information and Counselling Centre (ATICC). Since ATICC is already functioning at, or at least near, maximum capacity in terms of the provision of training, the recommendation that a refresher training programme be developed and provided as part of the standard care programme for adherence support may be impractical. On the other hand the development and adoption of a standardised programme for supervision that is focused on up-skilling may be a more feasible strategy for improving the quality of adherence counselling. One way in which to proceed may be to test the effectiveness of an enhanced supervision programme before deciding on the need for refresher training programmes to be developed and delivered.

Although the use of the MITI to assess counsellors' skills makes this study comparable to others conducted among lay counsellors in the Western Cape, the lack of a more qualitative analysis of counsellors' practice makes the interpretation of some findings difficult. For example, counsellors asked fewer open- and (much fewer) closed-ended questions at Time 2 than at Time 1. Counsellors also delivered fewer simple reflections at Time 2 than they did at Time 1. In an evaluation of communication skills

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training for paediatric ARV adherence counsellors, Evans (2010) highlights the value of the qualitative analysis of both counsellor and client speech for research on counselling communication. For example Evans observed that, following training, counsellors' information-giving style included more frequent checks for patient understanding. The ways in which they checked understanding after training also expanded beyond asking "do you understand" to asking the patient for explanations or demonstrations of information that had been given. In response to this style of information-giving, patients were seen to initiate more questions. Because a positive effect on patient engagement was observed, the communication skills training provided as a part of Evans' study can be said to have resulted in better practice in relation to the goal of facilitating treatment literacy. It was suggested in Chapters 4 and 5 that Western approaches to counselling may not be relevant when counselling individuals of African heritage. For example an information and advice-giving approach may not only be expected by patients attending primary healthcare clinics in SSA, but may be effective as well. Analysis of the responsiveness of patients to various counselling techniques could provide insight into approaches that are appropriate for this setting.

A limitation to this part of this study is the high loss to follow-up between Time 1 and Time 2. Of all 39 counsellors trained in *Options: WC*, 17 (44%) were not able to be assessed at 12-month follow up (Time 2). Of the 35 counsellors who were assessed at Time 1, 13 (37%) were not assessed at Time 2. The level of loss to follow up may affect the generalisation of findings.

Conclusion

This study indicates that refresher training and supervision were effective in improving counsellors' performance with regard to some aspects of the *Options* intervention, but not others. Elements of the eight-step protocol with which counsellors continued to struggle represent the more strategic elements of MI. Importantly patients struggled with these elements as well. The assessment of readiness-to-change that is Step 3 of the protocol often did not result in an understanding of the patient's actual state of readiness to change. Counsellors also seldom attempted to elicit change talk (Step 5) from patients. When counsellors did go "down the ladder", patients did not always understand what they were being asked and responded in ways that did not represent change talk. The delivery of Steps 3 to 5 thus contributed little to addressing poor adherence in the counselling sessions assessed in this study.

The time allocated to support focused specifically on up-skilling in the *Options:*

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WC project was more than is currently provided as a part of standard care to HIV lay counsellors. Refresher training is not offered as routine practice and skill development does not appear to be a focus of the monthly mentoring provided as a part of the standard care programme for support. Despite the intensity of the technical assistance provided as a part of *Options: WC*, it was not enough for counsellors to become proficient in the model. Any increase in technical support for lay counsellors by NGOs or the Provincial DoH is unlikely to be much more intensive than what was provided as a part of the *Options: WC* project, given the resources required and costs involved. The present results therefore would suggest that the resources required to make counsellors fully proficient in the *Options* protocol may be beyond the capacity of provincial health authorities to deliver.

Nevertheless, results also indicate that brief (two-day) refresher training in combination with four-monthly supervision sessions may be sufficient to move lay counsellors' performance at least to an "acceptable" level. These ongoing support activities were effective in improving counsellors' MI performance and in maintaining a focus on problem-solving barriers to adherence. Counselling sessions assessed at 12-month follow-up were also more consistent with a client-centred approach in that patients in these sessions were treated with respect and were engaged in problem-solving their own problems. The inclusion of ongoing support focused on up-skilling in the standard care programme for ongoing support may not be unrealistic in terms of the financial, time and human resources that would be required.

This study has shown that refresher training and supervision improved counsellors' practice with regard to some elements of *Options* but not others. Because elements of counsellors' practice were improved, there is reason to believe that the *Options: WC* programme had a positive impact on adherence counselling practice. The study presented in the following chapter is a cluster randomised control trial that was conducted to determine the impact of *Options: WC* on adherence counselling practice.

Chapter 7

The Effect of *Options*: WC on Counselling Practice

Results from Study V presented in the previous chapter show that refresher training and monthly supervision was effective with regard to improving counsellors' ability to deliver some aspects of *Options*, but not others. Areas in which counsellors' performance did not improve involved those steps of the counselling protocol representing the more strategic elements of motivational interviewing (MI). However counsellors did show improvement in terms of their therapeutic approach: they were more empathetic, collaborative and evocative at 12 month follow up compared with their performance immediately following the initial five-day training. Counsellors also showed improvement in some counselling communication skills: they made fewer MI non-adherent statements, used fewer closed-ended questions and a greater number of open-ended questions. One limitation to observational studies like Study V is that the possibility that the observed effect was caused by a third factor cannot be ruled out (Sibbald, 1998). The improvement in performance described above is attributed to the effect of refresher training and supervision, but could also reflect the effect of an additional year of counselling experience, or exposure to other interventions. Generally the most rigorous source of evidence regarding the effect of an intervention is a randomised control trial (RCT) (Rowe, de Savigny, Lanata, & Victora, 2005). This is because RCTs minimise the effect of other possible causes by randomising participants to intervention and comparison groups. The act of randomisation is intended to ensure that all other possible causes are equal between groups (Stolberg, Norman, & Trop, 2004). In this way, significant differences between groups on study outcomes can be attributed to the intervention being evaluated, and not other factors (Stolberg et al.).

Although the training and supervision provided as part of *Options*: WC failed to produce counsellors proficient in the *Options* counselling protocol, there is reason to believe that the *Options*: WC programme would have had a positive impact on ARV (antiretroviral) adherence counselling practice. RCTs in which the impact of MI on health behaviour has been investigated in comparison to other kinds of counselling suggest that training in MI does improve counselling practice. Clinic patients attending counselling sessions that are delivered by healthcare providers trained in the approach show greater improvement on health outcomes at follow-up than control patients who receive counselling in the form of education (Dilorio et al., 2008) and nondirective psychological

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support (Channon et al., 2007), information (Golin et al., 2006) and brief advice (Butler et al., 1999; Soria, Legido, Escolano, Yeste, & Montoya, 2006). *Options: WC* was not implemented such that an impact on patient-level outcomes could be assessed, but it is possible that counsellors benefited from the programme in terms of their counselling practice. It is also plausible that an improvement in counsellors' basic counselling skills might have had a positive effect on patients' adherence behaviour. The study presented in this chapter was intended to determine the impact of the *Options: WC* programme on adherence counselling practice in a randomised control trial.

Methods

Study Design

The study design was a cluster RCT. The counselling performance of counsellors taking part in the *Options: WC* programme (intervention) was compared to the counselling performance of a group of counsellors not taking part in the programme (control). Because non-governmental organisations (NGOs) had been randomly allocated to receive (or not to receive) the *Options: WC* programme, the NGO was the unit of randomisation for this study.

Population and Sampling

All NGOs (N=11) that employed clinic-based ARV adherence counsellors in the Western Cape at the time of this study were eligible for participation. Within these NGOs, all ARV adherence counsellors were eligible for enrolment. Generally a cluster randomised trial requires a larger sample size than a trial in which individuals are randomised to treatment conditions. This is to account for the similarities between individuals within clusters and to retain statistical power (Campbell, Elbourne, & Altman, 2004). In this trial the number of counsellors in the intervention condition was limited to the number of counsellors who had been trained in the *Options* intervention (N=39). At least one comparison counsellor was to be recruited for each intervention counsellor.

All NGOs were randomly allocated to study conditions in early 2009. Four of the 11 NGOs were selected for participation in the *Options: WC* programme (Chapter 1)³⁰. The remaining seven NGOs were thus allocated to the control condition. In 2010 five of these seven NGOs were randomly selected to take part in the control arm of the current study (five NGOs were all that were needed to meet the sample size requirement of one

³⁰ Only four of 11 NGOs were randomly selected for participation in the *Options: WC* project because the implementation and evaluation teams' capacity for training, monitoring and evaluation could not accommodate many more counsellors than were employed by these four NGOs without compromising quality.

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comparison counsellor for each intervention counsellor). All five agreed to participate. Permission to access the facilities in which ARV adherence counsellors employed by these five NGOs were based was requested from Cape Town City Health and the Provincial Department of Health (DoH) where appropriate. Following permission to access facilities, the principle investigator (PI) visited each NGO to describe the study to the ARV adherence counsellors. In total, 39 counsellors consented to take part in the comparison condition. These counsellors were based in 13 ARV clinics around Cape Town. The flow of clusters and participants in this study is presented in Figure 4. Although all comparison counsellors were asked to complete demographic questionnaires, those who declined to take part did not complete/submit theirs.

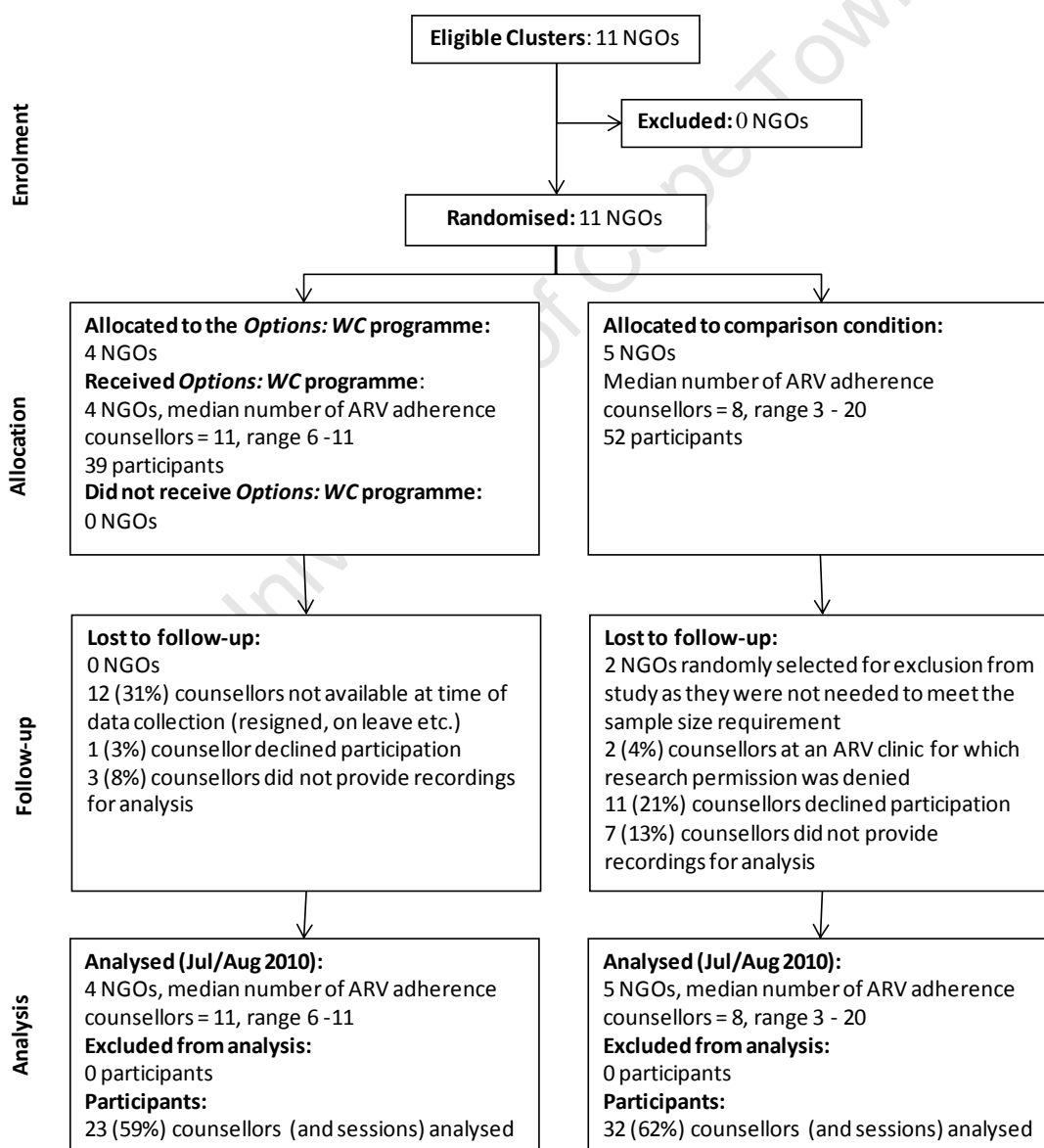


Figure 4. Flow of clusters and participants through the study.

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Intervention

Counsellors in the intervention condition received training in the *Options* protocol and the approach of MI during an initial five-day training (described in Chapter 5) and a two-day refresher training (described in Chapter 6). They also received four *Options*-specific supervision sessions delivered on a monthly basis (also described in Chapter 6). In addition to this they received the same “background” programme of training and support as comparison counsellors, described below.

Control Condition

Counsellors in the control condition received the usual training and support activities provided as part of the programme for adherence counselling in the Western Cape. Participation in refresher training following initial training is not mandated by the Provincial DoH, and the AIDS Training, Information and Counselling Centre (ATICC) does not offer any such courses. Counsellors may take part in training programmes offered by other organisations if sponsored by their NGO. These courses can range from one to three weeks in length and generally includes basic HIV counselling, bereavement, support group facilitation, and couples counselling.

In terms of ongoing support, counsellors meet monthly with psychologists and social workers employed by NGOs to provide “mentoring.” It is unclear exactly what is being delivered to HIV lay counsellors in these mentoring meetings. Mentors denied the PI access to these meetings citing concern regarding confidentiality. Anecdotal evidence from counsellors and mentors suggests that the focus is on administration (some counsellors complained about regularly having to recap statistical reporting sheets) and psychosocial support. The extent to which counselling communication skills are a focus is unclear, and could differ between NGOs and mentors. The programme received by control counsellors is compared to the programme received by intervention counsellors in Table 24.

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Table 24. *A Comparison of the Training and Mentoring Received by Control Counsellors versus Options: WC Counsellors*

Control counsellors	<i>Options: WC</i> counsellors
Monthly mentoring provided by NGO mentors ^a	Monthly mentoring provided by NGO mentors ^a
Participation in any counselling courses organised by NGO ^b	Participation in any counselling courses organised by NGO ^b
	<i>Options: WC</i> five-day training course
	<i>Options: WC</i> two-day refresher training course
	Four monthly <i>Options: WC</i> supervision sessions

Note. ^aThe content of these sessions is not standard between NGOs. ^bBoth sets of counsellors may take part in training programmes offered by other organisations. It is possible that some comparison counsellors and intervention counsellors would have attended such training courses in the year under review, but it is unlikely that one group systematically attended more of these than another.

Data Collection

Audio-recordings of counselling sessions for assessment in the current study were collected from intervention and control counsellors during the round of data collection that was conducted for Study V. Recordings were thus collected from counsellors in both conditions at 12 months following the start of *Options: WC* in June 2009. Recordings for all counsellors in this study were collected by the data collection team and procedures described for Study V (Chapter 6).

Data Handling and Analysis

Audio-recordings of counselling sessions were collected for 23 of 26 intervention counsellors (these are the same 23 counsellors who provided recordings for Study V). Two counsellors provided one recording each and five provided two recordings each. For control counsellors, recordings were collected from 32 of 39 participants. Seven of 39 counsellors gave no recordings because no patients had been referred for adherence counselling on days that data collectors were on site. Of the 32 who did give recordings, 1 counsellor provided 2 while the remaining 31 counsellors provided 3 recordings each. This made for a total of 95 recordings.

Upon transfer from the recorders to the PI's laptop, recordings were labelled only

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with counsellors' study numbers to ensure anonymity. For each counsellor providing multiple recordings, one recording was randomly selected for transcription and analysis. Thus a total of 55 recordings were transcribed verbatim and translated into English (where necessary) by a professional transcription and translation service. Transcripts were labelled by the service using only the counsellors' study numbers. These numbers were intended to blind coders to the group from which counselling sessions came (intervention or comparison) but the presence of steps from the *Options* counselling protocol in intervention counsellors' sessions made it impossible to blind coders completely. The lack of opportunity for blinding is not uncommon in RCTs evaluating behavioural and psychosocial interventions (Stephenson & Imrie, 1998).

A random selection of 15 transcripts of sessions originally conducted in Xhosa was checked by NM for accuracy in translation; no major errors were identified. Transcripts translated from Afrikaans into English (n=4) were not checked for accuracy at this time, and during coding it became clear that the translations were of poor quality. These sessions were re-transcribed and translated by one of the first-language Afrikaans speaking data collectors who worked on this study. While her experience in translation was minimal, this was the most cost-effective option available. The PI's familiarity with Afrikaans was good enough for the new transcripts to be checked against the recording. JC, who acted as the second rater in coding the transcripts, had sufficient knowledge of Afrikaans to be able to judge the quality of the translation, which was deemed to be good.

Intervention and comparison counsellors' transcripts were evaluated using the Motivational Interviewing and Treatment Integrity tool (MITI 3.0) by the PI and JC. This instrument is described in Chapter 5 under the methods section. Many of the communication skills and techniques associated with MI and measured by the MITI 3.0 are common to other client-centred counselling approaches, including the approach based on Egan's (2002) model in which HIV lay counsellors are trained at ATICC. Examples include the use of simple reflections and open- and closed-ended questions. Statements coded as MI-adherent (affirmations and supportive statements and emphasising the clients control) are consistent with a client-centred approach. Statements coded as MI non-adherent in the MITI (for example confronting, giving orders, commands and imperatives) are inconsistent with a client-centred counselling approach, which emphasises the demonstration of respect for clients and the role of the client as an equal partner. In terms of the global dimensions rated by the MITI, empathy, collaboration, and autonomy/support are characteristics shared by client-centred counselling models.

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Because of these shared characteristics, the MITI 3.0 is appropriate for comparing the communication skills of counsellors involved in the *Options: WC* project to the skills of counsellors not involved in the project.

Data analysis was conducted using IBM SPSS Statistics 19 and STATA 11. Preliminary analyses were conducted to determine group differences in demographic characteristics using Chi-squared tests and Fisher's Exact tests where appropriate. Inter-rater agreement was estimated using Spearman's Rank-Order Correlation and the intraclass correlation (ICC) for each MITI 3.0 rating category. Data from the MITI 3.0 coding was screened for normality using standard procedures. These analyses indicated that the data was not normally distributed and that non-parametric tests were appropriate. Mann-Whitney U tests were used to determine the difference between groups on global dimensions and behaviour count data as measured by the MITI 3.0.

Results

A total of 55 transcripts were coded using the MITI 3.0. Of these, 23 were from intervention counsellors and 32 were from comparison counsellors. Recordings collected from intervention counsellors ranged from 5 minutes to 20 minutes in length, with an average time of 10 minutes. Recordings collected from comparison counsellors ranged from 4 minutes to 28 minutes in length, with an average time of 12 minutes.

Results regarding inter-rater agreement for the coding of transcripts are presented in Table 25 where it can be seen that the majority of ICCs were in the excellent range. Agreement was lowest for the global ratings of direction and autonomy, although these scores are still considered to be fair (Cicchetti, 1994).

EFFECT OF *OPTIONS*: WC ON PRACTICETable 25. *Inter-Rater Agreement on Coding of Intervention and Comparison Counsellors' (N=55) Transcripts Using the MITI 3.0*

	ICC	95% CI		r_s
		Lower bound	Upper bound	
<i>Global ratings</i>				
Evocation	0.894	0.818	0.938	.812**
Collaboration	0.863	0.765	0.920	.757**
Autonomy	0.655	0.409	0.799	.498**
Direction	0.517	0.172	0.718	.573**
Empathy	0.920	0.863	0.953	.906**
<i>Behaviour counts</i>				
Giving information	0.982	0.942	0.980	.920**
MI adherent	0.966	0.941	0.980	.910**
MI non-adherent	0.951	0.915	0.971	.918**
Closed questions	0.995	0.991	0.997	.965**
Open questions	0.953	0.919	0.973	.878**
Simple reflections	0.982	0.969	0.990	.971**
Complex reflections	0.797	0.652	0.882	.701**

Note. ICC = Intraclass Correlation; CI = Confidence Interval; r_s = Spearman's rho. ICCs can be categorised as follows: $<.40$ = poor, $.40$ to $.59$ = fair, $.60$ to $.74$ = good and $.75$ to 1.00 = excellent (Cicchetti, 1994).

** $p < .01$

Table 26 presents the characteristics of the 55 counsellors evaluated in this study. The majority of counsellors were female, between the ages of 30 and 50 years old, spoke Xhosa as a first language, and were in possession of a Grade 12 certificate. Intervention and comparison groups were similar on all demographic characteristics but two. Results of Fisher's Exact tests revealed a significant relationship between "years of counselling experience in the field of HIV/AIDS"³¹, "counselling experience in ARV adherence" and group ($p = .037$ and $p = .003$ respectively). The data presented in Table 26 indicates that more counsellors in the comparison group had "six years or more" of HIV/AIDS counselling experience than intervention counsellors (72% as compared to 35%). More counsellors in the comparison group also had "six years or more" of ARV adherence counselling experience than intervention counsellors. No intervention counsellors had more than five years of ARV adherence counselling experience. Thus, in terms of years

³¹ Counselling experience in the field of HIV/AIDS could include years spent working in HIV counselling and testing and prevention of mother to child counselling, as well as any other HIV-related counselling experience that may have been gained in settings other than the public healthcare system.

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spent in HIV counselling, the comparison group could be said to be more experienced than the intervention group.

Table 26. *Demographic Characteristics of Intervention (n=23) and Control (n=32) Counsellors*

	Intervention Counsellors n (%)	Comparison Counsellors n (%)
<i>Age</i>		
20-29 years	4 (17)	4 (13)
30-39 years	9 (39)	13 (41)
40-49 years	6 (26)	10 (31)
50-59 years	2 (9)	4 (13)
60 years and older	0 (0)	1 (3)
Missing data	2 (9)	0 (0)
<i>First-language</i>		
Afrikaans	5 (22)	3 (9)
English	0 (0)	2 (6)
Xhosa	17 (74)	27 (84)
Other	1 (4)	0 (0)
<i>Highest Education</i>		
≤ Grade 9	1 (4)	0 (0)
Grade 10	3 (13)	4 (13)
Grade 11	3 (13)	7 (22)
Grade 12	16 (70)	21 (66)
Tertiary education	5 (22)	0 (0)
<i>Counselling experience in the field of HIV/AIDS</i>		
1 year	0 (0)	1 (3)
2 years	3 (13)	0 (0)
3 years	4 (17)	4 (13)
4 years	3 (13)	2 (6)
5 years	4 (17)	2 (6)
6 years or more	8 (35)	23 (72)
<i>Counselling experience in ARV adherence</i>		
1 year	8 (35)	6 (19)
2 years	9 (39)	4 (13)
3 years	3 (13)	5 (16)
4 years	1 (4)	2 (6)
5 years	1 (4)	5 (16)
6 years or more	0 (0)	9 (28)
<i>ATICC courses completed</i>		
10-Day HIV/AIDS Information	12 (52)	21 (66)
20-Day Intensive Counselling	12 (52)	20 (63)
10-Day ARV adherence	21 (91)	32 (100)
5-Day Paediatric Counselling ^a	12 (52)	12 (38)
<i>Participation in other HIV/AIDS counselling courses</i>		
	15 (65)	27 (84)

Note. ^a Participation in ATICC's 5-Day Paediatric Counselling course is included here, as basic counselling skills are revised in this course.

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Mann-Whitney U tests were conducted to determine the difference between groups on global dimensions and behaviour counts as measured by the MITI 3.0. Results of these tests indicate a significant difference between groups on all global dimensions: evocation ($U = 102.5, p = .000$), collaboration ($U = 100.5, p = .000$), autonomy/support ($U = 195.0, p = .001$), direction ($U = 310.5, p = .049$), empathy ($U = 180, p = .001$). Mean rank scores presented in Table 27 show that intervention counsellors scored higher than comparison counsellors on all of these dimensions. Thus, in terms of those dimensions that represent basic requirements for client-centred counselling strategies (specifically empathy, autonomy/support and collaboration), intervention counsellors' performance was better than comparison counsellors' performance.

Table 27. Results of Mann-Whitney U Tests on MITI 3.0 Items for Intervention ($n=23$) and Comparison ($n=32$) Counsellors

MITI 3.0 items	Mean rank (Intervention)	Mean rank (Control)	<i>p</i>
<i>Global ratings</i>			
Evocation	39.54	19.70	.000
Collaboration	39.63	19.64	.000
Autonomy/support	35.52	22.59	.001
Direction	30.50	26.20	.049
Empathy	36.17	22.13	.001
<i>Behaviour counts</i>			
Giving Information	33.15	24.30	.042
MI adherent	40.13	19.28	.000
MI non-adherent	15.28	37.14	.000
Closed questions	25.83	29.56	.392
Open questions	30.13	26.47	.398
Simple reflections	41.61	18.22	.000
Complex reflections	27.50	28.36	.397

Results of Mann-Whitney U tests for differences between groups on behaviour count data revealed a significant difference between groups on statements coded as giving information ($U = 249.5, p = .042$), MI adherent ($U = 89.0, p = .000$), MI non-adherent ($U = 75.5, p = .000$) and simple reflections ($U = 55.0, p = .000$). Mean rank scores in Table 27 show that intervention counsellors delivered significantly more information, MI adherent statements, and simple reflections than comparison counsellors. Intervention

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counsellors delivered significantly fewer statements coded as MI non-adherent than comparison counsellors. This suggests that the practice of intervention counsellors is more consistent with a client-centred approach to counselling than comparison counsellors' practice. There was no difference between groups in terms of the number of complex reflections, closed- and open-ended questions delivered.

Discussion

Results from this study show that the *Options: WC* programme had a positive impact on lay counsellors' adherence counselling practice in terms of counselling communication skills and the extent to which interactions were patient-centred. This study supports findings from the RCTs by Heaven et al. (2006) and Miller et al. (2004) (described in Chapter 6) in which training and ongoing technical support for counselling communication resulted in changes to trainees counselling practice. One limitation associated with cluster RCTs is that the efficacy of randomisation for ensuring that groups are equivalent at baseline is compromised because randomisation occurs at the level of the cluster and not the individual (Giraudeau & Ravaud, 2009). In the current study, control counsellors were more experienced than intervention counsellors in terms of years spent counselling. Despite this difference, intervention counsellors' practice was better than control counsellors' practice in terms of basic counselling communication skills and a client-centred counselling approach. Intervention counsellors scored significantly higher on MITI 3.0 dimensions of empathy, collaboration and autonomy/support than control counsellors did. Interactions high on these characteristics are more consistent with a client-centred counselling approach than interactions that are not. Intervention counsellors also made significantly fewer MI non-adherent statements than control counsellors. The avoidance of confrontation, warning and argument is also consistent with a client-centred counselling approach.

Intervention counsellors scored higher than control counsellors on the dimension of direction, although this difference was just within the limit of statistical significance. Traditionally a high level of direction is not associated with a client-centred approach to counselling. It is argued here, as it was in Chapter 5, that high direction is appropriate in counselling sessions that take place within busy clinic settings where time is limited. High direction could also be a feature of counselling sessions conducted in an authoritarian manner however. A condition for appropriate direction might be that it takes place within the context of an interaction that is also high on characteristics such as collaboration, empathy and autonomy/support. For intervention counsellors, high direction generally did

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take place within the context of interactions that were high on these dimensions as well. This was not the case for control counsellors.

The question that remains is whether improving lay counsellors' counselling practice will translate into better health outcomes for patients. There is a good amount of experimental research that indicates that psychosocial counselling interventions can positively impact health behaviours including adherence and sexual risk (for example, Belcher et al., 1998; Butler et al., 1999; Channon et al., 2007; Chung et al., 2010; Cornman et al., 2008; Dilorio et al., 2008; Fisher et al., 2006; Golin et al. 2006; Kalichman et al., 2007; Kalichman, Cain, Eaton, Jooste, & Simbayi, 2011; Kamb et al., 1998; Richardson et al., 2004; Rose et al. 2010; Soria et al., 2006). A limitation of most of these studies is that fidelity to the counselling approach being evaluated is not assessed. Counsellors' fidelity to the approach of MI was assessed in only one of these RCTs by Golin et al. The results of this assessment, conducted using the Motivational Interviewing Skill Code, are reported by Thrasher et al. (2006). Of 47 interviews analysed, most achieved proficiency thresholds for the ratio of reflections to questions (63%), MI consistent statements (100%) and percent complex reflections (85%). Levels of proficiency were also achieved in 44% of sessions for global ratings, and 19% for percent open questions. Thrasher et al. related the quality of counselling delivered to patients ARV adherence outcomes. Their findings indicated that better MI quality as measured by the Motivational Interviewing Skill Code was related to higher levels of adherence. This suggests that the more closely counselling communication comes to meeting standards set out in relation to the approach of MI, the more effective it is likely to be in promoting behaviour change. Further research investigating the levels of proficiency in counselling communication required to effect behaviour change is needed however.

The counselling interventions evaluated in RCTs and referred to in the above paragraph generally involve more than counselling communication however. Most interventions evaluated (including *Options*) use strategies for encouraging change such as problem-solving and goal setting, and there is evidence to suggest that these features are at least partly responsible for intervention effectiveness. For example in the RCT by Golin et al. (2006), MI was found to be more effective for improving ARV adherence than the provision of information only. Participants having received the MI intervention were found to be significantly more likely than control participants to have carried out behaviours related to improving adherence such as goal-setting and developing strategies for taking their medication. A systematic review of RCTs examining the effectiveness of

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patient support for adherence has also identified those interventions that target practical medication management as among the most successful (Rueda et al., 2009). A limitation of the current study is that the impact of *Options*: WC on counselling practice in terms of problem-management was not assessed. The evaluation of counsellors' practice prior to the *Options*: WC training suggests that problem-solving is not a routine feature of adherence counselling sessions. Based on the research evidence mentioned above, counselling sessions that include a focus on problem-solving are likely to be more effective in producing behaviour change than those that do not. It is thus argued that improving lay counsellors' counselling practice in terms of communication skills and strategies employed to address risk behaviour is likely to have a positive impact on the effectiveness of the adherence counselling programme.

This cluster randomised trial is limited by a small sample size which was further affected by a high loss to follow-up among participants. Of 39 intervention counsellors, 41% were not assessed in this study. Of comparison counsellors, 38% were lost to follow-up. Levels of loss were thus similar between groups. Another limitation to this study is that while randomisation took place at the level of clusters, analysis took place at the level of the individual and did not account for clustering. As such, findings of significant difference between intervention and comparison groups may be overestimated. Another potential source of bias in these results is that raters could not be completely blinded to study condition in the coding of transcripts. The high level of consensus observed between raters suggests that MITI codes were accurately applied however, and thus that bias in favour of intervention counsellors is likely to be minimal.

Reducing potential bias that may distort study findings is a primary concern among researchers (Petrosino & Soydan, 2005). In evaluating the impact of interventions, attempts to reduce bias usually involve the use of research design and statistical methods to increase the likelihood of valid and reliable results. Another source of potential bias that should be acknowledged (not only in relation to the current study, but the entire *Options*: WC evaluation) is the role of the evaluator in programme development and operation (Petrosino & Soydan). Indeed there is evidence to suggest that effect size increases positively when evaluators are involved in the treatment setting (Petrosino & Soydan). In the current project, the evaluator was also that person primarily responsible for the implementation of the *Options*: WC programme. Nevertheless, due care has been exercised in designing and conducting the evaluation, to ensure that the potential role of the researcher was minimised. If anything, one could speculate that if

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bias did operate, it would have influenced the results in a positive direction.

Conclusion

This study provides evidence for the effectiveness of the *Options: WC* programme for improving lay counsellors' counselling practice in terms of basic counselling communication skills and therapeutic approach. There is reason to believe that this improvement could have had a positive impact on patients' adherence behaviour, but further research investigating the level of counselling proficiency required to effect behaviour change is needed. This study also provides further evidence for the effectiveness of training in combination with ongoing support that is focused specifically on up-skilling for improving the counselling practice of lay counsellors. The ongoing training and support that is delivered as part of the programme for adherence counselling in the Western Cape could do more towards enhancing and maintaining the basic counselling skills that are taught to lay counsellors in training delivered by ATICC. Given training and supervision that is focused on up-skilling, lay counsellors appear to have the potential to deliver basic counselling at what could be considered an adequate level.

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Chapter 8

Implications of the *Options: WC* Evaluation for Lay Adherence Counselling Practice

The potential for evidence-based practice to contribute to health systems strengthening and improved health outcomes is recognised internationally by researchers and policy-makers alike. As a part of the primary healthcare re-engineering that is currently underway, the South African National Department of Health (DoH) envisions a healthcare workforce that is able to meet the health needs of the population by providing “quality professional care that is effective and evidence-based” (NDoH, 2012, p. 14). Much work has been put into developing and testing the efficacy of theory-based prevention interventions in well-designed studies (Norton et al., 2009). While it is acknowledged that the efficacy of a programme does not guarantee its effectiveness in practice, there is still an assumption that evidence-based interventions can be fairly easily transferred into real-world settings (Hirschhorn, Ojikutu, & Rodriguez, 2007). Particularly when interventions are implemented and tested within the context of pragmatic trials, the gap between the research setting and real-world practice can appear minimal.

The implementation of new programmes in practice settings is increasingly recognised as a complicated undertaking (Durlak & DuPre, 2008; Fixsen et al., 2005). The challenge of implementation is central to efforts to strengthen health services (Peters et al., 2009). Barriers to changing practice and implementing new programmes in healthcare settings can occur at various levels (Grol & Grimshaw, 2003); these need to be identified so that we may know how to improve the likelihood of successfully delivering a proven intervention (Panisset et al., 2012; Peters et al., 2009). Further, as Panisset et al. (2012) argue, policy-makers unaware of barriers to the implementation of particular programmes increase the likelihood of producing negative outcomes. These include wasting precious resources on inadequate programmes. This could apply not only to the implementation of evidence-based interventions but to the implementation of other programmes as well, including those that are developed at grass-roots level and those that are implemented as standard care practice.

An important question addressed by implementation research in healthcare settings is which strategies can be used to improve the delivery of health services in a particular context (Peters et al., 2009). In South Africa, as in other developing countries, lay health workers (LHWs) have been integrated into the formal health service to expand

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capacity for service delivery. Such large-scale, national LHW programmes are often implemented without evidence of their effectiveness for improving health outcomes (Lewin et al., 2006). Nevertheless, LHWs in South Africa have come to deliver services that are embedded in practice protocols (Schneider et al., 2008), including the preparation of patients for antiretroviral (ARV) treatment initiation and the provision of counselling for adherence support. Recently research investigating the contribution of LHWs to antiretroviral therapy (ART) programmes has begun increasing. A review by Wouters, van Damme, van Rensburg, Masquillier, and Meulemans (2012) has synthesised the research published between 2003 and 2011 on the contribution of community-based programmes delivered by lay providers to scaling-up ART in resource-limited contexts. The review demonstrates that these programmes have an unambiguous positive impact on a wide range of ART programme outcomes. These include access to and coverage of ART programmes, levels of adherence, virological suppression, immune restoration, patient retention, and rates of survival. Another study recently published evaluated the effect of a community-based adherence support programme delivered by lay providers in 57 South African public healthcare facilities (Fatti et al., 2012). Clinical, virological and immunological outcomes were assessed for ART patients enrolled in treatment between 2004 and 2010 in four provinces of South Africa. Lay providers in this study by Fatti et al. were community members with a Grade 12 education, numeracy and literacy in English, and fluency in the local language. They were trained over three weeks in HIV and TB (tuberculosis) infection and treatment, as well as psychosocial issues that impact on adherence and how to address these. One-day training and debriefing workshops were held on a monthly basis, and a five-day refresher training course was delivered one year following initial training. These LHWs conducted home visits to supervise taking of medication, conduct adherence checks, provide counselling for adherence and psychosocial problems, health promotion education, and symptom screening for TB and other opportunistic infections. Of 66, 953 patients included in the analysis, 19, 668 (29%) received the community-based support programme and 47, 285 (71%) did not. Patients who received the intervention had more advanced clinical stage disease and more concurrent TB at baseline than patients who did not receive the intervention. Despite this, up to five years of follow-up data indicates a 35% reduction in mortality and a 37% reduction in loss to follow-up among these patients as compared to patients who did not receive the intervention. Virological suppression was also superior in the group having received the programme.

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The above-mentioned research indicates that LHWs can deliver support for ARV adherence such that positive health outcomes are achieved. One limitation to this research is that it is not possible to disentangle the effects of counselling delivered by LHWs from the various other support strategies employed. In the study by Fatti et al. (2012) LHWs performed counselling activities for adherence support, but in combination with home visits, psychosocial screening, referral to services, health promotion education and adherence checks. In the studies included in the review by Wouters et al. (2012) strategies for support also included combinations of various activities such as counselling for adherence and psychosocial support, home visits, referral to health centres, directly observed therapy, health education, drug delivery and home-based caring activities. The contribution of counselling as delivered by LHWs in these programmes is not known.

Sanjana et al. (2009) have investigated the ability of LHWs in Zambia to provide counselling in relation to HIV testing, and conclude that lay counsellors can provide HIV counselling and testing (HCT) services of good quality. Counselling quality was assessed via interviews with patients however, who reported on whether counsellors had completed particular tasks. For example, patients were asked whether the counsellor had provided the necessary information regarding HIV/AIDS and displayed good skills in the counselling session. Torpey et al. (2008) investigated LHWs ability to provide counselling for ARV adherence support in Zambia and also determined that lay counsellors could provide support of good quality. This was judged by an assessment of loss to follow-up rates following the introduction of this cadre of health worker to the health service, as well as interviews with patients. Again patients provided assessments of quality based on whether counsellors completed particular tasks and characteristics of counselling sessions (for example, whether the session was easy to understand or not). More recently in an evaluation of a programme aimed to improve ARV adherence, Roth et al. (2012) determined that LHWs in the United States of America were able to successfully deliver the intervention which involved behaviour change and motivational techniques. This conclusion is based on data indicating positive outcomes in terms of adherence and viral load. While the LHWs in this project were not medical or mental health providers, they are described as having “varied professional backgrounds” (p. 2 of 7). This suggests that this group of LHWs is not representative of LHWs employed in sub-Saharan African (SSA) settings. Research on the ability of LHWs to deliver a good quality counselling for adherence support is thus limited, and the extent of their abilities in this regard is unclear.

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Large-scale LHW interventions involve considerable financial investment (Lewin et al., 2006) and, in contexts where LHWs are a necessary and integral part of service delivery, we need to know how the most benefit from such a significant investment can be achieved. Lewin et al. (2006) argue that LHWs are most likely to contribute to service delivery when they have an effective (evidence-based) intervention to deliver. There is a substantial body of evidence that indicates that relatively brief counselling interventions implemented within the context of randomised control trials do result in positive behaviour change. This is in relation to various health behaviours such as smoking (Butler et al., 1999; Soria et al., 2006), physical activity (Proper, Hildebrandt, Van der Beek, Twisk, & Van Mechelen, 2003) and glycaemic control in diabetes (Channon et al., 2007), and also sexual risk behaviour (Belcher et al., 1998; Cornman et al., 2008; Fisher et al., 2006; Kalichman et al., 2007; Kalichman et al., 2011; Kamb et al., 1998; Richardson et al., 2004; Rose et al. 2010) and ARV adherence (Chung et al., 2010; Dilorio et al. 2008; Golin et al., 2006). Such interventions are thus worth rolling out, and they should be rolled out with fidelity. Evidence regarding the effectiveness of LHWs as a delivery mechanism is needed before such programmes are scaled up however (Lewin et al.). In South Africa, clinic-based lay counsellors are trained to deliver counselling for psychosocial and ARV adherence support according to Egan's (2002) *Skilled Helper* model. The *Options for Health* model of counselling offers several advantages over Egan's model for adherence counselling practice in that has proven efficacy, was developed for use specifically within busy clinic settings and is focused on achieving health behaviour change. In contrast there is no evidence supporting the efficacy of Egan's model for health behaviour change (although it does share features with other successful adherence interventions) and, in theory, it is not as time efficient as the *Options* model. Previous research suggests that the *Options* counselling protocol can be effectively delivered by lay ARV adherence counsellors. Outcome data in both Mpumalanga and Kwa-Zulu Natal showed a significant reduction in sexual risk behaviour among patients having received the intervention (Chapter 1).

This thesis involved an evaluation of the implementation of *Options for Health* in ARV clinics in the Western Cape province of South Africa. *Options for Health* was an effort to strengthen the effectiveness of the Western Cape's ART programme for HIV prevention. Implemented within the context of routine adherence counselling practice, the *Options: WC* project aimed to replace the standard care counselling model with the *Options* counselling model, and to integrate sexual risk reduction with HIV clinical care.

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The intention was for Cape Town City Health and the Provincial DoH to continue implementation if the intervention was effectively delivered during the period of evaluation. Because of this, activities intended to put *Options* into practice were designed to match as closely as possible the activities undertaken by the health authorities to put the standard care adherence counselling programme into practice. Financial and human resource constraints limit the scope of activities associated with implementing the standard care programme. For the health authorities to take over implementation, evaluation would ideally show that the *Options: WC* programme could be implemented effectively under the same resource constraints faced by the standard care counselling programme. Originally the evaluation of the *Options: WC* project had been intended to assess the effectiveness of the programme in terms of adherence outcomes, but from the beginning the programme struggled with problems in implementation. These issues became the focus of the evaluation and this thesis. In motivational interviewing (MI) and the *Options* intervention, the concept of readiness-to-change explains the extent to which a particular plan of action for change will be taken up. In the implementation research literature the concept of readiness is applied to contexts as well. As Bumbarger and Perkins (2008, p. 57) write, “Any discussion of moving evidence-based interventions from trials to real-world implementations must begin by considering the context in which the programmes will ultimately be placed and the readiness of that context.” Context readiness can be conceptualised at various levels which correspond with those of Durlak and Dupre’s (2008) model of successful implementation. In effect this model (described in Chapter 3) sets out conditions for context readiness at each level. For example a setting in which providers recognise the need for a particular intervention, believe that it will provide the required benefits and who have the self-efficacy and skill proficiency are likely more ready for change (at least at this level) than one that is not. The studies conducted as part of this thesis were individually focused on measuring implementation effectiveness in terms of coverage and dose (Study I), fidelity and quality of delivery (Studies IV and V) and/or barriers to implementation (Study II and, indirectly, Studies III, IV and V). Together, however, findings from this evaluation combine to provide a picture of primary healthcare ARV clinics that are not ready for the implementation of an intervention like *Options: WC*. The concept of readiness at the levels of the provider, patient, the community and the organisation provides a useful framework for further discussion of the findings from this evaluation.

An important question regarding readiness at the level of the **provider** is whether

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the chosen providers have the requisite skills and knowledge for successful intervention delivery (Bumbarger & Perkins, 2008). Poor provider proficiency was one barrier to the delivery of the *Options* intervention in the Western Cape. Following a 5-day (35 hour) initial training course, lay counsellors were unable to implement those *Options* steps representing the more strategic aspects of MI (namely Steps 3 to 5). A further 18 hours of refresher training and supervision focused on the eight-step protocol were not sufficient to remedy this.

Scripted interventions such as *Options for Health* which follow prescribed steps lend themselves to rote learning. This appears to be the type of learning in which counsellors engaged in relation to the importance and confidence ladders that constitute the assessment of readiness-to-change in *Options* Step 3. Counsellors conducted this assessment mechanically in the absence of an understanding how the constructs related to the underlying behavioural change theory and the rest of the *Options* protocol. According to MI theory, readiness-to-change is likely a core component of the *Options* intervention. The client's state of readiness-to-change is intended to inform the counselling session and guide the development of a plan for behaviour change. In order to enhance the potential for the achievement of change, the development of a plan for change is intended to match the client's state of readiness-to-change. In theory, clients not ready to change their behaviour will resist engaging in activities that assume that they are ready, or should be ready, to change (Rollnick et al., 1993). In the counselling sessions evaluated in this thesis, the patient's state of readiness generally did not inform the counselling session or change-plan development. Refresher training and supervision improved the way in which counsellors conducted the assessment, but did not appear to improve their understanding of the relationship between these concepts and the steps of the *Options* protocol that follow on from this assessment.

The struggle experienced by lay counsellors in relation to elements of the *Options* counselling protocol highlights the importance of ensuring compatibility between the requirements of (evidence-based) practice and provider competencies for effective programme delivery. The use of selection criteria in the employment of LHWs has been recommended as one way in which to ensure good quality service delivery (for example Hermann et al., 2009). It is unclear what criteria might facilitate the delivery of quality counselling however. At least in terms of MI, there appears to be no association between proficiency and education level (Evangeli et al., 2009; Gaume et al., 2009; Navajits & Weiss, 1994). The evaluation of *Options: WC* did not investigate provider characteristics

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such as motivation, personality factors or demographic characteristics in relation to counselling ability. This is a potential avenue for future research. Study IV does suggest the possibility that time spent counselling may be an influential factor in terms of lay counsellors' ability to adopt new counselling practice. In this study, the eight counsellors who delivered seven of seven *Options* steps assessed had two or fewer years of counselling experience behind them. It is possible that counsellors with less counselling experience, and having had less time to develop and adopt into habit a particular method, are more amenable to learning and transferring new counselling strategies into practice. Unfortunately years spent in the field of HIV counselling were not matched to counsellors' proficiency in terms of the *Options* protocol or MI techniques as measured by the MITI 3.0 in this research. Should this be true, the findings of this thesis in terms of lay counsellors' ability to deliver the *Options* protocol may be limited to counsellors with previous counselling experience. The ability of lay counsellors to successfully deliver the eight-step protocol may be improved if they are trained and supported in this model from the beginning of their counselling practice.

The ability of counsellors to change counselling models could be associated with training outcomes as well. In the organisational training literature, one indicator of effective training transfer is the extent to which the trainee can adapt their newly learnt skills to the demands of the practice setting (Ford & Weissbein, 1997). A distinction between outcomes of training as "adaptive" and "routine" expertise has been made. Individuals who develop routine expertise as a result of training are able to apply learned strategies to well-learned and familiar contexts. In comparison, individuals who develop adaptive expertise have the ability to adjust their knowledge to novel situations and requirements (Ford & Weissbein; Holyoak, 1991). Adaptive expertise is not an inevitable outcome of training but a "high performance" skill (Ford & Weissbein, p. 34). Adaptive expertise is not necessarily related to inherent capability either – it is something that must be encouraged, enacted and refined from the earliest stages of training (Mylopoulos & Regehr, 2009). Evidence from Studies II, IV and V suggests that training provided as part of the *Options: WC* project did not facilitate adaptive learning among lay counsellors with regard to the *Options* protocol. The manner in which counsellors delivered particular *Options* steps was un-dynamic, but so was their use of the protocol in terms of the types of problems they applied it to. Some of the issues for which they felt *Options* was not appropriate could indeed have been addressed using the model (Study II). The possibility that lay counsellors cannot achieve adaptive expertise in counselling techniques without

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considerable (and practically unrealistic) levels of training and support must be considered. It seems reasonable that the most that is achieved by the limited training that is generally provided to lay counsellors is the development of routine expertise. The implication of this for the training of lay ARV adherence counsellors as part of the standard care adherence counselling programme is that counsellors need to be trained to apply Egan's (2002) model specifically in relation to adherence problems. Currently it is assumed that counsellors will transfer Egan's model from their HCT practice into their adherence counselling practice without further training or assistance. Findings from this thesis suggest that this transfer does not occur.

The potential inability of lay counsellors to apply counselling strategies flexibly to different patients and problems could extend to an inability to successfully change between counselling models and approaches as well. ARV adherence counsellors are trained as part of the standard care counselling programme to deliver counselling sessions with patients in preparation for treatment initiation. In comparison to counselling sessions that are conducted with patients already on treatment, these sessions are focused on information-giving. Possibly the change between this model and a model focused on problem-management (such as Egan's or *Options*) is problematic for lay counsellors. This might partly explain why counsellors have pulled an information-giving approach through to counselling sessions that are intended to address problematic adherence.

The ability of lay providers to successfully deliver counselling practices and techniques cannot be limitless, particularly when training is brief and infrequent. The low level of basic counselling skill observed in Study III most likely negatively impacted the effect of the initial five-day *Options: WC* training. MI is an advanced counselling technique, and low counselling skill prior to training in the approach may simply mean that more intensive training is required for trainees to reach levels of proficiency. Findings from this thesis thus suggest that the level of training required to make counsellors proficient in the *Options* protocol and some of the more complex elements of MI is likely more intensive than is feasible for the health authorities to deliver. By investigating individual aspects of the implementation of the *Options* protocol, this thesis provides some answers as to what lay counsellors *are* able to deliver in terms of counselling for behaviour change. This is following brief training and the provision of ongoing supervision focused on up-skilling that is not unrealistically more intensive than what is currently provided in this regard. While lay counsellors may not be able to successfully deliver MI-based Behaviour Change Counselling, findings from Studies IV

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and V suggest that lay counsellors may still be able to deliver counselling support for adherence that is effective.

This thesis indicates that lay counsellors are able to improve on basic counselling communication skills and therapeutic approach. Counsellors involved in the *Options: WC* project reduced their reliance on closed questions and asked more open questions following training and supervision focused on up-skilling. They also significantly reduced MI non-adherent behaviours which included making confrontational, warning, and judgemental statements. This was related to a change in overall approach that saw counsellors increase the extent to which they involved patients as contributors in counselling sessions and displayed empathy and respect for patients. Lay counsellors are thus able to be trained to adhere to the central tenets of a client-centred counselling approach.

This thesis also shows that training focused on problem-solving barriers to adherence is effective in teaching lay counsellors to adopt a problem-management approach to adherence counselling. The evaluation of counselling sessions occurring prior to the implementation of *Options: WC* in Study III revealed that problem-solving was largely absent from standard care adherence counselling practice. Following participation in the five-day *Options: WC* training programme, the majority of counsellors were seen to engage patients in problem-solving barriers to adherence and to negotiate realistic plans for change. A focus on problem management was maintained at 12-month follow-up, suggesting that this element was transferred into practice. This thesis suggests that lay counsellors are likely able to effectively deliver interventions that incorporate basic counselling communication skills and problem-management techniques. Given that interventions focused on medication management strategies have been found to be successful in SSA settings (Rueda et al., 2006), lay counsellors have the potential to positively affect treatment adherence.

The ability of providers to effectively deliver an intervention is obviously related to the provision of ongoing training and support as well. It is not clear exactly what form of support is delivered to lay counsellors in the Western Cape by means of the monthly mentoring sessions that are provided, but findings from Study III of this thesis suggest that there is insufficient focus on recapping basic counselling communication skills and Egan's (2002) model. Study V provides evidence for the effectiveness of supervision implemented as a part of the *Options: WC* research project and focused on up-skilling as an effective strategy for ensuring and maintaining lay counsellors' counselling

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communication skills and techniques. It was mentioned previously that the terms mentoring and supervision are often used interchangeably; there is a need for clarity on what is being delivered to HIV lay counsellors in this regard. It is suggested that supervision is the more appropriate concept for this setting, and that a programme standardising the delivery of supervision between non-governmental organisations (NGOs) be developed. Such a programme could provide a basis for future monitoring and evaluation activities to ensure that supervision is delivered as intended. The three-part model described in the previous chapter that is used in nursing practice could provide the framework for an enhanced programme of lay counselling support. Focusing on administrative, educational and emotional support, it appears to cover all areas relevant to clinic-based lay counselling practice. It might be advisable that the administrative component be implemented by individuals other than the mentors (for example NGO counselling co-ordinators) who currently provide monthly support so that more of their time is available for providing emotional and educational support.

In Chapter 3 it was argued that the characteristics of **patients** are variables that can significantly influence implementation in healthcare settings. Patient characteristics are perhaps particularly salient in the transfer of interventions across cultures, and from resource-rich settings into resource-poor settings. At the same time that counsellors involved in the delivery of the *Options: WC* programme did not appear to fully understand the significance of assessing readiness-to-change, the majority of patients in counselling sessions analysed in Study IV did not appear to understand the concepts of importance and confidence either. Patients' ratings on these constructs generally did not provide insight into their actual state of readiness-to-change. It is argued that this assessment contributed little to the counselling sessions evaluated in this study, and that the concept of readiness-to-change may be of limited value to promoting behaviour change in this setting. This raises interesting questions around the potential efficacy of a more directive approach to counselling for behaviour change in this setting, and the cultural applicability of client-centred counselling approaches to SSA populations. Mpofo (2006) suggests that client-centred approaches to counselling may not work well with clients who have the expectation that counsellors, as authority figures, *should* provide advice on concrete ways in which they can address their problems. Nwachuku and Ivey (1997) write that most dominant counselling theories (which include client-centred counselling theory) stem from a Euro-North American background and, as such, tend to be individualistic and support autonomous decision-making. It is often recommended that

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interventions being transferred across cultures be adapted to suit the new context, but Nwachuku and Ivey argue that mere adaptation means that the programme is still based in its original, traditional, theoretical assumptions. These authors argue that approaches to counselling should be generated from *within* the host culture, beginning with an investigation of traditional helping styles to inform the development culture-specific counselling methods. For example they argue that, in cultures in which decision-making is located within the family and community context, a more directive approach to helping is often traditional. A more active influencing style of counselling may thus be appropriate with individuals from such cultures. This perspective offers intriguing possibilities for future development research on counselling in African settings.

At the level of the **organisation**, readiness for successful implementation is related to capacity to accommodate a programme. As in Durlak and DuPre's (2008) model for successful implementation, this can be in terms of organisational features, practices and processes. Most efforts to improve counselling interaction in clinical settings involve provider training and the scripting of interventions (Hirschhorn et al., 2007; Kurth et al., 2004). The *Options* counselling protocol is an example of this. Unless structural barriers to counselling in these settings are addressed though, these strategies are unlikely to be very successful (Sheon, Lee, & Facente, 2010). Findings from this evaluation suggest that primary healthcare ARV clinics in the Western Cape lack the capacity to support counselling for behaviour change in general. In some clinics involved in the *Options: WC* project, the basic requirement of a dedicated room for counselling could not be fulfilled because of a general shortage of space. One of the main barriers to the delivery of the *Options* protocol, at least according to counsellors in Study II, was a lack of time. This is a barrier to counselling practice that is associated with most (if not all) medical settings. Some audio-recordings of counselling sessions that were assessed as part of the current evaluation were as brief as three to six minutes in length (see Studies II, IV and V). It is unlikely that effective counselling for behaviour change can be delivered in time slots of this duration. Across Studies III, IV and V, however, the average time spent with patients by *Options*-trained counsellors ranged from 10 to 15 minutes. The average time spent by comparison counsellors with patients in audio-recorded sessions in Study VI was 12 minutes. In theory, between 10 and 15 minutes is enough time for an intervention like *Options* to be delivered. In practice though it is possible that counsellors need more time than this to work through the eight-step protocol. HCT counsellors in Mpumalanga reportedly delivered the *Options* intervention

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in 20 to 30 minute sessions (Peltzer et al., 2008). Twenty to 30 minute counselling sessions are not likely to be feasible in busy clinic settings, but 3 minute counselling sessions are not likely to be very productive either. Allocating 10 to 15 minutes for individual counselling sessions seems like a reasonable, and achievable, compromise. Towards this end strategies aimed at increasing the amount of time available for adherence counselling with patients on treatment could be developed and tested. One solution might be to revise the process by which patients are prepared for treatment initiation. Currently, each patient preparing to start treatment is intended to receive four individual treatment work-up sessions in which counsellors deliver standard packages of information. Future research could investigate the potential for these standard packages of information to be delivered via other methods (group sessions or computer technology for example), thereby freeing up human resources for adherence support. While more counselling time needs to be made available, there is also a need for counsellors to be trained in the delivery of brief counselling for behaviour change. Counselling models such as Egan's (2002) *Skilled Helper* model are flexible and can be delivered over the course of an hour or within the space of a few minutes (Egan), but condensing a session in such a way that it remains a productive encounter likely requires a fair amount of skill and adaptive expertise. Lay counsellors, trained to deliver Egan's model in 20 to 30 minute sessions, are most likely not able to effectively adapt their practice to deliver the model in a substantially shorter amount of time on their own. Evidence for this is provided in Study III, where counsellors can be seen to have discarded many elements of Egan's model in favour of the provision of information and advice.

A shortage of time was also the main reason why counsellors did not deliver *Options* to address sexual risk behaviour in treatment work-up and follow-up adherence counselling sessions. This obstacle thus limits the capacity of ARV clinics to integrate sexual risk reduction with HIV care. Given the lack of time that providers have for delivering counselling aimed at behaviour change, researchers and policy-makers could consider the potential for time-efficient interventions aimed at reducing sexual risk behaviour using other modes of delivery. For example Remien et al. (2008) suggest the use of multi-media technology such as laptops and pre-programmed psycho-educational technology. They argue that these methods have been used effectively in health-related interventions in resource-poor settings (for example, Batholomew et al., 2000; Knebel, 2002). Such approaches might allow interventions to capitalise on the sometimes lengthy waiting periods that occur between the various stages of the clinic process. Regardless of

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the intervention approach chosen, findings from this thesis suggest that implementation needs to be initiated by a formal commitment on the part of the health authorities.

Readiness for implementation at a **community** level involves the state of factors at the political, funding and policy environment. There is a weakness in terms of policy regarding what approach counselling with poorly adherent people should take. This relates to a broader lack of clarity regarding what is meant by “counselling” in this setting. In the literature, the term counselling is used in relation to a variety of activities, including the provision of emotional support, information to facilitate decision-making, help with adaptation to difficulties, and direct aid in decision making (Seeley & Wagner, 1991). In the Western Cape, lay counsellors are trained to conduct HCT counselling sessions according to a format prescribed by the health authorities. Within the ARV adherence counselling programme in the Western Cape (and possibly other South African provinces), counselling for treatment initiation is also conducted according to a prescribed format. In terms of counselling for treatment initiation, counselling refers to the provision of education for health promotion. In contrast, counselling for adherence support is a relatively neglected area; there is no prescribed format for counselling sessions aimed at addressing problematic adherence. It is argued that the lack of explicit guidance on how adherence support counselling sessions should be conducted has contributed to a counselling approach developed from the ground up. This approach has been moulded by a variety of other factors discussed above and throughout this thesis, including a lack of adequate technical assistance, time pressure and processes of socialisation in which lay counsellors’ approach to communication with patients is modelled on the approach taken by other members of clinic staff (see Study II). There is no evidence of the effectiveness of Egan’s (2002) model for facilitating behaviour change but, given its focus on problem-management, it is potentially more effective than the current information- and advice-giving approach developed and used by lay counsellors.

A lack of formal support for addressing sexual risk among people living with HIV and attending clinical care is also suggested to have been an obstacle to the delivery of *Options* for this purpose. Because sexual risk reduction is not prioritised in ARV clinic settings, this aspect of the *Options: WC* programme was easily ignored in the face of (admittedly significant) barriers to counselling practice. In theory, South Africa’s large-scale ARV treatment programme has the potential to reduce HIV incidence. Data presented at the 19th International AIDS Conference has shown that effective ARV treatment can efficiently reduce the proportion of infectious individuals in a population

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(Jain et al., 2012). The potential of ART to reduce transmission can be undermined by low levels of adherence and a subsequent failure to suppress viral load however, as well as the presence of other sexually transmitted infections (STIs). Unprotected sex is also a risk for the transmission of drug-resistant HIV (Readhead et al., 2012), and there is evidence to suggest that individuals who are less than optimally adherent are also more likely to engage in risky sexual behaviours (for example, Flaks, Burman, Gourley, Rietmeijer, & Cohn, 2003; Kalichman et al., 2011; Ndziessi et al., 2012; Wilson et al., 2002). Strategies to reduce sexual risk behaviour (and promote adherence) are necessary to support the effectiveness of ART for prevention. That sexual risk reduction with people on ARV treatment is not a focus in this setting is a missed opportunity for HIV prevention in the country that currently has the highest burden of HIV in the world.

It is significant that the implementation of Egan's (2002) model faces many of the same problems that affected the implementation of the *Options: WC* programme. It can be argued that the standard care programme for adherence counselling is not being implemented as intended, because counsellors are not delivering counselling in accordance with Egan's model as they are trained to do. Thus, like *Options: WC*, the coverage achieved by Egan's model is low and intervention fidelity and quality is poor. In the current absence of an evidence-based intervention that can be implemented effectively, counsellors should at least be delivering counselling for adherence support in accordance with Egan's model. It has been found in a meta-analytic review of the features that characterise effective juvenile offender interventions that "a well-implemented intervention of an inherently less efficacious type can outperform a more efficacious one that is poorly implemented" (Lipsey, 2009, p. 127).

Findings of this thesis have implications for the re-structuring of the primary healthcare system that is currently underway. The revised model of primary healthcare delivery involves a move away from specialist lay counsellors who are associated with particular programmes (for example, HCT, TB or ARV treatment) towards generalist lay counsellors. In the proposed model, one lay counsellor per clinic is envisioned. This counsellor is responsible for pre- and post-HIV test counselling, treatment adherence support for HIV, TB and other chronic diseases, and post-trauma counselling (NDoH, 2010b). Cost-effectiveness and the need for the integration of services are strong reasons for broadening the roles of LHWs. The quality of service provided by LHWs is believed to be compromised by excess workload and diversification however (Philips et al., 2008). Findings from this thesis provide evidence for the negative impact of high patient loads

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on quality of counselling. ARV adherence counsellors interviewed in Study II reported being overwhelmed by their current patient loads which consisted of patients enrolled in the ART programme. The plan to have one clinic-based lay counsellor deliver counselling to HCT, ARV, TB and other chronic medication patients will substantially increase patient load. When pressed for time, counsellors found it preferable to deliver adherence support according to standard care practice. This practice was shown in Study III to be of poor quality in comparison to what was expected in terms of Egan's (2002) model. Arguably when time is short, lay counselling for treatment adherence is likely to take the form of information-giving and advice because this can be delivered in as few as three minutes. The apparent limited ability of counsellors to successfully switch between counselling models does not bode well for the plan to expand their role to include three different kinds of counselling (HCT, post-trauma and treatment adherence) in the restructuring of the primary healthcare system. Findings from this thesis also suggest that the higher the counsellor's patient load, the less time they have to spend with each patient, the less likely it is that the counselling service is being delivered as intended.

The need for expanding the role of lay counsellors must be balanced with the need for effective service delivery. So far the attention paid to ensuring the quality of the counselling programme for adherence support has been inadequate. Strategies for supporting the implementation of the lay counselling programme must be developed and implemented alongside the revision of the lay counsellor's role - this includes the development of strategies for ensuring and maintaining delivery as intended and quality care. The restructuring the primary healthcare system offers the opportunity for strategies aimed at strengthening the clinic-based lay counselling programme to be implemented. The revision of this programme must acknowledge the weaknesses in the current programme so that these are not perpetuated.

A number of options for improving adherence counselling practice can be suggested on the basis of findings from this thesis. These recommendations for practice and future research are presented below.

Recommendations for practice

In the view of the author, the option which holds the most promise for efficiently achieving the most benefit relates to **training and technical support**; this is the development and implementation of a programme for supervision that is focused specifically on counselling communication skills, problem- and case-management. This programme could be standardised across NGOs and delivery could be monitored to

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ensure that it is delivered as intended.

At the level of the **innovation**, a second option may be to adapt counselling training to include a focus on time-limited counselling. This would increase compatibility between the intervention (that is, adherence counselling) and the organisational context. Counsellors could be taught how to deliver Egan's (2002) model (for example) in as few as 10 minutes. The current strategy to train counsellors to deliver Egan's model in 20 to 30 minute sessions does not reflect the reality of clinic-based counselling, and appears to be ineffective in preparing counsellors for practice. Any action taken in this regard could relatively easily be accompanied by the development and dissemination of a prescribed format for adherence counselling to support delivery as intended.

In terms of ensuring that **providers** acquire and maintain sufficient skills, the adherence counselling programme may benefit from the implementation of a performance management programme. Currently lay counsellors' counselling practice is not monitored. Counsellors' performance in sessions with patients could be observed and assessed at specified intervals. This might be included as part of supervision. Such a programme should be accompanied by one or more strategies for addressing deficiencies in performance.

To improve **organisational capacity** for counselling programmes intended to achieve behaviour change, the feasibility of a referral system for follow-up counselling could be investigated. Not only is follow-up important in terms of monitoring and encouraging patient progress, but the chance to see the effect of their work could have a positive effect on lay counsellors' motivation and sense of self-efficacy.

Attempts to strengthen in-session counselling practice would also ideally be accompanied by efforts to ensure that basic requirements for counselling practice are provided. Most importantly this relates to the provision of dedicated counselling space.

In terms of programme management, accurate data regarding the number of patients seen by counsellors for different types of counselling should be collected. This is particularly important in light of the expansion of the clinic-based counsellors' role to include HCT, TB, ARV and other medication treatment adherence as well as post-trauma counselling. This data could provide the first indication that the quality of counselling being delivered may be negatively impacted by patient load. Strategies to address this challenge to quality service delivery may then be developed and tested. Related to this is the suggestion decisions regarding the role of the clinic-based lay counsellor be made with the recognition that individuals with limited counselling training and technical

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support will have limited ability to successfully deliver counselling strategies and techniques in practice settings.

Recommendations for future research

Decision-makers need information about which strategies work best to improve health services (Peters et al., 2009). In terms of strengthening the standard care programme for adherence support, the implementation of strategies aimed at enhancing and maintaining the quality of service delivered should be accompanied by monitoring and evaluation activities to determine effectiveness. The author's recommendations for future research are largely at the level of the **innovation**. Investigations into the feasibility and effectiveness of other brief counselling interventions for adherence support could inform decisions around what kind of interventions might be appropriate for this setting. It has been suggested that interventions focusing on increasing information, motivation and behavioral skills can help individuals to overcome barriers to adherence that are within their control (this would apply to other client-centered counseling approaches as well), but that attempts to reduce structural barriers are also essential for preventing non-adherence (Tuller et al., 2009). Various structural barriers have been found to affect patients' ability to adhere to ARV treatment. In the Western Cape these include, among others, barriers related to stigma, hostile clinic staff resulting in clinic non-attendance, transport difficulties, patient waiting times, food insecurity, migration, difficulty in obtaining letters of transfer, and the scarcity of substance abuse rehabilitation programmes (Kagee, 2009). A needs assessment to determine the prevalence of structural and individual level barriers to adherence would be of value in determining what form interventions for adherence support should take.

In determining the effectiveness of interventions for supporting treatment adherence (and reducing sexual risk behaviour), evaluations should ideally include other measures that can be used to determine the feasibility of a programme for practice. These include:

- The delivery of individual components of interventions – results from the evaluation of *Options: WC* indicate that some intervention components are harder to transfer into practice than others. Assessment of particular components in relation to outcomes would also be of use. Knowing which components are required to produce positive outcomes is of value when adapting interventions, and when judging the effect of adaptation that occurs on the ground by providers.
- Dosage effects - in settings such as primary healthcare clinics where it can be

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difficult to retain patients in a programme, it is important to know how much of an intervention needs to be delivered before a positive effect is shown.

At the level of the **provider**, future research could investigate the characteristics of LHWs (for example self-efficacy and motivation) in relation to programme implementation and counseling performance. Potentially the findings from such work could be used to inform employment and training practice.

In this thesis it is argued that **patient characteristics** are an important addition to Durlak and DuPre's (2008) model for understanding the implementation of interventions in this setting. Future research could expand on what has been learnt in this regard from the *Options: WC* project by investigating patient characteristics and how these may influence the uptake of interventions.

Finally, and at the level of the **organisation**, monitoring and evaluation activities could focus on the impact of planned changes to LHWs roles and practices on the quality of service delivery.

In conclusion, the activities that were intended to put the *Options: WC* programme into practice failed to achieve successful implementation. The evaluation of *Options: WC* revealed the poor capacity of the standard care programme for adherence counselling to accommodate an intervention like *Options*. In addition, primary healthcare ARV clinics appear to have poor capacity to accommodate the standard care programme for adherence counselling. It is unclear how effective what is being delivered as standard care counselling for adherence support is likely to be.

This is of concern because adherence is one of the most important predictors of treatment effectiveness; non-adherence to ART can result in treatment failure and the development of drug resistance (Arts & Hazuda, 2012). Effective adherence support is thus a critical component of ART programmes. Addressing sexual risk behaviour among people on treatment should also be a primary component of treatment support programmes. Large-scale ART programmes have the potential to reduce HIV incidence because successful treatment reduces the risk of new HIV transmission through unprotected sex (Wilson et al., 2008). One threat to the potential efficacy of treatment for prevention however is unprotected sex among people on treatment. The presence of other STIs can increase infectivity in spite of optimal adherence (Kalichman et al., 2011), and the sexual transmission of drug resistant HIV has the potential to compromise ART at a population level (Readhead et al., 2012). Further efforts to strengthen the counselling programme for adherence support in the Western Cape (and in other South African

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provinces) are thus needed, and these should include attempts to integrate sexual risk reduction and HIV care.

It is generally recommended that new programmes are to some extent adaptable so that community fit and contextualisation may be achieved (for example Durlak & DuPre, 2008; Kalichman et al., 2010). This thesis suggests the concomitant need for settings to adapt to accommodate new programmes as well. With regard to the counselling programme for adherence support, structural interventions aimed at addressing the barriers to counselling for treatment adherence are required before any counselling intervention for behaviour change is likely to be implemented successfully. In general, the implementation of LHW programmes needs to take place within the context of broader health systems strengthening efforts in which attention to requirements for the delivery of a good quality service are addressed. LHWs programmes are a significant investment and an integral part of the South African primary healthcare system. LHWs need to be adequately supported to realise their potential for contributing to improved health outcomes among those most vulnerable to negative health outcomes.

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APPENDIX A

Appendix A: The *Options* Record Form (ORF)

Date: _____	OPTIONS FOR HEALTH Patient Record Form										
Client Name: _____ Counsellor Name: _____											
A. PATIENT PROGRESS ON PREVIOUS GOAL											
N/A: Today is first Options visit	No Action Plan made at last visit	No progress on Action Plan	Partially achieved Action Plan	Fully achieved Action Plan							
Previous Action Plan: _____											
Barriers to Achieving this Action Plan: _____											
FOR SEXUAL RISK BEHAVIOUR											
B. RISK BEHAVIOUR: _____											
C. WHY IS SAFE BEHAVIOUR CHALLENGING? <i>(e.g. client has not disclosed to partner/ partner refuses to use condoms)</i>											

FOR ARV NON-ADHERENCE											
D. NON-ADHERENT BEHAVIOUR: _____											
E. WHY IS ADHERENCE CHALLENGING? _____											

FOR ALL CLIENTS											
F. BEHAVIOUR FOR WHICH IMPORTANCE AND CONFIDENCE WERE RATED: <i>(Be specific)</i> _____											

G. IMPORTANCE SCORE											
0	1	2	3	4	5	6	7	8	9	10	Didn't have client rate IMPORTANCE
Not At All Important					Somewhat Important					Extremely Important	
H. CONFIDENCE SCORE											
0	1	2	3	4	5	6	7	8	9	10	Didn't have client rate CONFIDENCE
Not At All Confident					Somewhat Confident					Extremely Confident	
I. ACTION PLAN THAT CLIENT AGREED TO FOR NEXT VISIT:											

J. WAS AN "ACTION PLAN" HANDED TO THE PATIENT? YES NO											
K. COMMENTS: _____											

APPENDIX B**Appendix B: Study consent form for patients****Audio-Recording of Counselling Sessions: Consent form for Patients [English]****Consent for Audio-Recording Counselling Session**

I have been asked to let my counsellor tape-record my counselling session. My counsellor has told me that this is being done for a study that is happening in this clinic and that the recordings that are made will help counsellors in their work.

I understand that, if I agree:

- The recording will be anonymous. This means that **my name will not be on the recording in any way**; there will be no way for anyone to know who took part in the counselling session.
- The recording will be confidential. This means that **no one at the clinic will be allowed to listen to the tape**. The only person who will listen to the tape will be the study fieldworker. The reason for this is that the fieldworker must type out the session to give to people on the research team.
- I can ask the counsellor to turn the tape recorder off at **any time** if I want to, even if I have agreed to have my session recorded, my care at the clinic will not be affected and nothing bad will happen to me.

Signature:

Date:

Counsellor signature:

Date:

APPENDIX C

Appendix C: Coding sheet for evaluating fidelity to the 8-step *Options* counselling protocol

8 STEP EVALUATION			
Step	Item	Response Options	Rating guide
1	Did the counselor introduce the discussion and ask permission to talk about sex or non-adherence to ARVs?	0 = no; 1 = yes	Comment on whether the counsellor introduced the discussion AND asked permission
2	Did the counselor assess the patients sexual risk/non-adherent behaviour (that is, determine the specific behaviour and the conditions under which it occurs)?	0 = no; 1 = yes	Comment on whether the counsellor determined the risk behaviour AND the context
3	3.1	Did the counselor assess Importance in relation to either practising safer sexual behaviour or adherence to ARVs?	0 = no; 1 = yes
	Quality of assessment	How well was the assessment conducted?	0 = poor; 1 = acceptable; 2 = very good
	3.2	Did the counsellor assess confidence in relation to either changing their sexual risk behaviour or their adherence to ARVs?	0 = no; 1 = yes
	Quality of assessment	How well was the assessment conducted?	0 = poor; 1 = acceptable; 2 = very good
4	Based on the patients' response and the Options algorithm[1], did the counselor focus on the appropriate construct (either [1] The algorithm is used in deciding whether to focus on ▪ If both are rated as 9 or 10, explore any barriers to change ▪ If Importance is less than 7, explore Importance ▪ If Importance is greater than or equal to 7, focus on Confidence	0 = no; 1 = yes	
5	Focusing on either Importance or Confidence, did the counselor identify barriers to either consistently practicing safer sexual behaviour or consistently adhering to their ARV treatment regimen? That is:		
	5.1	Did the counsellor go down the ladder? ("you gave yourself a 3, why not a 2 or a 1?")	0 = no; 1 = yes
	5.2	Did the counsellor go up the ladder? ("what needs to happen for you to move from a 3 to 5 or 6?")	0 = no; 1 = yes
Clients barrier		What is the barrier to optimal adherence/consistent safer sexual practice? Importance/Confidence	Description; (Score/Score)
6	6.1	Did the counselor facilitate a discussion around strategies to help the client change their behaviour?	0 = no; 1 = yes
	6.2	How many strategies were offered by the counsellor?	Enter number
	6.3	What strategies were offered?	Describe strategies
7	7.1	Was an action plan for changing behaviour created?	0 = no; 1 = yes
	7.2	Is the plan related to the barrier such that a change in behaviour could occur?	0 = no; 1 = yes
			Low importance: plan should relate to (and be aimed at increasing) information OR motivation. Low confidence: plan should relate to (and be aimed at increasing) behavioural skills OR motivation.

APPENDIX D

**Appendix D: Outline of the two-day *Options* refresher training programme held in
October 2009**

DAY 1 Programme and Activities	
08h30 – 09h15	Feedback <ul style="list-style-type: none"> • Successes • Problem areas
09h15 – 09h30	<ul style="list-style-type: none"> • Recap the 8 steps
09h30 – 09h50	<ul style="list-style-type: none"> • The importance of focus • Unpacking the 8-step format • Role-play by facilitators
09h50 – 10h30	Options Step 3 <ul style="list-style-type: none"> • Importance and Confidence ladders <ul style="list-style-type: none"> ○ Making sure you understand the difference ○ Specifically what are you rating? ○ Test your skill with cases • Short role-play by counsellors <ul style="list-style-type: none"> ○ Scenarios ○ Individual feedback by small group facilitator ○ Group discussion
10h30 – 10h45	Tea
10h45 – 11h00	Options Step 4 <ul style="list-style-type: none"> • Deciding whether to focus on Importance or Confidence • Cases for discussion <ul style="list-style-type: none"> ○ Individual feedback by small group facilitator ○ Group discussion
11h00 – 11h30	Options Step 5 <ul style="list-style-type: none"> • Identifying the barrier • Role-play by counsellors <ul style="list-style-type: none"> ○ Scenarios ○ Individual feedback by small group facilitator ○ Group discussion
11h30 – 12h30	Options Step 6 <ul style="list-style-type: none"> • Creating a menu of strategies <ul style="list-style-type: none"> ○ Realistic options ○ Brainwalking exercise • Role-play by counsellors <ul style="list-style-type: none"> ○ Scenarios ○ Individual feedback by small group facilitator • Group discussion
12h30 – 13h00	Lunch
13h00 – 13h15	Options Step 7 <ul style="list-style-type: none"> • Negotiate a plan of action
13h15 – 13h45	Options Step 8 <ul style="list-style-type: none"> • Completing the Options Record Form <ul style="list-style-type: none"> ○ Test your skill with cases
13h45 – 14h30	Options First Session <ul style="list-style-type: none"> • Putting it all together <ul style="list-style-type: none"> ○ Role-plays by counsellors for evaluation
14h30 – 14h45	Tea
14h45 – 16h00	Options First Session Continued <ul style="list-style-type: none"> • Putting it all together <ul style="list-style-type: none"> ○ Role-plays by counsellors for evaluation

APPENDIX D

	HOMEWORK Read through format for First Options Session (Safer sex)
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DAY 2 Programme and Activities	
08h30 – 10h30	Options First Session Continued <ul style="list-style-type: none"> • Putting it all together <ul style="list-style-type: none"> ○ Role-plays by counsellors for evaluation
10h30 – 10h45	Tea
10h45 – 11h15	Options Follow-up Session <ul style="list-style-type: none"> • Unpacking the format <ul style="list-style-type: none"> ○ Fully completed action plan ○ Partly completed action plan ○ Baby steps towards a bigger action plan • Role-play by facilitators
11h15 – 11h40	Has your client achieved the action plan? <ul style="list-style-type: none"> • Cases for discussion <ul style="list-style-type: none"> ○ Individual feedback by small group facilitator ○ Group discussion
11h40 – 12h00	Options Step 8 <ul style="list-style-type: none"> • Completing the Options Record Form <ul style="list-style-type: none"> ○ Test your skill with cases
12h00 – 12h30	Conducting an Options Follow-up Session <ul style="list-style-type: none"> • Role-plays by counsellors for evaluation
12h30 – 13h00	Lunch
13h00 – 14h30	Conducting an Options Follow-up Session continued
14h30 – 14h45	Tea
14h45 – 15h45	Case management
15h45 – 16h00	Evaluation of course by counsellors

APPENDIX E**Appendix E: Facilitators guide for monthly *Options* supervision sessions**Session 1: March 2012

- Welcome and brief update by counsellors regarding their experiences using Options
- Brief feedback on Options to date
 - Successes
 - Concerns
- Counsellors' and facilitator's expectations of the mentoring sessions
- Recap of MI principles – drawn from the MITI
- Recap of Options 8 steps – using the Options Format for increasing adherence
- Integrating MI principles and Options 8 steps
 - Written homework assignment - evaluating a mock up transcript of an Options session – to increase understanding of using the Options format and applying MI principles

Session 2: April 2010

- Review of homework
- Quick recap of MI principles and 8 Steps
- Skills building
 - Fishbowl role-plays with facilitator as client to drill the skills and foster experiential learning
 - Self evaluation by Counsellors based on the 8 steps and MITI
 - Feedback by facilitator
- Homework
 - Counsellors to evaluate one of their own sessions in the clinic – evaluation criteria will include both the 8 steps and principles of MI based on MITI

Sessions 3 & 4

- Review of homework
- Individual role-plays by counsellors for evaluation and feedback by facilitators