



**Kate Hall**  
Tania Gibbie  
Dan I Lubman

# Motivational interviewing techniques

## Facilitating behaviour change in the general practice setting

### Background

One of the biggest challenges that primary care practitioners face is helping people change longstanding behaviours that pose significant health risks.

### Objective

To explore current understanding regarding how and why people change, and the potential role of motivational interviewing in facilitating behaviour change in the general practice setting.

### Discussion

Research into health related behaviour change highlights the importance of motivation, ambivalence and resistance. Motivational interviewing is a counselling method that involves enhancing a patient's motivation to change by means of four guiding principles, represented by the acronym RULE: Resist the righting reflex; Understand the patient's own motivations; Listen with empathy; and Empower the patient. Recent meta-analyses show that motivational interviewing is effective for decreasing alcohol and drug use in adults and adolescents and evidence is accumulating in others areas of health including smoking cessation, reducing sexual risk behaviours, improving adherence to treatment and medication and diabetes management.

### Keywords

communication; doctor-patient relations; patient centred care; psychotherapy, brief; motivation



One of the biggest challenges that primary care practitioners face is helping people change longstanding behaviours that pose significant health risks. When patients receive compelling advice to adopt a healthier lifestyle by cutting back or ceasing harmful behaviours (eg. smoking, overeating, heavy drinking) or adopting healthy or safe behaviours (eg. taking medication as prescribed, eating more fresh fruit and vegetables), it can be frustrating and bewildering when this advice is ignored or contested. A natural response for a practitioner who encounters such opposition (termed 'resistance' in the psychological literature) is to reiterate health advice with greater authority or to adopt a more coercive style in order to educate the patient about the imminent health risks if they don't change. When these strategies don't succeed, the practitioner may characterise the patient as 'unmotivated' or 'lacking insight'. However, research around behaviour change shows that motivation is a dynamic state that can be influenced, and that it fluctuates in response to a practitioner's style. Importantly, an authoritative or paternalistic therapeutic style may in fact deter change by increasing resistance.<sup>1</sup>

### The Stages of Change model and motivational interviewing

Prochaska and DiClemente<sup>2</sup> proposed readiness for change as a vital mediator of behavioural change. Their transtheoretical model of behaviour change (the 'Stages of Change') describes readiness to change as a dynamic process, in which the pros and cons of changing generates ambivalence. Ambivalence is a conflicted state where opposing attitudes or feelings coexist in an individual; they are stuck between simultaneously wanting to change and not wanting to change. Ambivalence is particularly evident in situations where there is conflict between an immediate reward and longer term adverse consequences (eg. substance abuse, weight management). For example, the patient who presents with serious health problems as a result of heavy drinking, who shows genuine concern about the impact of alcohol on his health, and in spite of advice from his practitioner to cut back his drinking, continues to drink at harmful levels, embodies this phenomenon.



The Prochaska and DiClemente Stages of Change model<sup>12</sup> offers a conceptual framework for understanding the incremental processes that people pass through as they change a particular behaviour. This change process is modelled in five parts as a progression from an initial precontemplative stage, where the individual is not considering change; to a contemplative stage, where the individual is actively ambivalent about change; to preparation, where the individual begins to plan and commit to change. Successful progression through these stages leads to action, where the necessary steps to achieve change are undertaken. If successful, action leads to the final stage, maintenance, where the person works to maintain and sustain long term change.<sup>3</sup> Relapse is considered an important stage in the change process and is used as an opportunity to learn about sustaining maintenance in the future.

Motivational interviewing (MI) is an effective counselling method that enhances motivation through the resolution of ambivalence. It grew out of the Prochaska and DiClemente model described above<sup>2</sup> and Miller and Rollnick's<sup>1</sup> work in the field of addiction medicine, which drew on the phrase 'ready, willing and able' to outline three critical components of motivation. These were:<sup>1</sup>

- the importance of change for the patient (willingness)
- the confidence to change (ability)
- whether change is an immediate priority (readiness).

Using MI techniques, the practitioner can tailor motivational strategies to the individual's stage of change according to the Prochaska and DiClemente model (Table 1).<sup>1,2</sup>

## Applications and effectiveness of motivational interviewing

Recent meta-analyses show that MI is equivalent to or better than other treatments such as cognitive behavioural therapy (CBT) or pharmacotherapy, and superior to placebo and nontreatment controls for decreasing alcohol and drug use in adults<sup>4-6</sup> and adolescents.<sup>7</sup> Motivational interviewing has also been shown to be efficacious in a number of other health conditions, such as smoking cessation,<sup>8</sup> reducing sexual risk behaviours,<sup>9-11</sup> improving adherence to treatment and medication,<sup>12</sup> as well as diabetes management.<sup>13</sup> In addition, studies support the applicability of MI to HIV care, such as improving adherence to antiretroviral therapy<sup>14,15</sup> and the reduction of substance use among HIV positive men and women.<sup>15</sup> As such, MI is an important therapeutic technique that has wide applicability within healthcare settings in motivating people to change. In general practice, possible applications include:

- medication adherence
- management of the SNAP (smoking, nutrition, alcohol and physical activity)<sup>16</sup> risk factors
- engagement in prevention or management programs for diabetes or cardiovascular health
- management of substance abuse problems
- management of problem gambling or sexual risk taking
- pain management

**Table 1. Practitioner tasks within the Stages of Change model<sup>1,2</sup>**

Patient stage	Practitioner tasks
Precontemplation (Not ready)	Raise doubt and increase the patient's perception of the risks and problems with their current behaviour. Provide harm reduction strategies
Contemplation (Getting ready)	Weigh up the pros and cons of change with the patient and work on helping them tip the balance by: <ul style="list-style-type: none"> <li>• exploring ambivalence and alternatives</li> <li>• identifying reasons for change/risks of not changing</li> <li>• increasing the patient's confidence in their ability to change</li> </ul>
Preparation – action (Ready)	Clear goal setting – help the patient to develop a realistic plan for making a change and to take steps toward change
Maintenance (Sticking to it)	Help the patient to identify and use strategies to prevent relapse
Relapse* (Learning)	Help the patient renew the processes of contemplation and action without becoming stuck or demoralised
* Relapse is normalised in MI and is used as an opportunity to learn about how to maintain long term behaviour change in the future	

- stress management
- completion of recommended screening or diagnostic tests or specialist/allied health/psychologist referral.

## The spirit of motivational interviewing

Motivational interviewing is underpinned by a series of principles that emphasise a collaborative therapeutic relationship in which the autonomy of the patient is respected and the patient's intrinsic resources for change are elicited by the therapist. Within MI, the therapist is viewed as a facilitator rather than expert, who adopts a nonconfrontational approach to guide the patient toward change. The overall spirit of MI has been described as collaborative, evocative and honouring of patient autonomy.<sup>1</sup> Miller and Rollnick<sup>1</sup> have commented that the use of MI strategies in the absence of the spirit of MI is ineffective. Although paradoxical, the MI approach is effective at engaging apparently 'unmotivated' individuals and when considered in the context of standard practice can be a powerful engagement strategy (Case study, Table 2).



## Case study – using the spirit of motivational interviewing

A male patient, 52 years of age, who drinks heavily and has expressed the desire to reduce drinking, but continues to drink heavily.

It is easy to conclude that this patient lacks motivation, his judgment is impaired or he simply does not understand the effects of alcohol on his health. These conclusions may naturally lead the practitioner to adopt a paternalistic therapeutic style and warn the patient of the risks to his health. In subsequent consultations, when these strategies don't work, it is easy to give up hope that he will change his drinking, characterise him as 'unmotivated' and drop the subject altogether. In MI, the opposite approach is taken, where the patient's motivation is targeted by the practitioner. Using the spirit of MI, the practitioner avoids an authoritarian stance, and respects the autonomy of the patient by accepting he has the responsibility to change his drinking – or not. Motivational interviewing emphasises eliciting reasons for change from the patient, rather than advising them of the reasons why they should change their drinking. What concerns does he have about the effects of his drinking? What future goals or personal values are impacted by his drinking? The apparent 'lack of motivation' evident in the patient would be constructed as 'unresolved ambivalence' within an MI framework. The practitioner would therefore work on understanding this ambivalence, by exploring the pros and cons of continuing to drink alcohol. They would then work on resolving this ambivalence, by connecting the things the patient cares about with motivation for change. For example, drinking may impact the patient's values about being a loving partner and father or being healthy and strong. A discussion of how continuing to drink (maintaining the status quo) will impact his future goals to travel in retirement or have a good relationship with his children may be the focus. The practitioner would emphasise that the decision to change is 'up to him', however they would work with the patient to increase his confidence that he can change (self efficacy).

## Motivational interviewing in practice

The practical application of MI occurs in two phases: building motivation to change, and strengthening commitment to change.

### Building motivation to change

In Phase I, four early methods represented by the acronym OARS (Table 3) constitute the basic skills of MI. These basic counselling techniques assist in building rapport and establishing a therapeutic relationship that is consistent with the spirit of MI.

### Strengthening commitment to change

This involves goal setting and negotiating a 'change plan of action'. In the absence of a goal directed approach, the application of the strategies or spirit of MI can result in the maintenance of ambivalence, where patients and practitioners remain stuck. This trap can be avoided by employing strategies to elicit 'change talk'.<sup>1</sup> There are many strategies to elicit 'change talk', but the simplest and most direct way is to elicit a patient's intention to change by asking a series of targeted questions from the following four categories:

- disadvantages of the status quo
- advantages of change
- optimism for change
- and intention to change (Table 4).

Alternatively, if a practitioner is time poor, a quick method of drawing out 'change talk' is to use an 'importance ruler'.

Example: 'If you can think of a scale from zero to 10 of how important it is for you to lose weight. On this scale, zero is not important at all and 10 is extremely important. Where would you be on this scale? Why are you at \_\_\_\_ and not zero? What would it take for you to go from \_\_\_\_ to (a higher number)?'

This technique identifies the discrepancy for a patient between their current situation and where they would like to be. Highlighting this discrepancy is at the core of motivating people to change. This can be followed by asking the patient to elaborate further on this discrepancy and then succinctly summarising this discrepancy and reflecting it back to the patient. Next, it is important to build the

**Table 2. The spirit of motivational interviewing vs an authoritative or paternalistic therapeutic style**

The spirit of motivational interviewing	Authoritative or paternalistic therapeutic style
Collaboration: a partnership between the patient and practitioner is formed. Joint decision making occurs. The practitioner acknowledges the patient's expertise about themselves	Confrontation: the practitioner assumes the patient has an impaired perspective and consequently imposes the need for 'insight'. The practitioner tries to persuade and coerce a patient to change
Evocation: the practitioner activates the patient's own motivation for change by evoking their reasons for change. The practitioner connects health behaviour change to the things the patient cares about	Education: the patient is presumed to lack the insight, knowledge or skills required to change. The practitioner tells the patient what to do
Honouring a patient's autonomy: although the practitioner informs and advises their patient, they acknowledge the patient's right and freedom not to change. 'It's up to you'	Authority: the practitioner instructs the patient to make changes
Adapted from Miller and Rollnick, 2002	



<b>Table 3. OARS: The basic skills of motivational interviewing</b>	
<p><b>Ask Open-ended questions*</b></p> <ul style="list-style-type: none"> <li>• The patient does most of the talking</li> <li>• Gives the practitioner the opportunity to learn more about what the patient cares about (eg. their values and goals)</li> </ul>	<p><b>Example</b></p> <p>I understand you have some concerns about your drinking. Can you tell me about them?</p> <p><b>Versus</b></p> <p>Are you concerned about your drinking?</p>
<p><b>Make Affirmations</b></p> <ul style="list-style-type: none"> <li>• Can take the form of compliments or statements of appreciation and understanding</li> <li>• Helps build rapport and validate and support the patient during the process of change</li> <li>• Most effective when the patient's strengths and efforts for change are noticed and affirmed</li> </ul>	<p><b>Example</b></p> <p>I appreciate that it took a lot of courage for you to discuss your drinking with me today</p> <p>You appear to have a lot of resourcefulness to have coped with these difficulties for the past few years</p> <p>Thank you for hanging in there with me. I appreciate this is not easy for you to hear</p>
<p><b>Use Reflections*</b></p> <ul style="list-style-type: none"> <li>• Involves rephrasing a statement to capture the implicit meaning and feeling of a patient's statement</li> <li>• Encourages continual personal exploration and helps people understand their motivations more fully</li> <li>• Can be used to amplify or reinforce desire for change</li> </ul>	<p><b>Example</b></p> <p>You enjoy the effects of alcohol in terms of how it helps you unwind after a stressful day at work and helps you interact with friends without being too self-conscious. But you are beginning to worry about the impact drinking is having on your health. In fact, until recently you weren't too worried about how much you drank because you thought you had it under control. Then you found out your health has been affected and your partner said a few things that have made you doubt that alcohol is helping you at all</p>
<p><b>Use Summarising</b></p> <ul style="list-style-type: none"> <li>• Links discussions and 'checks in' with the patient</li> <li>• Ensure mutual understanding of the discussion so far</li> <li>• Point out discrepancies between the person's current situation and future goals</li> <li>• Demonstrates listening and understand the patient's perspective</li> </ul>	<p><b>Example</b></p> <p>If it is okay with you, just let me check that I understand everything that we've been discussing so far. You have been worrying about how much you've been drinking in recent months because you recognise that you have experienced some health issues associated with your alcohol intake, and you've had some feedback from your partner that she isn't happy with how much you're drinking. But the few times you've tried to stop drinking have not been easy, and you are worried that you can't stop. How am I doing?</p>
<p>* A general rule-of-thumb in MI practice is to ask an open-ended question, followed by 2–3 reflections</p>	

patient's confidence in their ability to change. This involves focusing on the patient's strengths and past experiences of success. Again, a 'confidence ruler' could be employed if a practitioner is time poor.

Example: 'If you can think of a scale from zero to 10 of how confident you are that you can cut back the amount you are drinking. On this scale, zero is not confident at all and 10 is extremely confident. Where would you be on this scale? Why are you at \_\_\_\_ and not zero? What would it take for you to go from \_\_\_\_ to (a higher number)?'

Finally, decide on a 'change plan' together. This involves standard goal setting techniques, using the spirit of MI as the guiding principle and eliciting from the patient what they plan to do (rather than instructing or advising). If a practitioner feels that the patient needs health advice at this point in order to set appropriate goals, it is customary to ask permission before giving advice as this honours the patient's autonomy. Examples of key questions to build a 'change plan' include:

- It sounds like things can't stay the same as they are. What do you think you might do?
- What changes were you thinking about making?

- Where do we go from here?
- What do you want to do at this point?
- How would you like things to turn out?
- After reviewing all of this, what's the next step for you?

It is common for patients to ask for answers or 'quick fixes' during Phase II. In keeping with the spirit of MI, a simple phrase reminding the patient of their autonomy is useful, 'You are the expert on you, so I'm not sure I am the best person to judge what will work for you. But I can give you an idea of what the evidence shows us and what other people have done in your situation'.

### The guiding principles of motivational interviewing

In general practice, the particular difficulties associated with quick consultation times can present unique challenges in implementing MI. Miller and Rollnick<sup>17</sup> have attempted to simplify the practice of MI for health care settings by developing four guiding principles, represented by the acronym RULE:





<b>Change talk</b>	<b>Questions to elicit change talk</b>	<b>Example of patient's change talk</b>
Disadvantages of the status quo	<ul style="list-style-type: none"> <li>• What worries you about your blood pressure?</li> <li>• What difficulties have resulted from your drinking?</li> <li>• In what way does your weight concern you?</li> </ul>	'I guess, if I'm honest, if I keep drinking, I am worried my family are going to stop forgiving me for my behaviour'
Advantages of change	<ul style="list-style-type: none"> <li>• How would you like your health to be in 5 years time?</li> <li>• What are the advantages of reducing your drinking?</li> <li>• What would be different in your life if you lost weight?</li> </ul>	'If I lose weight, at least I won't have to wake up feeling guilty every morning that I am not taking care of myself'
Optimism for change	<ul style="list-style-type: none"> <li>• When have you made a significant change in your life before? How did you do it?</li> <li>• What strengths do you have that would help you make a change?</li> </ul>	'I did stop smoking a few years ago for a year and I felt so much healthier. It was really hard, but once I put my mind to something I usually stick at it'
Intention to change	<ul style="list-style-type: none"> <li>• In what ways do you want your life to be different in 5 years?</li> <li>• Forget how you would get there for a moment. If you could do anything, what would you change?</li> </ul>	'I never thought I would be living like this. I want to go back to being healthy and strong, with enough energy to enjoy my friends and family'. 'I want to manage my diabetes better'

- Resist the righting reflex
- Understand the patient's own motivations
- Listen with empathy
- Empower the patient.

### Resist the righting reflex

The righting reflex describes the tendency of health professionals to advise patients about the right path for good health. This can often have a paradoxical effect in practice, inadvertently reinforcing the argument to maintain the status quo. Essentially, most people resist persuasion when they are ambivalent about change and will respond by recalling their reasons for maintaining the behaviour. Motivational interviewing in practice requires clinicians to suppress the initial righting reflex so that they can explore the patient's motivations for change.

### Understand your patient's motivations

It is the patient's own reasons for change, rather than the practitioner's, that will ultimately result in behaviour change. By approaching a patient's interests, concerns and values with curiosity and openly exploring the patient's motivations for change, the practitioner will begin to get a better understanding of the patient's motivations and potential barriers to change.

### Listen with empathy

Effective listening skills are essential to understand what will motivate the patient, as well as the pros and cons of their situation. A general rule-of-thumb in MI is that equal amounts of time in a consultation should be spent listening and talking.

### Empower your patient

Patient outcomes improve when they are an active collaborator in their treatment.<sup>17</sup> Empowering patients involves exploring their own ideas about how they can make changes to improve their health and drawing on the patient's personal knowledge about what has succeeded in the past. A truly collaborative therapeutic relationship is a powerful motivator. Patients benefit from this relationship the most when the practitioner also embodies hope that change is possible.

RULE is a useful mnemonic to draw upon when implementing the spirit of MI in general practice. If a practitioner has more time, four additional principles (*Table 5*) can be applied within a longer therapeutic intervention.

### Barriers to implementing motivational interviewing in general practice

Barriers to implementing MI in general practice include time pressures, the professional development required in order to master MI, difficulty in adopting the spirit of MI when practitioners embody an expert role, patients' overwhelming desire for 'quick fix' options to health issues and the brevity of consultation times. These barriers to implementing MI in primary care represent significant cons on a decisional balance. On the other hand, the pros for adopting an MI approach with patients who are resistant to change are compelling. While we are not advocating MI for all patient interactions in general practice, we invite practitioners to explore their own ambivalence toward adopting MI within their practice, and consider whether they are 'willing, ready and able'. Practitioners who undertake MI training will have an additional therapeutic tool to draw upon when encountering patient resistance



**Table 5. Four further principles of motivational interviewing**

**Express empathy**

In practical terms, an empathic style of communication involves the use of reflective listening skills and accurate empathy, where the practitioner seeks to understand the patient’s perspective, thoughts and feelings without judging, criticising or blaming. Building empathy and understanding does not mean the practitioner condones the problematic behaviour. Instead, the practitioner seeks to create an open and respectful exchange with the patient, who they approach with genuine curiosity about their experiences, feelings and values

**Develop discrepancy**

Assisting patients to identify discrepancies between their current behaviour and future goals or values about themselves as a person, partner, parent, or worker is a powerful motivator that helps ‘tip the balance’ toward change. Exploring the pros and cons of change can help a patient develop discrepancy. These ‘decisional balance’ exercises are used effectively in MI to help patients tease apart their ambivalence and help the patient express their concerns about the behaviour

**Roll with resistance**

Often when a practitioner attempts to move a patient toward change too quickly because the risks of the behaviour are significant or they perceive that there are time pressures for change, they adopt a coercive or authoritative style. If the patient is ambivalent about change, this approach will commonly be met with resistance from the patient. Resistance takes many forms but most commonly can be described as interrupting or arguing with the practitioner, discounting the practitioner’s expertise, excusing their behaviour, minimising the effects of their behaviour, blaming other people for their behaviour, being pessimistic about their chances to change or being unwilling to change altogether. In MI, rolling with this resistance involves approaching resistance without judgement and interpreting these responses as a sign that the patient holds a different perspective to the practitioner. MI then uses strategies such as simple reflection of the resistance, emphasising the individual’s choice to change or not (‘it’s up to you’), shifting the focus of the discussion or simply reframing what the person has said, in order to roll with resistance and prevent resistance from affecting engagement

**Support self efficacy**

Many people with enduring behaviours that have negative impacts on their health have made their own attempts to change at some time or other and been unsuccessful. They may have attempted to cease smoking and only lasted a week, or tried to lose weight but been unable to sustain a diet. They may have attempted to comply with their medication several times in the past but found it difficult because of side effects or a complicated dosing regimen. By highlighting the patient’s strengths and reflecting on times in their life when they have successfully changed, even if just in one small area, self efficacy can be promoted. The practitioner’s belief in a patient’s ability to change is a powerful way to promote self efficacy. By promoting self efficacy, the practitioner can help the individual develop the confidence that they are capable of change

to change and a proven method for dealing with a number of common presentations within general practice.

**Resource**

For further information and online motivational interviewing training opportunities visit [www.motivationalinterview.org](http://www.motivationalinterview.org).

**Authors**

Kate Hall BA(Hons), DPsych(Clin), MAPS, is Senior Lecturer, Deakin University, Department of Psychology and senior clinical psychologist, Turning Point Alcohol and Drug Centre, Eastern Health, Melbourne, Victoria. [kateh@turningpoint.org.au](mailto:kateh@turningpoint.org.au)

Tania Gibbie BSc(Hons), MPsych(Health), PhD, is a health psychologist, Barwon Health, Geelong, Victoria

Dan I Lubman BSc(Hons), MBChB, PhD, FRANZCP, FACHAM, is Director and Professor of Addiction Studies, Turning Point Alcohol and Drug Centre, Eastern Health and Monash University, Melbourne, Victoria.

Conflict of interest: none declared.

**References**

1. Miller WR, Rollnick S. *Motivational Interviewing. Preparing people for change.* 2nd edn. New York: The Guilford Press, 2002.
2. Prochaska J, DiClemente C. Towards a comprehensive model of change. In: Miller WR, Heather N, editors. *Treating addictive behaviours: processes of change.* New York: Pergamon, 1986.
3. DiClemente CC, Velasquez M. Motivational interviewing and the stages of change. In: Miller WR, Rollnick S, editors. *Motivational interviewing, second edition: Preparing people for change.* New York: The Guilford Press, 2002.
4. Burke BL, Arkowitz H, Menchola M. The efficacy of motivational interviewing: a meta-analysis of controlled trials. *J Consult Clin Psychol* 2003;71:843–61.
5. Hettema J, Steele J, Miller WR. Motivational interviewing. *Ann Rev Clin Psychol* 2005;1:91–111.
6. Lundahl BW, Kunz C, Brownell C, Tollefson D, Burke BL. A meta-analysis of motivational interviewing: twenty-five years of empirical studies. *Res Soc Work Pract* 2010;20:137–60.
7. Jensen CD, Cushing CC, Aylward BS, Craig JT, Sorell DM, Steele RG. Effectiveness of motivational interviewing interventions for adolescent substance use behavior change: a meta-analytic review. *J Consult Clin Psychol* 2011;79:433–40.



8. Gray E, McCambridge J, Strang J. The effectiveness of motivational interviewing delivered by youth workers in reducing drinking, cigarette and cannabis smoking among young people: quasi-experimental pilot study. *Alcohol* 2005;40:535–9.
9. Fisher J, Fisher W, Cornman D, Amico R, Bryan A, Friedland G. Clinician-delivered intervention during routine clinical care reduces unprotected sexual behaviour among HIV-infected patients. *J Acquir Immune Defic Syndr* 2006;41:44–52.
10. Kuyper L, de Wit J, Heijman T, Fennema H, van Bergen J, Vanwesenbeeck I. Influencing risk behavior of sexually transmitted infection clinic visitors: Efficacy of a new methodology of motivational preventive counseling. *AIDS Patient Care STDs* 2009;23:423–31.
11. Naar-King S, Wright K, Parsons J, et al. Healthy choices: Motivational enhancement therapy for health risk behaviours in HIV-positive youth. *AIDS Educ Prev* 2006;18:1–11.
12. Swanson AJ, Pantalon MV, Cohen KR. Motivational interviewing and treatment adherence among psychiatric and dually diagnosed patients. *J Nerv Ment Dis* 1999;187:630–5.
13. West D, Dilillo V, Bursac Z, Gore SA, Greene PG. Motivational interviewing improves weight loss in women with type 2 diabetes. *Diabetes Care* 2007;30:1081–7.
14. Cooperman NA, Arnsten JH. Motivational interviewing for improving adherence to antiretroviral medications. *Curr HIV/AIDS Rep* 2005;2:159–64.
15. Parsons J, Rosof E, Punzalan JC, Di Maria L. Integration of motivational interviewing and cognitive behavioral therapy to improve HIV medication adherence and reduce substance use among HIV-positive men and women: results of a pilot project. *AIDS Patient Care STDs* 2005;19:31–9.
16. The Royal Australian College of General Practitioners. Available at [www.racgp.org.au/guidelines/snap](http://www.racgp.org.au/guidelines/snap) [Accessed August 2012].
17. Rollnick S, Miller WR, Butler CC. *Motivational interviewing in health care. Helping patients change behavior.* New York: The Guilford Press, 2008.