

# Behaviour change models and strategies for PWPs

## Introduction

Cognitive and behavioural therapies are appropriately the models on which much of PWP training and practice is based. Most low intensity psychological interventions recommended in NICE guidance for anxiety disorders and depression use a CBT model and approach. The self-help materials supporting these interventions explain problems in terms of CBT models and set out CBT strategies for change. The competencies required of PWPs to implement these interventions are accordingly a subset of the general CBT competency framework (Roth & Pilling 2007).

Although CBT is the central model and approach, there are aspects of PWP work that it does not cover. There are low intensity interventions carried out by PWPs which are not CBT-based. These include medication management, exercise, signposting to community resources and brief interventions for alcohol. As PWP roles are expanded into areas beyond anxiety disorders and depression, the range of low intensity interventions that are not based mainly on CBT is likely to further increase. In addition, the self-help aspect of low-intensity CBT-based interventions raises challenges for effective delivery. Effective self-help puts more responsibility and demands on the patient for carrying out the treatment than therapist delivered high-intensity CBT. Engaging and motivating people are accordingly central issues. While motivation is certainly addressed in the CBT literature and in practice, the factors involved in enhancing motivation are not a central part of the CBT model per se.

A higher order set of theories to CBT is behaviour change. Behaviour change theories and models set out the necessary and sufficient conditions for behaviour change and the associated empirical literature describes the interventions and behaviour change techniques that are effective. CBT draws on behaviour change theories and literature, but the scope and application of behaviour change is much wider. This paper describes key aspects of the behaviour change literature that are relevant to PWP work and focuses in particular on how one overarching model of behaviour change, the COM-B model (Michie et al 2011, Michie et al 2014), might inform PWPs practice.

## Behaviour change models and techniques

A number of models of behaviour change have been used to understand health behaviour and to design interventions for changing health behaviour. These include the self-regulatory / 'common sense' model, the theory of reasoned action/theory of planned behaviour, the health belief model, social learning theory and the transtheoretical stage model of readiness to change among many others (Michie et al 2014). Behaviour change approaches based on these have addressed help seeking, motivation for treatment and adherence to treatment among other areas. All of these models and associated behaviour change strategies could contribute to informing PWP

practice and some have already been used in this way. However each model explains only some aspects of health behaviour, there is overlap between models and, pragmatically, with the limited training and high caseloads of PWPs, it is not realistic for PWPs to learn and work with multiple models.

A model of behaviour and behaviour change developed to address the problems of lack of integration is the COM-B model (Michie et al 2011, Michie et al 2014). This sets out that behaviour comes about from an interaction of 'capability' to perform the behaviour and 'opportunity' and 'motivation' to carry out the behaviour. New behaviour or behaviour change requires a change in one or more of these. As COM-B is an overarching framework of behaviour, it can supplement the CBT model in PWP practice, both contributing to the implementation of CBT-based low intensity interventions and suggesting approaches for low intensity interventions not covered by the CBT model.

Behaviour change techniques are the specific components of interventions to change behaviour. Different behaviour change models may suggest that particular behaviour change techniques will be effective, but many specific techniques are common to many different models. Various classifications of behaviour change techniques have been proposed (Michie et al 2013) and there are literatures on the effectiveness of behaviour change techniques for a range of health behaviours and problems. Recommendations on effective behaviour change techniques have been issued by NICE in two sets of NICE public health guidance (NICE 2007, 2014). The key recommendations in these of relevance to PWPs are summarised in Annex 1 of this paper.

## COM-B model

The COM-B model sets out that to change behaviour one needs to change one or more of 'capability' to perform the behaviour and/or 'opportunity' and 'motivation' to carry out the behaviour. Translating this to PWP work, the key elements are:

- Behaviour: Behaviour change involves doing something new or differently. In setting goals for treatment, patient and PWP set out the new behaviour desired by the patient. Ideally this is explicit (SMART goals), but if not the new behaviour desired is at least implicit. COM-B analysis in PWP treatment applies to these desired behaviours/goals. In addition, during the course of treatment, a number of tasks and specific homework targets are set (e.g. reading a section of a booklet, self-monitoring, a behavioural practice task, attending a further phone follow-up session, etc) each of which is a new behaviour. The extent to which the patient carries out these behaviours necessary for successful self-help treatment will also be a product of capability, opportunity and motivation and hence analysable by COM-B model.
- Capability: People may lack knowledge and/or skills to change behaviour. Coming to a new understanding of problems, of what maintains problems and of self-help approaches to dealing with problems, can change behaviour; learning skills in self-help/self-management approaches can also lead to new behaviour. These are the essence of self-help approaches informed by CBT principles and,

in this respect, CBT based self help primarily targets capability. Capability may also be affected by impairments in reasoning or executive functioning, including through concentration and memory difficulties in depression. Amelioration of impairments in cognitive capacity (for example through antidepressant medication in severe depression) can make change possible.

- Opportunity: Social, interpersonal and physical environment factors in peoples' lives (all sorts of chronic adverse circumstances) maintain problems and make behaviour change difficult. At a practical level, they can also make it difficult to attend appointments and carry out self-help homework tasks. Changes/improvements in adverse circumstances can lead to change in behaviour and amelioration of problems. Positive social environments and social support can encourage and support people in making changes
- Motivation: People may not consider it worth spending effort to change, they may not believe change is possible or believe that it might be possible but not with self-help. Self-help can require carrying out tasks (exposure, behavioural activation) in face of powerful avoidance motivational processes acting against change. Alcohol and drugs are powerful motivators that can interfere with attempts to change behaviour

The COM-B model can be used at assessment to identify goals (what is the best target for change) and what type of intervention is likely to be most effective (Michie et al 2014) and during course of implementing an intervention. How a COM-B analysis can assist PWPs at each of these two phases is now outlined

## Assessment: using COM-B to identify goals and interventions

The COM-B model is especially useful in helping with identifying goals and deciding on an appropriate low intensity intervention. Which of capability, opportunity or motivation are most relevant for a target of behaviour change and which of these might present major obstacles to change? For example, when people with anxiety disorders and depression have major adverse social circumstances (opportunity) or significant drug or alcohol problems (motivation), a COM-B analysis would suggest that goals involving direct change in anxiety/depression related behaviours and cognitions even with the most effective CBT based self help approaches (which primarily target improving capability) are unlikely to be effective without addressing these other issues first. This is in accord with common clinical wisdom. The potential contribution of the COM-B model is that it can support clinical decision making through providing a structure for systematically considering the different factors and choosing interventions. It offers a theoretical underpinning for clinical wisdom.

Table 1 below sets out the factors that PWPs might consider under each of capacity, opportunity and motivation. These factors should be considered alongside the problem statement summary in considering and discussing with the patient goals and possible interventions.

Table 1: COM-B factors to consider at assessment and intervention choice

COM-B	Factor to consider at assessment	Implication of factor
Capacity	Knowledge and understanding of nature of problems	Psychoeducation useful if lack of knowledge and understanding
	Knowledge, understanding and skills in self-help approaches that might help with problems	CBT-based self-help useful if lack of knowledge, understanding or skills
	Impairments in memory, concentration, reasoning and/or executive functioning which might limit capacity to undertake self-help	Alternatives to CBT-based self-help may be more appropriate (medication, exercise, step-up to CBT)
	Physical limitations that might limit undertaking of some tasks	May need to adapt interventions to physical limitations
Opportunity	Environmental cues for problem behaviours (e.g. drinking, anger)	Interventions to focus on awareness and management of cues (avoidance or coping skills)
	Absence of environmental cues for helpful behaviours	Interventions (e.g. behavioural activation) to increase likelihood of contact with cues
	Presence or absence of social support for behaviour change	If present, make use of the social supporter in intervention. If absent, signposting to support groups or agencies may be needed
	Adverse circumstances maintaining problem behaviour and likely to interfere with attempts to change	Signposting and facilitating access to community resources or other strategies to address adverse circumstances may be needed as initial intervention
Motivation	What problem is patient most motivated to deal with	Consider addressing this first
	Extent to which patient considers problem a concern and worth prioritising time to address	If low concern, explore pros and cons of addressing problem as first step

	Extent of avoidance processes (depression and anxiety) that will interfere with change	Discuss with patient at outset that change will require facing these, use graded techniques to help reduce impact, and use all approaches to maintain motivation in face of these
	Alcohol or drugs	If too strongly motivating (likely to support avoidance and disrupt motivation to address other target behaviours), then target directly first

Two examples of how this might work in practice follow:

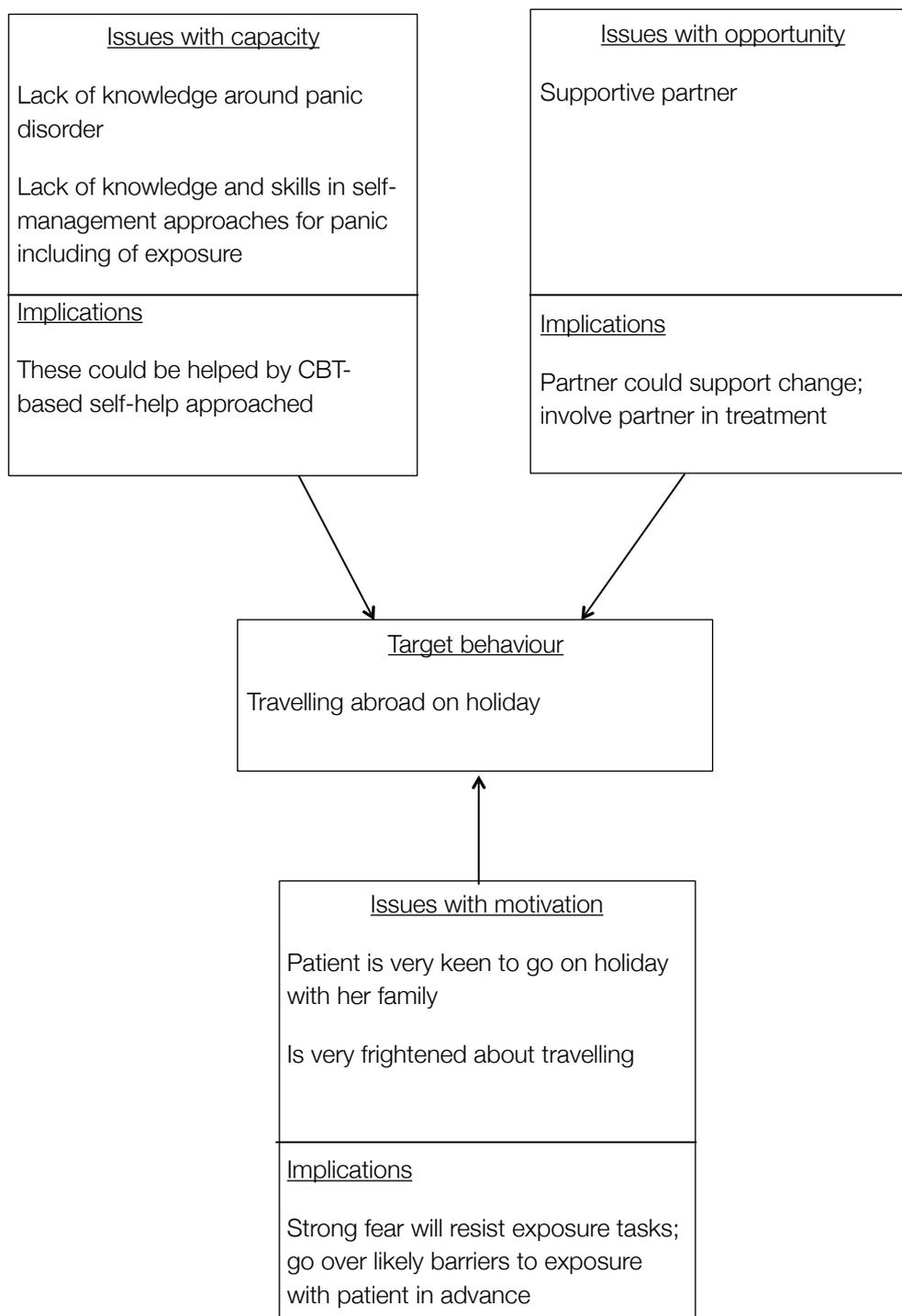
- Mrs Brown has panic disorder with agoraphobia. Other than seeing her GP and reading an article in a magazine, she has little knowledge about panic disorder and what can help (capability). She has a supportive partner (opportunity) and no major adverse circumstances in her life (opportunity). She is keen to obtain help (motivation) as she wants to be able to go on a Summer holiday with her family, which she has been unable to do for the past 3 years; but she is very frightened about the prospect (motivation). Her PWP decides, in discussion with her, that a goal of improving her panic management skills through guided self-help would be appropriate as she lacks knowledge and skills in how to help herself (capability), there are circumstances that mean she is keen to change (motivation) and there are no major barriers from life circumstances (opportunity). Given the extent of her fear (motivation), the PWP discusses with her what would be involved in her facing her agoraphobia with exposure in guided self help and barriers that might interfere with her doing this (motivation) and suggests she discusses with her partner helping her with the exposure tasks (opportunity). Figure 1 is the COM-B analysis for Mrs Brown.
- John is a young man who on assessment the PWP finds to be mildly depressed and to have moderate social anxiety. However, he does not see his social anxiety and avoidance as something that he needs help with or wants to change, insisting this is just how he has always been (motivation). The concern he has come about is insomnia, which he would like to improve (motivation). The PWP also learns he drinks four cans of lager a night (implications for motivation) which has contributed to him being in debt which he is not able to pay off as he is not working (opportunity). He is also rather socially isolated (opportunity). The PWP agrees to help him with sleep management as changing his sleep pattern is what he is keen to do (motivation) and discusses with him how drinking can both contribute to insomnia and interfere with attempts to change sleep patterns (motivation). They agree to work together on a brief intervention to reduce drinking (Kaner et al., 2007; Michie et al., 2012) and then for him to attend an insomnia group run by the service, which would mean he could get support from

others in the group in tackling his insomnia (opportunity). The PWP also signposts him for debt advice and employment support (opportunity).

## Intervention: using COM-B during interventions

The COM-B model can help guide how best to carry out low intensity interventions. It can be especially helpful with low intensity interventions that are not CBT based, where there is often less clear guidance for PWPs. But it can also help with facilitation of self-help interventions based on CBT principles especially ensuring due attention to the importance of motivation. Three examples of application of COM-B around medication adherence, signposting and CBT based self-help follow.

Figure 1: COM-B analysis of a possible treatment goal for Mrs Brown

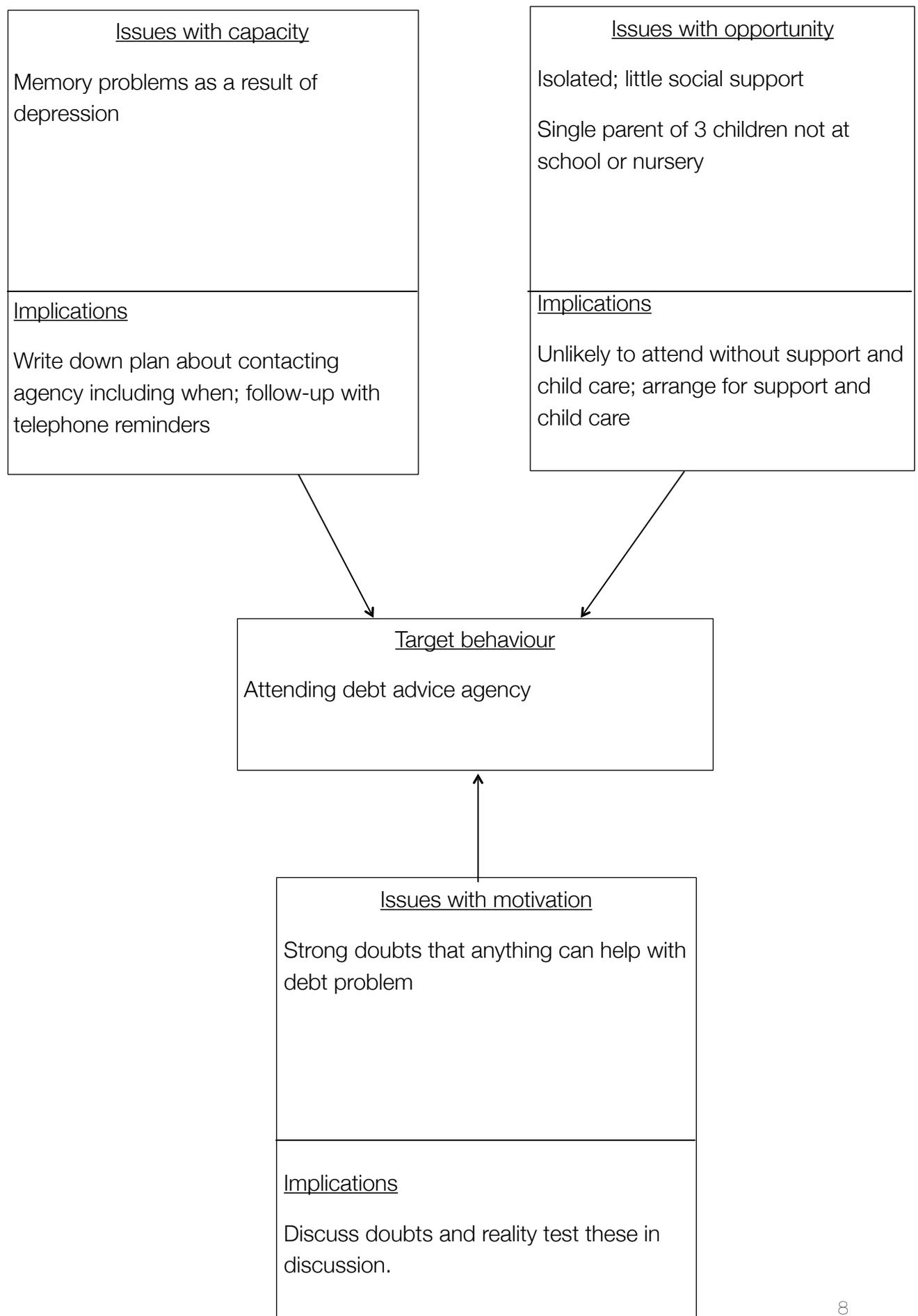


Supporting medication management involves helping patients obtain optimal benefit from medication for depression and anxiety disorders in liaison with the patient's GP. The COM-B model can be used to consider possible problems in adherence to medication (Jackson et al 2014). Patients may lack knowledge and understanding (capability) that affects their adherence, for example that antidepressant medication commonly has to be taken for a few weeks before it has any benefit and must be taken regularly (rather than just when they feel bad). Family or friends may advise against taking medication (opportunity) or could be helpful in prompting taking medication where a patient tends to forget (opportunity). In terms of motivation, a variety of negative beliefs about medication (it is addictive, it shows weakness and they should be able to cope without, etc) or negative beliefs about the possibility of help/improving ("I am a mess and nothing can help") will make it less likely that people will use medication even when it might be beneficial (motivation). The PWP needs to explore with the patient the reasons for nonadherence and tailor their intervention accordingly.

Signposting to community resources is the intervention that most clearly addresses opportunity. For patients with chronic adverse circumstances maintaining depression and anxiety disorders (debt, domestic violence, unsafe neighbourhoods, homelessness or inadequate housing, etc), facilitating access to agencies to address these adverse circumstances is often initially the intervention of choice. Facilitating access to community resources is also important for people with chronic histories of depression/anxiety, often isolated, whose lives are limited with few rewarding activities, social or interpersonal relationships. Signposting to support groups of people with similar experiences and backgrounds can be helpful in reducing isolation. In all these cases, an effective signposting intervention involves more than giving the patient the contact details of the community agency. Whether the patient will follow this up, make contact and attend the agency recommended will depend on their having adequate capacity, opportunity and motivation for this. The PWP needs to discuss these with the patient, identify potential barriers to attendance and ways to address these. These might include one or more of information about the agency and how it could help, clarifying patients questions and concerns, helping the patient draw up an action plan for contacting the agency, identifying who might support the patient in contacting and attending the agency, prompting the patient with a phone call to make contact, following up to see if the patient has attended and, if not, problem solving the barriers. Figure 2 sets out a COM-B analysis of implementing a signposting intervention to a debt advice agency.

Low intensity interventions require patients to take responsibility for their own treatment, attending individual or group appointments, working through on-line programmes, and undertaking all sorts of homework tasks from reading, to self-monitoring behaviour, to putting into practice self-help strategies. Some of these tasks can be time consuming and some (e.g. exposure and behavioural activation) will be resisted by the very avoidant anxiety or depressive motivational processes that have brought the patient to treatment in the first place. Unless patients carry out these tasks, they are unlikely to obtain benefit. There is evidence that patients

Figure 2: COM-B analysis of a signposting intervention



are more likely to benefit the longer they stay in low intensity treatment (Delgado et al 2014), although at some point additional sessions will have negligible additional benefit. Enhancing and sustaining motivation to carry out and persist with all the specific elements of their low intensity treatment is accordingly critical to success. Approaches to supporting motivation from the behaviour change literature, which are especially relevant for PWPs are:

- Prompting patients to make a commitment to undertake a task. When setting goals and homework tasks to be achieved between appointments, prompt the patient to make a commitment to doing the task (together with a plan as to when and in what circumstances)
- Providing feedback about performance and rewarding successful performance or effort. Ask after how patients have done with tasks, provide feedback on how they have done and be positive about successful performance or for attempts/efforts even if not successful (well done for trying).
- Boost self-efficacy. Lack of confidence about one's ability to make changes or to do specific homework tasks which might feel challenging (e.g. an exposure task), can lead people to not trying. Identify that a patient has such doubts, discuss their doubts and support them in having a sense of themselves as someone who can make the change.

Annex 2 contains a blank sheet that can be used by PWPs in summarising COM-B analyses with individual patients

## Conclusion

PWPs work can be enhanced through awareness of a broader range of behaviour change models and strategies in addition to CBT. The COM-B model of behaviour in particular is one relatively simple model that can help inform what treatment goal and what low intensity intervention is most suitable and how to facilitate patients in obtaining most benefit from interventions. Explicitly considering and addressing motivation is especially important for low intensity interventions and is one of the three core elements of the COM-B model.

## References

Delgadillo, J., McMillan, D., Lucock, M., Leach, C., Ali, S. and Gilbody, S. (2014). Early changes, attrition, and dose-response in low intensity psychological interventions. *British Journal of Clinical Psychology*, 53, 114-130

Jackson, C., Eliasson, L., Barber, N. & Weinman, J. (2014). Applying COM-B to medication adherence: a suggested framework for research and interventions. *European Health Psychologist*, 16, 7-17.

Kaner, E., Dickinson, H.O., Beyer, F.R., Campbell, F., Schlesinger, C., Heather, N. et al. (2007). Effectiveness of brief alcohol interventions in primary care populations. *Cochrane Database of Systematic Reviews*, (2), CD004148.

Michie, S., Atkins, L. & West, R. (2014). *The behaviour change wheel: a guide to designing interventions*. Silverback Publishing.

Michie, S., Richardson, M., Johnston, M., Abraham, C., Franis, J., Hardeman, W., Eccles, M., Cane, J. & Wood, C.E. (2013). The Behavior Change Technique Taxonomy (v1) of 91 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine*, 46, 81-95.

Michie, S., van Stralen M.M. & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science*, 6, 42

Michie, S., West, R., Campbell, R., Brown, J. & Gainforth, H. (2014). *ABC of behaviour change theories: An Essential Resource for Researchers, Policy Makers and Practitioners*. Silverback Publishing.

Michie, S., Whittington, C., Hamoudi, Z., Zarnani, F., Tober, G. & West, R. (2012). Identification of behaviour change techniques to reduce excessive alcohol consumption. *Addiction*, 107, 1431-1440.

NICE (2007). *Behaviour change: the principles for effective interventions*. Public health guidance 6. London: NICE

NICE (2014). *Behaviour change: individual approaches*. Public health guidance 49. London: NICE

Roth, A.D. and Pilling, S. (2007). *The competencies required to deliver effective cognitive and behavioural therapy for people with depression and with anxiety disorders*. London: Department of Health.

Self, R., Oates, P., Pinnock-Hilton, T. & Leach, C. (2005). *The relationship between social deprivation and unilateral termination (attrition) from psychotherapy at various*

stages of the health care pathway. *Psychology and Psychotherapy: Theory, Research and Practice*, 78, 95-111.

## Annex 1

### NICE guidance on behaviour change techniques

Recommendations on effective behaviour change techniques have been issued by NICE in two sets of NICE public health guidance (NICE 2007, 2014). These contain useful summaries which PWPs can draw on. In both, many of the recommendations are targeted at policy makers, commissioners, managers and trainers, so the specific recommendations relevant to individual health practitioners including PWPs are worth highlighting.

In the first, Behaviour change: the principles for effective interventions (NICE 2007), the key recommendations are those in Principle 4: Individual-level interventions and programmes. They are that practitioners select interventions that motivate and support people to:

- Understand the short, medium and longer-term consequences of their health-related behaviours, for themselves and others
- Feel positive about the benefits of health-enhancing behaviours and changing their behaviour
- Plan their changes in terms of easy steps over time
- Recognise how their social contexts and relationships may affect their behaviour, and identify and plan for situations that might undermine the changes they are trying to make
- Plan explicit 'if-then' coping strategies to prevent relapse
- Make a personal commitment to adopt health-enhancing behaviours by setting (and recording) goals to undertake clearly defined behaviours, in particular contexts, over a specified time
- Share their behaviour change goals with others

In the second, Behaviour change: individual approaches (NICE 2014), the key recommendation on effective behaviour change techniques is recommendation 7 (recommendations 8-10 are also relevant). Recommendation 7 is to “use proven behaviour change techniques when designing interventions” and stipulates that providers of behaviour change interventions and programmes should:

- Design behaviour change interventions to include techniques that have been shown to be effective at changing behaviour. These techniques are described in principle 4 of Behaviour change: the principles for effective interventions (NICE public health guidance 6) and include:
  - Goals and planning. Work with the client to:
    - agree goals for behaviour and the resulting outcomes
    - develop action plans and prioritise actions

- develop coping plans to prevent and manage relapses
- consider achievement of outcomes and further goals and plans.
- Feedback and monitoring (for example, regular weight assessment for weight management interventions):
  - encourage and support self-monitoring of behaviour and its outcomes and
  - provide feedback on behaviour and its outcomes.
- Social support. If appropriate advise on, and arrange for, friends, relatives, colleagues or 'buddies' to provide practical help, emotional support, praise or reward.
- Ensure the techniques used match the service user's needs.
- Consider using other evidence-based behaviour change techniques that may also be effective. See NICE guidance on alcohol, diet, physical activity, sexual behaviour and smoking for details of specific techniques.
- Clearly define and provide a rationale for all behaviour change techniques that have been included.
- Ensure novel techniques – or those for which the evidence base is limited – are evaluated.
- Consider delivering an intervention remotely (or providing remote follow-up) if there is evidence that this is an effective way of changing behaviour. For example, use the telephone, text messaging, apps or the internet.
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The focus on goals and planning and feedback and monitoring in the NICE PH49 recommendations are worth highlighting. A key aspect of the PWP role is the cycle of facilitating patients setting goals, action planning to achieve these goals, self-monitoring behaviour and reviewing progress towards goals, and modifying or setting new goals following review. This cycle is relevant both within CBT based and all sorts of other low intensity interventions.

### Annex 2: Diagram for use in summarising COM-B analysis

