## Appendix C – Theoretical Modelling

Intervention module	Page	Content	Evidence: Importance of barrier/facilitator content targets OR evidence for effectiveness of content	BCW construct	BCW function	BCTs (Taxonomy V1) Techniques broadly applied across content sections	SCT construct Constructs applied across content sections	NPT construct Constructs applied across content sections
Reducing and	Welcome							
stopping	Why should	Foster a	Bosman et al.	Reflexive	Enablement;	9.1 Credible	Knowledge;	Coherence:
antidepressants	I reduce	motivation to	(2016);	motivation	training;	source	social outcome	Individual
	and stop?	withdraw	Dickinson et al.		education		expectations;	specification
		through	(2010);			9.2 Pros and cons	physical	
		discussion of	Verbeek-Heida				outcome	Cognitive
		benefits,	and Mathot			15.2. Persuasion	expectations;	participation:
		reduction of	(2006);			about capability	Self-efficacy	Initiation
		side effects,	Iden et al.				(Somatic and	
		potential for	(2011);			13.2 Framing-	emotional	
		increase in	Karp (1993);			reframing	states)	
		agency,	Knudsen et al.					
		potential for	(2002); Eveleigh					
		effective use of	(2015); Gibson					
		alternatives to	(2016);					
		medication	Schofield	D (I .	- II .			
	The	Reflection on	(2011).	Reflexive	Enablement;			
	downsides	the side effects		motivation	training;			
		of			education			
		antidepressants as a means to						
		foster						
		motivation to						
		withdraw						
		withthaw						

When	Highlighting		Psychological	Enablement;		
should I	that it is best to		capability	training;		
reduce and	start withdrawal			education		
stop?	at a stable time					
	in life					
What to	Outline the		Psychological	Enablement;		
expect	discontinuation		capability	training;		
	process: that			education		
	the GP will					
	provide a					
	schedule, that					
	this is flexible					
	and that there					
	may be side					
	effects but					
	there are ways					
	to manage					
	these and they					
	are often short-					
	lived.					
Addressing	Briefly		Psychological	Enablement;		
concerns	acknowledges		capability	training;		
	that many		, ,	education		
	people have					
	concerns about					
	withdrawal but					
	that there are					
	techniques for					
	dealing with this					
	in AD-visor					
How can	Outline the role	Bosman et al.	Physical	Enablement;		
my GP	of the GP in	(2016);	capability	training;		
help?	discontinuation,	Dickenson et al.		education		

		when to go to the GP for support.	2010; Grime & Pollock (2003); Verbeek-Heida and Mathot (2006); Eveleigh (2015); Gibson (2016); Leydon et al. (2007); Cartwright (2016)					
	Planning ahead	Overview of the process: GP will give schedule and as one tapers, there is support in ADvisor that can be used		Reflexive motivation	Enablement; training; education			
	Support from family and friends	Highlight how friends and family members can play and important role	Bosman et al. (2016); Cromartry (2011); Verbeek- Heida and Mathot (2006); Eveleigh (2015)	Social opportunity	Enablement; training; education	3.1 Social support 3.3 Social support (emotional)		
How to reduce antidepressants	How to reduce	Practical information about tapering schedules		Physical capability	Enablement; training; education	4.1 Instructions on how to perform behaviour	Self-efficacy (Mastery experiences/vic	Coherence: Individual specification

	How to	Highlight that		Physical	Environmental		arious	
	reduce (2)	there is unlikely		capability	restructuring;	6.1	experiences).	
		to be a need for			Enablement;	Demonstration of	, ,	
		liquid			training;	behaviour		
		formulations or			education	(modelling)		
		pill cutters but if						
		needed, the GP						
		can offer some						
		guidance						
		(perhaps via						
		community						
		pharmacist)						
	When to	Reiterate that		Psychological	Enablement;			
	reduce	there are ideal		capability	training;			
		times to begin			education			
		tapering, such						
		as when no						
		major life						
		events are						
		expected						
Thinking about	What are	Briefly explains	Bosman et al.	Reflexive	Enablement;	13.2	Social outcome	Coherence:
antidepressants	antidepress	what	(2016);	motivation	training;	Framing/reframin	expectations;	Internalisation
	ants?	antidepressants	Dickenson et al.		education	g	Knowledge;	
		are used for.	2010; Grime &				physical	
		Highlights that	Pollock (2003);			15.2. Persuasion	outcome	
		while it was	Verbeek-Heida			about capability	expectations	
		believed they	and Mathot					
		work through	(2006); Karp					
		increasing	(1993); Knudsen					
		serotonin, we	et al. (2002);					
		now know it is	Eveleigh (2015);					
		more complex	Gibson (2016);					
		than that.	Cartwright					

Can I stop taking them?	Key point: even though we don't know exactly how they work, we do know	(2016); Leydon et al. (2007).	Reflexive motivation	Enablement; training; education		
	that many people can successfully discontinue					
Other forms of 'antidepres sant'	There are things other than medication which can improve mood. The relationship between brain and behaviour is highlighted through a study which shows that CBT can result in changes in the brain		Reflexive motivation	Enablement; training; education		
How to antidepress ants work	Highlights again that we don't know exactly how they work but we do know: ADs help some people and not others and many		Reflexive motivation	Enablement; training; education		
	,					

		people can						
		successfully						
		stop.						
I'm worried	I'm worried	Highlight that	Bosman et al.	Psychological	Enablement;	13.2	Knowledge,	Cognitive
about stopping	about	many people	(2016);	capability	training;	Framing/reframin	Self-efficacy	participation:
	stopping	have concerns	Dickinson et al.		education	g	(Mastery	Initiation
		about stopping	(2010);				experiences	
		and this is	Verbeek-Heida			15.2. Persuasion	vicarious	Cognitive
		understandable	and Mathot			about capability	experiences).	participation:
		and does not	(2006); Iden et					Activation
		mean you won't	al. (2011); Karp				Social outcome	
		be able to	(1993); Knudsen				expectations;	
		discontinue	et al. (2002);				Knowledge;	
	Successful	Indicate that	Eveleigh (2015);	Psychological	Enablement;		physical	
	stopping	many people	Gibson (2016);	capability	training;		outcome	
		stop SD without	Schofield		education		expectations	
		problems, and	(2011); Leydon					
		those who are	et al. (2007).					
		worried can						
		overcome their						
		concerns						
	Concerns	Patients will be		Psychological	Enablement;			
	about	given a		capability	training;			
	stopping	selection of			education			
		options to click						
		on to read more						
		about specific						
		concerns						
	How will I	Reassure that		Psychological	Enablement;			
	cope if	AD-visor has		capability	training;			
	something	guidance on			education			
	big	managing stress						
	happens?	in difficult						

	situations. Signpost to				
	Moving Forward module.				
What if I go	Reassure that	Psychological	Enablement;		
back to	AD-visor has	capability	training;		
how I was	guidance on	Capability	education		
before?	preventing		education		
before:	relapse and				
	signpost to				
	Keeping Well				
	module.				
What if I	Reassure that	Psychological	Enablement;		
have to	hopefully this	capability	training;		
start taking	won't be	, ,	education		
antidepress	necessary				
ants again?	because they				
	will learn how				
	to prevent				
	relapse, but if it				
	is, they can try				
	withdrawing				
	again in future				
How will I	Guidance on	Psychological	Enablement;		
manage my	planning	capability	training;		
responsibili	activities and		education		
ties?	highlight the				
	importance				
	family support				
	as well as the				
	timing of the				
	tapering process				

	Dealing with	Reflecting on the motivations		Reflexive motivation	Enablement; training;			
	worries	to discontinue and weighing these up against concerns.			education			
Keeping well	Keeping well	Introduce to the idea of relapse prevention	Kuyken (2008); Allen (2009); Kuyken (2010); Fava (1998);	Psychological capability	Enablement; training; education	11.2 Reduce negative emotions	Knowledge, Goals Self-efficacy (Mastery	Cognitive participation: Activation
	Automatic pilot	Define running on autopilot and explain negative automatic thoughts	Cromarty (2011); Otto (2010);	Psychological capability	Enablement; training; education	13.2 Framing/reframin g 6.1 Demonstration of behaviour 4.3 Reattribution	experiences vicarious experiences).  Social outcome expectations; Knowledge; physical outcome expectation	
	The power of thoughts	Explain how the way we think impacts mood and teach cognitive defusion (thoughts are not facts)		Psychological capability	Enablement; training; education			
	Let it be	Defining the term 'acceptance' and why it is useful in dealing		Psychological capability	Enablement; training; education			

Recognisin g warning signs	with difficult thoughts and feelings Explaining and reflecting on what thoughts and physical sensations might be indicators of	Psychological capability	Enablement; training; education		
Recognisin g triggers	relapse  Reflecting on situations that might trigger a relapse	Psychological capability	Enablement; training; education		
Recognisin g relapse	Writing down warning signs and triggers and saving these to view later	Psychological capability	Enablement; training; education		
Responding differently		Psychological capability	Enablement; training; education		

		ways can prevent relapse.						
	Preventing relapse	<ol> <li>Take a breath</li> <li>Make a decision on how to act</li> <li>Take action</li> </ol>		Psychological capability	Enablement; training; education			
Living life with values and goals*	What are values	Defines values as like a compass point providing direction for our lives.	Swain et al. 2013; Powers et al. 2009.	Psychological capability	Enablement; training; education	11.2 Reduce negative emotions  13.2 Framing/reframin	Knowledge, Goals	Coherence: Internalisation
	What do I value?	Provides a space to write down what they value Explaining the need to set goals in order to		Psychological capability  Psychological capability	Enablement; training; education Enablement; training; education	g 6.1 Demonstration of behaviour		

Setting goals   Meeting goals   Reminds users to revisit this section to review their goals and see if they have met them   Dealing with withdrawal symptoms   Symptoms   Pacceptage			act in line with				4.3 Reattribution		
Post		6	our values						
Meeting goals   Reminds users to revisit this section to review their goals and see if they have met them		•				,			
Meeting goals   Reminds users to revisit this section to review their goals and see if they have met them   Describes what withdrawal symptoms   Posting fire and body adapting to the change in medication   Recognisin g ymptoms   Posting fiferent symptoms   Posting fiferent symptoms   Posting fiferent symptoms   Posting fiferent symptoms   Posting fight be physical or mental. Specific   Posting for the deal of the properties of the physical or mental. Specific   Posting for the properties of the physical or mental. Specific   Posting for the properties of the physical or mental. Specific   Posting for the properties of the physical or mental. Specific   Posting for the phys		goals	•		capability	<u> </u>			
Poeling with withdrawal symptoms   Recognisin g withdrawal symptoms   Recognisin g medication   Recognisin g medication   Recognisin g myntoms   Symptoms   Symptom			·						
Section to review their goals and see if they have met them  Dealing with withdrawal symptoms?  Page Recognisin g withdrawal symptoms  Recognisin g withdrawal withdrawal withdrawal symptoms  Recognisin g withdrawal withdrawal withdrawal withdrawal symptoms  Recognisin g withdrawal wi		•				,			
Psychological capability   Physical capability   Physical symptoms   Recognising withdrawal symptoms   Recognising g withdrawal symptoms   Properties what withdrawal symptoms   Properties withdrawal symptoms   Properties what withdrawal symptoms   Properties what withdrawal symptoms   Properties what withdrawal symptoms   Properties what withdrawal symptoms withdrawal symptoms withdrawal symptoms   Properties what withdrawal symptoms withdrawal sympt		goals			capability	<u> </u>			
Dealing with withdrawal symptoms   Mathat re withdrawal symptoms   Recognisin g withdrawal symptoms   This page highlights that withdrawal symptoms   Mithdrawal symptoms   Recognisin g might be physical or mental. Specific   Spec						education			
They have met them   Dealing with withdrawal symptoms   Postribes what withdrawal symptoms   Recognism g withdrawal symptoms   Recognism g withdrawal symptoms   This page highlights that withdrawal symptoms   Postribe what might be physical or mental. Specific									
Them			goals and see if						
Dealing with withdrawal symptoms?  What are withdrawal symptoms?  What are withdrawal symptoms?  What are withdrawal symptoms?  Note the brain and body adapting to the change in g withdrawal symptoms  Recognisin g withdrawal symptoms  Recognisin g withdrawal symptoms  Responsion a symptoms  Recognisin g withdrawal symptoms  Recognisin g mithdrawal symptoms  What are withdrawal symptoms  What are withdrawal symptoms  Recognisin g mithdrawal symptoms  What are withdrawal symptoms  Recognisin g mithdrawal symptoms  Withdrawal symptoms  What are withdrawal they are and (2016); Ucrbeek-Heida and Mathot (2006); Iden et al. (2011); Karp  (1993); Knudsen et al. (2002); Evelegh (2015); Gibson (2016); Schofield (2011); Leydon et al. (2007)  Recognisin g mithdrawal symptoms that might be physical or mental. Specific			they have met						
withdrawal symptoms?  Recognisin g withdrawal symptoms  Recognisin g mightlere are withdrawal symptoms  Recognisin g mightlere are different symptoms that might be physical or mental. Specific			them						
symptoms? that they are a consequence of the brain and body adapting to the change in medication  Recognisin g withdrawal symptoms  Activation  Recognisin symptoms  Activation  Psychological capability  Psychological capability  Psychological capability  Psychological capability  Psychological capability  Psychological capability  Physical capability  Activation	Dealing with	What are	Describes what	Bosman et al.	Psychological	Enablement;	13.2	Social outcome	Cognitive
consequence of the brain and body adapting to the change in medication  Recognisin g withdrawal symptoms  This page highlights that there are different symptoms that might be physical or mental. Specific    Consequence of the brain and body adapting to the change in medication (2011); Karp (1993); Knudsen et al. (2002); Eveleigh (2015); Schofield (2011); Leydon et al. (2007)    Capability   Demonstration of behaviour (2011); Karp (2011); Karp (2012); Training; education (2012); Eveleigh (2015); Capability (2015); Capabil	withdrawal	withdrawal	they are and	(2016);	capability	training;	Framing/reframin	expectations;	participation:
the brain and body adapting to the change in medication  Recognisin g withdrawal symptoms  This page withdrawal symptoms  The are different symptoms that might be physical or mental. Specific	symptoms	symptoms?	that they are a	Dickinson et al.	Physical	education	g	Knowledge;	Activation
body adapting to the change in medication  Recognisin g highlights that gymptoms withdrawal symptoms  Recognism of the change in medication  Recognisin g highlights that there are different symptoms that might be physical or mental. Specific mental. Specific			consequence of	(2010); Verbeek-	capability			physical	
to the change in medication  Recognisin g highlights that symptoms different symptoms that might be physical or mental. Specific			the brain and	Heida and			6.1	outcome	
medication (2011); Karp Recognisin This page (1993); Knudsen g highlights that symptoms different symptoms that might be physical or mental. Specific (2011); Leydon et al. (2007)  medication (2011); Karp (1993); Knudsen et al. (2002); Enablement; training; education (2015); Capability (2015); Capa			body adapting	Mathot (2006);			Demonstration of	expectations	
Recognisin g highlights that g highlights that symptoms withdrawal symptoms that might be physical or mental. Specific			to the change in	Iden et al.			behaviour		
g highlights that there are there are different symptoms that might be physical or mental. Specific there are different symptoms that mental. Specific there are different symptoms that mental. Specific there are different symptoms that might be tal. (2007) the different symptoms that might be tal. (2007) the different symptoms that might be tal. (2007) the different symptoms that there are different symptoms that might be tal. (2007) the different symptoms that there are different symptoms that the different symptoms that there are different symptoms that the different symptoms that there are different symptoms that there are different symptoms that the different symptoms that th			medication	(2011); Karp					
withdrawal symptoms that symptoms that might be physical or mental. Specific		Recognisin	This page	(1993); Knudsen	Psychological	Enablement;	4.3 Reattribution		
withdrawal symptoms that symptoms that might be physical or mental. Specific		g	highlights that	et al. (2002);	capability	training;			
symptoms that might be (2011); Leydon physical or mental. Specific		withdrawal	there are	Eveleigh (2015);	Physical	education			
symptoms that might be (2011); Leydon physical or mental. Specific		symptoms	different	Gibson (2016);	capability				
physical or et al. (2007) mental. Specific			symptoms that	Schofield					
mental. Specific			might be	(2011); Leydon					
mental. Specific			_						
				, ,					
details of what			details of what						
symptoms may									
occur are not									
given.									

Т	Thinking	Explains that	Psychological	Enablement;		
	about	the way we	capability	training;		
	withdrawal	think about	Physical	education		
	symptoms	symptoms can	capability			
	, ,	change how	, ,			
		much impact				
		they have (e.g.				
		if you mistake a				
		withdrawal				
		symptom for				
		relapse, it may				
		be harder for				
		the symptom to				
		pass).				
K	Knowing	Details about	Psychological	Enablement;		
	the	the differences	capability	training;		
	difference	between	Physical	education		
		withdrawal	capability	caacation		
		symptoms and	capability			
		relapse.				
Г	Dealing	Mild symptoms	Psychological	Enablement;		
	with	can be tolerated	capability	training;		
	withdrawal	and will pass,	Physical	education		
	symptoms	moderate	capability			
	,	symptoms can	00,000			
		be treated by a				
		doctor, and				
		severe				
		symptoms may				
		indicate a				
		slower taper is				
		needed.				

	Accepting withdrawal symptoms	Guidance on accepting/tolera ting symptoms based on acceptance and commitment exercises used with chronic		Psychological capability Physical capability	Enablement; training; education			
		physical symptoms						
Moving forward	Healthy Paths Through Stress interventio n (Healthy Paths). See Geraghty et al. 2017 for full description	This module is based on an intervention aimed at managing life stresses. The modules have been developed as part of a separate project and their content will be incorporated into AD-visor. This section will include guidance on mindfulness practices and behavioural activation.	Muñoz et al. 2005; Geraghty et al. 2016.	Psychological capability	Enablement; training; education	11.2 Reduce negative emotions  13.2 Framing/reframin g  6.1 Demonstration of behaviour  4.3 Reattribution	Knowledge, Goals Self-efficacy (Mastery experiences vicarious experiences).  Social outcome expectations; Knowledge; physical outcome expectations	Coherence: Individual specification  Coherence: Internalisation  Cognitive participation: Initiation  Cognitive participation: Activation

## New references added:

- Bosman, R. C., Huijbregts, K. M., Verhaak, P. F. M., Ruhé, H. G., Van Marwijk, H. W. J., Van Balkom, A. J. L. M., & Batelaan, N. M. (2016). Long-term antidepressant use: A qualitative study on perspectives of patients and GPs in primary care. *British Journal of General Practice*, 66(651), e708–e719. https://doi.org/10.3399/bjgp16X686641
- Cartwright, C., Gibson, K., & Read, J. (2016). Long-term antidepressant use: patient perspectives of benefits and adverse effects, 1401–1407. https://doi.org/10.2147/PPA.S110632
- Cromarty, P., Jonsson, J., Moorhead, S., & Freeston, M. H. (2011). Cognitive Behaviour Therapy for Withdrawal from Antidepressant Medication: A Single Case Series. *Behavioural and Cognitive Psychotherapy*, 39(01), 77–97. https://doi.org/10.1017/S1352465810000512
- Dickinson, R., Knapp, P., House, A. O., Dimri, V., Zermansky, A., Petty, D., ... Raynor, D. K. (2010). Long-term prescribing of antidepressants in the older population: A qualitative study. *British Journal of General Practice*, 60(573), 257–259. https://doi.org/10.3399/bjgp10X483913
- Eveleigh, R. H. (2015). *Inappropriate long-term antidepressant use in primary care: A challenge to change*. Radboud University Nijmegen. https://doi.org/10.1063/1.3033202
- Fava, G. A., Rafanelli, C., Grandi, S., Conti, S., & Belluardo, P. (1998). Prevention of Recurrent Depression With Cognitive Behavioral Therapy. *Arch Gen Psychiatry*, *55*, 816–820.
- Geraghty, A. W. A., Muñoz, R. F., Yardley, L., Mc Sharry, J., Little, P., & Moore, M. (2016). Developing an Unguided Internet-Delivered Intervention for Emotional Distress in Primary Care Patients: Applying Common Factor and Person-Based Approaches. *JMIR Ment Health*, *3*(4), e53.
- Gibson, K., Cartwright, C., & Read, J. (2016). "In my life antidepressants have been..": A qualitative analysis of users' diverse experiences with antidepressants. *BMC Psychiatry*, 16(1), 1–7. https://doi.org/10.1186/s12888-016-0844-3
- Grime, K. P. J. (2002). Understanding Depression and its Treatment: GP, Patient and Pharmacist Perspectives, (September), 52–60. Retrieved from http://www.pharmacyresearchuk.org/waterway/wp-content/uploads/2012/11/Understanding depression and its treatment1.pdf
- Iden, K. R., Hjørleifsson, S., & Ruths, S. (2011). Treatment decisions on antidepressants in nursing homes: A qualitative study. *Scandinavian Journal of Primary Health Care*, 29(4), 252–256. https://doi.org/10.3109/02813432.2011.628240
- Karp, D. A. (1993). Taking anti-depressant medications: Resistance, trial commitment, conversion, disenchantment. *Qualitative Sociology*, *16*(4), 337–359. https://doi.org/10.1007/BF00989969
- Knudsen, P., Hansen, E. H., Traulsen, J. M., & Eskildsen, K. (2002). Changes in Self-Concept While Using SSRI Antidepressants. *Qualitative Health Research*, 12(7), 932–944. https://doi.org/10.1177/104973202129120368

- Kuyken, W., Byford, S., Watkins, E., Holden, E., White, K., King's, B. B., ... Teasdale, J. D. (2008). Mindfulness-Based Cognitive Therapy to Prevent Relapse in Recurrent Depression. *Journal of Consulting and Clinical Psychology*, 76(6), 966–978. https://doi.org/10.1037/a0013786
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R. S., Byford, S., ... Dalgleish, T. (2010). How does mindfulness-based cognitive therapy work? Behaviour Research and Therapy, 48, 1105–1112. https://doi.org/10.1016/j.brat.2010.08.003
- Leydon, G. M., Rodgers, L., & Kendrick, T. (2007). A qualitative study of patient views on discontinuing long-term selective serotonin reuptake inhibitors. Family Practice, 24(6), 570–575. https://doi.org/10.1093/fampra/cmm069
- Muñoz, R. F., & Mendelson, T. (2005). Toward evidence-based interventions for diverse populations: The San Francisco General Hospital prevention and treatment manuals. *J Consult Clin Psychol*, *73*(5), 790-799.
- Otto, M. W., McHugh, R. K., Simon, N. M., Farach, F. J., Worthington, J. J., & Pollack, M. H. (2010). Efficacy of CBT for benzodiazepine discontinuation in patients with panic disorder: Further evaluation. *Behaviour Research and Therapy*, 48(8), 720–727. https://doi.org/10.1016/J.BRAT.2010.04.002
- Powers, M. B., Zum Vorde Sive Vording, M. B., & Emmelkamp, P. M. (2009). Acceptance and commitment therapy: a meta-analytic review. *Psychother Psychosom*, 78(2), 73-80.
- Schofield, P., Crosland, A., Waheed, W., Aseem, S., Gask, L., Wallace, A., ... Tylee, A. (2011). Patients' views of antidepressants: From first experiences to becoming expert. *British Journal of General Practice*, *61*(585), 142–148. https://doi.org/10.3399/bjgp11X567045
- Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2013). Acceptance and commitment therapy in the treatment of anxiety: a systematic review. *Clin Psychol Rev*, 33(8), 965-978.
- Verbeek-Heida, P. M., & Mathot, E. F. (2006). Better safe than sorry why patients prefer to stop using selective serotonin reuptake inhibitor (SSRI) antidepressants but are afraid to do so: results of a qualitative study. *Chronic Illness*, 2(2), 133–142. https://doi.org/10.1179/174592006X111003

