

## Supplementary Document 15: Fidelity Checklist

### **INTERVENTION DELIVERY: Adherence to treatment manual**

#### **Measures to enhance fidelity during treatment delivery**

- Use of treatment manual/scripted curriculum
- Frequent peer supervision to ensure adherence to manual and/or any deviations are justified
- Audio-recordings of all sessions
- Fidelity coders are independent of the study and blinded to participant progress and facilitator identity

*“The usefulness of treatment manuals is controversial. On the one hand, they list the active treatment components and help to standardize treatments within and between providers. On the other hand, critics argue that they distance the patient from the provider, create passivity in the patient, and inhibit provider creativity. Kendall et al. (30) argue for a middle ground that does not compromise the fidelity of treatment, but, at the same time, calls for flexible adaptation which takes into account individual patient needs. For example, this could include administering treatment components out of order, dictated by the progression of the visit.” (Borelli, 2011, p. S57).*

#### **Use of the checklist**

- Listen to whole session first, complete the Facilitator Competence items and then do the specifics
- The order in which some components are presented may differ from the manual and checklist, as the facilitator had discretion/flexibility to be responsive to patient need/interest and to follow the natural flow of the conversation. As long as the component was delivered at some point in the session, it should be marked as such
- Some items may be achieved in “snippets” throughout the session rather than in a single period of time
- Content in brackets are examples of how the main item could be delivered
- Some items will not be appropriate for all patients. For example, if a patient chooses not identify a reward for goal, mark as discussed in session 1 then not applicable in further sessions.
- If unsure about rating, make brief note for further discussion
- Quality of recording can be poor in places and there is background noise and interruption – be patient!

Session number \_\_\_\_\_

Participant \_\_\_\_\_

Independent Assessor \_\_\_\_\_

### Facilitator competence

1. Collaborative and responsive to patient need, interest, direction						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

2. MI style/spirit						
Did the therapist use an MI-consistent communication style (e.g., use of open questions, reflective statements, attitude of curiosity, reinforcing change/necessity talk, affirmations, non-judgemental stance, collaboration + team working)						
Note: because session 1 is highly-structured, some aspects of MI may be less apparent than others and less apparent than in subsequent sessions where the content is more tailored to the individual – as long as the style was appropriate given the content (i.e., was not actively against MI), this should be reflected in the rating						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

3. XPAND spirit/philosophy						
Did the therapist convey the underlying spirit of XPAND? Were attempts/success at behaviour change linked to the spirit?						
The spirit/philosophy is defined by consistency with the messages summarised in the 4 graphics used throughout the sessions:						
<ul style="list-style-type: none"><li>a. Achieving balance/automaticity so XP/protection are backdrop for engagement with other priorities/values rather than taking time/effort away from or serving as a barrier to valued living</li><li>b. Building blocks of behaviour change</li><li>c. Tipping the balance towards better protection (motivation/willingness vs. overcoming/reducing/managing barriers)</li><li>d. Small changes lead to significant improvements in protection</li><li>e. Expanding motivation to include positive non-health reasons to protect.</li></ul>						
Note: similar to MI style/spirit, some aspects of the XPAND spirit won't be referenced until subsequent sessions (once behaviour change has been attempted) – as long as the delivery was appropriate given the content (i.e., was not actively against the XPAND spirit), this should be reflected in the rating						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

4. Normalise/validate non-adherence and the difficulty of being consistent all the time; encourage self-compassion (as/when appropriate)						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

5. Amplify success and exceptions (i.e., protection despite barriers) (as/when appropriate)						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

6. Participant understanding How well does the participant appear to have understood the session content/strategies/purpose?						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

7. *Convey understanding: Did the therapist use reflection, paraphrasing or summarizing to convey that she/he understood the client's problems?						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

8. *Patient self-discloses thoughts and feelings:						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

9. *Supportive encouragement: Was the therapist supportive of the client by acknowledging the client's gains during therapy, or by reassuring the client that gains will be forthcoming?						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

10. *Warmth: Did the therapist convey warmth?						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

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11. *Empathy: Was the therapist empathic towards the client (i.e. did she/he convey an intimate understanding of and sensitivity to the client's experiences and feelings)?						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

12. : Rapport Was there a "good" rapport between the therapist and the client? (i.e., was it a harmonious interaction, were they in sync and working together?)						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

What were the challenges for building rapport?

What was done well?

What could have been done differently?

13. Overall impression Was the session consistent with the overall goals of XPAND and were specific aims achieved (note: this rating could be high even in the absence of high fidelity to each component)						
1	2	3	4	5	6	7
Not at all		Some		Considerably		Extensively

*\*items from the THERAPEUTIC ALLIANCE SCALE (taken from PACT; used to supplement items about tone of session, adherence to spirit, and overall impression – see above)*



## SESSION SPECIFIC CHECKLIST

### SESSION 1

	<b>Component</b>	<b>Delivered in full, partially, not delivered, not applicable (N/A)</b>
1	Definition of facilitator and patient roles in XPAND, focus on collaborative approach	
2	Introduction to XPAND pack (magazine, worksheets, sunscreen video etc.)	
3	Structure of XPAND (including number of sessions, frequency, home vs. Skype)	
4	Set agenda for session 1 (why PP is important to them, phase I feedback, discussion of barriers, behavioural goal setting, plan for how to achieve goal, text messages)	
	<b>Elicit personal motivation to protect and values underlying motivation; link to photoprotection behaviour</b>	
5	Elicit importance and motivation for protection (using MI ruler)	
6	Elicit personal reasons for protection ('why')	
7	Description of 'carrots and sticks' metaphor and rationale for expanding motivation to non-health reasons	
	<b>Feedback personalised photoprotection behaviour and risk information</b>	
8	Orient participant to phase 1 data collection	
9	Introduce participant to the 'risk ruler' and elicit any discrepancies with their understanding of good vs. poor protection	
10	Provide personalised behaviour and risk feedback to participant (referring to risk profile)	
11	Determine how well their current behaviour matches phase I data (e.g., any surprises, have they made any changes or does this still seem accurate?)	
12	Link to 3 ways to lower UVR exposure (clothing, sunscreen, scheduling)	
13	Generate options for improvement (including using existing protection more frequently or consistently vs. adding new form of protection/novel combination)	
	<b>Explore barriers and facilitators to very good or ideal protection</b>	
14	Elicit barriers/facilitators, preferably at mechanistic level (e.g., through discussion of differences in level of protection across situations/contexts, identify/amplify	

	exceptions, prompt using internal vs. external barriers distinction)	
15	<i>Alternate discussion for patients who were not achieving at least good protection some of the time: elicit barriers/facilitators through discussion of what would make improving protection easier (e.g., internal-external distinction, link to motivation/importance ratings)</i>	
16	Feedback apparent barriers from phase I data (either structured or infused in discussion, depending on responsiveness of patient and flow of discussion)	
17	<i>Alternate format for patients who did not participate in phase I: categorise behavioural protection (as reported in baseline profiling questionnaire) using the risk ruler; explanation of dose to the face, link to measurement (dosimeter and diary); use barriers/facilitators from baseline profiling questionnaire to prompt discussion</i>	
18	Summarise personal barriers and provide rationale for focusing on barriers in subsequent sessions	
	<b>Set action plan to achieve SMART goal</b>	
19	Refer to UVR dial and/or risk ruler to demonstrate how protection can be improved by layering	
20	Refer to or complete the 'bubble' diagram (Note: the term bubble diagram might not be used - all possibilities for improving protection, including clothing, sunscreen, scheduling, and doing more of something or adding something new)	
21	Decide what the photoprotection goal will be and record on session 1 record sheet	
22	Outline concept of a SMART goal and provide rationale	
23	Help participant to turn goal into a SMART goal and action plan	
24	Elicit necessity, confidence, and willingness to achieve SMART goal over the coming week (MI rulers)	
25	Refer to a reward set by the participant for achieving the goal	
26	Elicit and encourage involvement of family/friends to help in goal achievement	
	<b>Coping planning for anticipated barriers over the coming week</b>	
27	Briefly provide rationale for coping planning (will be reiterated in more detail in subsequent sessions)	
29	Use responses to confidence and willingness questions to prompt discussion of potential barriers	
30	Link solutions ('then') to barriers ('if') and record on session 1 record sheet	
31	Refer to volitional help sheet in magazine (level of detail will depend on how able participant was to identify barriers and solutions)	
	<b>Provide rationale for XPAND text messages and confirm</b>	

	<b>with participant that they would like to receive them</b>	
32	Briefly provide rationale for texts (forgetting is a common barrier, not the full habit formation rationale – this comes in a later session)	
33	Guide participant to specify the most convenient/ relevant time to receive texts; record on session 1 record sheet	
	<b>Summary and close</b>	
34	Summarise content of session	
36	Suggest/confirm focus for session 2 (based on discussion of barriers and coping planning)	
37	Direct to pages of the magazine relevant to topic for next session	



## SESSIONS 2-5

*Note: some core components (e.g., problem solving, reference to graphics showing ‘philosophy’ or ‘spirit’ of XPAND) may be delivered in a subsequent session (2-5) and then only briefly referred to or reiterated in other sessions. Consequently, when only coding a random selection of sessions 2-5, the absence of these components in a given session won’t necessarily indicate low-fidelity (needs to be assessed across sessions). Grey components are those that should be delivered at some point in sessions 2-5 at facilitator’s discretion and as appropriately-matched to participant need.*

	<b>Component</b>	<b>Delivered in full, partially, not delivered, not applicable (N/A)</b>
Intro 1.1	Summary of last session (session 1 or most recent personalised module) and rationale for focusing on a relevant barrier in more detail (i.e., extended form of coping planning)	
Intro 1.1	Set agenda for session	
<b>2</b>	<b>Goal review</b>	
2.1	Reminder of goal set in last session	
2.2	Elicit details on goal achievement (complete, partial, not at all) and how/why (barriers, facilitators, strategies, reminders etc.)	
2.3	Amplify success and/or changes in right direction (attribute failure to external events/goal too hard or not relevant/presence of additional or unanticipated barriers, link more-detailed coping planning)	
2.4	Link change to Risk Ruler (on the feedback sheet)	
2.5	Elicit and amplify positive affect	
2.6	Elicit and amplify self-efficacy	
2.7	Refer to carrots and sticks	
2.8	Elicit and normalise any negative/unintended consequences (e.g., mood or social concerns);  If present, link to XPAND approach of identifying and dealing with barriers (may lead to additional personalised modules being suggested)	
2.9	Elicit and reinforce use of reward for this goal	
2.10	Elicit involvement of others in goal	
2.11	Refer to text messages	
2.12	If participant read the magazine use this to prompt discussion	
2.13	Refer to ‘tipping the balance for better UVR protection’ graphic at some point throughout	

	<p>sessions 2-5 – can be used to illustrate the different ways to improve protection and emphasise that not all barriers can be totally removed, so motivation may be more needed in some situations than others; willingness to experience barriers/deal with them differently can also tip the balance. This may be part of goal review/dealing with experienced barriers or in the context of the personalised module</p>	
2.14	<p>Introduce participant to problem solving steps and provide rationale for use – this may be part of goal review/dealing with experienced barriers or in the context of the personalised module at some point throughout sessions 2-5</p>	
	<p><b>Deliver personalised module, including rationale for focusing on the specific chosen barrier</b></p>	
3.1	<p>Provide rationale for focusing on the chosen barrier</p>	
3.2	<p>Link the specific strategies within the personalised module back to photoprotection, so it is clear how they could be used to improve photoprotection</p>	
3.3	<p>Refer to personalised module content when completing goal setting, action planning, and coping planning generic content at end of session (ensure any additional steps relevant to that module are completed; e.g., ‘value-based reminder’ or ‘strategies to boost my resources’)</p>	
	<p><b>Habit formation (if session 2)</b></p>	
4.1	<p>Provide definition of a habit and outline how habits are formed (repetition, consistent cues etc.);</p> <p>In subsequent sessions: habit rationale should be reiterated (as/when needed)</p>	
4.2	<p>Link to ‘achieving balance’ graphic and sub-aim of XPAND (to reduce effort/time/energy spent on protection and instead integrate it so protection becomes the backdrop on which engagement in other values/priorities/activities occurs)</p>	
4.3	<p>Refer to habit pages in magazine</p>	
4.4	<p>Link text messages (set up in session 1) to habit formation rationale and explain reason for reducing frequency over time (as matched to progress through sessions)</p>	
	<p><b>Set a new photoprotection SMART goal (or continue with/adapt old goal)</b></p>	
5.1	<p>Reminder of SMART goal rationale</p>	
5.2	<p>Select goal (new goal from previous list of options, or keep same goal with new action or coping plan, or adapt same goal using new options as specified for personalised module covered in that session); specify as SMART goal and create action plan</p>	

5.3	Ensure relevance/importance of goal (if this was one of the reasons why goal was not previously achieved)	
5.4	Elicit necessity (depending on personalised module delivered – may not always be needed), confidence, and willingness to achieve SMART goal over the coming week (MI rulers)	
5.5	Elicit new reward for new goal	
5.6	Elicit and encourage involvement of family/friends to help in new goal achievement	
	<b>Coping planning for anticipated barriers over the coming week</b>	
6.1	Reiterate rationale for coping planning; refer to ‘building blocks of behaviour change’ graphic	
6.2	Use responses to confidence and willingness questions to prompt discussion of potential barriers	
6.3	Link solutions (‘then’) to barriers (‘if’) and record on session 2-5 record sheet	
6.4	Refer to volitional help sheet in magazine (level of detail will depend on how able participant was to identify barriers and solutions)	

## SESSION 6

	<b>Component</b>	<b>Delivered in full, partially, not delivered, not applicable (N/A)</b>
1.1	Summary of sessions 1-5 and facilitator acknowledgement of behaviour change already achieved	
1.2	Set agenda for session	
	<b>Goal review including identification/coping with any barriers</b>	
2.1	Reminder of goal set in last session	
2.2	Elicit details on goal achievement (complete, partial, not at all) and how/why (barriers, facilitators, strategies, reminders etc.)	
2.3	Amplify success and/or changes in right direction, link to risk ruler; attribute failure to external events/goal too hard or not relevant/presence of additional or unanticipated barriers, link to rationale for coping planning and focus on maintenance in this session	
2.4	Link change to Risk Ruler (on the feedback sheet)	
2.5	Elicit and amplify positive affect	
2.6	Elicit and amplify self-efficacy,	
2.7	Refer to sticks and carrots	
2.8	Elicit and normalise any negative/unintended consequences (e.g. mood or social concerns)	
2.9	Elicit and reinforce use of reward	
2.10	Elicit involvement of others in goal	
2.11	If participant read the magazine use this to prompt discussion	
2.12	Refer to 'tipping the balance for better UVR protection'	
<b>3</b>	<b>Review/reflect on behaviour change and any other changes observed (e.g., beliefs, coping strategies) to boost self-efficacy</b>	
	<b>Deliver personalised module (if relevant topics remain and participant is interested in addressing another barrier)</b>	
4.1	Provide rationale for focusing on the chosen barrier	
4.2	Link the specific strategies within the personalised module back to photoprotection, so it is clear how they could be used to improve photoprotection	
	<b>Rationale for focus on maintenance of behaviour change and coping planning for the next 4-6 weeks</b>	
5.1	Refer to 'realistic course of behaviour change' graphic; normalise set-backs and reiterate rationale for coping planning and habit formation as ways to protect progress so improved protection is maintained	

5.2	Elicit any anticipated barriers that could threaten improvements in motivation and/or behaviour over the next 4-6 weeks (may be previously-experienced barriers and/or specific to events coming up)	
5.3	Complete coping planning for the identified barriers (may involve reiterating previously-used coping strategies and/or the generation of new strategies specific to maintenance in the absence of regular contact with XPAND facilitator); refer to volitional help sheet and 'planning for problems' pages in the magazine	
5.4	Reiterate problem solving process (should have been covered in one of sessions 2-5; could be covered here for first time if a suitable problem had not been identified in earlier sessions)	
5.5	Elicit self-efficacy for maintenance over next 4-6 weeks and recovery from set-backs (MI ruler); use responses to prompt discussion on how to make recovery from set-backs easier (additional action/coping planning or reiterating previously delivered skills, if needed)	
	<b>Reinforce self-regulatory skills used across the XPAND intervention period and link to rationale for habit formation (increased effort at start → habit)</b>	
6.1	Summarise self-regulatory skills (SMART goal setting, action planning, coping planning)	
6.2	Reinforce importance of consistent cues/prompts for protection	
6.3	Reiterate rationale for self-monitoring (semi-regular self-check-ins to ensure behaviour hasn't slipped without awareness)	
6.4	Encourage reference to magazine and worksheets if/when they are struggling or as a reminder	