

Supplemental Material S1. The parent fidelity of implementation 20-item rating scale for DB-PCX sessions.

Phase 1: Prevention			
Strategy	Definition	Criteria	Score (0, 1, 2)
Changing the Environment	<ul style="list-style-type: none"> • Address setting events • Change the order of events • Avoid situations or people • Controlling the environment 	<p><u>Score of 2</u> = 3+ instances of implementation</p> <p><u>Score of 1</u> = 1-2 instances of implementation</p>	
Parent Style	<ul style="list-style-type: none"> • Do things in small doses or steps • Respond to early signs of the problem • Change how you ask or respond (avoiding use of the word “No”) • Provision of choices 	<p><u>Score of 2</u> = If parent offers choices at least twice AND avoids use of word “No” throughout MCX (i.e., no more than 2 instances of “No”)</p> <p><u>Score of 2</u> = parent provides 3+ CLEAR choices AND uses no more than 3 instances of “no”</p> <p><u>Score of 1</u> = Parent offers 1 high quality choice AND avoids use of word “No” throughout MCX (i.e., no more than 2 instances of “No”)</p>	
Auditory Cues (Frequency)	<p>Use of auditory cues including:</p> <ul style="list-style-type: none"> • 3-2-1 countdown • Clean-up song • First-Then phrase • Timer cue with verbal reference to timer 	<p><u>Score of 2</u> = 3 clear instances of any auditory cue</p> <p><u>Score of 1</u> = 2 clear instances of any auditory cue</p> <p>OR</p> <p>4 <i>attempts</i> at first-then phrases (e.g., “After we clean-up we can have snack.”)</p>	
Visual Schedule/Cues (Frequency)	<p>Implementation of visual schedule/First-Then board within and/or across activities</p>	<p><u>Score of 2</u> = 3 clear instances of visual cue use. If using visual schedule, this should include one reference to the visual schedule at outset of activity (or recording).</p> <p><u>Score of 1</u> = 1 clear instance of use</p>	
Visual Schedule/Cues (Quality of Majority)	<ul style="list-style-type: none"> • Adherence to RUBI sequence of implementing visual schedule/First-Then board • Use of high-quality visual cue as part of auditory cue (ex., verbal countdown with visual cue) 	<p><u>Score of 2</u> = 50+% of instances of visual cue use are high quality (i.e., include at least 3 of the following elements: appropriate timing, simple language, child attention, child involvement)</p> <p><u>Score of 1</u> = < 50% of instances of visual cue use are high quality</p>	

Phase 2: Reinforcement			
Strategy	Definition	Criteria	Score (0, 1, 2)
Specificity of Reinforcers (Structured)	In a structured task (activity in which parent places a demand on the child immediately <i>before</i> a behavior is expected), the parent uses reinforcers (tangible <i>and/or</i> social) that are appropriate given the task demands and child behavior.	<u>Score of 2</u> = 3+ instances of specific praise/reinforcement <u>Score of 1</u> = 1-2 instances of <i>high quality, specific</i> praise	
Specificity of Reinforcers (“Catch your child being good”)	When parent “catches child being good” (outside of the context of the child meeting specific demands placed on him/her by parent immediately prior to the behavior), parent uses reinforcers (tangible <i>and/or</i> social) that are appropriate given task demands & child behavior. General praise is not ever credited for <i>Specificity of Reinforcer</i> items.	<u>Score of 2</u> = 3+ instances <u>Score of 1</u> = 1-2 instances of <i>high quality, specific</i> praise	
Immediacy of Reinforcers (Structured)	In “structured tasks,” parent delivers reinforcer within 5 seconds of a target child behavior. General praise can be scored for timing. But parent can only receive a 1 at most if only ever using general praise.	<u>Score of 2</u> = 3+ instances of <i>specific</i> verbal praise (or specific other) 2 specific <u>AND</u> 3+ non-specific <u>Score of 1</u> = 3+ instances of non-specific verbal praise, delivered within 5 seconds	
Engagement in Play (Following Child’s Lead & Imitation of Play)	<ul style="list-style-type: none"> Follows child's lead in play. Parent should refrain from giving instructions/commands both with regard to how to play with a toy <i>and</i> which toys to play with. Parent also refrains from asking “test questions” during play (e.g., “What color is this?”) Imitates child play acts. <p><u>Engagement</u> can look like: giving choices of toys, explicitly following lead, giving space for child to take a turn after modeling, modeling proximal to child’s play level.</p>	<u>Score of 2</u> = No more than 20% of what parent says during play is directive (vast majority of what parent says during play is not directive). <u>AND</u> <ul style="list-style-type: none"> Must show SOME imitation of play Must maintain child <i>engagement</i> across play (majority of time, parent is engaging in a non-directive manner) <u>Score of 1</u> = 21-50% of what parent says during play is directive <u>AND</u> <ul style="list-style-type: none"> At least be attempting to keep child engaged/keep child engaged for half of play portion 	

		<p><u>Score of 0</u> = 50%+ of what parent says during play is directive, majority of the time engagement style is directive, no imitation.</p>	
<p>Language in Play (Describing Child’s Play & Providing Language Expansions and Models)</p>	<p>How is the parent using language to support child’s play? When the parent <i>is</i> engaging the child appropriately, how appropriate is their language?</p> <ul style="list-style-type: none"> • Describes child’s play with simple language and/or provides simple labels of objects in child’s focus. • Imitates (“reflects”) or expands child’s utterances during play. • Parent highlights own model of social or play skill with specific language. 	<p><i>Descriptions</i> <u>Score of 2</u> = Parent describes/labels at least 50% of child’s play acts with simple & specific language <u>Score of 1</u> = Describes/labels 20-49% <i>OR</i> describes high percentage with language that is not simple enough <u>Score of 0</u> = Describes/labels < 20%</p> <p><i>and consider:</i></p> <p><i>Expansions</i> <u>Score of 2</u>= Within 3-5 sec parent imitates or expands 50+% of child utterances. <u>Score of 1</u> = Within 3-5 sec parent imitates or expands 25%. <u>Score of 0</u> = Within 3-5 sec parent imitates or expands < 25%.</p> <p>Round up between the 2 components above for this item’s score. If parent meets criteria for 2 on Descriptions, and 1 on Expansions, code item as 2.</p>	

Phase 3: Extinction			
Strategy	Definition	Criteria	Score (0, 1, 2)
General Principles of Planned Ignoring	<p>Parent avoids:</p> <ul style="list-style-type: none"> • Complying with child’s demand. • Providing verbal feedback related to/acknowledging the behavior (ex., “Stop kicking!”). • Avoids reactive facial expression. 	<p><u>Score of 2</u>= Parent avoids all 3 criteria in definition throughout MCX.</p> <p><u>Score of 1</u> = Evident to rater that parent is <i>trying</i> to implement Planned Ignoring, but implementation is not clean or comprehensive (e.g., consistent partial ignore: parent does frequently respond with flat affect, but fails to avoid eye contact throughout MCX).</p> <p>This code is about behaviors that are appropriately <i>absent</i> in parent response to child behavior.</p>	
Planned Ignoring (Frequency)	Planned Ignoring should be coded in response to all behaviors, include those that appear to be fleeting.	<p>Of times that behavior occurred and parent had opportunity to Ignore, what % were ignored?</p> <p><u>Score of 2</u> = 80+ % ignored</p> <p><u>Score of 1</u> = 20 - 80% of times ignored</p>	
Planned Ignoring (Quality of Majority)	<i>Of the times that parent implemented/attempted planned ignoring occurred, what was the quality of Planned Ignoring implementation (including use of appropriate type of Ignoring)?</i>	<p><u>Score of 2</u> = 80+ % of Planned Ignoring episodes were high quality</p> <p><u>Score of 1</u> = 20 - 80% of Planned Ignoring episodes was high quality</p> <p>This code is about behaviors that are <i>present</i> in parent response to child bx.</p>	
Compliance (Frequency)	<p>Parent gives instruction that they expect the child to be able to comply with. Parent should be being discerning about giving instructions.</p> <p>Examples of Compliance Commands: sit down, clean up, etc.</p>	<p>Of the times parent is giving compliance instructions, how frequently are they (1) close to child and (2) giving clear, specific commands, only a single time? Frequency code should be based on these two features:</p> <p><u>Score of 2</u> = 50+ % of compliance commands met the two above criteria</p> <p><u>Score of 1</u> = 25 - 49% of compliance commands met the two above criteria</p>	
Compliance (Quality of Majority)	Parent helps child to comply with a given compliance command and praises for compliance.	<p>Of the number of compliance commands parent gave throughout entire MCX (described above), what % were high quality? Quality code should be based on presence of the following two features:</p> <p>(1) Uses physical guidance to help child comply.</p> <p>(2) Provides immediate feedback/praise upon completion.</p> <p><u>Score of 2</u> = 50+ % of compliance commands met the two above criteria</p> <p><u>Score of 1</u> = 25 - 49% of compliance commands met the two above criteria</p>	

Phase 4: Teaching			
Strategy	Definition	Criteria	Score (0, 1, 2)
Functional Communication Implementation	Responds to early signs of a behavior by helping child to implement an appropriate replacement behavior that works quickly.	<p><u>Score of 1</u> = If single OR multiple instances when it’s evident to rater that parent is <i>trying</i> to implement functional comm strategy</p> <ul style="list-style-type: none"> • <u>OR</u> single instance in which parent gives praise/reinforcement when child spontaneously uses functional comm to request when something is frustrating <p><u>Score of 2</u> = Just a single instance of <i>high-quality</i> implementation necessary (follows through with having child say/sign and parent praises)</p> <p><u>OR</u> 2+ clear instances in which parent gives praise/reinforcement when child spontaneously uses functional comm to request when something is frustrating</p>	
Chaining (Frequency)	<p>How frequently did parent try to use chaining to teach a skill?</p> <p><i>Pre-determined chaining plan should be established by therapist with parent.</i></p> <ul style="list-style-type: none"> • Parent will likely only be explicitly taught to use chaining with 1 skill/behavior. 	<p><u>Score of 1</u> = Evident to rater that parent is <i>trying</i> to implement a chain / teach a sequence as a chain. Must include at least 3 systematic steps.</p> <ul style="list-style-type: none"> • If not sure about whether systematic enough for a 1, consider whether 20-49% of minimum number of steps parent should have completed as a part of Chain <u>are systematic and include increased support.</u> <p><u>Score of 2</u> = 50+% of minimum number of steps that parent should have completed as a part of Chain include systematic teaching and increased support. Must include >3 systematic steps.</p>	
Chaining (Quality of Majority)	<p>Parent appropriately social and tangible reinforcers during chaining implementation.</p> <p>Reinforces immediately (within 5 sec) after child attempts new step in chaining.</p>	<p><u>Score of 1</u> = 20-49% of minimum number of steps that parent should have completed as a part of Chain <i>include immediate reinforcement/praise</i></p> <p><u>Score of 2</u> = 50+% of minimum number of steps that parent should have completed as a part of Chain <i>include immediate reinforcement/praise</i></p>	
Teaching (Frequency)	<p>How frequently did parent use prompting to facilitate child’s demonstration of a skill or behavior? Including:</p> <ul style="list-style-type: none"> • Modeling • Verbal Prompt (hint, or question-as-hint, prosodic stress as cue) • Visual Prompts (gestures, signs) • Physical Prompts (full or partial physical prompt) • Stimulus Prompts (cue via material or related object) 	<p><u>Score of 0</u> = 1-2 instances</p> <p><u>Score of 1</u> = 3-4 instances of “prompts” in context of Teaching</p> <p><u>Score of 2</u> = 5+ instances of “prompts” in context of Teaching (hand-over-hand can only be credited for 2 of 5 instances)</p>	

	<ul style="list-style-type: none"> • Time Delay (provides wait time between question and prompt) 		
<p>Teaching (Quality of Majority)</p> <p><i>Appropriateness of Context & Materials</i></p>	<ul style="list-style-type: none"> • Implements in distraction-free setting. • Implements during time that is not rushed or under pressure. • Implements in a natural context (e.g., putting shoes on before time to go out). • Selects child's preferred materials while teaching skill (e.g., when teaching child to dress, uses favorite shirt). <p><u>Reinforcer use</u> - Includes appropriate and consistent use of reinforcers.</p> <p><u>Incrementally adds prompts</u> as needed if child does not respond to parent's initial prompt.</p>	<p><u>Score of 0</u> = Did not meet criteria for 1 on <i>Teaching-Frequency</i> item</p> <p><u>Score of 1</u> = Received 2 on Teaching-Frequency item AND 20-49% of prompts instances included some degree of increased supports <u>OR</u> praise/reinforcement OR Received 1 on Teaching-Frequency item AND 50+% of prompts instances included some degree of increased supports <u>OR</u> praise/reinforcement</p> <p><u>Score of 2</u> = Received 2 on Teaching-Frequency item <u>AND</u> 50+% of prompts instances included some degree of increased supports <u>OR</u> praise/reinforcement</p>	