

Program: Independent Toothbrushing Following a Video Model (Backward Chaining)

Rationale: Many individuals with ASD find dental procedures aversive (from toothbrushing to dental exams/procedures) and may brush ineffectively as a result. This program is designed to help your learner engage in high-quality toothbrushing by following a video model (dental hygenist approved) to meet the bare minimum requirements of brushing to sufficiently remove build-up from teeth. Learners may need instruction to learn to follow the video model but then may use the video model daily (if needed) to maintain effective toothbrushing.

Pre-requisite Skills: generalized motor imitation, sufficient fine motor ability to open toothpaste & apply, ability to attend to video model, ability to sip water and spit into sink (without swallowing or spitting at people).

Set-up: Place toothbrush, paste, cup, and towel near sink. Keep data sheet and pen/pencil to collect data.

Data collection: If client correctly completed the step independently (no verbal, gestural, or physical prompts <u>other than video</u>) circle the "C" in the correct column. Otherwise, slash through the box. Please note that because this is a backwards chaining protocol, you will be providing hand-over-hand prompting for most steps initially and thus must steps will be scored with a slash for incorrect. **Sd:** Time to brush your teeth (or something similar)

Video Model at: https://youtu.be/7d6tL1ccV9Y

Procedure: Use backward chaining by hand-over-hand prompting client to follow the video model & complete each step until #26. As client completes step #25, fade your hands away from theirs and wait to see if the client completes step #26 independently. If he does not complete step #26 independently within 5 s, then provide a verbal prompt (e.g., "spit in sink"). If client does not respond to verbal prompt, provide model prompt (by rewinding video to show step #26 or by modeling yourself). If client does not respond to verbal or model prompt, use hand-over-hand guidance to help him complete step #26 (you may need to lift cup to mouth to add water to mouth and squeeze cheecks gently to help eject water into sink). Do this until client can complete step #26 independently for 3 consecutive toothbrushing instances before fading out hand-over-hand prompting for step #25 and #26. Follow this pattern until client can independently brush his own teeth following the video model.

Reinforcement: Ensure the client has access to a high-value item/activity following completion of toothbrushing. It may be beneficial to allow a few minutes of access to this item/activity before brushing and bring it into bathroom with you. Then remove access and say "First brush teeth, then (item/activity name).

Date>										
# Steps	Correct									
1 Wet Toothbrush	С	С	С	С	С	С	С	С	С	С
2 Apply toothpaste, close cap and replace	С	С	С	С	С	С	С	С	С	С
3 Brush Lower, client Left side, Outter crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
4 Brush Lower, client Left side, Biting crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
5 Brush Lower, client Left side, Inner crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
6 Spit/re-apply toothpaste/re-wet brush as needed	С	С	С	С	С	С	С	С	С	С
7 Brush Lower, Front, Outter surface (incisors + cuspids) for 7 s	С	С	С	С	С	С	С	С	С	С
8 Brush Lower, Front, Inner surface (incisors + cuspids) for 7 s	С	С	С	С	С	С	С	С	С	С
9 Spit/re-apply toothpaste/re-wet brush as needed	С	С	С	С	С	С	С	С	С	С
10 Brush Lower, client Right side, Outter crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
11 Brush Lower, client Right side, Biting crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
12 Brush Lower, client Right side, Inner crown surface (molars + premolars) for 7 s	С	C	С	С	С	С	С	С	С	С
13 Spit/re-apply toothpaste/re-wet brush as needed	С	С	С	С	С	С	С	С	С	С
14 Brush Top, client Left side, Outter crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
15 Brush Top, client Left side, Biting crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
16 Brush Top, client Left side, Inner crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
17 Spit/re-apply toothpaste/re-wet brush as needed	С	С	С	С	С	С	С	С	С	С
18 Brush Top, Front, Outter surface (incisors + cuspids) for 7 s	С	C	С	С	С	С	С	С	С	С
19 Brush Top, Front, Inner surface (incisors + cuspids) for 7 s	С	С	С	С	С	С	С	С	С	С
20 Spit/re-apply toothpaste/re-wet brush as needed	С	С	С	С	С	С	С	С	С	С
21 Brush Top, client Right side, Outter crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
22 Brush Top, client Right side, Biting crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
23 Brush Top, client Right side, Inner crown surface (molars + premolars) for 7 s	С	С	С	С	С	С	С	С	С	С
24 Rinse toothbrush, replace to storage location	С	С	С	С	С	С	С	С	С	С
25 Add minimal water to cup, swish water in mouth from cup	С	С	С	С	С	С	С	С	С	С
26 Spit	С	С	С	С	С	С	С	С	С	С