Component 4: Bolus Transport/Lingual Motion

Bolus transport/lingual motion characterizes the pattern of lingual movement and bolus transport through the oral cavity. Score Component 4 for all bolus types: liquids, semi-solids and solids. When assigning your score, make your judgment about bolus transport/lingual motion after the initial gesture toward productive tongue movement directed toward propelling the bolus through the oral cavity. Bolus accommodating movements prior to this attempt should not be considered when scoring.

SCORING EXAMPLES

As the nature of component 4 does not lend well to still images, the user is strongly encouraged to view the video within the Learning Zone.

(0) Brisk tongue motion:
Movement of the tongue is brisk and timely with rapid bolus transport from anterior to posterior oral cavity.

(1) Delayed initiation of tongue motion:
This score is an example of a patient that typically experiences difficulty initiating any goal directed motor task. The patient usually requires multiple cues to initiate movement of the tongue, but once initiated, the bolus progresses normally from the anterior to posterior oral cavity. Look for prolonged bolus holding, that is, more than just a slight delay or pause to accommodate the bolus. For videos included throughout the MBSImP website, assume that the cue to swallow occurs at the start of the video.

(2) Slowed tongue motion:
Represents movement of the tongue and bolus that progresses from the anterior to posterior oral cavity, however, the motion is slowed contrasted with brisk movement.

(3) Repetitive/disorganized motion:
Resembles repetitive and disorganized tongue motion, that is, the tongue rocks the bolus anteriorly and posteriorly (back and forth) prior to moving the bolus through the oral cavity (A-C). Do not confuse brief movements of the tongue that may occur early during initial accommodation of the bolus in the oral cavity. For tongue movement to be considered a score of (3), you must observe at least 3 repetitions of tongue rocking.

(4) Minimal to no tongue motion:
Minimal to no apparent movement of the tongue despite cuing.
COMMON SCORING ERRORS

Accommodating Movements
The most common scoring error for Component 4 is the inclusion of bolus accommodating movements when assigning a score. The key for scoring bolus transport is identifying the initial gesture toward productive tongue movement to move the bolus through the oral cavity. Bolus accommodating movements prior to this attempt, should not be considered when scoring. For solids, this will occur after some degree of chewing and recollection.

Oral Residue
While oral residue is a surrogate for lingual weakness, do not base your score solely on oral residue. Often, patients with brisk tongue motion will have some degree of oral residue related to other impairments (i.e. Component 2, Bolus Hold).

Score of 0 vs. 2
Often, confusion occurs between determining a score of (0), brisk, and (2), slow tongue motion. “Slow” tongue movement and bolus transport are most easily discerned with thicker viscosities. This is a difficult component to score as there will be variations of slow, an inherent limitation of ordinal scaling. Only consider the speed and direction of movement when assigning your score. Slow tongue movement is distinct from brisk movement but both will move the bolus from an anterior to posterior direction through the oral cavity. Continued practice will help you further calibrate your understanding of “brisk” vs. “slow” and you are encouraged to work through the Training Zone videos scoring Component 4 only to help you further calibrate the variable appearance of brisk and slow that is common to human morphology.