

Oromotor Movement/Verbal Communication Function In Disorders Of Consciousness



Please ensure the patient has adequate arousal (eye opening) and attention prior to providing intervention or assessing level of consciousness. Utilize *Arousal Facilitation Protocol* (see handout) if the patient has sustained eye closure or has a change in behavioral responsiveness.

COMA

When a patient is in a comatose state, he/she does not demonstrate any signs of communication or communication attempts.

VEGETATIVE STATE/UNRESPONSIVE WAKEFULNESS

When a patient is in a vegetative state, he/she may demonstrate oral **reflexive movement** and **reflexive voicing**.



Possible Responses for Reflexive Movement and Reflexive Voicing:

- Yawn with and without voicing
- Voicing with posturing (moaning, groaning)
- Voicing with hiccups or burps
- Clamping of jaws
- Tongue pumping
- Chewing movement/munching
- Reflexive swallowing
- Spontaneous moaning/groaning



Suggested Activities for Eliciting Response:

- Presentation of tongue depressor or toothbrush into oral cavity
- *Thermal tactile stimulation* (TTS) (utilizing objects of different textures and temperatures to stimulate the senses). Please see handout for use of TTS for swallowing.
- Presentation of sensory stimulation (deep pressure, ice/heat packs)
- Change patient's position

He/she may also demonstrate **spontaneous vocalization** and **non-reflexive oral movements**.



Possible Responses for Non-Reflexive Movement and Voicing (can be in response to external stimuli and/or in potential attempts to communicate):

- Mouthing
- Unintelligible vocalizations/verbalizations
- Babbling
- Sticking out tongue
- Puckering or licking lips
(over)



Suggested Activities for Eliciting Response:

- Ask egocentric (centered around the individual and his/her immediate environment) and biographical (centered around the individual and their life) questions
- Wipe cotton swab with flavor (sweet, sour, salty, etc) on bottom lip
- Play music/ familiar songs
- Count
- Ask patient to complete oromotor movements (e.g. open mouth, stick out tongue, blow a kiss, etc.)

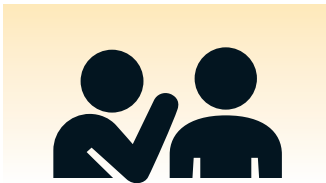
MINIMALLY CONSCIOUS STATE

When a patient is in a minimally conscious state, he/she may demonstrate contingent, inconsistent intelligible verbalizations, gestures or written words (at least 2).



Possible Responses for Communication Attempts:

- Consonant-vowel-consonant sounds (e.g. 'mom' not 'ma', 'hello' not 'hi')
- Points to brief or towards bathroom to indicate toileting need
- Points to bed to indicate feeling tired
- Points to mouth to indicate thirst/hunger
- Uses alphabet or picture board
- Writes name



Suggested Activities for Eliciting Response:

- Ask your patient questions
- Reinforce verbalization/gestural attempts
- Sing familiar songs
- Counting, reciting days of the week/months of the year
- Naming objects
- Recitation of familiar prayer

CONSCIOUS STATE

When a patient is fully conscious, he/she demonstrates **functional communication**, the ability to communicate basic wants/needs. Please see handout re: How To Establish a Yes/No Communication System.



Bodien YB, Chatelle C, Taubert A, Uchiano S, Giacino JT, Ehrlich-Jones L. Updated Measurement Characteristics and Clinical Utility of the Coma Recovery Scale-Revised Among Individuals With Acquired Brain Injury. *Arch PMR* 2021 102 (169-70)

Giacino, J. T., Fins, J. J., Laureys, S., & Schiff, N. D. (2014). Disorders of consciousness after acquired brain injury: the state of the science. *Nature Reviews Neurology*, 10(2), 99-114. doi:10.1038/nrneurol.2013.279

Giacino, J & Kalmar, K. (2006). Coma Recovery Scale- Revised. *The Center for Outcome Measurement in Brain Injury*. <http://www.tbims.org/combi/crs>