

**Assessment of Biobehavioral States:  
Supporting Availability for Learning for Students with Multiple Disabilities  
including Deaf-Blindness & Profound Intellectual & Multiple Disabilities**

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**CODING KEY**

**Behavior State Codes:**

AI: Asleep--Inactive  
 AA: Asleep--Active  
 DR: Drowsy  
 DA: Daze  
 AWIA: Awake--Inactive--Alert  
 AWAA: Awake--Active--Alert  
 AWASS: Awake--Active--Self--Stimulatory  
 CR: Crying  
 Z: Seizures

**Environmental Lighting (L):**

Dk: Dark  
 Dm: Dim  
 BN: Bright natural (sun)  
 BL: Bright lamp/lightbulb

**Sound Level (SL):**

Q: Quiet  
 LB: Low background noise  
 HB: High level backgr. noise  
 N: Noisy, direct

**Temperature (T):**

C: Cold  
 Cl: Cool  
 W: Warm  
 H: Hot  
 VH: Very Hot (humid)

**Position**

SE: Seated  
 ST: Standing  
 PR: Prone  
 SP: Supine  
 SI: Side--lying  
 RP: Repositioning

**Social:**

A: Alone  
 P: Proximity (within 3')  
 PC: Physical Contact  
 HUH: Hand Under Hand  
 HOH: Hand Over Hand

**Communication partner**

N: No partner  
 T: Teacher  
 A: Aide  
 P: Peer

*Coding systems partially adapted from:*

Arthur, M. (2004). Patterns amongst behavior states, sociocommunicative, and activity variables in educational programs for students with profound and multiple disabilities. *Journal of Developmental and Physical Disabilities*, 16(2), 125-149.

Guess, D., Mulligan-Ault, M., Roberts, S., Struth, J., Siegel-Causey, E., Thompson, B., ... & Guy, B. (1988). Implications of biobehavioral states for the education and treatment of students with the most profoundly handicapping conditions. *Research and Practice for Persons with Severe Disabilities*, 13(3), 163-174.

**Biobehavioral Assessment** Background Information: To be completed for activity within 24 hours of observation/assessment

**Food/Liquid Intake**

Type of food/liquid	Time Start	Time Stop	Amount (ounces)	Comments

**Elimination activity**

Time	Urine (U) or BM	Comments

**Medication information**

Type	Time	Amount (cc /mg)	Comments Description of side effects

**Seizure Activity**

Start Time	Stop Time	Description	Comments (aura, state before and after seizure)

**Sleep Information**

Start Time	Stop Time	Location	Comments

**Additional Comments:**

Time	Activity	Behavior State	Position	Environmental (Ambient)	Social Context	Communication Partner
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
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		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P

Comments: (Include specific **time**):

Student: \_\_\_\_\_ Date: \_\_\_\_\_ Data Collector(s): \_\_\_\_\_

Time	Activity	Behavior State	Position	Environmental (Ambient)	Social Context	Communication Partner
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
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		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P
		AI AA DR DA AWAI AWAA CR Z	SE ST PR SP SI RP	L: Dk Dm BN BL T: C CI W H VH SL: Q LB HB N	A P PC HUH HOH	N T A P

Comments: (Include specific ***time***):

**Informal Evaluation:**

Note any informal trends observed in each behavior state, in relation to: Time, Position, Environmental, Social Context, Communication Partner. For example, AA: Trend Position = Supine (Student was observed generally in Asleep-Active position when supine).  
\*Do not note trends unless observed specifically.

<b>Behavior State</b>	<b>Time</b>	<b>Position</b>	<b>Environmental (Ambient)</b>	<b>Social Context</b>	<b>Communication Partner</b>
<b>AI</b>					
<b>AA</b>					
<b>DR</b>					
<b>DA</b>					
<b>AWAI</b>					
<b>AWAA</b>					
<b>CR</b>					
<b>Z</b>					

### **Instructions for Completing the Assessment of Biobehavioral States:**

1. Review the results of prior assessments, and conduct additional sensory, communication, and preferences assessment needed to gather student-centered information that will help guide biobehavioral assessment and intervention.
2. **Background Information:** Collect background information within 24 hours of observation, with support of the family and/or home management team. (See page 2)
3. Pick a time interval for using the Observation forms. If assessing a half day or full day, you may want to use 15-minute or 30-minute intervals. If assessing a single contained activity, you may want to use 1-minute intervals.
4. **Observation Form:** On the observation form, complete data at the exact time interval selected above. Describe the activity briefly, and circle codes for data across all areas: Behavior State, Position, Environmental (ambient: Lighting, Temperature, Sound Level), Social Context, and Communication Partner. You may want to add additional notes on the side bar as needed.
5. Use as many of the observation forms as needed to complete data for the allotted time of the observation (whether a single activity, half day or full day).
6. **Informal Evaluation:** Note informal trends observed for each behavior state. Is there a time of day at which the student tends to be in a certain state? Are certain positions, environmental contexts, social contexts, or specific communication partner interactions associated with a specific behavior state?
7. **Recommendations:** Refer to the Recommendations form as a guide to provide the collaborative team (including the family) with clear recommendations for next steps in modifying the biophysical, environmental, and/or communication plan in order to increase the student's availability for learning.

### **Additional Resources Supporting Assessment and Intervention:**

[The Communication Matrix](#) (assessment of expressive communication appropriate for learners with multiple disabilities)

[Assessment of Learning & Communication in Children who are Deafblind or Who Have Multiple Disabilities](#) (assessment guide)

[HomeTalk: A Family Assessment of Children Who are Deafblind](#)

[WSDS Likes/Dislikes](#) Form (informal sensory preferences assessment)

[Sensory Channel Form](#) (adapted by T. Anthony)

["Talking the Language of the Hands to the Hands"](#) (Miles, 2003; Rev. Miles, Nelson & Pellerin, 2015)

[Open Hands Open Access DeafBlind Intervener Modules](#) (free online training modules for interveners and collaborative team members)

## **Biobehavioral Assessment: Guidelines for Recommendations**

**The goal of intervention and recommendations is to increase the student's availability for learning.** It may be necessary to modify the biophysical management plan and/or to make adjustments to the student's schedule, to the environment of the classroom and other instructional settings, to positioning, communication modes and practices used with the student, and to the actual materials presented to the student. The following guidelines are provided below to support the development of meaningful, student-centered recommendations for intervention:

**Biophysical management plan:** Are there areas of the student's biophysical management plan that require further investigation in order to support increased availability for learning? Consider specific questions for the family and/or clinical specialists regarding concerns or areas of potential intervention including: food/liquid intake, elimination (schedule, routine, other supports), amount of sleep, seizure activity, impact of medication (including timing of administering medication).

**Changes to the student's schedule:** Are there specific changes to the student's schedule that would support increased availability for learning? For example, if the student is always fatigued after Physical Therapy, should a break be scheduled after this activity, as opposed to scheduling an academic activity or other related service immediately following PT?

**Positioning:** Are there changes to positioning and seating supports needed to promote availability for learning, both in general and during specific activities? The [Positioning and Adaptations Tool](#) (NYDBC, 2016) may be used to support for planning positioning supports for each activity.

**Environmental modifications and supports:** Are there changes to the ambient environment of the classroom or other areas of the school/setting needed to promote availability for learning, both in general and during specific activities? Consider adaptations/modifications to: Lighting, Temperature, Sound Levels.

**Social Context:** Are there social contexts that should be planned carefully to promote increased availability for learning? Consider: constant contact and tactile proximity, use of **hand under hand** supports and mutual exploration (instead of more intrusive and manipulative hand over hand).

**Communication Partner:** Does the student have a variety of communication partners, or is communication/interaction limited to one or two people throughout the day? Do communication partners have common forms/modes of communicating and interacting with the student? Are there additional considerations for supporting communication partners and team members to share common practices of interacting and communicating with the student?

**Communication and Interaction Supports:** Consider recommendations for specific interaction and communication supports, including: touch cues, name cues, tangible symbols, calendar systems, active learning interventions (Little Room, others).

**Materials and Instructional Routines:** Are there adaptations to materials and to instructional routines that would support increased availability for learning? Consider the extent to which materials and the presentation of materials affects the student's availability or causes fatigue. For students with cortical visual impairment, consider the extent to which materials increase Multisensory Complexity.

**Additional evaluation recommended:** Are there additional assessments or evaluations needed to support the student's program to increase availability for learning? Consider: Communication Matrix (assessment of pre-linguistic expressive communication, normed for students with multiple disabilities); functional vision assessment and learning media assessment (or CVI Range assessment for students with cortical visual impairment); sensory preferences assessment and sensory profile.