

Logic model linking brain function with behaviors: Neurobehavioral theoretical model and application

Thousands of studies conducted in numerous countries over the last forty years have found that prenatal exposure to alcohol and other teratogens can have a debilitating effect on the developing brain and central nervous system. In addition, there are 50,000 teratogens—pre- and/or post-natal agents which may affect development—and other factors such as genetics, illness, sustained emotional trauma, abuse, anoxia, or head injuries that may affect brain structure and function. *Any one or combination of these may cause the same neurobehavioral symptoms; the logic model and neurobehavioral principles apply regardless of specific cause.*

This logic model is the theoretical foundation for the Neurobehavioral construct. It is an alternative theoretical explanatory basis for understanding behaviors informed by research that provides a platform on which to operationalize research findings. It is the conceptual glue for systematically reframing the meaning of behaviors and is the basis for developing person-specific, relevant and appropriate strategies and accommodations in all systems. This construct manages the complexity associated with the heterogeneity of brain-based symptoms.

Logic Model

1. The brain is a physical organ, no less than the heart and kidneys.
2. Alcohol, other teratogens and traumas kill cells and alter development in the brains of developing fetuses.
3. Alcohol also alters the structure of cells, reducing myelination and the number of interconnections among cells. Changes at the cellular level alter how cells function. These and other changes in brain design affect memory storage and retrieval, processing speed, ability to abstract, analyze, make decisions, and others.
4. Since these are *physical* changes, Fetal Alcohol/ Neurobehavioral conditions (FA/NB) is by definition a *brain-based, usually invisible physical disability with behavioral symptoms*

If this is true, then it follows that

Providing accommodations for people with FA/NB is as ethical, appropriate and effective as providing accommodations for people with other physical disabilities.

This logic is deceptively simple. However, simple is not simplistic. Understanding and applying this framework requires a different way of thinking; cognitive restructuring for parents and professionals.

Attempting to change superficial symptoms of underlying brain-based physical disabilities is like asking a paraplegic to do a high jump. *Instead of trying harder to change behaviors, we need to try differently.* Trying differently, using the Neurobehavioral model, means that behaviors are seen as cues for recognizing the disability. The approach consistent with this logic model follows: Provide appropriate accommodations, e.g., a cognitive wheelchair. This is the same principle as for people with more obvious physical conditions. The goal of providing accommodations is the same, to improve quality of life, prevent problems, and maximize developmental potential. The approach is paradoxical. The shift is from trying harder to change behaviors and being mystified when they worsen, to using behaviors as cues for recognizing etiology, a physical condition, providing accommodations, and improving outcomes.

What distinguishes a neurobehavioral approach from standard practice?

Standard practice addresses presenting behaviors
A neurobehavioral approach recognizes etiology, their source

1. Standard practice is based on beliefs about behaviors and targets behaviors for change. A neurobehavioral, brain-based approach recognizes etiology, brain function, as the source of behaviors.
2. Learning theory is the foundation for current practice. This term refers to "...a composite of theoretical approaches, including cognitive and cognitive-behavioral theories. Behavioral techniques, which are prevalent in all systems, are based on these theories" (Boulding, Brooks); yet, neither the theories nor the techniques have been systematically analyzed for their assumptions about brain function and, in turn, the congruence between these assumptions and neurobehavioral characteristics.
3. The cognitive-behavioral paradigm based on learning theory, the basis for shared understanding and standard practice, views behaviors through a lens that assigns intentionality or psychopathology, mental health problems, to behaviors. Values-laden interpretations of the meaning of behaviors mean behaviors are viewed as being the problem.
4. Beliefs dictate interventions. When behaviors are believed to be the problem, interventions attempt to change behaviors. This inadvertently exacerbates problems when behaviors are primary or secondary symptoms of underlying brain dysfunction.
5. The theoretical limits of standard practice contribute to multiple diagnoses, accumulated medications, increasingly constrictive, coercive and expensive interventions, "revolving door" involvement in systems, confusion and distress for those with brain-based conditions, their families and community providers.
6. Identifying the source of any physical condition is required for the development of appropriate solutions. Does the sore need a Band-Aid or is it a melanoma? Is the child refusing to read the whiteboard, or is the child blind? Is the adolescent ignoring me or does she have central auditory processing delay? Same behavior, different meaning; different meaning, different problem definition and solution.
7. The Neurobehavioral approach recognizes brain function as the source or etiology of behaviors. It is like stepping sideways onto a different conceptual platform that shifts perceptions, from the person *being* the problem to *having* a problem, a brain-based physical disability with behavioral symptoms, and asking different questions.
8. Reframing the meaning of behaviors redefines the nature of the problem—from a behavioral issue to a physical disability with behavioral symptoms. The shift from "won't" to "can't" changes the emotional quality of the relationship, from frustration to empathy.
9. Redefining the problem redefines solutions: The neurobehavioral approach shifts the focus for interventions from the person to include the setting. Rather than targeting the person for change, the shift is to including changes in the environment starting with knowledge, understanding, perceptions and beliefs of people in the environment. *This is the same principle as is provided for those with more obvious physical conditions:*

Identify the nature of the condition and provide appropriate accommodations to assure achievement of full developmental potential. The net effect is like providing cognitive wheelchairs instead of asking the cognitive paraplegic to jump.

10. The neurobehavioral approach yields paradoxical results: Trying harder to change neurobehavioral symptoms makes things worse; using behaviors as cues for recognizing an underlying invisible physical disability and providing accommodations yields changes. Same goal, two antithetical approaches. The shift is from trying to change the person to *achieving* changes through provision of accommodations.
11. More broadly, the neurobehavioral paradigm provides an alternative framework for organizing thinking about behaviors and interventions. It provides a platform on which to operationalize existing research on brain function and dysfunction, redefining problems and solutions in a manner consistent with research and managing the complexity associated with the wide range of neurobehavioral symptoms.

Clearly this brief overview does not address complex issues. Important questions of the chicken-or-egg-type variety are not addressed. For example: Does the person have genetically-influenced neurochemical changes that contribute to symptoms of anxiety, or is anxiety secondary to chronic fear, frustration and failure? What about RAD? PTSD? ADD? Since these and other DSM diagnoses are now believed to involve changes in brain structure, neurochemistry and function, this framework applies to these and other brain-based conditions. Current thinking about neurochemistry is that it changes through interactions with environments, so the question is not completely dichotomously either-or. Relative clarity is typically gained through a thoughtful, systematic consideration of brain function and setting.

Neither does this explore the apparent clash between deeply-held values and beliefs -- culturally assigned expectations for "appropriate" behaviors and symptoms of brain dysfunction. The values-laden moral lens through which behaviors are currently viewed is the source of powerful emotional reactions where neurobehavioral symptoms are at odds with expectations based on prevailing values: For example, consider the clash between the expectation to "Act your age", but the person has dysmaturity. "Plan, organize and be independent" but the person has executive functioning challenges and dysmaturity. Values, like techniques, may be reviewed and expanded to recognize neurobehavioral physical disabilities. Factoring in brain dysfunction resolves apparent clashes and alleviates much of the fear and negative emotional charge associated with neurobehavioral differences.

To help clarify these and other important questions and tolerate this transitional time between behavioral and neurobehavioral paradigms, one suggestion is to become aware of and question the role of brain function. Always ask the "what if?" question when considering the meaning of behaviors. What if the brain does have something to do with behaviors?

Neither an advanced degree in neurosciences nor a definitive diagnosis is required for this exploration. Simply giving equal weight to the idea that the brain plays a role in behaviors is a good start. This consideration is timely, appropriate and ethical. Exploring the question does not diagnose, limit, or inappropriately enable. It does contribute to a thoughtful, deliberate, reasonable, research-informed exploration of the meaning of behaviors from a neurobehavioral perspective, and it does expand options.

Barriers associated with FA/NB: Contributions and limitations of the DSM

Most people with FA/NB are currently not diagnosed with FA/NB, but are often assigned many DSM diagnoses. Currently, the most common overlapping diagnoses are ADD/ADHD, LD, PDD, SED, Conduct Disorder, Reactive Attachment Disorder, Bi-Polar, Autism and ODD.

The DSM has made a significant contribution and it is equally "...important to realize the changes that have *not* been made." (Andreasen, The Broken Brain, p. 160) The DSM moved toward the medical model of providing diagnostic precision of specific symptoms. However, the medical model "...assumes that a specific diagnosis ultimately defines a specific disease with a relatively discrete biological cause. The DSM carefully avoids use of the word disease, using the word disorder instead. (It) attempts to maintain strict neutrality about the factors that may cause disease or disorder..." (ibid)

This may contribute to "...*reliability at the expense of validity* (italics ed.). *Reliability* refers to the consistency of a diagnostic system -- two different clinicians may come up with the same diagnosis following examination of the same patient. *Validity* refers to the usefulness of a diagnostic system. A (valid) diagnostic system helps the doctor to make predictions about ...the illness—what is causing it, what treatments are likely to be useful..." (ibid)

People with FA/NB accumulate diagnoses over time, none of which is necessarily wrong given the presenting behavioral symptoms, and essentially all of which fail to recognize etiology, or organicity. Unfortunately, rather than clarifying, these often contribute to confusion and fragmentation. Further, these diagnoses pathologize and usually generate interventions based on presenting behavioral symptoms rather than their cause.

Where multiple diagnoses are found and FA/NB is suspected, consider the following equation: The greater the number of diagnoses, the more likely an underlying neurobehavioral condition exists.

Just like any other primary physical disability, when the neurobehavioral implications of FA/NB are not recognized, people with FA/NB continue to deteriorate in spite of multiple diagnoses and interventions. This is reflected in the following quote by the educator and philosopher, John Dewey:

"The nature of the issues cannot be understood save as we know how they came about...Attempts to deal with them simply on the basis of what is obvious in the present is bound to result in adoption of superficial measures which in the end will only render existing problems more acute and more difficult to solve."

Psychology and psychiatry are relatively new fields; the advantage of this is that new fields are in flux and are often more able to incorporate new information than older, more long-standing ones, where thinking is more fixed. This is the first time in history that there has existed as much knowledge about the brain, and this knowledge is growing exponentially. All that needs to happen now is that there be recognition of brain function when considering the meaning of behaviors, and make changes accordingly.

FASCETS neurobehavioral screening tool

Lists of behaviors are often long and overwhelming. However helpful these may be, the link between behavioral symptoms and brain function is not usually made. This brief screening tool provides definitions and examples of primary and secondary neurobehavioral characteristics commonly associated with underlying brain function. This list is intended to support exploration, identification and/or referral; *it is not intended for diagnostic purposes.*

Primary characteristics are learning, developmental, and/or physical responses to the environment, and other behavioral symptoms that have been associated with differences in brain structure and function. Strengths are also primary characteristics.

Scale: 0=Not assessed 1=No 2=Rarely 3=Sometimes 4=Usually 5=Always

1. Developmental level of functioning: Social skills and adaptive behaviors

- 0 1 2 3 4 5 Social behaviors are like a person half their age (developmental dysmaturity)
- 0 1 2 3 4 5 Prefers younger friends
- 0 1 2 3 4 5 May be seen as “irresponsible” for chronological age
- 0 1 2 3 4 5 Interests and play are more like a younger person

2. Sensory systems, sensory-motor integration

- 0 1 2 3 4 5 Easily overstimulated and slow to settle, may become overactive or shut down
- 0 1 2 3 4 5 Oversensitive to touch, textures-- clothing tags or bumps on socks may be irritating
- 0 1 2 3 4 5 Undersensitive to touch, doesn't seem to feel pain
- 0 1 2 3 4 5 Highly sensitive to lights, sounds or smells
- 0 1 2 3 4 5 Doesn't seem to understand personal space or boundaries
- 0 1 2 3 4 5 Has trouble falling asleep, staying asleep, or may sleep for very long times

3. Nutrition

- 0 1 2 3 4 5 Can't eat some foods – has strong reactions to some tastes or textures
- 0 1 2 3 4 5 Craves sugars, fats
- 0 1 2 3 4 5 Needs to eat often
- 0 1 2 3 4 5 Doesn't seem to know when hungry
- 0 1 2 3 4 5 Doesn't seem to know when full, when to stop eating

4. Language and communication

- 0 1 2 3 4 5 Talks better than understands, e.g., may be “off topic” in conversation
- 0 1 2 3 4 5 Confabulates—“Fills in the blanks,” may tell a story that sounds like a lie
- 0 1 2 3 4 5 Has trouble finding words to put on feelings and talking about feelings
- 0 1 2 3 4 5 Doesn't seem to understand, “just doesn't get it”
- 0 1 2 3 4 5 Has difficulty reading or responding to body language
- 0 1 2 3 4 5 Chatty, may talk a lot but have difficulty in a conversation, answering questions

5. Processing pace

- 0 1 2 3 4 5 Listens slowly; often asks “What?” or says “I don't know”
- 0 1 2 3 4 5 Thinks slowly; may take minutes to answer a question -- “Ten-second people in a one-second world”
- 0 1 2 3 4 5 Slow halting speech

(Adapted from: Diagnostic Guide for FAS and Related Conditions, FAS DPN, University of Washington, 1999)

Primary characteristics, continued

Scale: 0=Not assessed 1=No 2=Rarely 3=Sometimes 4=Usually 5=Always

6. Learning and Memory

- 0 1 2 3 4 5 Poor short-term auditory memory; may do one step of three-step directions
- 0 1 2 3 4 5 Says one thing, does another, e.g., "Talks the talk, but doesn't walk the walk"
- 0 1 2 3 4 5 Inconsistent performance: "On" and "off" days, "A" on Monday, "F" on Wednesday
- 0 1 2 3 4 5 Needs to be retaught the same thing many times
- 0 1 2 3 4 5 Learns a rule in one setting, may not apply it in a different place
- 0 1 2 3 4 5 Has trouble remembering and learning from past experiences

7. Abstract thinking

- 0 1 2 3 4 5 Learning math is hard
- 0 1 2 3 4 5 Making change or managing money is difficult
- 0 1 2 3 4 5 Often late; has difficulty planning time, or being on time for appointments
- 0 1 2 3 4 5 Difficulty predicting outcomes, seeing what's coming next
- 0 1 2 3 4 5 Making decisions may be hard

8. Executive functioning

- 0 1 2 3 4 5 Difficulty organizing and planning a day
- 0 1 2 3 4 5 Difficulty getting started or finishing multi-step tasks
- 0 1 2 3 4 5 Setting goals and planning the steps to achieve them is hard
- 0 1 2 3 4 5 Gets "stuck," has difficulty stopping doing something -- "Can't let go" in an argument
- 0 1 2 3 4 5 Has trouble transitioning, shifting gears; may become angry when interrupted
- 0 1 2 3 4 5 Upset by unexpected change in tasks, schedule or routine
- 0 1 2 3 4 5 Upset by changes in environments, e.g., desks or furniture moved, substitute teacher
- 0 1 2 3 4 5 Impulsive, difficulty inhibiting responses
- 0 1 2 3 4 5 Difficulty making links: Hearing into doing, seeing into writing, thinking into talking

9. **Strengths** in some areas may mask underlying challenges. Strengths are often more easily seen when there is no history of trauma or long-term frustration. Strategies for supporting people with FASD build on strengths, interests and talents, rather than deficits.

Interests and talents

Learning strengths

- | | |
|--|---|
| 0 1 2 3 4 5 Creative | 0 1 2 3 4 5 Relational; learns best 1:1, in relationship |
| 0 1 2 3 4 5 Artistic | 0 1 2 3 4 5 Visual learner; learns by being shown better than by being told |
| 0 1 2 3 4 5 Musical | 0 1 2 3 4 5 Auditory learner; reads out loud, repeats things |
| 0 1 2 3 4 5 Mechanically inclined | 0 1 2 3 4 5 Hands-on, concrete, experiential; learns by doing |
| 0 1 2 3 4 5 Athletic | 0 1 2 3 4 5 Kinesthetic; needs to hear, see, touch to learn |
| 0 1 2 3 4 5 Compassionate | 0 1 2 3 4 5 Other strengths and interests: _____ |
| 0 1 2 3 4 5 Poetic | _____ |
| 0 1 2 3 4 5 Generous | _____ |
| 0 1 2 3 4 5 Friendly, outgoing | _____ |
| 0 1 2 3 4 5 Determined | _____ |
| 0 1 2 3 4 5 Wants to please | _____ |
| 0 1 2 3 4 5 Good with younger children | |
| 0 1 2 3 4 5 Good with animals | |
| 0 1 2 3 4 5 Good gardener | |

Secondary behavioral characteristics are normal defensive behaviors that develop over time as a result of chronic frustration, trauma and/or failure, reflecting a “poor fit” between the needs of the person and his or her environment. These are preventable.

Scale: 0=Not assessed 1=No 2=Rarely 3=Sometimes 4=Usually 5=Always

Secondary characteristics:

- 0 1 2 3 4 5 Easily tired, fatigued; may show as overactivity, irritability, and/or tantrums
- 0 1 2 3 4 5 Anxious
- 0 1 2 3 4 5 Lonely, isolated
- 0 1 2 3 4 5 Shut down; flat affect
- 0 1 2 3 4 5 Fearful, withdrawn
- 0 1 2 3 4 5 Depressed
- 0 1 2 3 4 5 Frustrated, short fuse, angry
- 0 1 2 3 4 5 Gets in trouble if easily manipulated and set up by others
- 0 1 2 3 4 5 Self-harming behaviors
- 0 1 2 3 4 5 Avoidant, runs away
- 0 1 2 3 4 5 Remarkable sexual activity; multiple partners; unplanned or teen pregnancy
- 0 1 2 3 4 5 Aggressive
- 0 1 2 3 4 5 Destructive (not due to curiosity or just taking things apart)
- 0 1 2 3 4 5 Disruptive in class or at work, secondary to anxiety or frustration
- 0 1 2 3 4 5 Talks back, is argumentative, secondary to cognitive inflexibility

Tertiary characteristics are the net effect of chronic failure and frustration and are also preventable.

- 0 1 2 3 4 5 Delinquent; criminal involvement
- 0 1 2 3 4 5 Trouble at home
- 0 1 2 3 4 5 Trouble at school or in the community
- 0 1 2 3 4 5 Social services involvement
- 0 1 2 3 4 5 Legal system involvement
- 0 1 2 3 4 5 Alcohol / drug-related problems, addictions
- 0 1 2 3 4 5 Other problems

Common overlapping diagnoses: Multiple diagnoses are common; standard interventions may be ineffective. The greater the number of diagnoses, the stronger the recommendation to assess for underlying neurobehavioral characteristics.

- _____ Failure to Thrive
- _____ Attention Deficit Disorder / Hyperactivity
- _____ Speech and Language Disorder
- _____ Pervasive Developmental Disorder
- _____ Learning Disabled
- _____ Reactive Attachment Disorder
- _____ Post-Traumatic Stress Disorder
- _____ Seriously Emotionally Disturbed
- _____ Conduct Disorder
- _____ Oppositional Defiant Disorder
- _____ Autism Spectrum (ASD)
- _____ Bi-polar
- _____ Borderline Personality Disorder
- _____ Other(s) _____

Screening tool: Discussion

This short neurobehavioral screening tool is not intended for diagnostic purposes. It supports exploration of neurobehavioral characteristics and may be used to increase understanding and as part of a referral process for complete assessments. It has not yet been standardized; numeric equivalents for significance have not been established.

Primary characteristics

In general, findings may be considered positive when there are patterns of threes to fives for primary characteristics on the Likert scale of 0-5. In these cases, referral for a multidisciplinary neurodevelopmental assessment is appropriate. If this resource is unavailable, or in cases where the wait list is long, such patterns indicating positive findings have been used to support the development of accommodations. Using information in this manner gives equal weight to a brain-based alternative explanation for the meaning of behavioral symptoms. Accordingly, providing accommodations prior to formal confirmation is beneficial and will not harm anyone.

In some cases, depending on age or relevance of a particular characteristic, a wide scatter on the Likert scale has been found. The assignment of fours and fives in any of the primary characteristics sections strongly suggest the importance of accommodations and further exploration.

Strengths, interests, talents and learning strengths

It is important that this section be completed. Even though chronic frustration may erode or obscure strengths, taking time to identify relative strengths is an important part of a complete assessment process. Strategies build on strengths.

Secondary and tertiary characteristics and common overlapping diagnoses

Secondary defensive behaviors serve as flags for recognizing settings where there is a poorness of fit. According to research, providing a good fit helps resolve defensive symptoms. In general, but not always, patterns of secondary defensive behaviors are seen more commonly in adolescents and adults with FA/NB, reflecting chronic frustration or failure. Over time, and without accommodations, these patterns may lead to tertiary characteristics.

There seems to be an association between the number and severity of secondary behaviors and the number of diagnoses that have been accumulated. This last section is included to support consideration of the idea that the greater the number of diagnoses, the greater the likelihood that underlying neurobehavioral characteristics have not been identified.

Functional Neurobehavioral Assessment: Fit and accommodations for people with FA/NB

Explanation

This grid is a Functional *Neurobehavioral* Assessment (FNA). It provides a structure for systematically exploring the fit between person and setting, and managing the confusion and complexity associated with the variability of brain-based conditions. The value of this grid is to help clarify where there is a poor fit, identify and build on strengths and create appropriate accommodations, prevent future problems, and improve outcomes. The grid may be used with people of all ages in all settings—home, school, office, clinic, on the job and elsewhere.

Setting: The home, school, or community environment that is being assessed for “fit.”

Chronological age: Since there is typically a significant difference between chronological age and developmental level of functioning, recognizing level of functioning is central for understanding the person and planning appropriate accommodations.

Column 1 – Task or expectation: This asks the question, “What does the person need to do in order to be successful in this setting? What are the expectations for “appropriate behaviors?” This is otherwise known as task analysis.

Column 2 – Brain tasks: Column two asks the question, “What does the brain *need to be able to do* in order to successfully do the task in column one?” This column takes practice to learn to fill out since it requires identification of cognitive tasks that are typically taken for granted.

Column 3 – Primary characteristics FA/NB: To complete this column, refer to the neurobehavioral screening tool. Does this person have difficulty with the cognitive task in column two? For example, if column two identified “fast auditory pace”, and the person was a “5” on the screen for slow cognitive pace, this provides a visual comparison between assumed abilities and neurobehavioral symptoms. In the following case example, there is a poor fit. The grid also clarifies where there is a good fit.

Column 4 – Developmental age (estimate): Developmental level of maturity often varies by task. Factoring actual developmental age rather than chronological age into the analysis is central for understanding and developing appropriate accommodations.

Column 5 – Secondary characteristics FA/NB: Where there is a difference between columns two and three, secondary defensive behaviors are normal reactions to chronic pain and frustration and indicate a poor fit between task and ability. When there is a poor fit between columns two and three, secondary behaviors are common. When there is a good fit between columns two and three, there are typically no secondary symptoms in that area.

Column 6 – Strengths: Strategies build on strengths. Learning style, interests and talents are strengths on which to develop person-specific techniques and accommodations.

Column 7 – Accommodations: The first three columns provide a structure for task analysis, articulating assumptions about brain function and identifying neurobehavioral symptoms of brain dysfunction. Accommodations that create a good fit between person and setting and build on strengths emerge from understanding and are usually simple, inexpensive and effective.

Functional Neurobehavioral Assessment: Fit and accommodations Sample application

Setting: School

Chronological age of the person: 12

| 1. Task or expectation | 2. Brain tasks | 3. Primary characteristics FA/NB | 4. Developmental age (estimate) | 5. Secondary characteristics FA/NB | 6. Strengths | 7. Accommodations |
|-----------------------------|---|--|---------------------------------|--|---|---|
| Sit still and pay attention | Ignore or prioritize sensory stimuli | Difficulty filtering Easily overstimulated | 6 | Agitation | Visual learner | Provide visual cues, Ask |
| Follow the rules | Good memory | Poor memory, difficulty generalizing | 7 | Anger, frustration | Willing | Show, re-teach in different settings |
| Act your age | Developmentally mature, "on time" for chronological age | Dysmature, young for age | 5 | Anxiety, sadness, frustration | Wants to please | Recognize developmental level, provide opportunities for successful socialization |
| Learn from mistakes | Ability to form concepts, integrate new information | Difficulty forming concepts, gets the piece but not the picture, difficulty retrieving and applying stored information | 6 | Anger, confusion, fear, frustration, blame | Concrete, kinesthetic learner, contextual learner | Accept need to reteach, show rather than tell, invite into problem-solving |
| Listen to me | Fast auditory pace | Slow auditory pace | 5 | Agitation, irritation, frustration | Relational | Slow down. Give time. Accept slower pace |

Functional Neurobehavioral Assessment: Fit and accommodations Application

Setting: _____ Chronological age of the person: _____

| 1. Task or expectation | 2. Brain tasks | 3. Primary characteristics FA/NB | 4. Developmental age (estimate) | 5. Secondary characteristics FA/NB | 6. Strengths | 7. Accommodations |
|------------------------------|-------------------|--|---------------------------------------|--|-----------------|----------------------|
| | | | | | | |
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Sample questions to ask potential providers

Professionals vary widely in their understanding of FA/NB, particularly in terms of knowing what FA/NB means as a neurobehavioral condition, and in providing relevant services and accommodations. At this point in time, very few professional curricula adequately address FA/NB, and as a result, few providers have useful information about it. This observation is intended to increase compassion rather than to indict.

The following are a few preliminary questions that may help parents and professionals explore prospective providers' level of understanding, in order to assure compatibility between services and people with FA/NB.

Sample questions to ask providers to determine the appropriateness of a provider or program for working with children with FA/NB:

1. How much information do you have on FA/NB?
(If the answer is "quite a bit" then ask about the training—who, what, where, when. If the answer is "not much," the next question is #2.)
2. Would you be interested in learning more?
(If no, or "I went to one training and know all about it," continue looking for another provider.)
3. How many people with FA/NB have you worked with or diagnosed?
4. What do you think is most important to understand about FA/NB?
(Listen for understanding about the link between brain function and behaviors.)
5. Do you work differently with people with FA/NB? If no, find another provider. If so,
6. *What do you do that is different?*
(Listen for recognizing underlying brain function and accommodations. Listen for building on strengths, working with family systems. Is there a holistic approach to working with the person?)
7. What kind of parenting or professional techniques do you recommend?
(Do interventions target behavioral symptoms, or are behaviors understood from a neurobehavioral perspective? Listen for recommendations for accommodations and advocacy. If medications are considered, are these the first intervention? Or are these considered after accommodations have been in place for 6 months?)
8. Additional questions: