

Treating the Emerging Adult Patient: Rehabilitation or Habilitation?

By Cardwell C. Nuckols, PhD

Emerging adults 18–25 years old are the fastest growing patient population entering alcohol and drug addiction treatment programs. They typically view treatment as a form of punishment imposed by their family, the legal system, or another outside source. It is important for them to see the process as making a positive personal and healthy choice that is a stepping stone toward maturity.

Emerging adults respond best in a peer-to-peer environment. They often come from backgrounds where there was tremendous peer pressure to use alcohol and other drugs. Their use often started around two years earlier than those raised in more enriched environments.¹ Eating disorders, self-injurious behavior and/or sexual promiscuity complicate the clinical picture.

Emerging adults are searching for meaning in life out of the chaos that seems to surround them. They are more open with each other than with older adults. *This is why a safe and trusting environment with peer-to-peer support is so necessary for neurological growth. This growth allows for the development of the ability to deal more effectively and efficiently with the world.*

Strong, bright and talented young adults are frequently confused and frustrated by their inability to achieve life goals. At the same time, they generally are not yet able to appreciate the need to change emotional, attitudinal, and behavioral roadblocks to personal success. Treatment methodology utilized with older adults can be seen as an infringement on their independence and an unwanted extension of parental authority. Programming should be designed to help them overcome barriers to self-determination, meaningful employment, and healthy relationships.

Life is not an on-off switch. It is much more like a positive energy dimmer switch. Think of a switch on the wall that if turned clockwise more and more light enters the room. Now think of life in a similar fashion. The more positive energy put toward preparing oneself for a full life ahead, the better the chances of succeeding. By turning the dimmer switch counter-clockwise, less energy is put into their recovery. When energy is turned down, feelings of depression and accompanying negative self-talk prevail.

Treatment is an invitation into themselves...to discover more about what they truly want...and to create a launching pad from which they will go forth in the world and meet their personal destiny.



Rehabilitation or Habilitation

Rehabilitation means to return one to a former level of successful psychosocial functioning. For example, John graduated from high school and joined the Navy. After deployment, he returned home and married his high school sweetheart. They had two children. John was hired by a local business and was promoted several times. All went well until John's drinking started causing problems at home and on the job. John's treatment (rehabilitation) endeavored to return him to a level of functioning where he was a good husband, father and worker. Hopefully, his recovery helped him gain a better spiritual awareness.

The hand that Mary was dealt was different from the experience of John. She was sexually abused by her father and started drinking and using drugs at the age of twelve years old. During her adolescence, she spent time in a juvenile criminal justice facility and never graduated from high school. Now at the age of 23 years old, she is entering her third treatment program. What can Mary be rehabbed to? She has never matured into a formalized thinker capable of dealing with the complexity of the world around her. Although she is intelligent and talented, there is no history of prosocial functioning and one can imagine what her resume might look like. Mary needs habilitation with "wrap around" services. Without a safe, drug free environment, and without the help of a surrogate family (therapist, sponsor and home group, big brother or sister, church group, mentor, etc.), her chances of maturing into a well-functioning adult are guarded.

Due to Mary's non-enriched environmental upbringing, the newest area of her brain -- the prefrontal cortex — may not have developed properly. Because of neuroplasticity, exposing her to enriched environments with positive role models can help her develop an adult-like functional prefrontal cortex.

The Neurobiology of Change

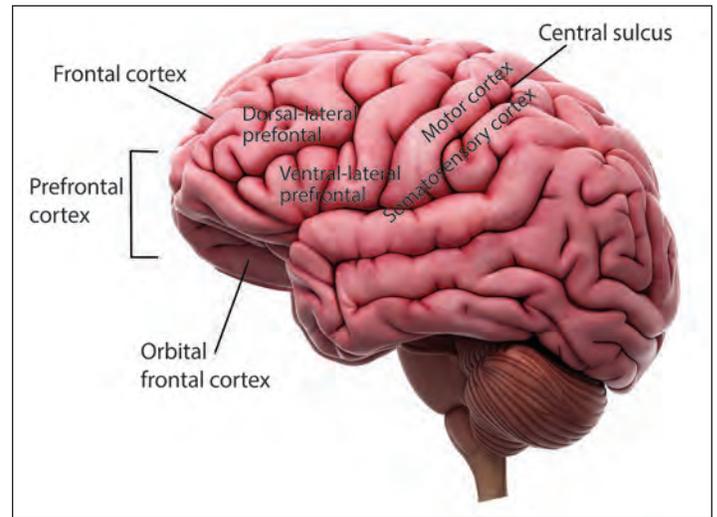
Beneath the exterior changes in thinking, feeling, and behavior are transformations in neurobiology. These neuroplastic changes in the prefrontal cortex can allow persons such as Mary to have better control over emotions, think in a more adult-like fashion and have an opportunity for healthier relationships. Prefrontal cortical plasticity allows for long-lasting changes to take place in neuronal circuitry and information processing. These changes are caused by learning and experience.²

The prefrontal cortex is a sophisticated area of the brain and, over time, allows one to think in a formalized fashion utilizing executive functioning. This area of the brain also allows for the attachment bonds so critical to healthy relationships. Affective or emotional stability is also a key aspect of becoming an adult. In other words, without a well-developed prefrontal cortex maintaining a relationship, raising a family and holding a job will be difficult at best.

In an enriching environment, the prefrontal cortex takes around 25 years to fully develop. When abuse and/or neglect occur during the early formative years, the prefrontal cortex may be immature in its development. Adding alcohol and other drugs of abuse can further complicate development.³

The brain functions best when there is top-down regulation of the impulses and urges of the bottom part of the brain. The desired formula is prefrontal cortex (inhibition) over midbrain and brain stem (excitation). When the prefrontal cortex is well developed, reasoning can override impulsivity, leading to better choices in life. By reducing impulsivity, the areas of the prefrontal cortex can plan for positive outcomes, allowing for better self-regulation, and the ability to manage the complexities of the world.

There are three areas of the brain that make up what is anatomically termed the prefrontal cortex. These integrated areas are the *dorsolateral prefrontal cortex*, the *orbitofrontal cortex* and the *anterior cingulate gyrus*. In the following paragraphs, brief descriptions of the functions of these areas along with how such stressors as early life developmental trauma and early onset alcohol and other drug use can lead to disruption of the natural trajectory of prefrontal maturity are described. Clinical suggestions helpful in the facilitation of neurogenesis and maturation are also listed.



NOTE: The *dorsolateral prefrontal* and the *orbitofrontal cortex* are pictured above. The *anterior cingulate gyrus* lies beneath the outer cortex and is not displayed.

The *dorsolateral prefrontal cortex* is intimately involved in the areas of morality and executive functioning.⁴ For example, a 7-year-old child cannot solve a pre-algebra problem, whereas an 11- or 12-year-old can usually comprehend an abstract concept such as "x." Throughout adolescence and young adulthood, one's capacity to analyze, abstract, make plans, inhibit impulses, and delay gratification are developed and refined. Developmental immaturity of the *dorsolateral prefrontal cortex* can impair the ability to perform age appropriate skills such as caring for your family and growing professionally.

In order to aid in the habilitation process, multiple modalities can be utilized to enhance executive functioning. For example, problem solving exercises, reading comprehension practices, and skills development through art and activities therapies, along with the following can be helpful:

- Write a job resume and have the group give feedback.
- Practice dressing and interviewing for a job.
 - The interviewer will use a standard set of questions which the patient will answer in front of the group.
 - Group feedback encouraged.
- Develop skills.
 - Experimenting with several opportunities to develop an interest or hobby, such as photography, cooking, painting, drawing, or using multiple mediums.
- Complete puzzles, such as jig saw puzzles or cross word puzzles.
- Play certain computer games that are nonviolent but demand attention, planning and delayed gratification.
- Use puzzles and computer games that are competitive in nature leading to a discussion on winning and losing.
- Utilize cognitive schools of therapy.

- Examine their interpretation of their favorite lyric of their favorite song and discuss in group.
- Have the group make their own instruments and write their own recovery song to be performed at community meeting or graduation.

The *orbitofrontal cortex* (especially the right hemisphere) allows for top-down control of emotions.⁵ This area of the brain also weighs risk versus benefit. Is the risk we might take worth the possible positive outcome of our actions? Should I use and get immediate gratification or should I continue to pursue my scholastic development in order to reach life goals?

Affective control and the development of the *orbitofrontal cortex* can be facilitated utilizing role play, forms of self-regulation, an introduction to spiritual practices, anger management techniques, and development of a behavioral safety plan (a 3 x 5" index card with positive behaviors chosen by the patient that serve as sources of external grounding). Below is an example of a safety plan. When experiencing a craving or other strong negative emotional state, the patient is taught to immediately read his or her card and choose a behavior to implement.

The patient can add a prayer or motivational message to the back of the card. If the patient is externally motivated, a picture representing the motivation can be placed in the upper corner of the card (example: "If I test positive for cocaine again the state will take my child away from me" can become visual as a small photo of the child).



NOTE: The card must be with the patient at all times, such as in his or her purse or wallet and on a bedside table at night. Reading and following the instructions on the card causes more blood flow to the orbitofrontal cortex and reduces flow to the amygdala in the midbrain.

Other examples that might be utilized to assist the patient in developing better top down control of emotions include:

- Role play
 - Work on managing potential relapse and craving situations
 - People, Places and Things (PPT) group
- Anger management
 - Practice saying, "When I get angry I give up control to the person I claim is making me angry."
 - Alternate responses using situational role play

- Spiritual
 - Each day a patient reads from a chosen passage from a spiritual text of their choice (AA, NA, Bible, Torah, Koran, Bhagavad Gita, Tao, etc.). Group discussion with personalization follows the reading.
- Introduction to meditation and self-regulation practices
- Opportunities to experience these practices and the outcomes during group or individual therapy
- Qualifying-writing and reading your story-experience, hope and expectations
- List triggering behaviors that precipitate anger and/or aggressive behavior and discuss and role play alternate scenarios

The *anterior cingulate gyrus* is a part of the attachment system and is critical for positive relationships such as choosing and maintaining a marriage partner. The structures that make up the middle pre-frontal cortex (the orbitofrontal cortex and the anterior cingulate) make up the social brain.⁶

Young children need to develop a relationship with at least one primary caregiver in order for their social and emotional development to transpire normally. During the first two years, how parents or caregivers respond to their infant establishes the type of pattern of attachment the child forms. As an adult, these patterns will guide feelings, thoughts and expectations in future relationships.

Emotional-relational-social experiences processed before the brain structures that can process experience consciously are fully mature (before 2½–3 years of age) are stored in implicit memory. Implicit memory is outside of awareness. Research has proven that attachment patterns become stabilize by 12–18 months of age. Therefore, they are stable before we have any choice in the matter.⁷ Fortunately, neuroplasticity allows for these patterns and schemas to change secondary to new relational experiences.

Some other opportunities to develop relational skills are as follows:

- Group oriented therapeutic exercises
- Communication skills building exercises
- Ropes course
- Equine therapy
- Choosing a good sponsor and home group
- Transference relationship with their therapist
- Genograms exploring family attachment histories

When parents are absent and/or abusive, insecure patterns of attachment can develop. The therapeutic relationship and the creation of a therapeutic milieu are the tools used to help the patient experience and form better attachment styles.

Creating an Enriched Environment

Fair and consistent relationships within a healing milieu can help the individual experience healthy attachment. This may be the greatest of gifts as most of the patients in need of habilitation have never experienced a predictable, enriched environment. The trust developed within such a setting allows for honest interchange with staff and fellow patients.

Predictability comes from the patients experience of fairness and consistency. It is directly related to the setting of limits. These limits or rules must be fair and all staff members must be consistent in their response to violation of program rules. If staff members are not on the same page, a non-enriched environment (like the one the patient came from) will exist and patients will "act-out" while staff may "burn out."



Rules that are strict and authoritarian can lead to increased patient anxiety and impulsive behavioral acting-out. When limits are too loose, it is very difficult to get the patient under control. A fair and consistent set of limits creates an environment where the prefrontal cortex can resume normal development along its natural trajectory.

Conclusion

Patients in need of habilitation need safety and quality relationships over time to allow for neurogenesis to take place. The process starts in as little as two minutes with the initial development of synapses and dendrites but may require years in order to give the patient the opportunity to develop a mature, fully functional prefrontal cortex. Typically, “wrap around” services such as recovery housing, educational and vocational support are important to the process. The patient now has the opportunity to succeed in the important areas of their lives — personal, professional and relational.



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(Endnotes)

- ¹Waldrop, A. E., Santa Ana, E., Saladin, M., McRae, A. and Brady, K. (2007) Differences in Early Onset Alcohol Use and Heavy Drinking Among Persons with Childhood and Adulthood Trauma. *The American Journal on Addictions*, 16(6), 439-442.
- ²Kuboshima-Amemori, S., & Sawaguchi, T. (2007). Plasticity of the Primate Prefrontal Cortex. *The Neuroscientist*, 13(3), 229-240.
- ³Crews, F., He, J., & Hodge, C. (2007). Adolescent Cortical Development: A Critical Period of Vulnerability for Addiction. *Pharmacology, Biochemistry and Behavior*, 86(2), 189-199.
- ⁴Boytek, B. (2013, December 11). Neuroanatomy: What are the primary functions of the dorsolateral prefrontal cortex? Retrieved from <https://www.quora.com/Neuroanatomy-What-are-the-primary-functions-of-the-dorsolateral-prefrontal-cortex>.
- ⁵Rolls, E. & Grabenhorst, F. (2008). The Orbitofrontal Cortex and Beyond: From Affect to Decision Making, *Progress in Neurobiology*, 86(3), 216-244.
- ⁶Graham, L (2008). The Neuroscience of Attachment. Retrieved from <https://lindagraham-mft.net/resources/published-articles/the-neuroscience-of-attachment>
- ⁷Ibid.

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Services Administration’s new Chief Medical Officer, has proposed a focus on enhanced access to inpatient psychiatric treatment and access to psychiatric medications and a decreased emphasis on community education and recovery support services. Her appointment and declared focus could signal potential abandonment, or a marked reduction in, efforts to develop long-term, community-based recovery support systems for persons experiencing mental health and/or substance use disorders.¹²

Collectively, these eight concerns reflect not the arrival of bold new leadership and innovative ideas, but an erosion of expertise and policy regressions that will exert potentially prolonged harm to individuals, families, and communities. Every effort must be made to resist and counter these policy directions. It is time for the more than 23 million Americans in recovery and their families to speak out on these issues regardless of their broader political affiliations.



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(Endnotes)

- ¹Colvin, J. (2017, March 29). Trump, Christie Pledge to Combat Nation’s Opioid Addiction. *U.S. News and World Report*. Retrieved from <https://www.usnews.com/news/best-states/washington-dc/articles/2017-03-29/christie-trump-to-launch-drug-addiction-task-force>.
- ²Humphreys, K. (2016, December 8). The big problem with Donald Trump’s big idea for stopping the flow of illegal drugs. *The Washington Post*. Retrieved from https://www.washingtonpost.com/news/wonk/wp/2016/12/08/the-big-problem-with-donald-trumps-big-idea-for-stopping-the-flow-of-illegal-drugs/?utm_term=.3b603299885e.

- ³Lema, K. & Mogato, M. (2016, October 1). Philippines’ Duterte likens himself to Hitler, wants to kill millions of drug users. *Reuters*. Retrieved from <http://www.reuters.com/article/us-philippines-duterte-hitler-idUSKCN1200B9>.
- ⁴Church v. state in the Philippines’ war. (2017, May 11). *The Economist*. Retrieved from <https://www.economist.com/news/asia/21721907-state-winning-church-v-state-philippines-war-drugs>.
- ⁵O’Donnell, K. (2017, March 29). Opioid Epidemic: Trump to Set Up Commission on Addiction Crisis. *NBC News*. Retrieved from <http://www.nbcnews.com/storyline/americas-heroin-epidemic/opioid-epidemic-trump-set-commission-addiction-crisis-sources-say-n739861>.
- ⁶U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, *Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health*. Washington DC, HHS, November 2016.
- ⁷Zezima, K. & Ingraham, C. (2017, March 9). GOP healthcare-bill would drop addiction treatment mandate covering 1.3 million Americans. *The Washington Post*. Retrieved from https://www.washingtonpost.com/news/wonk/wp/2017/03/09/gop-health-care-bill-would-drop-mental-health-coverage-mandate-covering-1-3-million-americans/?utm_term=.c7feb64ad438.
- ⁸Williams, P. (2017, May 12). Attorney General Sessions Orders Tougher Drug Crime Prosecutions. *NBC News*. Retrieved from <http://www.nbcnews.com/news/us-news/attorney-general-sessions-orders-tougher-drug-crime-prosecutions-n758111>.
- ⁹Hopkins, C. (2017, February 23). Private Prisons Back in Mix for Federal Inmates as Sessions Rescinds Order. *NPR*. Retrieved from <http://www.npr.org/sections/thetwo-way/2017/02/23/516916688/private-prisons-back-in-mix-for-federal-inmates-as-sessions-rescinds-order>.
- ¹⁰Alexander, M. (2010). *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press.
- ¹¹Eyre, E. (2017, May 9). Trump officials seek opioid solutions in WV. *Charleston Gazette-Mail*. Retrieved from <http://www.wvgazette.com/news-health/20170509/trump-officials-look-for-opioid-solutions-in-wv>.
- ¹²Keshavan, M. (2017, May 11). Trump’s pick to run mental health is poised to shake things up. Even some liberals can’t wait. *STAT*. Retrieved from <https://www.statnews.com/2017/05/11/mental-health-trump-nomination>.