

Neuro-Connections Are Made for Success: Rewiring the Brain after Injury

Mr. Kyle Ainsworth-Zufelt and Dr. Sue Wolf



Outcomes of This Session:

- Highlight a unique and innovative intensive program offered only in AZ to support youth to succeed in Transition after brain injury
- Increased awareness of the "realistic" types of supports needed for youth to succeed after cognitive impairment in early childhood
- Understand strategies for setting authentic goals and attaining them through comprehensive programming for youth and families
- Justify a need to rewire the brain's connections after injury to obtain successful outcomes in transition and adulthood



I. Brain Injury Impacts

II. Kyle's Story

III. Program Supports

IV. Success

Brain Injury Impacts: Findings from Research for Survivors

- Brain injury is the leading cause of death and disability in children in the United States.¹
- Disruptions in neurodevelopment due to brain injury (any type) have been shown to negatively affect future outcomes of (1) behavior, (2) emotions, and (3) cognition in both adolescents and adults.^{2,3,4,5}
- Outcomes and quality of life are worse for more severe injuries (diffuse and focal) and those involving the frontal lobes.⁶
- Brain injury in young children can result in arrested development (e.g., significant delays in typical neurodevelopment).⁷



Brain Injury Impacts: Findings from Research for Survivors

- Problems with thinking usually present themselves during the school years due to the task demands of education, including difficulty with:
 - Attention and concentration
 - All types of memory
 - Speed of processing (expressive and receptive, auditory and visual)
 - Language, literacy and mathematics skills
 - Executive functions (planning, sequencing, organizing problem solving)^{8,9,10}
- Disruptions in early neurodevelopment also results in behavioral issues with tendencies toward substance abuse, unemployment, and criminal activity and a greater likelihood of psychosocial and psychiatric issues in adolescence and adulthood.^{11,12}

Brain Injury Impacts: Findings from Research for Families

- Challenges with post-injury behaviors on the part of the survivor...
 - Depression, anxiety, and self-harming
 - Aggression, hyperactivity, and mood disorders
 - Poor self-esteem and low self-confidence
 - Poor self-regulation, poor social problem solving, poor adaptive behaviors
 - Loneliness, grief and loss
 - Withdrawal, isolation, suicidal ideation and attempts¹³
- ...impact not only the injured youth but also the family (parents, siblings, extended family) as a whole.^{14,15}

Brain Injury Impacts: Findings from Research for Families

- **The challenges that parents face are:**
 1. **Understanding behaviors** after brain injury
 2. **Limited awareness of the impacts** of brain injury now and into the future
 3. **Maladaptive interactions** or having different parenting styles
 4. **Increased stressors**
 5. **Reduced family cohesion** ^{16,17,18,19}



Brain Injury Impacts: Findings from Research for Families

- **For families engaged with their youth in the Pilot Program, several first year findings are of importance. Parents present with issues as well:**
 - (1) Many believe that their child/youth will “catch up” developmentally to his or her typical peers.
 - (2) Many think their child/youth will eventually “make it” socially.
 - (3) Some continue to believe that “parent burnout” is only temporary.
 - (4) Some parents are not receptive to psychosocial therapies for themselves.
 - (5) Parents who present as rigid, resistant, impatient and unrealistic were more likely to experience dysfunctional outcomes.
 - (6) **Unsuccessful parenting strategies need support, focus, and intervention** in order not to hinder the strategies that youth need to be successful. ¹⁵

Brain Injury Impacts: The AZ Governor’s Council on Spinal & Head Injuries Trust-funded VR Youth with Brain Injury Transition Pilot Program

- A vocational rehabilitation (VR) program was developed as a response to transition needs – the program assists youth with brain injuries to gain the confidence and acquire the competencies to successfully transition to adulthood and the world of work.
- This pilot program is the only program of its kind currently operating in the United States.
- Goal of the YBITPP is to offer youth with brain injuries (having completed freshman year in HS) an opportunity to have up to **four years of comprehensive, neuro-rehabilitation** to prepare them to be successful in employment, post-secondary education, or skills training
- Eligibility for youth (ages 14-22) is based on economic need and the capacity to participate in the program based on individualized assessments.



Brain Injury Impacts:

Findings from the AZ Governor's Council on Spinal & Head Injuries Trust-funded VR Pilot Program for Youth

- This **vocational rehabilitation program** is offered by four comprehensive neuro-rehabilitation providers under contract with DES/Rehabilitation Services Administration
 - **Center for Transitional Neurorehabilitation (CTN)**
 - **Rehab without Walls (RWW)**
 - **SouthWest Advanced Neurorehabilitation (SWAN)**
 - **Arizona Neurorehabilitation (AzN)**
- Includes the development of an **Individualized Plan for Employment (IEP)** created with the youth and family based on assets and strengths and interests of the client
- **Program oversight** and contact is through **Kathleen Cady**, RSA Brain Injury Consultant (KCady@azdes.gov) and **Ann Tarpy**, ED of the Governor's Council (ATarpy@azdes.gov)

II. Kyle's Story



Kyle's Story

- **His Family**
- **His Injuries**
- **His School Experience**
- **Challenges and Life Prior to YBITPP**

Kyle's Story

- The YBITPP Program Intake
- Actions within the YBITPP
- Things Kyle Learned About Himself
- Strategies He Learned for His Success

III. Program Supports



P. Klonoff (2015)

Working to Empower Youth for Success

- Dr. Pam Klonoff, Clinical Director and neuropsychologist at CTN, shared several insights about YBITPP that are important for understanding success.
- It was evident that youth presented with significant needs.
 - Intensive psychotherapy to address “arrested development” and “re-raise” youth through appropriate developmental phases
 - Medications to address distractability, emotional lability, anxiety, and depression
 - Psychoeducational techniques (logs, data-driven expectations, contracts)
 - Focused work on social behaviors and communication pragmatics
 - Regular staffings to reinforce commitment, plans, self-discipline, and follow-through and allow the youth to self-advocate and self-reflect
 - Situational assessments, work skill evaluations, feedback, and social outings
 - Collaborative Monthly meetings with VR Counselor & the ED of the Council

Working to Empower Parents for Success

- Families have significant needs too.
 - Intensive psycho-educational and emotional support of families to address grief, loss, frustration, denial, guilt, limited resources
 - Offer coping techniques to parents (avoid personalization, clarify identity and roles)
 - Move from finding “cures” to embracing “compensations”
 - Delegate responsibilities to the identified “tiers of support”
 - Referral to psychotherapy for dysfunctional patterns
 - Utilize social workers for community resources
 - Offer reading materials to help families better understand brain injury and their family’s future

Working to Empower Parents for Success

- “Coping” strategies and skills are offered to parents to improve outcomes.
 - Provide tools to help family members understand neuro-developmental phases, normal aging, separation, and individuation
 - Offer stress reduction techniques
 - Address ‘ambiguous loss’, grief, mourning
 - Teach families how to find meaning in suffering
 - Embrace “realism” over expectations
 - Practice “Letting Go” and moving toward a “new normal”
 - Teach parents about rewiring strategies that youth needed (logs, datebooks, assistive technology) to achieve success
 - Bolster parental supervision skills (internet, smartphone use)
 - Help youth find healthy social outlets (church, community, sports)

IV. Kyle’s Success



Q&A and NEXT STEPS

Kyle's Plans for His Future

**VR "Youth with Brain Injury
Transition Pilot Program"
Plans for the Future**


