

Interdisciplinary Team Approach

What is an interdisciplinary team approach to recovery?

An interdisciplinary therapy team approach to rehabilitation draws from two or more therapy disciplines – integrating them together in the pursuit of recovery. This approach develops a greater understanding of an individual’s complex and wide-ranging issues following a traumatic brain injury, and more importantly, the therapy results are greater than the sum of each discipline implemented individually.

To illustrate the advantages of this approach, we have documented four Rainbow client rehabilitation stories focused on each person’s therapy. The stories are unique, but the results of combined therapies and an integrated team approach yielded superior results in each of the following cases.

Case Study #1 - Betty Korte

February 2007 – Betty is an independent, vibrant 73-year-old, married to Ralph, the man she loves and her second husband of 35 years. She has three children, three grandchildren and three great grandchildren. But on February 11, her life changed drastically when she was in a car accident that left her injured with multiple fractures. After receiving acute care, Betty transferred to an inpatient rehabilitation center close to home. After weeks of therapy, she was having a very difficult time getting out of bed, was wheelchair bound and unable to progress in physical therapy sessions. She felt ill and had completely lost her self-confidence. Her lack of success caused an extreme amount of anxiety and her first response to therapy quickly became, “I can’t do that.”

After two months of unsuccessful treatment, Betty’s case manager felt she needed a change. She wanted her to try Rainbow’s “interdisciplinary team approach” to therapy. As it turned out, receiving therapy with a professional team focused on meeting her unique needs was exactly what Betty needed.

Betty did not have a brain injury, but she did have serious orthopedic issues, severe pain and medical conditions, including colitis. Marianne Knox, the admission coordinator assigned to Betty’s case, met with Betty and her husband, Ralph. Marianne evaluated Betty and produced a plan of care based on her assessment, medical records and Betty’s physician prescription. After selecting Rainbow’s NeuroRehab Campus as the appropriate treatment center and residential home, her therapy team was



assigned – physical therapists, occupational therapists, a Rainbow case manager and nurses.

For someone who is neurologically intact and has not incurred a brain injury, the treatment process can be less complex. Eliminating the need for adaptive cognitive strategies allowed Betty’s therapy team to strategically focus on improving her range of motion, overall strength, stability and balance. This became Betty’s daily rehabilitation.

As Betty worked with her therapists, she grew to trust them, and her confidence increased, translating into a more positive outlook. There was regular communication between her therapists on a daily basis and formal monthly team meetings. When Betty was tired or in pain, her therapists would communicate that information, and Betty would receive pain management following the therapy session. If necessary, therapies would be rescheduled later in the day, enabling her to rest. “We cater to our clients’ needs or issues,” stated Gaurav Rainbow, an occupational therapist. “If Betty needed a break or pain management, such as a hot pack, ice pack or pain medication, that need was communicated to nursing. After receiving treatment for pain, Betty felt better and could participate in therapy. When clients have varied needs, the interdisciplinary team approach becomes invaluable.” Within a short period of time, Betty grew stronger and was able to handle back-to-back therapy sessions.

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On September 27, only four months after admitting to Rainbow, Betty was ready to go home. Unfortunately, she had to wait until her house renovations were complete, but when her home received a passing grade, her discharge was quick.

When Betty arrived at Rainbow's NeuroRehab Campus, she needed assistance to stand and was unable to ambulate. When she left, she was able to walk with a cane and could handle almost all of her daily living tasks independently. The Rainbow team is always grateful to see clients progress and return home. Betty is well on her way to complete independence, and more importantly, she is happy with her outcome.

Case Study #2 - Tom Chadwick

March 1987 – Thirteen-year-old Tom Chadwick stepped out of his school bus and was struck by a car. He incurred a severe traumatic brain injury and initially did not have funding for rehabilitation services. It would be years before funding became available, and during that time, Tom lived with his parents. In 1994, his mother passed away and Tom's father became the primary caregiver. In June of 1998, Tom was admitted to Rainbow. It was the first formal therapy he had received in more than 10 years following his brain injury.

During this time, Tom suffered from seizures almost every other day. He was extremely thin and had very little stamina. In February of 1999, he was sent for a Wada test, which examines language and memory on one side of the brain at a time. This was done to assess his candidacy for surgical relief for his seizure disorder. Deemed a good candidate in June of 2000, Tom underwent a right anterior temporal lobectomy. This surgery was successful and substantially reduced his seizure activity.

After his surgery, Tom began to make great strides in therapy and rehabilitation as a whole. He was better able to focus, pay attention and voice his needs. He had increased learning retention, memory and physical tolerance. Unfortunately, his increased awareness had a negative side effect – Tom easily became agitated and irritable. There was a noticeable decline in his emotional tolerance and an increase in verbal outbursts. Sometimes, he would become extremely angry, and it was difficult to identify the triggers of these episodes. Rainbow's mental health specialists discovered that with Tom's newly acquired awareness, he perceived many circumstances as injustices and felt he deserved to be the center of attention at all times. If he wasn't, he acted out.

According to Kathleen Sobczak, Tom's former case manager

at Rainbow, "Tom was overwhelmed by too much auditory and visual stimulation, causing him to become distracted by his own thoughts. Tom couldn't figure out why he had such negative emotions – he couldn't put his finger on what was making him upset."

In addition to his behaviors, Tom was not receiving the support he needed at home. Living with his father, he was given little opportunity to work on his newly acquired skills. According to Tom's neuropsychological evaluation, his father stated, "I just don't have the patience ...it's easier to do it myself." Tom's father was also struggling with health issues. With increased awareness and lack of consistency from therapy to home, Tom found it very difficult to control his temper. It became essential that the therapy team work together to help him overcome his negative behaviors and bring his family on board so he had consistency.

How Tom, his therapy team and family put it all together ...

In January 2007, Tom's sister Lori assumed responsibility for his care. She moved in with Tom after their father passed away. This caused a great disruption in his daily routine. Rainbow's mental health specialists implemented anger management sessions and worked with Tom to accurately identify signs of anger along with appropriate coping skills. In addition, Tom's sister began to restrict TV and video games when he had outbursts. One technique his therapists used was to play to Tom's strengths – since he found satisfaction in helping others, his team realized that asking him to assist with a task would also help him cope with anger.

Lines of communication

The communication between the treatment team and family is critical to success and is handled formally through focus meetings – but there is also a tremendous amount of informal communication. Depending on what therapies are planned daily, Tom's therapists pass along critical information to make sure each session is successful. He also has a rehabilitation assistant (Raena) that personally works with him. She knows when Tom is heading toward an outburst or when Tom needs additional assistance. In addition, Tom's family wants the therapy team to call whenever something happens so that his rewards and restrictions are reinforced at home. "The family has been phenomenal in trying to reinforce the reward system at home that we use during therapy," said Kathleen Sobczak. "This has been crucial to Tom's success."

One of Tom's biggest gains has been to follow his own schedule, which he worked on with speech language pathologists

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(SLPs). “Prior to his surgery, Tom was on complete and utter autopilot,” said Angie McCalla, SLP. “When he first came to Rainbow, he would not even enter a room by himself. He would stand at the threshold near the door and rock back and forth until you physically moved him forward. Now, Tom can handle his own schedule.” Tom has made huge gains in handling social situations and is now able to initiate quality interactions with his peers.

Tom still gets frustrated but is better able to control his outbursts. Transition and flexibility are still difficult concepts for him to grasp and his therapy team continuously makes minor adjustments so he slowly becomes accustomed to change. As he faces new challenges, the support of his therapy team and his family’s consistency at home will continue to be vital. For now, Tom’s active therapy is continuing, and with consistent programming, he is continuing to make substantial rehabilitation gains.

Case Study #3 - Jake Kepler

August 2004 – Jake Kepler was 19 years old when he was involved in a rollover car accident. For two days, he was suspended by his seat belt upside down until he was found and transported to the hospital. He had trauma to the head and a soft-tissue injury across his entire abdomen.

Jake was admitted to Rainbow after a two-week hospital stay to receive occupational, physical, speech and mental health services. Rainbow’s mental health specialists thought he had ability to successfully rehabilitate, but Jake was not committed to treatment – he just wanted his physical wounds to heal. After three months of therapies and medical treatment, Jake left Rainbow’s program.

Jake kept in touch with his mental health counselor at Rainbow and decided to again try rehabilitation for a second time. Jake admitted to Rainbow and his therapy had a completely different focus, no longer concentrating on wound care and medical treatment. He needed a very structured program to move forward with rehabilitation. The structured environment in Rainbow’s Residential Program was very different from what Jake was accustomed to, and he wasn’t ready to commit. After only two months, he signed out against medical advice.

Again, Jake kept in touch with his Rainbow mental health counselor and reported having problems related to his brain injury. He couldn’t multi-task or concentrate and was surprised at how hard it was to perform in his work environment. In 2006, Jake received information about Rainbow’s Garden City

Apartment Program and wanted to come back to Rainbow. This program is structured to support individuals with brain injuries while living with their family or loved one. Jake liked the idea of receiving supports while living with his girlfriend, but the Rainbow team did not think he was ready for this level of independence. They told him he needed to learn how to maintain a job and appropriately structure free time before he could handle this level of independent living. In March of 2007, Jake re-admitted to Rainbow. This time, he was committed to advancing through the rehabilitation process.

Jake’s original neuropsychological evaluation documented cognitive deficiencies, especially memory. Joe Welch, a Rainbow behavioral analyst assigned to Jake’s therapy team, didn’t think that assessment matched what Jake demonstrated during therapy. He thought Jake could be successful in advancing to independent-living skills. According to Joe, “He [Jake] didn’t think he was skilled. But, bottom line, Mr. Kepler stepped up to every challenge this therapist put in front of him, building his confidence on his own.”

Jake worked on anxiety issues, memory problems and scheduling in his speech-therapy sessions. Since he never kept any kind of schedule, it was very hard for him to plan his days. But with a lot of tenacity and hard work, Jake is now able to hold down a job at a local grocery store. He secured this position with the help of vocational and occupational therapists. Before he was offered the job, Jake went to two interviews. During therapy sessions, he practiced interview questions followed by skill-building sessions. According to Kerri Torzewski, speech language pathologist, “Jake learns through repetition. He was really worried about starting his job at the grocery store, so we visited the store before his start date and went through various tasks such as how to read tags and what to expect. We did this to decrease his anxiety.”

According to Julie Slauterbeck, Rainbow vocational specialist, “I told Jake that he is smarter than he thinks. He suffers from a lack of confidence, so working at job where he’s able to excel is a real confidence builder. Jake still needs to learn how to reduce his anxiety and set some good goals. I believe that he will continue to excel, but he needs a lot of support, praise and reassurance that he is doing a good job. We, his therapy team, have become his supportive family.”

His interdisciplinary team feels it will take additional structured counseling and programming along with speech, occupational and vocational therapy before Jake is ready for his next step

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toward independence. In the meantime, his goal to live with his girlfriend is alive and well, and he is working hard along with the support of his interdisciplinary team to build independent-living skills.

Case Study #4 - Renee Darga

November 2002 – Renee was a high school senior living in Rogers City, Michigan, when she was involved in a serious motor vehicle accident. During the collision, Renee was thrown from the backseat into the front of the car. She was extricated from under the dashboard by rescue workers and taken to Alpena General Hospital. Her Glasgow Coma Scale measured just four, indicating she had incurred a severe traumatic brain injury. After a total of five months in three different hospital settings, Renee was admitted to Rainbow in March of 2003.

When Renee began her rehabilitation, she was completely dependent on staff for all her needs. She could not sit or hold her head straight, and her right arm and leg were essentially nonfunctional. She had limited muscle control, was unable to feed herself and could not communicate. Renee's prognosis was bleak – her treating physician said she would not rehabilitate. She would not go to college, live independently or even be able to care for her own basic needs. According to her neuropsychological evaluation, Renee had severe cognitive deficits.

That was a very difficult time for her parents, and the prognosis was a big hurdle for her interdisciplinary therapy team. Though doctors must provide a realistic picture, nobody can accurately predict the future. Renee's treatment team immediately began intensive physical, occupational and speech therapy.

It didn't take long for Renee to become the perfect example of interdisciplinary team success. Initially, she received co-treatments, which are simultaneous treatments by two therapy disciplines used to optimize therapy outcomes. There was carryover between therapies to produce consistency throughout her regimen. Renee thrived with this structure.

How Renee progressed ...

Since her arrival at Rainbow almost five year ago, Renee's therapy gains have been substantial. When she began physical therapy (PT), her therapists began with rolling and fully supported sitting, then independent sitting. About three months after her admission to Rainbow, Renee had tendon-release surgery. This was an important step in her recovery because she could now

progress to standing during her therapy sessions. Another surgery would later follow to provide her with increased ankle movement.

Renee also received neuro-dynamic therapy (NDT) from occupational and physical therapists. One of the basic concepts of NDT is the idea that all aspects of the person – sensory/perceptual, emotional, psychological and physical – must be considered during recovery and treatment. The therapists used NDT techniques to obtain normalization of tone on her right side along with normal movement patterns, which they integrated into her daily functional activities. One of Renee's biggest challenges was using her right side symmetrically with her stronger left side. The therapists took advantage of their NDT training and facilitated use of both sides of her body in a symmetrical manner during daily activities such as transfers, standing and walking.

Renee received intensive speech therapy, focused on bringing her from a nonverbal state to speaking and from not being able to eat to consuming a regular diet. When she was first admitted, she was unable to consistently follow commands and responded to pain with simple vocalizations. Now, she can effectively communicate not only her needs but her opinions and feelings as well, as she continues to work on clarity and inflection.

Aquatic therapy was added to Renee's rehabilitation when she was ready. Again, co-treatments were implemented with an occupational therapist and kinesiologist. Aquatics is an extremely effective therapy for impaired individuals because swimming is a full-body activity, and water buoyancy makes exercising an almost non-weight-bearing activity. Renee progressed from simple movements to nearly independent swimming and currently is working on integrating breath skills to her stroke.

Strong gains in rehabilitation ...

During her rehabilitation, Renee earned her high school diploma and is continuing to working on coping strategies. "Renee is an incredibly hard worker," stated Jenny Auty, Rainbow kinesiologist. "Renee went to school while receiving full therapy sessions. She would get up at 5:30 a.m., go to school, come to Rainbow's treatment center for therapy and then do her homework. It was amazing to see someone with a severe traumatic brain injury able to handle that workload."

Renee now lives at Rainbow's Garden City Apartments and works at RipCo, a sheltered workshop. She has progressed to working with recreational therapists on using public transportation and identifying some leisure interests.

While Renee has shown vast rehabilitation gains, she continues

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to require the services of a guardian and must be monitored in her apartment. Often, individuals with severe TBIs make substantial rehabilitation gains but still will require a lifetime of supports. Until her gains level off, she will continue to pursue her long-term goals, which include working in the community, attending college and living as independently as possible.

“In the last few years Renee has grown into an adult and regained so many functions,” stated Jenny D’Angela, Rainbow mental health counselor. “She has learned to speak again and has gone from a wheelchair to using a walker independently. Her treatment team thinks she’s pretty amazing.”

Putting it all together ...

As these four case studies illustrate, Rainbow’s team approach to rehabilitation is pivotal to individual therapy successes. By taking a “big-picture” approach to rehabilitation and bringing every therapy discipline together working toward common rehabilitation goals, the patient benefits by receiving streamlined care, tailored to his or her specific needs. As the team helps the individual rehabilitate, they work together as a group to build skill sets, reinforce behaviors, identify deficits and implement compensatory strategies – all to help individuals reach the highest level of independence possible based on their unique situation and abilities. ❖

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