



CASE STUDY Recovery from major left hemisphere stroke in 88-year-old female

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These case studies, each submitted by a Certified HANDLE[®] Practitioner, demonstrate outcomes achieved through implementation of an individualized HANDLE program. The acronym stands for the Holistic Approach to NeuroDevelopment and Learning Efficiency. The HANDLE paradigm for understanding behaviors and their root causes is thoroughly explained in *The Fabric of Autism: Weaving the Threads into a Cogent Theory*, by Judith Bluestone, the creator of HANDLE and the founder of The HANDLE Institute. For intimate insights into client and family experiences of HANDLE, see *The Churkendoose Anthology*, with commentary by Judith Bluestone.

For each of the clients in these Case Studies, the practitioner began with a comprehensive assessment, the findings of which led to a Neurodevelopmental Profile, which in turn formed the basis for a program of activities complex in their neuroscientific premises and very simple to implement. Thereafter the client's program was modified about monthly in accord with changes achieved in the interim. Each client participates in twelve to fifteen activities regularly; the practitioner, in writing up the case study, names those activities in brief without the full details and explicit information each client-family receives in why and how to implement the program. Go to www.handle.org for more information.

Introduction

This client, Maxine, had a major left hemisphere stroke at the age of 88. She was born at home, a spontaneous birth while her mother sat at the mangle. She is the middle child and was born and lived all of her life in the state of Oregon. She was an executive secretary, married twice and remained childless. She cared for her mother 24 hours a day during the last two years of life; her husband for many years with cardiac difficulties and diabetes; and her younger brother for a brief period of time. Maxine is my aunt and I am her medical representative.

Clinical history Health

Maxine's health history includes a hysterectomy; clostridium difficile leading to removal of most of her intestines (short bowel syndrome); a serious case of serum hepatitis, which left her bedridden for most of a year; three ruptured discs (age 86) re-mediated with sacral occipital therapy and gentle

chiropractic; chronic diarrhea and low weight due to short bowel syndrome; took Synthroid, Omega-3 fatty acids and hormone replacement at the time of her stroke.

Nutrition

Although Maxine had chronic diarrhea as a result of the short bowel syndrome, she had never been placed on a restrictive diet. She ate a "typical" American diet but was only able to eat small portions at a sitting.

Living Environment

Maxine lived with her husband in their own home until about a year after his death. At the time of her stroke she was living independently in an apartment in a retirement community. During the six months in the retirement community she sang in two choirs, attended concerts, lectures and plays, belonged to a Bible study group, participated in exercise classes and weight training, started line dancing and went for walks.

Participation in HANDLE Program Referral Concerns

Maxine had a major left hemisphere stroke on January 1, 2008. I was contacted immediately and flew to Portland, arriving 24 hours after her hospitalization.

Upon arrival at the hospital Maxine recognized and immediately acknowledged me with smiles and crying and a big hug (left arm around my neck).

A rudimentary assessment and medical report revealed the following:

A major stroke caused by a blood clot as the result of atrial fibrillation and hormone replacement (which increases clotting)

Pneumonia related to congestion prior to the stroke and possibly to aspiration

Intervention was too late for administration of early medication to dissolve the clot

No sensory/motor response from her right arm from the shoulder down

Minimal sensory/motor response from her right leg

No sensory/motor response on the right side of her face/mouth

Right sided neglect of vision, including visual loss and poor motility to the right

Loss of speech except for the phrase, "I like, I like, I like"

Good eye contact with indication of processing and understanding

Frustration, confusion and fear regarding the stroke and expressing her wants/needs

Relief at the presence of family (my sister and brother-in-law were also present) and medical representation

Very low energy with lots of sleeping

Spoon fed by another person, soft foods only, with difficulty managing the food, keeping it in her mouth and swallowing

Cried easily

Initial HANDLE Program

Hug and Tug: Within minutes of my arrival I did Hug and Tug with Maxine, arms crossed, using the phrase, "I like you." By the third finger she was including the word "you," making eye contact with my mouth and saying the words in rhythm with

the squeeze/pull of her fingers. By that first night she was saying, "I love you" with Hug and Tug and also from prompting. From that first moment forth, assuming I knew what she wanted to say to doctors, therapists, and visitors, Maxine would look at me and hold out her left index finger, indicating, "Help me say what I want to say." She would watch my mouth for the first three or four fingers, then turn and look at the person she was addressing and say the phrase while I did Hug and Tug with the next fingers. By the end of her hospital stay (Day 4), she could say nearly any phrase I offered while I did the Hug and Tug for her. She spoke very rhythmically each time, matching the rhythm of the Hug and Tug finger squeeze/pull.

Face Tapping: This was begun within the first half hour of my initial visit. She was absolutely delighted with it and would ask for it several times a day by tapping randomly on her face with her left hand and making deliberate eye contact. She wanted it done vigorously. On the third day she explored her face by pressing on first the left side of her face and then her right. When asked if she was beginning to get feeling back in her face, she nodded affirmatively. On the fourth day she began to get definition in her cheek on the right with increased tone throughout. The right corner of her mouth began to respond motorically as well, though it had no feeling. Additionally she regained right side vision and motility.

Singing: Beginning on Day 2, my sister and I sang with Maxine. She joined us, saying many of the words and carrying most of the tune (she had been a soloist in her choirs). She was pleased and frustrated at the same time, wanting full return of her voice and access to words. We sang several times a day after that, with improvement in her singing by the time she left the hospital.

Move to Skilled Nursing Facility

Maxine moved to a skilled nursing facility within her retirement community. She had PT, OT, and Speech Therapy once a day for five or six days a week. These sessions lasted from 10 minutes to an hour. She responded well to them and was usually cooperative, though she would often "whine" when doing some of the OT personal help skills or when required to multi-task. I stayed with her for the next five weeks.

Ongoing Assessment, Jan. 4 to Feb. 7

Through questioning, observation and feedback from Maxine the following was determined:

Maxine had pain in her neck for which she had been receiving treatment before the stroke. She had loss of feeling on the inside left side of her mouth resulting in food collecting between teeth and cheek; loss of feeling in left side of her throat resulting in swallowing difficulties and two incidents of choking; and the need for pureed and later mechanical soft foods. It was not possible for her to multi-task while eating, so no TV and no visiting or she would stop eating. Maxine was unable to initiate speech, but able to repeat any phrase with Hug and Tug; spontaneous speech began on Day 23 with some words, phrases and sentences, especially when well rested. These increased daily from then on. Maxine had labile emotions, crying or whining easily, being frustrated, and being pleased or happy about things as well. She began feeding herself with her left hand in the second week, though it was difficult; her strategy to manage food on right side of mouth was to use a small mirror on the table and monitor the need to wipe. Spontaneous movement of her right arm returned around the third week, starting with gross movements and refining to being able to roll a small object with effort between thumb and first finger by the fifth week. She started doing her own Hug and Tug in the second week with occasional help, evolving to always doing her own Hug and Tug with prompting or when wanting to say a practiced phrase (“Nice to see you” and “Thanks for coming” were used many times a day). She began walking with a walker, did not like it and graduated quickly to therapist/helper hanging on while she walked; then walked with no assistance by the fourth week. Maxine started personal grooming in the bed and moved to the bathroom in the third/fourth week; used a commode by the bed and graduated to the bathroom with elevated seat by the third week. She ate most meals in bed, occasionally sitting in a chair and only eating in the dining room a handful of times. She mostly chose to sit in bed rather than on a chair. She was extremely motivated to get better, often requesting HANDLE activities and speech activities; sometimes requesting to do arm and leg exercises and later to walk. She used a book with

phrases and lists to communicate. She began to attempt writing and could write her own name sometimes with prompts but was aphasic in her attempts to write letters or spell words. Although she would sometimes complain and become frustrated, she remained very determined to get better, especially with speech.

Changes in HANDLE Program

The following activities were continued or added to the program as Maxine was ready. Most were done while seated or lying in bed.

Hug and Tug continued with Maxine doing it herself starting in the second week; used before OT, for speech, proprioception, muscle tone, tactility, differentiation, fine motor function, and interhemispheric integration

Face Tapping continued several times a day for muscle tone, tactility, vision, vestibular function, speech, chewing, swallowing, facial expression, interhemispheric integration

Singing continued for speech, mood, breath control; used before speech therapy

Skull Tapping added for oxygenation of skull and brain (especially sensory/motor cortex), tactility, interhemispheric integration

Vestibular activities, forward and backward, side to side and rolling, VERY SLOWLY for vestibular functions, balance, muscle tone, proprioception, kinesthesia, vision and interhemispheric integration

Sunrise Sunset for mood, restoration of arm function, muscle tone, interhemispheric integration

Accentuation Tap for tactility, muscle tone, left hemisphere stimulation, interhemispheric integration, rhythmic synchronicity; done with right arm on pillow at first

Crossed Arm Bounce for restoration of arm function, stimulation of left hemisphere, muscle tone, interhemispheric integration, rhythmic synchronicity

Buzz Snap used before OT, for speech, proprioception, muscle tone, tactility, differentiation, fine motor function, vision, and interhemispheric integration, flow of energy

Angels in the Snow used for bilateral integration, differentiation, proprioception, range of motion, interhemispheric integration; this one

was done only a few times due to the awkwardness of doing it in bed

Blowing; first with a pinwheel, then a party favor, then bubbles; for breath control, breathing, vision

Joint Tapping for proprioception, muscle tone, tactility, arm and leg function; done prior to gross motor work

Cheerleader/Airplane Flagger for bilateral integration, differentiation, range of motion, restoration of function of right arm, interhemispheric integration

Rope Turning (Circles in the Air version) for differentiation, restoration of arm function, bilateral integration, rhythmic synchronicity, interhemispheric integration

Crazy Straw bottle; rejected the first three weeks, then used for all water consumption; for speech, air control, lip and tongue control, chewing, swallowing, facial expression, tactility, vision, vestibular function, interhemispheric integration

Ball Squeezing with a ball in each hand for return of strength, muscle tone, proprioception, tactility

Other Recommendations

Craniosacral therapy/sacral occipital therapy for neck and physical recovery

Take time between therapies for rest/sleep.

Mouth exercises before speech practice

Finish meals before visitors enter room.

Emphasis on trusting body as sensory input becomes reliable

Do as much for self as possible without stress.

Staff avoid lifting her head from the pillow: lift from shoulders

Outcomes in Fifth Week After Stroke

Maxine received both craniosacral therapy and sacral occipital therapy with resultant minimal neck pain; walked without an aid with a cross pattern; could move her right arm in all directions, (spontaneous movement in the third week); was able to squeeze balls with both hands; was able to roll a ½ inch ball between thumb and first finger of right hand and touch all fingers to thumb; spontaneous speech began Day 23, with some words, phrases, short sentences; still saying, “I like, I like...” with word finding difficulties; could

name opposites without hesitation and finish a provided sentence with minimal hesitation; was making jokes; was able to perform Sunrise Sunset, Accentuation Tap and Crossed Arm Bounce on her own; drank from the straw bottle; could sometimes write her name and copy other words with left hand, otherwise aphasic to writing; had two episodes of choking with otherwise continued swallowing improvement; had return of feeling to all of face except right corner of mouth, inside of right cheek, and under her lower lip; return of symmetry to her face except when tired; ate and drank with left hand; applied her own makeup with left hand; could wash her face with her right hand and assist her left hand during dressing; could dress herself; and could manage her own toileting and put together 35 piece puzzles.

Maxine was moved to an assisted living section of the health center at her retirement community at the end of week five after her stroke. Prior to the move I was asked to do an in-service training for the staff that would be working with her. She had a private certified nursing assistant (CAN) with her a few hours during the week to do her HANDLE program and meet other needs. She was on a unit with 14 other patients and two to three attendants plus a nurse who served four similar units and the Skilled Nursing Unit. She received speech therapy, occupational therapy and physical therapy once or twice a week. Eventually physical therapy was dropped.

Review March 30 – April 4, 2008 Assessment Findings

Maxine greeted me with her usual mix of smiles, tears and hugs. It became quickly clear that she was not happy. The private CNA told me that something was troubling her but no-one had been able to understand what it was. Within ten minutes she had told me: “Only maintenance!” then pointed across the courtyard to her old room in Skilled Nursing. She was not receiving the level of care she had at Skilled Nursing and wanted to go back! She was no longer doing her own toileting, dressing herself, or walking without an aid or a cane. She was very frustrated and dispirited. She ate in the dining room and now stayed out of bed a portion of the day. She was putting together 100 piece puzzles. Her repetitive phrase had grown to, “I like to be coming...”

HANDLE Program and Recommendations

Activities were reviewed with the private CNA with minimal modifications. The book that had been left for staff was updated and staff was asked to read it and to leave notes in it for each other, the private CNA and therapists. Maxine worked for a week and regained all of her lost skills. The private CNA was instructed to monitor and keep the staff informed, assuring that digression did not happen again. Arrangements were made for Maxine to move back home with 24 hour care.

Review May 5, 2008

Maxine was settled into her home as of April 23. Patty, her private CNA was hired as her primary caregiver and the person who would carry out her HANDLE program. I oversaw all of her care program. Patty was with Maxine eight hours a day, Monday through Friday. Other CNAs from her retirement community filled the other hours, seven days a week. She had been using a bio-electric machine to address a number of issues relating to her stroke, back, and general mood.

Assessment Findings

Maxine maintained her progress from March 30-April 4: self care, walking independent of any aid, dressing herself. She started chair exercise and weight machine programs. She was eating sometimes in the common dining room, otherwise at the dining room table at home. She was staying out of bed all day with rests/naps on the couch and some TV watching. Her speech/language was improving with outpatient occupational therapy and speech therapy once a week and practice sessions each day. She was unfortunately experiencing extreme lower back pain and disappointed that she could not demonstrate how well she was walking and managing in all ways. Brushing her teeth is not very thorough with her left hand, which has remained fairly weak and somewhat uncoordinated.

HANDLE Program and Recommendations

Weighted Cuffs added to awaken awareness of right side of body

HANDLE program set for the morning before getting out of bed with specific activities prior to therapy sessions or tasks

Sacral occipital therapy, emotional freedom

technique (EFT) and reflexology for back pain
Patty (private CNA) trained to carry out HANDLE activities, to recognize stress, communication techniques

All caregivers trained to do Face Tapping, Skull Tapping, Hug and Tug, to recognize stress, communication techniques and to encourage Maxine to do everything she can for herself, intervening only as needed

Set up a program for Maxine to empty the dishwasher every day

Add Omega-3 fatty acids

Binder brought up to date for all caregivers regarding personal care, therapies, areas of independence

Use an electric toothbrush for more thorough brushing

Review Early August, 2008

Maxine was settled in and happy to be in her home. A routine had developed.

Assessment Findings

Maxine was walking normally with a degree of hypervigilance. Her overall progress had slowed however. It turned out that she was practicing her OT, PT (old ones) and Speech programs every day for an hour or more each and becoming VERY stressed in the process. This resulted in intense frustration, emotional outbursts, anger, noncooperation, low energy and regression. She had arranged for and begun returning to her social activities of attending lectures, concerts and plays, attending a Bible study group, attending church and singing in two choirs. She had swollen ankles in the evening. She would get very emotional if anyone mentioned her piano, saying she could not play it and never would again. She could turn a door knob, write more with her left hand, write some with her right hand, empty the dishwasher, and manage self-help skills better. She could tie a sash using both hands, manage the remote control, and get up and down from the couch and chairs. She could brush her hair and teeth and put in her hearing aids. She had difficulty climbing the four stairs to enter the church bus.

HANDLE Program and Recommendations

Kneading Feet to help move lymph and reduce swollen ankles

Reflexology regularly at night for back, digestion, energy

Do any single exercise for no more than 10 minutes; rest; then do an entirely different exercise, using a different part of the body

Begin eating some of each meal with right hand; open doors, use keys with right hand and brush teeth with right hand

Practice stepping up and down, using a wooden box

Review Sept. 9, 2009

Maxine was comfortably back to nearly all of her old routine (no line dancing!). She continued to have 24-hour care, though they were there mostly for those things she could not do, to support her in the night when she got up and was a bit unstable and to prepare and clean up after meals.

Assessment Findings

Maxine had maintained all gains. She was no longer getting stressed and worn out due to long therapy sessions. She began to play the piano and was successfully playing different patterns with both hands at once. She was active in all social events. She was going out to eat once in a while. She was using her right hand for many new things, more often while eating and she could now fasten her bra hooks (in the front). She had more spontaneous movement of her arms. She was taking much more control of her daily life and planning for the future. She was still getting frustrated, mostly by being unable to speak fluently. Her speech had become much more understandable, with increased vocabulary that she could access readily and the ability to carry on a conversation. She could speak much more spontaneously when lying down or when fully supported, once for nearly 45 minutes without a single "I like to be coming..." She was writing with her right hand and regularly signing her name with her right hand (printing only). She seemed overall to be more content.

Continuing Goals

1. Opening mail
2. Using right hand throughout meals
3. Meal preparation
4. Clean up after meals
5. Nail care

6. Playing the piano (met as of September)

7. Fewer emotional outbursts

8. Using the computer

9. Writing with ease

10. Smooth, fluent speech all the time

Plans for the Future

Maxine plans to continue to update and add challenging activities to her HANDLE program; continue complementary therapies, adding those as needed; purchase a Rife Machine; continue chair exercise and weight training machines; to live in the independent living program at her retirement community with support as needed; to sing in the choir; to attend social events; and to become more independent regarding her financial/legal management (she now makes the decisions, but needs them explained and followed through by others).

What Makes This Case Unique

This was the first time that I had been able to intervene with HANDLE philosophy and activities within 24 hours of a brain injury. Three months post injury was the closest I had ever worked with a client. It was remarkable to see how quickly Maxine responded before even leaving the hospital. It was also unique in that I was able to stay with Maxine for the first five weeks following her stroke, assuring Gentle Enhancement® and adding HANDLE challenges as she was ready for them. She was an outstandingly motivated individual with multitudes of friends and family visiting and sending cards to encourage her recovery. Another remarkable response was from the staff at the hospital and at the Skilled Nursing Center. Doctors, nurses, therapists and even office staff remarked at how quickly Maxine was recovering function following a major stroke. This can be summed up by my brother-in-law who phoned me in Alaska when Maxine had her stroke to tell me I had better get down to Oregon quickly or I might regret not being there. He is an anesthesiologist. He visited Maxine in her assisted living facility three months after her stroke where she was participating fully in a chair exercise class (taught by my 90-year-old mother!). Afterwards he walked up to Maxine and said, "Never in a thousand years would I have said you would be able to do the things you are doing now."

Footnote: On October 19, 2008 Maxine had an encounter with a load of furniture that shifted on a dolly as it entered an elevator. She fell and broke her right hip. It required surgery, there were complications, and she was in a convalescent home for several weeks. She is home and nearly back where she was before the accident. The difference is that she now uses a walker and has slowed down a bit. However, her social life has resumed and she is talking better than ever; now able to carry on an understandable conversation on the telephone.

The client, Maxine Walker, gave permission for her name to be used to tell her story.

Catherine Stingley, who is affiliated with The

HANDLE® Institute International LLC in Seattle, Washington, USA, has been a certified HANDLE practitioner since 1997, and a HANDLE instructor since 1998. Catherine is the owner/director of a HANDLE practice in Homer, Alaska, Thoughtful Therapies. Since 1999 she has been the European Regional Education Director for The HANDLE Institute International, LLC. She is also certified in Matrix Reimprinting, an advanced approach using the emotional freedom technique.

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The HANDLE Institute presents these case studies to demonstrate the successes of the HANDLE approach and pique the interest of researchers and funders in engaging in clinical studies to further examine the efficacy of these interventions. For more information about The HANDLE Institute, go to www.handle.org.



The HANDLE® Institute