STROKE EDUCATION MANUAL











My Stroke Date of stroke:_____ Type of stroke:_____ Location:____

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The mission of Gaylord Specialty Healthcare is to enhance health, maximize function and transform lives. Our organization lives our values daily: clinical excellence, compassion, integrity, respect, accountability and a commitment to safety. Our vision is to be a recognized and acknowledged destination for rehabilitation and complex medical care providing high quality, paitent-centered, compassionate, team-based healing at every point in the journey from illness or injury to maximum recovery.

The Stroke Rehabilitation Program is one of the first and largest programs at Gaylord Specialty Healthcare. Rehabilitation after a stroke is a process that the person and their support system work through together, with the assistance of an interdisciplinary group of professionals. This team approach is essential to maximize the physical, cognitive, linguistic, psychological, emotional, spiritual and social recovery. This education manual is dedicated to all our past, present, and future stroke survivors, their families, and support system - the true core of every rehabilitation team.



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What is a stroke?

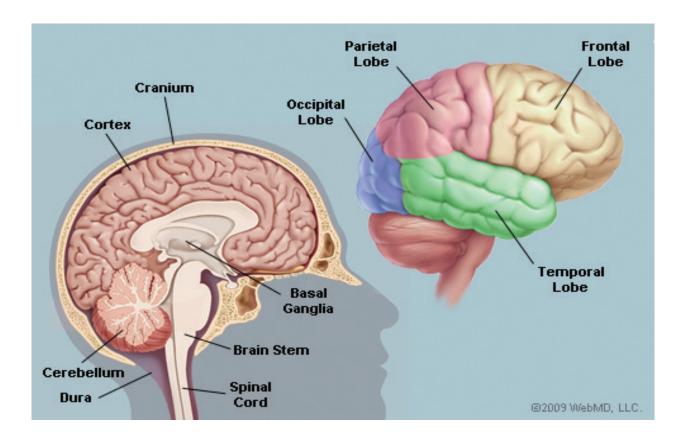
Different Types of Strokes:

A stroke is an injury to the brain resulting from an alteration in its blood supply. There are many causes of stroke. **Causes include blood vessel abnormalities** (arteriopathies – both atherosclerotic and non-atherosclerotic), clots from the heart (cardioembolic), and blood disorders. Despite knowing many of the possible causes of stroke, a large percent still remain unknown.

There are 2 major types of stroke. The vast majority of strokes are caused by **cerebral infarctions**. A cerebral infarct occurs when a blood vessel carrying blood to the brain becomes blocked and the blood cannot get to the brain. These strokes are also called **ischemic strokes**. There are many causes and types of ischemic strokes. Common causes include the build up of cholesterol plaques in arteries, changes in blood vessels due to high blood pressure, and clots that form and block vessels in the brain. A minority of strokes are caused by a brain **hemorrhage**. A hemorrhage occurs when a blood vessel leaks or an **aneurysm** (a bulge of a blood vessel) ruptures, spilling blood into the brain. There are many causes and types of **hemorrhagic strokes**. The most common includes bleeding into the brain after a blood vessel weakened by high blood pressure ruptures. Other blood vessel abnormalities that can result in hemorrhagic strokes include **subarachnoid hemorrhages** (or SAH, a bleeding into the space between covering layers of the brain) and **arteriovenous malformations** (or AVM, an abnormal connection between arteries and veins).

After a Stroke: The Acute Care Hospital Experience

There are many things that contribute to the problems stroke survivors will have following their stroke. Some of the factors influencing this include the location of the stroke in the brain, and the size of the stroke. Strokes can occur within the brain cortex- the outer area of the brain, the subcortical area- the area deep below the cortex, or the brainstem- the area that connects the spinal cord to the other parts of the brain.



Tissue Plasminogen Activator If you had an ischemic stroke, it is possible that you were treated with Tissue Plasminogen Activator (TPA). TPA is a clot-busting drug approved by the FDA in 1996. Studies have shown improved functional outcomes in appropriate patients given IV TPA within the appropriate period of time. Other possible interventions include intra-arterial TPA and clot retrieval therapy.

In addition to injuring the brain, there are numerous natural processes and complications following a stroke that can lead to additional problems. Things that are typically assessed include swelling in the brain, the ability to swallow, and the ability to breathe and manage the secretions that the lungs and mouth normally produce.

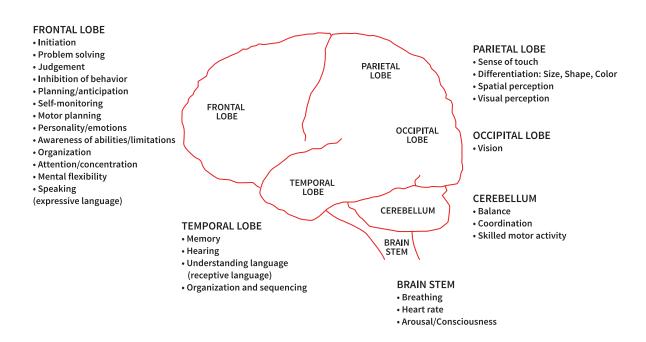
If brain swelling was a significant problem after the stroke, the doctors may have recommended the removal of part of the skull to give the brain more room within the otherwise enclosed space of the skull bones. This procedure is known as a **craniectomy**. If this is done, the stroke survivor needs to wear a helmet to protect the part of the brain that is not covered by the skull.

The skull can be replaced in the future when it is determined to be safe by a neurosurgeon to do so (this also commonly known as a "bone flap"). If the ability to swallow is affected, it can lead to difficulty getting enough calories and fluids to stay nourished and hydrated. If so, a tube may be surgically placed into the stomach. Many stroke survivors need **feeding tubes**. Needing a tube initially does not mean the tube will be needed forever. The ability to swallow is just one of many things that can improve after a stroke.

If a person has difficulty breathing, **intubation** or placement of artificial airway and **mechanical ventilation** of patients with a stroke is usually performed due to pulmonary edema or for inability to protect the airway because of a decreased level of consciousness from effects of stroke or seizure. Additional indications include partial airway obstruction, hypoventilation, and aspiration pneumonia and inadequate oxygenation of vital organs.

If the ability to manage secretions produced normally by the lungs and mouth is affected, a tube may have been placed into the trachea in the neck. Once again, needing a **tracheostomy** initially does not mean the tube will be needed forever. The ability to manage secretions can improve after a stroke.

Simplified Brain-Behavior Relationships



What can I expect following a stroke?

The changes with muscle strength and/or feeling happen immediately with the ischemia or bleeding injuries to the brain. On a few occasions, these symptoms can increase and decrease over several hours. Usually, the muscle weakness is most severe in the first hours after the stroke. Arms and/or legs may be very 'floppy' at this time; sometimes considered hypotonic.

Shortly after the stroke, changes with muscle strength and feeling can be seen over the next days and weeks. Either with or without increase in muscle strength, the floppiness of arms/legs can change to tightness and/or 'jumpiness'. When muscle strength does return, it usually starts in the weak leg before the arm. Muscle strength is then first seen in the muscle groups that are closest to the body—this would be the hip before the foot or the shoulder before the hand. This is why functional activities like standing or walking sometimes returns before holding a cup or tying shoelaces.

The time frame for neurologic recovery from stroke can continue for many months after the event. Scientific studies consistently show that the most noticeable improvements happen during the first three months following the stroke. However, recovery may continue for a much longer period of time. In addition, functional recovery can be seen for years after stroke.

Factors that affect recovery include—the size of the injury, the part of the brain that was damaged, age, other medical problems, and importantly, how soon treatment may have started after the stroke. Neurologically, during the early months/weeks after a stroke, there is decrease in swelling (also called **edema**), resolution of blood at the site of the stroke, and cells and neurons being reorganized. It is during this period of time that people work to regain some of the abilities that they lost. The complex process in reorganization is part of the **neuroplasticity** of the brain.

The brain controls all muscle strength, the direction of muscle movements, cognition, feeling/sensation, vision/perception, thinking, speaking, swallowing, mood and emotions. All of these functions are complexly organized. Injury to the brain from a stroke can affect one or more of these areas of brain control. No two strokes are exactly alike. However, there are frequently seen problems and impairments based on the part(s) of the brain injured by ischemia, bleeding or both.

Muscle Strength:

Muscle strength is very frequently affected by a stroke. This can range from slight, almost unnoticeable to complete absence of strength. **Paresis** describes this range of muscle weakness. If a stroke impacts the motor cortex region of the brain muscle strength may be affected. Typically, the right side of the brain controls the left side of the body and vice versa. **Hemiparesis** is the name given to weakness on one side of the body. A stroke can also cause weakness on both sides of the body: this would be **quadraparesis**.

Sometimes there is little to almost no muscle weakness at all. However, the control of the muscle strength is affected. For example, your hand may have the strength to grab and hold onto a fork, but your hand and arm are unable to follow the typical path of movement to bring your hand to your mouth for feeding. This inability to make the planned controlled movements is apraxia.

Certain muscles and movements of the face, including eyes, eyelids, mouth and tongue, can also be affected by a stroke. These changes can happen with or without weakness to other parts of the body.

Balance:

With muscle weakness on one side, the body's position may appear altered to everyone but the person with the stroke. This can result in leaning to the side or backward. In some cases, the person with a stroke will push themselves to one side. They do not know that they are doing this. In extreme cases, they may hold on tightly to bars, railings or another person to prevent their 'real' feeling of falling. This is often called **"Pusher syndrome."**

With or without weakness, there can be the feeling of dizziness and/or loss of balance. Balance is controlled by multiple systems in the body including the vestibular, visual, sensory and motor systems—all of which can be affected by the stroke. Balance can be affected when walking or reacting to movements or even in sitting. Dizziness from rolling or moving sometimes then causes nausea.

Sensation:

Changes in feeling or sensation after a stroke are not uncommon. Some stroke syndromes cause complete loss of feeling on one side of the body. This is usually in the same places as the loss of muscle strength. Sometimes there are odd feelings that involve one side of the body—this can be numbness or a sense of 'pins and needles'. On a few occasions, there are strange feelings or sensations that cause sharp or 'shock type' pain. (Again, the areas involved are usually the same places as those with muscle strength loss.)

Without feeling one side of the body, there can be less awareness or knowing that part of the body exists, often called personal or body neglect. When this happens, a certain part of the body may no longer feel 'owned' or acknowledged by the person with the stroke. In the most extreme conditions of this syndrome, a person's arm or leg (yet most often the arm) is thought to belong to someone else.

Spasticity/Tone:

A stroke can damage parts of the brain that result in symptoms that are usually present immediately following the stroke such as weakness of a body part, difficulty with speech, and vision problems. Other symptoms, like spasticity, may develop over time, such as weeks or even months after a stroke. Spasticity is a condition in which some muscles are overactive, causing stiffness or tightness. It can also be very painful. Some symptoms that may be noticed include: difficulty relaxing muscles, muscle spasms, and difficulty moving certain joints. Spasticity may affect the arm and leg and can make movements and tasks like dressing and walking very difficult.

The doctor, nurse, physical therapist and occupational therapist will all play a role in both the evaluation process and the proper treatment if indicated. The occupational and physical therapists may recommend positioning and/or splinting devices to improve the motion in the limbs as well as to improve comfort and mobility. The nurse will work with therapy to carryover proper positioning in bed for comfort and preventing skin breakdown. The doctor may recommend a trial of medications to treat the spasticity.

Helpful Hint: To make sure a limb does not get too tight, ask the therapist if there are any range of motion stretches that can be done. Also ask if any splints should be worn throughout the day or night.

Vision and Perception:

One of the most common complaints after a stroke is change in vision. Like other effects of stroke, visual problems do often improve with time as the brain recovers. For long term solutions a doctor may need to consult a special doctor, such as a neuro-optometrist to help.

Here are some of most common visual problems:

Field Cut: Most commonly after a stroke a person can have a vision field cut, this means that a portion of each eye is not perceiving vision. Missing vision from half of each eye is also hemianopsia, while a quarter of a field loss is called a quadrantopia. This does not mean they see black in the missing areas, but the brain does not recognize it is there, much like the space behind our head. These field cuts are from injury to the brain and not the eyes. This may distort where middle is perceived.

Visual Neglect: This is also called inattention. This is when you ignore objects in a certain area ie: the left side. This can happen with or without a field cut. For example: they may eat only half of a meal on a plate or shave only half of their face.

Helpful Hint: To help the stroke survivor increase awareness of their affected or injured side, have family/friends sit on that side.

Double Vision: Three major nerve from the brain stem control eye movements. If any of these are impacted by the stroke they eye muscles may not work perfectly as a team and the person may see double.

Thinking:

A stroke on the right side of the brain can cause changes with thinking also known as cognition. Some areas of cognitive function include orientation, attention, memory, reasoning/problem solving and executive functioning. One, some, or all areas can be affected.

Orientation is the awareness of oneself and one's surroundings in terms of 4 spheres; person, place, time, and reason. The main objective is for stroke survivors to know who they are, where they are, what happened to them and the day/date.

Attention is the ability to attend to something and process it. It is key to all areas of our thinking skills. After a stroke, attention can change in several ways. First, a person may not be able to focus his/her attention and become easily distracted or fall off topic. Second, a person may not be able to focus on a task long enough to finish. Finally, it may be hard for a person to alternate or divide attention between two or more things at once. Difficulties in attention may be mild to barely noticeable or severe enough to interfere with sometimes simple daily activities.

Helpful Hint: It will be helpful for family and friends to spend time visiting with the stroke survivors in a quiet place. Leave the television off. It may be best to avoid the cafeteria during the busy lunch hour.

Helpful Hint: It is easier for most stroke survivors to have just a few visitors at a time rather than large groups.

Memory is the ability to learn, keep and use information. It can be divided into long-term memory and short-term memory. Long-term memory includes information that is stored permanently in the brain, such as a birthday, address, and events or conversations that have occurred in the recent past. This is rarely affected by a stroke. Short-term memory is temporary storage which lasts for approximately 30 seconds. After information is registered and determined to be important, we use it in short-term memory. For example, a phone number can be looked up in the phone book and temporarily memorized to dial it. This is more likely to be affected by a stroke.

Sometimes, language or attention problems can be mistaken for memory loss. It is important that this is evaluated. When there is true memory impairment, the team will recommend ways to compensate for the loss, such as the use of a memory notebook.

Reasoning and problem solving skills help us get through our day. Reasoning is a person's logic and interpretation of the surrounding environment. Problem solving skills are used to handle challenges that may be encountered throughout the day.

Executive skills are a person's ability to plan, problem solve and self-monitor. Simply put, it refers to how someone will "think on their feet". The hospital environment is very structured. While in the hospital, people with a stroke usually have very few complex demands, so changes with executive functioning skills may go unnoticed at first. They are sometimes seen more subtly as personality changes. For example, someone who was quiet and conservative may become noticeably more talkative or make comments/use language that is out of their usual character.

Speaking:

Difficulties with speech and language after a stroke are communication disorders. These may include aphasia, dysarthria and apraxia; any one or all three.

Aphasia is a language disorder affecting the ability to understand what is being heard or read, and/or the ability to express oneself through talking or writing. In the most severe case, a person may have difficulty expressing basic wants and needs, and may be unable to read or write, as well as the inability to understand the spoken or written word. In a less severe case, a person may have occasional difficulty recalling words and may have some difficulty understanding lengthy, complex conversations.

Helpful Hint: Often stroke survivors are provided with activities to do outside of speech therapy sessions. Family and friends should encourage the person to follow through with the activity.

Dysarthria refers to weakness and/or incoordination of the muscles that are used to speak. Dysarthric speech may sound slurred or 'thick'. In more severe cases, speech may not be well understood to the ear.

There are two kinds of **apraxia** or inability to make the planned controlled movements. A person with a stroke may have one or both types. The first type, **verbal apraxia**, causes trouble using words.

A person may know what they want to say, but cannot correctly say it. Or, they may also "get stuck", and say the same word or sound over and over (perseveration). The second type, **oral apraxia**, causes trouble with intentional movement of the tongue, lips and jaw.

Helpful Hint: Stroke survivors are often given exercises to practice speech sounds and/or oral motor movements. Families and support systems should assist and encourage the person to do these exercises on a daily basis

Swallowing:

Dysphagia refers to any difficulty with swallowing from when food and/or liquid starts in the mouth and finishes in the stomach. After a stroke, the muscles in the face and throat are sometimes weak and do not move well. This may make it hard to chew or swallow. Food and/or liquid may "go down the wrong pipe or wrong way"; also known as aspiration. Aspiration may cause pneumonia.

Helpful Hint: Family and/or friends are requested to check with staff before offering food or drink to the stroke survivor to ensure his/her safety.

Mood and Emotions:

There are several common emotional effects of stroke, including: depression, anxiety, mood swings (emotional lability), apathy, and changes in self-esteem. In some cases, up to half of stroke survivors will experience depression or some type of mood change. Mood changes are also common in their caregivers as well. What follows below is a more in-depth description of each of the more common emotional effects and what can be done to help.

Depression

It is sometimes hard to tell the difference between symptoms of depression and the effects of the stroke. Many symptoms overlap, such as:

- Low activity level
- Sleep problems
- Difficulty controlling emotions
- Lack of initiation

What might be seen:

- Persistent sad, anxious, or "empty" feelings
- Feelings of hopelessness and/or pessimism
- Feelings of guilt, worthlessness, and/or helplessness
- Irritability, anger, restlessness
- Loss of interest in activities or hobbies once pleasurable, including sex
- Fatigue and decreased energy
- Problems concentrating, remembering details, and making decisions
- Insomnia, early morning wakefulness, or excessive sleeping
- Overeating, or appetite loss
- Persistent somatic complaints (aches & pains, headaches, etc.)
- Less attention paid to personal grooming
- Thoughts of suicide, suicide attempts

How you can help:

- □ Offer emotional support, understanding, patience, and encouragement. Remind the person that depression usually fades with time and treatment.
- □ Talk to the person and listen carefully.
- □ Acknowledge feelings, point out realities, and offer hope.
- □ Get the person involved in activities if possible.
- □ Avoid sharing your own personal stories of depression.
- □ Avoid the phrase "I know how you must feel". No you don't.

Increased Anxiety

- Constant physical tension
- Excessive worry, racing thoughts
- Feeling jumpy, irritable, restless
- Racing heart, dry mouth, excess sweating, shakiness, or feeling short of breath
- Feeling panic or having a sense that something bad is going to happen

How you can help:

- □ Work with the stroke survivor to recognize problems that he/she may be worried about. Use problem-solving techniques to address them.
- □ Suggest the person keep a journal, if possible. Sometimes this alone can be calming and can slow down racing and nervous thoughts.
- □ Use redirection.

Mood Swings (Emotional Lability)

- Laughing one minute, and feeling sad or crying the next
- An emotional response that does not "fit" the situation
- Frequent, unexpected shows of emotion

How you can help:

- □ Reassure the person that you understand his or her display of emotion may not match the situation. Try and be nonjudgmental.
- ☐ Understand sudden shifts in the person's mood can be a symptom of the stroke.
- □ Distract the person and use redirection.

Apathy

- There are several different kinds: emotional, cognitive and motor
- Difficulty with initiating
- Often function in a "blah" range—experiencing neither highs nor lows.
- Can't get started on things –seem to lack motivation
- · Peter out and lose steam

How you can help:

- ☐ Gentle encouragement to get started on something
- □ Recognize that the person will do best with structure
- ☐ The person will also do best when working with someone else on a project

Changes in Self-Esteem

- Negative self statements: "I am worthless," "I'll never be normal again," "How can you love me like this?"
- Less interest in personal appearance
- Social withdrawal

How you can help:

- □ Encourage the person to express his/her feelings. Try to redirect them to more positive thoughts.
- □ Encourage them to spend time with others.
- ☐ Help the person to set realistic, attainable goals. Help him or her to choose activities that he/she can successfully complete.

Bowel and Bladder:

Problems related to bladder and bowel function are common but distressing for stroke survivors. "Going to the bathroom" after suffering a stroke may be complicated by urinary incontinence, urinary retention, constipation and/or bowel incontinence.

Urinary incontinence is being unable to control urination. Some tips that might help get through this are: go to the bathroom at regular times to help train the bladder, drink plenty of fluids during the day and limit them in the evening, limit caffeine and alcohol at night, and ask the physical therapist to help strengthen the muscles around the bladder.

Urinary retention is having trouble urinating or not completely emptying the bladder. This condition can lead to bladder stones, reflux (reverse flow of urine back to the kidneys) or a **urinary tract infection** (UTI). Some symptoms of a UTI are foul smelling, cloudy urine, burning when urinating, fever and chills, cramps in the lower abdomen or side, pain in the lower back, or frequent urination or feeling like one has to go to the bathroom even though the bladder is empty. If any of these symptoms are noted, see a doctor immediately. A UTI needs immediate treatment.

Bowel incontinence is being unable to control the release of stool. A tip that might be useful is to develop a pattern. Opportunities to use the bathroom should be planned according to previous bowel habits.

Constipation is being unable to have a regular bowel movement. Some helpful tips are using a sitting position that allows the person to lean forward, being active during the day to stimulate the process of bowel movement, eating healthy foods to reduce constipation, and/or use of a stool softener or bulk agent, enema or oral laxative.

DVT:

DVT, or **deep vein thrombosis**, is a <u>serious complication</u> after stroke. The lack of mobility after having a stroke increases the risk of clot formation in the veins of the legs. Prevention of a DVT is key. The best way to decrease formation of blood clots is by early mobility, as well as the use of certain medications such as blood thinners, if appropriate. Blood clots can be painful as well as lifethreatening if a piece of the clot breaks off and travels to the lungs. This is known as a **pulmonary embolus**. When a DVT occurs, treatment is dependent on the type of stroke, how recent the stroke occurred and ability to take blood thinning medications.

Respiratory Complications:

Disturbances in respiratory system function and complications affecting the respiratory system are possible after a stroke. The nature of these disorders depends on the severity and site of neurological injury. Alterations in breathing control, respiratory mechanics, and breathing pattern are common and may lead to gas exchange abnormalities or the need for mechanical ventilation.

Stroke can lead to sleep disordered breathing such as central or obstructive sleep apnea. Sleep disordered breathing may also play a role in the cause of some strokes.

Close observation of the stroke survivor for these potential disturbances, and implementation of preventive measures can significantly decrease morbidity and mortality.

SECTION 3

Different Levels of Care for Stroke Rehabilitation

People with a stroke may be served by many people in the healthcare system. Recovery often follows a progression that is often defined by the term "continuum of care." That means that a person with a stroke may transition from an acute care hospital through progressively less medically intense levels of care. The first step in the continuum is the acute care hospital. Patients are stabilized, medications are initiated or their effect is maximized. Secondary complications from the stroke and other medical problems are minimized. Once someone is discharged from the acute care hospital, they go to the next level that is most appropriate for them. That could be locations anywhere along the continuum, based on each individual's needs, from home with outpatient therapy to a long term acute care hospital. The first step is often to a long term acute care hospital (LTACH) or an inpatient rehabilitation facility (IRF). An LTACH is an option for stroke that have specific, complex medical needs. Gaylord is an LTACH. We are able to care for stroke survivors with medically complex problems and provide therapies that are equal to their needs (30 minutes to over 3 hours per day) to maximize their function and health. An LTACH average length of stay is 3-4 weeks based individually on each patient. An IRF sees a more medically stable population, for a shorter length of stay (14 days) and has strict rules on the amount of therapy (3 hours for everyone, despite their functional status).

Another option along the continuum is a sub-acute facility or a **skilled nursing facility**. These are institutions where people with a stroke have needs that can not be met at home from a medical or care standpoint. They continue to progress at a slower rate and are able to maximize their recovery prior to discharge. The typical length of stay is between 4-8 weeks. People can also transfer to an extended care facility as well, if home is not an option for discharge.

Following a stay at any facility, stroke survivors can discharge home with home care or go directly to outpatient therapy. Some people with stroke begin their therapy at home to maximize their function there or because they are unable to get to outpatient therapy. After a typical 4 week course of therapy at home, people often then discharge to outpatient therapy. Other times, people with stroke can also discharge from a facility directly into outpatient therapy. Outpatient therapy is typically more intensive than home care therapy. Outpatient therapy has the benefits of equipment and facilities not available in the home. Gaylord also has a large outpatient therapy department for persons with a stroke on the Wallingford campus.

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Outpatient Medical Services:

The Outpatient Medical Services Department at Gaylord Hospital provides medical evaluations and follow-up. The Outpatient Medical Services Department is staffed with physiatrists who are skilled in the treatment of individuals with stroke. Gaylord physiatrists can prescribe specialized treatments for spasticity management. In addition, wheelchair accessible GYN services and urology consultations are offered at Gaylord.

Outpatient Therapy Services:

Outpatient therapy services are typically provided to you when you are living in your home environment and can attend therapy outside of your home. The Outpatient Therapy Department at Gaylord Hospital provides physical therapy, occupational therapy and speech therapy services. Gaylord's Outpatient Therapy Department is staffed with therapists who are skilled in stroke rehabilitation.

Outpatient Psychology Services:

The Psychology Department offers short-term, evidence-based, cognitive-behavorial counseling services with a focus on helping people adjust to catastrophic injury (TBI, stroke, spinal cord injury) and related issues including substance abuse, PTSD, chronic pain, and general mental health concerns.

Additional Services:

Nutrition consultations are also performed in Gaylord Outpatient Services.

(203) 284-2888, Appointments, option 1

Transition to Rehab: Role of the Treating Team

Medical:



The physician is the team leader. This professional may be a specialist in Physical Medicine and Rehabilitation (Physiatry) or Internal Medicine. Since patients have survived a very severe and, in many cases, life threatening illness, continued management of medical complications beyond the acute care hospital is essential. Without medical stability, the stroke survivor's full participation in a rehabilitation

program would be impossible. The physician will assess many aspects of the ongoing health care needs of the stroke survivor. Both pre-existing and new medical problems will be evaluated, monitored, and managed. The medical team may also include a physician's assistant (PA) or a nurse practitioner (APRN), both of whom play key roles in managing the stroke survivor's ongoing health care needs.

Nursing:



A registered nurse is responsible for establishing a plan of care based on the needs of the patient as identified by the nurse. The ultimate goal of rehabilitation nursing care is helping people regain the control of and the responsibility for their lives. It is important to remember that the focus is on the stroke survivor becoming more independent and less reliant on others as discharge approaches.

The nurse ensures that each person receives adequate nutrition and rest, administers medications and performs treatments ordered by the physician. Monitoring the person to prevent or correct problems such as skin pressure areas, infection, deformities and excess weight is very important. Physical, cognitive, social and emotional reactions are also observed and recorded. Rehabilitation nurses work closely with other team members in evaluating and helping the stroke survivor practice on the unit the functional skills taught in other therapies. They address bowel and bladder training as needed.

Because the family is part of the team, education and participation in their relative's care is necessary.

Correct techniques are taught to the family in the therapy departments and on the nursing unit. Once these techniques are learned, the family will be encouraged to help whenever they are present. Adequate family training not only makes the transition from hospital to home possible but often can mean the difference between the stroke survivor being able to go home or to another facility.

Food and Nutrition:

A Registered Dietitian Nutritionist (RDN), upon nutrition consultation, will evaluate and monitor the nutritional status of stroke survivors and provide guidance for the person, family and team. Interventions may include education about healthy food choices to help manage chronic health conditions and assistance with managing poor appetite or addition of nutrition supplements. The dietitian also assesses and may modify a tube feeding regimen as needed. The RDN works closely with the Speech-Language Pathologist (SLP) when a modified consistency diet is needed due to swallowing problems. A representative from the Food & Nutrition department meets with inpatients daily for individual menu selections.

Before changing the diet or taking any type of supplement, one should always check with their health care provider. Nutrition education may be provided in both group and individual sessions. Continued nutrition support and counseling may be recommended after discharge on an outpatient basis.

Occupational Therapy:



The occupational therapist (OT) evaluates and treats areas which effect a person's ability to care for his or her self. The role of the occupational therapist is to assist the person in achieving the highest level of independence possible in activities of daily living (ADL's). This may include areas such as feeding, grooming, dressing, bathing, ability to get to and from

the bathroom, and preparing meals. A stroke may cause temporary or permanent weakness or paralysis on one side of the body. A person may need to re-learn how to perform these activities with the use of one arm or leg, and to compensate for visual, perceptual, and cognitive deficits. The occupational therapist may recommend adaptive equipment or modify the environment to assist the stroke survivor with their ability to perform these tasks more independently.

The occupational therapist also provides demonstrations and training to family members in the areas of self care and mobility in preparation for a safe discharge home.

Physical Therapy:



The role of the physical therapist (PT) is to assist stroke survivors in attaining the highest level of mobility possible following a stroke. The physical therapist will conduct an evaluation of movement in both legs comparing strength, sensation, tone and coordination, often which may be impacted following a stroke.

The therapist will also evaluate endurance, balance, as well as important mobility skills necessary for getting out of bed to walk, move from/to a bed or wheelchair ("transfer"), or use stairs. After completion of the evaluation, an individualized treatment program is developed in consideration of both the person and family's goals for rehabilitation.

Family education and training is an essential component to a stroke survivor's recovery following

a stroke. In consideration of a stroke survivor/family goal for a discharge to home, it may be advised for the appropriate family members to attend treatment sessions for training to assist the patient with safe mobility in the home environment. Recommendations for necessary assistive equipment and continued therapy services are made by the physical therapist prior to discharge.

Helpful hint: Wearing loose and comfortable clothing, including sneakers and pants (no skirts) is recommended.

Respiratory:



The Respiratory Therapist (RT) plays a key role in the management of the stroke patient. The RT will initially assess for any and all respiratory needs including oxygen, medication therapies, airway clearance modalities and airway interventions. The RT works together with the interdisciplinary team to best coordinate all aspects of the stroke survivor's care. The Respiratory Therapist

works with members of the interdisciplinary team to facilitate ambulation as soon as appropriate and aid in recovery and return to everyday activities. The RT staff will also provide education on breathing interventions to maintain optimal respiratory function.

Speech-Language Pathology:



If appropriate, stroke survivors in the inpatient program are evaluated by a speech-language pathologist (SLP). The doctor will order an evaluation of swallowing, communication and/or cognition (See each specific section for more information). Following the evaluation(s), an individualized treatment plan is developed. Goals are set by the stroke survivor, family members

or therapist, to assist with return to the highest level of function. Examples of speech therapy goals include: returning a patient to eating the least restrictive diet if he is nothing by mouth (NPO) or on a modified diet, using a speaking valve if a tracheostomy is in place, or remembering newly learned information. Treatment is given in individual speech therapy sessions and group therapy if appropriate. Families are encouraged to participate in treatment sessions to promote implementation of all skills/strategies learned.

Therapeutic Recreation:



Therapeutic Recreation (TR), also called Recreational Therapy, uses leisure and recreation programs to improve an individual's quality of life and physical, cognitive, social and emotional function. Therapeutic Recreation helps to improve abilities, enhance independence and make participation in recreation possible. TR offers activities that address the physical, cognitive, social, emotional and creative needs through engaging in activities of interest to each individual. Some examples of activities may

include: board games, cards, Wii or video games, arts and crafts, iPad use, sports and community re-integration. Leisure Education teaches or enhances recreation skills and attitudes that will be used throughout life. It can help one to discover new and exciting activities through interest exploration and to re-familiarize one with their community. Leisure Education also helps an individual continue to participate in activities of interest through adaptive equipment.

Care Management:

The Care Manager coordinates health care services that a person with a stroke requires through a collaborative multi-disciplinary team approach. It is the responsibility of the Care Manager to provide education and support to the person and their family as well as to hospital staff regarding community resources, managed care issues, or payment / payer issues.

Discharge planning is initiated upon admission. The Care Manager develops and revises individualized discharge plans as indicated by the team's assessment, and the patient's response to treatment. Many factors including the psychosocial, physical, educational and cultural aspects are taken into consideration when developing a plan. It is the role of the Care Manager to ensure that the stroke survivor's plan of care promotes a safe and timely discharge, and to evaluate the overall plan for effectiveness. The Care Manager involves both the stroke survivor and family in the formulation of goals for a safe discharge. The Care Manager provides the link between provider and payer organizations, physicians and the community in the transition of your care through the health care continuum.

Psychology:

The role of Psychology for patients admitted to the inpatient rehabilitation program, and their families, is to provide an evaluation of current functioning, including emotional, personality, cognitive and behavioral. In addition, the clinician will assess one's adjustment to illness. Recommendations are offered to guide treatment. Psychological treatment may include individual, family and/or group therapies to aid in adjustment issues and coping for the stroke survivor and family members. Treatment would include collaboration with other care providers to ensure continuity of care.

A brief neuropsychological evaluation may also be conducted based upon need with the goal of helping to inform treatment as well as the stroke survivor and family understanding of the cognitive and emotional changes. Upon discharge, resource information may be provided for follow-up as necessary. After discharge, the role of Psychology for stroke survivors may continue to the outpatient rehabilitation program and include an assessment by a neuropsychologist or other clinician. This is done to guide treatment and collaborate with outpatient doctors, physical/occupational and/or speech therapists to ensure continuity of care and to ensure the person's needs are met. Psychology facilitates outpatient individual and group therapies. Neuropsychological evaluations may also be conducted based upon individual need, to further inform treatment, especially as individuals begin to resume premorbid life roles (e.g. academia, employment) or seek additional services in the home. Resource information is also provided to help the stroke survivor reconnect with his/her community and bolster his/her support network.

Chaplaincy Services:

Chaplains serve to enhance health, maximize function and transform lives by helping patients, family members and staff draw upon their own religiosity and spirituality as potential sources of healing and comfort. We support patients, family members and staff of all faith backgrounds.

Health Management

Infections:

After any illness including a stroke, the body is weak and at risk of becoming overwhelmed by many of the bacteria (or germs) that naturally live in/on our bodies OR that pathologically live in health care facilities. The lung/respiratory system, bladder and skin have the highest risk for infection in health care centers. Any invasive procedure, whether drawing blood, obtaining urine by catheterization, placing an intravenous line or surgical procedure increases the risk. Hospital protocols are used to minimize risk of infection.

Infections of the respiratory system, bladder, skin or blood should be treated promptly and thoroughly with proper antibiotics. Careful choices in treatment are important to prevent overwhelming body system illness, antibiotic resistance or super infections. Caution must be taken to not use antibiotics improperly as overuse can be as clinically problematic as underuse.

Medications:

Secondary Stroke Prevention is very important in the process to decrease the risk of another event. Numerous medical studies have determined best practices to prevent another stroke. The goal of this research has been to determine the best and safest treatment for each group of stroke survivors at risk for a second stroke. The greatest mistake is to not consider medications that prevent a Secondary Stroke as part of the treatment process. Age should not be considered a contraindication to any intervention.

The recommendations are (unless not medically recommended due to increasing the risk):

- Persons with ischemic stroke, without atrial fibrillation, should be on an antiplatelet agent
- Persons with ischemic stroke with atrial fibrillation should be on anticoagulation.
- Persons with hemorrhagic stroke in the immediate post-stroke period, should NOT receive antiplatelet or anticoagulation therapy.
- Persons with stroke should receive an ACE-inhibitor, even at the lowest dose.
- Persons with stroke should receive a statin; with goal to keep LDL <90mg/dL.

- Serotonin Reuptake Inhibitors should be considered as part of post-stroke therapy for possible favorable influence on motor recovery and language skills.
- Blood pressure should be maximally managed with medications beyond ACE inhibitors if necessary.
- Diabetes should be maximally managed with oral therapy and/or insulin.
- Atrial fibrillation additionally requires proper heart rate control.
- Early and aggressive management of vasospasm in subarachnoid hemorrhage is important to improve outcome; these agents, particularly the calcium channel blocker—Nimodipine may continue for several weeks and must be dosed several times per day.

Mood:

Psychological services are available to assist in coping with the illness and consequent changes and to aid in adjustment. During one's inpatient stay, a psychologist is available to help the stroke survivor and family manage the emotional changes and develop the most effective method and strategies for coping. For those individuals who are receiving outpatient therapy services at Gaylord, psychological services are also available to target adjustment issues, and assist with return to pre-injury activities and settings. As well, neuropsychological evaluation is available as needed to aid in the examination of cognition and emotion in order to guide treatment.

Nutrition & Swallowing:

A brain injury can affect nutrition in a variety of ways. After a brain injury, some people have difficulty swallowing. The facial and throat muscles become weakened and are unable to move well, thus, creating problems with chewing and swallowing. If the brain injury survivor does, check with the doctor to see if a special eating plan that changes texture of foods or fluids for safe swallowing is needed. Some alterations to the diet may include: pureeing foods, making them smaller pieces with chopping or grinding or adding extra gravies to foods to make them moist and easier to manage. Fluids may need to be thickened to allow for a safer swallow. If liquids need to be thickened, it will be important to monitor the amount one drinks to ensure adequate hydration. The speech therapist and dietitian will formulate an eating plan that is right for each person. Following this plan will help the food and fluids to travel down the esophagus and prevent food from traveling toward the windpipe.

National Dysphagia Diet Levels (NDD)

NDD Level 1: Dysphagia Pureed

Pureed foods are smooth, no texture, they resemble the consistency of applesauce or pudding.

Below are recommended foods and food preparations:

Breads: Pureed French toast, pureed pancakes, pureed waffles, pureed muffins *When pureeing bread products, consider adding milk or cream along with butter or syrups to make creamy and smooth.

Cereals: Hot cereals such as farina, grits, cream of rice

Desserts: Smooth puddings, custards, custard style or whipped yogurts, pureed desserts, soufflés

*Consider pureeing desserts such as cakes, brownies, pies with milk, cream or fruit juices

Fruits: Pureed fruits or fully mashed bananas, fruit juices, fruit sauces

*If fruits contain seeds, strain fruit as needed

Meat/Proteins: Pureed meats, pureed fish, pureed eggs, blended tofu, hummus, bean spreads

*Consider pureeing meats/proteins with stocks, sauces, gravies that would traditionally accompany the item.

Potatoes/Starches: Mashed or pureed potatoes of any variety (skins removed) with butter, sour cream, gravy, sauce for moisture, pureed pastas, pureed stuffing or dressings.

*When starches puree, they can often become very thick. Adding extra moisture sources are necessary to maintain an "applesauce or pudding" consistency. Soups: Pureed or strained soups.

Vegetables: Pureed vegetables, vegetable smoothies, tomato or vegetable juices

NDD Level 2: Dysphagia Mechanically Altered

Mechanically altered foods are moist, very easy to chew, soft textured and are very easily formed in the mouth to swallow. Pieces of food are no larger than a $\frac{1}{4}$ inch. Meats are ground or minced and resemble a tuna salad or taco beef consistency. All Level 1 pureed food items are included in Level 2 recommendations.

Breads: Soft/highly moistened chopped pancakes, french toast, waffles with butter, syrup or fruit sauces

Cereals: Hot cereals with little texture, such as oatmeal, soaked and drained dry cereals with little texture such as corn or wheat flakes, rice crisps, puffed rice/wheat

Desserts: Puddings, custards, tapioca pudding, softened cookies that have been soaked in milk, soft/moist cakes moistened with milk/cream or fruit sauces

Fruits: Soft, drained, canned or cooked fruits without seeds or skin, soft chopped bananas, fruit juices with or without pulp. Avoid fresh, canned or cooked pineapple.

Meats/Proteins: Moistened or ground meat, poultry or fish, moist casseroles without rice or large chunks, moist macaroni and cheese, soft pasta with meat sauce, tuna noodle casserole, chopped stuffed shells (omit mozzarella cheese), chopped lasagna (omit mozzarella cheese), sauced meatballs, meatloaf with gravy, tuna/egg/ham salads (no large chunks, omit raw vegetables), cottage cheese, quiche without large chunks, poached, soft scrambled or over medium eggs, tofu, baked beans

Potatoes/Starches: Well cooked, moistened, boiled, mashed potatoes, baked potatoes without skin with added moisture, soft pastas in sauce, soft dumplings with butter or gravy. Avoid rice, peas, corn.

Soups: Pureed or strained soups.

Vegetables: Soft, well cooked, easily mashed with a fork. Avoid fibrous vegetables such as asparagus, cabbage. Avoid peas, corn.

NDD Level 3: Dysphagia Advanced

Foods are moist, bite sized. Dry, chewy, hard, stringy foods are avoided. All Level 1 pureed foods and level 2 mechanically altered food items are included in Level 3 recommendations.

Breads: Soft sliced breads, soft muffins with butter/jelly, soft biscuits with butter, cut pancakes/soft waffles/French toast with butter and syrup

Cereals: Soaked and drained dry cereals such as corn or wheat flakes, rice crisps, puffed rice/wheat, hot cereals

Desserts: Soft cookies, custards, fruit pies without top crust, moist cakes, pudding, tapioca pudding

Fruits: Canned/cooked fruit, ripe bananas, soft peeled fresh fruits, soft berries with seeds. Avoid grapes, raisins, hard fruits, stringy fruit (pineapple, fresh oranges), coconut

Meats/Proteins: Moist cut or finely sliced meats, meatloaf, tuna/egg/chicken/ham salad sandwiches on sliced bread, moistened turkey/ham sandwiches (omit lettuce and tomato), sloppy joes on soft buns, moist fish, eggs, cheese slices, cottage cheese

Potatoes/Starches: Tender home fried potatoes, moist rice, pasta with sauce, moist casseroles.

Soups: Cream or broth based soups with soft pieces, chili. Avoid soups with large pieces or stringy/chewing ingredients. Avoid clam chowders.

Vegetables: Soft cooked, fork tender vegetables. Avoid salad, corn, peas, fibrous vegetables such as cabbage, asparagus, raw vegetables

Please consult with your speech therapist in regards to specifics of your recommended diet.

Oral Care:



Just like the muscles in the arms and legs a stroke can cause weakness and numbness in the face, cheek, tongue or throat which can lead to problems such as swallowing, controlling saliva, dry mouth and difficulty controlling dentures.

One of the problems a person with a stroke may experience is difficulty in swallowing saliva, so that it overflows from

the corners of the mouth. This can make the corners of the mouth or chin sore. Improving posture so that the person with a stroke can sit up properly may help prevent this. In some cases medication can be used to reduce the amount of saliva produced.

After a stroke, some people may experience a dry mouth. Some may have an increased tendency to breathe through the mouth rather than through the nose which dries the mouth and increases the risk of tooth decay and gum disease. A few helpful tips are to take frequent sips of water or use a small atomiser and spray into the mouth, keep lips moist by applying a lip salve, and always take dentures out at night to give the mouth a rest.

Loss of sensation and loss of muscle control can affect wearing dentures in different ways, mainly putting dentures in and controlling loose dentures. If the loss of sensation on one side of the mouth makes it difficult for the stroke survivior to put in dentures, they should try the following: use a mirror, put the denture into the mouth towards the affected side, turn the denture around towards the unaffected side, and slide the denture back into position.

It is very important to maintain daily oral care. Speak to your healthcare provider for guidance if you are having difficulty with oral hygiene.

Pain:

Pain after stroke can be the result of many things. Pain can significantly impact one's ability to participate in the rehabilitation process. The location of the stroke itself may result in the sensation of pain. Spasticity, a common problem after stroke, can be a source of pain as well. Shoulder pain in the weakened upper extremity can occur in up to 75% of stroke patients with resulting weakness.

The source of pain experienced can help to determine the most appropriate treatment option, speak with your doctor to formulate the best plan.

Skin Care:

After experiencing a stroke, survivors may be at risk for skin problems due to decreased sensation, the inability to move their body or body part and inattention to certain visual fields.

Many types of skin problems may occur as a result of immobility after a stroke. A person may develop a bed sore, blisters, a rash, or a change in skin color from lying or sitting in one spot for long periods of time with the inability to shift their body or body part. Loss of feeling may affect the ability to notice contact with something sharp or hot. Bladder or bowel accidents are special concerns because they can cause the skin to become irritated. As we age, our skin becomes less elastic putting older people at greater risk for skin problems after a stroke.

Healthy skin is intact, well-lubricated with natural oils, and nourished by a good blood supply. A balanced diet, good hygiene, regular skin checks and appropriate pressure relief are all important for healthy skin. Skin problems can often be prevented. Relieving pressure and checking skin ensures a good blood supply.

Remember to keep skin clean and dry, eat a healthy diet, and check the skin regularly in order to help recognize potential areas as soon as possible. Early detection is key.

Sleep Disturbances:

Adequate sleep after a stroke can be very important to recovery. Some sleep disorders significantly increase the risk of stroke, and stroke itself also increases risk of sleep disorders. In fact, about 2 out of 3 survivors of stroke have some form of sleep disorder. Signs of sleep symptoms manifest in various ways: insomnia, depression, snoring, excessive daytime sleepiness, shortness of breath during sleep and unexplained awakenings from sleep, alerting the person or caregivers of important sleep disorders.

Family members may play a vital role as they may notice symptoms that the stroke survivor may not be aware of or cannot communicate effectively. Alerting medical professionals or caregivers about these signs and symptoms can help a great deal in the recovery process.

Respiratory Issues:



With the stroke survivor population, there are many respiratory issues that can occur. Oxygen therapy may be indicated to maintain adequate oxygen in the cardiopulmonary system. Airway exercise devices such as incentive spirometers may be utilized to remind and encourage the stroke survivor to take deep breaths. This simple activity may prevent hospital acquired pneumonia and other breathing difficulties. Deep breathing

and coughing are key components to maintaining clear airways and good respiratory health. Airway clearance devices may be utilized if secretion management becomes an issue. Examples of these are cough assist machines, PEP devices, flutter valves, and suction equipment.

Aging with a Stroke:

After surviving a stroke, other body changes related to aging will continue. Continuing to address the body's changes over time with all of your physicians is important. For example, as we age soft tissues of the joints become less flexible. Thus, walking with a limp or hiking your shoulder repeatedly can caused increased wear and tear on certain joints. Importantly, one of the biggest risk factors for having a stroke, is having had a previous stroke. Taking all the possible steps to control that risk is vitally important. Good nutrition, following doctor's orders, staying physically active, limiting overuse of specific joints, and controlling your stroke risk factors, are all very important.

Technology & Equipment

Augmentative and Alternative Communication:

Augmentative and alternative communication (AAC) incorporates the communication methods used to supplement or replace speech or writing for those with difficulty producing or understanding language. AAC is used by those with a wide range of speech and language impairments. AAC can be a permanent addition to a person's communication or a temporary aid. The purpose of AAC is to facilitate meaningful participation in daily life activities. Special augmentative aids, such as picture and symbol communication boards and electronic devices, are available to help people express themselves. This may increase social interaction, performance, and feelings of self-worth. AAC should be used when communication needs are not being met, and to express his or her own feelings, thoughts, wants and needs. A team approach is utilized when providing AAC services. A Speech-Language Pathologist will identify the need for AAC and perform an assessment to determine the most appropriate AAC techniques and equipment. The SLP then develops material, programs a device, and trains the patient, family, and other team members regarding use. An occupational therapist will determine most effective ways to access communication aides and a physical therapist to determine the most effective positioning for the patient.

Assistive Technology:

Assistive technology (AT) is any item, piece of equipment, or product system that is used to increase, maintain, or improve functional capabilities. Assistive technology can be off the shelf, modified or customized. Assistive technology enables a stroke survivor to fully participate in meaningful activities and fulfill life roles. Trained therapists work collaboratively with individuals to determine the most effective and efficient piece of assistive technology to meet individual needs. Therapists may recommend devices to help people be more independent with feeding, bathing, dressing, communicating, cooking and/or accessing their home environment. Assistive technology also includes devices that increase your mobility, computer access and communication. Assistive technology may be considered 'low tech' or 'high tech'. Low tech equipment may include a long handled reacher or elastic shoelaces. High tech equipment may include an environmental control unit that can control lights and simple appliances in your home.

Therapists work with both the stroke survivor and the family to determine specific goals and objectives. Therapists are able to evaluate skill levels and make recommendations as appropriate. Assistive technology also includes making adaptations to existing equipment to increase the level of function. During the stroke victim's inpatient stay, the therapy and medical team will begin to introduce a variety of assistive technology that meets the individual's needs. Gaylord staff will be able to provide the stroke survivor with a number of resources and trial assistive technology products if appropriate.

What Does Gaylord Have:

EksoTM



Ekso™ is a wearable battery powered, bionic device or exoskeleton that enables people with lower-extremity paralysis or weakness to stand and walk. With the individual providing the balance and proper body positioning, Ekso allows them to walk with reciprocal gait. The physical therapist uses the control pad to program the desired walking parameters, such as step length and speed, as well as control when the Ekso stands, sits, and takes a step. The variable assist feature allows the device to provide varying levels of power to each leg, allowing the individual to use their own muscles to the best of their ability and progress in their recovery.

Functional Electrical Stimulation (FES)



Electrical stimulation is the clinical use of electrical current to cause a contraction in a muscle. When electrical stimulation causes the muscles to contract in a purposeful way, this is called functional electrical stimulation or FES.

Standing Frame/Tilt Table



A standing frame/tilt table is a device that allows the stroke survivor to be supported in a standing position if they have weakness in the torso and legs. Regular use of a standing frame/tilt table may minimize many complications that can be experienced due to sitting in a wheelchair for too long. The potential benefits of using a standing frame include:

- Maintaining full movement in the hips, knees and ankles
- Improving postural alignment
- Reducing muscle spasms
- Relieving pressure on the skin
- Reducing fatigue
- Increasing confidence and improving mood

Lite GaitTM



The Lite Gait[™] is a weight supported harness system that is used in therapy to assist stroke survivors that have difficulty standing and walking.

Apple iPad®



The Apple iPad® is used to provide assistance with communication and organization. Patients are taught to use applications that help with cognitive and functional capabilities. With this technology patients can Skype™ and keep in touch with family and friends. Our staff helps patients to use the best apps to maximize their time and effort.

Bioness Integrated Therapy System - BITS®



BITS is a multi-disciplinary therapy solution designed to motivate patients and improve clinician efficiency. With 24 unique programs and four standardized assessments, BITS' interactive touchscreen and diverse program options challenge patients through the use of visual motor activities, visual and auditory processing, cognitive skills and endurance training.

ZeroG® Gait & Balance System®



The ZeroG Gait and Balance System protects patients from falls while providing dynamic body-weight support as patients practice walking, balance tasks, sit-to-stand maneuvers and even stairs. Because ZeroG is mounted to an overhead track, there are no barriers between the patient and therapist. With the only ZeroG in Connecticut, inpatients can begin rehabilitation as early as possible in a safe, controlled environment.

AlterG® Anti-Gravity Treadmill®



AlterG Anti-Gravity Treadmills use NASA-developed Differential Air Pressure (DAP) technology that enables unprecedented unweighting therapy and training capabilities. This unique unweighting with air pressure comfortably lifts the user and allows him/her to walk or run at a fraction of their body weight. Gaylord has AlterG treadmills in all outpatient locations - Cheshire, North Haven and Wallingford.

Kinesiq



The first balance and motor capacity exercise equipment dedicated to physical and neurological rehabilitation as well as to preservation of functional autonomy. It combines two motion platforms in perfect synchronization with multimedia content for passive and assisted movements. The program types are: weight shift and movement exercises, a "games: program requiring different movements that can be used for evaluation and comparison testing requiring vision, cognition and motor planning, and also multimedia balance platform activities.

What scenarios does it feature?

- Play balance games to restore everyday abilities
- Take a bus or a subway ride
- Dance with rhythm on Latin tunes
- Ride a gondola in Venice or sail thru Caribbean Sea

Synchrony



Synchrony is an interactive sEMG
Dysphagia Treatment System. Unlike
any other dysphagia rehabilitation
solutions available, Synchrony is
designed specifically for you and your
speech language pathologists (SLPs) to
visualize swallow activity using virtual
reality sEMG (surface electromyography)

biofeedback. With engaging exercise visualizations, data dashboards, and reporting tools, this technology gives SLPs more power than ever to help you to learn new behaviors which will enhance your quality of life.

Saebo MyoTrac Infiniti®



The Saebo MyoTrac Infiniti® is a comprehensive, portable biofeedback electrical stimulation system assisting with foot drop. The device delivers stimulation to the targeted muscles based on the client's very own EMG signal. This combination of biofeedback and stimulation provides a unique opportunity for people to maximize their rehabilitation and recovery.

Brake Reaction Test



The Vericom Response is a tool specifically designed to be used by Occupational Therapists, Medical Professionals, Research Teams, and Driver Training providers to test human perception and reaction time. It consists of software, a steering-wheel, and accelerator/brake pedal system, designed for use in an office type setting in front of a computer

mounted to a desk with the accelerator/brake pedals on the floor. The Vericom Response includes 10 preloaded driving videos that simulate driving in the city, around mountain curves, rain, snow, and a 2-lane highway as primary distractions. The user can select from 9 different objects that will enter the video as a "stimulus" that the client is instructed to react to. The client provides the response and input via a steering-wheel/pedal hardware system that connected to the PC operating the Response software. Upon conclusion of each test session, the results table is automatically displayed for review.

Helix HD



Helix HD is a compact, portable & lightweight HD video magnifier. The Helix HD plugs directly into your HDTV or HD computer monitor and is controlled via a wireless control pad. The Helix HD has a wide viewing area (up to 8 inches) and allows full page width magnification of any text or images up to 150x.

Virtual Reality



The Vive is a virtual reality system used to immerse a patient into a new world. Patients can choose their experience- archery, guided meditation or exploring the world are all options. Benefits include helping the patient work on functional skills such as balance or physical skills through sports or movement, coping and adjustment to the disability or returning to a career through simulation. Experiences can be guided by a therapist and experienced from a seated or standing position.

Sesame Enable



Sesame Enable is a hands free and touch free application that can be installed on any android device from 7.0 and above, including smart phones and tablets. It allows the user complete control over the device through head movements which controls the cursor. The application is able to be customized based on the users level of ability including but not limited to tremors,

decreased neck range of motion, decreased strength and hemiplegia. It is ideal for people living with paralysis or upper extremity impairments - Spinal Cord Injuries, Multiple Sclerosis, Lou Gehrig's disease (ALS), Cerebral Palsy, and other conditions. This technology when combined with other smart devices such as environmental control units allows the user access and control of their home environment increasing independence and quality of life.

BionessTM H200 & L300 Go



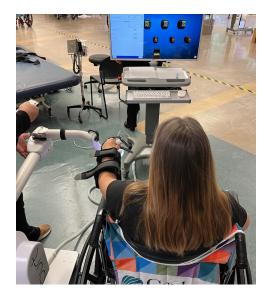
Gaylord also has Bioness H200 Wireless Therapy™ available for use with individuals with impaired arm and hand function. The Bioness H200 Wireless is the only device FDA- approved to improve hand function.

Clinical benefits of the device include improving hand active range of motion and hand function, improving voluntary movement, re-educating muscles, maintaining and increasing range of motion, increasing local blood circulation, and reducing muscle spasm. The occupational therapist may suggest use of this device to improve hand function if indicated.



Another Bioness device in use is the L300 Go. It is a system that uses electrical stimulation to control foot drop and improve knee stability. The system's gait sensor adapts to changes in walking speed and terrain. The L300 is programmed by your clinician to stimulate the appropriate nerves and muscles in your leg to lift your foot, stabilize your knee and help with a more natural walking pattern.

BURTTM - Upper extremity robotic trainer



BURT® is an FDA-registered medical device that assists patients with both passive and active ranges of motion while providing adjustable resistance. BURT® assisted activities are directed by therapists and encourage patient involvement through video game activities that provide active proprioceptive, vibrational, visual, and auditory feedback. Engaging and colorful games are beneficial in holding patients' interest and gravity assistance may also allow for increased repetition in the face of patient fatigue.

References:

^{1.} Miller EL, Murray L, Richards L, Zorowitz RD, Bakas T, et al. 2010. Comprehensive overview of nursing and interdisciplinary rehabilitation care of the stroke patient: a scientific statement from the American Heart Association. Stroke 41:2402-48

^{2.} Barrett_Medical. Robotic Assist Rehabilitation Made Easy. https://medical.barrett.com

Positioning and Related Equipment:



Positioning can be crucial for a variety of reasons. How a patient is positioned in bed or in a wheelchair can assist in maintaining proper joint alignment, range of motion and comfort. Common areas of concern include: head and neck, trunk alignment, arm, leg, and any bony prominences such as elbows, heels, and buttock bones.

Common items used for positioning may include: pillows, wedges, multi-podus boots, and towels. These items can be utilized in bed to elevate such areas and protect the skin from breaking down. The entire rehab team frequently monitors skin for any vulnerable areas of redness. The therapy team will work together to choose an appropriate cushion to keep one's bottom comfortable and pressure free when seated in a wheelchair.

In addition to skin protection, positioning is important to protect the affected limbs after a stroke. Most commonly after a stroke, a person's arm is initially very weak and needs to be supported while in a seated or standing position. The humerus bone may start to separate from the shoulder joint since the muscles that typically support the shoulder joint are weak or inactive. This can lead



to pain and subluxation of the joint. The occupational therapist will choose an arm tray or trough to help keep the upper extremity supported and the shoulder joint in alignment while the person is seated in their wheelchair. It is also important to maintain a safe position of the shoulder during transfers and walking. The occupational therapist may also suggest a sling for use during these activities.

Kinesiotaping is another method that can be used to protect the shoulder joint and assist in the prevention of subluxation. The occupational therapist may also recommend use of a hand splint for the affected extremity to maintain soft tissue length and to protect the hand joints while at rest. This splint is often called a resting hand splint. The occupational therapist will work with the stroke survivor and their family to develop a wearing schedule and provide education for how to put the splint on. As the person recovers, the affected limbs may become tight.



The therapy staff will work with the individual and their family to provide appropriate positioning to maintain proper joint alignment and maximize comfort and hygiene. If necessary, contact information will be provided of the vendor who made the splint to assist the person as needed with any changes to help improve comfort and fit of the splint.





After a stroke, individuals often have difficulty moving the affected side of their body. Over time, this lack of movement may cause an increase in fluid build up in the hand or foot. A foam wedge or Isotoner™ glove may be issued to help more evenly disperse the fluid. The tight white stockings, known as TEDS or compression stockings, are used similarly for the legs. These stockings are also used to assist with circulation in the legs since the person may not be as mobile at this time. The wheelchair leg rests can also be elevated.

Taping:

Kinesiotape is a therapy tool used to assist people in offering support to weak muscles in either the arm or leg that can become painful after a stroke. Kinesiotape may also be used in therapy to help persons that have tight muscles after stroke that may limit the amount of movement in the arm/leg. The physical therapist and occupational therapist will answer any questions about the use of kinesiotape in recovery after a stroke.

Bracing:

After a stroke, it is common to see weakness affecting the leg. This weakness can have a negative effect on one's safety with transfers (moving from one place to another), walking and stair negotiation. The physical therapist will make recommendations as needed for bracing for the weak leg. These may include an aircast (to help stabilize the ankle), an AFO (ankle foot orthosis), or multipodus boot (to protect the heel and provide a stretch at the ankle to prevent loss of range of motion).

The physical therapist will also help the stroke survivor understand why the brace/orthotic is important, how to put it on and take it off, as well as talk with the person how long the brace should be worn each day, and the importance of checking the skin while wearing a brace. There will be contact information of the vendor who made any brace provided to assist as needed with any changes to help improve the comfort and fit of the brace, or orthotic.

Durable Medical Equipment:

After a stroke, many times patients require special equipment for mobility and safety. If you are able to go directly home from Gaylord, your therapists here will review any equipment recommendations and assist you with the process of ordering and obtaining your equipment. Each person requires different equipment, some examples of DME include:

- · hospital beds or mechanical lifts
- wheelchairs, cushions and positioning equipment
- devices for self care commodes, tub benches, shower chairs, hand held showers
- braces and splints
- transfer equipment or ambulation devices such as canes and walkers

Equipment CAN:

- Increase independence
- Protect against injury
- Protect your skin
- Provide postural support and prevent deformity
- Prevent injury to a caregiver
- Improve comfort
- Require maintenance

Equipment should NOT:

- Make life more difficult or complicated
- Be harmful to you or caregiver
- Increase clutter in your home
- Break the bank

Staying Healthy and Preventing Another Stroke

A large risk factor for having a stroke is having a previous stroke. Thus, we want to limit as many factors that could cause a stroke. There are factors that can be controlled, and those that cannot.

CONTROLLABLE RISK FACTORS are things that CAN be modified to decrease risk of stroke. Regular consultation with a physician and making lifestyle changes can assist with establishing an appropriate plan of prevention. Proper control of the factors below decreases risk of stroke.

MEDICATION COMPLIANCE: It is very important to take your medications as directed by your physician. Not taking your meds as prescribed can increase your risk for stroke.

HIGH BLOOD PRESSURE: If blood pressure becomes consistently too high, it causes added pressure on the blood vessels leading to the brain, increasing the risk of stroke. According to the American Heart Association, a blood pressure reading of below 120/80 is considered normal. It is recommended that the stroke survivor consult with their doctor because everyone's needs are different, especially after an event such as a stroke. However, for prevention, the recommended blood pressure is below 120/80. The stroke survivor should speak with their doctor regarding the appropriate medications that are needed to manage blood pressure and blood pressure should be checked regularly.

SMOKING: Smoking damages the blood vessels and increases the risk of hardening of the arteries. Hardening of the arteries limits the space for normal blood to flow to the brain and may cause a stroke. Thus, smoking is NOT recommended.

DIABETES: Diabetes affects the blood vessels and subsequently all of the organs of the body, including the brain. It is essential that diabetics monitor their blood sugar levels and see their doctor regularly to be sure the diabetes is well controlled.

PHYSICAL INACTIVITY AND OBESITY: Having excess weight puts added stress on the heart and forces it to work harder. Extra weight may increase blood pressure and may put individuals at risk for high cholesterol and other medical problems such as diabetes.

Exercise also decreases risk for stroke by controlling weight and improving cardiovascular health. See also, "Nutrition" later in this section for diet suggestions.

CARDIAC ARRYTHMIAS: Abnormal contractions cause the blood in the heart to pool and clot, increasing the risk of stroke. Common examples include: atrial fibrillation (irregular heartbeat), bradycardia (slow heartbeat), and tachycardia (fast heartbeat).

COAGULATION PROBLEMS: It is important to manage the clotting of the blood if the doctor recommends it. Medication commonly called "blood thinners" are often prescribed. Please speak to your care provider with any questions.

HIGH CHOLESTEROL: High cholesterol causes plaque or fatty deposits to form and adhere to the linings of the arteries, making it difficult for blood to freely flow through. This can lead to a blockage in the area of an artery leading to the brain and may cause a stroke. In other instances, a piece of this plaque may loosen from the artery into the blood stream and cause a blockage in another area leading to the brain or another organ of the body. Ask your doctor to help you understand your targeted range for HDL, LDL, and triglycerides.

STRESS LEVELS: High levels of stress may cause an increase in blood pressure, decrease in sleep, increase in bad eating habits, weight gain, increase in cholesterol, and increased smoking, thereby increasing the risk of stroke.

EXCESSIVE SUBSTANCE USE: Drinking more than 1-2 drinks per day may lead to increased risk of stroke. In addition, use of other substances can increase risk of stroke.

NON-CONTROLLABLE RISK FACTORS are things that **CANNOT** change in the prevention of Stroke.

AGE: As we get older, the chances of having a stroke increase. However, strokes can and do occur at any age.

GENDER: Men are more at risk for stroke than women, although in a given year, more women than men will die from a stroke. One in 5 women will have a stroke in her lifetime. Stroke is the fifth leading cause of death in men.

ETHNICITY: The National Stroke Association reports that African Americans, Hispanics and the Asian Pacific Islander population are at a higher risk for stroke.

PERSONAL MEDICAL HISTORY: Your doctor can inform you if your medical history puts you at risk for having a stroke, however having had a stroke is a risk factor that may lead to more strokes. You are also at risk if you have a family history of stroke.

Nutrition:

Tips to Control Blood Pressure:

The eating plan after stroke is low in sodium (which comes mainly from salt). Limiting sodium will help to control fluid build- up as well as control blood pressure. In general, foods with more than 300 milligrams (mg) sodium per serving may not fit into the stroke survivor's meal plan. Minimal salt should be added to foods before or after cooking. Note that restaurant foods can be very high in sodium and restaurants may accommodate low salt or no salt choices when requested. A variety of herbs are available that will nicely flavor foods without adding sodium to the diet. These may include parsley, basil, pepper, garlic and garlic powder. High sodium foods to limit include canned soups, pickled items, mustard and other high sodium condiments, salty snacks, luncheon meats, hot dogs, bacon, sausage and fried foods.

Eating foods that are good sources of the minerals potassium, magnesium and calcium can also help control blood pressure. These include fruits and vegetables in a variety of colors (potassium and magnesium), low fat dairy products (calcium and potassium) and nuts and seeds (potassium and magnesium). If overweight, gradual weight loss may help with blood pressure control.

Tips to Control Blood Cholesterol Levels:

Limit foods that are rich in saturated fat and trans fat which can raise the LDL cholesterol or the "bad" cholesterol in the blood. These foods include: fatty or fried meats, rich desserts, butter, cream and tropical oils such as palm, palm kernel and coconut oils as well as hydrogenated oils. Better choices are unsaturated oils such as olive oil, canola, soybean, sunflower or avocado oil.

Fiber:

A diet high in fiber is helpful for heart health and bowel function. As fiber is added to the eating plan, it is important to drink more water to help the body process the fiber without discomfort. High fiber foods include fruits, vegetables, whole grains, nuts, seeds and legumes (dried beans and peas). Aim for 2 cups of fruit, 3 cups of vegetables and 3 ounces of whole grains per day. Soluble fiber is especially good for controlling cholesterol levels. Good sources are oatmeal, dried beans and peas, nuts, apples and flaxseed.

Omega- 3 Fatty Acids:

Eat cold water, fatty fish such as salmon, tuna, mackerel and sardines twice per week. These fish provide omega-3 fats which are heart-healthy. Be aware, however that canned fish can be high in sodium. Choose fresh or frozen fish or buy low-sodium canned types. Add ground flaxseed or flaxseed oil to food or eat walnuts for extra omega 3.

Before changing your diet or taking any type of supplement, you should always check with a health care provider. A Registered Dietitian Nutritionist is available to provide individualized education. Continued nutrition support and counseling may be recommended after discharge on an outpatient basis.

How To Recognize If You Are Having A Stroke:

The American Heart Association uses the acronym FAST





F: Face drooping- Does one side of the face droop or is it numb? Ask the person to smile. Is the person's smile uneven?

A: Arm weakness- Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?

S: Speech difficulty- Is speech slurred? Is the person unable to speak or hard to understand? Ask the person to repeat a simple sentence, like "The sky is blue." Is the sentence repeated correctly?

T: Time to call 911- If someone shows any of these symptoms, even if the symptoms go away, call 9-1-1 and get the person to the hospital immediately. Check the time so you'll know when the first symptoms appeared.





HOW TO EAT BETTER



CREATE A HEALTHY EATING PATTERN

Make smart choices and swaps to build an overall healthy eating style. Watch calories and eat smaller portions.



vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins, skinless poultry, fish and seafood.









sweetened drinks, alcohol, sodium, red and processed meats, refined carbohydrates like added sugars and processed grain foods, full-fat dairy products, highly processed foods, tropical oils like coconut and palm.









trans fat and partially hydrogenated oils (found in some commercial baked goods and fried foods).

✓ READ NUTRITION LABELS



Learning how to read and understand food labels can help you make healthier choices.

When you have more than one choice, compare nutrition facts. Choose products with lower amounts of sodium, saturated fat and added sugars.

Learn more at heart.org/lifes8

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Eat only as many calories as you use up through physical activity. Understand serving sizes and keep portions reasonable.



COOK AT HOME

Take control over the nutritional content of your food by learning healthy preparation methods.



The Heart-Check mark helps you find foods that can be part of a healthy eating plan.



The American Heart Association has hundreds of heart-healthy recipes to choose from.

Gaylord Specialty Healthcare Services

Community Re-Entry:

Community Re-Entry is a group session provided at Gaylord Hospital. Patients participating in community re-entry are able to participate in planning and completing a trip to a community location (restaurant, museum, grocery store, etc.) with therapy staff and peers. The purpose of community re-entry is to provide an opportunity for exposure to community barriers, increase knowledge of leisure resources in the community, increase skill building through on-site therapy intervention, provide opportunity for social interaction and increase physical and/or cognitive functioning.

Transitional Living:



The Louis D. Traurig House is the only transitional living center for people with acquired brain injuries in Connecticut. Located in Wallingford on the campus of Gaylord Hospital, Traurig House is an 8-bed, co-ed facility. The setting is that of

a home with bedrooms, sitting areas, a computer station with internet access, a kitchen and dining room.

Typically, residents come to Traurig House after they have completed their inpatient rehabilitation but are not quite ready to go home because of difficulty with language, physical, or cognitive functioning. Traurig House provides the necessary transition to ease the patient from hospital to home. The residents have weekly goals in the house to progress their functional skills toward independent living and maximize their potential under the supervision and assistance of staff. Each resident also spends weekends home to utilize their skills with their loved ones in their own home. The length of stay is modified to meet the needs of each resident, typically between 4-6 weeks.

They also receive services in our Cognitive or Aphasia Day Treatment Program, at Gaylord Hospital; such as cognitive retraining, communication skills, community re-entry, psychosocial skills, independent living skills, psychological support as well as individual Physical Therapy, Occupational Therapy and Speech Therapy.

Insurances are accepted with a contract for transitional living are: Blue Cross of Connecticut, Connecticare, Medicaid, and Workman's Comp. Unfortunately, some insurances like Medicare, United and Cigna do not have a benefit. Please talk with your case manager for any inquiries about acceptance into the transitional living program.

The Traurig House allows each individual and their family to "practice" what it will be like upon returning home. You and your family are welcome to visit for a tour by calling (203) 741-3488 or (203) 284-2773.

Orthotics and Prosthetics Care:

Gaylord's board-certified physical medicine and rehabilitation doctors work with patients who require new or revised prosthetics and orthotics. Our team evaluates a patient's strength, gait, balance, coordination, medication, and current prosthetic or orthotic use. New technologies are changing the shape of this field and our clinical staff can introduce patients to the best options available. Whether getting up on a new prosthetic for the first time or interested in new technology, Gaylord can help.

Wheelchair Assessment Service:



An optimally prescribed wheelchair and seating system can help a wheelchair user achieve independence and wellness. Gaylord's Wheelchair Assessment Service (WAS) evaluates clients for mobility devices, including manual wheelchairs, scooters, power wheelchairs, as well as custom seat cushions and back supports. A WAS appointment consists of a comprehensive evaluation by a physical therapist who is a certified Assistive Technology Professional (ATP) with advanced training in seating and positioning. Rehab Technology Suppliers are present at evaluations to assist in equipment

selection and to provide the equipment to a wheelchair user. A comprehensive evaluation is completed to address your seating and mobility system needs. Extensive equipment simulation is performed to assist you in equipment selection.

Gaylord WAS clinicians work closely with equipment manufacturers to ensure that a wide variety of state-of-the-art equipment options are available for trial. Additional services include pressure mapping assessments, standing frame evaluations, custom molded seat cushion and back support fabrication.

Aquatic Therapy Program:



Aquatic therapy, therapeutic exercise in warm water, provides a soothing, efficient method for achieving movement. Therapy in water offers a cushioning environment for those with various stroke related issues, since the physical properties of water diminish the effects of gravity. Gaylord's Aquatic therapy program provides treatment by registered physical and occupational therapists with advanced training in aquatic

therapy techniques. The ability to swim is not necessary to participate. Aquatic therapy can offer many benefits, including increased ability to stand and walk in the water, greater flexibility, balance and strength building, pain reduction and relaxation.

Gaylord's pool is maintained at a therapeutic temperature of 90 degrees. The state-of-the-art 75-by 25-foot therapeutic pool is specially designed for people with disabilities. The unique pool is equipped with various ways to enter the

water such as stairs, a hydraulic lift, and a ceiling lift to accommodate bariatric patients. Gaylord also offers Aquacize, a community aquatic exercise program for independent use of the pool during designated hours.



The following conditions would prohibit participation in Aquatic Therapy:

- Open wounds
- Bowel incontinence
- Bladder incontinence
- Urinary Tract Infection in initial stages
- Uncontrolled seizures
- Isolation precautions
- Skin infections
- Fever
- Tracheostomy

If you are interested in Aquatic Therapy, discuss if it is an appropriate exercise method with your physician and therapist.

Day Treatment Programs:

Gaylord offers the **Cognitive Day Treatment Program** and the **Aphasia Day Treatment Program**. After a stroke, you may experience a variety of cognitive deficits or communication deficits. If you are having difficulty with orientation, attention, memory, reasoning, problem solving, executive functioning or pragmatics, Gaylord's Cognitive Day Treatment Program may be for you. If you observe problems with auditory comprehension, verbal expression, reading or writing, Gaylord's Aphasia Day Treatment program could help you. These specialized and unique programs are intensive, full day individualized programs that include a mix of group and individual therapies. Since family members are important to your recovery, they are encouraged to take an active role. Our specialists will design a treatment plan based on each individual's specific needs.

Beyond Gaylord— Tips for a Successful Life

Returning to Work and School:



Consideration for a stroke survivor to return to school or work occurs towards the end of treatment. Certain steps must be followed to ensure a successful transition back to school or work. This includes testing, adequate communication between the medical and school or work setting, and arrangement for special accommodations. Becoming

connected with resources in the community or national organizations can also be helpful with this process.

Consideration for return to work/school is based upon the recovery of functions in numerous domains. These domains include cognition, behaviors, physical skills, and emotions. Cognition allows us to acquire new information, process that information and retain it for later use. Cognition also impacts all other aspects of functioning. For example, behaviors are influenced by our ability to recognize and filter social expectations and interpersonal interactions. One must be able to understand and remember information to respond appropriately and generalize behaviors to other settings, especially in the return to pre-injury functions and environments (e.g. home, academia, employment). As well, it is important to recognize our own abilities and limitations [self-awareness] in the context of recovery to utilize the information we receive from our environment, treatment providers, family and friends. Behaviorally, one must be able to interact with others and their environment to successfully alter their way of engaging in activities and relationships with others. Emotionally, individuals may experience changes in mood and affect, the expression of mood. This in turn, can affect how one reacts to incoming stimulation and may lower one's resistance to frustration and heighten sensitivity to the environment and other individuals with whom they interact. Depression and anxiety are common emotions during recovery as individuals and their families may experience a grief process during recovery, all of which may impact returning to pre-injury activities and settings.

Neuropsychological assessment is generally conducted upon referral from one's treatment provider to examine the strengths and weaknesses of cognitive, behavioral and emotional abilities. The test results guide treatment and determine what accommodations would be necessary and helpful to foster a smooth and successful transition back to one's environment. This evaluation may occur briefly during the inpatient stay, but most often is scheduled post-discharge when patients are seeking to resume pre-injury activities. The stroke survivor and/or family typically consult with their physician, physician's assistant or therapist to initiate the referral process. Results of the testing and recommendations that stem from the testing are reviewed with the stroke survivor (and family if desired) to aid implementation.

Our Stroke Tune-Up Clinic can help you a year after you have completed rehab. During an appointment we will:

- Assess changes in your mobility, function and health since you finished your rehab
- Use evaluation tools to help prevent risk factors such as falls, decreased mobility, or future strokes
- Recommend new technology that has come to market since you finished your rehab

We encourage annual follow up visits with our physiatrist, a doctor of physical medicine and rehabilitation. The doctor will monitor your function and medications, and will provide a resource assessment to maximize your quality of life post stroke.

Driving:

To some, driving is considered a rite of passage; a form of independence. However, the effects of strokes can significantly impact a person's ability to drive. Therapists will help address those deficits and skills during your course of treatment. Your therapist and primary care provider will help determine if and when you're ready to resume driving and will provide you with the information required to get the process started.

Sexuality:

What is Sexuality?

Sexuality is an important part of who we are, how we see ourselves, and how we express ourselves. Sexuality is very personal and can mean many different things to different people. In general, it is the way we express ourselves sexually and involves our feelings, thoughts, attractions, and behaviors.

How may an acquired brain injury impact sexuality?

A brain injury can lead to a variety of physical, cognitive, emotional, and behavioral changes that may impact a person's sexual functioning. A person may have an increased or decreased desire for sex after injury. Injury to the brain can cause a person to become "hypersexual" meaning a person's sexual behaviors or urges may be difficult to control. These behaviors are due to disinhibition which is the loss of control over behavior. On the other hand, a person may have an overall decreased interest or desire for sex for reasons explained below.

Physical changes that can affect sexuality:

- A person may experience weakness, stiffness, difficulty with coordination and balance which can change how they move during sex. They may have to explore different sexual positions than they are used to.
- They may have muscle spasms, pain or less sensation so sex might feel different.
- They may feel too tired to have sex. Tiredness can be physical and/or mental. They may not have the same physical strength as before their injury and get tired quickly. Mental tiredness can occur when they have to spend more energy to focus on one thing for a sustained amount of time which can affect their energy level.
- They may have a hard time controlling their bladder or bowel which may cause them to avoid sex or worry about having sex.
- They may be generally less interested in sex and have trouble with orgasm or erection.

Emotional changes that can affect sexuality:

• They may feel sad, depressed, or irritable which can make them not want to have sex.

- They may be scared that having sex may increase their blood pressure and cause a stroke.
- They may be more interested in sex and talk about sex or touch themselves or you when it may be inappropriate.
- They may find it hard to control their emotions or may experience changes in their personality.
- They may see themselves differently than they did before which can affect their confidence.

Cognitive changes that can affect sexuality:

- They may have difficulty sustaining their attention to an activity like sex so it can be difficult to maintain an erection or maintain sufficient arousal to have an orgasm.
- They may have difficulty with memory therefore it may be difficult to remember what they enjoy during sex or how to initiate sexual contact.
- They may have a hard time understanding whether someone else is interested in sexual contact through their body language.
- They may have trouble coming up with words they are trying to say or may be slower to understand things.

Relationship changes that can affect sexuality:

- If you are in a relationship, it may take time for you and your partner to get used to a new "normal" after your partner's injury.
- If you are now taking on the role of being your partner's caregiver, it can take time for both of you to adjust to your new roles.
- Stress, physical and emotional changes can put a strain on your relationship.

Why do changes in sexuality and sexual functioning occur after a brain injury?

Changes in sexual functioning may be caused by hormonal changes, medication side effects, fatigue, difficulty with movement, reduced confidence, changes in thinking abilities, emotional changes, and changes in relationships. See link for more information: https://msktc.org/tbi/factsheets/sexuality-after-traumatic-brain-injury

When should my partner or I talk to someone?

- Are you or your partner unsure about having sex or being intimate again?
- Does your partner have a lack of interest when it comes to sex?
- Does your partner's increased sexual desire or actions make you feel uncomfortable?

Who can I talk to if I have more questions?

Gaylord has a team of trained medical professionals consisting of physiatrists, physician assistants, physical therapists, occupational therapists, speech therapists, nurses, and social workers who can help you with challenges you may be having with sexuality after your brain injury. You can also contact your primary care physician, urologist or gynecologist with questions. Some people may feel embarrassed talking to others about sexual issues, but it's important to keep in mind that sexuality is a normal part of human functioning and our team of medical professionals are here to help.

What is intimacy?

Intimacy is how we show devotion to one another, how we support each other, and how we connect with one another. It's the closeness felt between people in personal relationships.

As humans, we thrive on having close personal relationships and having the ability to connect with others. Intimacy doesn't only refer to having sex. Intimacy can be shared between romantic partners, friends, or family members.

Ways to engage in intimacy with your partner

- Maintain open communication with your partner and share your thoughts and feelings with one another
- Bonding over common interests or just spending time with one another
- Touching including hugging, cuddling, holding hands or kissing are physical ways to create intimacy with your partner

Changes in intimacy after acquired brain injury

- You may have to learn how to communicate with your partner differently
- You may have to relearn how to be intimate with your partner and learn new ways to connect and feel close to one another
- Changes in roles (taking on a caregiver role for your partner) can change your overall relationship dynamic and affect intimacy
- Cognitive changes may result in your partner not having the ability to know how to initiate or engage in intimacy or sex like they used to

Establishing intimacy with your partner after their brain injury is very important, but will ultimately take time along with consistent effort and communication between you and your partner. It is important for partners to know that support is available, either independently or as a couple.

Leisure:

Recreation can reduce the chance of secondary diagnoses, such as depression. Participating in recreation regularly can improve self-esteem, promote relaxation and stress reduction, increase physical fitness and function, expand social interaction, enrich quality of life, increase knowledge and skills, and decrease the chances of being readmitted to a hospital. Some examples of recreational activities include:

- Arts and crafts
- Baking
- Bird watching
- Collecting
- Cooking
- Crossword puzzles
- Exercising
- Games
- Gardening
- Jigsaw puzzles
- Movies
- Music (listening to or playing)
- Reading
- Socializing
- Sports
- Sudoku
- Technology
- Trivia
- Word searches
- Writing

The Creative Expressions Program at Gaylord Hospital

Developed and coordinated through the Therapeutic Recreation Department, the Creative Expressions Program offers patients and people in the community with disabilities an opportunity to use art as therapy and as a creative outlet. Participants will work with peers and staff alike to enhance their painting skills. Participants must be able to work independently, have their own transportation, and be independent with personal care needs. Participants may be returning to art as an interest or trying it for the first time. If interested, please contact at 203-284-2732.

Sports:



The Gaylord Sports Association provides adaptive sports and recreation opportunities for persons with physical disabilities such as spinal cord injuries, strokes, amputations, traumatic brain injuries,

pulmonary disorders and visual impairments. We believe that everyone, regardless of ability level, should have the opportunity to enjoy sports and recreation. We work with our participants on an individual basis to help them achieve their adaptive sports goals, whether it is to try a new activity, return to a past leisure pursuit or strive to become a Paralympic athlete. We offer the most diverse adaptive sports program in the state of Connecticut, with over a dozen different sports, ranging from introductory recreation activities to highly competitive sports teams. Our goal is to assist participants in gaining the confidence, independence and skills to meet their adaptive sports goals. Opportunities to get involved in adaptive sports include introductory clinics, discovery nights, clubs, classes, competitive teams and veteran specific programs. The Sports Association is a chapter member of Disabled Sports USA and a Bronze Level Paralympic Sports Club. Examples of sports offered are:

- Rock Climbing
- Downhill Skiing
- Sled Hockey
- Wheelchair Tennis
- Paratriathlon
- Water Skiing
- Yoga

- Archery
- Cycling
- Boccia
- Golf
- Kayaking
- Wheelchair Rugby
- Veteran's Fishing







Home Safety Tips: Preparing for Caring for Those with Impaired Memory or Impaired Safety Awareness

Lock up potentially hazardous products, electrical appliances or any other potentially dangerous appliances.

In the kitchen:

- Install childproof latches on cabinets and drawers to limit access to potentially dangerous items such as cleaning products, alcohol, matches, knives, scissors and plastic bags
- Using appliances that have auto shut-off feature
- Turning off gas to stove when not in use

In the laundry room:

- Install childproof latches on detergent or other laundering products. Keep them secured to avoid possible ingestion of harmful chemicals
- Close and latch the doors and lids to washer/dryer
- Consider removing large knobs if the person likes/tries to tamper with machinery

In the garage, shed or basement:

- Install latches or locks on cabinets where tools, tackle, machines, sporting equipment, paint, fertilizer, gas, cleaning supplies or other toxic materials
- Lock up keys to cars and other machinery i.e. lawnmowers/tractors, weed trimmers or snow blowers etc.
- Safely store fuel sources
 - Remove fuel sources from your grill or other equipment when not in use
- Lock all vehicles
 - Consider covering or removing vehicles and bikes that aren't frequently used

In the bathroom:

- Use child restraint caps on medication containers
- Removing prescription drugs or vitamins from countertops and locking away

Remove guns or weapons from the home or make sure that they are locked away

Remove door locks

• Consider removing locks from bathroom/bedroom doors to prevent the person from accidentally locking himself or herself in

Prevent access to potentially dangerous appliances

- Install safety knobs on the stove to prevent the person from turning stove on/off
- Disconnect stove or garbage disposal

• Install a monitoring device

- A baby monitor can help the caregiver hear if the person needs help or gets up in the middle of the night
- Install motion sensors on garage doors and home exits

• Take caution when using fireplaces

• Don't leave person with impaired memory alone with an open fire in fireplace or outdoor firepit

Restrict access to pool

• Install a gate with a locks or cover the pool/hot tub when not in use

Check the locks

- Make sure there are working locks on windows, front and back doors
- Keep a spare set of keys outside the home in case the person locks you out
- You can install deadbolts high/low on outside of doors to make it harder to get out

Address outlets and electrical cords

Cover unused electrical outlets with childproof plugs

• Install smoke alarms and carbon monoxide detectors

- Place them in/near kitchen and bedrooms and check them regularly to make sure they work
- It the person has vision or hearing problems you can install ones with vibrating pads or flashing lights

Keep computer equipment out of the way

- Protect your documents/files with passwords and create backup files
- Consider monitoring the persons computer use
- Change passwords to important accounts and keep credit cards/cash locked or hidden away

• Other helpful tips:

- Consider removing locks from bathroom/bedroom doors to prevent the person from accidentally locking himself or herself in
- Keeping a timer available when cooking with person to keep track of items cooking
- Using a "whistling" teakettle
- Keeping commonly used items in the same location
- Having commonly used phone numbers pre-programmed into persons phone or posted near telephone
- Posting signage around the home to help prompt the person to turn appliances on/off when using, to remember to lock the door or to take out the garbage
- Utilizing checklists with the correct steps/sequences for household tasks such as laundry
- Placing directions and steps for multi step tasks i.e. laundry near washing machine
- Removing unnecessary items from the living environment to decrease confusion and distractions
- Label cabinets to assist in locating objects
- Have a calendar displayed

Home Safety Modifications and Fall Prevention:

If a loved one is being discharged to home, there are many home modifications, adaptations, and recommendations that can be made to the home to increase safe and independent functioning. Rarely, the therapist can come to the home to complete a home evaluation. More often, there are simple modifications that can be done to help increase safety in the home. The Occupational and Physical therapist can answer any specific questions one may have about your home.

General Considerations:

- Type of home: one-family, two-family, apartment, condo, etc.
- Number and width of entrances
- Step(s) to enter/step(s) within the home, need for ramp
- Presence of railings
- Door sills
- Removal of obstructions of pathways
- Carpeting/Throw rugs
- Electrical cords
- Accessibility of light switches, telephones
- Presence of working smoke detectors
- Presence of space heaters or wood burning equipment
- Presence of an emergency call system/exit plan
- Presence of pets

Recommendations:

- Ensure adequate lighting both indoors and outdoors
 - Good lighting on stairways is important. Turn on lights before going up/down stairs.
 - Place a lamp within easy reach of your bed. Put night lights in the bathroom, hallways and kitchen.
 - Store flashlights in easy to find places in case of power outages.
- Use contrasting colors
- Simplify environment, reduce clutter
- Arrange furniture to give you plenty of room to walk freely
- Be sure that carpets are secured to the floor and stairs with double sided tape.

- Remove throw rugs
- Securely fasten handrails on both sides of stairs
- Provide light switches at top and bottom of stairways
- Put non-slip strips on floors and steps. Try to avoid wet floors, and clean up spills right away.
- Fix cracked pavement or steps
- Encourage use of rubber-soled shoes, don't walk around in socks. Always wear footwear that fits appropriately.
- In winter months, have someone spread salt/sand on icy surfaces/driveways
- Consider use of Life Alert, or carry your cell phone with you in the event you will be alone at times at home or live alone.

Considerations Specific to Room(s)

Bedroom

- Bed: size, height from floor to top mattress, position of bed (against wall or free standing)
- Side of bed person will enter/exit bed
- Accessibility of clothes and dresser drawers
- Sufficient room for bedside commode if needed

Recommendations:

- Install night lights, or light switch within reach of bed, consider a bedside flashlight
- Place telephone within reach of bed
- Raise or lower bed height as needed
- Remove anything that could cause you to trip or slip while walking

Bathroom:

- Number of bathrooms in the home; location and accessibility
- Width of bathroom doorway
- Height of toilet/tub
- Type of bathing person performs (shower, bath, sponge bath, etc.)
- Type of shower (shower stall, tub/shower, glass door/curtain closure)
- Presence of grab bars
- Location of soap dish
- · Presence of hand held shower
- Presence of anti-scald valves and/or faucets

Recommendations:

- Install grab bars in tube/shower, next to toilet
- Provide non-skid mats and night lights
- Use elevated toilet seat
- Tub/shower bench

Kitchen:

- Locations of frequently used meal prep devices such as microwave, oven, stove etc.
- Presence of countertop area between stove, sink and refrigerator
- Accessibility of food, pots, pans, dishes and preparation materials
- Presence of charged fire extinguisher
- Presence of anti-scald valves and/or faucets

Recommendations:

• Store items on reachable shelves (between person's eye and hip level)

Falls Prevention

About 40% of stroke survivors have serious falls within a year of their stroke. Several impairments following a stroke can contribute to your falls risk. These impairments include: changes in sensation, weakness, changes in balance, vision and dizziness, and medications. Our goals with the team here at Gaylord are to educate you on your fall risk and offer strategies to assist you and your caregiver(s) with fall prevention at home.

Five Things You Can Do to Prevent Falls:

1. Begin a regular exercise program.

- Exercise is one of the most important ways to lower the chances of falling. It makes one stronger and helps to make one feel better. Exercises that improve balance and coordination like Tai Chi are the most helpful.
- Lack of exercise leads to weakness and increases the chances of falling.
- Ask the doctor or therapist about the best type of specific exercise.

2. Have the health care provider review medicines.

• Have the doctor or pharmacist review all the medicines you take, including over- the-counter medicines. As one gets older, the way medicines work in the body can change. Some medicines, or combinations of medicines, can make one sleepy or dizzy and impact your balance.

3. Have vision checked.

• Have the eyes checked by an eye doctor at least once a year. One may be wearing the wrong glasses or have a condition like glaucoma or cataracts that limits vision. Poor vision can increase chances of falling.

4. Make the home safer.

• See above section on Home Safety Modification/Fall Prevention

5. Take your time

- If you feel lightheaded when first sitting up or standing up, sit down and stay seated until your head clears, then stand up slowly
- Take your time while walking
- Use assistive devices as instructed by your physical therapist

If you Fall

Right After A Fall

- Take a deep breath and stay calm
- Remain still on the floor or ground for a few moments
- Do a brief self-check before getting up. Test each body part to see if any injury occurred. Getting up too quickly or in the wrong way could make an injury worse
- If injured, call for help
- Wait for help to arrive to assist you

Getting Up From A Fall

- If you can get up safely without help, roll over onto your side
- Rest again while your body and blood pressure adjust. Slowly get on your hands and knees, and crawl to a sturdy chair, toilet, bed, or sofa
- Put your hands on the chair seat and slide one foot forward so that it is flat on the floor. Keep the other leg bent so the knee is on the floor
- From this kneeling position, slowly rise and turn your body to sit
- If you are hurt or cannot get up on your own, or with the help you have at home, call 911.

Emergency Preparedness



It is key to have a plan before an emergency takes place. There are many agencies that can help you in making your plans. The Ready. gov website has videos, plans, supply kit checklists, and helpful tips. FEMA and the American Red Cross has many other ideas to help you.

For more information, see the resource section below.

When making your plan, think about the needs of the people in your home. Create a contact list to be shared with other family members, caregivers, and neighbors. You will also need contact information for important offices and people such as doctors, hospital, utility company, pharmacy, etc. Letting first responders know there is a person with disabilities in the house may be helpful in an emergency. Make an emergency kit with:

- all contact information
- an up to date medication list
- any backup medical devices or assistive technology needs

Practice your plan with your family and friends. Just like fire drills, emergency drills are the best way to see if all your needs will be meet before it counts. If possible, store any emergency supplies:

- over-the-counter medications
- insulin
- catheters
- ostomy supplies or any other medical supplies
- bottled water
- non-perishable food
- modified textured foods
- thickened liquids
- flashlights, radio, batteries

If an emergency evacuation takes place, you will be able to provide first responders your information, needs, and where you hope to stay. If you or someone in your home has a wheelchair, it's important to know the size and weight of it in case it needs to be transported. You might want a collapsible transport wheelchair for backup. If oxygen is needed, back up tanks and portable concentrators also need to be planned for.

Protecting yourself and your family in an emergency takes planning. By having contact lists, your emergency kit, and a plan can make it much less scary. Know how to get the help you need. Be sure to practice and be prepared.

Resources:

- **1.** Connecticut Red Cross, 209 Farmington Ave. Farmington, CT 06032 877-287-3327 http://www.redcross.org/local/connecticut
- **2.** Prepare my family for a Disaster, U.S. Department of Homeland Security https://www.dhs.gov/how-do-i/prepare-my-family-disaster
- **3.** Disaster Resources for People with Disabilities and Others with Access and Functional Needs, Emergency Managers & Planners & Disability-focused Organizations http://www.jik.com/disaster.html
- **4.** Ready.gov Prepare, Plan, Stay Informed: Individuals with Disabilities and Others with Access and Functional Needs https://www.ready.gov/individuals-access-functional-needs
- **5.** FEMA: Preparing Makes Sense for People with Disabilities, Others with Access and Functional Needs, and the Whole Community https://www.fema.gov/media-library-data/1440775166124-c0fadbb53eb55116746e811f258e fb10/FEMA-ReadySpNeeds_web_v3.pdf
- **6.** Preparing for Disaster for People with Disabilities and other Special Needs https://www.fema.gov/media-library/assets/documents/897

Neighboring Town Points of Contact for Non-Emergency Situations:

- Wallingford Police Dispatch: 203-294-2800
- Cheshire Police Dispatch: 203-271-5500
- Meriden Police Dispatch: 203-239-5321
- North Haven Police Dispatch: 203-239-5321

*Note: If a true medical or other type of emergency exists, Dial -911 for immediate assistance. Be sure to give your name and location and describe as best you can any medical symptoms related to your call for assistance.

Self-Advocacy:

It is important the stroke survivor and the family advocate for themselves. The world of healthcare can be overwhelming. There are many resources in the community that can help navigate this new world. Many are listed in the next section. One of the best places to start is BIAC, the Brain Injury Alliance of Connecticut, www.biact.org. One also needs to advocate in each medical appointment. In order to get the most out of your time with your provided, come prepared with a list of your medications and your questions. Bring a family member of friend to be a second set of ears and to take notes. Ask about side effects and other options for treatment.

One of the hallmarks of a good patient-healthcare provider relationship is open and honest communication about problems. Difficult discussions about feelings of abuse or neglect are important to have with medical professionals. Abuse can come in many forms; physical, emotion, verbal, psychological, financial or sexual. Neglect, intentional or not is also considered a form of abuse. In the event of suspected incidents of abuse or neglect, we encourage patients, families, and staff to report the situation to any healthcare provider. We are mandatory reporters and serve to protect those in our care. Incidents of actual or suspected neglect or abuse, whether committed by family, healthcare workers, or others, are thoroughly investigated by the state government. If you have any questions, please speak with your healthcare provider.

Education is an important part of advocacy. The potential role of CAM (Complementary and Alternative Medicine and Therapy) can be reviewed at various websites and resources including:

- National Brain Injury Association website www.brain injury.org; and search for current articles on the topic in issues of their magazine Brain injurySmart
- Cochrane Collaboration website www.cochrane.org
- The National Institutes of Health National Center for Complementary and Alternative Medicine (nccam.nih.gov/health/whatiscam/) Research studies and clinical trials are available as well. Many websites can be accessed regarding clinical studies, including the National Institute for Health http://www.ninds.nih.gov/disorders/tbi/detail_tbi htm.

Careful consideration is important, prior to enrolling, if participation is a goal. There are several options for further advocacy issues. See contact information below.

- State of Connecticut 1-(860) 297-4300
- Center for Medicare Advocacy, Inc. (840) 456-7790 or in Connecticut (800) 262-4414
- State of Connecticut Office of Managed Care Ombudsman/Healthcare Advocate (866) 466-4446

Americans with Disabilities Act

www.ADA.gov

The ADA website provides information and technical assistance regarding the Americans with Disabilities Act.

(800) 514-0301 (voice) 1-800-610-1264 (TTY)

The NEAT Marketplace Coventry and Holcomb Streets Hartford, CT 06112 (860) 242-2274 (860) 286-3113 (TTY) www.neatmarketplace.org

The NEAT Marketplace (New England Assistive Technology) restores donated assistive devices and medical equipment/supplies. NEAT is a demonstration center, as well as an equipment restoration center. Restored items are available for sale at reduced rates.

The Easter Seals Mobility Center provides thorough driving assessments to those who have an injury or impairment that may impact their ability to safely operate a motor vehicle. The Center provides a clinical assessment, an on the road assessment, as well as equipment recommendations and prescriptions.

East Coast Assistance Dogs Inc.
P.O. Box 831
Torrington, CT 06790
(860) 489-6550
ECAD1@aol.com
www.ECAD1.org

East Coast Assistance Dogs Inc. helps people with various disabilities gain greater independence through the use of specially trained dogs.

MENTAL HEALTH AND SUBSTANCE ABUSE

Substance Abuse & Mental Health Services Administration (SAMHSA) Samhsa.gov. Substance Abuse & Mental Health Services Administration U.S. Department of Health and Human Services is a searchable directory of mental health, substance abuse, and support services treatment facilities.

Department of Mental Health and Addiction Services (DMHAS) 410 Capitol Avenue Hartford, CT 06134 (860) 418-7000 ABI Wavier – Wise Program (866) 548-0265

The Department of Mental Health and Addiction Services (DMHAS) promotes and administers comprehensive, recovery- orientated services in the areas of mental health, abuse prevention and treatment throughout CT. DMHAS services adults over the age of 18 with psychiatric or substance abuse disorders, or both, who lack the financial means to afford services on their own. DMHAS provides a wide range of treatment including inpatient hospitalization, outpatient clinical services, 24 hour emergency care, day treatment, psychosocial and vocational rehabilitation, outreach services for persons with mental illness who are homeless, and comprehensive, community based mental health and support services.

DMHAS provides a variety of treatment services to persons with substance abuse disorders, including ambulatory care, residential detoxification, long-term care, methadone or chemical maintenance, outpatient, partial hospitalization, and aftercare. Services for HIV-infected include counseling, testing, support and coping therapies, alternative therapies and comanagement. The department also provides prevention services, designed to promote health and wellness of individuals and communities.

American Foundation for Suicide Prevention www.afsp.org

Mission: Save Lives and Bring Hope to Those Affected by Suicide. Established in 1987, the American Foundation for Suicide Prevention (AFSP) is a voluntary health organization that gives those affected by suicide a nationwide community empowered by research, education and advocacy to take action against this leading cause of death.

National Suicide Prevention Lifeline 988lifeline.org

The National Suicide Prevention Lifeline is a 24-hour, toll-free, confidential suicide prevention hotline available to anyone in suicidal crisis or emotional distress. Your call is routed to the nearest crisis center in the national network of more than 150 crisis centers.

For assistance, call 988 For TTY, call 711 then 988

EMPLOYMENT

Office of Disability Employment Policy www.dol.gov/odep 1-(866) 487-2365

The Office of Disability Employment Policy (ODEP) is the only non-regulatory federal agency that promotes policies and coordinates with employers and all levels of government to increase workplace success for people with disabilities.

Office of Personal Management, Federal Employment of People with Disabilities

www.opm.gov

The Federal Government is actively recruiting and hiring persons with disabilities. We offer a variety of exciting jobs, competitive salaries, excellent benefits, and opportunities for career advancement.

Rehabilitation Services Administration rsa.ed.gov

Our mission — to provide leadership and resources to assist state and other agencies in providing vocational rehabilitation (VR) and other services to individuals with disabilities to maximize their employment, independence and integration into the community and the competitive labor market.

The Vocational Rehabilitation Program (formerly BRS)
Bureau of Rehabilitation Services - Department of Social Services
55 Farmington Ave -12th Floor, Hartford, CT 06105
(860) 424-4844 (voice); (860) 247-0755 (TDD/TTY)
www.ct.gov/rehabilitationservices

The goal of the Vocational Rehabilitation (VR) Program is to assist individuals with significant physical and mental disabilities to prepare for, obtain and maintain employment. Through the provision of individualized services, persons with disabilities who are eligible for vocational rehabilitation are supported in planning for and achieving their job goals. To be eligible for the VR program, an individual must have a physical or mental condition which poses a substantial barrier to employment, and must require VR services in order to prepare for, find and succeed in employment.

Ability Beyond Disability 4 Berkshire Blvd. Bethel, Connecticut 06801 (888) 832-8247 abilitybeyond.org

Ability Beyond Disability's mission is to enable individuals whose independent living skills are impaired by disability, illness or injury, to achieve and maintain self-reliance, fulfillment and comfort at home, at work and in the community, by providing the best comprehensive home, health and rehabilitation services.

FINANCIAL ASSISTANCE

Medicare (800) MEDICARE ((800) 633-4227) www.medicare.gov

Medicare provides hospital insurance, medical insurance and prescription drug coverage. Hospital insurance, sometimes called Part A, covers inpatient hospital care and certain follow-up care. Medical insurance, sometimes called Part B, pays for physicians' services and some other services not covered by hospital insurance. Prescription drug coverage, sometimes called Part D, helps pay for medications doctors prescribe for treatment. Medical insurance and prescription drug coverage are optional, and you must pay monthly premiums. People who are 65 or older are automatically eligible for medicare. Those that are determined to be disabled by the SSA are eligible after 2 years as long as certain other criteria are met.

Social Security (800) 772-1213 www.socialsecurity.gov

The Social Security Administration is responsible for two major programs that provide benefits based on disability: Social Security Disability Insurance (SSDI), which is based on prior work under Social Security, and Supplemental Security Income (SSI). Under SSI, payments are made on the basis of financial need. Social Security Disability Insurance (SSDI) is financed with Social Security taxes paid by workers, employers, and self-employed persons. To be eligible for a Social Security benefit, the worker must earn sufficient credits based on taxable work to be "insured" for Social Security purposes. Disability benefits are payable to blind or disabled workers, widow(er)s, or adults disabled since childhood, who are otherwise eligible. The amount of the monthly disability benefit is based on the Social Security earnings record of the insured worker. Supplemental Security Income (SSI) are payable to adults or children who are disabled or blind, have limited income and resources, meet the living arrangement requirements, and are otherwise eligible.

Department of Social Services 25 Sigourney St. Hartford, CT 06106-5033 General info referral, 1-800-842-1508

24/7 client info line, Benefits Center, 1-855-626-6632 www.ct.gov/dss

The Department of Social Services provides a broad range of services to the elderly, disabled, families, and individuals who need assistance in maintaining or achieving their full potential for self-direction, self-reliance and independent living. DSS administers over 90 authorized state programs.

Husky Health of Connecticut
P.O. Box 5005
Wallingford, CT 06492
(800) 859-9889
huskyhealthct.org
Community Health Network
11 Fairfield Blvd. Suite 1, Wallingford, CT 06492
(203) 949-4000
Telephone: 800-440-5071

This company manages all Title 19 or Medicaid products for all ages. The programs provide medical coverage assistance to low income persons. Applications and approval is still done through the state DSS or Department of Social Services. All services included in the CT Medicaid program are covered, including homecare and skilled nursing facilities. Gaylord has a benefits Liason who can assist you with the application process. Your care manager can make a referral to Joan Hogan if that will be helpful to you.

Acquired Brain Injury (ABI) Waiver
Department of Social Services
25 Sigourney St.
Hartford, CT 06106-5033
(800) 842-1508-*General info, Referral (recorded info)
(855) 626-6632-*24/7 Client info line, benefits center www.ct.gov/dss

This program is designed to provide a range of non-medical, home and community based services to maintain adults who have an acquired brain injury (not a developmental or degenerative disorder), in the community.

Portal.ct.gov/DSS/Lists/Publications/Applications-and-forms

Adults must be age 18-64 to apply, must be able to participate in the development of a service plan in partnership with a Department social worker, or have a Conservator to do so, must meet all technical, procedural and financial requirements of the Medicaid program, or the Medicaid for Employed Disabled program. An adult deemed eligible for the ABI Waiver, is eligible for all Medicaid covered services. Application is made by contacting the Department's regional offices, and returning a completed ABI Waiver Request Form.

Personal Care Assistant (PCA) Waiver Department of Social Services 25 Sigourney St. Hartford, CT 06106-5033 1-(800) 445-5394 option 4 uwc.211ct.org

A Medicaid Waiver program that provides personal care assistance services included in a care plan to maintain adults with chronic, severe, and permanent disabilities, in the community. Without these services, the adult would otherwise require institutionalization. The care plan is developed by a Department social worker in partnership with the adult. Adults must be age 18-64 to apply, must have significant need for hands on assistance with at least two activities of daily living (eating, bathing, dressing, transferring, toileting), must lack family and community supports to meet the need, and must meet financial requirements of the Medicaid program, or the Medicaid for Employed Disabled program. Eligible adults must be able to direct their own care and supervise private household employees, or have a Conservator to do so. An adult deemed eligible for the PCA Waiver, is eligible for all Medicaid covered services. Application is made by contacting the Department's regional offices, and returning a completed PCA Waiver Request Form.

'Money Follows the Person'
Department of Social Services
25 Sigourney St.
Hartford, CT 06106-5033
www.ct.gov/dss
(888) 992-8637

'Money Follows the Person' is a program to assist people living in nursing homes or applying to them the opportunity to live in their own homes in the community. This program works along with other state programs including Waiver programs and is currently a work in progress.

ConnPACE (Connecticut Pharmaceutical Assistance Contract to the Elderly and Disabled)

Department of Social Services
(855) 481-6777

payingforseniorcare.com

Only for people who have not worked enough quarters for Medicare plus a very low income. ConnPACE is a service that helps eligible senior citizens and people with disabilities afford the cost of most prescription medicines, insulin and insulin syringes and needles. If you are a Connecticut resident aged 65 or older, or with a disability aged 18 or older, you may qualify for ConnPACE. Eligibility is based on income.

ConnMAP (Connecticut Medicare Assignment Program)
Department of Social Services
25 Sigourney St.
Hartford, CT 06106-5033
(855) 626-6632
www.ct.gov/dss

The Connecticut Medicare Assignment Program (ConnMAP) ensures that eligible Medicare enrollees are charged no more than the reasonable and necessary rate established by the federal government for Medicare covered services received from health care providers. Individuals who are residents of Connecticut, enrolled in Medicare Part B, and have incomes no greater than 165% of the income limits for the ConnPACE Program (currently \$41,415 if single or \$55,770 for couples) are eligible to participate in the program. ConnPACE program participants are automatically eligible for ConnMAP.

Alternate Care Unit - Connecticut Home Care Program for Elders (CHCPE)
Department of Social Services
25 Sigourney St.
Hartford, CT 06106-5033
(855) 626-6632
www.ct.gov/dss

To be eligible, applicants must be 65 years of age or older, be a CT resident, be at risk of nursing home placement and meet the program's financial eligibility criteria.

To be at risk of nursing home placement means that the applicant needs assistance with critical needs such as bathing, dressing, eating/meals, taking medications, using the toilet. The CHCPE helps eligible clients continue living at home instead of going to a nursing home. Each applicant's needs are reviewed to determine if the applicant may remain at home with the help of home care services.

HOUSING:

The Care Management Department can provide you with the most recent booklet of listings/information on Section 8, HUD and elderly housing. This is intended as a resource to you and your family for informational purposes or for future use. This department does not assist you in finding housing following your hospital stay.

TRANSPORTATION SERVICES:

Public Transportation

Federal law requires that providers of mass transit services who receive federal financial assistance must certify that they provide people with disabilities full and equal access to the same services and accommodations as persons without disabilities. One of those services is public transportation. The U.S. Department of Transportation's Urban Mass Transportation Administration (UMTA), the funding source, allows local areas to select one of a few acceptable options to meet that requirement. These options are:

- **1**. The operators to ensure that at least 50% of the fixed route buses running during service hours are lift equipped.
- **2.** The operator to establish a Paratransit or special system which is known as "door-to-door" or "dial a ride", on a demand responsive basis.
- **3**. The operator may establish service that is a combination of the other two options listed (1 and 2). Whenever a special service is employed, that service as a whole, must meet certain criteria of comparability with the service available to able-bodied persons.

Anyone who would like to use the ADA Paratransit service must be certified ADA Paratransit eligible.

Information and/or an application can be obtained by contacting your local ADA Paratransit office.

CTRides.com provides a resource directory to local bus service and public transportation services by regional district.

Greater Bridgeport Transit Authority

gogbt.com (203) 366-7070 (Access Customer Service Representative) info@gogbt.com

Estuary Transit District (Central Shoreline and Middletown)

estuarytransit.org (860) 510-0429

Greater Hartford Transit District

www.hartfordtransit.org (860) 247-5329 ext 3011 (860) 724-5340 (Paratransit)

Greater New Haven Transit District

www.gnhtd.org (203) 288-6282 (Administrative Office) (203) 288-6643 (Paratransit)

My Ride of the Greater New Haven Transit District

www.gnhtd.org 840 Sherman Ave. Hamden, CT 06514 (203) 288-6643 My Ride offers transportation for disabled or elderly persons living in the South Central CT area.

Connecticut ADA Paratransit Resource Center

www.ctada.com (203) 365-8522

Greater Waterbury Transit District

www.gwtd.org (203) 757-0535

Housatonic Area Regional Transit

www.hartransit.com (203) 744-4070

Middletown Transit District

www.middletownareatransit.org (860) 346-0212

Milford Transit District

www.milfordtransit.com (203) 874-4507

Northeastern Connecticut Transit District

www.nectd.org (860) 774-3902

Northwestern Connecticut Transit District

www.nwcttransit.com (860) 489-2535

Norwalk Transit District

www.norwalktransit.com (203) 852-0000

Southeast Area Transit District

www.southeastareatransitdistrict.com (860) 886-2631

Valley Transit District

www.invalley.org (203) 735-6408

Windham Region Transit District

www.wrtd.net (860) 456-2223

If your transit provider discriminates against you, ask your operator for a copy of the UMTA certification. Check the UMTA certification with the State Office of Protection and Advocacy for Person with Disabilities – 1-800-842-7303.

RETURN TO DRIVING RESOURCES:

Easterseals Driver Assessment Program

158 State St Meriden, CT 06450 (203) 630-2208 or email driver@eswct.com

McLean Outpatient Rehab in partnership with AAA

75 Great Pond Road Simsbury, CT 06070 (860) 658-3745 or 3998 Contact Susan Adamowicz, OTR/L, CDRS

Norwalk Hospital Driver Rehabilitation Program*

520 West Avenue Norwalk, CT 06850 Phone: 203-852-3400 *Cognitive assessment only

Bureau of Rehabilitation Services (BRS) Driver Training Program

1-(800) 537-2549

Burke White Plains New York

785 Manaroneck Ave White Plains, NY 10605 (914) 597-2326

Stroke Resources

Books:

After Stroke: A Complete, Step-by-Step Blueprint for Getting Better. David Hinds. Thorsons, 2000.

After Stroke: Enhancing Quality of Life. Wallace Sife. Haworth Press, 1998.

After a Stroke: 300 Tips for Making Life Easier. Cleo Hutton. Demos Medical Publishing, 2005.

By His Side: Life and Love After Stroke. Eileen Steers Quann. Fastrak Press, 2002.

Contemporary Diagnosis and Management of Stroke. Jesse Weinberger. Handbooks in Health Care, 2005.

The Diving Bell and the Butterfly. Jean-Dominique Bauby. Translated from the French. Alfred A. Knopf, 1997.

Harbor: Helping Patients and the Family After a Loved One had a Stroke [Video]. Aquarius Health Videos, 1999.

Healing and Happiness After Stroke. Kari Dahlgren.

How to Conquer the World with One Hand ... And an Attitude. Paul Berger. Positive Power Publishing, 2003.

Living with Stroke: A Guide for Families. Richard C. Senelick. Contemporary Books, 1999.

Living with Stroke: Strategies to live a healthy life. Developed by the Sheperd Center. "e-book"

Managing Stroke: A Guide to Living Well After Stroke. Paul Rao (ed.). ABI Professional Publications, 2000.

My Stroke of Insight. Jill Bolte Taylor.

My Stroke of Luck. Kirk Douglas. HarperCollins, 2002.

My Year Off: Recovering Life After a Stroke. Robert McCrum. W.W. Norton & Company, 1998.

November Days. Bonnie Ruth.Francis Scott Press, 1995.

One-Handed in a Two-Handed World. Tommye-K. Mayer. Prince Gallison Press, 2000.

Out of the Blue: One Woman's Story of Stroke, Love, and Survival. Persimmon Blackbridge. Wildcat Canyon Press, 2000.

Remember to Smile. Blanche Feero

Return to Ithaca: A Woman's Triumph over the Disabilities of a Severe Stroke. Barbara Newborn. Element Books Limited, 1997.

Stop Your Next Stroke: Stroke Prevention for Those Who have Had a Stroke or Stroke-Like Symptoms. David Always. Authorhouse, 2005.

Striking Back at Stroke: A Doctor-Patient Journal. Cleo Hutton. Dana Press, 2003.

Stroke: A Comprehensive Guide to Brain Attacks. Everything You Need to Know. Vladimir Hachinski. Firefly Books, Ltd., 2003.

Stroke: A Memoir. Arthur Niehoff. The Hominid Press, 2001.

Stroke: Questions You Have – Answers You Need. Jennifer Hay. People's Medical Society, 1995.

Stroke: Your Complete Exercise Guide. Neil F. Gordon. Human Kinetics, 1993.

Stroke and the Family. Joel Stein. Harvard University Press, 2004.

Stroke at Time of Diagnosis [Video]. Time Life Medical. Patient Education Media, 1996.

The Stroke Book. June Biermann. Tarcher, 2005.

Stroke for Dummies. John R. Marler. Wiley Publishing, Inc., 2005.

A Stroke of Luck: Life, Crisis, and Rebirth of a Stroke Survivor. Howard Rocket. Rehabilitation Institute of Toronto, 1998.

The Stroke Recovery Book: A Guide for Patients and Families. Kip Burkman. Addicus Books, 1998.

Teaching Me to Run. Tommye-K. Mayer. Prince Gallison Press, 2000.

When Someone You Love Has a Stroke: A National Stroke Association Book. Marilyn Larkin. Dell Publishing, 1995.

When I Learn ... Surviving Stroke with Pride. Donna Brady. Authorhouse, 2002.

Whose Hand is This? Our Story of Stroke, Recovery and Love. Rosalie Leaney. Fremantle Arts Centre Press, 1999.

Your Mother Has Suffered a Slight Stroke. Kathleen Bosworth. Publish America, 2001.

Magazines:

Stroke Connection. Published 6 times a year by the American Stroke Association. 1-888-4-STROKE. Free.

StrokeSmart. Published 6 times a year by the National Stroke Association. 1-800-STROKES. Free.

Associations/Websites:

Family Caregiver Alliance

www.caregiver.org/hospital-discharge-planning-guide-families-and-caregivers The Family Caregiver Alliance addresses the needs of family and friends providing long-term care for loved ones at home. It provides support, information, and tools to manage the complex demands of caregiving. These include online support and resources, navigators to help locate support services by state, and the National Center on Caregiving which unites research, policy, and practice to develop cost-effective programs for caregivers. Click the link to find out more about how FCA could help you or your family.

American Stroke Association: A Division of the American Heart Association National Center

7272 Greenville Avenue Dallas, TX 75231 (888) 478-7653 stroke.org

Agency on Aging- South Central Connecticut

One Long Wharf Drive, Suite 1L New Haven, CT 06511 (203) 785-8533 www.aoascc.org/

Brain Aneurysm Foundation

269 Hanover St Hanover, MA 02339 www.bafound.org

Gaylord Specialty Healthcare

50 Gaylord Farm Road Wallingford, CT 06492 (203) 284-2800 www.gaylord.org

National Aphasia Association

www.aphasia.org naa@aphasia.org

Resources for the stroke patient/family education manual on complementary and alternative medicine and therapies:

- 1. National Stroke Association website; search for articles on the topic in issues of their magazine StrokeSmart
- 2. Cochrane Collaboration website (www.cochrane.org)

Support at Gaylord:

Community Stroke Support Group

The group is designed to target all ages with specialization in the young adult population. For more information, please call (203) 284-2875.

Gaylord Peer Mentor Program

Stroke survivors who are members of our Stroke Support Group have volunteered to be peer mentors to our current stroke inpatients. They are available to meet with patients privately to provide encouragement or answer questions regarding stroke recovery. Please contact (203) 741-3321 if you are interested in meeting with a peer mentor.

Chemical Use Education (CUE Group)

The purpose of CUE group is to provide general education about substance use, and resources regarding the effects of substance use and behavior which helps community members to make informed decisions regarding a healthy lifestyle.

For more information contact (203) 679-3506.

Gaylord Specialty Healthcare's Family and Caregiver Support Group of Acquired Brain Injury Patients (BIFI):

The goals of this group are to:

- Provide family and caregivers with fundamental information about common symptoms and challenges after brain injury.
- Teach coping and problem solving strategies.
- Teach family members effective communication skills in order to develop a strong, mutually beneficial long-term support system.

For more information contact: Dorene Scolnic, LCSW (203)-679-3506

Brain Injury Coping Skills (BICS):

There is a need for care and support that includes both survivors and their families. As patients transition home both they and their support system often seek to learn additional coping skills to better cope with challenges. It is known that improved coping skills and increased social support leads to improved psychosocial outcomes.

This program offers eight weeks of structured support and assistance dealing with specific topics each week.

- The group is open to Gaylord patients, ideally 3-6 months post ABI (acquired, stroke, TBI, tumor)
- The patient needs to be able to participate in the sessions
- The family member or designated caregiver needs to attend the entire series alongside the patient

For more information contact: Dorene Scolnic, LCSW (203) 679-3506

Other Support Groups:

Aphasia Support Group

Where: Cross of Christ Lutheran Church

155 Hamilton Ave. Waterbury, CT 06706

When: First Monday of every month from 6:30 p.m. to 8:00 p.m.

Contact: blacheteaches@yahoo.com

(203) 573-9303 (203) 592-6716

Accommodations

Guest Accommodations at Gaylord Specialty Healthcare:

Our goal is to provide inviting and comfortable onsite housing while loved ones are at Gaylord by offering the Hoffman Guest Cottage, a two-bedroom guest house, and the MoraLee Guest Cottage with four individual suites. For a nominal fee, family members can be steps away from the hospital, with access to our beautiful grounds, cafeteria, and other resources, as you support your loved one and participate in his or her recovery. If you are interested in booking accommodations please contact on campus Guest Accommodations at (203) 284-2817 Accommodations are based on availability.



MoraLee Guest Cottages



The Maximilian E. and Marion O. Hoffman Cottage

Some area motels and inns have made special rates available to those planning on extended stays while visiting Gaylord patients or receiving treatment. Please mention Gaylord when making reservations. Discount programs and hotel names may change at the discretion of the hotel management.

Wallingford

Courtyard by Marriott 600 Northrop Road Wallingford, CT 06492 (203) 284-9400

Fairfield Inn 100 Miles Drive Wallingford, CT 06492 (203) 284-0001

North Haven

Best Western Plus 201 Washington Avenue North Haven, CT 06473 (203) 239-6700

Meriden

Red Roof Inn 10 Bee Street Meriden, CT 06450 (203) 235-5154

Holiday Inn Express 2014 N. Broad Street Meriden, CT 06450 (203)443-5700

- 1. Miller EL, Murray L, Richards L, Zorowitz RD, Bakas T, et al. 2010. Comprehensive overview of nursing and interdisciplinary rehabilitation care of the stroke patient: a scientific statement from the American Heart Association. Stroke 41:2402-48
- 2. Barrett_Medical. Robotic Assist Rehabilitation Made Easy. https://medical.barrett.com

This educational resource was assembled through the dedication of our excellent clinical team. It started as an idea and bloomed because of our dedicated staff.



What are the signs and symptoms of a stroke?

- Sudden weakness or numbness of the face, arm, or leg especially on one side of the body
- Sudden loss of vision or blurry vision in one or both eyes
- Sudden difficulty speaking or understanding simple statements
- Sudden dizziness or loss of balance or coordination
- Sudden severe headache with no known cause

Think FAST to spot some of the commong signs of stroke:

Face drooping (asymmetry). Ask the person to smile and observe whether or not the person's smile is even.

Arm strength. Ask the person to hold up both arms. Is one arm weak? Does it drift down?

Speech. Ask the person to say a simple statement. Is the person able to repeat the statement? Is the speech slurred or hard to understand?

Time. Note the time the symptoms started and Call 9-1-1 immediately. Let the dispatcher know that you suspect the person is having a stroke. Some treatments for stroke can only be given within a specific amount of time, so it is important to get the person with stroke symptoms to the hospital as soon as possible.



Call 9-1-1 immediately



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