DAN MARINO AND HOUSE BILL 1319

In April of 2006, Dan Marino traveled to Tallahassee in support of House Bill 1319 sponsored by Representative Susan Goldstein. House Bill 1319 was unanimously passed by both the Florida House and Senate. As a result of this passage, the Dan Marino Foundation was awarded $535,000 to develop and implement a certification program for certified swim instructors teaching individuals with developmental disabilities. In addition, the Dan Marino Foundation has built an adapted aquatic facility at the Nicklaus Children's Hospital Dan Marino Outpatient Center. The Foundation hopes to establish this program nationally using private donations to accomplish this goal.

This program is particularly important to the Marinos, as one of the Nicklaus Children's Dan Marino Outpatient Center's families lost a child to drowning. Antoine Girard-Bissonnette was a frequent visitor to the Center, having been diagnosed with autism as well as some physical impairment. It was a place he loved to come to, and his family always felt very welcome. Antoine drowned six months after this picture was taken. It is ironic that although he gained many skills at the Nicklaus Children's Hospital Dan Marino Outpatient Center, and his family was so proud, the one he didn't have access to may have made all the difference.

Antoine Girard-Bissonnette

2001 to 2003

FOREWORD

Many children with disabilities drown in the State of Florida due to the inaccessibility and unavailability of appropriate swimming programs. To address this problem, in April of 2006, House Bill 1319 was unanimously passed in both the Florida House of Representatives and the Senate. This Bill requires certification of swimming instructors working with people with developmental disabilities and is imperative to the safety of these individuals. The Dan Marino Foundation received funding in 2007 from the State of Florida to develop and implement an instructor certification.

At present, a website (www.nicklauschildrens.org/adaptedaquatics) has been developed for instructors to complete their certifications online. Upon successful completion of the certification, instructors are welcome to contact the Dan Marino Foundation for information on in-water training courses that are offered as an option to the certification.

Aquatic activities offer unique experiences for the individual with developmental disabilities. Opportunity exists for motor skill acquisition, strengthening, and social/communication skills as well as fun and relaxation. Inclusion in school and community activities for these individuals has created a dramatic increase in their participation in aquatics. Parents/caregivers of individuals with developmental disabilities look to the aquatics community for expert advice and instruction for their child and have created a demand for quality swim instruction by certified teachers with specialized knowledge.

This instruction manual, the online learning component, and water workshops include important topics for special needs dynamics involved in swimming and water safety. The content is designed to prepare instructors to be more effective when teaching students with developmental disabilities. Swimming instructors completing this certification course will meet the requirements of the State of Florida.

The Dan Marino Foundation and Nicklaus Children's Hospital Dan Marino Outpatient Center gratefully acknowledge the generous support provided by the State of Florida and the Broward County Board of County Commissioners.

Mary Partin
Chief Executive Officer
Dan Marino Foundation

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For more information:
www.nicklauschildrens.org/adaptedaquatics
954-385-6221

TABLE OF CONTENTS

MODULE 1: OVERVIEW OF NICKLAUS CHILDREN'S HOSPITAL

Philosophy

In addition to learning to swim, inclusion in swim lessons is an important goal for children who come to the pool with special needs. While some swim instruction may need to be provided on a one-to-one ratio, it is hoped that as often as possible, children with special needs will be integrated into group lessons with their typical peers. The information provided in this manual is intended to help the certified swim instructor provide services for inclusion group lessons, group lessons for only children with special needs, and private lessons.

The Individuals with Disabilities Education Act (IDEA) which became law in 1997 states children shall receive services in the “least-restricted environment” possible. The least-restricted environment in aquatics is usually instruction in a group setting, because it offers both skill acquisition and important socialization time for all children. Adapted aquatics programming addresses the special needs for children with developmental disabilities.

The Nicklaus Children's MARINO Adapted Aquatics Program is to equip certified swim instructors with tools to enhance the development of life-saving swim skills that are interactive and promote mutual assistance, support, and cooperation among all students participating in the swim lessons. In addition, socialization can be uniquely addressed in the water environment. Children can be brought together to learn how to socialize and work cooperatively with each other. Water is a great equalizer for children with special needs and offers a venue to work and learn side-by-side with their typical peers. Learning to swim offers the opportunity for safety in and around the water and provides a lifelong recreational activity.

History of Nicklaus Children's MARINO Adapted Aquatics

During the 1990s, Florida began to experience an increase in incidents of childhood drowning closely tied to the number of homes built with swimming pools and/or on waterways.

In 1999, Broward County developed and funded a water-safety education program. The SWIM Central Program consisted of swim lessons and water-safety education for all children ages 6 months to 18 years of age. A partnership between Broward County and the Broward County School Board was developed. This highly successful program has become a key element in preventing and reducing the incidence of childhood aquatic-related accidents and injuries in Broward County. Statistics in Broward County support the fact that accidental pediatric aquatic accidents have been significantly reduced since the formation of SWIM Central.

To date, more than 100 elementary schools in Broward County participate in the SWIM Central program which serves more than 25,000 youth annually. Furthermore, Broward County Schools have successfully integrated children with special needs into its safety swim lessons.

More recently, children with autism were noticed to be part of the trend of childhood aquatic accidents. Because children with autism have a strong affinity for the water, a corresponding number of aquatic accidents were noticed in this population of children. One reaction to this was to question how aquatic skills and education were being offered to children with autism.

In April 2006, the State of Florida passed Statute 514.072, which requires a certification requirement for swim instructors who work with people with developmental disabilities. The State of Florida is the nationwide leader in aquatic education and has strict qualifications for swim instructor certification. In fact, at this writing, the State of Florida is the only state that requires specific qualifications for certification of swim instructors. The State of Florida is to be commended for its aggressive action and commitment to protect its children from aquatic accidents and injuries by setting rigid certification standards for its swim instructors.

In 2008, the Dan Marino Foundation partnered with Nicklaus Children's Hospital to build a pool at the Dan Marino Outpatient Center in Weston, Florida. This pool is heated to 92 degrees year-round and provides a safe and comfortable environment for children with special needs to learn water safety skills and stroke development.

The Organizational Structure of Nicklaus Children's MARINO Adapted Aquatics

The Nicklaus Children's MARINO Adapted Aquatics Program Director and Manager works together with the CEO of the Dan Marino Foundation.

Partners

Nicklaus Children's MARINO Adapted Aquatics is part of the Nicklaus Children's Hospital Aquatics Program and the Dan Marino Foundation, Inc. A spirit of cooperation and sharing exists between these organizations with the health and welfare of children with special needs being the prime concern. This working partnership is dedicated to inclusion swim lessons whenever possible and views this objective as a very worthwhile and important goal.

Nicklaus Children's MARINO Adapted Aquatics Qualifications for Instructors

The Nicklaus Children's MARINO Adapted Aquatics Certification is a mandatory requirement for all swim instructors who provide swim lessons to individuals with special needs in the State of Florida.

Candidates for certification in the Nicklaus Children's MARINO Adapted Aquatics course must be currently certified in at least one of the following recognized swim instructor certifications:

American Red Cross Water Safety Instructor

YMCA Aquatic Instructor

SwimAmerica Coach

Infant Swimming Research Instructor

It is incumbent upon instructors to maintain current CPR and first aid certifications in respect to the ages of the students they instruct. (Adult CPR for children ages 12 and older, Child CPR for children ages 1 through 12, and Infant CPR for children less than 1 year of age.)

Certification and Recertification

1. Present documentation of current swim instructor certification to meet the eligibility requirement of the Nicklaus Children's MARINO Adapted Aquatics program.
2. Completion of the Nicklaus Children's MARINO Adapted Aquatics curriculum with a passing score on the certification examination.
3. Receive a two-year initial certification.
4. Recertify every two years.

Code of Behavior for Nicklaus Children's MARINO Adapted Aquatics Instructors

1. Abide by the rules set forth by the program.
2. Promote participation of all children in safe swim lessons.
3. Strive for inclusion of swim classes for children with developmental disabilities where appropriate.
4. Increase water safety knowledge while developing swimming and water survival skills.
5. Assure equal opportunity for all children to learn to swim and to acquire water safety and survival skills.
6. Treat all swimmers with courtesy and respect regardless of differences and needs and do not discriminate on any grounds.
7. Represent Nicklaus Children's MARINO Adapted Aquatics and the swimming industry in a professional manner and to do no harm by acting in a manner that would bring the teaching profession of Nicklaus Children's Hospital disrepute.
8. Maintain current swim instructor certification throughout the certification

period of the Nicklaus Children's MARINO Adapted Aquatics Certification.

Services Provided by Nicklaus Children's MARINO Adapted Aquatics

Nicklaus Children's MARINO Adapted Aquatics is committed to providing programs for children with special needs in the least-restricted environment. Nicklaus Children's MARINO Adapted Aquatics activities include:

1. Instructor training in adapted aquatics for the State of Florida.
2. Administering tests and certifying instructors.
3. Providing certificates and awards.
4. Training and assuring quality control for Nicklaus Children's MARINO Adapted Aquatics Instructors.
5. Training of qualified course presenters.
6. Maintaining a website.
7. Serving as a resource and clearinghouse for adapted aquatics instruction.
8. Registration and updating system.
9. Developing guidelines for adapted aquatics practices.
10. A client/parent evaluation of the instructor.

Swim Instruction and Aquatic Participation

Children with special needs who participate in swim lessons benefit physically, psychosocially, and cognitively from the experience. Skills for lifelong water safety, recreation, and fitness can be gained from swimming instruction.

In recent years, water safety has become an issue for children with autism spectrum disorders. The powerful attraction water holds for this population of children has become an area of concern. It has been noted that children with autism are best served by attending swim lessons early and often, because the incidents of drowning are higher in children with autism than any other population with special needs.

Introduction to Nicklaus Children's MARINO Adapted Aquatics Certification Course

This course is a certification course for adapted aquatics instructors and is required by the State of Florida for all instructors who work with people with developmental disabilities. The certification for swim instructors who work in adapted aquatics consists of a manual and an online training component.

This course will cover many of the challenges children with special needs face and offer information about the characteristics of some of the disorders of these

children. After certification, this manual is best used as a resource for the wide diversity of needs that are encountered as a swim instructor. The goal is to help the instructor create the very best lesson for every child.

Use of the Nicklaus Children's MARINO Adapted Aquatics Logo and Materials

Nicklaus Children's MARINO Adapted Aquatics instructors and their facilities are able to use the Nicklaus Children's MARINO Adapted Aquatics logo, signage, flyers, and other advertising and marketing material. The Nicklaus Children's MARINO Adapted Aquatic logo can be a valuable tool to let the community know aquatic services for individuals with developmental disabilities are available at that location.

Use of the logo is limited to facilities holding a current registration with Nicklaus Children's MARINO Adapted Aquatics, and the guidelines for logo application as set by Nicklaus Children's Central Adapted Aquatics must be followed. To obtain a copy of these guidelines, please call 954-385-6221.

MODULE 2: NEED FOR DEVELOPMENTAL DISABILITIES CERTIFICATION

Many individuals with developmental disabilities are attracted to water and lack safety awareness when it comes to dangerous situations. Therefore, swimming instruction for this population is of the utmost importance. While parents and caregivers understand this is an essential skill for their children to learn, the financial burden of raising a child with special needs prohibits them from affording private lessons or aqua therapy for their children. Many swimming lessons that are offered either free or at a reduced cost are not available to these individuals. In addition, parents are not comfortable with instructors that lack appropriate skills to teach their children. This certification will provide instructors with the additional skills and knowledge to better teach these individuals water safety.

Because of the enactment of the Individuals with Disabilities Act that states children are to receive services in the least-restricted environment, the trend is to mainstream children with disabilities into a swimming program, replicating what is being done in the school system where teachers have access to specialized training. Inclusion swim lessons can offer all children the opportunity to learn life-saving swimming skills as well as important social and physical skills. Water can be a great equalizer between individuals with developmental disabilities and their typical peers and provides a unique opportunity for extended social interaction.

Individuals with special needs who participate in swim lessons benefit physically, psychosocially, and cognitively from the experience of learning to swim because of the enjoyable, soothing environment. Skills for lifelong water safety, recreation, and fitness can be gained from swimming instruction.

Physically, water offers an environment where the effects of gravity can be easily overcome. Children whose disability impairs their mobility on land can often function in the water with less or without external assistance. In addition, acquisition of swim skills can increase physical strength and endurance, enhance body image, increase self esteem, and provide better coordination and balance.

Individuals with developmental disabilities frequently exhibit a deficit in social skills. Their participation in group lessons allows for interaction among peers and provides the setting for teaching appropriate social skills, such as turn taking, listening, and getting along with others. This experience also provides their typical peers with the opportunity to become more accepting of children who are different from them.

Cognitively, swimming can provide these individuals with the opportunity for further communication skill development. This opportunity occurs by learning and listening to swimming instruction and through communication with other students during the lesson. The buoyancy of the water promotes relaxation, which alleviates some of the stress and frustration that may be felt by an

individual with developmental disabilities, because movement can be practiced without the force of gravity. Students can also increase body awareness by learning where their body parts are in relation to each other. Those with sensory integration dysfunctions can learn to process information received through touch, movement, and body position thereby increasing gross and fine motor skills and adapted learning abilities.

MODULE 3: LAWS AND LEGAL ISSUES

Introduction

Module 3 will provide a basic understanding of current federal and state legislation including the Americans with Disabilities Act (ADA), the Individuals with Disabilities Education Act (IDEA), and the Rehabilitation Act. A discussion on the Individual Education Plan (IEP) and its role in aquatic training is also included. All of the referenced laws have had a great impact on almost every area of life in the United States including aquatics. The aquatic community adapted quickly to the issues of pool accessibility. Aquatic facilities added lifts, ramps, railings, and other adapted equipment to pools nationwide. As a result, aquatic instructors began seeing more people with disabilities using pools for therapy, exercise, and recreation.

Florida Law

The State of Florida requires all swim instructors to hold one of the following certifications: The American Red Cross Water Safety Instructor Certification (WSI), YMCA Aquatic Instructor Certification, SwimAmerica Coach Certification, or Infant Swimming Research Instructor Certification.

In addition to the Federal laws, the State of Florida requires the certification of swim instructors working with individuals with developmental disabilities.

514.072 Certification of swimming instructors for people who have developmental disabilities required. Any person working at a swimming pool who holds himself or herself out as a swimming instructor specializing in training people who have developmental disabilities, as defined in s. 393.063(9), may be certified by the Dan Marino Foundation, Inc. in addition to being certified under s. 514.071. The Dan Marino Foundation, Inc. must develop certification requirements and a training curriculum for swimming instructors for people who have developmental disabilities and must submit the certification requirements to the Department of Health for review by January 1, 2007. A person certified under s. 514.071 before July 1, 2007, must meet the additional certification requirements of this section before January 1, 2008. A person certified under s. 514.071 on or after July 1, 2007, must meet the additional certification requirements of this section within six months after receiving certification under s. 514.071.

Federal Laws

It is important to understand that individuals with disabilities have only recently obtained the right to equal access to all public places and the opportunity for appropriate education. The Civil Rights Movement of the 1960s created awareness of the need for equality for minorities and the disabled. Many laws

have been written to protect and to provide equal rights to minorities and individuals with disabilities.

These laws created a firm foundation for dramatic changes in our society. Now, nearly 50 years later, it may seem hard to believe that in the 1960s, there was no disabled parking, no wheelchair ramps to make buildings accessible, and equal access to appropriate education was being denied to most children with disabilities. Understanding what the law mandates for these individuals will help instructors provide appropriate services to clients.

Americans with Disabilities Act of 1990 (ADA)

In 1990, the federal government passed the Americans with Disabilities Act. This act provides protection to all Americans with disabilities and mandates that all programs (not only those receiving federal funding) are to provide equal opportunity for individuals with disabilities. This includes workplaces, public places such as restaurants, entertainment facilities, recreational facilities, and all forms of transportation.

Individuals with Disabilities Education Act of 1997 (IDEA)

This law provides federal funding to school districts for special education. The law ensures that students who have disabilities receive free and appropriate education in the least-restricted environment. This law established the idea of inclusion in schools by defining special education as a system of individualized services and instruction to be provided by the school. Prior to this Act, special education was provided in a resource or a special education room where children were educated separately from other students. Now school systems work with the inclusion model to provide services and instruction in the mainstream classroom whenever possible.

Rehabilitation Act of 1973

In 1973, the Rehabilitation Act was passed giving people with disabilities equal rights and access to all programs and institutions that receive federal funding. This meant that an individual with a disability could not be denied access or be refused benefits based on their disability. This act required facilities and programs funded by the federal government to be accessible to the physically disabled. Prior to 1973, wheelchair ramps, disabled parking, and restrooms were rarely available severely limiting accessibility.

Individual Education Plan (IEP)

An Individual Education Plan is a legal document drawn up for a child once it has been determined the child is eligible for special education. The law under IDEA

states the information on an IEP is allowed to be discussed with school professionals who require further knowledge about the child in order to provide appropriate services. If a parent gives permission, the child's IEP may be shared with the aquatic instructor to provide further insight on the child's needs and goals. It is important to protect the privacy of the student, and it is against the law to divulge information in the IEP to anyone without consent from the parent.

Legal Liability

Working in and around the water carries a certain amount of risk to the swim instructor. It is imperative to be professional, responsible, and alert in the teaching of all students, but in particular of students with developmental disabilities.

Concerning legal liability, the following issues must be addressed:

Certification by WSI, SwimAmerica, YMCA, or Infant Swimming Research Instructor.

Certification to teach children with special needs.

Medical history and release forms completed by physicians and parents/caregivers.

Insurance.

Laws.

Safe aquatic environment.

Emergency action plan.

Negligence

Due to the fact that more people are aware of their legal rights, instructors must be diligent in providing safe and healthy environments for their clients. Working around the water brings with it a degree of risk, and the instructor must learn to manage this risk. Instructors must be fully certified as determined by state and federal laws. Instructors must be professional in their class preparation and must conduct themselves in a way to prevent any harm or risk to their students. Class preparation should include planning for any possible emergency. Once appropriate and necessary preparations have been done, risk of litigation is reduced.

Anyone can be sued for negligence under the law. An allegation of negligence is the most common legal problem a swim instructor should guard against.

Negligence is defined as:

Doing something that a reasonable person would not have done.

Not doing something a reasonable person would have done.

Before damages can be claimed due to injury from a swimming lesson, it must be proven that the instructor in charge was negligent. There is no obligation under the law to compensate an injured party, if there was no negligence.

Examples of negligence during class would be:

Leaving the class unattended.

Remaining in the water as a thunderstorm approaches.

Allowing horse play in class that leads to an injury.

If, as an instructor, negligence is proven causing injury or death, the law could demand the injured person be compensated. At that point, the instructor and/or the employer would be liable for damages.

The five elements of negligence are:

Duty of care was owed to the injured person.

There was a breach of that duty of care.

An injury was sustained.

There was a reasonable connection between the breach of duty of care and the injury suffered.

No conduct on the part of the injured person could have substantially contributed to the injury.

Duty of Care

The duty of care is an instructor's legal obligation recognized by law to conform to a standard of conduct for the protection of students against unreasonable risk. An instructor's level of care obligation encompasses three components:

Type of activity.

Characteristics of the learner.

Training of the instructor.

Emergency Action Plans

Every pool should have an emergency action plan including the instructor and the role he/she assumes in the event of an emergency. This plan must be learned by all instructors. An instructor must foresee possible risks and hazards and plan an immediate response in the case of an emergency.

The following considerations should be included:

Write and rehearse emergency plans.

Know the availability and location of rescue equipment.

Inspect rescue equipment regularly.

Create a recognizable emergency signal such as a blast of a whistle.

Practice rescue techniques including CPR, back boarding for spinal injuries, and contact/non-contact rescues.

Ensure the selected teaching environment allows for safe performance of rescues in an emergency.

MODULE 4: HEALTH AND SAFETY ISSUES

Health Considerations

Although many children have special health considerations, the medical concerns for children with special needs can be unique and differ greatly in each child, even those children with the same diagnoses. The parents/caregivers must be consulted, and a medical history and a signed release form should be obtained from the parent or legal guardian and primary physician before beginning lessons. While a good relationship between the instructor and parent/caregiver is important, the instructor should never recommend any medication, treatments, or consultations to a parent/caregiver and should instead refer them to appropriate professionals if asked.

Medical Management

Listed are specific health concerns and materials/equipment suggested for the handling of these concerns. Medical clearance from a physician is recommended for these cases:

- Controlled seizure disorder: One-on-one supervision required.
- Wounds: Bio-occlusive dressing (e.g., Opsite, Tegaderm).
- G-tube: Reinforce with Opsite.
- Colostomy: Reinforce with Opsite.
- Menstruation: Internal protection required.
- Portable oxygen: Long tubing or float tank.
- For those with compromised sensation in their lower limbs/feet, great care should be taken to avoid injuries. Socks can offer a soft barrier. Giving the lesson in water of sufficient depth is also helpful.

Precautions

If any of the following symptoms are present, aquatic activities will be terminated:

Dizziness.

Irregular heart rate.

Shortness of breath.

Poor peripheral circulation – Peripheral means “away from the center.” It refers to the areas away from the center of the body or a body part. For example, the hands are peripheral to the shoulder. The toes are peripheral to the knees (Medline 2007).

Cyanosis – Bluish discoloration of the skin or mucous membranes caused by lack of oxygen in the blood.

Increased ataxia – Uncoordinated muscle movement.

Fecal, blood, or open-wound accident in the pool.

Decreased alertness.

Significant increased agitation or confusion.

Sun Protection

Outside swimming lessons require that the students be protected from the sun. This can be provided by overhead awnings, sun-protective clothing, and sunscreen. If sunscreen is used, care should be taken to keep the sunscreen away from the eye area in order to avoid irritation by sunscreen going into the eye during submersion. Some medications can make children sensitive to sunlight. Instructors should consult with the parents/caregivers to determine if such sensitivity is present.

Environmental Safety

Careful consideration should be given to the pool environment and surrounding area. The following precautions should be in place.

The pool decks are often slippery causing falls. Stainless steel handrails placed on the wall around the pool provide support to the student when walking.

Stainless steel rails inside the pool area can be very slippery. Tight-fitting neoprene covers on ladders and handrails should be used to prevent slipping when entering or exiting the pool.

Floors can be covered with slip-proof mats, and benches can be added in strategic areas.

Air and water temperatures are important factors for teaching individuals with developmental disabilities. When a child is warm, they will be comfortable and ready to learn. Some children will have difficulty regulating their body temperature in cold water and/or adjusting body temperature out of the water in cool air. Water temperature should be maintained between 85 to 90 degrees for older children and 88 to 92 degrees for younger children. Air temperature should be no less than five degrees cooler than the water temperature.

If the water temperature is cooler than the above recommendations, either the lesson should be shortened and/or a wetsuit provided. It may be determined that the water is too cool for a lesson to take place.

Transferring

When entering and exiting the pool, assist the child only when needed and inform the child of the assistance. Encourage the child to be as independent as possible. Reasonable expectations of self sufficiency help children to develop independent life skills.

Transferring is the method of moving a participant to another surface or object. Parent/caregiver recommendations for transfer must be requested and followed. Proper training in hydraulic and sling-type lifts must be provided prior to usage.

Some of the most important points for the instructor to consider when transferring are:

Have the parent/caregiver do the transfer initially, as he/she will be most familiar with the appropriate and correct technique to utilize with the child. Instructors should be in the pool ready to receive the child.

The primary concern is the safety of the participants and movers.

Only one person should be giving instructions while transferring.

The participant should be aware of what will be happening and how it will happen.

Clear/concise communication should be used while performing the movements.

Lifting should be done with the legs and not the back.

The instructor should avoid twisting while lifting.

Weight should be kept close to the instructor's center of gravity.

A wide base of support should be used to ensure stability.

Extra precautions are needed when using electric wheelchairs next to a pool.

Hygiene

Hygiene of the pool environment as well as the child is always important. Children with disabilities may have some additional considerations involving hygiene. Below are some concerns and how they should be addressed.

Diapering

Proper swimming attire is to be enforced for participants who are not toilet trained. A reusable swim diaper (no swim-ups or Little Swimmers®) is recommended. Reusable swim diapers contain solids, do not add weight, and

are made particularly to fit under most swimwear comfortably. Elastic around the leg and waist openings should fit snugly to ensure containment.

Medical Considerations for Exclusion

Teaching swimming to individuals with developmental disabilities can be challenging. Addressing the need of each student is imperative while maintaining the proper instructor-to-student ratios. While some students can be fully included, others will need to be instructed at least in some part either individually or in a smaller class. While the preference is full inclusion, not all individuals with developmental disabilities are able to be fully mainstreamed.

Eligibility for group swimming lessons is determined by the instructor and aquatic manager. This curriculum and certification are tools to help certified adapted aquatic instructors meet the needs of all who come to the pool to learn how to swim.

Exclusions may include:

Bowel/bladder incontinence.

Open or draining wound.

Sensitivity/allergy to pool chemicals.

Severe respiratory problem.

Uncontrolled renal or heart failure.

Uncontainable infectious disease.

Uncontrollable seizure disorder.

Tracheotomy – An opening through the neck into the trachea (windpipe). A tube is usually placed through this opening to provide an airway and to remove secretions from the lungs. This tube is called a tracheostomy tube or trach tube (Medline 2007).

Autonomic Dysreflexia within 72 hours – Autonomic Dysreflexia (AD), also known as Hyperreflexia, is a potentially dangerous complication of spinal cord injury (SCI). AD usually occurs because of a noxious (irritating) stimulus below the level of the injury. Symptoms include headache, facial flush, perspiration, and a stuffy nose. SCI at a high level can cause low lung capacity which can be compromised further by the pressure of the water (National Spinal Cord Injury, 2006)

Vomiting.

Angina – Chest pain.

Blood pressure greater than 200/100.

MODULE 5: INSTRUCTOR QUALIFICATIONS NECESSARY FOR TEACHING STUDENTS WITH DEVELOPMENTAL DISABILITIES

Individuals with developmental disabilities face greater challenges than their typical peers. However, they also have many of the same needs and behaviors as their peers. Everyone has the need to be part of a group, to have friends, and the desire to play and achieve. Here are some of the reasons instructors choose to teach adapted aquatics.

To help make a child feel safe and comfortable in and around the water.

To add functional mobility to a child.

To create a fun water environment to help children with special needs achieve their highest potential and at the same time develop enjoyment of the water.

Swimmers with special needs must have an instructor who genuinely cares about them. Children can sense ambivalence no matter the level of impairment they may have. Sometimes students will have behaviors and other differences that are difficult to accept. If this is challenging for the instructor, it is imperative to acknowledge these difficulties and ask for assistance. The parent/caregiver can provide further information about the student's needs, abilities, and likes or dislikes. Behavioral issues and how they are handled at home and in the classroom should be discussed. Knowledge is power. The more the instructors know about the student's individual needs, the more comfortable they will be working with the students, and they will be able to teach more effectively.

As an instructor, every effort should be made to see each child for the unique and wonderful being that they are. Actions toward a child should reflect the way everyone would want to be treated. Children with special needs want to be accepted and loved.

Effective communication between the instructor and student is an important factor in the student's success. Strong communication skills will help establish a relationship of trust between the instructor and the student. The instructor should use person-first language which is to describe the person first then the disability or health condition second. For example, instead of saying "autistic child," say "child with autism."

Instructors must have a good sense of humor and be confident in the service they are providing. Help may be requested from the students, parents/caregivers, and other instructors to assist the student in achieving their goals in the water. By asking questions, difficult situations may be alleviated and even prevented from occurring.

Professional Growth of an Instructor

For the professional growth of an instructor, it is important to review the list of references and other materials on our website, www.nicklauschildrens.org/Aquatics, for continuing education, especially for expansion of knowledge when interested in a particular disability. Ask to co-teach with an experienced instructor to gain knowledge on equipment use, physical handling, class management, methods of behavioral interventions, and other teaching skills. If possible, find a mentor. A mentor can offer new ideas and provide a model for improving instruction and efficiency.

The top priorities are water safety and fun. As the student progresses, other goals will be added including learning strokes, endurance swimming, or even racing techniques. Set realistic expectations for the children and have a clear plan for working toward those goals and maximizing the student's abilities.

MODULE 6: TEACHING METHODOLOGIES

Strategies

While many strategies are successful and effective with students with developmental disabilities, listed below are some of the most prevalent methodologies used.

Lesson Plans

Successful lessons are the result of good lesson planning. Developing and following a plan is what lesson planning is all about. Methods and goals being used for instruction should be determined for each class. Swimmers with developmental disabilities will benefit from a well thought-out lesson plan with clear goals and objectives.

Strategies should be discussed with parents/caregivers and teachers. Reasonable expectations and achievements for each swimmer should be set and will assist the child in learning to trust in the instructor.

When writing lesson plans, while the instructor should be prepared, he/she cannot expect to complete all skills in one class. Lessons should have a predictable routine, and expectations should be clear. Each new lesson should be preceded by a review of the previous lesson, clear explanations of the rules, and introduction to upcoming new skills. Within each and every lesson, a component of safe conduct in and around water should be incorporated.

Motivation

Since most children enjoy water, use of other motivations will be minimal. After the student overcomes his/her initial fear, most children will love learning water skills. Some methods of motivation are listed below, although the child's preference for reinforcement should be discussed with the child and parent/caregiver.

Frequent and positive feedback.

Work on skills that are neither too easy nor too difficult.

Tap into the child's interests.

Fun lessons to alleviate fear and anxiety so the student naturally wants to participate.

Reinforcements such as hugs, high fives, snacks, small toys, hand stamps, stickers, trophies or ribbons, and other high-interest items.

The child's needs must be addressed. If the class is too difficult, the child is not well, or is tired, or is a danger to himself/herself or others in the class, action must be taken. The supervisor must know immediately of any problem that the instructor is not equipped to handle. Distraction in the vicinity of the instruction area should be kept at a minimal level.

The instructors should not develop their own special education accommodations. The Individual Education Plan and the parent/caregiver instructions regarding the child's needs should be followed where applicable. Often teachers assist the student excessively, and as a result children become too dependent on the prompts of the instructor.

Behavior

Behavioral issues may be the greatest challenge of an instructor of students with developmental disabilities. Communication and social skill deficits lead to behaviors unique to this population that may not be prevalent in others with special needs. Below are some effective strategies for reducing inappropriate behavior.

The instructor should try to identify what triggers an inappropriate behavior or meltdown. This is called the antecedent. Behaviors may be caused by the child's sensitivities to light, sound, smell, taste, pain, and touches of everyday life. If the instructor knows what causes the behavior, steps can be taken to avoid the situation or trigger.

Lesson plans should be clearly established. Students, aides, and parents/caregivers must know what to expect. A structured environment and boundaries are important, as they create a feeling of safety and security.

Simplify the task. Sometimes frustration causes inappropriate behavior. Take a second look at the activity or skill that is causing the frustration and make modifications to simplify it.

Stimulation Reduction: If an over-stimulating environment is causing a behavior problem, make adjustments accordingly. Move to a quieter area of the pool or relocate any distractions away from the pool area.

Redirection involves taking an incorrect action and creating a more appropriate use for that action. For example, a swimmer who is kicking the teacher could be put in a prone position on or off a mat and the work redirected to kicking skills.

Task simplification: Frustration on not being able to accomplish a task usually causes behaviors. Activities and skills should be modified to alleviate the frustration of the student.

Put the task in sequence (step-by-step) and give simple verbal instruction. The less words the better. Start from a one-step task and increase as appropriate.

Voice modulation: Avoid speaking in a loud tone, as some children may have sensitivity to loud noises thereby hindering active participation.

Often the most troublesome student is acting out just to get attention. By ignoring the acting-out behavior when possible and praising the student when he/she is behaving appropriately, negative behavior is reduced.

Discipline

A discipline plan should be developed by the instructor with input from the aquatics director, classroom teacher, and parents/caregivers. There should be collaboration, agreement, and support among all parties. Precautions should be in place to avoid any danger to the students. Also, there should not be an environment whereby there would be legal repercussions.

When it comes to using discipline, there is a fine line between the instructor standing his/her ground and jeopardizing the relationship being built with the child. Below are some effective methods to use to help children learn the rules while still keeping a positive relationship with the instructor.

The student should not be embarrassed.

Firmness, fairness, and consistency regarding class rules are necessary.

When a child is upset, their auditory skills tend to disintegrate.

The child should know why the instructor is displeased.

The child should feel that the instructor cares about him/her.

Behavior issues should be dealt with immediately and decisively.

Attention-seeking behaviors should be ignored whenever possible.

High rates of reinforcement should be provided when the child is complying with the rules.

Rule Setting

The instructor must convince the child that he/she is capable of working cooperatively in the water with the class. Here are some general guidelines for making and enforcing class rules.

Rules should be reviewed at the beginning of each lesson.

Rules should be limited and clearly stated. Less is more when establishing rules for a student with special needs.

Rules must be compatible between the aquatic center and school. Children have a hard time adjusting to contradictory rules for classroom behavior and pool behavior.

Rules should be written or in picture symbols as well as being stated verbally.

Instructors must be firm and consistent. Enforcing the consequence is necessary for use in disciplining.

The child should be praised and/or reinforced for positive behavior. This will reinforce the correct behavior.

Patience must be practiced.

Many individuals with developmental delays take longer to process a request. Adequate time should be provided but not an excessive amount of time.

Communication

One of the greatest difficulties that many individuals with developmental disabilities experience is a deficit in communication skills. Receptive language and expressive language are both deficient in many cases. Some students may be extremely limited in language skills and others may be totally nonverbal. Even those that appear to be fully communicative will often lack basic comprehension skills and social cues. Following are some helpful strategies to enhance communication with the student.

Determine the student's primary language.

Observe the student's ability to understand explanations and follow instructions.

Words must be chosen very carefully. Often, individuals with processing problems miss subtleties and other social cues. The student must have time to process the information. If the child is verbal, ask him to repeat the directions to ensure understanding.

One form of communication that is useful and effective when working with individuals with developmental disabilities is a communication board or picture card system. It is also important that the student learn basic swim vocabulary and/or signs for them.

Provide ample and appropriate demonstrations. Because these children are usually visually oriented, it is better to show them an activity than to verbalize instruction. It may have to be shown repeatedly until learned.

Use photographs or picture symbols to transition from one activity to the next. A visual schedule will relieve the child of the stress of having to remember what comes next, helps manage the child's time, and allows for an easier transition process.

Use simple and consistent language. Children with developmental disabilities are concrete thinkers. Idioms such as "Hold your horses" and "It's raining cats and dogs" are generally taken literally.

Provide only one direction at a time.

Social Interaction

Individuals with developmental disabilities need assistance learning social skills and cues. Many times it may look like the student does not want to interact or play with others, but it may be only that the individual does not know how to start a conversation or initiate play. The instructor should invite the others to join the student with disabilities, thereby making him/her feel more comfortable and included in the activities. Most students will be delighted to be included.

Bullying

Sometimes children bully because they are afraid or unsure of the person with special needs. If during an inclusive lesson, the instructor becomes aware of another child acting in this way toward the child with challenges, steps need to be taken to mediate or discipline the other child by possibly removing him/her from the pool immediately.

In order to alleviate bullying before it starts and to familiarize the other students with the needs of the student with developmental disabilities, an empathy training course may be in order. These are trainings involving exercises that assist the typical child in understanding the difficulties and challenges that students with disabilities face. However, care must be taken to avoid exposing conditions of special needs children, as this is a violation of the HIPAA Privacy laws.

Parent/Caregiver Participation

Researchers report that parent/caregiver participation provides positive results for both the child and the parent/caregiver.

Some of the results of this parent/caregiver involvement are:

Increased self esteem for the child.

Higher rates of achievement.

Improved relationships.

Improvement of the child's attitude toward the lesson.

Equipment

Please Consult Video

Adaptations to Aquatic Center

Communication Board

Picture Symbols

Activity Schedules

Aquatics Equipment

MODULE 7: UNDERSTANDING THE CHALLENGES OF CHILDREN WITH DEVELOPMENTAL DISABILITIES

Understanding the common characteristics of a disability will be beneficial. The following list of characteristics and challenges will be helpful in assisting the instructor work with swimmers with special needs. Children with special challenges need personal care from instructors. It is important to show respect and kindness. A student will respond positively when treated appropriately. Developing this relationship will enable the instructor to learn more about the child and his/her challenges.

Below is a partial description of disorders that the instructor may encounter in teaching individuals with special needs. Also included are teaching methodologies that the instructor should take into consideration when setting up goals for the students. It is important to present clear and attainable goals to ensure success. Because this is a partial compilation, instructors are advised to consult other sources of information such as websites and reference books specific to the disorders. Some useful sites are listed in the Appendix.

I. AUTISM AND RELATED DISABILITIES

1. Autism

Autism is a complex developmental disability that typically appears during the first three years of life. It is the result of a neurological disorder that affects the normal functioning of the brain impacting development in the areas of social interaction and communication skills. Both children and adults with autism typically show difficulties in verbal and non-verbal communication, social interactions, and leisure or play activities.

Autism is one of five disorders that fall under the umbrella of Pervasive Developmental Disorders (PDD), a category of neurological disorders characterized by “severe and pervasive impairment in several areas of development.”

The five disorders under PDD are:

- Autistic Disorder
- Asperger Syndrome (AS)
- Childhood Disintegrative Disorder (CDD)
- Rett's Disorder
- PDD-Not Otherwise Specified (PDD-NOS)

Characteristics of Autism

Different terms are used to describe children within this spectrum, such as autistic-like, autistic tendencies, autism spectrum, high-functioning or low-functioning autism, and more-abled or less-abled. However, more important than the term used to describe autism, is understanding that whatever the diagnosis, children with autism can learn and function normally and show improvement with appropriate treatment and education.

Every person with autism is an individual, and like all individuals, has a unique personality and combination of characteristics. Some individuals mildly affected may exhibit only slight delays in language and greater challenges with social interactions. They may have difficulty initiating and/or maintaining a conversation. Their communication is often described as talking at others instead of to them. For example, the individual may deliver a monologue on a favorite subject that continues despite attempts by others to interject comments.

People with autism also process and respond to information in unique ways. In some cases, aggressive and/or self-injurious behavior may be present. Persons with autism may also exhibit some of the following traits:

- Insistence on sameness and resistance to change.
- Difficulty in expressing needs and using gestures or pointing instead of words.
- Repeating words or phrases in place of normal, responsive language.
- Laughing and/or crying for no apparent reason.
- Showing distress for reasons not apparent to others.
- Preference to being alone and an aloof manner.
- Tantrums.
- Difficulty in mixing with others.
- Not wanting to cuddle or be cuddled.
- Little or no eye contact.
- Unresponsive to normal teaching methods.
- Sustained odd play.
- Spinning objects.
- Obsessive attachment to objects.
- Apparent over-sensitivity or under-sensitivity to pain.
- No real fears of danger.
- Noticeable physical over-activity or extreme under-activity.
- Uneven gross/fine motor skills.
- Non-responsive to verbal cues. Acts as if deaf, although hearing tests result in the normal range.

Note: Information taken from the Autism Society of America (http://www.autism-society.org).

2. Asperger Syndrome (AS)

Asperger Syndrome or Asperger's Disorder is a neurobiological disorder named for a Viennese physician, Hans Asperger, who in 1944 published a paper which described a pattern of behaviors in several young boys who had normal intelligence and language development, but who also exhibited autistic-like behaviors and marked deficiencies in social and communication skills.

Characteristics of Asperger Syndrome

Individuals with AS can exhibit a variety of characteristics, and the disorder can range from mild to severe. Persons with AS show marked deficiencies in social skills, have difficulties with transitions or changes, and prefer sameness. They often have obsessive routines and may be preoccupied with a particular subject of interest. They have a great deal of difficulty reading nonverbal cues (body language), and very often the individual with AS has difficulty determining proper body space. Often overly sensitive to sound, taste, smell, touch, and sight, the person with AS may prefer soft clothing and certain foods and be bothered by sounds or lights that no one else seems to hear or see. It is important to remember that the person with AS perceives the world very differently. Therefore, many behaviors that seem odd or unusual are due to those neurological differences and are not the result of intentional rudeness or bad behavior and most certainly not the result of "improper parenting".

Note: Information taken from Online Asperger Syndrome Information and Support (http://www.udel.edu/bkirby/asperger/aswhatisit.html).

3. Childhood Disintegrative Disorder (CDD)

The central feature of Childhood Disintegrative Disorder is a marked regression in multiple areas of functioning following a period of at least two years of apparently normal development. After the first two years of life, the child has a clinically significant loss of previously acquired skills in at least two of the following areas: expressive or receptive language, social skills or adapted behavior, bowel or bladder control, or play or motor skills.

Individuals with this disorder exhibit the social and communicative deficits and behavioral features generally observed in Autistic Disorder, as there is qualitative impairment in social interaction, communication, and restrictive, repetitive and stereotyped patterns of behavior, interests, and activities.

Note: Information taken from the Autism Society of America (http://www.autism-society.org).

4. Rett Syndrome

Rett Syndrome is a childhood neurodevelopmental disorder characterized by normal early development followed by loss of purposeful use of the hands, distinctive hand movements, slowed brain and head growth, gait abnormalities, seizures, and mental retardation. It affects females almost exclusively.

Individuals with Rett Syndrome often exhibit autistic-like behaviors in the early stages. Other symptoms may include toe walking, sleep problems, wide-based gait, teeth grinding, difficulty chewing, slowed growth, seizures, cognitive disabilities, and breathing difficulties while awake such as hyperventilation, apnea (breath holding), and air swallowing.

Note: Information taken from the National Institute of Neurological Disorders and Stroke, 2007 (http://www.ninds.nih.gov/disorders)

5. PDD-Not Otherwise Specified (PDD-NOS)

Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS) is a condition in which some but not all features of autism are identified. PDD-NOS is often incorrectly referred to as simply "PDD." The term PDD refers to the class of conditions to which autism belongs. PDD is NOT itself a diagnosis, while PDD-NOS is a diagnosis. The term Pervasive Developmental Disorder - Not Otherwise Specified is included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) to encompass cases where there is marked impairment of social interaction, communication, and/or stereotyped behavior patterns or interest, but when full features for autism are not met.

Note: This information is taken from the Yale Developmental Disabilities Clinic, 2007 (http://www.medicine.yale.edu/childstudy/)

6. Attention Deficit/Hyperactivity Disorder (AD/HD)

Attention Deficit/Hyperactivity Disorder is a condition that becomes apparent in some children in the preschool and early school years. It is hard for these children to control their behavior and/or pay attention. The principal characteristics of ADHD are inattention, hyperactivity, and impulsivity. These symptoms appear early in a child's life. Attention Deficit/Hyperactivity Disorder is the term now used for a condition which has had several names over the past hundred years. Science recognizes three subtypes of AD/HD (inattentive, hyperactive-impulsive, and combined). A diagnosis of one type or another depends on the specific symptoms that person has. While some individuals, including many professionals, still refer to the condition as Attention Deficit Disorder (ADD), this term is no longer in widespread use. For those who may have been diagnosed with ADD, the corresponding diagnostic category, using current terminology, would mostly likely be "AD/HD, Predominantly Inattentive Type."

Note: This information is taken from the National Institute of Mental Health, 2006, (http://www.nimh.nih.gov/publicat/adhd.cfm) and the National Resource Center on AD/HD.

Special Teaching Considerations for Autism and Related Disabilities

Children with autism and related disabilities tend to be visual learners. Picture symbol cards, social stories, and activity schedules work well for most children with autism. Activity schedules break down the skills into components enabling the child to better understand and complete the requested task or tasks and also allow the child to transition into the next activity with greater ease. These materials may consist of picture symbols, text, or a combination of both. Examples of these materials are included on the website, www.nicklauschildrens.org/adeptedaquatics

Private Lessons

For safety reasons, some children with severe impairments may not be able to participate in inclusion lessons and would therefore require either smaller group or private lessons. The parent/caregiver should be asked to serve as a water aide if needed. This will allow the instructor to get to know the child and learn which motivation techniques to use.

In class, use of a safety island will create a home base to work from. A safety island will both stabilize and isolate the child in the water and create two activities: Getting from the island to the wall and getting from the wall to the island. The video on the website is a good reference showing the use of other materials as reinforcements including mats, toys, slides, and kickboards.

Inclusion Lessons

A diagnosis of autism or a related disorder includes a wide variety of characteristics ranging in intensity from mild to severe. Students with mild impairments typically flourish in water activities, and with a little extra assistance will perform with great proficiency. Consistency will be the key to their success.

- Use the child to demonstrate skills when possible.
- If the student is sensitive to touch, offer a rash guard or tight-fitting T-shirt.
- Always remind the child of the task before beginning.
- Laminate pictures of children performing swim skills or dressing skills.
- Make the child the class leader or demonstrator.

- Avoid open-ended questions by using either/or scenarios. For example: “Do you want to swim to the end of the pool on your front or back?” not, “Do you want to swim to the end of the pool?”

II. Intellectual Impairment

A diagnosis of intellectual impairment is defined by three criteria:

- IQ score below 70.
- Impairment since childhood.
- Lack of adapted living skills in at least two areas: Self-care, self-direction, health, academic functioning, communication, or safety.

Each child with intellectual impairment has a unique set of strengths and weaknesses. There are some who are only slightly slower learners than the general population. If a child’s IQ is lower than 50, the challenges will be greater. Individuals with this diagnosis may have multiple disabilities in conjunction with this disorder.

Tips for Teaching Children with Intellectual Impairment

- Break each skill into simple components.
- To maximize learning, create routines and repeat them each class.
- Repeat instructions for clarity.
- Provide positive feedback.
- Keep the lesson area clear of distractions.
- Consider offering longer lessons.

What are the Challenges for the Instructor?

Praise is the most effective behavior modifier for children with intellectual impairment. These children love to please the teacher. Use praise often to help the student understand expectations. Correct inappropriate behavior quickly using a calm, deliberate voice. Clearly explain the problem and redirect the child to the appropriate behavior. Profoundly impaired individuals will require close supervision. These children may lack understanding of self-preservation and constant supervision will be necessary.

III. Cerebral Palsy (CP)

Cerebral palsy is a term used to describe a group of chronic conditions affecting body movement and muscle coordination. It is caused by damage to one or more specific areas of the brain, usually occurring during fetal development; before, during, or shortly after birth; or during infancy. Thus, these disorders are not caused by problems in the muscles or nerves. Instead, faulty development or damage to motor areas in the brain disrupts the brain's ability to adequately control movement and posture.

"Cerebral" refers to the brain and "palsy" to muscle weakness/poor control. Cerebral palsy itself is not progressive (i.e. brain damage does not get worse). However, secondary conditions, such as muscle spasticity, can develop which may improve, worsen, or remain the same over time. Cerebral palsy is not communicable. *It is not a disease and should not be referred to as such.* Although cerebral palsy is not "curable" in the accepted sense, training and therapy can help improve function.

Characteristics of Cerebral Palsy

Cerebral palsy is characterized by an inability to fully control motor function, particularly muscle control and coordination. Depending on which areas of the brain have been damaged, one or more of the following may occur: Muscle tightness or spasticity, involuntary movement, disturbance in gait or mobility, difficulty in swallowing, and problems with speech. In addition, the following may occur: Abnormal sensation and perception, impairment of sight, hearing or speech, seizures, and mental retardation. Other problems that may arise are difficulties in feeding, bladder and bowel control, problems with breathing because of postural difficulties, skin disorders because of pressure sores, and learning disabilities.

Note: Information obtained from United Cerebral Palsy, 2007 (http://www.ucp.org/)

What are the Challenges for the Instructor?

Swimming is a very good therapy for children with Cerebral Palsy and relaxes the child’s muscle tone with proper therapy enabling greater range of motion. Because of the adapted equipment used by these children, knowledge about the proper handling of the equipment as well as learning the technical aspects of transferring the child is necessary. Because of the instability of some children, utmost precautions around the pool must be taken. Also, if a child experiences communication deficits, many of the interventions discussed previously in the manual can be utilized.

IV. Tourette Syndrome (TS)

Tourette Syndrome is a neurological disorder characterized by repetitive, stereotyped, involuntary movements and vocalizations called tics. The early symptoms of TS are almost always noticed first in childhood with the average onset between the ages of 7 and 10 years. TS occurs in people from all ethnic groups. Males are affected about three to four times more often than females. It is estimated that 200,000 Americans have the most severe form of TS, and as many as one in 100 exhibit milder and less complex symptoms such as chronic motor or vocal tics or transient tics of childhood. Although TS can be a chronic condition with symptoms lasting a lifetime, most people with the condition experience their worst symptoms in their early teens, with improvement occurring in the late teens and continuing into adulthood

Characteristics of Tourette Syndrome

Tics are classified as either simple or complex. Simple motor tics are sudden, brief, repetitive movements that involve a limited number of muscle groups. Some of the more common simple tics include eye blinking and other vision irregularities, facial grimacing, shoulder shrugging, and head or shoulder jerking. Simple vocalizations might include repetitive throat-clearing, sniffing, or grunting sounds. Complex tics are distinct, coordinated patterns of movements involving several muscle groups. Complex motor tics might include facial grimacing combined with a head twist and a shoulder shrug. Other complex motor tics may actually appear purposeful, including sniffing or touching objects, hopping, jumping, bending, or twisting. Simple vocal tics may include throat-clearing, sniffing/snorting, grunting, or barking. More complex vocal tics include words or phrases. Perhaps the most dramatic and disabling tics include motor movements that result in self-harm such as punching oneself in the face or vocal tics including coprolalia (uttering swear words) or echolalia (repeating the words or phrases of others). Some tics are preceded by an urge or sensation in the affected muscle group, commonly called a premonitory urge. Some individuals with TS will describe a need to complete a tic in a certain way or a certain number of times in order to relieve the urge or decrease the sensation.

What are the Challenges for the Instructor?

Children with Tourette Syndrome need structure. Tics often increase with excitement or anxiety and decrease during calm, focused activities. Some physical experiences can trigger or worsen tics. For example, tight collars may trigger neck tics, or hearing another person sniff or throat-clear may trigger similar sounds. While the symptoms of TS are involuntary, some people can occasionally suppress, camouflage, or manage their tics in an effort to minimize their impact on functioning. The instructor should work closely with teachers and caregivers to understand the nature and severity of this child’s disorder.

Note: This information is taken from the National Institute of Neurological Disorders and Stroke, 2007.

V. Down Syndrome

Down Syndrome is set of mental and physical symptoms that result from having an extra copy of chromosome 21. Even though people with Down Syndrome may have some physical and mental features in common, symptoms of Down Syndrome can range from mild to severe. Usually, mental development and physical development are slower in people with Down syndrome.

Characteristics of Down Syndrome

Down Syndrome symptoms vary from person to person and can range from mild to severe. However, children with Down Syndrome have a widely recognized characteristic appearance. The head may be smaller than normal and abnormally shaped. For example, the head may be round with a flat area in the back. The inner corner of the eyes may be rounded instead of pointed.

Common physical signs include:

- Decreased muscle tone at birth.
- Excessive skin at the nape of the neck.
- Flattened nose.
- Separated joints between the bones of the skull.
- Single crease in the palm of the hand.
- Small ears.
- Small mouth.
- Upward slanting eyes.
- Wide, short hands with short fingers.
- White spots on the colored part of the eye (Brushfield spots).

Note: Information taken from Medline Plus
http://www.nlm.nih.gov/medlineplus/ency/article/000997.htm#Definition

What are the Challenges for the Instructor?

These children love the water and can be delightful to work with due to their sweet and some time childlike nature. Many children with Down Syndrome have learned all four strokes and compete in the Special Olympics. The instructor should always ask caregivers and teachers what method of behavior modification is being used at home or in the classroom for use during the lesson to provide continuity. You may wish to refer to the previous section on Intellectual Impairment for more information.

VI. Traumatic Brain Injury (TBI)

Traumatic brain injury, also called acquired brain injury or simply head injury, occurs when a sudden trauma causes damage to the brain. TBI can result when the head suddenly and violently hits an object or when an object pierces the skull and enters brain tissue.

Characteristics of Traumatic Brain Injury

Children who sustain TBI may experience a complex array of problems including the following:

- Physical impairments: Speech, vision, hearing, and other sensory impairment, headaches, lack of fine motor coordination, spasticity of muscles, paralysis of one or both sides, seizure disorders, impaired balance, and other gait impairments.

- Cognitive impairments: Short- and long-term memory deficits, impaired concentration, slowness of thinking, limited attention span, impairments of perception, communication, reading and writing skills, and impaired planning, sequencing, and judgment.

- Psychosocial-behavioral-emotional impairments: Fatigue, mood swings, denial, self-centeredness, anxiety, depression, lowered self-esteem, sexual dysfunction, restlessness, lack of motivation, inability to self-monitor, difficulty with emotional control, inability to cope, agitation, excessive laughing or crying, and difficulty relating to others.

Any or all of the above impairments may occur to different degrees. The nature of the injury and its associated problems can range from mild to severe. The course of recovery is very difficult to predict for any given student. It is important to note that, with early and ongoing therapeutic intervention, the severity of these symptoms may decrease, but in varying degrees.

Note: Information taken from the National Institute of Neurological Disorders and Stroke, 2007 and Kid Source (https://www.ninds.nih.gov/Disorders/All-Disorders/Traumatic-Brain-Injury-Information-Page).

What are the Challenges for the Instructor?

This student may be easily frustrated because of his/her impairments. Keep the rules for class and requests for appropriate behavior simple. Consistent consequences such as timeout are helpful, and allow the students time to compose themselves and return to class. Proper handling and positioning due to physical impairments are important. Use the buoyancy of water to assist in relaxation and movement.

VII. Juvenile Rheumatoid Arthritis (JRA)

Juvenile Rheumatoid Arthritis is arthritis that causes joint inflammation and stiffness for more than six weeks in a child of 16 years of age or less. Inflammation causes redness, swelling, warmth, and soreness in the joints, although many children with JRA do not complain of joint pain. Any joint can be affected and inflammation may limit the mobility of affected joints.

Characteristics of Juvenile Rheumatoid Arthritis

The most common symptom of all types of JRA is persistent joint swelling, pain, and stiffness that typically is worse in the morning or after a nap. The pain may limit movement of the affected joint. JRA commonly affects the knees and joints in the hands and feet. One of the earliest signs of JRA may be limping in the morning because of an affected knee. Besides joint symptoms, children with systemic JRA have a high fever and a light skin rash. The rash and fever may appear and disappear very quickly. Systemic JRA also may cause the lymph nodes located in the neck and other parts of the body to swell. In some cases (less than half), internal organs including the heart and, very rarely, the lungs may be involved.

What are the Challenges for the Instructor?

Water warm-up and gradual stretching exercises are suggested before lessons begin. Swimming and water exercises are safe and highly recommended for these children. The temperature of the water should be lower than 92 degrees.

Note: Information taken from the National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2001 (http://www.niams.nih.gov/health-topics/juvenile-arthritis)

MODULE 8: TEACHING TOOLS SPECIFIC TO DISORDERS AND OTHER HEALTH IMPAIRMENTS

Autism and Pervasive Developmental Disorders

Provide a routine for the swimming session.

For those who are fearful of water or not used to water immersion, gradual introduction to the water is important to prevent negative behavior and eventual aversion to water.

Give a five-minute, then two-minute warning when stopping one activity and going onto the next.

Provide concrete examples and compare new skills to those already learned in school or home. For example: Opening and closing a door to demonstrate a pulling or pushing movement.

Provide a home base such as a circle outlined in tape on the deck or a plastic disc/poly spot under the water or taped to the gutter for swimmers to return to for regrouping.

Provide clear boundaries for the student to understand the limitations of personal space.

Bright, colorful props provide additional motivation.

Use cue words rather than long explanations.

Additional demonstrations and performing the skill for or with the student increases success.

Some students are hypersensitive to loud music and noises but are generally drawn to music at a moderate volume.

Often, sensory integration dysfunction is present, and some students prefer not to be touched. A rash-guard surf shirt on the swimmer has proven helpful to decrease the sensation of the instructor's hands on the swimmer.

Overloading of the senses may cause swimmers to appear confused and agitated causing them to run away, refuse to cooperate, or become aggressive with others. The use of earplugs or a neoprene headband over the ears has been shown to be successful in decreasing auditory sensitivity.

Relate a welcome song and/or swim routines to the swimmer's age and favorite movie, cartoon character, game, etc.

Use picture symbols and activity schedules to help with transition and communication.

Hearing Impaired

Provide visual demonstrations.

Use kickboards held lightly on top by instructor and swimmer, and provide instruction in rhythm for teaching kicking, breathing, and arm motions. Tap out beats on the kickboard with the swimmer's hand for the student to feel.

Explain difficult concepts before you get into the water, if hearing aids or cochlear implants are used that will be removed for swimming.

When working with an interpreter, look at the student when speaking instead of the interpreter.

Provide handouts regarding rules and upcoming activities prior to instruction for the swimmer to read beforehand.

If an interpreter is not available, learn basic sign language, written instruction, and text messaging.

Determine the most effective form of communication, learning style, and level of residual hearing by consulting with the students and their parents/caregivers.

Learning Disabilities

Initially slow down the instructional portion of the lesson for processing.

Structure lessons with a variety of levels within each progression.

Provide visual cues during the swim sequences.

Understand that a “mirror effect” may be difficult for students to translate from the instructor in terms of right/left movement. Possibly use same color wrist and/or ankle bands for instructor and swimmer to follow each other or do side-by-side/front-back demonstrations.

Understand that crossing the midline might be difficult. Provide simple movements across the midline before adding combinations and patterns that require this skill.

Provide lots of encouragement and practice, as this population may exhibit poor coordination, impaired auditory processing, and inconsistent rhythm.

Attention Deficit/Hyperactivity Disorder

Encourage swimmers to repeat directions to check for understanding. Visual cues are also helpful via demonstration, hand over hand, and modeling by other participants.

Encourage effective positioning of the swimmers by stationing them close to the teacher but with enough personal space.

Provide a home base such as an “X” on the deck or pool gutter for swimmers to orient themselves and monitor their positioning.

Break swim segments down into smaller steps.

Use cue words rather than long explanations.

Provide time for the swimmer to explore both large and small movements.

Intellectual Impairment

Simplify, demonstrate, and repeat.

Use age-appropriate music and games even though some swimmers with cognitive delays may prefer songs for younger children.

Explore secondary disabilities and medical history for relevant medical issues.

Know the swimmer well and provide motivational cues and key words to alleviate fears and insecurities.

Use small groups and one-on-one settings and gradually introduce the swimmer to larger groups.

Communicate often with the parents/caregivers about progress.

Set measurable goals and objectives that are assessed frequently.

Provide visual cues such as footprints, arrows, and lines on the deck, gutter, or pool bottom (shallow end) as well as animated demonstrations.

Use physical guidance with verbal cues.

Provide concrete and easy-to-understand rules and reinforce them frequently.

Give a five-minute, then two-minute warning when stopping one activity and going onto the next.

Do not assume that the swimmer with cognitive disabilities understands movement and swimmer vocabulary. Give a demonstration of the expected movement or skill.

Check frequently for understanding, and ask specific questions rather than, “Does everyone understand that?”

Multiple Disabilities

Research the disabilities the swimmer has for safety, health, and medical considerations.

Do not modify activities based on stereotypical disability characteristics. Assess the student’s ability.

Interview the participant and parents/caregivers to determine the extent of the cognitive and/or physical disabilities.

Break down a task into its smallest components to determine if it needs to modified or eliminated and replaced with an achievable skill.

When modifying the swim movements, remember to incorporate the Individual Education Plan goals into the sessions.

Train assistants to provide as close to a one-on-one ratio as possible.

Learn how to operate the mobility equipment that the student is utilizing.

Orthopedic Disabilities

Fully understand and research physical disabilities and devices used.

Determine if the swimmers will be removing or using their devices for transfer.

Provide a chair for rest periods or a chair in shallow water near the wall for leaning if needed.

Provide family and personal changing areas.

Open up lines of communication with the swimmer in terms of their personal needs regarding adapted equipment such as orthotics, braces, prosthetics, or other devices.

Health Impairments

Asthma

Provide means for an inhaler or other medication to be readily available for swimmer.

Provide training of breathing techniques.

Provide a slow warm-up for those with exercise-induced asthma.

Ensure convenience in obtaining water or other fluids in order to provide appropriate hydration.

Communicate with parents/caregivers as to what preceded an asthma episode if one occurs.

Diabetes

Provide private space for blood sugar monitoring.

Have a specific place for Gatorade, glucose, or other sugar/carb reload substances.

Communicate with swimmer and parent/caregiver if the swim session will be atypically long or short in order for them to regulate their insulin and food that day.

Be aware of any changes in the swimmer’s color, alertness, or coordination.

Seizures

Be aware that an individual who is seizure prone may have a trigger such as excessive fatigue, blinking lights, increased water temperature, etc.

If a swimmer has a seizure, remove the person from the water, place him/her on his/her side, do not restrain, protect the head, and time the seizure. Notify the parent/caregiver to determine if emergency services are required. If parent/caregiver is not available, call for emergency services.

Disperse the group to an area where they can be monitored but are not hovering.

Explain the seizure in a clear manner, so that all participants understand**.**

Speech or Language Disorders

Devise a communication system such as picture symbols, sign language, written, or questions requiring only yes/no answers.

Provide opportunities for the swimmer to express moods, emotions, and other expressions through movement.

Develop a rapport with the swimmer to determine emotions.

For students who have difficulty processing the spoken and written word, provide opportunity for visual demonstration and physical guidance. In addition, provide time for extra practice and assistance with movements and skills.

Traumatic Brain Injury (TBI)

Research TBI and understand the extent of the disability's effect on cognitive, emotional, behavioral, intellectual, and physical functioning.

Each person is unique in terms of functioning. It is best to observe the swimmer in a one-to-one setting to determine their skill level before participating in the group lessons.

The swimmer with TBI may have one or more of the following issues: Muscle weakness, incoordination, impaired motor control, balance problems, spasticity, startling, deficits in memory and understanding, inability to form initiation, lack of inhibition, lack of spatial awareness, depression, lack of knowledge of self and limitations, and impulsivity. Modify environment and lessons accordingly.

Visual Impairment

Provide specific, detailed verbal cues.

Provide tactile modeling.

Provide handouts or other written materials in Braille or large print.

Provide a barrier or personal space reminder such as a floating buoy rope for stationary and semi-stationary work.

Be familiar with the "sighted guide" method and utilize it for helping orient the swimmer to the environment. Sighted guide is a method used with a visually-impaired individual allowing him/her to follow someone by taking the leader's arm and moving along with the leader. Do not pull or push the person to where you need them to go unless it is an emergency.

MODULE 9: APPENDICES

Appendix 1 – Reference Material

Involving Parents in the Education of Their Children. ERIC Clearing House on Teaching and Teacher Education; www.ericfacility.net/ed308988.html

A Guide to Disability Rights Laws. U.S. Department of Justice, Civil Rights Division, September 2005, http://www.usdoj.gov/crt/ada/cguide.htm

Adaptive Aquatics Programming: A Professional Guide, Lepore, ISBN 0880116951, 1998

Integrating the Disabled into Aquatics Programs. Journal of Physical Education and Recreation. Louise Priest, 1979

Adaptive Aquatics. Louise Priest, 1977

Recommended Websites for Resources of Medical Information

http://www.nlm.nih.gov/medlineplus/ency/article/002273.htm

http://www.spinalcord.org/html/factsheets/aut_dysreflexia.php#

http://www.nih.gov/

http://www.cdc.gov/

http://medlineplus.gov/

http://www.webmd.com/

http://www.wikipedia.org/

http://www.healthfinder.gov/

http://www.ama-assn.org/ama/pub/category/1905.html

http://www.merck.com/

httup://www.autism-society.org

http://www.help4adhd.org/en/about/what

http://www.ninds.nih.gov/disorders/cerebral_palsy/cerebral_palsy.htm

http://www.udel.edu/bkirby/asperger/aswhatisit.html

http://www.ninds.nih.gov/disorders/rett/detail_rett.htm#84813277

http://www.medical.yale.edu/chldstdy/autism/index.html

http://www.nimh.nih.gov/publicat/adhd.cfm

http://www.ucp.org/ucp_generaldoc.cfm/1/9/37/37-37/447

http://www.nlm.nih.gov/medlineplus/ency/article/000997.htm#Definition

http://www.nimh.nih.gov/publicat/adhd.cfm

National Resource Center on AD/HD

Appendix 2 – Credentials

- Master Teachers of Special Needs
- American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) Adapted Aquatics Instructor Program, www.aapar.org

Appendix 3 – Glossary

Adapted aquatics: Techniques that emphasize swimming skills modified or adapted to accommodate individual abilities

Ambivalence: The coexistence within an individual of positive and negative feelings toward the same person, object, or action

Antecedent: Action that happens before an inappropriate behavior begins, thereby triggering the behavior

Angina: Any attack of painful spasms characterized by sensations of choking or suffocating

Apnea: Breath holding

Ataxia: Loss of the ability to coordinate muscular movement

Autonomic dysreflexia: A potentially dangerous complication of spinal cord injury; usually occurs because of an irritating stimulus below the level of the injury; symptoms include headache, facial flush, perspiration, and a stuffy nose

Bio-occlusive dressing: A dressing that seals a wound from air or bacteria

Bowel/bladder incontinence: Being unable to restrain natural discharges or evacuations of urine or feces

Cognitive: Being conscious of intellectual activity, such as thinking, reasoning, remembering, imagining, or learning

Colostomy: Surgical construction of an opening from the colon through the abdominal wall to the outside of the body for the purpose of excretion

Communication board: Board with either pictures, text, or both allowing the student with communication difficulties to make choices nonverbally

Congenital heart defects: Structural problems with the heart present at birth

Copralalia: Uttering swear words

Cyanosis: Bluish discoloration of the skin or mucous membranes caused by lack of oxygen in the blood

Duty of care: An instructor's legal obligation recognized by law to conform to a standard of conduct for the protection of students against unreasonable risk

Echolalia: Repeating the words or phrases of another person

Gait: A person's manner of walking

G-Tube: A tube is surgically introduced through the abdominal wall for feeding purposes

Hydration: The introduction of additional fluid into the body

Least restricted environment: The educational setting where a child with disabilities can receive a free, appropriate public education designed to meet his or her education needs while being educated with peers without disabilities in the regular educational environment to the maximum extent appropriate

Legal liability: A situation in which a person is responsible to pay compensation for any damage incurred

Muscle spasticity: State of increased tone of a muscle; for example, with spasticity of the legs, there is an increase in tone of the leg muscles so they feel tight and rigid

Negligence: Failure to exercise a degree of care that the law requires for the protection of other persons

Nonverbal cues: Body language

Obesity: Very overweight

Picture symbol: Drawn picture or photograph used as a communication device for those individuals with impaired verbal abilities

Poor peripheral circulation: Peripheral means away from the center; refers to the areas away from the center of the body or a body part; for example, the hands are peripheral to the shoulder; the toes are peripheral to the knees

Premonitory urge: Tics are preceded by an urge or sensation in the affected muscle groups

Psychosocial: Involving aspects of both social and psychological behavior

Rapport: A relationship of mutual understanding or trust and agreement between people

Renal: Relating to the kidneys

Seizure disorder: Periodic disturbances of the brain's electrical activity resulting in some degree of temporary brain dysfunction

Sensory integration dysfunction: A neurological disorder causing difficulties with processing information from the five senses: vision, hearing, touch, smell, and taste

Spatial awareness: Of, relating to, involving, or having the nature of space

Spatial skills: An excellent awareness of space, the orientation of the body, and other people

Stereotypic behavior: A repetitive behavior with no obvious goal or function

Stereotypic hand movements: Particularly purposeful hand movements

Tic: Nervous, involuntary movement or twitch of a muscle

Tracheotomy: Surgical incision of the trachea through the neck to make an artificial opening for breathing

References:

NSCI, 2006
Medline 2007
Dictionary.com
http://en.wikipedia.org/wiki/Main_Page