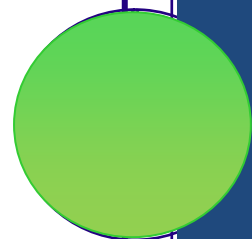


# Client Groupings Model

*Functional Client Groupings Model for Children and  
Youth with Physical and Developmental Disabilities*

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## INTRODUCTION

The *Functional Client Groupings Model for Children and Youth with Physical and Developmental Disabilities*, or the CGM, provides a descriptive framework for use by Ontario Association of Children's Rehabilitation Services (OACRS) Children's Treatment Centres (CTCs). This framework helps therapists and administrators to describe the client population serviced by CTCs, and may be used as a communication, workload, and/or management tool. The CGM uses physical and cognitive descriptors to describe the client population by their functional characteristics. There are nine distinct groupings or categories within which a client might fit. Functional characteristics are considered when therapists group a client, including: learning and applied knowledge, mobility, self care, communication, medical issues, safety issues, and equipment needs. Based on the functional characteristics of the client, a physical and cognitive functional grouping is determined. By describing the client population with common terminology, CTCs can develop clinical pathways based on best practice to guide assessment and intervention, and to promote equality of services.

## HOW THE CLIENT GROUPINGS MODEL WAS DEVELOPED

In 2003, health care professionals at ErinoakKids identified a need to develop clinical pathways with which they could create and support service guidelines. An outside consultant from the Brondesbury Group, Judith Weinstein (RN), was hired to assist in the process of developing clinical pathways. The consultant used a Continuous Quality Improvement (CQI) framework to determine inefficiencies in ErinoakKids' service provision and make recommendations for improvement. The consultant identified the need for a model or framework prior to developing clinical pathways. To create this model, health care professionals needed to describe the client population serviced by ErinoakKids. Using the modified Delphi method to reach consensus, representatives from medicine, occupational therapy, physiotherapy, social work, speech-language pathology, and early childhood resource services, were asked to describe the clients they service. From these descriptions, the consultant constructed the *Functional Client Groupings Model for Children with Youth with Physical and Developmental Disabilities* (CGM) matrix using cognitive and physical headings. These were the most relevant client characteristics that determined the type of assessment, intervention, and resulting client outcomes. From this, a model was developed that contained nine distinct categories or groupings. A group of health care professionals from a variety of disciplines refined the matrix by including descriptors within the nine categories based on the International Classification of Functioning, Disability, and Health (ICF) and clinical experience. From these more detailed descriptions of client characteristics, health care professionals may develop specific clinical pathways to improve the consistency of client services and achievement of client outcomes.

## THE NEED FOR THE CLIENT GROUPINGS MODEL

The health care system in Canada dictates a need for health care providers to provide an appropriate and best level of care to each person using the most economical and efficient means (Bay, Leatt, & Stinson, 1982). Government funding for health care is subject to fluctuations according to the country's economic situation. As such, health care providers can be faced with situations in which there is an increase in clients and a decrease in funding to service these clients. In order to efficiently provide services, health care providers must deliver best practice services within a budget of finite resources (Brock, Reid, Goldie, & Greenwood, 1998). This pressures health care providers to determine the most efficient and effective way to deliver services. In order to establish these aspects of services, health care providers must evaluate costs and outcomes, and determine clinical pathways (Murchland & Wake-Dyster, 2006). The Ontario Association of Children's Rehabilitation Services (OACRS) proposed that publically-funded Children's Treatment Centres (CTCs) provide rehabilitation to children and youth with disabilities and their families. Based on government expectations, OACRS indicates that there is a need for CTCs to enhance their service delivery by creating a more "integrated, coordinated, collaborative, responsible and accountable" (p. 5) system with simplified access to services (OACRS, 2005).

Casemix is a method of funding used in health care systems. In casemix funding, patient episodes or clinical pathways are described, from which classification groups are created. This assists in management and in determining resource allocation. These classification groups must be homogeneous, clinically meaningful to health care staff, and there must be a manageable number of groups. The classifications or groupings help to describe the populations that the health facility services. Casemix classifications or groupings can be used to determine the most efficient and effective services by determining typical clinical pathways for each group. Benchmarking is the process of comparing service provision across facilities that offer similar services. By describing typical clinical pathways of client groups, benchmarking and resource allocation based on the most efficient and effective practice can occur (Brock et al., 1998). Classification of client populations and benchmarking are helpful in

assuring that health care providers are accountable for their services, and that they have incentive to improve services based on a need for efficiency (Dyson, Duckett, & Allen, 2000).


Classification can be based on diagnosis, severity, and/or functional characteristics of the client population. According to the International Classification of Functioning, Disability, and Health (ICF), “diagnosis alone does not predict service needs, length of hospitalization, level of care or functional outcomes” (World Health Organization, 2002, p. 4). Research shows that clinicians do not find information about diagnosis clinically and intuitively meaningful; therefore, there is a need to identify clients by useful groupings and classifications (Hogan & Smith, 1987). There has been a trend towards using functional outcome measures as indicators of health as opposed to using measures of disease, diagnosis, and/or mortality rate. The use of homogeneous groups that focus on functional descriptors are less likely to overlap compared to classification systems that focus on diagnosis and impairments (Dyson, et al., 2000). Clinically relevant outcomes are crucial to consider, such as function and perceived health, in order to utilize classification systems to determine efficient and effective service delivery (Brock et al., 1998).

Connecting significant and meaningful client outcomes with appropriate groupings and classifications allows for clinicians to determine which interventions are effective for clients with specific functional characteristics. In medicine and rehabilitation, using evidence to guide clinical decision making has become a standard of practice, known as evidence-based practice (Slavin, 2004). There has further been a trend towards client-centred and family-centred practice: the client and the family are considered to be experts on their own health and well-being, and are treated as partners in the rehabilitation process. In upholding the principles of evidence-based practice, the client’s and family’s own expert knowledge and experiences serve as important aspects of evidence to consider in clinical decision making about approaches and interventions (King, King, Rosenbaum, & Goffin, 1999; Sumsion & Law, 2006). Classifying clients based on functional characteristics is a top-down approach to determining clients’ needs. This allows for clinicians to focus on improving function and meaningful abilities rather than focusing on impairment and disability. This is client and family-centred, as it includes the client’s and family’s perspectives on which aspects of function are meaningful and important.

Functional characteristics to allocate resources and determine resource utilization have been particularly popular in inpatient settings (Adams-Wendling, 2003; Hogan & Smith, 1987; Smith, Hogan, & Rohrer, 1987). The functional classification models in nursing settings have been helpful in using activities of daily living to determine the number of nursing hours needed (Smith et al., 1987). Functional classification models have become a necessity in managing systems such as hospitals and long-term care facilities. This approach allows for appropriate planning and management of client care that is flexible, while predicting and allocating limited resources (Harper, 2002). Functional classification models in inpatient settings can be used to predict clinical pathways, which can promote consistency of care and improve the efficiency and effectiveness of available resources and services (Bay et al., 1982; Harper, 2002).

CTCs recognize their responsibility in providing a multidisciplinary approach to promote service coordination for children and families (OACRS, 2005). However, these facilities also acknowledge that navigating through these services can be complicated. The current method of service delivery by CTCs has resulted in duplicated services, inconsistencies, and poor co-ordination amongst team members (OACRS 2005). In order to address these issues, the use of a functional classification model within CTCs should be viewed as an organizational priority (Dyson et al., 2000). A model will increase organization and help to ensure equitable services to all clients.

Evidence to support the use of a functional classification system for children and youth with disabilities has recently become a topic of interest amongst researchers. In order to promote accountability for resource utilization and improve funding systems, preliminary classification models have been developed for school-aged children with disabilities (Dyson et al., 2000). Adapting such a model allows for greater use of therapy services and provides clinically meaningful groupings to predict appropriate funding. The use of these homogeneous groupings shows promise in providing a framework to outline how government-funded dollars should be spent.




Within the health care system there is a growing trend to provide funding and support for community-based services. With this shift in focus from hospital-based settings, there remains a need for research to continue to evaluate the effectiveness of functional classification models in community care, especially in examining the paediatric population.

## HOW THE CLIENT GROUPINGS MODEL CAN BE USED

The *Functional Client Groupings Model for Children and Youth with Physical and Developmental Disabilities* (CGM) is based on the International Classification of Functioning, Disability, and Health (ICF), which models the interaction of concepts to describe a person's participation and engagement in activities. The ICF is a biopsychosocial model which integrates the medical and social models of disability. The ICF considers function and disability at three different levels: the level of the body or body part, including health conditions, body structures and functions (impairment level); the level of the whole person (activity limitations); and the level of the person in a social context, including environmental and personal contextual factors (participation restrictions). The ICF model can be used at the individual level for the following reasons: to assess a person's level of functioning, treatment and intervention planning, communication amongst health care professionals, and the person's perceived health and functional status. The model can be used at the institutional level for the following reasons: education and training of staff, resource planning and development, quality and efficacy measurement and improvement, outcome evaluation, and developing cost-efficient and effective services. Further, the model can be used at the social and societal levels for the following reasons: entitlements and eligibility criteria for benefits, legislation reform and developments, needs assessments, and assessment of accessibility and universal design (World Health Organization, 2002). The CGM, based on this model of disability, can be used at the individual, institutional, and social levels as well within the multidisciplinary services provided by Children's Treatment Centres (CTCs).

The CGM uses descriptors from the Gross Motor Function Classification System (GMFCS) in its group classifications. The GMFCS is a standardized, reliable, and valid method of classifying functional gross motor abilities of children with cerebral palsy (CP). The GMFCS provides clinically meaningful descriptions of a child's function, rather than describing the child by his or her affected parts of the body or severity (Bartlett, 2006). The Manual Ability Classification System (MACS) is another classification model developed for children with CP to describe how children use their upper extremities to handle



objects in activities of daily living (Eliasson et al., 2006). These models can assist with realistic goal setting, intervention planning, caseload distribution and management, resource allocation, and can facilitate evidence-based practice (Bartlett, 2006).

The CGM, based on the ICF and using qualifiers and descriptors from the GMFCS, can be used to describe the paediatric population across disabilities and diagnoses in terms of their functional abilities and participation. The CGM can be used as a descriptive tool, to describe and identify the client population serviced by CTCs; a communication tool, between and amongst multidisciplinary team members; a management tool, for resource allocation and management of health care professionals' caseloads; an educational tool for new staff, to familiarize health care professionals with services provided by CTCs and with the paediatric population; and as a tool to develop and establish appropriate workloads and clinical pathways, to ensure the provision of efficient, effective, and equitable services.

# FUNCTIONAL CLIENT GROUPINGS MODEL


The *Functional Client Groupings Model for Children and Youth with Physical and Developmental Disabilities* (CGM) has a strong focus on the client's personal attributions as they relate to function. However, clients must be viewed in the context of their natural environments and available resources within these environments. In order to determine the client's grouping, personal attributions, such as cognitive and physical functions, must be considered. The CGM examines the following functions as described by the International Classification of Functioning, Disability, and Health (ICF): learning and applied knowledge, mobility, self care, and communication. The CGM further examines the following descriptors, which include clinical information a rehabilitation health care provider may find valuable: medical issues, safety issues, and equipment needs. A variety of assessments, standardized and non-standardized, can be used to aid the clinician in choosing the client's most appropriate grouping. Further, the CGM can guide the clinician in assessment and intervention. The clinician might assess activities of daily living, mobility, gross and fine motor abilities, and cognition (e.g., problem solving skills, decision making skills, language abilities, and communication). On the CGM matrix, fine motor skills are included in learning and applied knowledge. Speech is expanded upon outside of the CGM matrix.

## Who Should Determine the Client Grouping?

Client grouping levels should be determined by clinical professionals who have graduate or post graduate training in the area of child development. This can include physicians, occupational therapists, physiotherapists, speech-language pathologists, and early learning educators.

## How is the Client Grouping Level Determined?

The CGM is a classification tool used to describe clients with physical and developmental disabilities. The tool provides a straightforward method to describe a client's characteristics enabling a more focused approach to clinical assessment, intervention, and workload measurement. The CGM is not an assessment tool. Clinicians should use standardized assessments and/or clinical observations that will



provide information on the physical or cognitive assignment. Clinicians should reference physical and cognitive descriptors (p. 13) provided in this manual.

Determination of physical level is based on mobility and transfer skills. If there is a discrepancy between mobility and transfer skills, the client should be assigned a grouping based on his or her mobility skills (e.g., uses a powered wheelchair, but is able to stand for transfers: the client should be a P3). Determination of the cognitive component is based on functional demonstration of cognition and not on standardized measures (see descriptors p. 13). Where there are multidisciplinary teams, the team should determine the appropriate level. If there is a discrepancy, the physiotherapist should determine the physical level, and the speech-language pathologist and/or occupational therapist should determine the cognitive level.

**FUNCTIONAL CLIENT GROUPINGS MODEL FOR CHILDREN AND YOUTH WITH PHYSICAL & DEVELOPMENTAL DISABILITIES**

COGNITIVE FUNCTION				
	C1	C2	C3	
P H Y S I C A L  F U N C T I O N	P1	<p><b>L&amp;AK*</b> • Academic/applied learning</p> <p><b>Mobility</b> • Independent +/- orthotics •<i>Transfer</i>: Independent/age appropriate</p> <p><b>Self Care</b> • Emerging/established independence</p> <p><b>Communication**</b> •<i>Language</i>: AA to minimal limitations</p> <p><b>Medical Issues</b> • Low probability</p> <p><b>Safety Issues</b> • Low probability</p> <p><b>Equipment Needs</b> • May require AAC</p> <p align="right"><b>C1P1</b></p>	<p><b>L&amp;AK*</b> • Basic learning</p> <p><b>Mobility</b> • Independent, +/- supervision •<i>Transfer</i>: Independent/developmentally appropriate</p> <p><b>Self Care</b> • Partial independence</p> <p><b>Communication**</b> •<i>Language</i>: Limited functional skills</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Physical</p> <p><b>Equipment Needs</b> • May require AAC</p> <p align="right"><b>C2P1</b></p>	<p><b>L&amp;AK*</b> • Sensory awareness, +/- cause &amp; effect</p> <p><b>Mobility</b> • Independent +/- supervision / +/- assistance (due to cognitive/behavior) •<i>Transfer</i>: Independent/developmentally appropriate</p> <p><b>Self Care</b> • Assisted/dependent</p> <p><b>Communication**</b> •<i>Language</i>: Minimal to non-functional</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Needs supervised setting</p> <p><b>Equipment Needs</b> • self care, productivity</p> <p align="right"><b>C3P1</b></p>
	P2	<p><b>L&amp;AK*</b> • Academic/applied learning</p> <p><b>Mobility</b> • Aided +/- assistance, • +/- Environmental adaptation •<i>Transfer</i>: Aided/assisted</p> <p><b>Self Care</b> • Modified/assisted</p> <p><b>Communication**</b> •<i>Language</i>: AA to minimal limitations</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Physical</p> <p><b>Equipment Needs</b> • May require AAC • mobility, self care, productivity</p> <p align="right"><b>C1P2</b></p>	<p><b>L&amp;AK*</b> • Basic learning</p> <p><b>Mobility</b> • Aided/supervised and/or assisted • +/- Environmental adaptation •<i>Transfer</i>: Aided/assisted</p> <p><b>Self Care</b> • Supervised/assisted</p> <p><b>Communication**</b> •<i>Language</i>: Limited functional skills</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Physical</p> <p><b>Equipment Needs</b> • May require AAC • mobility, self care, productivity</p> <p align="right"><b>C2P2</b></p>	<p><b>L&amp;AK*</b> • Sensory awareness, +/- cause &amp; effect</p> <p><b>Mobility</b> • Aided with assistance • +/- Environmental adaptation •<i>Transfer</i>: Aided/assisted</p> <p><b>Self Care</b> • Maximum assist</p> <p><b>Communication**</b> •<i>Language</i>: Minimal to non-functional</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Physical +</p> <p><b>Equipment Needs</b> • mobility, self care, productivity</p> <p align="right"><b>C3P2</b></p>
	P3	<p><b>L&amp;AK*</b> • Academic/applied learning • High potential to direct own care</p> <p><b>Mobility</b> • Dependent: Maximum assistance with aids • Environmental adaptations • may use a power w/c •<i>Transfer</i>: Dependant/lifted</p> <p><b>Self Care</b> • Dependent/maximum assistance</p> <p><b>Communication**</b> •<i>Language</i>: AA to minimal limitation</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Physical</p> <p><b>Equipment Needs</b> • May require AAC • mobility, self care, productivity</p> <p align="right"><b>C1P3</b></p>	<p><b>L&amp;AK*</b> • Basic Learning • Some potential to direct own care</p> <p><b>Mobility</b> • Dependent: Maximum assistance with aids • Environmental adaptations • may use a power w/c •<i>Transfer</i>: Dependant/lifted</p> <p><b>Self Care</b> • Dependent/maximum assistance</p> <p><b>Communication**</b> •<i>Language</i>: Limited functional skills</p> <p><b>Medical Issues</b> • +/-</p> <p><b>Safety Issues</b> • Physical</p> <p><b>Equipment Needs</b> • May require AAC mobility, self care, productivity</p> <p align="right"><b>C2P3</b></p>	<p><b>L&amp;AK*</b> • Sensory awareness, +/- cause &amp; effect</p> <p><b>Mobility</b> • Dependent: maximum assistance with aids • Environmental adaptations •<i>Transfer</i>: Dependant/lifted</p> <p><b>Self Care</b> • Dependent/maximum assistance</p> <p><b>Communication**</b> •<i>Language</i>: Minimal to non-functional</p> <p><b>Medical Issues</b> • +</p> <p><b>Safety Issues</b> • Physical</p> <p><b>Equipment Needs</b> • mobility, self care, productivity</p> <p align="right"><b>C3P3</b></p>

**KEY:** \* Includes Fine Motor, \*\* Speech: See overlay, AAC= Augmentative & Alternative Communication, AA = Age Appropriate/e, +/- may or may not be present

## CLIENT GROUPINGS MODEL: PHYSICAL AND COGNITIVE DESCRIPTORS

<b>Physical Descriptions</b>	
<b>P1</b>	Client demonstrates independent/age appropriate mobility with or without orthotics. The client may also have asymmetrical movement/gait patterns. These clients may have challenges with endurance & balance. If this child has a diagnosis of CP they would be a Level 1 or 2 on the GMFCS.
<b>P2</b>	Clients who can participate in their mobility with assistance or with an assistive device eg. Propel a wheelchair or cruise. These clients can also participate with their transfers. If this child has a diagnosis of CP they would be a Level 3 or 4 on the GMFCS.
<b>P3</b>	Clients who are dependent for mobility and transfers. eg. Cannot propel a manual wheel chair. These clients may use a powered wheelchair. If this child has a diagnosis of CP they would be a level 4 or 5 on the GMFCS.
<b>Cognitive Descriptions</b>	
<b>C1</b>	Learning would occur along predictable pathways. Academic learning is expected and includes those with learning disabilities. These clients are able to perform higher executive functions including problem solving and goal setting as appropriate for the developmental level. These clients would be enrolled in academic or applied programs in high school, possibly leading to university, college, trades or employment in a variety of settings.
<b>C2</b>	Clients with basic learning skills. These clients learn through repetition and physical, verbal or visual cues. They may achieve some levels of independence with self-help skills, self-regulation, community experience, and participation in play and leisure activities. These clients have basic social communication and comprehension &/or functional communication. They may achieve basic literacy and numeracy skills. They would most likely attend life skills programs in school where the focus is on functional academics. It could be expected that some may achieve independent/semi-independent living skills and employability skills for living and working in their community as adults. Some may achieve employment in a sheltered &/or supported environment.
<b>C3</b>	These clients have global impairments of cognition, language, memory, attention, and understanding. They may express communication of basic needs (cause & effect, acceptance/rejection, basic choice making). They may have some awareness &/or passive participation with; self & others, personal care, including play, sensory, environmental, leisure and community experiences. These clients will require total care/ supported living in the community.

## DEFINITIONS OF TERMS

The following definitions can help clarify the categories and the descriptors in the *Functional Client Groupings Model for Children and Youth with Physical and Developmental Disabilities* (CGM). These definitions are adapted from the ICF and from ErinoakKids' staff.

<b><u>Learning and Applied Knowledge</u></b>	The client's ability to learn, think, solve problems, make decisions, and generalize learning to many situations. Using the ICF framework, fine motor skills are included in this category.
<b>Academic/Applied learning</b>	The client could function within the school setting with or without educational support (e.g., scribing, assistance with books). This client may have the ability to attend a post-secondary institution, such as university, college, or trades.
<b>Basic Learning</b>	The client would most likely attend a life skills program in a school setting. The client learns through repetition and physical, visual, and/or verbal cues. The components of basic learning may be achieved (see Components of Learning p.15). The therapist must consider age and developmental stage of the client.
<b>Directing Own Care</b>	The client may be able to make a direct request for assistance to complete an activity.
<b>Sensory Awareness</b>	The client has global impairments of cognition, language, memory, attention, and understanding. The client may experience, have awareness of, and/or interact with sensory information, including visual, auditory, and tactile stimuli.
<b>Identifying Cause and Effect Relationships</b>	The client may demonstrate an understanding of the effects of their body and their actions on the environment.
<b>Acceptance/Rejection</b>	The client may demonstrate the ability to indicate preferences and refusals (e.g., the client turns his/her head away when he/she no longer wants juice).
<b>Basic choice making</b>	The client may be able to select a preference using a form of communication (e.g., when given a choice between two toys, the client looks at the toy he/she wants).

<b><u>Components of Learning:</u></b>	
<b>Rehearsing</b>	The client can repeat a sequence of events (e.g., reciting a poem) and/or symbols (e.g., counting by tens).
<b>Reading</b>	The client may read written materials with accuracy and fluency. This includes recognizing characters and alphabets, sounding out words with correct pronunciation, and understanding words and phrases (including Braille). C1 clients would perform at age appropriate levels. C2 clients may have basic reading skills or use symbol systems for reading.
<b>Writing</b>	The client may use symbols to represent sounds, words, or phrases in order to convey meaning (including Braille).
<b>Calculating</b>	The client may manipulate numbers and perform simple and/or complex mathematical operations. This includes using mathematical signs for addition and subtraction, and applying the correct mathematical operation to a problem.
<b>Acquiring skills</b>	C1 clients would acquire complex competencies (i.e., integrated set of actions to follow rules and sequence tasks), and use these competencies to develop and apply skills. This includes manipulating tools or playing games. C2 clients may acquire basic competencies (i.e., elementary, purposeful actions such as playing computer games).
<b>Solving problems</b>	The client may be able to find solutions to questions or situations by identifying and analyzing issues, developing options and solutions, evaluating potential effects of solutions, and executing a chosen solution.
<b>Making decisions</b>	The client may be able to make a choice amongst options, implement the choice, and evaluate the effects of the choice.

<b><u>Mobility</u></b>	The client's ability to move his or her entire body from one place to another (e.g., walking, rolling, transferring).
<b>Independent Mobility</b>	The client can move his or her entire body from one place to another, with or without orthotics. The client may have asymmetrical movement/gait patterns. Transfer is age appropriate for C1, and developmentally appropriate for C2 and C3. C2 and/or C3 clients may require supervision and/or assistance in mobility and transfers due to cognition and/or behaviour.
<b>Aided Mobility</b>	The client may use mobility devices such as hand-held devices (e.g., walker) or manual wheelchairs. The client can participate in mobility and transfers. The client may require assistance and/or supervision depending on cognitive level. The client may require environmental adaptations/modifications that will facilitate his or her optimal performance with mobility.
<b>Dependent Mobility</b>	The client requires a powered wheelchair or assistance to propel a manual wheelchair. The client requires maximum assistance and does not actively participate in mobility and transfers. Environmental adaptations/modifications are necessary.
<b>Assistance</b>	The physical help from another person(s).
<b>Environmental Adaptations</b>	Any environmental element that facilitates an individual's ability to attain his or her optimum performance (e.g., ramp).

<b><u>Self Care</u></b>	The client's ability to care for him or herself, which includes: personal grooming, dressing, toileting, hygiene, feeding and eating, and health and wellness practice.
<b>Emerging/Established Independence</b>	The client can participate in activities of daily living at an age appropriate level. The client may be or become independent.
<b>Partial Independence</b>	The client can demonstrate some independence in self care, however, may require supervision and/or assistance due to physical level, safety issues and/or developmental level (see Safety p. 19).
<b>Assisted/Dependent</b>	The client will require assistance due to physical, safety issues or developmental level.
<b>Modified/Assisted</b>	The client may have capabilities to be independent in self care but may require environmental modifications and/or assistance due to physical or safety issues (see Safety p. 19).
<b>Supervised/Assisted</b>	The client may demonstrate partial independence in activities of daily living, however, may require supervision and/or assistance due to behavioural and/or physical safety issues (see Safety p. 19).
<b>Maximum Assistance</b>	The client will have complete dependence on the presence and assistance of another person to perform activities of daily living.

<b><u>Communication</u></b>	The client's ability to demonstrate general and specific features of communicating by language, signs, and symbols, including: receiving and producing messages, carrying on conversations, and using communication devices and techniques.
<b>Age Appropriate or Expected Communication</b>	The client can communicate using a form of age appropriate language with or without minimal limitations.
<b>Limited Functional Communication</b>	The client can communicate using a functional form of language in basic social situations.
<b>Minimal to Non-Functional Communication</b>	The client may express basic communication needs, such as acceptance/rejection and basic choice making, using a form of language (e.g., picture exchange communication system).
<b>Language</b>	A system for understanding and expressing ideas and feelings using sounds, words, gestures, signs, and/or symbols.

<b><u>Medical Issues</u></b>	Concerns and complications related to diagnosis of client. These could be related to treatment and/or condition itself. These are problems in the body's functions or structures which result in a significant deviation or loss.
<b>Body Functions</b>	Body functions are physiological functions of body systems (including psychological functions).
<b>Body Structures</b>	Body structures are anatomical parts of the body such as organs, limbs, and their components.

<b><u>Safety Issues</u></b>	This model includes two types of safety: safety for the client and safety for the caregiver. Within these two types of safety are physical and behavioural aspects of safety.
<b>Safety for the Client</b>	<i><u>Physical:</u></i> The client may be at risk for falling, feeding and swallowing issues (e.g., choking), lifting/transfer difficulties.
	<i><u>Behavioural:</u></i> The client may be at risk for harming him or herself or another person due to lack of insight or other cognitive limitations.
<b>Safety for the Caregiver</b>	<i><u>Physical:</u></i> The caregiver may be required to utilize techniques to minimize the possibility of a physical injury to him or herself due to the client who requires physical assistance as a result of a physical disability.
	<i><u>Behavioural:</u></i> The caregiver may be required to utilize techniques to minimize the possibility of a physical or psychological injury to him or herself due to the client's potential to demonstrate risky and/or aggressive behaviour.

<b><u>Equipment Needs</u></b>	Equipment the client may require to function in various environments, and to participate and engage in activities.
<b>Augmentative and Alternative Communication (AAC)</b>	Forms or modes of communication that replace, supplement, or enhance speech. This may include the use of electronic devices, picture boards, sign language, etc.
<b>Mobility Devices</b>	Aids, such as walkers and manual and powered wheelchairs, which allow the client to move his or her entire body from one place to another.
<b>Self Care Equipment</b>	Equipment that can be used for bathing, toileting, hygiene, grooming, and/or dressing that promote safety and independence for the client.
<b>Productivity Equipment</b>	Equipment that can be used to help the client access the school curriculum, play and leisure activities, volunteer activities, and work activities (e.g., computer switch to access a cause and effect program).

## CASE SCENARIOS

This section includes four examples of clients who may be consumers of Children's Treatment Centres. Following these examples are descriptions of how these clients can be classified using the *Functional Client Groupings Model for Children and Youth with Physical and Developmental Disabilities* (CGM).

### Case Scenario 1: Jacob

Jacob is a three-year old boy with a diagnosis of Down Syndrome. He was born with a heart defect that was corrected with surgery soon after birth. Jacob presents with low muscle tone, however he is able to independently ambulate. He began walking at 18 months. His mother reports that Jacob has difficulties in completing self care tasks and requires supervision or assistance. Jacob requires cueing to dress; he is unable to manipulate utensils and has yet to begin toilet training. He enjoys playing with his seven-year-old sister, listening to music, and playing with his toy cars. His spoken language consists of single words. Jacob is currently attending a local preschool. He demonstrates difficulties with fine motor tasks, such as colouring and painting, and therefore tends to avoid them. He tends to play in isolation without engaging in play with the other children. He has difficulties following directions and requires cueing to participate in group activities. Jacob is a happy child who can be shy at times.

### Case Scenario 2: Jessica

Jessica is a seven-year-old girl with cerebral palsy, spastic quadriplegia. She has been attending a Children's Treatment Centre since she was five-months-old where she has been seen regularly by occupational therapists, physiotherapists, and speech-language pathologists. Jessica presents with decreased trunk tone and increased upper and lower extremity tone. She is a level IV on the Gross Motor Function Classification System. She has received Botox injections in both upper and lower extremities and has had serial casting in her left upper extremity. Jessica wears bilateral ankle foot orthoses and uses a powered wheelchair as her primary form of mobility. She requires maximum assistance with transfers and uses a lift. She can sit if her trunk is supported, and can roll independently. Jessica requires physical assistance for self care and toileting, and requires some environmental adaptations (e.g., adapted toilet seat). Jessica eats with adapted utensils and some assistance. Jessica has a right hand preference for fine motor activities. She uses a palmar grasp with an adapted writing utensil to scribble, and is currently working on writing her initials. Jessica uses mounted loop scissors for cutting. She is friendly and happy, and enjoys spending time with peers and her family. She communicates mostly with


speech, but also uses picture communication symbols, body language, and facial expressions. Jessica's speech is slightly dysarthric, but she communicates at an age appropriate level using these various forms of communication. Jessica participates in the classroom with the help of an educational assistant for note taking, self care, and mobility. She also uses various computer programs to access the curriculum.

### **Case Scenario 3: Laura**

Laura is a nine-year-old girl with a diagnosis of epilepsy. Laura has experienced severe physical and cognitive damage as a result of medically refractory seizures. She requires 24-hour supervision and experiences several seizures a day. She is dependent and requires maximum assistance for mobility, transfers, and self care. Laura is pushed in a manual wheelchair. The family home has undergone numerous environmental modifications to become fully accessible. Laura does not participate in any of her self care tasks; she is dependent for dressing, toileting, hygiene, and eating. Laura has non-functional communication and at times she moans or cries. She is unable to understand cause and effect relationships, indicate acceptance or rejection, or participate in basic choice making.

### **Case Scenario 4: Kevin**

Kevin is an eight-year-old boy who sustained a traumatic brain injury as a result of a motor vehicle accident three years ago. Kevin had a skull fracture and multiple lesions in his brain. Kevin continues to present with mild right hemiparesis, dysphagia, productive aphasia, diminished alertness, easy distractibility, difficulty following one-step commands, and impulsive behaviours (e.g., getting out of bed without assistance, resulting in falls). Kevin can ambulate using a cane, and is beginning to use a walker. He requires supervision due to both physical and behavioural safety issues. Kevin wears a right ankle foot orthosis. He participates in transfers and can sit with minimal trunk support. Kevin requires verbal and physical cueing during self care activities (e.g., help with set-up for dressing and verbal instructions). Kevin requires cueing and supervision for feeding, as he has difficulty sequencing fluid and solid intake, and over-stuffs. Kevin uses his left upper extremity for fine motor tasks and requires some environmental modifications for posture (e.g., First Class chair). Kevin uses picture symbols for communication, though sometimes does not use these



correctly, and some words. Kevin demonstrates an understanding of cause and effect, can indicate basic choices, and can demonstrate a desire for an object.

# CLIENT GROUPINGS OF CASE SCENARIOS

## Case Scenario 1: Jacob

**Grouping:** C2P1

**Learning and Applied Knowledge:** Jacob currently requires physical, verbal and visual cues. He is able to participate in play, leisure and self care activities. His play skills are delayed because he is currently playing in isolation. This would group him as a C2.

**Mobility:** Jacob can ambulate safely, independently and age appropriately. He may experience challenges with endurance and balance due to low muscle tone. This would group him as a P1.

**Self Care:** Jacob requires some assistance with self care tasks, particularly fine motor activities. He also requires some verbal and physical cueing.

**Communication:** Jacob has delayed communication skills. He will most likely develop functional communication skills.

**Medical Issues:** Jacob has an increase risk of hypothyroidism, congenital heart defects, epilepsy, Alzheimer's disease, visual and auditory problems and orthopedic problems.

**Safety Issues:** Due to his slight cognitive delay, Jacob may have behavioural safety concerns.

**Equipment Needs:** Jacob will not require equipment.

## Case Scenario 2: Jessica

**Grouping:** C1P3

**Learning and Applied Knowledge:** Jessica is learning at an age appropriate level. Although she requires modifications to access the curriculum, this is related to physical issues rather than cognitive issues. This groups Jessica as a C1.

**Mobility:** Jessica uses a powered wheelchair for the majority of her mobility. She wears bilateral ankle foot orthoses and she can sit if her trunk is supported. She does not participate in transfers and uses a lift. She has a GMFCS rating of level IV. The home environment will require modifications (e.g., stair glide, ramp, vehicle modifications). This groups Jessica as a P3.

**Self Care:** Jessica requires maximum assistance for all self care tasks. This groups Jessica as a P3.

**Communication:** Jessica communicates at an age appropriate level using various forms of communication.

**Medical Issues:** Jessica has a high degree of spasticity that is being managed by Botox injections and serial casting to prevent contractures.

**Safety Issues:** There are physical safety concerns for both the client and the caregiver, particularly related to self care activities.

**Equipment Needs:** Jessica requires self care equipment, such as bathroom equipment. She will require adaptive seating for the classroom and specialized computer programs to access the curriculum. Jessica will require equipment for fine motor tasks, such as cutting and writing.

### Case Scenario 3: Laura

**Grouping:** C3P3

**Learning and Applied Knowledge:** Laura has sensory awareness. However, she does not demonstrate basic choice making skills, she cannot indicate acceptance or rejection, and she is unable to identify cause and effect relationships. This groups Laura as a C3.

**Mobility:** Laura is completely dependent for mobility and transfers. She is pushed in a manual wheelchair. The home environment will require modifications (e.g., stair glide, ramp, vehicle modifications). This groups Laura as a P3.

**Self Care:** Laura is unable to participate in self care tasks due to cognitive and physical issues. She needs maximum assistance for all self care activities. This groups Laura as a P3.

**Communication:** Laura has non-functional communication.

**Medical Issues:** Laura could potentially present with medical issues related to the brain damage caused by medically refractory seizures. Laura is at risk for injuries related to seizures.

**Safety Issues:** There are physical and behavioural safety concerns for both the client and the caregiver.

**Equipment Needs:** Laura will have equipment needs. She will require self care equipment such as bathroom and feeding equipment.

### Case Scenario 4: Kevin

**Grouping:** C3P2

**Learning and Applied Knowledge:** Kevin can express communication of basic needs. However, he has global cognitive impairments, such as difficulties following one-step directions, diminished alertness, and easy distractibility. This groups Kevin as a C3.

**Mobility:** Kevin's mobility is supervised and aided. He uses a cane and/or a walker and has a right ankle foot orthosis. Kevin participates in transfers. This groups Kevin as a P2.

**Self Care:** Kevin requires cueing and supervision with self care tasks.

**Communication:** Kevin has productive aphasia. Although Kevin attempts to use some words and picture symbols, this is not always a functional form of communication.

**Medical Issues:** Kevin could potentially present with medical issues related to brain damage. Kevin is at increased risk for seizures, sensory problems, and memory loss. Kevin is at risk for injuries related physical and behavioural safety concerns.

**Safety Issues:** There are physical and behavioural safety concerns for both the client and the caregiver. Due to Kevin's impulsivity there are physical safety concerns, such as getting out of bed without assistance and the potential for choking or aspiration during feeding due to difficulties in sequencing food /fluid intake.

**Equipment Needs:** Kevin will require adaptive writing aids and other equipment for the classroom environment (e.g., First Class chair). Kevin will require equipment for self care tasks, such as bathroom equipment. Kevin might wear a protective helmet.

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