

# Special Olympics Healthy Young Athletes



# **CLINICAL DIRECTOR MANUAL**





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# HEALTHY ATHLETES

## About Healthy Athletes

Special Olympics Healthy Athletes® is designed to help Special Olympics athletes improve their health and fitness. The goal of Healthy Athletes is to improve each athlete's ability to train and compete in Special Olympics as well as other sports activities.

The **key objectives** of Special Olympics Healthy Athletes are to:

- Improve access to care at event-based and other health screening clinics.
- Make appropriate referrals for follow-up to community health professionals.
- Train health care professionals and students about the needs of people with intellectual disabilities
- Collect, analyze and disseminate data on the health needs of people with intellectual disabilities.
- Advocate for improved health policies and programs for people with intellectual disabilities.

Health screenings are conducted at World Games as well as local, State and National Games, and occasionally at special events. Healthy Athletes screenings have provided free care to hundreds of thousands of Special Olympics athletes. All Healthy Athletes screening areas maintain confidentiality of each athletes' health information. Screening data are aggregated and assessed to improve individual athlete health, and to assist in policy recommendations and advocacy for improved health care for Special Olympics athletes around the world.

#### The Healthy Athletes Disciplines are:

- Lions Clubs International Opening Eyes® (started in 1997)
- Special Smiles® (started in 1997)
- FUNfitness (started in 1999)
- Healthy Hearing (started in 2000)
- Health Promotion (started in 2000)
- Fit Feet (started in 2003)
- MedFest® (started in 2007)
- Strong Minds (started in 2017)



### History of the Healthy Young Athletes

**Special Olympics Young Athletes** delivers direct, evidence-based support to children ages 2-7 with and without intellectual disabilities (ID) through inclusive developmental skill activities, with the potential to make a long-term, meaningful impact on the social, cognitive, psychological, and physical development of young children. Young Athletes programming lasts a minimum of eight weeks and takes place in homes, schools, and communities, led by family members, teachers, and volunteers supported with Special Olympics training and resources.

Through the work of **Special Olympics Health**, we know that people with intellectual disabilities are one of the largest and most medically underserved populations because of a range of systemic challenges, including inadequate provider training and inaccessible facilities, they have less access to quality health care and health promotion programs. As a result, people with ID experience dramatically higher rates of preventable disease, chronic pain and suffering, and premature death.

Over the years, Healthy Athletes has attempted to address the unique health needs of young children through age-appropriate screenings. Protocols for most Healthy Athletes disciplines have been developed for the Young Athletes population. These protocols and practices have been implemented with varying success for a variety of reasons, including the structure of the protocols, need for pediatric discipline-specific experts, and limited communication to Special Olympics Programs about the protocols. To address these challenges, many Programs are using the general Healthy Athletes protocols (designed for athletes ages 8+) for Young Athletes. As a result, protocols in use may not meet the needs of our youngest participants.

# The Challenge

Special Olympics (SO) Programs (states and countries) have expressed the following concerns regarding implementation of the current Healthy Young Athletes discipline-specific protocols:

- Inability to conduct screening for young children due to lack of proper pediatric specialists.
- Concern that bringing Young Athletes participants through Healthy Athletes at large events will result in the need to change between protocols regularly and require different training for volunteers.
- The long lines that often develop at Healthy Athletes events are not conducive to the participation of young children.

# The Solution

To address these concerns, Special Olympics believes Young Athletes participants would benefit from a holistic pediatric screening (Healthy Young Athletes) as an initial offering through Healthy Athletes. The screening has the potential to close the loop and ensure all children are getting the right types, and levels, of services and supports, regardless of their access to a primary care provider. Additionally, the pediatric screening can be used in settings outside of Healthy Athletes, for instance in school or community-based Young Athletes sessions, to create a deeper connection between Young Athletes and health programming. Healthy Young Athletes will not take the place of a child's regular well visits with their primary care provider. Rather, it is intended to complement a child's primary care and provide an additional review of the child's health that can be shared with their primary care provider if they have access to one. If the child is not under the care of a primary care provider, Special Olympics will provide a referral to a local primary care doctor or health clinic for follow up.

This screening is not meant to be a diagnosing tool, but rather an educational experience to increase health and development knowledge amongst parents and caregivers. To achieve this goal, this screening focuses on identifying medical, developmental, and behavioral concerns that parents and caregivers may have about their child and directing them to the appropriate resources. Some of the resources that will be provided at the event include an educational toolkit with information, activities, and resources for families to review and complete at home.

Healthy Young Athletes differs from traditional Healthy Athletes in one area. **all Young Athletes, both with and without ID, can participate in the screening**. This is important to support the inclusionary nature of Young Athletes and value of supporting development amongst all young children. It is also valuable in providing support to children who may not have an intellectual disability diagnosis at the time of the screening, as many children do not receive a formal diagnosis until later in their childhood.

# **CLINICAL DIRECTOR**

Clinical Directors for the Healthy Young Athletes play a critical role in the success of the screening event. A Clinical Director should be licensed to practice medicine and prescribe medications in the state or country in which the screenings are held. The Clinical Director should have extensive experience in pediatrics, along with expertise in the following areas:

- appropriate interpretation of all health and developmental screening results
- medical assessment and decision-making
- developmental screening/evaluation for children under 8 years old
- referrals and extensive experience in pediatrics

## **Background and Requirements**

- Licensed medical professional in one of the following specialties:
  - General Pediatrics or pediatric subspecialty board certified/eligible general or subspecialty (MD, DO)
  - Independently practicing Pediatric Nurse Practitioner (PNP), DNP
  - Family medicine (FM) physician (MD, DO) or independently practicing Family NP (FNP) with > 50 documented pediatric patient experiences in children < 8 yrs old</li>
- Preferably have extensive networks within the medical community to facilitate establishment of a robust referral system.
- Ability to mobilize volunteers to take part in the screening, e.g. through partnerships with training institutions or professional associations.
- A minimum three-year commitment to serve as a Clinical Director and ensure quality and continuity of services.
- Completion of online (*coming soon*) or in-person Train-the-Trainer Module, which provides information and training about Special Olympics, Healthy Athletes, the pediatric screening tools, event management and implementation, and clinical requirements.

The Clinical Director will serve as the primary authority for medical operations during the Pediatric Screening event. Their **tasks** will include assisting Special Olympics staff in:

- Determining event opportunities
  - Identifying and scheduling the best opportunity to provide a pediatric screening is a joint effort between the Clinical Director and their local Special Olympics Program. Clinical Directors will also help determine how to design the events based on the primary purpose of the event.
- Recruiting and training volunteers
  - Clinical Directors are the best people to identify and train health volunteers to support the pediatric screening event, because they know their community and its local health care professionals. Potential volunteers may come from:

- o Private Practitioners
- o Professional schools, universities, or colleges
- o Health and Professional Associations
- Local hospital systems and other medical groups/ practices State or Local Public Health Agencies
- Approving clinical equipment and supporting capacity grant application
  - Clinical Directors will work with their local Program to ensure that supplies and equipment needed to deliver the core components of the pediatric screening are included in the Healthy Athletes' Capacity Grant application. These grants assist Programs in purchasing interactive educational materials, athlete giveaways and incentives, volunteer recognition, signage and other supplies/equipment needed to conduct an impactful pediatric screening
- Finding referral networks
  - Checklist of necessary resources and referrals to be curated will be provided with training
  - o Ideas for connecting to referral networks will be provided
- Enforcing the standard of care and improving protocols
- Serving as the clinical authority if questions or issues arise at a Pediatric Screening
- Overseeing data collection and quality control, including setting up and supervising the event venue
  - On the day of the event, the Clinical Director is responsible for supervising the set up and delivery of the screening and interactive education services by trained volunteers
- Collecting and Reporting Data
  - Clinical Directors use the pediatric screening form to document screening data collected during the event. Data is used to determine the need for a referral to a healthcare provider, and to assess the health and developmental status and needs of individual children. This data provides SO Programs worldwide with information to increase awareness and provide more targeted services.
- Program Evaluation
  - Evaluation gives Clinical Directors the opportunity to continuously improve and adapt their programs to the needs of the athletes and their families.
- Eligible Healthcare Professionals
  - Laws about this vary across states and countries so it is important that you confirm what is permitted in your local jurisdiction. For the pediatric screening, the healthcare professional implementing the tool must be qualified to conduct the assessment in your state/country and also be able to prescribe medications.
  - Chiropractors and Physical Therapists are NOT permitted to conduct the SOI medical assessments per current policy. This is regardless of whether they can legally do so in your state/country.

Interested healthcare professionals must submit their resume/CV for consideration and approval prior to taking the online or in-person training module.

If you are interested in serving as a Clinical Director, please contact your <u>local Special</u> <u>Olympics Program</u>.

If Programs are unable to identify candidates with the medical backgrounds delineated above, preference should be given to those with a family medicine, emergency medicine general practice, or internal medicine background, with some interest or experience in pediatric care. A Clinical Director may also be a Registered Nurse Practitioner, Developmental Pediatrician Doctor of Osteopathy, or a Physician Assistant (or the equivalent in your Region). Other healthcare providers like pediatric physical/speech and occupational therapists may also serve as CD but will need to have a licensed physician with a history of working with children <8 years old as a co-Clinical Director to provide support

#### **Referral Network**

Prior to the Healthy Young Athletes event, the Clinical Director, with the help of the Special Olympics Program, should establish a network of professionals willing to accept referrals from the Pediatric Screening event.

Whenever possible, all referrals should be made through the child's primary care provider, who remains the overall focal point for all needed health services and takes responsibility for providing consistent comprehensive care. The clinical Director can provide the primary care provider with recommendations of medical sub-specialists and therapists within their network. If a child is referred directly to a sub-specialist or therapist, the referring clinician should include the contact details of the child's primary care provider in the referral to ensure adequate follow-up.

Important professionals to include in the network are: early intervention specialists, audiology, optometry/ophthalmology, dentistry, nutrition, cardiology, neurology, psychology, special education, and other medical subspecialties. Additionally, therapy disciplines, such as speech therapy, occupational therapy, and physical therapy. If no referral network can be established, the child should be referred to a primary care physician or a case manager in an education setting for follow-up, or if the volunteer is willing, to the practice of the Pediatric Screening volunteer.

The pediatric screening could be the first time a child is interacting with Special Olympics or it could be offered to a seasoned Young Athlete. Regardless of previous experience with Special Olympics, the goal is to provide a holistic screening that increases the likelihood of a long healthy life.

# HEALTHY YOUNG ATHLETE SCREENING TOOL

Healthy Young Athletes uses a specific assessment form that is based on the best medical and developmental psychology practice and current standards for conducting a pediatric exam to meet the most common needs of Special Olympics Young Athletes. This form was developed by a team of medical and child development experts, comprised of physicians, child development specialists, educational psychologists, special educators, and health professionals from around the world. This tool should be used when hosting a pediatric screening.

You can access the tool and supporting resources online.

The screening tool includes **three key sections**:

- 1. A prescreening to be completed by the child's parent, legal guardian, or primary caregiver prior to a screening event or while waiting to see a provider at the screening.
- 2. Audio, visual and dental screening, developmental survaillance, health history, and physical exam to be completed at the event by a Special Olympics volunteer.
- 3. An impressions and referrals document to be completed by the volunteer prior to departure of the family from the event.

#### IMPORTANT NOTE ON PILOT

Healthy Young Athletes was successfully piloted in 5 states within the US and 5 countries globally and was officially launched in August 2022. There are however still materials and platforms to develop that align with traditional Healthy Athletes events. Future iterations of this screening tool will be built into the larger SO electronic health records system. A waiver for participants is embedded into the prescreening document. All materials are fillable offline. Should a location need to complete the assessment on paper, a member of the local Special Olympics Program should be responsible for inputting the data online once internet is available.

### **Prescreening**

The prescreening document should be completed by the child's primary parent or caregiver online (when feasible) or in a paper and pencil format prior to the screening event. Ideally, it should be submitted one to two days ahead of the event to allow the Clinical Director sufficient time for review.

If this is not possible and the prescreening needs to be completed onsite, a volunteer should be assigned to review the prescreening before the family meets with the provider. When necessary, the prescreening can be completed on paper; however, all completed prescreenings will need to be entered into the online system by an event volunteer.

SO Programs should consider that not every parent or caregiver may be able to complete the prescreening tool without support. Programs should build an assistance and accommodations strategy into the event plans to account for potential translation, reading level, and comprehension issues.

The prescreening tool contains basic and overview information about the child and family's health, development, strengths, and history.

#### Strategies for Implementing the Prescreening

The prescreening questionnaire contains a question that asks families about their child's strengths and fun facts. This question should be used by the screening volunteers and family escort to build rapport with the child and family throughout the event. The volunteers can ask questions related to the child's fun facts, like their favorite cartoon character or toy.

A Note on Parental stress: Parent depression and stress are risk factors for poor socialemotional development, behavioral issues, and child abuse, which is higher in children with special needs. Providing support in this area could be one of the most impactful interventions. Within the assessment and plan section, there is an action item to provide information and referral to locally available and relevant resources that aid in alleviating this stress. This includes information about respite care, federally/state mandated early intervention programs, or local mental health support groups.

#### **Developmental Surveillance**

The developmental section of the tool is intended to be used to identify potential developmental strengths and delays. The tool is based on the US Center for Disease Control's developmental progressions and is criterion-referenced, as opposed to norm-referenced. The information collected through the screening will not be used to directly compare the children's developmental outcomes to those of children without disabilities. Rather, it is intended to be used to identify areas of strength and areas in which developmental supports are needed. Completion of the developmental surveillance should lead to recommendations for parents that can be used to support their child's development, referrals to professionals for additional support, and access to resources.

The developmental surveillance reviews the following areas:

• **Social-emotional:** Social-emotional skills are important for connecting with others. They help the child manage their emotions, build healthy relationships, and behave in a socially acceptable manner.

- Language and communication: Language refers to a set of sounds, words, gestures, etc. that have meaning. Communication involves people understanding information that is directed toward them and being able to share information with others through sounds, words, gestures, and more. Communication can be both verbal and non-verbal in nature.
- **Thinking, reasoning, and problem-solving:** Children are natural problem solvers. They use their thinking and reasoning skills to better understand the world around them. Initially, they do this on a trial-and-error basis. As a child develops and becomes a more experienced problem-solver, they use past experiences to help them solve new problems.
- **Fine motor:** Motor development refers to the growth and strengthening of a child's bones, muscles, and ability to interact with their surroundings. Fine motor skills refer to small movements of hands, feet, fingers, toes, etc.
- **Gross motor:** Gross motor skills involve the development of large muscles that enable children to sit, crawl, walk, run, jump, pull themselves up, etc.

#### Strategies for Implementing the Developmental Surveillance

The aim is to identify developmental or behavioral issues that cause significant distress to either the child or their families and negatively affect daily living. The child will then be referred to the relevant specialist(s) for a more in-depth assessment and diagnosis.

It is preferable to have an extra person, e.g. another parent/caregiver or volunteer, to engage with the child as the primary caregiver responds to the questions in the developmental screening section. Young Athlete's activities can be incorporated into this station to keep the athlete engaged and entertained.

#### Medical Screening

Children with ID are prone to certain medical illness as a result of an underlying genetic condition or syndrome, as well as certain medical interventions. They are also at risk of missed diagnoses due to various factors that could hinder their access to medical care. This section focuses on identifying underlying medical conditions that could contribute towards growth and developmental delays, as well as behavioral issues. It also aims to screen for medical conditions known to be associated with syndromes linked to intellectual disability and developmental delay, e.g. Down syndrome, Fragile X, etc.

### **Biometrics and Vital Signs**

The goal of this section is to identify signs of:

- Genetic conditions or other chronic, underlying conditions, such as failure to thrive and microcephaly.
- Common comorbidities, such as obesity, hypothyroidism, cardiac arrhythmia, and coarctation of aorta.

• A condition that may require urgent or emergent medical attention, such as increased ICP.

The following vitals will be collected during the medical portion of the screening:

- Weight and Height
- Head circumference
- Body Mass Index (BMI)
- Blood Pressure
- Pulse Oxygen saturation/ pulse oximetry
- Temperature
- Heart rate
- •

#### Strategies for Collecting Biometrics and Vital Signs

Vital signs should ideally be taken when the child is calm or in the caregivers' arms to avoid distortion of findings due to anxiety. Certain vitals, such as blood pressure, temperature and pulse oximetry, can be obtained simultaneously to reduce time spent in this station.

If a high blood pressure reading is observed using the automated blood pressure measurement devices, this should be confirmed by taking a manual measurement of the blood pressure.

#### Visual screening

The Purpose of this section is to identify signs of visual issues and subsequent referral to relevant specialists for further evaluation and management

Visual screening will be done using symbol charts/ instrument-based vision screeners/autorefractors/ fundus cameras. This will require a space with the appropriate amount of lighting to facilitate the screening

#### Audio screening

The Purpose of this section is to identify signs of auditory impairments as well as ear infections with subsequent referral to relevant specialists for further evaluation and management

An external ear examination will be one followed by a hearing screening using an OAE machine. This screening will require a quiet room to ensure accurate results

#### Dental screening

The purpose of this station is to identify children at risk of developing early childhood caries and to provide education on recommended oral hygiene practices. Additionally, children identified as having cavities or gum infections will be referred to the relevant healthcare providers for further evaluation and management.

### Review of Systems

The purpose of this section is to identify:

- Signs of common comorbid conditions.
- Concerns raised by the parent/caregivers in the prescreening questionnaire. For example, if they are concerned about the child's weight then one needs to get a more detailed nutrition and GI history, as well as signs of illnesses that could affect the child's weight.
- Habits that impact health, such as sleep and nutrition. This will highlight opportunities to provide parental education and counseling related to important health indicators and determinants.

The following content will be reviewed during the medical portion of the screening

- Review of Systems
- Nutrition and GI Questions
- Sleep Questions

#### Strategies for Implementing Review of Systems

It is ideal to ask a majority, if not all, the questions in this section. However, the clinicians should focus on systems that are most associated with the parent/caregiver's concerns. Information from this section will give guidance on areas of focus during the physical examination.

# Physical Exam

The purpose of the physical exam is to Identify:

- Signs pointing to underlying cause of ID
- Signs of common comorbid conditions
- Signs of a condition that may require urgent or emergent medical attention
- Concerns raised from history gathered

The following content will be reviewed during the physical exam:

- General observations, such as mental status, the child's interaction with others, and responsiveness
- System based physical examination, including neurology, cardiovascular, respiratory, gastroenterology, musculoskeletal, ENT, and dermatology

#### Strategies for Implementing the Physical Exam

Focus should be placed on evaluating systems associated with the concerns raised by the caregivers, as well as those identified during review of systems.

The volunteer must obtain consent from caregivers to examine the child. Ensure privacy is maintained at all times and avoid unnecessary exposure or examining areas of the body that the parent/caregiver has expressed reservation towards.

#### Assessment and Plan

The purpose of the assessment and plan is to:

- Complete the visit with actionable items
- Identify areas of strength for encouragement
- Provide opportunity for a collaborative approach to empower parents in making changes
- Identify needs to provide resources, counseling, and community referrals

The following content will be reviewed during the assessment and plan:

- Strengths
- Goals
- Needs, concerns, or suspected health conditions
- Referral details
- Emergency care referral
- Emergency care rendered
- Child abuse reporting

#### Strategies for Implementing the Assessment and Plan

Where possible make referrals through the primary care physician to ensure continuity of care. Seek to identify the issues that cause significant distress to the child and family, as well as those that negatively impact daily living and address those ones as a priority.

#### **Resources and Referrals**

A Family Education Toolkit has been created to share with families and caregivers during screening process. The materials will highlight concerns addressed during the screenings, information on follow-up care, resources that support a family as they navigate the healthcare system and related support services and strategies for health and wellness in the home.

The Family Education Toolkit and Referral resources can be found online.

# **EVENT IMPLEMENTATION**

Young Athletes is offered in <u>schools</u>, <u>communities</u>, <u>homes</u>, or through one-time events. This section provides guidance on hosting the pediatric screening across all Young Athletes implementation models.

Delivery Method	Pediatric Screening Guidelines for Each Setting	
Home	Virtual screening with parent/caregiver meeting with trained provider through virtual platform.	
Community	Trained volunteers attend a local Young Athletes event or training session to complete the screening.	
School	School nurses, in conjunction with the Clinical Director and volunteers, conduct the screening during the school day or at a school wide event, such as a sports physical day.	
Events	The pediatric screening can be integrated into Healthy Athletes at large events.	

# Planning a Healthy Young Athletes event

There is a lot of flexibility with planning and implementing of Healthy Young Athletes in the context of the event and venue. The event can be modified to fit the structure or space that works best for the SO Program and Clinical Directors. The details below serve as a suggested structure to help guide the pediatric screenings in your area.

Below will walk you through the key considerations for planning your event, including determining the number of children to screen. As the date of the event draws closer and pre-screening/consent forms are signed and returned to the Special Olympics Program office, this number will become more and more reliable. The expected turn out for an event will usually be a function of the population of the area served, the efficiency of transportation and the level of unmet medical needs in the area.

# Number of Children

The determining factor for all other aspects of a Healthy Young Athletes event planning is the number of children expected to attend the event. The SO Program will likely be working closely with community Young Athletes programs, schools, and other organizations to bring potential and existing Young Athletes to the event. These organizations should be able to accurately predict the number of athletes that will attend.

It is estimated that the complete screening and education will take approximately one hour per child, so the number of children will be strongly correlated to the number of volunteers recruited for the event.

## Event Planning Timeline



### **Event Set-up and Design**

#### Event Space Needs

Once the number of children and families, volunteers, and stations have been estimated, square footage requirements are ready to be addressed. In estimating square footage needs, it is important to keep the special needs of some of the areas in mind.

Because each venue has different acoustic properties and each event will have different noise levels, it is also good to develop a contingency plan if the noise is too loud for the physicians to perform an adequate cardiac and private examination. In an ideal situation, each physician would perform the cardiac exam as part of his or her evaluation. However, if during the event, the clinical personnel feel that the noise level is too high to adequately perform this exam, a single physician could perform all of the cardiac examinations in a quiet room.

If the venue is a clinic, quiet areas and privacy in exam rooms will not be difficult to secure. However, many events occur in gymnasiums, auditoriums, or other large venues and, therefore, require substantial pipe-and-drape partitioning.

All areas require adequate seating and large thoroughfares to accommodate people traveling in groups, or those that use strollers or wheelchairs. At no place in the physical layout of a pediatric screening should any person in a wheelchair be expected to travel through a space less than 4 feet (1.2 meters) wide.

#### Waiting Area

The size of the waiting area depends on how efficient the entire pediatric team works and how well transportation to and from the event is coordinated. Though waiting is an inevitable part of a pediatric screening event, thorough planning and proper execution can minimize this inconvenience to the families. Ideally, groups of families will be

scheduled far enough apart so that there is minimal overlap. The waiting area, therefore, should be able to accommodate the largest group plus 50% of the preceding expected group and 100% of the following group. The waiting area should have supplies and a space where families can complete the prescreening, if it was not done before the event. In the waiting area, there should be activities to keep children engaged, such as coloring pages (perhaps of doctors/children, like the one shown here), books on medical visits, etc.



The waiting area will need to provide ample seating, tables for completing the prescreening if not done ahead of time, space for the children to play and be active prior to the screening

#### Screening Stations

- **Registration/Check-Out Station:** Generally, these stations just require tables and chairs. The number of tables and chairs should be determined by the number of families expected to attend. Therefore, the number of attendees should be assessed prior to selecting a proper venue.
- **Biometrics and Vitals Station:** At this station, a small table and chairs are necessary. If you only have large tables, you may need more space.
- **Visual screening station:** This should be done in a space where the lighting can be controlled, especially when using instrument –based vision screeners.
- **Audio screening station**: Should be conducted in a quiet room to ensure accurate results.
- **Dental station:** This station will have oral hygiene education resources. This may include pediatric toothbrushes, flouride containing toothpaste, puppets to use to demonstrate oral hygiene techniques.
- **Developmental surveillance Station:** This station should be partitioned off by pipe and drape to make individual screening stations within the larger area. The number of families attending will determine the amount of space required. One YA family equipment kit should be provided per station for the developmental screening. If a large space is being used one can opt to have the individual stations spaced out enough to ensure privacy when parents/caregivers are responding to questions, but the children may be allowed to play and demonstrate their skills in a common area I.e Young Athletes activities are set us in a common area.
- **Review of Systems & Physical examination Station:** This station should be partitioned off by pipe and drape to make individual stations and requires enough room for an exam table, stool, stroller, up to 3 adults, and one child. If the venue allows, one can have separate rooms designated as examination stations
- Education and Findings: This station will be several private tables where the families can go to sit while they wait for the results of the impressions and findings document. A volunteer at this table can share these findings and resources from the educational toolkit. This is also a space where discussion on available opportunities with Young Athletes can be provided to the families.

See suggested screening station layout in <u>Appendix B</u>.

### **Event Considerations**

- Adding Medical Tests: It is acceptable for Clinical Directors to make slight alterations to the pediatric screening to fit the needs and resources of the community in which it is being offered. In general, it is acceptable to add protocols, but it is not acceptable to eliminate them unless prior approval has been secured by the Special Olympics International team.
- Non-Invasiveness: All pediatric screening protocols are non-invasive. Therefore, urology, gynecological, and rectal exams are strictly prohibited. Blood testing and x-ray examination are also considered invasive and are prohibited. Urinalysis, EKG, echocardiography, ultrasound, bone densitometry, and bioelectrical impedance are considered non-invasive and therefore can be done. Other tests should be discussed with Special Olympics and will be considered on a case-by-case basis. If a partner is offering these invasive services outside the scope of the pediatric screening, that is permitted, but they will need to take responsible, need their own funding, and their own consent form for these services.
- **Free of Charge:** The pediatric screening is a free, elective event. No child should be required to undergo any testing which would cost money to the family.
- Autism Spectrum Disorders (ASD): Autistic-like behavior is encountered frequently in children and adults who have intellectual disabilities. Fragile X and many other neurodevelopmental disorders are associated with features often, but not always, observed in children who have ASD. One of the behaviors often observed among children with ASD is an aversion to intense visual or auditory

stimuli. When a pediatric screening event is at its activity peak, there can be a lot of commotion and noise. This may be overwhelming to some children, especially those who experience behaviors associated with ASD. For these athletes, completing the exam in a quiet contingency room may be necessary. Consider suggesting that families bring their noise canceling headphones for the child and/or provide a couple of sets for those that need this equipment.



- Wheelchairs/Strollers: A number of Special Olympics Young Athletes will require the use of a wheelchair or stroller. Some pediatric screening protocols will need to be modified in order to accommodate these Young Athletes. Specifically, the modified height and weight protocols described earlier will need to be used. It is imperative that all areas of the pediatric screening accommodate athletes using wheelchairs and strollers.
- **Malpractice Coverage (United States only):** For events in North America, Special Olympics has malpractice coverage through a private insurance company. This coverage acts as a secondary coverage for physicians who already have

malpractice insurance. It will also act as primary malpractice insurance for physicians who do not have malpractice insurance. In order to ensure that each volunteering clinician is covered both primarily or secondarily, the names of each volunteer should be collected and given to Special Olympics staff (who are, in turn, required to inform the insurance company) prior to the date of the pediatric screening. Be sure to have the Hold Harmless Form completed (available on the pediatric screening page).

• Mandated Reporting: In many states/countries, professionals who frequently work with children are considered "mandatory reporters." This means they are required by law to report suspected or confirmed abuse to the relevant child welfare agency. Clinical Directors, in collaboration with the SO Programs, are encouraged to educate their volunteers on the mandatory reporting laws in their region. Education may include: what the law defines as abuse, the difference between suspected abuse and proven abuse, time limit within which reports must be made, and the manner in which the reports must be made.

#### Communicating During and About the Event

- Put the Child First: Too often people with disabilities are described by their condition first. Although a specific disability label may provide some insight to a person's abilities or behavior, it does not do justice to their individuality. Because of this, Special Olympics uses "person- first" language. This means putting the person before the disability. For instance, when describing a child, you might say, "I met a Young Athlete who loves to play basketball and who has Down syndrome." Use the child's name as much as possible.
  - Sometimes using person-first language feels awkward, but it is an important way to show respect for people with ID. Simply put, you can't fail if you:
    - Put the person first
    - Look for the person's individuality
    - Look for common ground for conversation
  - To help train volunteers on communication and person-first language, use this video "<u>Talk to Me: How to Speak with People with Disabilities</u>"
- **Put Family First:** When communicating with families, it is important for them to feel welcome and included. Keeping a power differential between professionals and family members in check is likely to make the family members feel more comfortable in responding to the screening questions.
  - Focusing on the child's strengths and using positive/supportive language (e.g., your child is very motivated or expressive) versus focusing mostly on the child's deficits (e.g., your child is not able to speak like a 3-year-old or your child seems behind emotionally) will make the family member more engaged in completing the tool and receptive to suggestions for follow up.

• Maximizing Impact of the Pediatric Screening: Providing a free pediatric screening to people with ID is an attractive human-interest story to most local newspapers and media outlets. It is also a good photo opportunity for local political leaders. It is recommended that a public relations strategy for Special Olympics Programs be developed to incorporate the pediatric screening as a center piece. Local ministers of health, cabinet health secretaries, mayors, governors, senators, donors, and providers of in-kind support should be invited to attend the pediatric screening. Such public relations strategies can help solidify strategic relationships and potentially create opportunities for future relationships and funding. Work with coaches as well as schools, community Young Athletes programs, and family members/caregivers to promote the pediatrics screening events in advance to encourage participation and registration.

# VOLUNTEERS

# Volunteer Recruitment

There are a variety of volunteers needed to host Healthy Young Athletes. The easiest way to recruit volunteers is by partnering with a local hospital, clinic, medical, or other allied health professional school, as well as psychology, occupational therapy (OT), physical therapy (PT), social work, and special education programs.

Recruiting and training volunteers that are comfortable working with children and families is vital to the success of your pediatric screening. It is suggested that you recruit a multidisciplinary team to administer the screening tool.

It is important to remember that some physicians who specialize in caring for adults may not be comfortable performing physicals on children. This will impact how many, and of what specialty, physicians may need to volunteer. Some physicians will only volunteer for a few hours. In this case, additional physician volunteers will need to be scheduled to make sure that the exam station is always staffed during the event.

# General Criteria for Volunteers

Credentials for pediatric screening event volunteers should include:

- Certification as a pediatric MD/DO, NP, or PA
- Pediatric Physical, occupational and speech therapists, pediatric psychologists, early intervention specialists
- Healthcare providers in training : medical students, residents, nursing students, PA students
- Expertise to include: appropriate interpretation of all health and developmental screening results, medical assessment and decision-making, developmental screening/ evaluation and referrals.
- Experience in pediatrics, medical decisions & treatment, and developmental screening and referrals for young children < 8 years old
- Knowledgeable about local referrals and resources to give families
- Support in reviews of pre-screening
  - *Example*: Physician in charge of advocacy rotation at residency program
- Duties include oversight of select volunteers implementing the screening
- Social workers to assist in care coordination and connecting families to social services after the screening

# Types of Volunteers

To support a successful Healthy Young Athletes event, recruit as many experts to volunteer as possible. These individuals can help you with problem solving and connections in your community. Based on the breakdown provided below, it is

recommended to have a minimum of 10 volunteers. That number will need to be scaled up based on the number of families attending the event.

### **General Volunteers**

General volunteers are vital to the success of Healthy Young Athletes. These volunteers will help check and collect paperwork, direct families from one station to another, and coordinate lunch, transportation, and giveaways. Because families will tend to arrive in groups, it is recommended that at least two volunteers work the check-in station and at least two volunteers work the check-out. Additionally, a volunteer should be stationed at the volunteer registration station and at every point of transition from one area of the pediatric screening to another, including entry and exit ways. It is recommended that, at a minimum, there should be between 10 - 15 general volunteers at large events. Using this number of volunteers as a benchmark for large events can inform how many volunteers will be needed at smaller community events. Simply scale this number down to match the number of children that will be screened at a small community event. This will help ensure that the event will run as smoothly as possible.

Registration should include stroller parking and additional iPads, laptops, or paper copies of prescreening for families that have not completed the paperwork before the event. In this case a volunteer should be available to review the prescreening paperwork and bring the prescreening documents directly to the screener at the review of systems station so they can have context about that child when they get to the station.

If families have completed the pre-screening paperwork before the event, they should register for an "appointment time." These appointments can be windows of time to have the families arrive so that people come at staggered times to alleviate potential wait times.

#### **Supporting Families**

It is recommended that at least two caregivers come with each child to allow for effective and efficient administration of the event. If this is not an option, volunteers can serve as family escorts to support the child through each station. A single volunteer will stay with one family from start to finish at the screening event. This volunteer can help support the child and family members as they navigate the event by keeping the child pre-occupied and engaged. This will allow the parent/caregiver to focus on answering screening questions. Volunteers in this role can be medical students, social work students, etc.

### **Biometrics and Vitals Stations Volunteers**

After registration, the first station of the pediatric screening will be the biometric and vitals station. Children will be escorted to this station either by their assigned volunteer or directed to the vital station by the registration volunteer. At this location tables will be set up with volunteers. The space should be "child friendly", meaning that volunteers will keep the space quiet, calm, and inviting. To engage with children during vitals, volunteers

will greet the children and their caregiver by name and begin to build a rapport. Before collecting vitals, the volunteer will ask permission and explain to the child each vital that will be collected.

Materials to decrease the anxiety of the children can be provided at the vitals stations, such as pretend play doctor kits and puppets (example illustrated to the right).

On average, the entire battery of vital signs can be measured in 10-15 minutes. Typically, one volunteer will perform the height, weight, blood pressure, temperature, and pulse oximetry, and one or two volunteers will do the vision and

hearing assessment. If enough clinical volunteers cannot be found or the event is small in scale, you can combine vital stations and have one volunteer collect all of the vitals, as well as the vision and hearing assessment.

If the data is not collected electronically through iPads or computers during the screening, the PDF of the screening tool will be given to the family and/or family escort to bring with them to each station. This way each screener can evaluate what has taken place a previous station.

It is estimated that from the time of check-in to departure the family will be at the screening event for one hour. The times listed below are an approximate and may vary based on the number of volunteers recruited to support the event.

- Check-in/Waiting Room: 5 minutes
- Biometrics & Vitals: 10 minutes
- Developmental Screening: 20 minutes
- Review of Systems and Physical Exam: 15 minutes
- Education and Findings/Check-out: 10 minutes

#### Medical Screening Volunteers

Credentials for event volunteers implementing the medical screening should include:

- Licensed psychologist or other developmental/mental health clinician.
  - Examples include: PhD, PsyD, LCSW, OTR-L, MA in special education/early childhood education
- Pre-licensure pediatric MD/DO PGY-1
- Family Practice MD/DO PGY 1-3
- Post-licensure pediatric MD PGY 2-3
- Pediatric NP student
- Family medicine NP students



The pediatric screening can be an excellent way to engage Medical Schools or other Allied Health Professional Schools. This is an excellent hands-on training for their students and can help you set-up a permanent supply of volunteers, while also training the next generation of healthcare professionals on how to provide care to people with intellectual disability. However, if you are going to have student participant in the pediatric screening, here are some considerations:

- A fully licensed physician must check the work of each student and provide his or her signature as the medical authority.
- Students and other unlicensed professionals should never provide the final referrals, without a licensed, qualified professional double checking and countersigning their work.
- Ideally, find time to do a pre-training with the student volunteers (and all volunteers) so they know what to expect and how to complete the medical form.

### Developmental surveillance Volunteers

These volunteers can include professionals in: general psychology, school psychology, developmental psychology, special education, vocational rehabilitation, school social work, or similar fields. Volunteers can be practicing professionals, as well as advanced students in these programs who have practical experience in the field.

The family escort and/or vitals station volunteer will direct the family to the developmental screening station. At this station, sets of Young Athletes equipment can be set-up in individual private areas where the screening can take place. The family escort or additional volunteer at the station supporting the collection of data will engage with the child through the Young Athletes activities. If this is a large space, the activities can be set-up "obstacle course style" where the child can showcase their skills and practice the course multiple times. If the space is small the YA equipment can include scarves, balls, and floor markers and the child can play independently while the screening is taking place. While the child is participating in YA activities, and perhaps demonstrating some of the developmental skills, the parent will be answering the screening questions.

# *Review of Systems, physcial exam and education/findings station Volunteers*

The number of physician stations needed is a direct function of the number of children expected and the amount of time the event will be operating. A very efficient physician may be able to perform these exams faster; however, pressure to do so may compromise the quality of the physical exam delivered. It is therefore recommended, that physicians be expected to spend 15 - 20 minutes with each child. The space for the review of systems and targeted surveillance should be private and in an area where the family members can answer the questions confidentially. Pipe and drape should be used for a large event. If this event is taking place at a small community event, consider using small offices or classrooms where the family can meet with the screener privately.

The screener that has conducted the review of systems & physical exam will also complete the impressions, assessment, & plan documentation. At this stage the family will move to the education station where a volunteer will review the data that has been collected and provide follow-up suggestions, referrals, and/or educational materials. If an additional station of this phase is not preferable the individual conducting the review of systems may share the impressions document and corresponding educational materials. Please use the referral letter template and educational toolkit provided.

#### Capturing Data at Screening Event

Currently the pediatric pre-screening and data collection documents are captured through Qualtrics. At an event, it is suggested that the stations include either iPads or laptops where the data can be collected by each station volunteer electronically to limit the amount of paperwork and data entry to be completed after the event. If using technology is not an option at the event, a PDF paper copy of the screening tool can be pre-printed and completed during the event. After the event, a volunteer should enter all information collected in Qualtrics.

### Important Note on Collecting Sensitive Information from Families

Collecting data for this screening can be sensitive in nature and family members my be reluctant in sharing information. Each volunteer will reassure the family member that they are not required to answer any questions that they do not want to and that all information will be kept confidential. Deidentified data will be shared with SOI such as the number of participants, type of diagnosis if known and common areas of concern. This data will be used to improve the screening process and inform on the support and interventions that can be provided to the children and their families in the future.

# **APPENDIX A: EVENT EQUIPMENT**

Basic equipment must be purchased or borrowed in preparation for the Healthy Young Athletes event. The quantities of each piece of equipment will vary based on the size and configuration of the event. The following is a brief list of necessary equipment.

All of these can be purchased with SOI Capacity Grant Funds.

# Monitoring and Reference Range Charts

All vitals stations should have the following charts available for use for each child or clearly printed to be used as a reference by the volunteers taking the vitals:

- Growth charts: Age and sex specific.
  - Also have specialty growth charts for specific genetic diagnoses, such as Downs syndrome, Fragile X syndrome, Prader Willis syndrome etc.
- Age specific heart rate reference range charts
- Age specific blood pressure reference range charts

# Equipment for Medical Screening Station

В	lo	bd	Ргеззиге	Cuffs
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Each station should have self-inflating blood pressure cuffs, which are meant to be placed around the upper arm and ankle. Manually inflated cuffs are acceptable; however, they can be very strenuous for the volunteer. Wrist blood pressure measurements are often inaccurate and such equipment should be avoided. Order child sized cuffs.

**Pulse Oximeters** Pulse oximeters, such as the one shown here, are preferred standard equipment for the pediatric screening. Other pulse oximetry devices are also acceptable.





Vision Charts The Lea eye chart is the preferred method of measuring near and far vision in people with ID. Standard charts require a degree of literacy that may not be appropriate for all Special Olympics athletes. Instrument-based vision screener may also be used depending on availability. The recommended ones are PlusOptix and GoCheck Kids. Other advanced equipment for visual assessment and identification of pathology may be used, depending on availability of the equipment and the expertise to operate them and interpret the results. These include autorefractors and fundus cameras.	
Otoacoustic Emissions Machine (OAE)	
For the hearing screen, we recommend the use of a portable, handheld OAE machine that produces fast and accurate measurements in children. Programs are encouraged to use the OAE machines that are available to them and those that require minimal specialized skills to operate and interpret.	The second se
<b>Exam Tables &amp; Stools</b> Review of Systems & Surveillance stations should be conducted at an exam table. Adequate abdominal and cardiac examinations require that the patient be examined in the supine position. Padded, portable exam tables, often used by physical and massage therapists, are the easiest to use and set up. However, makeshift exam tables using a standard 3 x 6 (0.9m x 1.8 m) conference table and a tablecloth can also be effective. If makeshift tables are used, Special Olympics staff should test the weight capacity of the table prior to allowing any children to use them. Stools can also be used at this station.	
Tongue Depressors	
Though many clinicians are comfortable not using tongue depressors, some clinicians prefer using them. A supply should be kept on site for those clinicians wishing to use them.	Contraction of the second seco

<b>Ophthalmoscopes</b> Eye examination will be focused on assessing the external eye anatomy (cornea, iris, sclera, pupils), pupillary reflexes, red reflex, and extraocular muscle movement. Therefore, an ophthalmoscope is a "good to have" but not mandatory equipment. Portable, battery powered ophthalmoscopes may be made available to be used as needed.	
Otoscopes and Speculum Covers Otoscopy is essential for a proper evaluation. Inexpensive, battery powered otoscopes are available and should be kept at each exam station. Each otoscope should be accompanied by an adequate supply of speculum covers. These covers must be changed after every athlete. So, the total supply of speculum covers should exceed the total number of athletes expected for the event.	
<b>Stethoscopes</b> Physicians and other licensed practitioners should be encouraged to bring their own stethoscope. Each stethoscope transmits sounds differently. If a physician is used to performing a heart examination with a particular stethoscope, he or she is used to hearing certain tonal information associated with cardiac abnormalities. Upon changing stethoscopes, the quality of his or her exam could become compromised. For physicians who forget to bring their own stethoscope, it is recommended that a few high- quality stethoscopes be kept onsite for the event.	Z
<b>Non-Latex Gloves</b> A supply of medium and large non-latex gloves should be kept onsite for physicians performing examinations. Non- latex gloves are preferred because of the possibility of latex allergies. These gloves will be changed after every examination. It is therefore recommended that an ample supply of gloves be kept on site during the event.	SI SMART TOLICH Biserbar
<b>Masks</b> In SONA US Programs, masks can be ordered directly free of charge. In regions outside the US, masks should be available for all volunteers, family members, and children participating. SO guidance on COVID-19 mitigation and mask use should be followed at pediatric screening events.	RNgs

Hand Sanitizer Alcohol-based gel or foam hand sanitizer should be used by each clinician between patients. Each medical exam station should have its own dedicated supply of hand sanitizer.	A second s
Impressions Document, Referral Letter, and Educational Material A copy of the impressions document along with a referral	<b></b> ,
letter and educational materials will be shared with families at the event. Copies will need to be made. The program should determine how to capture the impressions document information to be saved in data collection platform and shared with families	• • •
<b>Pipe and Drape</b> Privacy for children and families is a necessity during the screening. Adequate pipe and draping must be supplied to create private rooms.	
<b>Clip Boards and Pens</b> Having a large number of clip boards and pens will help the check-in process to go smoothly. Arranging the athlete medical forms in either alphabetical order or scheduled arrival time will facilitate faster processing time at the check- in area.	
<b>Technology</b> iPads, laptops, and/or PDF Copies of Screening tool for data collection	
<b>Incentives</b> Each local event can customize incentives for the children and families. It is suggested that the incentive tie directly to the screening. Suggestions include: providing the children with a "passport" at check in where they can collect stamps, stickers, and or pretend play doctor kit items as they participate in the event.	sector Oymolog Boung Athietes-

# **Suggested Cleaning Supplies**

- Paper Towels
- Garbage bags
- Kleenex
- Ziploc bags
- Alcohol prep pads
- Tool kit
- Clorox Wipes

## Suggested Event Supplies

- Name badges
- Pencils and Pencil sharpener
- Pens
- Sharpies
- Duct tape
- Clear packing tape
- Blue painters tape
- Rope
- Post-it notes
- Binder clips
- Paper clips
- Scissors
- Stapler
- Box of staples
- Zip ties
- First aid kit
- Young Athletes equipment kits

# **APPENDIX C: FREQUENTLY ASKED QUESTIONS**

- Can physicians from other states or countries volunteer at a pediatric screening?
  - Yes. However, a licensed physician from that locale must double-check and countersign the physicals performed by the non-local physician.
- Can medical, nursing, or physician assistant students volunteer at the pediatric screening?
  - Yes. Students may volunteer at any station in which they feel comfortable working. Students working at the examination station must be double checked and countersigned by a licensed physician from that locale.
- Does Special Olympics malpractice insurance cover all pediatric screening volunteers?
  - Yes, in the United States. However, prior to the day of the pediatric screening event, a list of all clinical volunteers and their insurance status (whether or not they have malpractice insurance) should be given to the Special Olympics administrative office who will, in turn, give it to the insurance company. Pediatric screening malpractice insurance acts as a secondary insurance for those who already have malpractice coverage, but acts as primary insurance for those who do not.
  - Clinical volunteers outside of the United States are not covered under SO's malpractice insurance.
- Can we offer finger-stick blood testing for diabetes, cholesterol, liver function, or HIV?
  - No. Any test which draws blood from the child is considered invasive. Through the stipulations of the funding provided to Special Olympics and insurance guidelines, no invasive tests may be given to children during the pediatric screening event, even if the family consents to, and specifically requests, such testing.
- Can somebody else offer blood testing for diabetes, cholesterol, liver function or HIV?
  - Yes. Though Special Olympics is prohibited from offering invasive tests, other entities not funded through the pediatric screening grant may do so. Special Olympics is not responsible for what a family does directly before or after they participate in the pediatric screening event.
- Can we offer vaccinations at the pediatric screening?
  - No. Vaccination is considered invasive. Through the stipulations of the funding provided to Special Olympics and insurance provisions, no invasive procedures may be given to children during the pediatric screening event, even if the family consents to and specifically requests such treatment. However, a third party that provides vaccines may attend the event and

have an additional station set-up for their organization. The CD might advise parents to take their child for a vaccination and recommend the service available on site; however, the consent for the actual vaccination and administering the vaccine must be managed by the third party (who must be separately insured).

- How do we follow up with any recommendations or referrals made at the pediatric screening?
  - It is recommended that the Special Olympics Program identify a person such as a social worker, volunteer, or staff member who will attempt to contact families requiring follow-up after the pediatric screening event, to remind them of their referrals and recommendations.
- Is the pediatric screening a new Healthy Athletes discipline?
  - Yes, the pediatric screening will be offered in the menu of Healthy Athletes disciplines. This protocol has been created through support of each individual Healthy Athletes Global Clinical Advisor and a team of consultants with pediatric expertise.
- Why is Healthy Athletes adding the Pediatric Screening as a new discipline?
  - Over the years, Healthy Athletes has attempted to address the unique health needs of young children through age-appropriate screenings. These protocols and practices have been implemented with varying success for a variety of reasons, including the structure of the protocols themselves and limited communication to Programs about the protocols. To address these challenges, many Programs are using the general Healthy Athletes protocols (designed for athletes ages 8+) for Young Athletes and, as a result, these protocols may not always meet the needs of our youngest participants.
  - To address the concerns of conducting a proper Healthy Young Athletes screening, and in an effort to reach individuals with ID at a younger age, Special Olympics believes Young Athletes participants would benefit from a holistic pediatric screening as an initial offering through Healthy Athletes. The screening can close the loop and ensure all children are getting the right level of services and supports, regardless of their access to a primary care provider.
  - All Healthy Athletes disciplines have a protocol developed for Young Athletes. Fit Feet and Healthy Hearing do not have specific protocols as they are written to be adaptable for ages 2-7.

- Children already have access to screenings and assessments with their pediatrician, why is Special Olympics creating this new protocol?
  - The pediatric screening will promote opportunities for families to maximize their child's health and development outside of the primary care visit through comprehensive support, coordination, and education.
  - The pediatric screening would not take the place of a child's regular well visits with their primary care provider. Rather, the screening would complement a child's primary care and provide an additional review of the child's health that can be shared with their primary care provider if they have access to one.
- What happens if a child does not have a primary care doctor, or an issue is discovered in the screening that requires a referral?
  - Programs should utilize local healthcare partners to identify pediatricians and pediatric specialists for referrals.
- Is this screening part of a Healthy Athletes or Young Athletes?
  - The pediatric screening is a new discipline offered through Healthy Athletes. Programs should coordinate both the Healthy Athletes and Young Athletes staff to work together for a successful launch of the screening.
  - *Healthy Athlete Program Staff* should provide guidance on application and reporting process, recruitment of Clinical Director, and day of pediatric screening logistics.
  - **Young Athlete Program Staff** should support application and reporting process, recruitment of Young Athletes families to participate in screening, assistance with day of pediatric screening logistics

# **APPENDIX D: REFERENCE CHARTS**

#### **Biometrics**

Please use any medical calculation apps or sites you find helpful. E.g. UpToDate, MedCalc etc. Also use the reference charts for normal values commonly used in your region/country, e.g. CDC, WHO or Institution specific. Below are some suggestions:

#### CDC & WHO Growth Charts

Weight	<u>Girls</u>	Boys
Height	<u>Girls</u>	<u>Boys</u>
BMI	Girls	Boys
Head Circumference (OFC)	Girls	Boys

Children with specific genetic diagnoses should be plotted along specialty growth charts:

- <u>Down Syndrome</u>
- Prader Willi Syndrome
- William Syndrome (1998 Phelan charts) chart for girls, chart for boys

Specialty growth charts are also available for the following diagnoses online:

- Cornelia de Lange syndrome
- Di George Syndrome/ 22q11.2 deletion
- Achondroplasia
- Marfan syndrome
- Turner syndrome

### Vital Signs

Heart Rate: measure when the child is awake but resting

• <u>Pediatric Heart Rate Chart</u>

#### Pulse Oximetry

• 95% or greater

#### **Blood Pressure**:

• Use <u>calculator</u> or <u>blood pressure tables</u>.