

Autism Evaluation and Treatment: An Update



By **Koren Boggs, Ph.D.**, *Clinical/Pediatric Psychologist at Children's Hospital*, and **Jodi Kamps, Ph.D.**, *Clinical/Pediatric Psychologist and Assistant Director of the Psychology Department at Children's Hospital; Clinical Assistant Professor,*

Department of Pediatrics, LSU Health Sciences Center, New Orleans; Clinical Assistant Professor, Tulane University School of Medicine, Department of Psychiatry & Neurology and Adjunct Professor, Tulane University, Department of Psychology.

This issue of Pediatric Review is intended for pediatricians, family physicians and all other interested medical professionals. For CME purposes, the authors have no relevant financial relationships to disclose.

OBJECTIVES

At the end of this activity, the participant should be able to:

1. Discuss the prevalence and new definition of Autism Spectrum Disorder (ASD)
2. Describe how ASD can be identified
3. Discuss evidence-based interventions for ASD and describe the process for evaluating a treatment's effectiveness

INTRODUCTION

Autism spectrum disorder (ASD) is a complex neurobehavioral disorder characterized by impairments in reciprocal social interaction and communication, and the presence of restricted and repetitive patterns of behavior, interests, and activities, with the onset of symptoms usually present prior to three years of age. In a minority of cases (i.e., < 10%), ASD is associated with a known medical condition or genetic syndrome, but for the majority of individuals with ASD, a precise cause is unknown. Identifying possible causes is also complicated by the significant variation in behaviors across individuals with ASD.

According to the U.S. Centers for Disease Control and Prevention (CDC), ASD is currently estimated to affect 1:88 children. In 2002, the CDC estimated 1:150 children were affected with some type of spectrum disorder. A controversial issue is if the increased prevalence of ASD is due to increased awareness or due to an actual increase in the number of cases. However, regardless of the reason for the increased prevalence of ASD, pediatricians are increasingly likely to encounter children with ASD in their practices. Thus, knowing how to identify and treat ASD is paramount for practitioners.

CHANGE OF ASD DEFINITION

Beginning in May 2013, changes will occur to the definition of ASD with the release of the fifth edition of the Diagnostic and Statistical

Manual of Mental Disorders (DSM-5). These changes include collapsing prior diagnoses of Autistic Disorder, Asperger Disorder, Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS) and Childhood Disintegrative Disorder into a unifying diagnosis of Autism Spectrum Disorder. Additionally, the three symptom domains that are currently listed in the DSM-IV-TR (i.e., social impairment, communication deficits and restricted/repetitive behavior) will be condensed to two areas: social communication impairment and restricted/repetitive behaviors. The changes in DSM-5 also will allow providers to specify a severity level/level of support necessary to better reflect that ASD encompasses a continuum of abilities.

IDENTIFYING ASD

Although ASD is considered to be chronic in nature, early identification and treatment of this condition results in improved long-term outcomes. Pediatricians play a crucial role in the early identification of children with ASD as they are the providers most likely to see children with ASD before referral to specialists. Therefore, it is critical that pediatricians complete developmental surveillance, including screening for symptoms of ASD, at well visits beginning in infancy and consistent with the American Academy of Pediatrics (AAP) 2007 guidelines. Specifically, the AAP recommends administering a standardized autism-specific screening tool in all children between 18-24 months. There are a number of screening instruments available for this purpose including the Checklist for Autism in Toddlers (CHAT) for 18-month-old toddlers or the Modified-Checklist for Autism in Toddlers (M-CHAT) for children at least 2 years of age. The Screening Tool for Autism in Toddlers and Young Children (STAT) and the Communication and Symbolic Behavior Scales (CSBS) are also recommended for young children. It is important to note that since there are no biological markers for ASD that the identification and diagnosis of ASD is based upon behavioral symptoms.

If children exhibit characteristics of ASD, they should be referred for more in-depth assessment, usually conducted by an experienced clinician or multidisciplinary team. Core components of a thorough diagnostic evaluation should include developmental history, developmental/intellectual functioning, adaptive behavior and assessment of characteristics of ASD based both on direct observation of the child and caregiver report. Studies indicate that for the diagnosis of ASD, diagnostic specificity is much worse if a clinician does not combine information from multiple sources. Although there are a number of measures available regarding characteristics of ASD, two have received substantial support from the research literature. The Autism Diagnostic Interview – Revised (ADI-R) and the Autism Diagnostic Observation Schedule (ADOS) are currently considered the “gold standards” in the assessment of ASD symptoms based on parent report and direct observation, respectively. Additionally, recent revisions to the ADOS have improved its accuracy and expanded its clinical utility to include an indicator of severity.

Table 1 – Steps for Evaluating Treatment Effectiveness

- 1. Determine what you expect to change and define it.** For example, there is no treatment designed to “make autism better”. Rather, good treatment should target a specific symptom like irritability, communication deficits or food tolerance.
- 2. Determine a baseline for your treatment target(s).** This should be done before initiating treatment, as it will give an idea of where things stand before the intervention. This is important, as the baseline will serve as a comparison point during treatment. Baseline data can include frequency, duration, and intensity of targeted symptoms and behaviors.
- 3. Make only one change at a time.** In order to know what is responsible for observed changes in symptoms and behaviors, it is important to not “muddy the waters” with several changes at once.
- 4. Keep taking the same behavioral data throughout treatment.** This enables you to compare levels from before and after the initiation of treatment.
- 5. Make data-based treatment decisions.** Determinations about what is working, what isn’t working, and what might be making things worse can be made by continuously reviewing the data you began recording at baseline.

TREATMENT OF AUTISM SPECTRUM DISORDER

Treatment of ASD involves a focus on the symptoms that cause clinically significant functional impairment. Since ASD is a diagnosis made based on behavior, there is no treatment that addresses the biological or neurological underpinnings of the disorder at this time. However, there are evidence-based treatments available to target characteristics of the diagnosis that interfere with successful functioning. Evidence-based treatments for autism can be grouped into two primary categories: behavioral and psychopharmacological.

Common targets for treatment in ASD include communication deficits, maladaptive behavior patterns, emotional lability, fine and gross motor deficits, social skills deficits and learning difficulties. Communication deficits can include a total lack of development of spoken language, limited or delayed speech, a lack of spontaneous functional communication, and, in individuals with developed speech, difficulty with pragmatics or the social use of language. Higher rates of significant maladaptive behaviors, such as self-injury, aggressive behavior, tantrums, elopement and pica, are observed in children with ASD as compared to typically-developing peers. Other behavioral challenges commonly seen in this population include feeding problems (i.e., limited diet, food refusal), toileting delays and sleep disturbance. Fine and gross motor deficits can co-occur with ASD and can present as difficulties with activities of daily living including dressing, feeding and completion of academic work requiring handwriting. Children with ASD also present with different learning styles and may have trouble generalizing learned skills to new environments.

As mentioned previously, early identification of autism is critical and should lead to the development of an early intervention plan and services. Research shows that children with ASD who receive intensive early intervention services can make significant developmental gains. In addition, research has shown that an early focus on the development of social and communication skills leads to better outcomes for children with ASD compared to other types of intervention programs.

EVIDENCE-BASED INTERVENTIONS – APPLIED BEHAVIOR ANALYSIS

Applied Behavior Analysis is an evidence-based, data-driven intervention shown to be effective in treating individuals with ASD across the lifespan. Behavior Analysis is the systematic study of variables that influence behavior and is based on decades of research on learning theory. Applied Behavior Analysis (ABA) involves the use of those science-based principles of learning to improve socially significant behavior. More specifically, ABA therapies employ methodology designed to harness motivation to learn new skills, while also reducing interfering and unwanted behaviors. A hallmark of an ABA intervention is the ongoing assessment of the treatment’s efficacy. In an ABA-based treatment plan, target behaviors and skills are identified and tracked via collection of behavioral data before interventions commence and as treatment progresses. This process is fundamental to the practice of ABA and is critical in making data-based decisions regarding treatment.

Several specific teaching and treatment methodologies have been developed using the principles of ABA. These include Functional Behavior Assessment and Analysis, Discrete Trial Teaching, Verbal Behavior Training, Pivotal Response Training, Early Intensive Behavioral Intervention and Incidental Teaching. The principles of ABA are applied via these methods to teach individuals with ASD to communicate, increase adaptive skill competence, improve learning readiness skills, increase social awareness and facility, increase knowledge of academic concepts, and reduce challenging behaviors that interfere with daily life.

Of particular importance is an understanding of the Functional Behavior Assessment methodology, specifically in relation to treating problem behaviors. Functional Behavior Assessment (FBA) is a process by which behavior is assessed in the context of the individual’s environment. Sound FBA includes operationally-defined behavioral targets (e.g., hand-to-head hitting, biting others, banging fists on hard surfaces), and observational data collected in a variety of situations. The goal of an FBA is to form hypotheses about the functions of target behaviors in order to develop function-based treatment to reduce the target behaviors and increase more adaptive replacement behaviors. That is, an FBA should yield information on when the behavior occurs, what happens before, and what typically happens after the behavior. Behavioral hypotheses generated from an FBA should clearly identify all three of these variables, as well as a statement of the posited function(s) of the target behaviors. For example, an effective FBA will result in a statement such as, “Johnny is more likely to engage in hand-to-head hitting in the classroom setting when his teacher presents an academic demand. Adults typically respond by removing the demand, at which time, the target behavior ceases. Consequently, it appears as though Johnny’s hand-to-head hitting is maintained by escape from academic demands.” Following an FBA, a treatment plan is developed based on the hypothesized function. In Johnny’s case, treatment may include modification of demands to ensure that he is able to complete them. Treatment will also likely include introduction of high-quality contingent reinforcement to increase his motivation to comply with the academic demands. Depending on the severity of Johnny’s self-injurious behavior, the treatment plan may also include strategies designed to prevent the escape he previously received contingent upon hitting himself.

The basis of all ABA-based therapy lies in the assessment of the relationship between behavior and the environment. Consequently, ABA therapy should have specific targets, data collection procedures that encourage accurate recording of behavioral data, frequent opportunities to evaluate the effectiveness of the intervention(s), and should program for generalization and maintenance of skills from the outset of treatment.

Table 2 – Services available at The Autism Center at Children’s Hospital

- 1. Comprehensive Diagnostic Evaluations**
 - For children and adolescents 2 – 21 years of age
 - Provided by clinical psychologists
- 2. Medication Management**
 - For children/adolescents with an existing diagnosis of an Autism Spectrum Disorder (i.e., Autism, Asperger’s Disorder, PDD-NOS)
 - Provided by a child psychiatrist
- 3. Parent/Caregiver Classes**
 - Intro to Autism Spectrum Disorder: Four-week course covering the basics of diagnosis, treatment and common challenges. New courses start the first Wednesday of each month.
 - Special Topics: Single-topic workshops focusing on specific challenges often faced by families of children with ASD. Topics will rotate.
 - Behavior Management in ASD*: Six-week course covering the principles of learning and behavior and their practical application in improving the lives of children with ASD.
*Registration is required to attend this course.
- 4. Parent Support Group**
 - For caregivers of children with Autism Spectrum Disorders to discuss a variety of topics
 - Meets the first Tuesday of every month from 6:30 – 8 p.m. at the Children’s Hospital Parenting Center at 938 Calhoun St.
 - Caregivers only – no childcare provided currently
- 5. Social Skills Groups***
 - These groups will consist of 6, 8, or 10-week courses, meeting once per week for 90 minutes. Children of similar ages and grade levels will be grouped together. Topics will vary depending on the age and needs of individual group members.
 - * Registration is required to attend these groups.

We accept Medicaid and all major insurance plans. For appointments or more information, please call (504) 896-7272. Please also visit our website at www.chnola.org/autism for information, a calendar of upcoming classes, and a copy of our resource guide for services throughout the state.

PSYCHOPHARMACOLOGICAL TREATMENT IN ASD

As previously mentioned, treatment for individuals with ASD is focused on interfering symptoms rather than “autism” itself. For pharmacotherapy of ASD, this means that specific psychiatric symptoms are targeted rather than the core features of the disorder. The Food and Drug Administration (FDA) has approved two drugs for treating irritability in individuals with ASD: risperidone and aripiprazole, both in the “atypical antipsychotic” class of medications. Other medications are sometimes used “off-label” to treat symptoms such as hyperactivity and inattention, as well as anxiety and obsessive-compulsive behavior. Studies have demonstrated that stimulant medications such as methylphenidate can sometimes be effective in reducing significant hyperactivity and impulsivity in children with ASD. Some clinicians may prescribe selective serotonin reuptake inhibitors (SSRIs) to reduce repetitive and ritualistic behavior in individuals with ASD; however, research examining the effective-

ness of SSRIs in this population has not shown significant effects. It is recommended that the use of medications in treating individuals with ASD occur in conjunction with behavioral therapies. A combination of risperidone and behavioral parent training (i.e., teaching parents about behavioral interventions) has shown to be more effective in reducing serious maladaptive behavior in children with ASD than medication alone.

COMPLEMENTARY AND ALTERNATIVE TREATMENTS

Several complementary and alternative therapies have been proposed and used for children with ASD (e.g., Gluten-Free/Casein-Free Diet, hyperbaric oxygen therapy, auditory integration therapy). However, most of these treatments have not been adequately studied and cannot be considered evidence-based. A review of complementary and alternative medical (CAM) treatments for ASD (Levy & Hyman, 2008) discusses the lack of evidence of efficacy for most CAM treatments, emerging evidence of the efficacy of some treatments (i.e., melatonin), as well as documented evidence to reject the use of other CAM therapies (i.e., chelation).

EVALUATING TREATMENT EFFECTIVENESS

Evaluating the effectiveness of treatment is especially important in the population of children with ASD, whether the family chooses to begin behavioral, medical or CAM therapy. Even for evidence-based interventions, decisions regarding treatment should be data-based and data-driven. Families should be educated about the importance of using objective data, the phenomenon of placebo effects and the pitfalls of using only subjective data to make treatment decisions. The guide in Table 1 can be used to evaluate the effectiveness of an intervention.

THE AUTISM CENTER AT CHILDREN’S HOSPITAL

The Autism Center at Children’s Hospital has expanded and is currently providing best-practice diagnostic evaluations in addition to a number of intervention services for children with ASD and their families. A summary of services currently offered is outlined in Table 2.

CONCLUSION

Overall, pediatricians play a crucial role in the early identification of children with ASD especially since early intervention results in improved outcomes for children with this condition. Familiarity with current diagnostic and treatment practices will be helpful for pediatricians as they work with children affected by ASD and their families.

REFERENCES

1. Aman, M. et. al. Medication and parent training in children with pervasive developmental disorders and serious behavior problems: Results from a randomized clinical trial. *J Am Acad Child Adolesc Psychiatry*. 2009; 48(12):1143-54.
2. American Psychiatric Association. DSM-5 Proposed criteria for autism spectrum disorder designed to provide more accurate diagnosis and treatment. News release from January, 20, 2012. Available at www.dsm5.org/Documents/12-03%20Autism%20Spectrum%20Disorders%20-%20DSM5.pdf.
3. Huerta, M., & Lord, C. Diagnostic evaluation of autism spectrum disorders. *Pediatr Clin North Am*, 2012, 59: 103-111.
4. Levy, S. & Hyman, S. Complementary and alternative medicine treatments for children with autism spectrum disorders. *Child Adolesc Psychiatr Clin N Am*. 2008; 17(4): 803-ix.
5. Ozonoff, S., Goodlin-Jones, B.L., and Solomon, M. Evidence-based assessment in autism spectrum disorders in children and adolescents. *J Clin Child Adolesc Psychol*, 2005, 34: 523-540.
6. Plouche Johnson, C., Myers, S.M., and the Council on Children with Disabilities. Identification and evaluation of children with autism spectrum disorders. *Pediatrics*, 2007, 120: 1183-1215.



Children's Hospital's Behavioral Health Center

Twin units serve adolescents 13 – 17, children 8 – 12

Since Hurricane Katrina devastated New Orleans' medical infrastructure, Children's Hospital has been at the forefront of returning healthcare to our city's most vulnerable. One of the hospital's major investments since the storm has been the growth of Children's Hospital's Behavioral Health Center on our Calhoun Campus, formally DePaul Hospital. After the storm, Children's Hospital made a near \$20 million investment in purchasing and renovating the property, where mental health services have been provided for more than 160 years. In less than a decade, the center has grown into our second-largest inpatient unit. With 33 beds, it is a vital community service that treats children and adolescents age eight to 17.

When the state closed New Orleans Adolescent Hospital (NOAH) in 2009 and planned to move inpatient services to Southeast Louisiana Hospital in Mandeville and outpatient services to clinics across the city, Children's Hospital worked with the Department of Health and Hospitals to expand its available inpatient mental health capacity. With concern being voiced by many mental health professionals about a potential shortage of needed beds, Children's hired the required staff to increase our inpatient capacity so that some beds from NOAH could stay in New Orleans.

Children or adolescents who are admitted to the program are experiencing acute psychiatric and emotional symptoms that interfere with their ability to function at home and or school. We offer 26 acute inpatient treatment beds specifically designed to meet the needs of adolescents ages 13 to 17, while the child unit's seven beds serve the needs of children age eight to 12.

The goal of treatment is to stabilize the patient's psychiatric symptoms and provide evaluation and medication adjustment. Patients are treated in a safe and structured environment by a multidisciplinary treatment team comprised of psychiatrists, pediatricians, psychiatric nurses, psychologists,



Behavioral Health

Appointments
(504) 896-7200

Location
Children's Hospital Calhoun Campus
935 Calhoun St., Uptown

Andrew Williams, MD
Behavioral Health Medical Director

Jamie Hanna, MD
Behavioral Health Physician

Josh Sumrall, RN
Behavioral Health Nurse Manager

Theresa Jacobsen, RN, BSN
Community Liaison & Intake Coordinator
(985) 237-9741

social workers, certified recreational therapists and mental health technicians. Educational groups, which enhance positive coping and problem solving skills, are also provided.

Patients learn to take responsibility for their behavior by actively participating in their child's treatment. The recovery process includes:

- goal setting groups
- structured recreational activities
- assigned daily responsibilities based on their individual level
- individual, group and family therapy

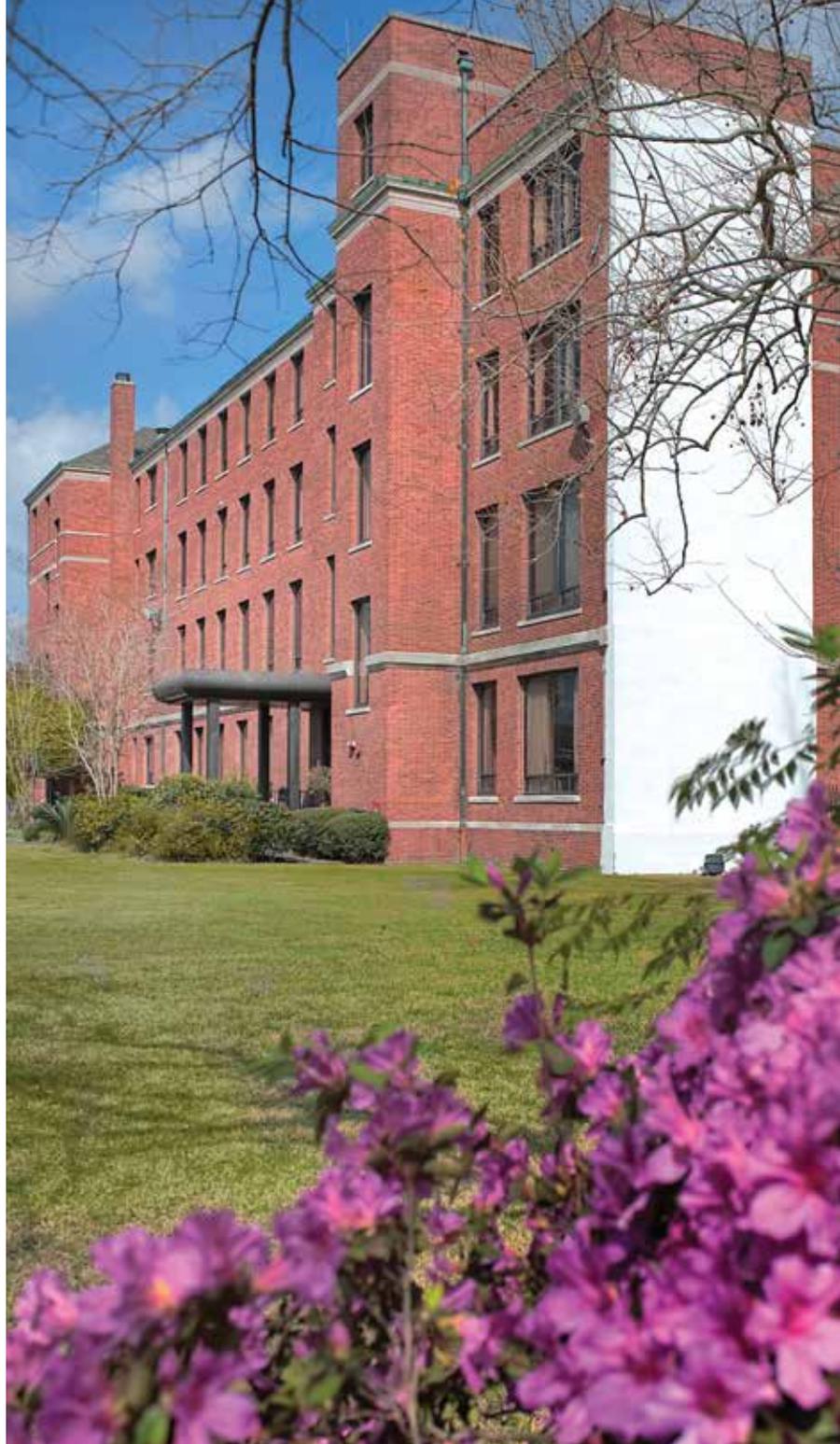
Families are encouraged to participate in the patient's treatment by attending family sessions and helping the team facilitate contact with their patient's school and outside therapists when appropriate. The treatment team works closely with the patient's family, physician and therapist to develop a discharge plan that focuses on continuity of care and a positive transition from the program back to home or to a level of care that best meets the patient's individualized needs.

Children's has a Behavioral Health Community Liaison — with more than 20 years of experience in child/adolescent psychiatric care — to assist and coordinate the admission or provide assistance in accessing community resources. The liaison works with the referral source (pediatrician, parent, school counselor, etc.), the mental health team and the patient's family to navigate through the mental health system to find appropriate services for the child/adolescent throughout the community and the region.

Referral sources may

- call for information/resources that they may then pass on to the family;
- call to discuss the referral with the liaison, providing appropriate clinical information to assist the liaison to better serve the client; or
- have the family call directly for referral information

The center serves children and adolescents covered by most major insurances as well as Medicaid and other funding sources.



Admission to Children's Hospital's Behavioral Health Center

Please call (504) 896-7200 to request admission to the program or to speak to the liaison for an initial triage assessment or an appropriate referral when admission is not needed. The unit accepts admissions inquiries from any one of the following:

- the child's family
- psychiatrists
- primary care physicians
- mental health providers
- school counselors
- case managers
- probation officers throughout the region

Children's Hospital Specialty Clinics & Therapies

CLINICS IN NEW ORLEANS, METAIRIE, BATON ROUGE AND LAFAYETTE

Allergy/Immunology

Dimitriadis, Victoria ^(M, BR) (504) 896-9589
 Ochoa, Augusto ^(M) (504) 896-9589
 Paris, Ken ^(M, L) (504) 896-9589
 Sorensen, Ricardo ^(M) (504) 896-9589

Amputee Clinic

Gonzales, Tony (504) 896-9569

Cardiology

Ascutto, Robert (504) 896-9751
 Gajewski, Kelly (504) 896-9751
 Lilje, Christian (504) 896-9751
 Ross-Ascutto, Nancy (504) 896-9751
 Sernich, Steffan (504) 896-9751
 Siwik, Ernest (504) 896-9751
 Stopa, Aluizio (504) 896-9751

Cardiothoracic Surgery

Caspi, Joseph (504) 896-3928
 Dorotan, Jaime (504) 896-3928
 Pettitt, Timothy (504) 896-3928

Children at Risk Evaluation (CARE) Center

Jackson, Jamie (504) 896-9237
 Mehta, Neha (504) 896-9237
 Wetsman, Ellie (504) 896-9237

Cleft/Craniofacial

McBride, Lori (504) 896-9568
 Moses, Michael (504) 896-9857
 St. Hilaire, Hugo (504) 896-9857

Clinical Trials

Cochlear Implants

Arriaga, Moises (504) 896-2141
 Jeyakumar, Anita (504) 896-9254

Craniofacial/Genetics

Lacassie, Yves ^(M) (504) 896-9857
 Marble, Michael (504) 896-9857
 Zambrano, Regina (504) 896-9857

Cystic Fibrosis

Levine, Stephen (504) 896-9436
 Pepiak, Derek (504) 896-9436

Dental

Mobile Dental Program 34-BRUSH
 Ritwik, Priyanshi (504) 896-9580

Dermatology

Poole, Jeffrey (504) 896-2888
 Wiltz, Katy (504) 896-2888

Developmental/High Risk

Wong, Joaquin (504) 896-9458

Diabetes

Chalew, Stuart (504) 896-9441
 Genet, Michelle ^(BR) (504) 896-9441
 Gomez, Ricardo (504) 896-9441
 Stender, Sara (504) 896-9441
 Vargas, Alfonso (504) 896-9441

Down Syndrome

Lacassie, Yves ^(M) (504) 896-9254
 Marble, Michael (504) 896-9254
 Zambrano, Regina (504) 896-9254

Endocrinology

Chalew, Stuart (504) 896-2888
 Felipe, Dania (504) 896-2888
 Genet, Michelle ^(BR) (504) 896-2888
 Gomez, Ricardo ^(M, BR) (504) 896-2888
 Stender, Sara (504) 896-2888
 Vargas, Alfonso ^(M, BR) (504) 896-2888

Epilepsy Surgery

McGuire, Shannon (504) 896-9458

Feeding Clinic

Hyman, Paul (504) 896-9534

Gastroenterology

Brown, Raynorda ^(M, BR) (504) 896-2888
 Hyman, Paul (504) 896-2888
 Keith, Brent (504) 896-2888
 Monagas, Javier ^(M) (504) 896-2888
 Noel, Adam ^(M) (504) 896-2888
 Rosenberg, Allan ^(M, BR) (504) 896-2888

Genetics

Lacassie, Yves ^(M) (504) 896-9254
 Marble, Michael ^(BR, L) (504) 896-9254
 Zambrano, Regina ^(M, BR) (504) 896-9254

Gynecology

Holman, Stacey (504) 896-2888
 Wells, Lindsay (504) 896-2888

Hematology/Oncology

Gardner, Renee (504) 896-9740
 Morales, Jaime ^(BR, L) (504) 896-9740
 Morrison, Cori (504) 896-9740
 Prasad, Pinki ^(L) (504) 896-9740
 Ramos, Ofelia (504) 896-9740
 Velez, Maria ^(BR) (504) 896-9740
 Yu, Lolie ^(L) (504) 896-9740

Hemophilia Clinic

Morales, Jaime (504) 896-9740
 Velez, Maria (504) 896-9740

HIV Clinic/FACES

Wilcox, Ronald (504) 896-9583

Hospitalists

Referrals (504) 896-3924
 English, Robin (504) 896-3924
 Hescocock, Jay (504) 896-3924
 Roy, Melissa (504) 896-3924
 Sulton-Villavasso, Carmen (504) 896-3924

Infectious Disease

Bégué, Rodolfo (504) 896-9583
 Seybolt, Lorna (504) 896-9583
 Wilcox, Ronald (504) 896-9583

International Adoption Clinic

Bégué, Rodolfo (504) 896-9583

Kidney Transplant

Buell, Joseph (504) 896-9238
 Killackey, Mary (504) 896-9238
 Paramesh, Anil (504) 896-9238
 Slakey, Douglas (504) 896-9238

Kidney Transplant Clinic

Vehaskari, Matti (504) 896-9238

Metabolic

Marble, Michael (504) 896-9254
 Zambrano, Regina (504) 896-9254

Muscular Dystrophy

Tilton, Ann (504) 896-9283
 Weimer, Maria (504) 896-9283
 Wong, Joaquin (504) 896-9283

Nephrology

Aviles, Diego ^(BR) (504) 896-9238
 Bamgbola, Oluwatoyin ^(L) (504) 896-9238
 Iorember, Franca (504) 896-9238
 Vehaskari, Matti ^(BR, L) (504) 896-9238

Neurofibromatosis

Lacassie, Yves (504) 896-9254
 Marble, Michael (504) 896-9254
 Zambrano, Regina (504) 896-9254

Neurology

Conravey, Allison ^(M) (504) 896-2888
 Deputy, Stephen (504) 896-2888
 Gautreaux, Jessica ^(M) (504) 896-2888
 Luke, Wendi NP (504) 896-2888
 McGuire, Shannon (504) 896-2888
 Tilton, Ann (504) 896-2888
 Weimer, Maria (504) 896-2888
 Wong, Joaquin (504) 896-2888

Neuromuscular

Gonzales, Tony (504) 896-9569
 Levine, Stephen (504) 896-9436
 Tilton, Ann (504) 896-9319
 Weimer, Maria (504) 896-9859
 Wong, Joaquin (504) 896-9283

Neurosurgery

Greene, Clarence ^(L) (504) 896-9568
 McBride, Lori (504) 896-9568
 Nadell, Joseph ^(L) (504) 896-9568
 Occupational Therapy (504) 896-9540

Ophthalmology

Ellis, George, Jr. ^(M) (504) 896-9426
 Eustis, Sprague (504) 896-9426
 Leon, Alejandro ^(M) (504) 896-9426
 Vives, Tere ^(M) (504) 896-2134

Orthopaedics

Accousti, William ^(M, L) (504) 896-9569
 Chavez, Manuel, PA (504) 896-9569
 Faust, Donald (504) 896-2888

Gonzales, Tony ^(BR) (504) 896-9569
 Heinrich, Stephen (504) 896-9569
 King, Andrew (504) 896-9569
 Lago, Theresa, PA (504) 896-9569
 Lee, Raven, PA (504) 896-9569
 Nguyen, Jessica, PA (504) 896-9569
 Patel, Prerana (504) 896-9569
 Southern, Edward (504) 896-9569

Otolaryngology (ENT)

Arriaga, Moises (504) 896-9254
 Hagmann, Michael ^(M) (504) 896-9254
 Jeyakumar, Anita (504) 896-9254
 Simon, Lawrence (504) 896-9254

Physical Therapy

Plastic Surgery

Moses, Michael (504) 895-7200
 St. Hilaire, Hugo (504) 412-1240

Psychology

Boggs, Koren (504) 896-7272
 Franz, Diane (504) 896-9484
 Gentile, Steven (504) 896-7272
 Henke, Amy (504) 896-7272
 Heslet, Lynette (504) 896-7272
 Jackson, David (504) 896-7272
 Kamps, Jodi (504) 896-7272
 Kiracofe, Catherine (504) 896-7272
 Rothbaum, Rebecca (504) 896-9484

Pulmonology

Edell, Dean (504) 896-9436
 Levine, Stephen (504) 896-9438
 Pepiak, Derek (504) 896-9438

Rheumatology

Brown, Amanda ^(BR, L) (504) 896-9385
 Dimitriadis, Victoria (504) 896-9385
 Gedalia, Abraham ^(M, BR, L) (504) 896-9385

Scoliosis/Pediatric Spine

Accousti, William ^(M, L) (504) 896-9569
 Gonzales, Tony ^(BR) (504) 896-9569
 King, Andrew (504) 896-9569
 Patel, Prerana (504) 896-9569

Spasticity

Nadell, Joseph (504) 896-9568
 Tilton, Ann (504) 896-9283
 Wong, Joaquin (504) 896-9283

Speech & Hearing

Surgery

Hill, Charles (504) 896-3977
 Steiner, Rodney (504) 896-9756
 Valerie, Evans (504) 896-9756

Travel Clinic

Bégué, Rodolfo (504) 896-9583
 Seybolt, Lorna (504) 896-9583
 Wilcox, Ronald (504) 896-9583

Treatment after Cancer & Late Effects Center

Prasad, Pinki (504) 896-9740

Urology

Langston, Sherry, CNP (504) 896-2888
 Ortenberg, Joseph ^(BR, L) (504) 896-2888
 Roth, Christopher (504) 896-2888

Vascular Anomalies

Poole, Jeffrey (504) 896-9857
 Shehan, Claudia (504) 896-9857
 Simon, Lawrence (504) 896-9857
 St. Hilaire, Hugo (504) 896-9857

Wound Clinic

Valerie, Evans (504) 896-3977

TRANSPORT/TRANSFER



1-855-CHNOLA1

200 Henry Clay Ave., New Orleans, LA 70118

(504) 899-9511 • www.chnola.org

In addition to Children's Hospital Main Campus, some physicians also hold clinics at other centers.

Children's Hospital (504) 899-9511
Ambulatory Care Center (504) 896-9532
Metairie Center ^(M) (504) 832-4033
Baton Rouge Center ^(BR) (225) 216-3047
Lafayette Center ^(L) (337) 289-8289



CMEasy

Sign up to have

PEDIATRIC REVIEW

delivered each month by
e-mail or get each issue at
www.chnola.org/pedrev



Chris PriceEditor
 Cathleen Randon Director, Public Affairs
 Steve Worley President & CEO
 Alan Robson, MD Medical Director
 Brian Landry Vice President, Marketing
 Brian Barkemeyer, MD President,
 Medical Staff
 George Koclanes, MD Vice President,
 Medical Staff
 Rick Baumgartner, MD ... Secretary-Treasurer,
 Medical Staff

website: www.chnola.org

Pediatric Review is published monthly for the
 medical staff of Children's Hospital by the
 Public Affairs Department. For information
 about *Pediatric Review*, call (504) 896-9373.

STAFF

Marketing Department
 Children's Hospital
 200 Henry Clay Avenue
 New Orleans, LA 70118
 Change Service Requested



NON-PROFIT ORG.
 US POSTAGE
 PAID
 NEW ORLEANS LA
 PERMIT NO. 285