APPLIED BEHAVIOR ANALYSIS FOR TREATING OLDER CHILDREN, ADOLESCENTS, AND YOUNG ADULTS WITH AUTISM SPECTRUM DISORDER

Autism spectrum disorders (ASD) have no cure, but psychoeducational interventions based on applied behavior analysis (ABA) may be an option for managing ASD. Individualized ABA therapies are intended to promote intellectual and psychosocial development and to suppress problematic behaviors typically associated with ASD. ABA therapies use discrete, successive goals to guide intervention, ideally until the individual's development matches that of neurotypical peers.

DA VINCI ROBOTIC-ASSISTED SURGERY FOR PERFORMING LAPAROSCOPIC PROCEDURES

Approved use of robotic-assisted laparoscopic surgery using da Vinci® Surgical Systems (Intuitive Surgical, Inc.) continues expanding to include more clinical indications. The manufacturer reported 4,149 da Vinci systems installed worldwide (2,703 U.S. systems) as of June 30, 2017. In 2017, procedural volumes reportedly have increased by 15% to 18% (through October 2017) over the approximately 753,000 procedures performed worldwide in 2016.

The NICO Myriad system consists of handheld mechanical tools intended for precise soft-tissue resection during delicate neurosurgical procedures, a console, and ancillary products to collect and preserve resected tissue for histopathologic examination. Surgeons performing neurosurgical procedures, such as brain and spine tumor resection, may use NICO Myriad as a mechanized alternative to manual electrosurgical tools and to avoid thermal tissue damage associated with laser and ultrasound ablation devices.

Numerous reports describe the risks to hospitalized patients from misconnections of tubing and catheters and strategies to prevent them, but these misconnections continue to occur. International Organization for Standardization (ISO) standards (i.e., ISO-80369) have been developed to prevent medical device tubing from unintentionally being attached to another device that performs a completely different function by making each connector's design specific to its application.

Integrated imaging systems that combine positron emission tomography (PET) with magnetic resonance imaging (MRI) purportedly offer enhanced soft-tissue imaging detail without the ionizing radiation of computed tomography. However, high costs and uncertain reimbursement have slowed diffusion of integrated PET/MRI systems.

Hospitalized neonates and infants may be undernourished if feedings provide inadequate energy and protein for growth and development or if they are unable to absorb nutrients from feedings due to illness. Risk factors include preterm birth, low birth weight, illness or congenital anomaly, and infants establishing feeding after necrotizing enterocolitis or gastrointestinal perforation.

In the outpatient setting, pediatricians must carefully assess nutritional needs in neonates and infants who have transitioned from the neonatal intensive care unit (NICU) to home and in neonates, infants, children, and adolescents with...
nutrition-related diseases or conditions, congenital anomalies, severe acute illness, or injury, and those affected by abuse or neglect.

Feb 27, 2017 - Custom Product Briefs

INOMAX INHALED NITRIC OXIDE (MALLINCKRODT/INO THERAPEUTICS LLC) FOR TREATING PULMONARY HYPERTENSION IN NEONATES

INOMax® inhaled nitric oxide (Mallinckrodt/INO Therapeutics, LLC) is a vasodilator intended to improve oxygenation in term and near-term neonates who have hypoxic respiratory failure. INOMax is usually given at a dose of 20 ppm for up to 14 days or until resolution of oxygen desaturation or when the neonate is ready to be weaned from INOMax therapy.

Feb 24, 2017 - Special HTA Reports

SURGICAL SYSTEMS FOR TREATING PEDIATRIC SCOLIOSIS

This Special Report on Surgical Systems for Treating Pediatric Scoliosis is in the format of a PowerPoint Presentation. Scoliosis is defined as a lateral spinal curvature of 10° or more. Etiology is not known in a large majority of cases. About 2% to 3% of all children meet the criteria for diagnosis.

Jan 25, 2017 - Custom Product Briefs

ETEPLIRSEN (EXONDYS 51) INFUSION (SAREPTA THERAPEUTICS, INC.) FOR TREATING DUCHENNE MUSCULAR DYSTROPHY

Eteplirsen (Exondys 51) is an antisense oligonucleotide of the phosphorodiamidate morpholino oligomer subclass indicated for treating Duchenne muscular dystrophy (DMD) in a subset of patients with a confirmed mutation of the DMD gene that is amenable to exon 51 skipping (an estimated 13% of all patients with DMD). The recommended dose is 30 mg/kg once weekly as an intravenous infusion. Eteplirsen is the only FDA-approved treatment for DMD.

Dec 30, 2016 - Custom Product Briefs

NELLCOR SYSTEMS WITH OXIMAX TECHNOLOGY (MEDTRONIC) FOR NEONATAL PULSE OXIMETRY

Nellcor™ systems with OxiMax™ technology are intended to noninvasively measure arterial oxygen saturation of hemoglobin (SpO2) by measuring light-absorbing changes resulting from arterial blood flow pulsations. Nellcor offers a line of monitors and OxiMax oximetry sensors that can be used for neonatal pulse oximetry.

Dec 30, 2016 - Custom Product Briefs

MASIMO SET TECHNOLOGY (MASIMO CORP.) FOR NEONATAL PULSE OXIMETRY

The Masimo Signal Extraction Technology® (SET®) is intended to provide a noninvasive measurement of SpO2 by measuring light-absorbing changes resulting from arterial blood flow pulsations.

Dec 2, 2016 - Custom Product Briefs

MAGELLAN SAFETY SYRINGES (MEDTRONIC/COVIDIEN LLC) FOR REDUCING NEEDLESTICK INJURIES

Magellan™ safety products (i.e., safety needles, safety needle and syringe combination, insulin safety syringes, tuberculin safety syringes) are intended to prevent accidental needlestick injuries. The products have a shield that encases the entire cannula after activation using a thumb, finger, or flat surface. The needle has an integrated locking mechanism that prevents device deactivation.

Nov 18, 2016 - Custom Product Briefs

MONOJECT SAFETY SYRINGES (MEDTRONIC/COVIDIEN LLC) FOR REDUCING NEEDLESTICK INJURIES

The Monoject™ safety syringes (includes Monoject Insulin, Tuberculin, and hypodermic safety syringes) are intended to prevent needlestick injuries (NSIs) after device use. The syringes have a safety shield that can be extended over the needle for transport, and the needle does not have to be recapped.

Sep 12, 2016 - Custom Rapid Responses

RADIATION EXPOSURE FROM BIPLANE RADIOGRAPHY/FLUOROSCOPY IN CHILDREN WITH CONGENITAL HEART DEFECTS

Radiographic/fluoroscopic (R/F) biplane imaging systems are designed to perform vascular imaging (angiography) during diagnostic and interventional procedures.

Aug 2, 2016 - Custom Rapid Responses
FUNCTIONAL ELECTRICAL STIMULATION FOR REHABILITATION OF CHILDREN WITH CENTRAL NERVOUS SYSTEM DISORDERS OR INJURIES CAUSED...

Functional electrical stimulation (FES) is a rehabilitation technique intended to enhance movement or function of organs, muscles, and extremities by applying electrical currents to peripheral nerves. FES is used during rehabilitation for adults and children with neurologic dysfunction caused by impaired upper motor neuron function, while peripheral nerve function is preserved. Such conditions include spinal cord injury, brain injury, and cerebral palsy.

June 20, 2016 - Custom Rapid Responses

HORMONAL TREATMENT WITH GNRH ANALOGUES TO SUPPRESS PUBERTY IN TRANSGENDER CHILDREN AND ADOLESCENTS

Gonadotropin-releasing hormone (GnRH) analogues (also known as puberty blockers), a synthetic form of human GnRH hormone, can suppress the secretion of luteinizing hormone and follicle-stimulating hormone when taken regularly. GnRH analogues may be administered by injection (monthly or every 3 months) or through a small implant (placed under the skin for up to 12 months).

May 31, 2016 - Custom Product Briefs

VANISHPOINT SYRINGES (RETRACTABLE TECHNOLOGIES, INC.) FOR REDUCING NEEDLESTICK INJURIES

VanishPoint® syringes are intended to prevent needlestick injuries after the device has been used. The VanishPoint syringe has an automatic retraction device that retracts the needle directly from the patient. After the clinician injects the patient, the plunger is depressed to activate the automatic needle retraction system while the needle is still in the patient. The needle automatically retracts into the syringe, rendering the device nonreusable.

May 31, 2016 - Custom Product Briefs

BD SAFETYGLIDE SYRINGES (BECTON, DICKINSON AND CO.) FOR REDUCING NEEDLESTICK INJURIES

The BD SafetyGlide™ syringe is intended to prevent needlestick injuries after device use. The SafetyGlide syringe contains a mechanism that covers the used needlepoint; a cap is pushed up and over the needle to cover it.

February 12, 2016 - Custom Product Briefs

CYTOSCAN DX ASSAY (AFFYMETRIX, INC.) FOR DETECTING CHROMOSOMAL VARIATIONS ASSOCIATED WITH DEVELOPMENTAL DELAY AND INTELLIGENCE...

The CytoScan® Dx Assay is intended to aid diagnosis of children's developmental delay and intellectual disability, congenital anomalies, and dysmorphic features with a high-resolution genome-wide analysis of genetic aberrations. According to the manufacturer, CytoScan analyzes the whole genome in a single assay.

February 2, 2016 - Custom Rapid Responses

CLINICAL INDICATIONS FOR USING BOTULINUM TOXIN IN PEDIATRIC PATIENTS

Botulinum toxins (BTXs) are extremely potent neurotoxins produced by Clostridium botulinum bacteria, of which seven neurotoxins have been identified. BTX Type A has been used to treat various ophthalmologic and neurologic conditions characterized by exaggerated muscle contraction or increased muscle tone. Injection of the toxin into affected muscles can decrease excess muscle activity by inhibiting the neurons that activate the muscle.

January 25, 2016 - Special HTA Reports

GENDER DYSPHORIA

This Special Report systematically reviews clinical studies on gender dysphoria and treatments for this condition to assess their effectiveness and to determine how many of these studies have been approved by an institutional review board (IRB) and to examine the process by which individuals in these subjects are protected.

November 22, 2015 - Custom Rapid Responses

HORMONE THERAPY FOR TREATING GENDER DYSPHORIA IN CHILDREN AND ADOLESCENTS

Gender dysphoria, a marked incongruence between one's experience/expressed gender and assigned gender, may be treated in children and adolescents with hormone therapy designed to suppress puberty or promote the physical characteristics of the desired sex.

July 22, 2015 - Custom Rapid Responses
OUTDOOR BEHAVIORAL HEALTHCARE FOR TREATING ADOLESCENT MENTAL HEALTH DISORDERS

Outdoor behavioral healthcare (OBH), also referred to as wilderness therapy or adventure therapy, is a mental health intervention for adolescents with emotional, adjustment, addiction, and psychological problems. OBH typically involves immersion in the wilderness, group living with peers, individual and group therapy sessions, including backcountry travel and wilderness living skills.

Jul 13, 2015 - Custom Product Briefs

CORTRAK 2 EAS (CORPAK MEDSYSTEMS, INC.) FOR ELECTROMAGNETIC TUBE PLACEMENT FOR ENTERAL FEEDING

The Cortrak® 2 Enteral Access System (EAS)™ is an electromagnetic tube placement system intended to aid and confirm placement of feeding tubes into the stomach or small bowel of patients requiring enteral feeding.

Jun 16, 2015 - Custom Rapid Responses

NEEDLE-FREE INJECTION SYSTEMS FOR ADMINISTERING MEDICATIONS

This Hotline Response examines the clinical literature on the use of needle-free injection systems compared to standard needle and syringe injection methods. Special attention is given to studies reporting pain as an outcome.

Jun 12, 2015 - Custom Rapid Responses

GLUCOSE MONITORING WITH MUTANT VARIANT OF QUINOPROTEIN GLUCOSE DEHYDROGENASE (MUT. Q-GDH) TEST STRIPS IN NEONATES WITH G ...

This Hotline Response looks at the clinical literature on the use of glucose test strips with mutant forms of glucose dehydrogenase-pyrroloquinoline quinone (GDH-PQQ) to estimate plasma glucose levels in neonates, especially infants with galactosemia in which large quantities of galactose in the blood may interfere with GDH-PQQ-based test strips and erroneously indicate hyperglycemic conditions rather than hypoglycemia.

Apr 15, 2015 - Custom Rapid Responses

INHALED PROSTACYCLINS AS ALTERNATIVES TO NITRIC OXIDE FOR TREATING PULMONARY HYPERTENSION IN NEONATES AND CHILDREN

This Hotline Response explores use of inhaled prostacyclins (including epoprostenol, iloprost, and treprostinil) for treating pulmonary hypertension in neonates and children.

Updated: 3/20/2018