Children's Hospital Association

Emergency Department Suite

This suite of Pediatric Learning Solutions (PLS) online courseware and curriculums provides 24/7 access to the foundational knowledge and just-in-time job aids clinicians working in the ED need to understand and care for their pediatric patients and families. Standardized, self-paced learning resources allow educators to focus on application to assist new hires in gaining required knowledge and skills more quickly, improving time to productivity. In addition, educators can add organization-specific information and policies to online topics, creating a personalized solution.

CHILDREN'S HOSPITAL ASSOCIATION

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Emergency Department Suite

Abdominal Emergencies
Acquired Heart Disease in Children
Acute Respiratory Distress Syndrome
Advanced Concepts in Respiratory Physiology
Advanced Medication Calculation
Age-Specific Care for Adolescents
Age-Specific Care for Adults
Age-Specific Care for Infants
Age-Specific Care for Newborns
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Age-Specific Care for School-Age Children
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Anxiety Disorders and Obsessive-Compulsive Disorder
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Arrhythmia Recognition: Analyzing the ECG Rhythm Strip
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Arrhythmia Recognition: Ventricular
Assessment of the Critically Ill Child
Asthma
Attention-Deficit/Hyperactivity Disorder (ADHD)
Basic Medication Calculation
Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation
Blood and Blood Components Administration
Blood Components
Blood Exchange Transfusion
Blood Transfusion Reaction
Care of the Dying Child: Grief

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Care of the Dying Child: The Dying Process
Care of the Pediatric Patient with Suicidal Ideation
Caring for a Child with a Tracheostomy
Caring for the Behaviorally Challenged Patient
Caring for the Pediatric Patient in Shock
Chemotherapy General Principles and Safety
Child Abuse and Neglect
Clinical Delegation
Comprehensive Assessment of the Neonate
Congenital Heart Disease: Acyanotic Defects
Congenital Heart Disease: An Overview
Congenital Heart Disease: Cyanotic Defects
Congestive Heart Failure
Crisis Prevention Through Verbal and Non-Verbal De-escalation Strategies
Cystic Fibrosis
Diabetes Insipidus and SIADH
Diabetes Mellitus
Diabetic Ketoacidosis
Disseminated Intravascular Coagulation
Eating Disorders
EMTALA Overview
Family-Centered Care in the ICU
Fluid and Electrolyte Management: Dehydration
Fluid and Electrolyte Management: Laboratory Assessment
Fluid and Electrolyte Management: Physical Assessment
Fluid and Electrolyte Management: Physiological Differences
Health Care Advance Directives: Communicating Wishes
Healthcare Emergency Management
Hemodynamic Monitoring
Hemophilia: An Overview
High-Alert Medications
HIPAA Overview
Hydrocephalus
Hyperbilirubinemia
Hypoxic Ischemic Encephalopathy
Implementing Trauma-Informed Sensitive Practice
Intimate Partner Violence

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Intracranial Pressure Monitoring and Management
Introduction to Arterial Blood Gas Interpretation
Introduction to Ethics
Introduction to Pediatric Pressure Injury
Lower Airway Diseases
Management of MDROs in the Health Care Setting (Clinical)
Management of Peripheral IV Complications in the Pediatric Patient
Management of the Difficult Airway
Mechanical Ventilation: Introduction to Pediatric Practices
Meconium Aspiration Syndrome
Medication Error Reduction
Meningitis and Encephalitis
Metabolic Disorders of the Newborn
Necrotizing Enterocolitis
Neonatal Pain Assessment and Management
Neonatal Pharmacokinetics
Neonatal Respiratory Distress Syndrome
Neonatal Seizures
Neonatal Sepsis
Nursing Management of Chest Tubes
Oncologic Emergencies
Oppositional Defiant Disorder (ODD)
Organ and Tissue Donation: The Gift of Life
Pain Management: Assessment of Pain
Pain Management: Non-Pharmacological Therapies in the Management of Pediatric Pain
Pain Management: Pain Pathophysiology
Pain Management: Pharmacological Management of Pediatric Pain
Pain Technologies: PCA & Epidural Analgesia
Pediatric Abdominal Trauma
Pediatric Assessment: Performing a Head-to-Toe Assessment
Pediatric Assessment: The Cardiovascular System
Pediatric Assessment: The Gastrointestinal System
Pediatric Assessment: The Genitourinary System
Pediatric Assessment: The Integumentary System
Pediatric Assessment: The Musculoskeletal System
Pediatric Assessment: The Neurological System
Pediatric Assessment: The Respiratory System

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Pediatric Burns
Pediatric Drowning
Pediatric Hematologic Disorders
Pediatric Mood Disorders
Pediatric Orthopedic Trauma
Pediatric Peripheral IV Care & Management
Pediatric Restraints and Seclusion
Pediatric Sepsis
Pediatric Spinal Column/Cord Injuries
Pediatric Stem Cell Transplant
Pediatric Stroke
Pediatric Thoracic Trauma
Pediatric Toxicology Exposure
Pediatric Traumatic Brain Injury
Permanent Pacemakers and ICDs
Pressure Injuries in the Pediatric Population: Staging and Care
Pressure Injury Staging Assessment
Preventing Central Line-Associated Bloodstream Infections
Preventing Ventilator-Associated Pneumonia
Procedural Sedation in the Pediatric Patient
Psychotic Disorders
Radiation Safety
Rapid Sequence Intubation
Renal Failure in the Pediatric Patient
Respiratory Inhalation Medications
Sickle Cell Crisis
Solid Tumors: Brain and Spine
Status Asthmaticus
Status Epilepticus
STEC-HUS
The Deadly Triad of Trauma
Therapeutic Relationships and Professional Behavior
Thermoregulation of the Newborn Infant
Thrombocytopenia: ITP and HIT/T
Trauma-Informed Practice: Concepts, Goals and Key Principles
Tuberculosis
Understanding Abnormal Blood Gases

Emergency Department Suite

Vasoactive Medications
Vicarious Trauma and Self Care

Emergency Department Suite

Abdominal Emergencies (55 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinical Staff Members, Clinicians, Clinicians working in the ED, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurses, Nursing Aides

Abdominal pain, nausea and vomiting are among the most frequent concerns of pediatric patients presenting to primary care or emergency departments. Children with emergent abdominal conditions may present with normal appearance, level of consciousness and work of breathing, making it difficult to differentiate emergent from non-emergent abdominal conditions. Did you know? By age 15, one in three children have seen a physician with the chief complaint of abdominal pain. Abdominal emergencies are those conditions that require careful medical management and rapid interventions to avoid complications. Health care providers who care for infants and children need to know the signs and symptoms, management and treatment of these conditions. This course discusses the most common causes of abdominal emergencies throughout childhood.

Objectives:

- Outline manifestations, causes and risk factors of abdominal emergencies including abdominal compartment syndrome, necrotizing enterocolitis (NEC), Hirschsprung's disease, pyloric stenosis, volvulus, intussusception, appendicitis, abdominal trauma, and the surgical abdomen.
- Differentiate emergent and non-emergent abdominal conditions.
- Summarize the tools used in diagnosing abdominal emergencies.
- Describe medical and surgical management of each specific abdominal emergency.
- Verbalize the components of discharge planning and patient/family education.

Emergency Department Suite

Acquired Heart Disease in Children (54 minutes)

Continuing Education Available: CME 1.00, CNE 1.00

Intended For: Clinicians working in the PICU, Health Care Workers as Applicable, Nurses, Physicians, Residents and Fellows

Acquired heart diseases can develop any time after birth and may be caused by a variety of factors, including infection, genetics, the environment or autoimmune disorders. Often the cause of acquired heart disease is unknown. Acquired heart disease can lead to profound congestive heart failure , signs of decreased cardiac output , myocardial ischemia and even sudden death. The manifestations and possible negative outcomes from these diseases require early recognition and intervention. This module discusses the most common acquired heart diseases in children: Myocarditis Cardiomyopathy Kawasaki disease Rheumatic heart disease

Objectives:

- Compare and contrast the etiology and pathology of myocarditis, dilated cardiomyopathy, Kawasaki disease and rheumatic heart disease.
- Identify the clinical manifestations of myocarditis, dilated cardiomyopathy, Kawasaki disease and rheumatic heart disease in children.
- Describe the management of myocarditis, dilated cardiomyopathy, Kawasaki disease and rheumatic heart disease in children.

Emergency Department Suite

Acute Respiratory Distress Syndrome (46 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Pediatric acute respiratory distress syndrome (PARDS) is a life-threatening condition that results from either direct injury to the lungs or as a systemic response to an indirect injury. It occurs in 15 to 18 percent of all ventilated patients and in approximately one percent of children admitted to pediatric intensive care units. The mortality rate ranges from 20 to 45 percent. This course provides an overview of PARDS and discusses current management standards.

Objectives:

- Define PARDS using the criteria of the Pediatric Acute Lung Injury Consensus Conference.
- Associate the pathophysiology of PARDS to its clinical presentation.
- Recognize the presenting clinical features of PARDS.
- Outline current treatment and management modalities for PARDS.

Emergency Department Suite

Advanced Concepts in Respiratory Physiology (48 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Residents, Residents and Fellows, Respiratory Therapists

It is necessary to understand respiratory physiology and the principles of ventilation to recognize and provide appropriate respiratory support and care to the child in respiratory distress. This course reviews the concepts of respiratory physiology as it relates to all respiratory interventions including mechanical ventilation.

Objectives:

- Describe basic respiratory anatomy and physiology including nervous system controls, the processes involved in respiration and key terms of respiration.
- Discuss gas exchange at the level of the alveoli.
- Explain the role of hemoglobin in delivery of oxygen to the body tissues and physiologic conditions that affect that delivery.
- Identify equations used to evaluate respiration, including the alveolar gas exchange equation, the alveolar to arterial oxygen difference equation and effective tidal volume.
- Identify common causes of hypoxemia and conditions that affect the exchange of oxygen.

Emergency Department Suite

Advanced Medication Calculation (44 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

This course provides a review of how to calculate pump (or infusion) rate of intravenous (IV) fluids and medications that are frequently utilized in high-acuity health care environments. The content focuses on medications ordered as dose over time, administration of continuous and intermittent IV medications and the calculation of pediatric fluid replacement.

Objectives:

- Accurately calculate a medication dosage according to body weight.
- Determine the pump rate of intravenous fluids and medications.
- Accurately calculate fluid requirements for a pediatric patient.
- Calculate the dose being delivered when the rate and concentration are known.

Emergency Department Suite

Age-Specific Care for Adolescents (26 minutes)

Continuing Education Available: CNE 0.50

Intended For: Chaplains, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Respiratory Therapists, Social Workers

This course provides an overview of age-specific growth and development for the adolescent from 12 to 19 years of age. The physical, cognitive and psychosocial needs of the patient and family are discussed. By understanding and incorporating this knowledge into your daily practice, you will be more effective in providing competent care to each adolescent.

Objectives:

- Discuss developmental considerations and age-specific care of the adolescent.
- Identify the physiologic and developmental characteristics of the adolescent.
- Describe the adolescents age-specific needs applied to your daily practice.

Emergency Department Suite

Age-Specific Care for Adults (22 minutes)

Continuing Education Available: CNE 0.25

Intended For: Chaplains, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Respiratory Therapists, Social Workers

This course provides an overview of age-specific growth and development of the adult patient. For the purposes of this course, "adult" is defined as patients 19 years of age and older. By understanding and incorporating the physical, cognitive and psychosocial needs of the adult patient and family into daily practice, the health care team will be more effective in providing competent care to this patient population.

Objectives:

- Discuss growth and developmental considerations of the adult.
- Identify age-specific physiologic and developmental characteristics of the adult.
- Describe age-specific modifications for providing care to the adult patient.

Emergency Department Suite

Age-Specific Care for Infants (26 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinical Staff Members, Clinicians working in the NICU, Clinicians working in the PICU, Health Care Workers as Applicable, Nurses, Occupational Therapists, Rehabilitation Team Members, Respiratory Therapists, Social Workers

This course provides an overview of age-specific growth and development for the infant, from 29 days to 12 months. The physical, cognitive, communication and psychosocial needs of the infant and family are discussed. By understanding and incorporating this knowledge into your daily practice, you will be more effective in providing competent care to the infant population.

Objectives:

- Explain how to provide individualized care based on the developmental needs of the patient/family member.
- State a major developmental consideration and age-specific care issue for the infant 29 days to 12 months old.
- Explain how to incorporate your knowledge of an infant's age-specific needs into your daily practice.

Emergency Department Suite

Age-Specific Care for Newborns (20 minutes)

Continuing Education Available: CNE 0.25

Intended For: Chaplains, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Respiratory Therapists, Social Workers

This course provides an overview of age-specific growth and development for the newborn infant, from birth to 28 days including high-risk neonates. The physical, cognitive and psychosocial needs of the patient and family are discussed. By understanding and incorporating this knowledge into your daily practice, you will be more effective in providing competent care to each infant.

Objectives:

- Discuss developmental considerations and age-specific care of the newborn.
- Identify the physiologic and developmental characteristics of the neonate including the high-risk neonate.
- Describe the newborn infant's age-specific needs applied to your daily practice.

Emergency Department Suite

Age-Specific Care for Preschoolers (21 minutes)

Continuing Education Available: CNE 0.25

Intended For: Chaplains, Health Care Workers as Applicable, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Respiratory Therapists, Social Workers

This course provides an overview of age-specific growth and development for the preschooler from 3 years of age up to 6 years. The physical, cognitive and psychosocial needs of the patient and family are discussed. By understanding and incorporating this knowledge into your daily practice, you will be more effective in providing competent care to preschoolers.

Objectives:

- Discuss developmental considerations and age-specific care of the preschooler.
- Identify the physiologic and developmental characteristics of the preschooler.
- Describe the preschoolers age-specific needs applied to your daily practice.

Emergency Department Suite

Age-Specific Care for School-Age Children (18 minutes)

Continuing Education Available: CNE 0.25

Intended For: Chaplains, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Respiratory Therapists, Social Workers

Age-Specific Care for School-Age Children This course provides an overview of age-specific growth and development for the school-age child from 6 years up to 12 years of age. The physical, cognitive, and psychosocial needs of the patient and family are discussed. By understanding and incorporating this knowledge into your daily practice, you will be more effective in providing competent care to each school-age child.

Objectives:

- Discuss developmental considerations and age-specific care of the school-ager.
- Identify the physiologic and developmental characteristics of the school-age child.
- Describe the age-specific needs of the school-age child applied to your daily practice.

Emergency Department Suite

Age-Specific Care for Toddlers (20 minutes)

Continuing Education Available: CNE 0.25

Intended For: Health Care Workers as Applicable, Nurses

This course provides an overview of age-specific growth and development for the toddler from 12 months to 36 months. The physical, cognitive, and psychosocial needs of the patient and family are discussed. By understanding and incorporating knowledge into your daily practice, you will be more effective in providing competent care to each toddler.

Objectives:

- Discuss developmental considerations and age-specific care of the toddler.
- Identify the physiologic and developmental characteristics of the toddler.
- Describe the toddler's age-specific needs applied to your daily practice.

Emergency Department Suite

Anxiety Disorders and Obsessive-Compulsive Disorder (43 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Health Care Workers as Applicable, Managers, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Anxiety disorders and obsessive-compulsive disorder (OCD) are among the most common mental and/or psychiatric disorders affecting children. Although anxiety disorders and OCD respond very well to treatment, many youths are not getting the treatment they need. Some of these children will present to the hospital setting with behavioral and/or somatic complaints. Left untreated, anxiety disorders can result in significant long-term problems such as substance abuse, depression, suicidal ideation, and educational and occupational underachievement. Therefore, increasing education to identify youth at risk is paramount. This course discusses the symptoms, types, causes, co-morbidities and management strategies associated with anxiety disorders and obsessive-compulsive disorder (OCD) seen in the pediatric population.

Objectives:

- Recognize the symptoms of anxiety disorders and obsessive-compulsive disorder and distinguish the spectrum from developmentally typical versus of clinical concern.
- Differentiate the types of anxiety and related disorders seen in the pediatric population.
- Explain the causes and maintenance factors of anxiety disorders and OCD.
- Discuss the common co-existing medical or psychological conditions that youth with anxiety and related disorders frequently have.
- Outline evidence-based treatments for anxiety, including psychotropic medications and behavioral interventions.
- Outline strategies that parents and caregivers (including clinicians) can use to help promote self-regulation, emotional control and resiliency in the anxious youth.

Emergency Department Suite

Apnea of Prematurity (39 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

Apnea of prematurity (AOP) is a common respiratory occurrence observed in premature infants. Though readily corrected by appropriate clinical interventions, persistent episodes of apnea contribute to prolonged hospitalization and the need for home monitoring. While there are other reasons for apnea in the preterm infant, the focus of this course is on AOP. The course will discuss the pathophysiology, assessment, documentation and current standards of practice for managing apnea of prematurity.

Objectives:

- Define apnea of prematurity (AOP) and differentiate from periodic breathing.
- Describe the three types of apnea.
- Identify common contributing factors to AOP.
- Outline current standards of practice for managing AOP.

Emergency Department Suite

Arrhythmia Assessment (Comprehensive Test) (210 minutes)

Continuing Education Available: CNE 3.50

Intended For: Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Nurses, Outpatient Staff, Physicians, Respiratory Therapists

Managing arrhythmias requires rapid recognition of the rhythm. This course provides the clinician an opportunity to assess competency in arrhythmia recognition. The learner will be presented with various types of arrhythmias. Interpretation of each arrhythmia should be completed using the 5 steps of rhythm interpretation. If you have not completed the Arrhythmia Recognition and Care Management courses (or like program), please do so first—this comprehensive test does not cover the electrophysiology and background of individual arrhythmias. Instead, this test provides an opportunity to analyze and interpret various rhythms presented on a rhythm strip. Job Aid For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Use the 5-step rhythm interpretation method to accurately identify rhythms in the following categories: sinus, atrial, junctional, ventricular, atrioventricular blocks, and paced rhythms.

Emergency Department Suite

Arrhythmia Recognition: Analyzing the ECG Rhythm Strip (49 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Physicians, Residents, Residents and Fellows

To identify a cardiac rhythm, the clinician analyzes the waveforms and segments displayed on a cardiac rhythm strip and compares the findings against "normal" criteria. This module provides a systematic approach to rhythm analysis, allowing accurate identification of both normal and abnormal cardiac rhythms. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Interpret the correct heart rate on given rhythm strips.
- Determine rhythm regularity.
- Identify factors to consider when assessing P waves.
- Describe three potential abnormalities in the PR interval.
- Identify possible causes for a prolonged QRS complex.
- Recognize a normal vs. abnormal QT interval.

Emergency Department Suite

Arrhythmia Recognition: Atrial (86 minutes)

Continuing Education Available: CNE 1.50

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Atrial rhythms result from impulses originating in the atria somewhere other than the sinoatrial (SA) node . These impulses occur as a result of disorders in impulse formation, automaticity or re-entry mechanisms. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Describe the conduction pathway of each atrial rhythm.
- Identify the distinguishing features of each atrial rhythm using the 5 steps of rhythm interpretation.
- Discuss the etiologies of atrial rhythms.
- Summarize the clinical manifestations of each atrial rhythm.
- Identify treatment options available for aberrant atrial rhythms.

Emergency Department Suite

Arrhythmia Recognition: Atrioventricular Blocks (70 minutes)

Continuing Education Available: CNE 1.25

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Health Care Workers as Applicable, Nurses, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Atrioventricular (AV) blocks are not, technically, arrhythmias. Rather, they reflect that the conduction of the electrical impulse as it travels from the sinoatrial (SA) node through the rest of the myocardium has either been delayed or interrupted. These delays or interruptions in conduction result in an atrioventricular block that may be functional or pathological in nature. Failure to identify the conduction disturbance can result in heart failure when heart rates are too low for adequate cardiac output. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Describe the conduction pathway of each atrioventricular block rhythm.
- Identify the distinguishing features of each atrioventricular block rhythm using the 5 steps of rhythm interpretation.
- Discuss the etiologies of atrioventricular block rhythms.
- Summarize the clinical manifestations of each atrioventricular block rhythm.
- Identify treatment options available for aberrant atrioventricular block rhythms.

Emergency Department Suite

Arrhythmia Recognition: Channelopathies (49 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Nurses, Respiratory Therapists

This module discusses inherited arrhythmia syndromes, called cardiac channelopathies, that are caused by dysfunctional ion channels. The discussion will include etiology, triggers, clinical manifestations, significance and treatment of each rhythm. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Describe the pathophysiology of arrhythmias that are due to disturbances of ion movement.
- Summarize the genetic factors and diagnosis of channelopathies.
- Identify the distinguishing features of each arrhythmia caused by a cardiac channelopathy using the 5 steps of rhythm interpretation as well as additional analysis of the ECG.
- Summarize the trigger events, etiology, clinical manifestations and treatment options of each cardiac channelopathy arrhythmia discussed.

Emergency Department Suite

Arrhythmia Recognition: Electrophysiology (32 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Nurses

Cardiac electrophysiology is the process by which heartbeats originate and spread through the myocardium. Understanding basic cardiac electrophysiology is essential to cardiac rhythm interpretation. ?This course reviews basic principles of cardiac electrophysiology, such as the cardiac action potential and mechanisms of cardiac conduction in the different types of cardiac cells. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Name the components of the cardiac conduction system.
- Describe how impulses spread from atrium to ventricle resulting in cardiac contraction.
- Describe the cardiac action potential and how it relates to cardiac contractility and is represented on the ECG.
- Describe the basic mechanisms of arrhythmia formation.

Emergency Department Suite

Arrhythmia Recognition: Junctional (58 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

This module discusses junctional rhythms, or rhythms that do not originate at the SA node, but rather at the AV node or the area surrounding the AV node, called the AV junction. Clinicians will learn the criteria for interpretation, etiology, clinical manifestations and treatment for each rhythm, preparing them for care of the pediatric patient with a junctional arrhythmia. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Describe the conduction pathway of each junctional rhythm.
- Identify the distinguishing features of each junctional rhythm using the 5 steps of rhythm interpretation.
- Discuss the etiologies of junctional rhythms.
- Summarize the clinical manifestations of each junctional rhythm.
- Identify treatment options available for junctional rhythms.

Emergency Department Suite

Arrhythmia Recognition: Just the Basics for the Pediatric Clinician (68 minutes)

Continuing Education Available: CNE 1.25, CRCE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Nurses, Respiratory Therapists

This course provides a very basic introduction to arrhythmia recognition, focusing simply on the bedside clinician's ability to recognize normal versus abnormal rhythms in the pediatric population and to initiate appropriate interventions when needed. Additionally, ST segment elevation recognition and its significance (e.g., STEMI) is discussed.

Objectives:

- Recognize a normal vs. abnormal heart rhythm.
- Intervene as needed when an abnormal heart rhythm is recognized, according to current standards of practice.
- Recognize ST elevation on 12-lead ECG and when it is an immediate emergency.
- Recognize ST-elevation myocardial infarction (STEMI) and implement immediate interventions.

Emergency Department Suite

Arrhythmia Recognition: Lines, Waveforms and Segments (37 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

As an electrical impulse passes through the heart's conduction system, it creates waveforms on the ECG (electrocardiogram). Understanding the characteristics of the normal ECG waveforms will help the clinician identify waveforms that indicate an abnormal conduction pathway. This module provides the clinician with basic information about the various lines, waveforms and segments that are displayed on the cardiac monitor screen in response to cardiac electrical activity. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Identify the P wave, PR segment, PR interval, QRS complex, ST segment, T wave, QT interval and U wave on an ECG tracing.
- Discuss the normal characteristics of each of the following: P wave, PR segment, PR interval, QRS complex, ST Segment, T wave, QT interval and U wave.
- Correlate the lines, waveforms and segments produced on the ECG screen with the electrical events occurring within the heart.

Emergency Department Suite

Arrhythmia Recognition: Structure and Function of the Heart (24 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Interpretation of arrhythmias begins with an understanding of cardiac anatomy and physiology. This introductory module of the Arrhythmia Recognition and Care Management library provides basic information about the structures of the heart and the physiology of cardiac muscle function in relationship to cardiac rhythms. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Identify the structures and function of the heart.
- Describe the characteristics of cardiac muscle cells, both mechanical and electrical.
- Identify the structures and function of the electrical conduction system.
- Describe the effects of sympathetic and parasympathetic nervous stimulation on cardiac cell function.

Emergency Department Suite

Arrhythmia Recognition: The Cardiac Monitor (28 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

While there are many different models of cardiac monitoring systems, the process of tracing the patient's cardiac rhythm is uniform. This module introduces the components, lead systems and output of cardiac monitoring systems. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Explain how the flow of electrical activity in the heart is represented on an ECG.
- Describe common leads used in cardiac monitoring.
- Identify correct electrode placement and application for common leads.
- Identify the function of cardiac monitor components.
- Explain ECG grid measurements.
- Discuss potential monitoring problems and associated solutions.

Emergency Department Suite

Arrhythmia Recognition: Ventricular (83 minutes)

Continuing Education Available: CNE 1.50

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Ventricular arrhythmias do occur in children, although less commonly than supraventricular arrhythmias. While some of these ventricular arrhythmias may be benign, others place the child at high risk for hemodynamic instability and even sudden death. Consequently, the clinician must be able to recognize these arrhythmias and understand their implications. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management courses in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Identify each type of ventricular rhythm using the 5 steps of rhythm interpretation.
- Describe the etiologies of ventricular rhythms.
- Summarize the clinical manifestations of each ventricular rhythm.
- Outline current care standards for treatment and management of ventricular rhythms.

Emergency Department Suite

Assessment of the Critically Ill Child (30 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the PICU, Nurses

This course discusses the criteria and methodology for performing an efficient, yet thorough assessment of the critically ill child. Patient prioritization is also reviewed. The course includes case scenarios in which learners can apply their patient prioritization and assessment knowledge.

Objectives:

- Explain the criteria for performing an effective assessment of the critically ill child.
- Describe the exam components of a rapid, yet thorough assessment of the critically ill child.
- Prioritize a patient assignment and identify the key parameters to assess in the prioritized patient.

Emergency Department Suite

Asthma (46 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Educators, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Asthma is the most common chronic lung disease in children and the primary reason for emergency room visits, hospitalizations and missed days of school. Approximately 9.4% of children in the United States have asthma. This condition results in a narrowing of the airway, and, if not effectively managed, can progress to complete airway obstruction. NATIONAL HEART, LUNG AND BLOOD INSTITUTE (NHLBI) Definition of asthma: A chronic inflammatory disorder of the airway Asthma contributes to: Recurrent exacerbations of respiratory symptoms Chronic inflammation Variable airflow obstruction Airway hyper-reactivity

Objectives:

- Explain the pathophysiology of asthma in children.
- Outline risk factors and clinical presentation of asthma in the pediatric patient.
- Describe diagnostic and management strategies for the pediatric patient with asthma.

Emergency Department Suite

Attention-Deficit/Hyperactivity Disorder (ADHD) (42 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: Child Life Therapists, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the PICU, Nurses, Occupational Therapists, Physical Therapists, Physicians, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Attention-deficit/hyperactivity disorder (ADHD) is a disorder characterized by significant difficulties with inattention, hyperactivity and/or impulsivity. Symptoms of ADHD occur in children prior to the age of 12 although diagnosis can occur so long as symptoms were present prior to the age cutoff. In this course we will review the symptoms and presentation of ADHD, causes, management strategies and development of a plan of care.

Objectives:

- Recognize the symptoms of and continuum of behaviors and deficits in self-regulation the child with ADHD may experience.
- Explain the causes of ADHD.
- Discuss the common co-existing medical or psychological conditions that children with ADHD frequently have.
- Outline the treatment modalities for ADHD, including psychotropic medications and behavior-intervention strategies.
- Individualize an interdisciplinary plan of care and incorporate evidence-based practices specific to the child’s skill sets and staff and patient safety needs.

Emergency Department Suite

Basic Medication Calculation (41 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Graduate Nurses, Nurses, Residents

Health care practitioners have an important role in medication calculation. They must not only perform accurate medication calculations themselves, but also confirm the accuracy of calculations made by colleagues. It is essential that each clinician who has responsibility for ordering, dispensing and/or administering medication is competent in medication calculation. This course provides a review of basic medication calculation including measurement, conversions and dosage calculations.

Objectives:

- Identify common sources of error in medication calculation and related strategies for safe medication delivery.
- Review common conversions and accurately convert simple measurements from one system of weight and measure to another.
- Demonstrate accurate dosage calculation utilizing appropriate methods and rounding guidelines for pediatrics.

Emergency Department Suite

Basic Principles of Oxygen Therapy, Specialty Gases and Noninvasive Ventilation (62 minutes)

Continuing Education Available: CNE 1.00, CRCE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Oxygen is classified as a drug because, like a drug, it has distinct physiologic and biochemical actions, effective dosing ranges and well-defined adverse effects when used in high doses. When used as a therapeutic agent, oxygen plays a decisive role in correcting tissue hypoxia, improving myocardial function and accelerating tissue repair through its antiseptic effect in the anti-inflammatory response. Frequent use of oxygen, in comparison to other therapeutic agents, is due to its easy availability and relatively inexpensive material cost. This course introduces the various modes of oxygen delivery and noninvasive respiratory support measures commonly used to manage the pediatric patient's oxygen needs. The purpose and safe administration of common specialty gases is also discussed.

Objectives:

- Explain the use of oxygen as a therapeutic agent as well as its risks and hazards.
- State the indications, contraindications, and risks of the following modes of oxygen delivery: Nasal cannula, Masks, High-flow nasal cannula.
- Describe the use of CPAP and BiPAP as noninvasive respiratory support modalities for treating oxygen refractory hypoxemia.
- Describe the purpose and safe administration of common specialty gases used in neonatal-pediatric respiratory care.

Emergency Department Suite

Blood and Blood Components Administration (44 minutes)

Continuing Education Available: CNE 0.75

Intended For: Blood Bank Technicians, Graduate Nurses, Nurses, Physicians, Residents

Blood products are used for a wide variety of indications in children. Safe administration of blood and blood components requires strict adherence to proper procedure and close observation of the patient's response. Administration mistakes can be devastating—incompatible blood can cause serious complications and possibly death. This course discusses the proper procedure to follow to ensure safe administration of blood and blood components.

Objectives:

- Identify critical information that must be written in the physician's order.
- Verify essential items when obtaining blood or blood components from the blood bank prior to patient administration.
- List the equipment that must be gathered for the administration of blood and blood products.
- Follow the required steps when infusing blood or blood components.
- Document essential elements in the medical record after the administration of a blood transfusion.

Emergency Department Suite

Blood Components (46 minutes)

Continuing Education Available: CNE 0.75

Intended For: Blood Bank Technicians, Graduate Nurses, Nurses, Physicians, Residents

The administration of blood components is frequently required in the care and treatment of infants and children suffering from a variety of medical, surgical and traumatic conditions. What will you learn about in this course? This course provides an overview of the following essential elements of blood composition: Red blood cells Platelets Fresh frozen plasma Granulocytes Cryoprecipitate Albumin and plasma protein fraction Clotting concentrates Note: Details about irradiation and leukoreduction are also discussed.

Objectives:

- Outline the transfusion indications for each of the seven components found in whole blood.
- Describe the infusion guidelines for the seven blood components.
- Discuss the indications for irradiation and leukoreduction.

Emergency Department Suite

Blood Exchange Transfusion (33 minutes)

Continuing Education Available: CNE 0.50

Intended For: Graduate Nurses, Nurses, Physicians, Residents

An exchange transfusion is the process by which the patient's native whole blood is incrementally removed and immediately replaced by donor blood, either by manual or automated methods. In this course, you'll learn: The purpose and indications for blood exchange transfusion Types and methods Risks and potential complications Equipment and supplies Monitoring, assessment, and documentation requirements

Objectives:

- Describe the indications for exchange transfusions and the types of blood components commonly used.
- Discuss the two types of exchange transfusions and the risks and potential complications.
- List the equipment and supplies required for administering an exchange transfusion.
- Differentiate the two methods of administering an exchange transfusion.
- Discuss the importance of monitoring and identify the required elements to be documented during an exchange transfusion.

Emergency Department Suite

Blood Transfusion Reaction (40 minutes)

Continuing Education Available: CNE 0.75

Intended For: Blood Bank Technicians, Graduate Nurses, Nurses, Physicians, Residents

Despite its life-saving capacity, there are many risks associated with the transfusion of blood or blood components. Clinicians must monitor the child closely for signs of a reaction. Monitoring becomes especially important with children since many children are not able to tell the nurse when they are having a reaction. This course discusses transfusion reactions and nursing actions if a reaction occurs.

Objectives:

- Recognize the seven types of transfusion reactions
- Summarize the cause(s) of each type of transfusion reaction
- Identify the signs and symptoms of each type of transfusion reaction.
- Determine appropriate clinical interventions for a patient experiencing a transfusion reaction.

Emergency Department Suite

Care of the Dying Child: Grief (54 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, PDU 0.50

Intended For: Chaplains, Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows, Social Workers

Understanding the grieving process and the variations of grief responses allows health care team members to provide compassionate care and support throughout the dying process. This course focuses on the experience of parents, grandparents, siblings and friends; however, it's important to note that children with chronic, life-limiting illness also grieve. Additionally, grief impacts professional care givers and the larger community.

Objectives:

- Describe the difference between anticipatory grief, bereavement, and complicated grief.
- Discuss the six grief responses to impending and actual loss.
- State the potential benefits of a trauma-informed approach to end-of-life care.
- Distinguish specific issues related to grieving in fathers and siblings.
- Identify people who may experience disenfranchised grief.

Emergency Department Suite

Care of the Dying Child: The Dying Process (43 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, PDU 0.50

Intended For: Advocates, Chaplains, Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows, Social Workers

This course describes the dying process as experienced by children with life-threatening illnesses. The dying process is a multifaceted journey filled with a wide range of emotions and change. The changes that occur are a normal part of the dying process, but each child and family will follow their own unique path. Understanding the changes that may occur will enable health care providers to deliver compassionate and individualized care to each dying child and his or her family. While the experience of a life-threatening illness is among the common causes of death within the pediatric population, other causes include accidents, assaults, suicide and homicide. Special considerations for unexpected death will also be addressed.

Objectives:

- Discuss concepts of death based upon a child's developmental age/stage.
- Compare how children in various developmental stages may experience change in self-concept throughout the dying process.
- Examine the physical, social, emotional, spiritual and behavioral changes that occur in the four dimensions of dying.
- Utilize select interventions to support the child and family throughout the dying process.
- Describe interventions to support children and families in the event of sudden or traumatic deaths.

Emergency Department Suite

Care of the Pediatric Patient with Suicidal Ideation (67 minutes)

Continuing Education Available: CME 1.25, CNE 1.25, CRCE 1.00, PDU 1.00

Intended For: Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the PICU, Graduate Nurses, Health Care Workers as Applicable, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

The Centers for Disease Control and Prevention (CDC) identified suicide as the second leading cause of death for ages 10 to 24, second only to unintentional injuries. Approximately two million adolescents attempt suicide each year. Suicidal ideation is defined as having thoughts of suicide that may range from a vague wish to die to a specific plan and intent. By being familiar with warning signs, risk factors and screening tools, you can help ensure the interventions needed for the child and family are provided.

Objectives:

- Outline the warning signs, risk factors and screening tools used to identify pediatric patients with suicidal ideation.
- Summarize the strategies presented by The Joint Commission and The American Academy of Pediatrics (AAP) to protect at-risk patients.
- Identify effective therapeutic communication techniques to use with patients with suicidal ideation.
- Describe assessment parameters used to evaluate for medical stability in the patient with suicidal ideation.
- Summarize trauma-informed care strategies to be used in the management of the patient with suicide ideation in the hospital setting.
- Describe medications that may be used with patients with suicidal ideation.
- Outline the options for disposition of the patient with suicidal ideation, including discharge, and the criteria and care considerations for each.
- Outline patient and family care interventions when boarding a patient with suicidal ideation in the ED.

Emergency Department Suite

Caring for a Child with a Tracheostomy (49 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

This course discusses indications for pediatric tracheostomies as well as current management strategies for caring for the child with a tracheostomy.

Objectives:

- Discuss indications for a tracheostomy.
- Discuss possible complications related to tracheostomy.
- Describe proper tracheostomy care, tracheostomy exchange and suctioning technique.

Emergency Department Suite

Caring for the Behaviorally Challenged Patient (41 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: All Hospital Staff, Nurses, Physicians

Children with challenging behaviors, including those with global neurodevelopmental disorders such as autism spectrum disorder (ASD), present a unique set of issues for health care providers. Behaviors such as grabbing, biting, scratching, kicking and slapping, along with self-injury, can present a significant safety risk to staff and the patient, as well as causing distress to other patients, family members and visitors. Challenging behavior that is ineffectively addressed can lead to poor delivery of health care, over-reliance on medications and restraints, and increased stress and burnout in health care providers. This course will discuss some common causes of challenging behaviors and modifications to the plan of care that can reduce incidents of aggression. The course will also review de-escalation strategies that can be used to resolve behavioral challenges.

Objectives:

- Identify common antecedents of challenging behavior in the hospital setting.
- Discuss the unique needs of patients with global neurodevelopmental disorders and the individualized care that can best support them.
- Explain modifications to the plan of care that can prevent or reduce incidents of challenging behavior.
- Describe strategies that can be used to de-escalate challenging behaviors or situations.

Emergency Department Suite

Caring for the Pediatric Patient in Shock (58 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the PICU, Health Care Workers as Applicable, Nurses, Physicians, Respiratory Therapists

Shock is a complex process characterized by decreased tissue perfusion resulting in an inadequate supply of oxygen and nutrients to cells. Many hospitalized children may be at risk for developing shock. Because children have strong compensatory mechanisms, hypotension is often a late and ominous sign of shock. Consequently, clinicians must be able to recognize the pediatric patient at risk for development of shock, differentiate the various types of shock and their associated clinical indicators, and utilize current clinical guidelines to manage the identified shock state.

Objectives:

- Recognize and differentiate obstructive, cardiogenic, hypovolemic and distributive shock.
- Explain the management strategies for each type of shock.
- Follow the pediatric-specific national guidelines for septic shock management.

Emergency Department Suite

Chemotherapy General Principles and Safety (59 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Nurse Practitioners, Nurses, Nursing Aides, Residents

Chemotherapy medications, also referred to as antineoplastics, are used in the treatment of cancer and other diseases. They are effective at treating malignant diseases but can also have some harsh side effects. These agents also have toxic effects on healthy cells, thereby posing a health risk to those involved in their preparation, dispensing and administration. This course discusses the goals and principles of chemotherapy in treating cancer and outlines safety guidelines surrounding administration of the medications.

Objectives:

- Discuss clinical indications for use of chemotherapy in the treatment of cancer.
- Describe the action of chemotherapy agents used both individually and in combination with one another.
- Demonstrate accurate calculation of body surface area.
- Explain administration guidelines, handling and safety precautions, as well as side effects and potential toxicities of chemotherapy.

Emergency Department Suite

Child Abuse and Neglect (67 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, CRCE 1.00, PDU 1.00

Intended For: Advocates, Clinicians working in the ED, Clinicians working in the PICU, Educators, General Staff, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows, Social Workers

Child abuse is a serious threat to the health, safety and well-being of children in this country. It is a sensitive issue that requires careful assessment by healthcare providers. This course discusses the types of child abuse and neglect, including human trafficking, the related indicators and the reporting responsibilities of healthcare providers.

Objectives:

- Explain the most common types of child abuse.
- Outline risks and protective factors for child abuse and neglect.
- Identify possible indicators of sexual abuse and human trafficking.
- Distinguish cultural health practices and conditions that may be confused with abuse when assessing a child for potential maltreatment.
- Recognize individuals who are mandated reporters and discuss the responsibilities of reporting child maltreatment.

Emergency Department Suite

Clinical Delegation (1 hour)

Continuing Education Available: CNE 1.00

Intended For: Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurse Practitioners, Nurses, Nursing Aides, Occupational Therapists, Outpatient Staff, Pharmacists, Physical Therapists, Physicians, Residents, Residents and Fellows

Clinical delegation is a critical component for the health care team working collaboratively to provide quality patient care. Organizational cost-containment strategies, vacant positions, high patient census, increased patient acuity and demographic changes have contributed to the increasing use of assistive personnel in health care settings. This course will help clinicians develop the delegation skills necessary to coordinate and deliver safe, efficient patient care among a health care team that includes assistive personnel.

Objectives:

- Define clinical delegation.
- Describe the importance of appropriate clinical delegation.
- Discuss roles and responsibilities related to clinical delegation.
- Identify strategies to overcome barriers to delegation.

Emergency Department Suite

Comprehensive Assessment of the Neonate (42 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

A clinician must be able to expertly perform initial, comprehensive neonatal assessments. The first opportunity to document well-being or identify abnormalities, this exam can mean the difference between life and death for a neonate. This course discusses three key elements of neonatal assessment: Maternal, family and prenatal history Gestational age assessment Physical examination

Objectives:

- Describe the components of a maternal/family/prenatal history.
- Classify a newborn by gestational age and weight.
- Identify neonatal risk factors based on intrauterine growth patterns and the gestational age assessment.
- List the steps to perform a neonatal head-to-toe physical assessment, utilizing four techniques of physical assessment.
- Discuss normal versus abnormal findings of a neonatal physical exam.

Emergency Department Suite

Congenital Heart Disease: Acyanotic Defects (54 minutes)

Continuing Education Available: CNE 1.00, CRCE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Physicians, Respiratory Therapists

Congenital heart disease (CHD) is a broad group of defects of the heart that are present at birth. Acyanotic diseases are those that do not decrease systemic oxygenation and often do not cause cyanosis. Some defects can be managed with medication, while others may require one or multiple surgeries and some may lead to death. This course discusses the structural and hemodynamic characteristics, manifestations and current treatment options associated with the following defects: Patent ductus arteriosus (PDA) Atrial septal defect (ASD) Ventricular septal defect (VSD) Atrioventricular septal defect (AVSD) Pulmonary stenosis (PS) Aortic stenosis (AS) Coarctation of the aorta (COA)

Objectives:

- Describe the two types of defects that result in acyanotic heart defects.
- Differentiate the structure and hemodynamic characteristics of each defect.
- Discuss the clinical manifestations and diagnosis of each of the acyanotic defects.
- Outline the management strategies for each defect.

Emergency Department Suite

Congenital Heart Disease: An Overview (27 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Residents, Residents and Fellows, Respiratory Therapists

The term congenital heart disease (CHD) describes a diverse group of heart defects present at birth. Many of these defects go unrecognized, while others lead to significant problems soon after birth. Some defects can be managed with medication, some will require surgery, and others may lead to death. Major developments in the recognition and management of children with congenital heart disease has resulted in significant improvements in mortality over the past few decades. This course provides an overview of the embryology and fetal and normal circulation, as well as diagnostic procedures and post-operative care. Additional Courses Additional Pediatric Learning Solutions courses* in the CHD series: Congenital Heart Disease: Acyanotic Defects Congenital Heart Disease: Cyanotic Defects *Note: This module may not be currently available in your organization.

Objectives:

- Discuss identified causes and risk factors of congenital heart disease.
- Describe the characteristics of cyanotic and acyanotic heart defects.
- Identify the components of fetal circulation that change at delivery.
- Describe the normal hemodynamics of postnatal cardiac circulation.
- Identify diagnostic procedures and post-operative complications associated with congenital heart disease.

Emergency Department Suite

Congenital Heart Disease: Cyanotic Defects (67 minutes)

Continuing Education Available: CNE 1.25, CRCE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Physicians, Respiratory Therapists

Congenital heart disease (CHD) is a broad group of heart defects that are present at birth. Cyanotic diseases are those that cause a decrease in systemic oxygenation due to either a shunt or an obstruction. Some defects can be managed with medication, while others may require one or multiple surgeries, and some may lead to death. This course will discuss the structural and hemodynamic characteristics, manifestations and current treatment options associated with the following congenital heart defects that cause cyanosis: Tetralogy of Fallot (TOF) Tricuspid atresia Transposition of the great arteries (TGA) Total anomalous pulmonary venous return (TAPVR) Truncus arteriosus Hypoplastic left heart syndrome (HLHS) Additional Courses This course frequently refers to defects that, when seen in isolation, do not cause cyanosis. In order to be familiar with those defects you may find it helpful to review Pediatric Learning Solutions' *Congenital Heart Disease: Acyanotic Defects. *Note: This module may not be currently available in your organization.

Objectives:

- Describe the two types of defects that result in cyanotic heart defects.
- Differentiate the structure and hemodynamic characteristics of each cyanotic defect.
- Identify the clinical manifestations of each of the cyanotic defects.
- Explain management strategies for each cyanotic defect.

Emergency Department Suite

Congestive Heart Failure (37 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinical Staff Members, Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Managers, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

Children with congestive heart failure (CHF) often present to the hospital acutely ill. CHF is a complex problem requiring a thorough understanding of cardiopulmonary anatomy and physiology. This course discusses the pathophysiology, manifestations and treatment options for children with congestive heart failure.

Objectives:

- Describe the pathophysiology of congestive heart failure in the pediatric patient.
- Differentiate between acute and chronic heart failure.
- Identify manifestations of heart failure in the pediatric patient.
- Discuss management of heart failure in the pediatric patient.
- Recognize the role of nutrition in the management of the pediatric patient with heart failure.

Emergency Department Suite

Crisis Prevention Through Verbal and Non-Verbal De-escalation Strategies (39 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Dieticians, Educators, General Staff, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Crisis situations are common in hospital settings. Some individuals internalize crisis, while others present as verbally or physically aggressive. A crisis can diminish a patient's ability to problem-solve or use coping skills, leading to escalating behaviors. This course discusses behaviors indicative of a patient in crisis and presents de-escalation strategies that can be used to effectively address escalating behaviors.

Objectives:

- Recognize risk factors and signs of escalating behaviors in order to use the least restrictive strategy necessary to resolve the situation.
- Explain the purpose of using verbal and nonverbal de-escalation strategies.
- Describe de-escalation strategies that can be used to help patients regulate their emotions and behaviors.
- Discuss strategies for implementing a team approach to caring for patients exhibiting challenging behaviors.

Emergency Department Suite

Cystic Fibrosis (57 minutes)

Continuing Education Available: CNE 1.00, CRCE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

Cystic fibrosis (CF), a chronic, genetic disease that may affect several body systems but primarily impacts the respiratory and digestive systems. Although medical advances in the past 30 years have improved the length and quality of life for patients with CF, this disease, which impacts children of all races, remains one of the most prevalent, life-shortening hereditary diseases among Caucasian children. This course provides an overview of cystic fibrosis including signs and symptoms, diagnosis, and treatment. Focus will be placed on the prevention of respiratory failure.

Objectives:

- Examine the genetic abnormalities associated with cystic fibrosis.
- Discuss how cystic fibrosis is diagnosed and how the disease impacts organ systems.
- Describe the signs and symptoms, treatment and complications of cystic fibrosis.

Emergency Department Suite

Diabetes Insipidus and SIADH (38 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Diabetes insipidus (DI) and syndrome of inappropriate antidiuretic hormone secretion (SIADH) are two endocrine disturbances that, while rare, can have significant life-threatening implications. These conditions, resulting from vastly different causes, affect the fluid and electrolyte (specifically water and sodium) status of the body and the control of antidiuretic hormone. Cerebral salt wasting (CSW) will also be discussed as it causes sodium imbalances and is sometimes difficult to distinguish from SIADH.

Objectives:

- Describe the role of antidiuretic hormone in the control of water and sodium balance in the body.
- List the causes of diabetes insipidus (DI), syndrome of inappropriate antidiuretic hormone secretion (SIADH) and cerebral salt wasting (CSW).
- Identify the signs and symptoms of DI, SIADH and CSW.
- Discuss the treatment guidelines for DI, SIADH and CSW.
- Describe potential complications of DI, SIADH and CSW.

Emergency Department Suite

Diabetes Mellitus (66 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Dieticians, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

The incidence of type 1 and type 2 diabetes mellitus (DM) is increasing, especially in younger age groups. Effective early management can reduce long-term complications such as vascular disease, renal disease and retinopathy associated with poor glucose control. The pediatric clinician plays a vital role in decreasing complications through recognition of risk factors, early intervention and patient and family support and education.

Objectives:

- Describe the physiologic characteristics of diabetes mellitus.
- Identify the types of diabetes as well as other metabolic conditions that increase risk of hyperglycemia or diabetes.
- Discuss the causes and pathophysiology of type 1 and type 2 diabetes mellitus.
- Describe the therapeutic management of type 1 and type 2 diabetes mellitus.
- Identify education guidelines and priorities for diabetic children and their families.

Emergency Department Suite

Diabetic Ketoacidosis (52 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Diabetic ketoacidosis (DKA) is a potentially life-threatening metabolic disorder that results from a dangerously insufficient amount of insulin in the body, which leads to the breakdown of fat to use as fuel for the body. When this happens, a buildup of acid (or ketones) accumulates in the body, eventually leading to ketoacidosis if left untreated. This condition requires prompt recognition and treatment. DKA is the initial presentation in 25 to 40% of children with newly diagnosed diabetes. While the pediatric mortality rate for DKA is approximately 15 to 30%, secondary complications related to DKA accounts for 60 to 90% percent of deaths, with children under the age of 5 being at highest risk for mortality. This course will review the pathophysiology of DKA, as well as clinical presentation, metabolic disturbances, interventions, and ongoing care for the pediatric patient.

Objectives:

- Explain the pathophysiology and etiology of diabetic ketoacidosis (DKA).
- Describe typical electrolyte disturbances that are associated with DKA.
- Identify the signs and symptoms of DKA.
- Discuss treatment priorities and interventions for DKA.
- Outline the complications of DKA.

Emergency Department Suite

Disseminated Intravascular Coagulation (51 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Health Care Workers as Applicable, Nurses

Disseminated intravascular coagulation (DIC) is a potentially life-threatening systemic disorder of the clotting cascade characterized by the accelerated development of microthrombi and uncontrolled bleeding. DIC can be difficult to recognize, so it is critical for clinicians to have a thorough knowledge of potential risk factors and presenting symptoms. This course discusses hemostasis dysfunction, the pathogenesis of DIC, and effective treatment strategies. Wodzisz - Hope's Blog "Photo courtesy of wodzisz.blogspot.com "

Objectives:

- Describe the hemostasis dysfunction that occurs in DIC.
- Identify clinical conditions and risk factors that may predispose the infant or child to DIC.
- Identify the signs and symptoms associated with acute and chronic DIC.
- Describe the collaborative management and supportive treatment strategies for DIC.

Emergency Department Suite

Eating Disorders (40 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: Chaplains, Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Dieticians, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

The peak onset of eating disorders occurs during adolescence, between 13 and 18 years of age. Up to 90 percent of adolescents with eating disorders report some contact with heath care providers during this time; however, few specifically talked about their eating disorder. Denial, shame and lack of recognition of symptoms by professionals may prevent patients from talking about their eating disorder. This course discusses commonly seen eating disorders in the pediatric population, in addition to treatment, management and potential medical complications. Refeeding syndrome is also discussed, including its risk factors, prevention and treatment.

Objectives:

- Discuss the presentation of the commonly seen eating disorders in the pediatric population.
- Discuss the potential medical complications and common comorbidities associated with eating disorders.
- Outline evidence-based treatments and management of the various eating disorders.
- Explain refeeding syndrome, including the associated risk factors and current prevention and treatment modalities.

Emergency Department Suite

EMTALA Overview (20 minutes)

Intended For: Health Care Workers as Applicable

Under federal law and the provisions of the Emergency Medical Treatment and Labor Act (EMTALA), all patients presenting to a hospital and requesting emergency treatment must receive an appropriate medical evaluation. This course explores the components of EMTALA and its application for hospital personnel including: EMTALA Law Medical screening examinations Stabilizing treatment Appropriate transfers Reporting responsibilities and violations Being surveyed for an EMTALA infraction Penalties associated with described violations

Objectives:

- Explain the history and intent of EMTALA.
- Identify the required elements, including legal obligations, of EMTALA.
- Describe the penalties associated with EMTALA violations.

Emergency Department Suite

Family-Centered Care in the ICU (32 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

The admission of a child to the critical care setting is a traumatic and stressful event for the entire family. By recognizing the typical stressors experienced by pediatric patients and their families and employing appropriate family-centered interventions, the clinician can help families cope and achieve greater patient and family satisfaction. This course discusses the core principles of providing family-centered care to the critically ill child and family.

Objectives:

- Define family-centered care.
- Explain the core principles of family-centered care.
- Identify major sources and symptoms of stress for critically ill children and their families.
- Describe interventions to support families in crisis.
- Select appropriate strategies to facilitate a positive sibling visit.
- Discuss factors that would lead to the involvement of a social worker.

Emergency Department Suite

Fluid and Electrolyte Management: Dehydration (54 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

The most common fluid and electrolyte disturbance in children is a disruption in sodium balance due to dehydration. Dehydration can be isotonic, hypotonic or hypertonic based on the amount of water loss in relation to electrolyte loss. Dehydration can be a serious condition for the young and small child if not recognized early and treated quickly. Understanding and recognizing dehydration in the child will allow you to respond rapidly. What will you learn in this course? Signs and symptoms of dehydration Causes of dehydration Therapy for dehydration

Objectives:

- Describe osmosis as it relates to dehydration.
- Calculate severity of dehydration, fluid deficit and fluid requirements.
- Discuss the four phases of treatment that should be used for managing isotonic, hypertonic and hypotonic dehydration.
- Identify manifestations and causes of hypotonic, isotonic and hypertonic dehydration.
- Outline the treatment guidelines including fluid and electrolyte replacement recommendations for the three types of dehydration.

Emergency Department Suite

Fluid and Electrolyte Management: Laboratory Assessment (53 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Dieticians, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows

Laboratory values, when correlated with physical findings, aid in the accurate recognition of imbalances and the planning of fluid and electrolyte therapy. This course provides a guide for the clinical laboratory assessments that may indicate fluid volume and electrolyte imbalances in pediatric patients. Being familiar with laboratory results that may indicate a fluid or electrolyte imbalance will lead to earlier intervention and improved outcomes for the pediatric patient. We will discuss serum electrolytes, blood urea nitrogen (BUN), serum creatinine, serum protein and hemoglobin and hematocrit. Additionally we will consider urine specific gravity, urine pH and urine ketones.

Objectives:

- Identify laboratory tests used in the assessment of fluid and electrolyte balance.
- Recognize clinical conditions that place the pediatric patient at risk for abnormal serum electrolytes.
- Describe the manifestations of abnormal serum electrolytes.
- Discuss causes of abnormal hemoglobin and hematocrit, BUN, creatinine, serum protein, specific gravity, urine ketones and urine pH as they relate to fluid imbalance.

Emergency Department Suite

Fluid and Electrolyte Management: Physical Assessment (44 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows

Pediatric patients are especially vulnerable to fluid and electrolyte imbalances due to their size, metabolism and increased incidence of acute illnesses. Rapid assessment and early recognition of fluid and electrolyte imbalance can prevent further complications. This course will review alterations in the physical assessment that indicate fluid and electrolyte imbalance in the pediatric patient.

Objectives:

- Identify the alterations in the physical examination that indicate fluid and electrolyte imbalances.
- Discuss guidelines for using weight assessment for identifying fluid and electrolyte imbalances.
- Describe accurate measurement of intake and ongoing losses of fluid and electrolytes.

Emergency Department Suite

Fluid and Electrolyte Management: Physiological Differences (28 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows

Fluid and electrolyte balance is maintained and influenced by a variety of physiologic factors. This course discusses the physiological differences between infants, young children and adults that influence fluid and electrolyte balance. Understanding these differences will assist the pediatric clinician in recognizing when the infant or young child is at risk for fluid and electrolyte imbalance and anticipate the most effective interventions.

Objectives:

- Describe the key physiological factors that influence fluid and electrolyte balance in infants and young children, and how they differ from adults.
- Identify the primary assessment parameters indicative of fluid and electrolyte balance/imbalance in the infant and young child.

Emergency Department Suite

Health Care Advance Directives: Communicating Wishes (32 minutes)

Continuing Education Available: CME 0.50, CNE 0.50

Intended For: Advocates, Chaplains, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Advance directives are legal documents that patients use to convey their wishes about end-of-life care if they should become unable to communicate or make decisions for themselves. If a health care advance directive has been completed by the patient, then health care providers have the legal responsibility to obtain a copy of the document and follow the patient's wishes. This course reviews the types of advance directives patients may have, advance care planning options for minor patients, the responsibility of health care providers, and potential problems encountered when working with a patient with an advance directive.

Objectives:

- Describe the purpose and importance of an advance directive.
- Compare and contrast types of advance directives.
- Discuss advance care planning options for minor patients.
- Outline health care providers' responsibilities related to advance directives.
- Identify common problems encountered when following an advance directive.

Emergency Department Suite

Healthcare Emergency Management (30 minutes)

Intended For: All Hospital Staff

Hospitals play a key role in the communities they serve. Establishing a cohesive healthcare emergency management program is critical in effectively preparing, mitigating, responding and recovering from emergencies and disasters. The key to emergency and disaster response is to be both proactive and reactive. This course will introduce healthcare emergency management. Every employee of a hospital has a role to play during an emergency. By understanding each phase of emergency management and the possible impact of emergencies on healthcare service delivery, you will be better prepared to respond to an emergency. Courtesy of The U.S. National Archives

Objectives:

- Identify the types of emergencies or disasters that could impact your organization.
- Describe the goals and elements of an Emergency Operations Plan.
- Explain how the Hazard Vulnerability Analysis (HVA), Hospital Incident Command System (HICS) and National Incident Management System (NIMS) contribute to emergency planning and response.
- Discuss how the delivery of healthcare services may be impacted by an emergency.
- Outline your role during an emergency.

Emergency Department Suite

Hemodynamic Monitoring (64 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Physicians, Residents, Residents and Fellows

Critically ill children frequently experience variations and fluctuations in vascular pressures that may precede or accompany the development of life-threatening crises. Hemodynamic monitoring allows for changes in a critically ill child's condition to be assessed rapidly and for the early initiation of interventions to restore normal physiological functioning. This course will address the background anatomy and physiology of the circulatory system as it relates to hemodynamic monitoring, indications for use, an introduction to the system components, normal values for hemodynamic monitoring and specific care and troubleshooting aspects of four monitoring systems: intra-arterial, central venous, pulmonary artery and left atrial.

Objectives:

- Discuss the circulatory system and its pressure gradients as they relate to hemodynamic monitoring.
- Identify the components of the pressure monitoring system and describe their functions.
- Explain the purpose and methodology of calibrating the pressure monitoring system.
- Explain the indications, insertion sites, normal values, causes and troubleshooting considerations of abnormal values and waveforms, and potential complications for intra-arterial blood pressure monitoring, central venous pressure monitoring, PA monitoring and LA monitoring.

Emergency Department Suite

Hemophilia: An Overview (58 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Residents

Hemophilia is an X-linked genetic disorder that causes prolonged bleeding due to a deficiency in clotting factors required for hemostasis. This course will review hemophilia types, causes, signs and symptoms, diagnostic evaluation, treatment, management of complications, growth and development considerations and patient and family teaching points.

Objectives:

- Discuss the process of the clotting cascade.
- Differentiate the types and classifications of hemophilia.
- Recognize the clinical manifestations and diagnostic criteria of hemophilia.
- Describe the medication management of a patient with hemophilia.
- Discuss the diagnostic and treatment implications of inhibitors.

Emergency Department Suite

High-Alert Medications (30 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

This course provides an overview of high-alert medications, including the definition of "high-alert" and specific high-alert medications. Common risk factors and strategies to prevent harm and reduce medication errors are also discussed .

Objectives:

- Define high-alert medications.
- Discuss the high-alert medications identified by the Institute for Safe Medication Practices (ISMP).
- Recognize common risk factors and suggested strategies to reduce errors related to high-alert medications.
- Identify “just culture” behaviors relative to the administration of high-alert medications and patient safety.

Emergency Department Suite

HIPAA Overview (45 minutes)

Intended For: All Hospital Staff

Patients have the right to feel confident that their personal health information remains confidential and is only available to those in need who provide for their health care and related services. This course provides an overview of the Health Insurance Portability and Accountability Act (HIPAA) and how the law impacts you and your organization in terms of patient's rights, safeguards to the privacy and security of PHI and the penalties associated with non-compliance.

Objectives:

- Describe the purpose and importance of HIPAA.
- Define and recognize protected health information (PHI).
- Describe patient's rights and staff obligations under HIPAA.
- Identify common methods to safeguard the privacy and security of PHI.
- Summarize individual and organizational consequences for failing to comply with HIPAA.

Emergency Department Suite

Hydrocephalus (33 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Hydrocephalus is a pathological condition caused by an abnormal accumulation of cerebrospinal fluid (CSF) in the ventricles of the brain. For some children, hydrocephalus can be managed by placing a shunt to drain the excess fluid. Other children may suffer chronic symptoms even with the placement of a shunt, potentially causing brain damage and sometimes even death. Occurring in about one in every 500 children, hydrocephalus requires astute assessment and appropriate treatment to save the child's life. This course discusses the clinical aspects and assessment skills necessary to identify and manage both the acute and chronic phases of hydrocephalus.

Objectives:

- Verbalize the causes and pathophysiology of hydrocephalus.
- Differentiate between obstructive and communicating hydrocephalus.
- Describe the clinical manifestations of hydrocephalus.
- Outline the acute and chronic management of hydrocephalus.

Emergency Department Suite

Hyperbilirubinemia (42 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Lab Technicians, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

Indirect bilirubin elevation is a normal physiologic finding in newly born infants, regardless of gestational age. Sixty to eighty percent of all full-term newborns will display jaundice, but only a small amount of these babies will require treatment. Rapidly rising bilirubin or hyperbilirubinemia accompanied by neurologic symptoms is dangerous, requiring rapid evaluation and intervention to prevent permanent neurologic injury. This course will discuss the physiology of neonatal hyperbilirubinemia and its various etiologies, as well as the monitoring, evaluation, and treatment of hyperbilirubinemia in the newborn infant.

Objectives:

- Discuss the physiologic factors associated with the development of hyperbilirubinemia in newborns.
- Explain the risk factors for newborn hyperbilirubinemia.
- Discuss the links between hyperbilirubinemia and breastfeeding.
- Compare and contrast physiologic and pathologic hyperbilirubinemia.
- Summarize the two primary methods of treatment for hyperbilirubinemia, including their complications.
- Differentiate acute bilirubin encephalopathy and bilirubin-induced neurological dysfunction.

Emergency Department Suite

Hypoxic Ischemic Encephalopathy (47 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the NICU, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Occupational Therapists, Physical Therapists, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Hypoxic ischemic encephalopathy (HIE) is a serious condition of the newborn characterized by brain injury due to hypoxia and decreased perfusion that occurs during labor or at delivery. HIE can result in long-term disability or infant mortality. Prompt recognition and treatment of HIE is crucial to improving neonatal outcomes.

Objectives:

- Explain the pathophysiology and identified risk factors of hypoxic ischemic encephalopathy (HIE).
- Describe the clinical presentation of HIE.
- Explain the diagnostic studies used to confirm the presence of HIE.
- Outline the current standards of practice for managing and caring for the neonate with mild, moderate or severe HIE, including therapeutic hypothermia.
- Explain the long-term neurological implications of HIE.

Emergency Department Suite

Implementing Trauma-Informed Sensitive Practice (57 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, CRCE 1.00, PDU 1.00

Intended For: Chaplains, Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Health Care Workers as Applicable, Leaders, Managers, Nurses, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Trauma-informed care increases awareness and sensitivity to the impact of trauma on patients and their families. Trauma-informed care also focuses on acknowledging and minimizing the effects of direct or indirect trauma on health care providers. While you may not know what specific trauma patients and their families have experienced, you may encounter the lasting effects—both physiologic and psychologic—as you work to provide care. This course builds upon the concepts discussed in the Pediatric Learning Solutions' *Trauma-Informed Practice: Concepts, Goals and Principles course by examining how to implement the practices of universally sensitive trauma-informed care. Please review the Trauma-Informed Practice: Concepts, Goals and Principles course first. *Note: This course may not be currently available in your organization.

Objectives:

- Use trauma-informed care practices with all patients and families to engage, empower and partner effectively in creating an individualized plan of care.
- Recognize and respond in a trauma-informed, sensitive manner to symptoms possibly indicative of exposure to a traumatic life event(s).
- Reduce the stress-producing effects of the health care setting on patients, their families and health care providers.
- Engage in strategies to minimize the likelihood of triggering memories of past trauma and causing re-traumatization.
- Identify ways to enable patients and their families to develop and build resilience.

Emergency Department Suite

Intimate Partner Violence (47 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: Advocates, All Hospital Staff, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurses, Nursing Aides, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Intimate partner violence (IPV), also known as domestic violence, is a serious and widespread public health issue. All health care providers, including those working in pediatric settings, must be sensitive to this issue and should carefully and routinely assess patients and family members for signs of violence. This course discusses the prevalence of intimate partner violence, types and indicators of abuse, impact on children, and the related responsibilities of health care providers.

Objectives:

- Define intimate partner violence.
- Explain key elements, signs and symptoms and types of intimate partner violence.
- Describe the impact of intimate partner violence on children.
- Outline health care provider responsibilities related to screening, intervention, documentation and reporting of intimate partner violence.

Emergency Department Suite

Intracranial Pressure Monitoring and Management (49 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working in the PICU, Graduate Nurses, Graduate Nurses, Nurses, Nurses, Physicians, Physicians, Respiratory Therapists, Respiratory Therapists

There are many conditions, illnesses and injuries that can result in increased intracranial pressure (ICP). These conditions often require placement of an intracranial pressure monitoring device for either assessment and/or relief of pressure inside the skull. While children can generally tolerate high pressure for a longer time than adults, an elevated ICP has the potential to severely harm or, if prolonged, be fatal. Appropriate assessment and management of the patient with an ICP monitor is essential to promote favorable outcomes.

Objectives:

- Describe the physiologic process of autoregulation and accommodation in controlling intracranial pressure.
- Discuss specific conditions and situations that require intracranial pressure monitoring.
- Describe the invasive intracranial pressure monitoring system and goal of therapy.
- Discuss several methods of managing intracranial pressure by modifying the blood, brain and cerebrospinal fluid components.
- Describe bedside care of the external ventriculostomy device.

Emergency Department Suite

Introduction to Arterial Blood Gas Interpretation (43 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Proper recognition and management of alterations in respiratory or metabolic status is essential when caring for the pediatric patient. Blood gas interpretation is a key step to diagnose illness and evaluate treatment. This course discusses and provides a methodology by which to assess and interpret blood gas values.

Objectives:

- Identify the normal values for each of the following arterial blood gas components: pH, PCO_2, HCO_3 -, B.E.
- Analyze a blood gas, determine the acid-base balance, ventilation and oxygenation status.
- Explain the two main mechanisms used to regulate the body's acid-base balance, ventilation and oxygenation status.
- Define and differentiate compensated, uncompensated and partially compensated states of acid-base balance.
- Differentiate respiratory acidosis, respiratory alkalosis, metabolic acidosis and metabolic alkalosis.

Emergency Department Suite

Introduction to Ethics (41 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00, PDU 0.50

Intended For: Advocates, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, General Staff, Graduate Nurses, Leaders, Managers, Nurse Practitioners, Nurses, Pharmacists, Physical Therapists, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Navigating ethical issues in clinical settings is not easy, especially in pediatric acute care facilities. Differing values among stakeholders, along with rapid technological advances, can make deciding what is "right" or "wrong" for an individual patient challenging. This course will examine moral dilemmas, offer tools to analyze and work through difficult cases, and discuss resources available to clinicians.

Objectives:

- Describe situations in pediatric facilities that may create ethical issues.
- Discuss core ethical values that may influence medical decision making.
- Apply ethical decision-making frameworks.
- Recognize situations that might require other resources, such as an ethics consultation.

Emergency Department Suite

Introduction to Pediatric Pressure Injury (56 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Occupational Therapists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists

Though the majority of pressure injury research involves the adult population, pressure injuries also affect infants and children. It is important for all members of the health care team to understand the factors involved in pressure injury development and how to prevent them from occurring in at-risk neonatal and pediatric patients. This course includes a review of normal skin anatomy and introduces the risk factors and risk assessment of pressure injury development in the pediatric population as well as related prevention strategies. The content of this course aligns with the Children's Hospitals' Solutions for Patient Safety (SPS) prevention and maintenance bundles.

Objectives:

- Identify characteristics for each stage of pressure injuries.
- Recognize common locations and medical devices associated with pressure injury development.
- Use a risk-assessment tool such as the Braden QD scale to assess for risk factors of developing a pressure injury.
- Implement intervention strategies to reduce risk of pressure injury development.
- Accurately distinguish a Stage 1 pressure injury.

Emergency Department Suite

Lower Airway Diseases (60 minutes)

Continuing Education Available: CNE 1.00, CRCE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Nurse Practitioners, Nurses

Many infants and children are hospitalized due to lower airway diseases. Clinicians can help prevent respiratory complications from lower airway diseases by understanding the pathophysiology, assessing for clinical manifestations and implementing early interventions based on current treatment modalities. This course will review bronchiolitis, pneumonia and respiratory syncytial virus (RSV) and will briefly review asthma.

Objectives:

- Explain the pathophysiology of bronchiolitis and pneumonia in children.
- Outline the clinical presentation for bronchiolitis and pneumonia.
- Describe diagnostic and management strategies for bronchiolitis and pneumonia.

Emergency Department Suite

Management of MDROs in the Health Care Setting (Clinical) (42 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurse Practitioners, Nurses, Nursing Aides, Occupational Therapists, Outpatient Staff, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

The development of antibiotic-resistant bacteria has been a global concern for several years. The emergence of bacteria that are resistant to multiple antibiotics, also called multidrug-resistant organisms or MDROs, are of particular concern in health care today. This course provides a review of MDROs, including the most common pathogens, risk factors for transmission and methods to prevent and control the spread of MDROs.

Objectives:

- Define multidrug-resistant organisms and explain the mechanisms by which they become resistant to antimicrobials.
- List the most common MDROs and describe key characteristics for each organism.
- Identify risk factors for transmission of MDROs.
- Describe the evidence-based practices recommended to prevent and control the spread of MDROs.

Emergency Department Suite

Management of Peripheral IV Complications in the Pediatric Patient (36 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinical Staff Members, Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Nurses, Physicians, Residents, Residents and Fellows

Peripheral intravenous lines (PIVs) play an important role in the treatment of many clinical conditions of the pediatric patient. However, PIVs are not without potential complications. This course provides an overview of PIV assessment and management, including recognition of abnormal PIV assessment findings, identification of the types of PIV complications and the prevention and management of complications. Rapid recognition of complications and appropriate interventions are important in limiting negative patient outcomes.

Objectives:

- Identify assessment findings of the PIV that indicate a complication.
- Describe appropriate interventions and follow-up actions for each identified PIV complication.
- Discuss guidelines for preventing PIV complications.
- Describe documentation of PIV assessment and use of evidence-based assessment scales.

Emergency Department Suite

Management of the Difficult Airway (29 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Physicians, Residents, Respiratory Therapists

A difficult airway is a clinical situation in which a health care provider who is skilled at airway management encounters difficulty with one or more standard methods of managing an airway. While rare in the pediatric population, it is important to recognize anatomical characteristics and conditions that can result in a difficult or failed airway and be prepared to respond with appropriate advanced airway adjuncts.

Objectives:

- Define and differentiate the difficult and the failed airway.
- Outline normal pediatric airway characteristics, as well as congenital and acquired conditions, that predispose a child to potential difficulty in airway management.
- Recognize assessment parameters indicative of potential difficulty in airway management (i.e., oxygenation, ventilation).
- Outline strategies to successfully oxygenate and ventilate the patient with a difficult or failed airway.

Emergency Department Suite

Mechanical Ventilation: Introduction to Pediatric Practices (40 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Residents and Fellows, Respiratory Therapists

Care of the pediatric patient requiring mechanical ventilation requires a thorough understanding of the principles of ventilatory support and in-depth clinical assessment and management skills. Because these patients are often critically ill and have complex needs, the clinician plays a crucial role in providing efficient, effective and holistic care to ensure positive patient outcomes. This course introduces the principles and current pediatric modes of mechanical ventilation. Additional Courses It is recommended to first review Pediatric Learning Solutions' Advanced Concepts in Respiratory Physiology course, which provides an overview of ventilation therapies and application to the care of a child with respiratory dysfunction. *Note: This module may not be currently available in your organization.

Objectives:

- Identify the parameters of mechanical ventilation and how each can be manipulated to improve oxygenation and lung mechanics.
- Describe methods and modes of mechanical ventilation.
- Explain patient assessment criteria and equipment assessment steps to evaluate the effectiveness of mechanical ventilation, including assessment indicators for weaning and extubation readiness.
- Evaluate the role of nitric oxide, surfactant, patient position changes and heliox as adjunct therapies to mechanical ventilation.
- Identify complications of mechanical ventilation and methods of prevention.

Emergency Department Suite

Meconium Aspiration Syndrome (33 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Physicians, Respiratory Therapists

Meconium aspiration syndrome (MAS) is a life-threatening respiratory disorder affecting mostly term and postterm infants. Providing effective care to these infants requires the ability to accurately assess an infant in distress and rapidly initiate an appropriate intervention to correct the underlying cause of distress. This course addresses MAS, including the pathophysiology, risk factors, assessment parameters and current treatment modalities.

Objectives:

- Explain the pathophysiology of meconium aspiration syndrome (MAS) including the mechanical and chemical mechanisms that occur.
- Identify maternal and infant risk factors for the development of MAS.
- Describe the clinical presentation including diagnostic radiographic findings of MAS.
- Outline current interventions used in the prevention and management of MAS.

Emergency Department Suite

Medication Error Reduction (37 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians, Nurses

Various studies have found the delivery of a single dose of medicine requires between 10 and 15 steps, thus making medication delivery an error-prone process. This course discusses the incidence of medication errors and current regulatory standards and identifies prevention strategies used to support a culture of high reliability and to reduce errors.

Objectives:

- Identify phases of the medication administration process where pediatric patients are at increased risk of harm from medication errors.
- Examine sources and types of medication errors.
- Recognize the importance of identifying and reporting medication errors.
- Examine strategies to reduce or prevent medication errors that support a culture of high reliability and safety.

Emergency Department Suite

Meningitis and Encephalitis (43 minutes)

Continuing Education Available: CNE 0.75

Intended For: Graduate Nurses, Nurses

Meningitis and encephalitis are the two most common central nervous system (CNS) infections in the pediatric population. They can lead to permanent neurologic damage or even death. Prompt recognition and intervention are crucial to ensure an optimal outcome.

Objectives:

- Identify the etiology of meningitis and encephalitis.
- Describe the manifestations of meningitis and encephalitis.
- Discuss the methods for diagnosing central nervous system infections in the pediatric and neonatal patient.
- Explain the strategies for managing meningitis and encephalitis.
- Describe the methods of preventing infections of the central nervous system.
- Discuss the potential complications of meningitis and encephalitis.

Emergency Department Suite

Metabolic Disorders of the Newborn (41 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Clinicians working on units with ECG monitoring, Educators, Educators, Nurse Practitioners, Nurse Practitioners, Nurses, Nurses, Pharmacists, Pharmacists, Physicians, Physicians, Residents, Residents, Residents and Fellows, Residents and Fellows

Metabolic disorders of the newborn can result in significant neonatal morbidity and mortality, but early identification and interventions can improve outcomes. This course discusses the initial presentation typically seen with metabolic disorders as well as the role of newborn screening in detection.

Objectives:

- Describe the five categories of metabolic disorders identified in the neonatal period, including the initial presentation.
- Discuss the role of newborn screening for early identification of metabolic disorders.
- Recall the presentation of metabolic disorders in the newborn including findings from the infant and family history, physical assessment, any abnormal odors and laboratory results.
- Identify specific treatment and management strategies for metabolic disorders.
- Explain the necessity of providing parental support and counseling after a positive finding on a newborn screen or diagnosis of a metabolic disorder.

Emergency Department Suite

Necrotizing Enterocolitis (35 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the NICU, Nurses

Premature and low birth weight infants are at high risk for necrotizing enterocolitis (NEC), a life-threatening gastrointestinal emergency. As the presentation of NEC can be acute, with rapid and profound septic shock, careful assessment and the ability to rapidly respond to changes in clinical status are vital to providing timely treatment. This course discusses the pathophysiology, clinical presentation, management and related complications and prognosis of NEC. Given with permission to use by Seattle Children's

Objectives:

- Describe the pathophysiology of necrotizing enterocolitis (NEC).
- Outline the etiology, associated risk factors contributing to the development of NEC and strategies for prevention of the disease.
- Describe the clinical manifestations and lab studies associated with NEC.
- Describe the medical and surgical management for the infant with NEC.
- Outline the complications of NEC including long-term consequences of the disease.

Emergency Department Suite

Neonatal Pain Assessment and Management (42 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

This course discusses assessment and management of neonatal pain. Specifically addressed are the indicators of pain in the neonate population, pain assessment scales and the pharmacologic and non-pharmacologic management of neonatal pain.

Objectives:

- Describe neonatal behavioral and physiological responses to pain.
- Explain considerations for selecting a pain assessment tool for use with neonates.
- Discuss non-pharmacologic pain management interventions and pharmacologic pain management for the neonate.
- Identify interventions for managing procedural pain in the neonate.

Emergency Department Suite

Neonatal Pharmacokinetics (34 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

Pharmacokinetics is the study of what the human body does to metabolize and process drugs. Absorption, distribution, metabolism and excretion of drugs differ in the neonatal population from that of older infants, children and adults. Understanding of these differences is essential for the safe administration of medications in neonates.

Objectives:

- Define key terminology and concepts related to fetal and neonatal development.
- Analyze the differences in neonatal pharmacokinetic absorption, distribution, metabolism and excretion (ADME) as compared to older infants, children and adults.
- Outline specific drug examples that illustrate how differences in ADME may result in altered patient outcomes.

Emergency Department Suite

Neonatal Respiratory Distress Syndrome (35 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Respiratory distress syndrome (RDS) is the most common respiratory disorder in premature and late preterm infants. It occurs due to a deficiency in surfactant, which plays a critical role in keeping small air sacs in the lung open to promote optimal gas exchange. This course discusses the pathophysiology, risk factors, clinical presentation and complications of RDS. Current treatment and management strategies for infants with RDS are also discussed.

Objectives:

- Describe the pathophysiology of respiratory distress syndrome (RDS).
- Recognize the clinical presentation of RDS.
- Outline current treatment and management strategies for RDS.

Emergency Department Suite

Neonatal Seizures (45 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

The onset of seizure activity in the newborn infant represents one of the more emergent and intimidating events the neonatal clinician may need to address. In addition, the appearance of seizures may be very frightening to the parents. This course will provide key information to promote your understanding of neonatal seizures and seizure-related care.

Objectives:

- Explain three underlying etiologies for neonatal seizures.
- Recognize abnormal newborn movements associated with seizures.
- Differentiate the various seizure characteristics that might be observed in neonates.
- Examine differential diagnosis and verbalize understanding of assessment of a newborn with suspected or confirmed seizures.
- Evaluate the goals of clinical management for neonatal seizures. including pharmacological agents used in treatment and their typical administration guidelines.

Emergency Department Suite

Neonatal Sepsis (62 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, CRCE 1.00

Intended For: Nurse Practitioners, Nurses, Respiratory Therapists

Sepsis is a syndrome of inflammatory response that results from an infection in the blood. Sepsis begins when chemicals are released into the bloodstream to fight infection. In neonates, infections may start in the lungs, spinal fluid, or urinary tract. Often, the bedside assessment will reveal important details about the newborn's condition. Recognizing the indicators of neonatal sepsis will assist in prompt treatment and will improve outcomes.

Objectives:

- Identify risk factors that make the newborn infant more susceptible to infection.
- Distinguish between early- and late-onset sepsis in the neonate.
- Recognize the clinical presentation of sepsis in the neonate, including changes in physical exam and vital signs, common infection sites, common organisms, laboratory and diagnostic findings.
- Describe the current standards of care and treatment in the management of neonatal sepsis, including broad-spectrum antimicrobial agents used in the treatments of neonatal infections.

Emergency Department Suite

Nursing Management of Chest Tubes (63 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

This course presents the foundations of chest tube management including indications for chest tubes, how chest tubes function, types of chest tube drainage systems, patient care and troubleshooting potential problems.

Objectives:

- Recognize the indications for chest tube insertion and removal.
- Identify and describe chest tube drainage systems.
- Describe the procedure for chest tube insertion.
- Discuss chest tube management and interventions for emergencies.

Emergency Department Suite

Oncologic Emergencies (52 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the ED, Clinicians working in the PICU, Nurses

Children with cancer are at increased risk for serious and potentially life-threatening complications, either due to the disease itself or treatment of the disease. This course discusses both the early recognition and initial management of these emergencies. Early treatment helps prevent further complications and leads to better outcomes for children with cancer.

Objectives:

- Recognize and describe the management strategies of the following nine most common pediatric oncologic emergencies:
  - Hyperleukocytosis/Leukostasis
  - Tumor lysis syndrome (TLS)
  - Septic shock
  - Disseminated intravascular coagulation (DIC)
  - Anaphylaxis
  - Typhlitis
  - Spinal cord compression (SCC)
  - Superior vena cava syndrome (SVCS)
  - Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

Emergency Department Suite

Oppositional Defiant Disorder (ODD) (39 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, PDU 0.50

Intended For: Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the PICU, Educators, Graduate Nurses, Health Care Workers as Applicable, Managers, Nurses, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

A child with oppositional defiant disorder (ODD) may have behavior that becomes disruptive in the acute care facility. It is important to recognize behaviors associated with ODD and triggers that may escalate negative responses from the child. Throughout this course, you will learn more about the defining characteristics of ODD, factors contributing to the development of ODD, and the most effective management strategies.

Objectives:

- Discuss behaviors associated with oppositional defiant disorder (ODD), including criteria for diagnosis.
- Identify causes and risk factors for oppositional defiant disorder.
- Describe the types of skill sets the child with ODD is lacking as well as triggers for maladaptive behaviors.
- Develop an individualized plan of care for the hospitalized child who has ODD.
- Explain indications for and types of psychotropic medications used for the child with ODD.
- Summarize outpatient therapy practices for the child with ODD.

Emergency Department Suite

Organ and Tissue Donation: The Gift of Life (45 minutes)

Continuing Education Available: CNE 0.75, PDU 0.50

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Nurse Practitioners, Nurses, Residents, Residents and Fellows

Organ and tissue donation is a gift of life for the recipient. It can also help grieving families find meaning or comfort in the death of their loved one. Health care providers who are knowledgeable about organ and tissue donation are key to facilitating the donation process. This course discusses the conditions of participation, organs and tissues that are donatable, and how to assist the family through the donation process. Please, realize it's the family's right to choose! More grief is caused by not offering this option to allow the loved-one's death to have meaning. -A donor family member

Objectives:

- Discuss the history of organ donation and current statistics.
- Explain the Center for Medicare and Medicaid Services (CMS) Conditions of Participation regarding organ donation and transplantation.
- Identify different types of organ donors, including the types of organs and tissues each can donate.
- Describe the unique characteristics of pediatric organ donation and transplantation.
- Discuss roles and responsibilities for initiating the donor process.
- Explain the process for becoming an organ donor.

Emergency Department Suite

Pain Management: Assessment of Pain (50 minutes)

Continuing Education Available: CNE 0.75, PDU 0.50

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Occupational Therapists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists

Evidence-based pain intervention can significantly reduce patient distress, improve the patient experience and help guide care. Pain assessment is the foundation of effective pain management. This course will review the elements of a complete pain assessment, pain intensity scales and the role of clinical judgment in managing patients' pain effectively.

Objectives:

- Identify assessment findings that may indicate pain in the pediatric patient and developmentally disabled pediatric patient.
- State the elements to consider in a pain assessment.
- Describe the pain intensity scales commonly used in assessing children of various levels of development and function.
- Delineate accreditation standards for pain assessment and management.
- Discuss the role of critical judgment in assessing and managing pain.

Emergency Department Suite

Pain Management: Non-Pharmacological Therapies in the Management of Pediatric Pain (39 minutes)

Continuing Education Available: CNE 0.75, PDU 0.50

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Leaders, Managers, Nurse Practitioners, Nurses, Nursing Aides, Occupational Therapists, Outpatient Staff, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists

Non-pharmacological therapies, used in conjunction with pharmacological interventions, can be used to successfully manage children's pain. This course outlines non-pharmacologic pain-management options, including developmentally appropriate pain-management strategies.

Objectives:

- Explain the pain pathway and the role non-pharmacological therapies can have in disrupting that pathway.
- Illustrate the importance of caregiver presence, preparation and positioning for comfort as strategies for pain management.
- Differentiate non-pharmacological therapy strategies from the sensory, cognitive/behavioral and imagery categories.
- Identify developmentally appropriate non-pharmacological therapies for infants, toddlers, preschoolers, school-aged children and adolescents.

Emergency Department Suite

Pain Management: Pain Pathophysiology (36 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians, Nurses, Physical Therapists, Physicians, Residents and Fellows, Respiratory Therapists, Social Workers

Pain affects most pediatric patients at some point during their care. For the health care team, understanding the pathophysiology of pain is essential for proper identification and treatment. This course provides an overview of the types of pain and the underlying pathophysiology, and it examines how pain-management techniques can merge the understanding of both.

Objectives:

- Differentiate between acute and chronic pain.
- Recognize the pathophysiology of how the body senses and processes pain.
- Describe the characteristics of nociceptive pain.
- Define the unique characteristics of neuropathic pain.
- Explain the various pharmacologic and non-pharmacologic methods for treating pain based on pain pathophysiology.

Emergency Department Suite

Pain Management: Pharmacological Management of Pediatric Pain (37 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Pharmacists, Physical Therapists, Physicians, Residents, Residents and Fellows

This course discusses the pharmacological management of pain in children. Analgesics are discussed, including the different medication classes and their role in achieving adequate pain control.

Objectives:

- Define key pharmacology concepts associated with pain control.
- State the indications, mechanism of action and the most common adverse effects of non-opioids, opioids and adjuvants for pain management.
- Differentiate between tolerance, dependence, withdrawal and addiction.
- Recognize the importance of anticipatory guidance for families with children receiving opioid pain medication.
- Describe how to safely dispose of opioid medications.

Emergency Department Suite

Pain Technologies: PCA & Epidural Analgesia (50 minutes)

Continuing Education Available: CNE 0.75

Intended For: Nurses, Physicians

This course discusses the use of patient-controlled analgesia (PCA) and epidural analgesia as methods to provide pediatric pain management safely and effectively. Specifically discussed are advantages and disadvantages of each, patient selection criteria, common medications used, patient assessment and monitoring and corresponding nursing interventions.

Objectives:

- State the advantages and disadvantages of PCA and epidural analgesia.
- Identify patients that are appropriate candidates for PCA or epidural analgesia.
- Discuss medications commonly used for PCA and epidural analgesia.
- Describe appropriate nursing assessments and monitoring, corresponding nursing interventions, documentation and patient/family education for PCA and epidural analgesia.

Emergency Department Suite

Pediatric Abdominal Trauma (46 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the PICU, Graduate Nurses, Nurses

Pediatric abdominal trauma is the third leading cause of traumatic death (after head and thoracic injury) in children. It is the leading cause of unrecognized fatal injury and the leading cause of morbidity. Because pediatric abdominal trauma rarely occurs without other multi-system trauma, these children are often very ill, requiring intensively skilled clinical care and management. This course discusses the anatomical factors that predispose children to abdominal trauma, likely causes of abdominal trauma, the most common injuries, and clinical assessment and management of specific injuries.

Objectives:

- Identify the anatomical factors that increase the risk of abdominal trauma in the child.
- Explain the most common mechanism of injury and recall two types of resulting injuries.
- Describe the primary survey of the child with abdominal trauma.
- List the various types of abdominal injuries and describe the signs and symptoms of these injuries.
- Outline the clinical management of specific abdominal trauma injuries.

Emergency Department Suite

Pediatric Assessment: Performing a Head-to-Toe Assessment (31 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

A systemic head-to-toe assessment, based on the age of the patient, supports a thorough and efficient exam. If a patient shows physical signs or reports problems with a specific body system, a more thorough assessment should be performed.

Objectives:

- Discuss the developmental approach to the pediatric head-to-toe assessment.
- Recognize normal vital sign values and growth parameters.
- Describe the detail and sequence of a head-to-toe assessment based on the child’s age and developmental level.

Emergency Department Suite

Pediatric Assessment: The Cardiovascular System (48 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Graduate Nurses, Health Care Workers as Applicable, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

This course reviews the components of a cardiovascular (CV) assessment in children. While most children have healthy hearts, cardiac conditions in the pediatric patient can be subtle and can go undiagnosed for a period of time. Therefore, it is important to routinely complete a systematic cardiovascular assessment. Completing a thorough CV assessment may also identify risk factors for adult heart disease and allow the clinician to encourage lifestyle changes to promote positive health outcomes.

Objectives:

- Outline the components of the cardiovascular history and physical exam of the pediatric patient.
- Identify normal and abnormal findings of the cardiovascular assessment.
- Develop a systematic approach to assessing heart sounds and differentiating murmurs that may be associated with cardiac defects.

Emergency Department Suite

Pediatric Assessment: The Gastrointestinal System (42 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Dieticians, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows

It is vital that health care providers develop exceptional skills in a gastrointestinal (GI) health assessment and physical exam. GI symptoms can be extremely subjective due to the variation in definitions of symptoms such as diarrhea and constipation. This course describes the skills and knowledge required to perform a comprehensive pediatric GI history and physical assessment as well as the ability to determine normal and abnormal findings.

Objectives:

- Identify the components of a gastrointestinal (GI) history specific to the pediatric patient.
- Discuss age and development-appropriate components of the pediatric GI and nutritional assessment and physical exam.
- Describe normal and abnormal findings of the pediatric GI physical exam.

Emergency Department Suite

Pediatric Assessment: The Genitourinary System (46 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

Assessment of the genitourinary system provides valuable information about a patient's health. However, families and patients, especially adolescents, may be uncomfortable discussing genitourinary symptoms. Health care providers must be competent and sensitive both in obtaining a complete history, and in performing a thorough physical genitourinary assessment.

Objectives:

- Demonstrate a focused review of current genitourinary symptoms as well as medical and family history while maintaining sensitivity and privacy.
- Outline the essential components of a genitourinary assessment in pediatric patients.
- Describe normal and abnormal findings of the pediatric genitourinary exam.

Emergency Department Suite

Pediatric Assessment: The Integumentary System (63 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides

The integumentary system consists of the skin, hair, nails, glands and nerves. Its main function is to be a barrier that protects the body from the outside world, including chemicals, ultraviolet rays, and microbes. It also functions to retain body fluids, eliminate waste products and regulate temperature. This course reviews the assessment skills necessary to identify abnormalities of the integumentary system in children. There is a wide variation in the presentation and treatment of conditions. Therefore, accurate assessment, including a detailed history and physical exam, is extremely important.

Objectives:

- Describe a complete skin assessment and necessary documentation for the pediatric patient.
- Identify normal and frequently seen abnormal findings in the pediatric integumentary exam.
- Discuss presentation of common disorders of the pediatric integumentary system.

Emergency Department Suite

Pediatric Assessment: The Musculoskeletal System (55 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Occupational Therapists, Physical Therapists, Residents, Residents and Fellows

Early detection and treatment of musculoskeletal disorders and skeletal deformities may prolong function and prevent complications. This course discusses the assessment skills necessary to identify abnormalities in a pediatric musculoskeletal exam.

Objectives:

- Identify components of the musculoskeletal system history specific to the pediatric patient.
- Describe normal and abnormal findings of the pediatric musculoskeletal exam and associated conditions.
- Identify essentials of the post-surgical orthopedic assessment.

Emergency Department Suite

Pediatric Assessment: The Neurological System (52 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Nursing Aides, Physicians, Residents, Residents and Fellows

Neurological dysfunction can manifest in almost any body system and may be challenging to diagnose, particularly in infants. A thorough neurological assessment aids in the proper diagnosis and treatment of neurological disease or injury. Neurological injury can result due to trauma, toxins, infection, degeneration, structural defects, tumors, blood flow changes, immune disorders and genetic or metabolic issues. This course reviews the key components of a systematic pediatric neurological exam.

Objectives:

- Identify the components of the neurological system assessment specific to the pediatric patient.
- Describe normal and abnormal findings of the pediatric neurological exam.
- Identify associated findings of a patient with suspected brain injury.

Emergency Department Suite

Pediatric Assessment: The Respiratory System (48 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows, Respiratory Therapists

Respiratory symptoms are one of the most common reasons for an outpatient visit and inpatient admission in pediatrics. Because of this, the skills required for the pediatric respiratory exam are some of the most important when assessing the pediatric patient. This course reviews the key components necessary to provide a thorough pediatric respiratory exam.

Objectives:

- Discuss key elements of a complete history of respiratory illnesses and thorough respiratory assessment.
- Describe clinical manifestations of various respiratory illnesses seen in pediatric patients.
- Recall important signs and symptoms to document as part of the respiratory system assessment.

Emergency Department Suite

Pediatric Burns (51 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurses, Occupational Therapists, Pharmacists, Physical Therapists, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists

In 2020, fire and burn injuries among children ages 0 to 19 resulted in four deaths per week. More than 9,000 children were hospitalized and more than 61,000 were treated and released from the ED. Though pediatric burn mortality has decreased, dealing with long-term body image issues due to scarring and loss of limb mobility is a challenge. However, improvements in skin care and scar revision are continually evolving to help decrease the morbidity of burns. This course discusses types of burn injury, the pathophysiology of burns and the immediate and long-term clinical management of burns.

Objectives:

- List the types and causes of burn injuries that occur in children.
- Describe the anatomy and physiology of the skin as it relates to the pathophysiology of burn injuries.
- Explain patient assessment parameters specific to the pediatric burn patient, including categorization and extent of the burn injury.
- Outline initial and long-term burn-management strategies.
- Design a discharge education plan appropriate for the pediatric burn patient.

Emergency Department Suite

Pediatric Drowning (43 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Nurses, Physicians, Respiratory Therapists

Drowning is the leading cause of death from injury in children 1 to 4 years of age in the United States and the third leading cause of injury death in children 5 to 19 years of age in the United States. It is also a major cause of disability as many survivors will have moderate to severe neurologic complications. Management of the drowning patient should be focused on preventing further anoxic damage and identifying and treating complications. There are three phases of interventions for the drowning patient: Prehospital Emergency department Inpatient care This course discusses a systematic approach to the rapid assessment and management of the drowning patient, both in the emergency department and in the pediatric intensive care unit.

Objectives:

- Define drowning and submersion injury.
- Describe interventions specific to the type of drowning—cold water, warm water, clean water, contaminated water.
- Discuss current management strategies of the drowning victim in the emergency department and PICU.
- Identify indications of deterioration.
- Describe predictors of mortality and outcomes after drowning.
- Outline strategies to prevent drowning in the pediatric population.

Emergency Department Suite

Pediatric Hematologic Disorders (62 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

Hematologic disorders may include problems with red blood cells, white blood cells and platelets. Each of these components of blood have specific roles that help maintain homeostasis. Disorders will result in that component being unable to maintain homeostasis of the hematologic system. Manifestations of disorders of any of these will reflect the role of that component of the blood. This course introduces common disorders of the hematologic system and discusses manifestations and treatment for each.

Objectives:

- Identify common hematologic disorders of red and white blood cells and clotting disorders in the pediatric population.
- Outline the causes, manifestations and treatments of disorders of red blood cells and neutrophils.
- Discuss the presenting manifestations, physical findings and treatments associated with DVT, PE and CVA.

Emergency Department Suite

Pediatric Mood Disorders (55 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, CRCE 1.00, PDU 0.50

Intended For: Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Health Care Workers as Applicable, Managers, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers, Spanish Speaking Staff Members, Volunteers

Children with mood disorders may present in an acute care setting for a variety of reasons and manifestations. It is important for the clinician to recognize the child with a mood disorder no matter why they are being seen. While all children may feel anxious and apprehensive in a medical setting, children with mood disorders are less able to regulate their emotions and adapt to the stressful environment. This course will review assessment, manifestations, treatment and therapeutic strategies for children with depressive and bipolar disorders. By learning more about mood disorders the pediatric clinician will be better prepared to support the child and family with a mood disorder.

Objectives:

- Discuss the importance of identifying mood disorders in a medical setting.
- Define and describe the presentation of the various types of mood disorders typically seen in the pediatric population.
- Identify evidence-based strategies to assess for symptoms of mood disorders, the risk of suicide, and related concerns/issues in youth with mood disorders.
- Outline treatment modalities (psychotherapeutic and pharmacological) for mood disorders in the pediatric population.
- Identify therapeutic strategies to utilize when interacting with the pediatric patient with a mood disorder and the child's family.

Emergency Department Suite

Pediatric Orthopedic Trauma (47 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the PICU, Nurses

Trauma is the number one cause of morbidity and mortality in the pediatric population, with injuries ranging from mild to life-threatening. Diagnosis and management can be challenging in the pediatric population. Future bone growth potential has the biggest impact on treatment choices for pediatric patients versus adult patients. This course provides an overview of the types of orthopedic injuries in children and includes a discussion of the risk factors, assessment parameters, priorities of care, management goals and strategies, and injury prevention education for patients and families.

Objectives:

- Identify the differences between the child and adult musculoskeletal systems.
- Describe the types of traumatic orthopedic injuries most commonly suffered by children.
- Recognize potential life-threatening orthopedic injuries.
- Explain the assessment parameters and management goals specific to pediatric orthopedic injuries.
- Describe strategies to prevent orthopedic injuries in the pediatric population.

Emergency Department Suite

Pediatric Peripheral IV Care & Management (49 minutes)

Continuing Education Available: CNE 0.75

Intended For: Health Care Workers as Applicable, Nurses, Physicians

The peripheral intravenous catheter (PIV) is the most commonly used intravenous device in hospitalized patients. Although PIVs are considered low risk, there can be complications resulting in serious harm. Clinicians should follow the standard of care to protect patients from potential injuries. This course provides an overview of PIV care, including comfort measures, device selection, insertion and securement techniques and assessment parameters.

Objectives:

- Select the appropriate access device based on length of therapy, type of fluids and patient history.
- Describe correct peripheral IV insertion techniques to reduce risks for complications, including infiltration and extravasation.
- Identify PIV securement techniques that promote visualization and stabilization of site.
- Outline assessment parameters used when monitoring PIV sites.

Emergency Department Suite

Pediatric Restraints and Seclusion (53 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, CRCE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Leaders, Managers, Nurse Practitioners, Nurses, Nursing Aides, Outpatient Staff, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows

The use of restraints and seclusion is sometimes necessary for the safety of the patient and staff. However, because there can be risks associated with their use, it is important for the clinician to be familiar with guidelines and safety measures that should be taken when using restraints. This course reviews the Centers for Medicare and Medicaid Services (CMS), The Joint Commission (TJC) and National Integrated Accreditation for Healthcare Organizations (NIAHO®; aka DNV) standards and practice guidelines for the use of restraint and seclusion in the hospital setting. Your state legislature may also have written standards. These standards are designed to protect the patient. Note for Behavioral Health Clinicians This course does not discuss the restraint and seclusion standards specific to the behavioral health care setting. Refer to your organization's policies specific to behavioral health care units and/or CMS's, TJC's or NIAHO's specific accreditation manual (e.g., TJC Comprehensive Manual for Behavioral Health Care), as it applies to your setting.

Objectives:

- Define hospital-setting restraint and seclusion and differentiate from interventions that are not considered restraint.
- Differentiate the purpose and standards of practice for each type of restraint and seclusion.
- Outline the Centers for Medicare and Medicaid Services (CMS), The Joint Commission (TJC) and National Integrated Accreditation for Healthcare Organizations (NIAHO®) standards related to restraint and seclusion use in the hospital setting.
- Identify alternatives to restraint and seclusion.

Emergency Department Suite

Pediatric Sepsis (40 minutes)

Continuing Education Available: CME 0.75, CNE 0.75, CRCE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Pharmacists, Physicians, Residents, Residents and Fellows

Sepsis remains the leading cause of pediatric death worldwide, with reported mortality ranging from 4% to 50%. In the United States, over 75,000 children are hospitalized with sepsis annually, with approximately 7,000 deaths attributed to sepsis each year. Significant life-long morbidity can result for survivors of pediatric sepsis. Health care teams can directly impact sepsis-related morbidity and mortality through early identification and treatment.

Objectives:

- Describe the mechanism of inflammatory response and organ dysfunction present in pediatric sepsis.
- Discuss common causative organisms of pediatric sepsis.
- Recognize patients at risk for pediatric sepsis.
- Outline the clinical manifestations in pediatric sepsis.
- List laboratory and diagnostic tests frequently used in screening for or monitoring of pediatric sepsis.
- Discuss treatment strategies for pediatric sepsis.

Emergency Department Suite

Pediatric Spinal Column/Cord Injuries (53 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Nurses, Rehabilitation Team Members

Traumatic spinal injuries, although not as common as other types of trauma injuries, carry the potential for significant and permanent life-changing consequences. Whether spinal trauma results in a permanent or temporary disability, the physical, emotional and social adaptations that occur during the recovery period present unique challenges to the child, the family and the staff members who care for these children. This course reviews pediatric spinal anatomy, discusses mechanisms of injury and specific injuries that occur, and outlines clinical management during the initial trauma period. The prevention and management of long-term complications that can follow spinal trauma are also reviewed.

Objectives:

- Discuss the anatomy of the pediatric spine and nervous system.
- Describe mechanisms of spinal injury including differences related to age.
- Explain key characteristics of each type of spinal injury.
- Summarize the elements of a comprehensive neurological assessment.
- Describe the primary assessment, immobilization and management priorities for spinal injury.
- Discuss the common secondary complications of spinal injury and the related management strategies.

Emergency Department Suite

Pediatric Stem Cell Transplant (59 minutes)

Continuing Education Available: CME 1.00, CNE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Managers, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

Pediatric stem cell transplant is a treatment option for a number of pediatric disorders. Stem cell transplant may be used when chemotherapy alone does not provide complete treatment for cancers such as leukemia or lymphoma. Stem cell transplant may also be utilized in the treatment of non-cancerous bone marrow diseases such as sickle cell disease, thalassemia, severe aplastic anemia and Kostmann syndrome . This course focuses on the following topics related to pediatric stem cell transplants: Types of stem cell transplants. Indications for stem cell transplants. How to care for the pediatric patient before and after receiving a stem cell transplant.

Objectives:

- Discuss indications for stem cell transplants.
- Describe the various types of stem cell transplants and the sources of stem cells.
- List the conditioning regimens used to prepare patients for stem cell transplants.
- Discuss various toxicities and complications associated with stem cell transplant including manifestations and treatment.
- Identify essential supportive care and long-term follow-up needed for patients undergoing stem cell transplant.

Emergency Department Suite

Pediatric Stroke (72 minutes)

Continuing Education Available: CME 1.25, CNE 1.25

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

When stroke occurs there is a sudden disruption of the blood supply to a part of the brain. This leads to an acute loss of the functions that were controlled by that part of the brain and an onset of neurological signs and symptoms. The disruption of blood supply may be the result of a blood vessel occlusion (ischemic stroke) or blood vessel rupture (hemorrhagic stroke). Pediatric Stroke Care The overall goal of pediatric stroke care is to minimize brain injury and maximize patient functioning . Pediatric health care professionals need to be able to identify, intervene quickly and provide ongoing management for patients who suffer from pediatric stroke.

Objectives:

- Differentiate the types of strokes seen in the pediatric population including risk factors.
- Describe presentation, assessment, including the use of a stroke scale, and diagnostic findings for strokes in the pediatric population.
- Identify conditions that mimic pediatric stroke.
- Outline the interventions indicated during each of the three phases of stroke care: Hyperacute, Acute and Post-acute.
- Explain key teaching points for families and patients experiencing pediatric stroke.

Emergency Department Suite

Pediatric Thoracic Trauma (53 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the PICU, Nurses

Pediatric thoracic trauma requires intense monitoring and diligent clinical management to prevent respiratory compromise, shock and systemic collapse. These injuries are often associated with multi-system trauma. This course discusses typical mechanisms of injury and appropriate assessment and management strategies for various types of thoracic trauma. Photo courtesy of Corey Schwartz, Phoenix Children’s Hospital, Phoenix, AZ

Objectives:

- Describe pediatric thoracic anatomy.
- Discuss the mechanisms of thoracic trauma in children and identify the two types of injuries that result.
- Explain the priorities for primary assessment of thoracic trauma injuries.
- Identify thoracic trauma injuries and describe the signs and symptoms of these injuries.
- Outline the treatment and clinical management steps for specific thoracic injuries.

Emergency Department Suite

Pediatric Toxicology Exposure (39 minutes)

Continuing Education Available: CNE 0.75

Intended For: Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Educators, Graduate Nurses, Managers, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows, Social Workers

Unintentional and intentional exposures to toxic substances continue to be a significant cause of morbidity and mortality in the US. Children younger than six years continue to account for the majority of all human exposures. This course discusses toxic exposures as it pertains to children, including common routes and substances, risk factors, assessment and management of exposure incidences, and prevention strategies.

Objectives:

- Discuss the most common types of exposures, routes and substances of pediatric toxic exposures.
- Describe appropriate stabilization and assessment of patients with suspected or known toxic exposure.
- Recognize toxic syndromes and correlate to the specific class of toxin.
- Explain current management strategies for toxic exposures, including the goals and specific interventions.
- Describe toxic exposure prevention strategies to discuss with parents and caregivers.

Emergency Department Suite

Pediatric Traumatic Brain Injury (49 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Nurses

Caring for a child with a traumatic brain injury is rewarding but difficult. It is our responsibility as clinicians to competently and safely care for these children so they can return to as normal a life as possible. This course discusses pediatric traumatic brain injury (TBI), focusing on the causes and types of injury, as well as current assessment and management strategies.

Objectives:

- Describe the impact of pediatric development and anatomical differences on the incidence of head injury in children.
- Describe the two types of brain injury and list examples of each type.
- Outline assessment strategies for patients with traumatic brain injury.
- Discuss treatment options for patients with traumatic brain injury.

Emergency Department Suite

Permanent Pacemakers and ICDs (66 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Nurses

Pediatric patients may require a permanent pacemaker or implantable cardioverter defibrillator (ICD) for a variety of reasons. This course provides the pediatric clinician with information about the indications for permanent pacing and defibrillator therapy, as well as the components and settings available in a permanent pacemaker and an ICD. Assessment of pacemaker function and troubleshooting problems will also be discussed. For the greatest efficiency and success in understanding arrhythmias, it is recommended that you complete the Arrhythmia Recognition and Care Management course in the sequence listed on the Arrhythmia Recognition Library job aid.

Objectives:

- Describe guidelines for permanent pacing and defibrillator therapy in the pediatric patient.
- Identify the components, settings and functions of permanent pacemakers and implantable cardioverter defibrillators (ICDs).
- Utilize the NBG Pacemaker Code to identify and describe the types of pacing utilized with permanent pacemakers.
- Identify assessments and possible interventions needed for the pediatric patient with a permanent pacemaker or ICD.
- Analyze typical ECG strips with pacing activity.

Emergency Department Suite

Pressure Injuries in the Pediatric Population: Staging and Care (36 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Educators, General Staff, Graduate Nurses, Nurse Practitioners, Nurses, Nursing Aides, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists

Pressure injuries do occur in the pediatric population. Pressure injuries can cause considerable harm and may result in increased length of stay, infection, surgical intervention and sepsis. It is imperative that health care providers know how to accurately assess and stage pressure injuries and to be able to provide appropriate wound care management in order to prevent further injury. This course introduces the learner to the assessment and staging of pressure injuries utilizing the revised National Pressure Injury Advisory Panel (NPIAP) pressure injury staging system. The course reviews the differences between pressure injuries and other types of wounds and reviews wound care management strategies. Additionally, CHA has aligned this content with the Children's Hospitals' Solutions for Patient Safety (SPS) Prevention Bundle to ensure it represents current evidence-based practice.

Objectives:

- Identify pressure injury stages, including unstageable pressure injuries and deep tissue injury (DTI), using the National Pressure Injury Advisory Panel (NPIAP) standards.
- Discuss the elements required to thoroughly document pressure injuries.
- Differentiate pressure injuries from other wound types.
- Describe key interventions when caring for and managing pressure injuries.

Emergency Department Suite

Pressure Injury Staging Assessment (38 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians, Nurses, Physical Therapists, Physicians

This assessment provides staff members the opportunity to practice and verify accuracy in identifying pressure injury stages. Enhanced competency in accurately staging pressure injuries will assist in providing appropriate management strategies. Each test question will have a photograph and description of a pressure injury. Stage each pressure injury in accordance with the National Pressure Injury Advisory Panel's (NPIAP) staging guidelines. Additional Courses Additional Pediatric Learning Solutions courses* you may find helpful: Pediatric Assessment: The Integumentary System Introduction to Pressure Injuries in the Pediatric Population Pressure Injuries in the Pediatric Population: Staging and Care *Note: This module may not be currently available in your organization.

Objectives:

- Accurately stage pressure injury images using the 2019 NPIAP staging guidelines.

Emergency Department Suite

Preventing Central Line-Associated Bloodstream Infections (70 minutes)

Continuing Education Available: CME 1.25, CNE 1.25

Intended For: Health Care Workers as Applicable, Nurses, Physicians, Residents and Fellows

This course presents pediatric-specific, evidence-based practices for central line insertion and maintenance, with a focus on the use of care bundles that promote applying practices simultaneously to better improve patient outcomes. Photo courtesy of Juan Pulido, Children's Health Children's Medical Center Dallas, Dallas, TX These guidelines represent the current evidence practices developed by the Society for Healthcare Epidemiology of America (SHEA), the Infectious Diseases Society of America (IDSA), the Association for Professionals in Infection Control and Epidemiology (APIC), the American Hospital Association (AHA), The Joint Commission (TJC), the Centers for Disease Control and Prevention (CDC) and the Children's Hospitals' Solutions for Patient Safety (SPS).

Objectives:

- Explain the importance of preventing central line-associated bloodstream infections.
- Describe standardized, evidence-based processes for inserting a central catheter.
- Discuss standardized, evidence-based processes applicable to the care and maintenance of a central catheter.
- Recall complications that can occur with CLABSIs.

Emergency Department Suite

Preventing Ventilator-Associated Pneumonia (30 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Though an essential, life-saving therapy for patients of all ages, mechanical ventilation poses risk for various complications. One of these potential ventilator-associated events (VAEs) is pneumonia. Ventilator-associated pneumonia (VAP), deemed a preventable complication, carries a high mortality rate and prolongs both time in the intensive care unit and overall hospital length of stay. This course provides an overview of VAP incidence and causative agents with a detailed discussion of pediatric-specific, evidence-based practices for prevention in the neonatal and pediatric intensive care units.

Objectives:

- Define ventilator-associated pneumonia.
- Outline the criteria for diagnosis of VAP.
- Outline the associated risk factors for development of VAP in the pediatric population.
- Summarize the evidence-based practice standards for the prevention of VAP.

Emergency Department Suite

Procedural Sedation in the Pediatric Patient (64 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Pharmacists, Physicians, Respiratory Therapists

The provision of moderate procedural sedation and analgesia is a specialized skill requiring in-depth knowledge and competency in pre-sedation assessment, the use of related medications, monitoring, maintenance of an airway and advanced life support skills. The American Society of Anesthesiologists has developed guidelines that non-anesthesiologists must follow in order to provide sedation and analgesia. Successful moderate procedural sedation is that which is safe and effective. This course reviews the standards and guidelines for effective and safe moderate procedural sedation and analgesia. The role and responsibilities of those administering this level of sedation is also discussed.

Objectives:

- Discuss the continuum of sedation with attention to patients and procedures that are appropriate for moderate procedural sedation.
- Describe systematic preparation for a sedated procedure, including availability of equipment and personnel.
- Discuss the common pharmacologic agents and dosages used in pediatric moderate procedural sedation.
- Provide comprehensive assessment and monitoring of the pediatric patient prior to, during and after moderate procedural sedation.
- Identify early signs of complications and the emergency procedures to follow if the patient requires resuscitation.

Emergency Department Suite

Psychotic Disorders (35 minutes)

Continuing Education Available: CME 0.50, CNE 0.50, CRCE 1.00, PDU 0.50

Intended For: Chaplains, Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Schizophrenia and psychotic disorders in children have only been recognized as distinct diagnoses since the 1980s. Before this, children were often diagnosed as autistic, developmentally delayed, or with conduct disorder due to the early developmental issues and withdrawn behaviors observed. Psychotic disorders in children are rare but present unique challenges both in diagnosis and management. Throughout this course, you will learn about the manifestations, possible causes, risk factors, diagnosis and treatment of childhood schizophrenia and psychotic disorders.

Objectives:

- Describe the common symptoms and causes of psychotic disorders seen in the pediatric population.
- Differentiate medical causes from psychiatric causes of psychosis.
- Differentiate schizophrenia from other psychotic disorders.
- Discuss assessment and diagnosis of the pediatric patient with psychosis.
- Outline the treatment for psychotic disorders encountered in the pediatric population.

Emergency Department Suite

Radiation Safety (30 minutes)

Intended For: Health Care Workers as Applicable

Medical imaging that uses radiation has led to improvements in the diagnosis and treatments of numerous pediatric conditions. Following proper safety practices is paramount to reducing radiation exposure risks while maintaining the benefits to patient care. This course provides an introduction to radiation use in health care settings and safety measures used to limit employee exposure.

Objectives:

- Explain what radiation is and how it is used in a medical setting.
- Discuss the concept of ALARA.
- Describe work practices that minimize employee exposure to radiation.

Emergency Department Suite

Rapid Sequence Intubation (31 minutes)

Continuing Education Available: CNE 0.50, CRCE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Nurses, Respiratory Therapists

Rapid sequence intubation (RSI) is an airway-management method in which unresponsiveness and muscle paralysis is induced followed by immediate and rapid placement of an endotracheal tube into the airway. What will you learn in this course? This course provides an overview of RSI including indications, medications and the proper sequence of actions.

Objectives:

- Discuss rapid sequence intubation and recognize the indications.
- Contrast rapid sequence intubation to delayed sequence intubation.
- Identify the steps in preparing the patient for rapid sequence intubation including necessary personnel and equipment.
- Compare and contrast medications used for induction and paralysis, including onset of action, duration and side effects.
- Outline the proper sequence to successfully complete a rapid sequence intubation.

Emergency Department Suite

Renal Failure in the Pediatric Patient (57 minutes)

Continuing Education Available: CME 1.00, CNE 1.00

Intended For: Clinicians working in the PICU, Nurses

The kidneys play a vital role in every aspect of human health. The health consequences are significant when disease, illness, trauma or congenital malformations result in the inability of the kidneys to perform their function. This course provides an overview of kidney anatomy, the physiology of kidney function, the signs and symptoms of impaired kidney function, including decreased glomerular filtration rate (GFR) and the subsequent loss of fluid, electrolyte balance, retention of waste products, and treatment options for neonates and children who experience kidney dysfunction.

Objectives:

- Describe the functions of the kidneys.
- Discuss acute kidney injury (AKI) and chronic kidney failure, including common causes of AKI and the classifications used based on anatomical location.
- Identify clinical signs and symptoms of kidney dysfunction.
- Analyze abnormal laboratory values diagnostic of impaired kidney function.
- Identify treatment options for infants and children with acute and chronic kidney failure.

Emergency Department Suite

Respiratory Inhalation Medications (44 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Respiratory Therapists

Many respiratory medications are administered via aerosol, pressurized metered dose inhaler (pMDI) or dry powdered inhaler (DPI) to deliver a prescribed dose directly to the lungs. Other medications used to treat respiratory symptoms are administered topically as an intranasal spray. This course provides the clinician an overview of common medications used in the treatment of pediatric respiratory disease, their therapeutic action, routes of administration and effects on the respiratory system.

Objectives:

- Describe the response of the autonomic nervous system on various organs and its role on airway function.
- Outline factors to consider when selecting the route and delivery device of respiratory inhalation medications for neonatal and pediatric patients.
- Identify indications and side effects of the commonly used respiratory medications.

Emergency Department Suite

Sickle Cell Crisis (33 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Nurses

This course briefly reviews the epidemiology and pathophysiology of sickle cell disease (SCD) and focuses on the presentation and treatment of the most common acute manifestations of the disease, vaso-occlusive crisis and acute chest syndrome.

Objectives:

- Explain the basic physiology of sickle cell crisis.
- Outline the baseline treatment of vaso-occlusive crisis and acute chest syndrome.
- Provide care to the patient in crisis, addressing the following care needs:

  Hydration
  Pain management
  Prevention, monitoring, treatment of infection
  Oxygenation and work of breathing
  Blood transfusion

Emergency Department Suite

Solid Tumors: Brain and Spine (55 minutes)

Continuing Education Available: CME 1.00, CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

Central nervous system (CNS) tumors occur when healthy cells of the brain or spine change and grow in an abnormal way. This results in a tumor that can be malignant (cancerous) or benign (grows but unlikely to spread). This course introduces three common childhood CNS tumors: low-grade gliomas, peripheral primitive neuroectodermal tumors (PNET) and ependymomas. This course also includes information on the signs and symptoms, diagnosis, treatment, nursing management and prognosis of brain and spinal tumors.

Objectives:

- Describe the most commonly seen brain and spine tumors in the pediatric population.
- Outline the signs and symptoms often displayed with brain and spine tumors in the pediatric population.
- Summarize the diagnosis, treatment, management and prognosis of pediatric brain and spine tumors.

Emergency Department Suite

Status Asthmaticus (58 minutes)

Continuing Education Available: CNE 1.00, CRCE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Nurses, Respiratory Therapists

Asthma is the most common chronic illness in childhood and a leading cause of hospitalization. The incidence of asthma in the pediatric population has increased in the past 30 years. While the severity of the disease varies from mild to severe, all patients with asthma are at risk for developing status asthmaticus. Recognizing when manifestations are indicative of worsening asthma allows the clinician to intervene sooner.

Objectives:

- Recognize the presenting signs and symptoms of acute asthma exacerbation.
- Use an evidence-based clinical scoring system to detect acute exacerbation of asthma in the pediatric patient.
- Outline the medical management of status asthmaticus or severe acute asthma exacerbation across the continuum of care, as the patient transitions from the ED to the PICU.
- Describe respiratory support strategies to manage the airway needs of a pediatric patient with severe acute asthma exacerbation or status asthmaticus.
- Assess the effectiveness of treatment and the patient's readiness to wean.

Emergency Department Suite

Status Epilepticus (67 minutes)

Continuing Education Available: CME 1.00, CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses

In pediatric patients, status epilepticus (SE) is the most common neurological reason for an emergency room visit. It is a serious health issue requiring prompt recognition and immediate treatment. Status epilepticus has an overall mortality of 3 percent in children. The highest incidence of SE occurs in children less than 2 years of age. This course will discuss Seizure etiology, Seizure pathophysiology, Common types of seizure activity and Acute management of pediatric status epilepticus.

Objectives:

- Discuss the pathophysiology and etiology of status epilepticus.
- Describe common types of seizure activity during status epilepticus.
- Outline the assessment and acute management of status epilepticus including supportive measures and pharmacologic interventions.

Emergency Department Suite

STEC-HUS (29 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Graduate Nurses, Nurse Practitioners, Nurses

Hemolytic uremic syndrome (HUS) is a condition that occurs when damaged RBCs clog the glomeruli. HUS is the most common cause of acute kidney injury in children. Although several conditions can cause HUS, the most common cause in children is Shiga toxin-producing Escherichia coli , or STEC. STEC-HUS can cause diarrhea, intestinal bleeding and damage to kidney cells. What will you learn in this course? This course introduces STEC-HUS, including its pathophysiology, manifestations, diagnosis and management.

Objectives:

- Outline the pathophysiology of Shiga toxin-producing *Escherichia coli*-associated hemolytic uremic syndrome (STEC-HUS) and its triad of characteristics—thrombocytopenia, hemolytic anemia and acute renal failure.
- Describe the clinical presentation of STEC-HUS.
- Summarize the assessment and diagnostic parameters associated with STEC-HUS.
- List the potentially life-threatening complications that may occur with STEC-HUS.
- Outline current management and treatment modalities for STEC-HUS.
- Design a patient and family education discharge plan that includes key information and related prevention measures.

Emergency Department Suite

The Deadly Triad of Trauma (38 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the ED, Clinicians working in the PICU, Nurses

Trauma—any external force applied to the body that results in tissue injury—can result in injuries ranging from mild to life-threatening. Termed the "deadly triad of trauma," the combination of hypothermia, acidosis and coagulopathy is a response to trauma that can lead to death. This deadly triad creates a vicious cycle of worsening bleeding (due to coagulopathy), decreased oxygenation (due to acidosis) and continued decreasing body temperature (due to hypothermia), ultimately resulting in a downward spiral to death. This course discusses the three components of the deadly triad of trauma, including manifestations and resuscitation interventions.

Objectives:

- List the three components of the deadly triad of trauma.
- Identify contributing factors and manifestations of hypothermia in a trauma patient.
- Identify contributing factors and manifestations of acidosis in a trauma patient.
- Identify contributing factors and manifestations of coagulopathy in a trauma patient.
- Explain assessment and resuscitation interventions for preventing/treating the deadly triad of trauma.
- Outline continued care interventions and monitoring of patients at risk for developing the deadly triad of trauma.

Emergency Department Suite

Therapeutic Relationships and Professional Behavior (35 minutes)

Continuing Education Available: CME 0.50, CNE 0.50, PDU 0.50

Intended For: Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Leaders, Managers, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows

The National Council of State Boards of Nursing (NCSBN) states that a “therapeutic nurse-patient relationship protects the patient’s dignity, autonomy and privacy and allows for the development of trust and respect.” The complexity of the health care environment can make it challenging to establish therapeutic relationships with pediatric patients and families. This module will identify the characteristics of a professional, therapeutic clinician-patient relationship as well as strategies for identifying and avoiding inappropriate behaviors and relationships.

Objectives:

- Describe therapeutic relationships between health care providers and those under their care, including the phases of developing a relationship.
- Discuss the continuum of professional behavior and consequences of boundary crossings and boundary violations.
- Recall professional obligations required of the health care professional when participating in social media networking.
- Identify behaviors with patients and families that reflect the concepts of therapeutic relationships, boundary crossings and boundary violations.

Emergency Department Suite

Thermoregulation of the Newborn Infant (41 minutes)

Continuing Education Available: CNE 0.75

Intended For: Clinicians working in the NICU, Educators, Nurse Practitioners, Nurses, Physicians, Residents, Residents and Fellows, Respiratory Therapists, Volunteers

This course provides the clinician with the knowledge to provide the newborn a neutral thermal environment that will reduce the risks of cold stress and hyperthermia. Additionally, management strategies for these conditions will be presented.

Objectives:

- Summarize the physiology of temperature regulation in the newborn.
- Differentiate the mechanisms of heat transfer and interventions to prevent heat loss.
- Compare and contrast risk factors related to cold stress and potential management strategies.
- Identify the signs of cold stress and hyperthermia.
- Describe appropriate interventions to provide a neutral thermal environment for the newborn infant.

Emergency Department Suite

Thrombocytopenia: ITP and HIT/T (24 minutes)

Continuing Education Available: CNE 0.50

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Nurses

Thrombocytopenia is a condition characterized by a decreased number of platelets in the blood. This course reviews the risk factors, presenting signs and symptoms, diagnosis and treatment of two types of thrombocytopenia--immune thrombocytopenia purpura (ITP) and heparin-induced thrombocytopenia/thrombosis (HIT/T). With this information, clinicians can recognize thrombocytopenia and provide appropriate interventions to result in the best outcomes for patients.

Objectives:

- Define platelets, thrombocytopenia, immune thrombocytopenia purpura (ITP) and heparin-induced thrombocytopenia/thrombosis (HIT/T).
- Describe at-risk populations, presenting signs and symptoms, diagnostic testing and treatment for ITP.
- Identify at-risk populations, presenting signs and symptoms, diagnostic testing and treatment for HIT/T.

Emergency Department Suite

Trauma-Informed Practice: Concepts, Goals and Key Principles (62 minutes)

Continuing Education Available: CME 1.00, CNE 1.00, CRCE 1.00, PDU 1.00

Intended For: Chaplains, Child Life Therapists, Clinical Staff Members, Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Dieticians, Graduate Nurses, Health Care Workers as Applicable, Leaders, Managers, Nurses, Nursing Aides, Occupational Therapists, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Traumatic stress is widespread and harmful. Whether from violence, abuse, neglect, loss, disaster, war or any other emotionally harmful experience, such trauma can have lasting physiologic and psychologic effects. We might not be aware of the various traumatic stress our patients and families may or may not have experienced, therefore it is important to treat all individuals in a trauma-informed manner. This course discusses types of traumatic stress, the effect of traumatic stress and the principles and components of a trauma-informed practice. Trauma-informed care emphasizes physical, psychological and emotional safety for all individuals, including your patients, families and the health care team.

Objectives:

- Define trauma-informed practice.
- Explain the purpose, concepts and goals of providing trauma-informed care.
- Outline the types of traumatic life events and toxic stress individuals may have experienced.
- Explain the stress response and impact of traumatic life experiences.
- Outline the principles of trauma-informed practice.

Emergency Department Suite

Tuberculosis (54 minutes)

Continuing Education Available: CME 1.00, CNE 1.00

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, Graduate Nurses, Managers, Nurse Practitioners, Nurses, Residents, Residents and Fellows

Tuberculosis (TB) is the leading cause of death among curable infectious diseases. One third of the world's population is infected with TB and approximately ten million people become sick with TB disease each year. Infants and children less than 5 years old are at higher risk of developing life-threatening forms of TB disease (e.g., TB meningitis or disseminated TB). Among children, TB cases are most often seen in children less than 5 years of age and in adolescents older than 10 years of age. In this course, you will learn about the pathogenesis, transmission, diagnosis, and treatment of TB. You will also learn how to prevent and control the spread of the disease.

Objectives:

- Differentiate latent TB infection (LTBI) and active TB disease, including risk factors, symptoms, evaluation, diagnosis and treatment.
- Describe the four factors affecting TB disease transmission.
- Outline the three components of infection-control used to decrease the transmission of TB disease.

Emergency Department Suite

Understanding Abnormal Blood Gases (42 minutes)

Continuing Education Available: CNE 0.75, CRCE 1.00

Intended For: Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Nurses, Respiratory Therapists

Children with respiratory compromise can experience rapid deterioration. A critical tool for recognizing respiratory distress and implementing timely interventions is the arterial blood gas (ABG). This module presents scenarios that should be used by the clinician to apply existing knowledge in anticipating, interpreting and managing abnormal blood gases. It does not provide the foundational information about ABG interpretation that is needed to complete the scenarios—the learner should have completed the module Introduction to ABG Interpretation or otherwise have a basic understanding of ABG analysis and interpretation prior to attempting the case studies presented in this module. Additional Courses If you are new to arterial blood gas interpretation, you should complete the following two Pediatric Learning Solutions' courses or already have a basic understanding of ABG interpretation before attempting the case studies presented in this module. These modules will provide you with the content needed to apply to the case scenarios. Advanced Concepts in Respiratory Physiology Introduction to Arterial Blood Gas Interpretation *Note: These courses may not be currently available in your organization.

Objectives:

- Evaluate and correctly interpret blood gas values presented in the case studies.
- Select appropriate interventions based on the interpretation of the presented patient's blood gas values and context of the patient story.

Emergency Department Suite

Vasoactive Medications (53 minutes)

Continuing Education Available: CNE 1.00

Intended For: Clinicians, Clinicians working in the NICU, Clinicians working in the PICU, Graduate Nurses, Nurses, Pharmacists, Physicians, Residents, Residents and Fellows

At times, critically ill children may require resuscitation and/or support of their cardiovascular systems. Vasoactive medications play a significant role in the treatment of children with such needs. This course provides an overview of the various vasoactive agents and their effects.

Objectives:

- Compare the effects produced on alpha- and beta-adrenergic receptors.
- Identify clinical situations for the use of vasoactive medications.
- Outline the characteristics of inotropic medications, including indications for use, dosage, adverse reactions and nursing implications.
- Outline the characteristics of vasopressor and vasodilator medications, including indications for use, dosage, adverse reactions and nursing implications.

Emergency Department Suite

Vicarious Trauma and Self Care (30 minutes)

Continuing Education Available: CME 0.50, CNE 0.50, CRCE 1.00, PDU 0.50

Intended For: Clinicians, Clinicians working in the CVICU, Clinicians working in the ED, Clinicians working in the NICU, Clinicians working in the PICU, Clinicians working on units with ECG monitoring, Educators, General Staff, Graduate Nurses, Leaders, Managers, Nurses, Nursing Aides, Occupational Therapists, Outpatient Staff, Pharmacists, Physical Therapists, Physicians, Rehabilitation Team Members, Residents, Residents and Fellows, Respiratory Therapists, Social Workers

Vicarious trauma frequently impacts health care workers as they care for individuals who have experienced a traumatic event. Clinicians are especially vulnerable to vicarious trauma as they may be caring for individuals every day that have experienced trauma. This type of chronic trauma in the health care provider can lead to lower employee satisfaction and employee burnout and can have negative impacts on patient care. It can also cause anxiety, depression and in worst cases death by suicide. This course introduces the concept of vicarious trauma and how it affects the lives of health care workers every day. Additional information includes: Signs and triggers of vicarious trauma Individuals at risk of experiencing vicarious trauma What vicarious trauma looks like in those who experience it Strategies for health care providers to use when at risk for or experiencing vicarious trauma

Objectives:

- Describe vicarious trauma including the triggers and risk factors.
- Describe how vicarious trauma impacts individuals both physically and emotionally.
- Discuss strategies used to minimize or prevent the effects of vicarious trauma, including self-care techniques, peer support, building resilience and practicing mindfulness.