



Pediatrics

*Specialty Courses
for Phlebotomists*



National Center for
Competency Testing

7007 College Boulevard, Suite 385 | Overland Park, Kansas 66211
www.ncctinc.com | t: 800.875.4404 | f: 913.498.1243

Pediatrics Specialty Certificate Course For Phlebotomists

By Sheryl Whitlock, MA MT(ASCP) BB

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NCCT is continually refining and creating professional development products for all certified allied health professionals. We are committed to your success. This mini course was designed to help healthcare professionals understand and provide superior service to children.

The course is divided into chapters. There is an open-book quiz at the end of every chapter to help you assess your understanding of that chapter's material. Upon completing all the chapters, you can access this mini course's final examination on-line at NCCT's website, www.ncctinc.com. Proceed to the *Testing* section, and choose the *CE Test Login* option, and log in. Choose the *Pediatrics for Phlebotomists Final Exam*.

Seventy per cent or better is considered a passing grade for this course. Upon passing the course's final exam you will receive a Specialty Certificate and a sticker from NCCT signifying that you have successfully completed this course. This sticker should be placed in your NCCT *Professional Development Log Book*. You will also receive five clock hours of continuing education credit and the course title will be placed on your *NCCT Continuing Education Transcript*.

Acquiring new skills and pursuing additional knowledge in your career field has always been the hallmark of a true professional. Read, learn, and most importantly, enjoy your profession more. Your new knowledge will not only increase your competence and importance to your team, but will also increase your own self-assurance in your ability and work.

Learning Outcomes

Upon completion of the Competence Certificate Course, the professional will be able to:

1. Define pediatrics
2. Differentiate the ages and factors used to categorize the stages of childhood
3. Outlines and describes appropriate blood collection devices for use in pediatric settings
4. Describes appropriate collection containers for use in pediatric settings
5. Applies appropriate collection methods to specific test methods and the stages of childhood.
6. Lists specimen collection problems associated with pediatric patients
7. Discusses pre-analytical variables associated with pediatric phlebotomy
8. Describes issues associated with specimen quality in the pediatric patient
9. Discusses the emotional impacts of blood collection on pediatrics patients
10. Describes age-appropriate pain assessment
11. Outline tools and methods for alleviating stress of the pediatric patient during phlebotomy
12. Discuss parental involvement with pediatric specimen collection
13. List phlebotomy-related injuries among the pediatric age-group populations
14. Discuss prevention of phlebotomy-related injuries among the pediatric age-group populations.

Disclaimer

The writers for NCCT Competence Certificate Courses attempt to provide factual information based on literature review and current professional practice. However, NCCT does not guarantee that the information contained in these educational courses is free from all errors and omissions.

Chapter 1 Definition of the Pediatric Population

The delineation of an age specific population is important in health care. The designation of age-specific treatment modalities helps to provide appropriate health care globally. Pediatrics is an especially delicate area in which provision of treatment and timely accomplishment of care-related goals is imperative. The emotional stakes are high and positive outcomes are expected in 100% of diagnoses and treatment regimens. Health care professionals that compose the pediatric care team must operate on the same parameters with regard to provision of rapid age-appropriate care for pediatric all patients.

The development of age-related criteria for treating a specific population must address not only the chronological age, but also the emotional age and physical development of the individual at the time of medical treatment. Assessments of the needs of children are more variable than adults. Children are in a constant state of development. All children develop at varying rates. In addition, their development may not be in sync within their own body. For example, physical development may be more advanced than emotional development. It is important for the health care practitioner to do a rapid assessment and match the treatment to the developmental level of the patient.

Finally, children are not just "small adults." This applies not only to their physical and emotional development, but also the equipment that may be used for the medical treatment of children. This is common knowledge, but at times is not apparent to the treating personnel or facility. Emergent situations also present challenges since the proper pediatric equipment may not be available or accessible.

This unit will address the major points of pediatric phlebotomy. Special consideration will be given to treating the "whole patient." Proper pediatric equipment for performing blood collection procedures will be discussed at length. Inclusion of the parents and ancillary caregivers will be addressed as well.

Chapter 1 Definition of the Pediatric Population

Unit a. General Definition

Pediatrics is defined as a specialty that is "concerned with the health of infants, children and adolescents, their growth and development, and their opportunity to achieve full potential as adults." ⁽²⁰⁾ Pediatrics as a specialty encompasses a broad scope of treatment of children. Many of the functions of pediatrics revolve around the growth and development of the child. A child changes and develops so rapidly that appropriate treatment today will not necessarily be appropriate at the next office visit or treatment session. This factor makes treatment of pediatric patients challenging and requires a high degree of diligence on the part of all ancillary personnel and caregivers with regard to providing the best possible care for each child.

Chapter 1 Definition of the Pediatric Population

Unit b. Determination of Age

Determination of age encompasses broad categories not limited to chronological age but inclusive of biological age, emotional age and social age. All of these "ages" must be taken into consideration when categorizing pediatric patients

Chronological age is the amount of time that has passed since birth. It is the "number" that is quoted when we describe age. In pediatrics, this may be days, weeks, months, years or combination of any of these factors. As one ages, it becomes impractical to describe age in days, weeks or months, but in a neonate or infant these descriptions are significant. Early in life, the rate of development is rapid with regard to chronological age and the difference of one week or month is significant. As individuals age, it is not practical to report an age in days, weeks or months and the differentiation is not significant. The developmental differences in an infant 1 month of age when compared to the same infant at 3 months of age are significant. The developmental differences of an adult after a two month time lapse, is not at all significant.

Biological age relates to the age that is represented by an individual's body at any given time. For children this is dependent on the rate and stage of development. The variability in biological age is probably most pronounced in neonates and infants that were premature. Since a premature infant starts his/her life in the negative for biological age, there is a postpartum period of "catching up". Barring other circumstances, biological age should parallel chronological age in children. Biological age in children change rapidly as the child grows, develops and matures. Parameters assessed include size, weight, biochemical parameters and hormonal changes. Metabolic disorders may create discontinuity between chronological and biological ages in children. This is rare and will not be further considered here.

Emotional and social ages are based on Erik Erikson's eight stages of development. Approaching a child and handling them during phlebotomy will be dependent on this development. The stages are summarized:

- 1. Learning Basic Trust Versus Basic Mistrust (Hope)** Chronologically, this is the period of infancy through the first one or two years of life. As the child interacts with persons he/she develops a sense of trust when nurtured in a positive environment.
- 2. Learning Autonomy Versus Shame (Will)** The second stage begins between 18 months or 2 years and continues until 3½ to 4 years of age. As the child develops, he/she seeks control, autonomy and independence. During this stage, the child may react with tantrums, stubbornness, and negativism.
- 3. Learning Initiative Versus Guilt (Purpose)** This third stage occurs during the "play age," or the later preschool years until entry into formal school. As the child develops, the child imagines, broadens his skills through active play, learns to cooperate with others and be a leader. This child may be fearful or reluctant to be involved in group play and may continue to depend unduly on adults



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