Curriculum Development Centers Program

Awardee of The Office of the National Coordinator for Health Information Technology

HEALTH IT WORKFORCE CURRICULUM
COMPONENT BLUEPRINT
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Component Number	**3**
Component Name	**Terminology in Health Care and Public Health Settings**
Component Description	**This component explains specific terminology used by workers in health care and public health. This is NOT a course in data representation or standards.**
Assigned Institution	**University of Alabama at Birmingham**
Team Lead	**Kay Clements, MA, RHIA** **Department of Health Services Admin.** **School of Health Professions** **University of Alabama at Birmingham**
Team Members	
Content Developers	**Kay Clements, MA, RHIA** **Department of Health Services Admin.** **School of Health Professions** **University of Alabama at Birmingham** **Robert Garrie, MPA, RHIA** **Department of Health Services Admin.** **School of Health Professions** **University of Alabama at Birmingham** **Jacqueline A. Moss, PhD, RN** **Clinical Simulation and Technology** **School of Nursing** **University of Alabama at Birmingham**

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Donna Slovensky, PhD, RHIA
School of Health Professions
University of Alabama at Birmingham

Critical Reviewers

Carol McKelvey, MA, RHIA
Health Care Information Programs
Wallace State Community College

Donna Stanley, EdS, RHIA, CCS
Health Care Information Programs
Wallace State Community College

Virginia Caris, MA
Department of Health Services Admin.
School of Health Professions
University of Alabama at Birmingham

Instructional Designers

Pamela E. Paustian, MS, RHIA
Department of Health Services Admin.
School of Health Professions
University of Alabama at Birmingham

Lorrinda Khan, MFA
Department of Health Services Admin.
School of Health Professions
University of Alabama at Birmingham

Instructor's Manual Editor

Shannon Houser, PhD, MPH, RHIA
Department of Health Services Admin.
School of Health Professions
University of Alabama at Birmingham

Lecture Narration

Lori Stegner
Maestro Productions
Nashville, TN

Bryan Talbot
Talbot Sound
Nashville, TN

Workforce Roles: **Core: Implementation Support Specialist (IT) and Practice Workflow and Information Management Redesign Specialist (IT); Secondary: All other roles**

Component Objectives:
At the completion of this component, the student will be able to:

1. Define, understand and correctly pronounce medical terms related to each of the major body systems.

2. Define commonly used terms in public health, nursing, health information technology, and clinical vocabularies & terminologies related to the implementation of electronic health records.

3. Identify the purpose and uses of pertinent health care terminologies in the electronic health record.

4. Demonstrate the ability to integrate and use health care terminology in the various health information technology roles

Component Units with Objectives and Topics

Unit 1 Understanding Medical Words

Description: This unit describes the meanings of medical words.

Objectives:

1. Discuss the four parts of medical terms.
2. Recognize word roots and combining forms.
3. Identify the most common prefixes and suffixes.
4. Describe the anatomical positions.
5. Define the body planes.
6. Identify regions of the body.
7. Define directional and positional terms.
8. Build, divide, spell and pronounce common medical words.

Topics:

1a.1 - Understanding medical words
1a.2 - Parts of a medical term
1a.3 - Word and combining forms
1b.1 - Common prefixes and suffixes
1b.2 - Singular and plural endings
1b.3 - Abbreviations
1c.1 - Body structure
1c.2 - Anatomical positions
1c.3 - Body planes

1c.4 - Regions of the body
1c.5 - Directional and positional terms

Unit 2 Integumentary System

Description: This unit describes the integumentary system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Integumentary System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Integumentary System.

Topics:

2.1 - Integumentary System Overview
2.2 - Organs of the Integumentary System
2.3 - Function
2.4 - Skin
2.5 - Accessory Organs
2.6 - Integumentary Combining Forms
2.7 - Integumentary System Disorders/Diseases
2.8 - Burns
2.9 - Skin Cancer
2.10 - Wounds
2.11 - Common Hair problems
2.12 - Nail Problems

Unit 3 Musculoskeletal System

Description: This unit describes the musculoskeletal system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Musculoskeletal System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Musculoskeletal System.

Topics:

3.1 - Musculoskeletal system overview
3.2 - Muscular components
3.3 - Skeletal components
3.4 - Functions
3.5 - Bones
3.6 - Joint
3.7 - Muscles
3.8 - Muscle disorders
3.9 - Myopathy
3.10 - Myositis
3.11 - Muscular dystrophy
3.12 - Muscular system combining forms
3.13 - Skeletal system
3.14 - Spinal column
3.15 - Upper extremity
3.16 - Lower extremity
3.17 - Skeletal disorders
3.18 - Fractures
3.19 - Arthritis
3.20 - Osteoporosis
3.21 - Skeletal system combining forms

Unit 4 Blood, Lymphatic and Immune Systems

Description: This unit describes the blood, lymphatic and immune systems.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Blood, Lymphatic and Immune Systems.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Blood, Lymphatic and Immune Systems.

Topics:

4.1 - Blood Overview
4.2 - Function
4.3 - Blood Components
4.4 - Blood cells
4.5 - Plasma
4.6 - Common Blood disorders/conditions
4.7 - Iron deficiency Anemia
4.8 - Sickle Cell Anemia
4.9 - Blood Combining Forms

4.10 - The Lymphatic and Immune Systems
4.11 - Primary organs
4.12 - Lymph nodes
4.13 - Lymphatic vessels
4.14 - Thymus gland
4.15 - Tonsils
4.16 - Functions
4.17 - Immunity
4.18 - Types
4.19 - Natural Immunity
4.20 - Passive Acquired immunity
4.21 - Active Acquired immunity
4.22 - Common Lymphatic and Immune disorders/conditions
4.23 - Lymphedema
4.24 - Tonsillitis
4.25 - AIDS
4.26 - Lymphatic & Immune Combining Forms

Unit 5 Cardiovascular System

Description: This unit describes the cardiovascular system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Cardiovascular System
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Cardiovascular System

Topics:

5.1 - Cardiovascular System Overview
5.2 - Function
5.3 - Primary Organs
5.4 - Heart
5.5 - Atria
5.6 - Ventricle
5.7 - Septum
5.8 - Blood Vessels
5.9 - Common diseases/conditions
5.10 - Atherosclerosis
5.11 - Stroke
5.12 - Hypertension
5.13 - Myocardial Infarction
5.14 - Cardiovascular Combining Forms

Unit 6 Digestive System

Description: This unit describes the digestive system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Digestive System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Digestive System.

Topics:

6.1 - Digestive system overview
6.2 - Function
6.3 - Primary organs
6.4 - Accessory organs
6.5 - Primary organs
6.6 - Oral cavity
6.7 - Pharynx
6.8 - Esophagus
6.9 - Stomach
6.10 - Small intestine
6.11 - Colon
6.12 - Rectum and anus
6.13 - Accessory organs
6.14 - Salivary glands
6.15 - Liver
6.16 - Gallbladder
6.17 - Pancreas
6.18 - Common diseases/conditions
6.19 - Peptic ulcer
6.20 - Cholelithiasis
6.21 - Crohn's disease
6.22 - Digestive system combining forms

Unit 7 Endocrine System

Description: This unit describes the endocrine system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Endocrine System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Endocrine System.

Topics:

7a.1 - Overview of the Endocrine System
7a.2 - Hormones
7a.3 - Disorders
7a.4 - Identification of the location of the endocrine glands
7a.5 - Adrenal Glands
7a.6 - Pancreas
7b.1 - Pituitary Gland
7b.2 - Pineal Gland
7b.3 - Thyroid Gland
7b.4 - Reproductive Organs
7b.5 - Thymus Gland

Unit 8 Ears, Nose, Throat, Eyes and Vision

Description: This unit describes the ears, nose, throat, eyes and vision.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Ears, Nose and Throat and Eyes and Vision.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Ears, Nose and Throat and Eyes and Vision.

Topics:

8a.1 - Overview of the Ear Anatomy
8a.2 - Hearing Loss and Deafness
8a.3 - Ear Disorders and Diseases
8a.4 - Overview of the Nose and Throat Anatomy
8a.5 - Nasal Cavity Disorders
8a.6 - Allergies
8a.7 - Common Cold
8a.8 - Hay Fever
8a.9 - Deviated Septum
8a.10 - Nasal Polyps
8a.11 - Nosebleed

8a.12 - Rhinitis
8a.13 - Sinusitis
8a.14 - Nasal Cancer
8a.15 - Paranasal Sinuses
8a.16 - Throat Disorders
8a.17 - Cough
8a.18 - Diphtheria
8a.19 - Streptococcal Infections
8a.20 - Head and Neck Cancers
8b.1 - Overview of the Eye Anatomy
8b.2 - Eye Disorders and Diseases
8b.3 - Cataract
8b.4 - Color Blindness
8b.5 - Diabetic Retinopathy
8b.6 - Glaucoma
8b.7 - Eye Infections
8b.8 - Conjunctivitis
8b.9 - Stye
8b.10 - Macular Degeneration
8b.11 - Refractive Errors
8b.12 - Myopia
8b.13 - Hyperopia
8b.14 - Presbyopia
8b.15 - Astigmatism
8b.16 - Eye Cancers
8b.17 - Melanoma
8b.18 - Lymphoma

Unit 9 Nervous System

Description: This unit describes the nervous system

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Nervous System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Nervous System.

Topics:

9.1 - Overview of the Anatomy of the Nervous System
9.2 - Central Nervous System
9.3 - Brain
9.4 - Spinal Cord

9.5 - Cerebrospinal fluid
9.6 - Cerebrum
9.7 - Hypothalamus
9.8 - Cerebellum
9.9 - Peripheral Nervous System
9.10 - Cranial Nerves
9.11 - Spinal Nerves
9.12 - Brain Disorders and Diseases
9.13 - Alzheimer's Disease
9.14 - Brain Aneurysm
9.15 - Brain Cancer
9.16 - Epilepsy
9.17 - Parkinson's Disease
9.18 - Stroke
9.19 - Ischemic
9.20 - Hemorrhagic
9.21 - Spinal Cord Disorders and Disease
9.22 - Arteriovenous Malformation
9.23 - Meningitis
9.24 - Multiple Sclerosis
9.25 - Nerve Disorders and Diseases
9.26 - Bell's Palsy
9.27 - Carpal Tunnel Syndrome
9.28 - Peripheral Nerve Disorders
9.29 - Neurofibromatosis

Unit 10 Reproductive Systems

Description: This unit describes the reproductive systems.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Female Reproductive System and Male Reproductive System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Female Reproductive System and Male Reproductive System.

Topics:

10a.1 - Overview of the female reproductive system anatomy
10a.2 - Breast
10a.3 - Ovary
10a.4 - Fallopian tube
10a.5 - Uterus

10a.6 - Cervix
10a.7 - Vagina
10a.8 - Breast disorders and diseases
10a.9 - Fibrocystic breast
10a.10 - Cysts
10a.11 - Fibroadenomas
10a.12 - Intraductal papillomas
10a.13 - Breast Cancer
10a.14 - Cervical disorders and disease
10a.15 - Cervicitis
10a.16 - Cervical incompetence
10a.17 - Cervical polyps and cysts
10a.18 - Human papillomavirus (HPV)
10a.19 - Gonorrhea
10a.20 - Trichomoniasis
10a.21 - Ovarian disorders and diseases
10a.22 - Pelvic inflammatory disease
10a.23 - Uterine disorders and diseases
10a.24 - Dysfunctional uterine bleeding
10a.25 - Endometriosis
10a.26 - Uterine fibroids
10a.27 - Adenomyosis
10a.28 - Vaginal disorders and diseases
10a.29 - Vaginal cancer
10b.1 - Overview of the male reproductive system anatomy
10b.2 - Testes
10b.3 - Scrotum
10b.4 - Excretory ducts
10b.5 - Seminal vesicles
10b.6 - Prostate gland
10b.7 - Penis
10b.8 - Disorders and diseases of the penis
10b.9 - Balanitis
10b.10 - Erectile dysfunction
10b.11 - Infections
10b.12 - Chlamydia
10b.13 - Genital warts
10b.14 - Gonorrhea
10b.15 - Disorders and diseases of the prostate
10b.16 - Prostatitis
10b.17 - Benign prostatic hypertrophy (BPH)
10b.18 - Prostate cancer
10b.19 - Disorders and diseases of the testicles
10b.20 - Testicular disorders
10b.21 - Testicular cancer

Unit 11 Respiratory System

Description: This unit describes the respiratory system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Respiratory System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Respiratory System.

Topics:

11.1 - Overview of the Anatomy of the Respiratory System
11.2 - Upper Respiratory Tract
11.3 - Lower Respiratory Tract
11.4 - Diseases and Disorders of the Bronchus
11.5 - Asthma
11.6 - Bronchitis
11.7 - Diseases and Disorders of the Pharynx
11.8 - Tonsillitis
11.9 - Pharyngitis
11.10 - Head and Neck Cancer
11.11 - Diseases and Disorders of the Lung
11.12 - Cystic Fibrosis
11.13 - Lung Transplantation
11.14 - Pneumonia
11.15 - Pulmonary Embolism
11.16 - Pulmonary Hypertension

Unit 12 Urinary System

Description: This unit describes the urinary system.

Objectives:

1. Define, understand and correctly pronounce medical terms related to the Urinary System.
2. Describe common diseases and conditions, laboratory and diagnostic procedures, medical and surgical procedures and medications related to the Urinary System.

Topics:

12.1 - Overview of the Anatomy of the Urinary System
12.2 - Kidneys
12.3 - Ureters
12.4 - Urinary Bladder
12.5 - Urethra
12.6 - Diseases and Disorders of the Urinary System
12.7 - Bladder Diseases
12.8 - Cystitis
12.9 - Urinary Tract Infection
12.10 - Interstitial Cystitis
12.11 - Diagnostic Tests
12.12 - Urine Tests
12.13 - X-rays
12.14 - Cystoscopy
12.15 - Bladder Cancer
12.16 - Diseases and Disorders of the Kidney
12.17 - Nephrolithiasis
12.18 - Diabetic Nephropathy
12.19 - Kidney Failure Treatments
12.20 - Hemodialysis
12.21 - Peritoneal Dialysis
12.22 - Kidney Transplantation
12.23 - Wilms' Tumor
12.24 - Renal Cancer

Unit 13 What is Public Health?

Description: This unit describes public health.

Objectives:

1. Discuss the various terms used to define public health.
2. Identify the distinguishing features of public health.
3. Discuss the various terms used to define health.
4. Identify the categories and factors that influence health.
5. Identify the terms commonly used as measures of health status.

Topics:

13.1 - What is Public Health ?
13.2 - Public Health Definitions
13.3 - Features of Public Health
13.4 - Defining Health
13.5 - Categories that influence Health
13.6 - Measurement of Health Status

Unit 14 What is Health Information Management and Technology?

Description: This unit describes health information management and technology.

Objectives:

1. Define and explain the terms and concepts used in the field of Health Information Management and Technology.
2. Understand the terms that frame Health Information Management (HIM) and Health Information Technology (HIT) practice.
3. Explain commonly used acronyms and abbreviations.

Topics:

14.1 - Health Information Technology Regulations
14.2 - American Recovery and Reinvestment Act of 2009
14.3 - Health Information Technology for Economic and Clinical Health Act
14.4 - Terms and Concepts in Health Information Technology
14.5 - Commonly Used Health Information Technology Acronyms and Abbreviations

Unit 15 Overview/Introduction to the EHR

Description: This unit describes the overview and introduction to the electronic health record (EHR).

Objectives:

1. Discuss the American Recovery and Reinvestment Act of 2009 (ARRA) including the portion of the bill called the Health Information Technology for Economic and Clinical Health Act (HITECH) Act of 2009.
2. Identify factors affecting the need for an EHR.
3. Compare the automated record with the paper record.
4. Identify the advantages and disadvantages of the automated record.
5. Discuss the obstacles to implementation of a paperless record.

Topics:

15.1 - American Recovery and Reinvestment Act (ARRA)
15.2 - Office of the National Coordinator for HIT
15.3 - Goals of the HITECH
15.4 - Components of HITECH
15.5 - The Electronic Health Record
15.6 - Functions of health records

15.7 - Attributes of electronic health records
15.8 - Advantages and disadvantages of implementation of electronic health records

Unit 16 Definitions and Concepts in the EHR

Description: This unit describes definitions and concepts in the electronic health record (EHR).

Objectives:

1. Discuss the difference between an EHR, EMR, and PHR.
2. Define functional requirements of an EHR.
3. Discuss the purpose of EHR components (i.e. CPOE, CDSS, pharmacy system, laboratory systems, documentation systems, admission and discharge systems)
4. Describe methods to ensure data security and confidentiality.
5. Identify the hardware and software requirements for EHR implementation.

Topics:

16.1 - EHR, EMR, PHR
16.2 - Use of EMR in ambulatory, acute care, and public health settings
16.3 - Functions and use of the PHR
16.4 - EMRs, PHRs and interoperability with an EHR
16.5 - Functional Requirements and Components of an EHR
16.6 - Documentation systems
16.7 - CPOE and CDSS
16.8 - Pharmacy, Laboratory, and ADT systems
16.9 - Data security and confidentiality
16.10 - HIPAA
16.11 - Hardware and software requirements for data security (i.e. back-ups, mirror Systems, off-site data storage
16.12 - Methods for ensuring data confidentiality (i.e. passwords, audit trails, biometrics)
16.13 - Hardware and Software Requirements for EHR implementation
16.14 - System servers and data repositories
16.15 - Types of Networks and network devices (i.e. smart terminals, dumb terminals, wireless networks)
16.16 - User interface hardware and point of care devices (i.e. CPU, PDA, Tablets, Slim Clients)
16.17 - Types of electronic record software (i.e. best of breed, legacy, home grown, off the shelf)

Unit 17 Clinical Vocabularies

Description: This unit describes clinical vocabularies.

Objectives:

1. Discuss the relevance of standardized terminologies to healthcare practice and research.
2. Describe the attributes of a terminology.
3. Identify the difference between classification systems and reference terminologies.
4. Discuss the interest and involvement of the federal government in terminology standards.
5. Identify classification systems used to classify and document healthcare diagnoses, interventions, and outcomes.

Topics:

17.1 - Importance of terminology standards
17.2 - Interoperability of healthcare records
17.3 - Reimbursement for care and surveillance of illness
17.4 - Tracking of healthcare outcomes for practice and researching the PHR
17.5 - Terminologies
17.6 - Attributes of a terminology system
17.7 - Types of terminology structures and coding
17.8 - Terminologies used to classify healthcare diagnoses, interventions, and outcomes