This "tech prep" state competency profile contains all the competencies required and recommended for entry-level employees in occupations in the health technologies cluster. Introductory materials include the following: descriptions of the different types of competencies (essential ones that must be included in all new tech prep programs and recommended ones), definitions that broadly describe occupations within the health technologies cluster, explanation of leveling codes used in the profile, summary (listing) of the competencies divided into 71 units, and a matrix that indicates whether a unit is required or recommended for each of 11 occupations. The occupations are as follows: radiographer, respiratory care therapist, physical therapist assistant, registered nurse--associate degree, medical laboratory technician, emergency medical technician, dental hygienist, health information technician, exercise technologist, ophthalmic technician, and medical assistant. The competencies categorized under units follow. Each competency is presented in a one-page format that indicates the unit, whether the competency is essential or recommended, the grade level (by the end of grade 12 or by the end of the associate degree) and the depth (introduce, reinforce or add depth, and proficient), academic code (communications, mathematics, or science related), the competency, and list of competency builders (more specific competencies). (YLB)
Health Technologies

State Competency Profile

Columbus, Ohio
Health Technologies
State Competency Profile

This document is the result of collaboration between a number of individuals and organizations. The Ohio Department of Education and the Ohio Board of Regents provided financial and staff support for the development of the base document.

The current document is a result of a review by a state panel of business/industry/labor representatives and secondary/associate degree educators on March 26, 1998. (The name and institutional affiliation of each panel member is provided on the following pages.) Jan Eley, Akron Area Tech Prep Consortium; Linda Fauber, Lakeland Tech Prep Consortium; Julie Daugherty, Eastern Ohio Valley Tech Prep Consortium; and Jennie Royer, Stark County Tech Prep Consortium served as facilitators of the March 26, 1998.

On August 5, 1998, a panel of business/industry and secondary/associate degree educators was convened to finalize the Nursing (AD) portion of this document. The Medical Assistant portion was finalized during a December 15 meeting. (A list of Nursing and Medical Assistant Panel members is attached).

The following document is not intended to replace or in any way modify the existing requirements established by professional associations or accrediting bodies. It is rather intended to outline in competency form the essential and recommended skills needed by entry level employees in Health related occupations.

As you review the document, keep in mind the following:

**Essential Competencies**
Those competencies marked *Essential* in the State Competency Profile were determined by the statewide business/industry/labor panel to be necessary to ensure minimal levels of employability. Entry level employees should be able to perform this competency without supervision; therefore, students must be proficient in these competencies at least by the end of the Associate Degree.
Essential competencies must be included in all new Tech Prep programs. Tech Prep consortia with current programs in this area will be expected to phase-in essential competencies into their programs as well.

Wording of essential competencies may not be altered. The leveling may only be changed to deliver the competency earlier during the educational process. For example, the leveling of an essential competency in the State Competency Profile may be altered locally from a P or Proficiency leveling at the end of the Associate Degree to a P or Proficiency by the end of the 12th grade. The reverse is not permissible. For example, a competency leveled P or Proficient by the end of the 12th grade in the State Competency Profile cannot be changed to a P or Proficient by the end of the Associate Degree at the local level. For additional information on leveling of competencies, refer to the Leveling Code Sheet.

Competency builders are intended to help define each competency; therefore, the builders may be modified as long as that modification does not change or dilute the intent of the State Panel.

Issues which arise regarding delivery of the essential competencies once the program is implemented will be addressed by a State review panel of business/industry/labor and education representatives with possible revisions to the State Competency Profile at a later date. Any issues identified during the local verification meeting should be conveyed to Tech Prep Curriculum Services by the consortium coordinator.

Recommended Competencies
Competencies marked Recommended are suggested additions to the State Competency Profile. Each of these competencies should be reviewed during a local competency profile meeting, with a joint panel of business/industry/labor and education representatives deciding whether to include each competency in the local curriculum. The decision should be based upon a consideration of local business needs, as well as priorities and time constraints of the educational process. Wording and leveling of all recommended competencies and builders may be modified.

Additional Units/Competencies/Builders
Competencies and/or builders may be added to any unit in the State Competency Profile. Additional units may also be added.

Occupation Definitions
Skills may be added to the occupational definitions based on the modifications made during the competency review. Because the definition is based on the skills detailed in the competency profile, only minor modifications should be necessary.

For additional information about this State Tech Prep Competency Profile contact:

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Occupational Definitions
Health Technologies Cluster

The following definitions broadly describe occupations within the Health Technologies Cluster. Occupational definitions are not job descriptions. They are broader in focus and provide general skill training directions.

**Radiographer** — An individual who performs diagnostic examinations and administers therapeutic procedures using x-rays and related radiations, under the supervision of radiologist. Technical skills should include, but not be limited to:
- conducting x-ray procedures
- equipment operation and maintenance
- evaluating radiographic images
- applying anatomy, physiology, positioning, and radiographic techniques
- determining exposure factors to achieve optimum radiographic results
- providing education related to radiologic procedures and safety
- monitoring quality assurance

**Respiratory Care Therapist** — An individual who performs procedures using respiratory equipment under the supervision of a physician. Technical skills should include, but not be limited to:
- administering medications/oxygen via mist, mask, tent, or other procedures as prescribed by physician
- observe patient’s reaction to treatment and record as needed
- managing ventilators and other intensive care therapies
- emergency procedures and airway assessment management
- equipment operation and maintenance
- storage and sterilization methods
- patient education
- medical ethics
- basic pharmacology
- infection control methods
- assessing condition of patient
- documentation skills

**Physical Therapist Assistant** — An individual who, under the supervision of a physical therapist, assists with patient examinations, treatment administration, and monitoring. Technical skills should include, but not be limited to:
- therapeutic exercises and massage
- heat, light, sound, water, and electrical modality treatments
- helping patient learn and improve functional activities in daily life
- fitting, adjusting, and training patient in the use and care of assistive devices
- observing patient during treatments and reporting progress to physical therapist
- demonstrating therapeutic exercises, modalities, and rehabilitation
- medical ethics
Registered Nurse — An individual who promotes health, assesses patient conditions, establishes plan of care based on diagnosis, directs or implements safe, effective, comforting, collaborative nursing care, and evaluates outcomes. Technical skills should include, but not be limited to:

- assess condition of the patient and support systems
- confer with physician on plan of care
- implement physician orders including prescribed treatments and medications
- evaluate outcomes of treatments and nursing interventions
- report and document observations and findings
- apply management, supervision, and delegation principles in planning and evaluating care
- teach and counsel patients and individuals in support system, including caregivers
- apply legal and ethical principles

Medical Laboratory Technician — An individual who performs standard clinical laboratory procedures and examinations under the direction and supervision of a pathologist, qualified physician or laboratory director. Technical skills should include, but not be limited to:

- laboratory instrument operation, calibration, and maintenance
- principles and methods of clinical chemistry, hematology, immunology, immunohematology, and microbiology
- medical laboratory safety procedures
- performing medical laboratory tests, procedures, examinations, and analysis
- microscopic and chemical analysis of body fluids
- analyzing test results and reporting results to medical practitioners
- infection control methods

Emergency Medical Technician — An individual who performs initial assessment and management, and provides continuous care to medical and trauma patients. Technical skills should include, but not be limited to:

- disease, disorder, and injury symptomology
- emergency medical procedures
- equipment operation and maintenance
- radio communications
- emergency pharmacology
- emergency vehicle operation
- mass casualty incident management

Dental Hygienist — An individual who practices the cleaning of teeth and related oral health therapies, either independently or in collaboration with dentists. Technical skills should include, but not be limited to:

- patient examination
- preventative oral health care
- oral health education
- dental hygiene therapy
- initial periodontal therapy
- dental radiography
- prosthetic cast creation
Health Information Technician — An individual who classifies medical information and prepares patient records that are complete, accurate, and coded according to standard medical/health care classification systems. Technical skills should include, but not be limited to:

- analysis of medical records
- accurate collection and preparation of statistical data
- coding of diseases, procedures, operations, and therapies
- quality assurance management
- transcription of medical reports
- responsible release of information to insurance companies, law firms, and government agencies
- maintenance and utilization of a variety of storage and retrieval systems
- processing, storage, and retrieval of computerized health information

Exercise Technologist —

To Be Determined

Ophthalmic Technician — An individual who performs the diagnostic testing and measurements used by the ophthalmologist in evaluating and treating eye diseases. Technical skills should include, but not be limited to:

- taking medical and ocular history
- conducting basic and advanced ocular measurements
- testing for ocular functions
- performing diagnostic tests
- administering topical ophthalmic medications
- apply patches and protective devices
- assisting in ophthalmic surgery
- instructing patients on contact lens care, preventive eye care, use of eye drops, and pre-operative and post-operative care

Medical Assistant — An individual who performs both administrative and clinical procedures in the ambulatory care setting under the supervision of a physician. Technical skills should include, but not be limited to:

- assess condition of the patient and support systems
- implement physician orders including treatment and medications
- report and document observations and findings
- apply legal and ethical principles
- teach and counsel patients and individuals in support system including caregivers
- coding of diseases, procedures, operations and therapies
- transcription of medical report
- collect and prepare patient record
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**X** = Unit required for the occupation.

**R** = Unit recommended for the occupation (local review necessary).

***= Competencies should be addressed in a manner applicable to the occupation.
### Table of Units and Requirements

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X = Unit required for the occupation.
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RAD = Radiographer  
RCT = Respiratory Care Therapist  
PTA = Physical Therapist Assistant  
RNA = Registered Nurse—Associate Degree  
MLT = Medical Laboratory Technician  
EMT = Emergency Medical Technician  
DHY = Dental Hygienist  
HIT = Health Information Technician  
ET = Exercise Technologist  
OPH = Ophthalmic Technician  
MA = Medical Assistant

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| Page # | UNIT                                        | RAD | RCT | PTA | RNA | MLT | EMT | DHY | HIT | ET | OPH | MA |
|-------|--------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 506   | Health Information Clerical Functions      |     |     |     |     |     |     |     |     |     |     |     |     |
| 513   | Health Information Quality Control         |     |     |     |     |     |     |     |     |     |     |     |     |
| 524   | Health Information Report Preparation      |     |     |     |     |     |     |     |     |     |     |     |     |
| 526   | Health Information Supervision             |     |     |     |     |     |     |     |     |     |     |     |     |
| 530   | Medical Assisting X-ray Operator           | X   |     |     |     |     |     |     |     |     |     |     |     |
| 546   | Medical Assisting Respiratory Care         |     |     |     |     |     |     |     |     |     |     |     |     |
| 560   | Medical Assisting Physical Therapy         |     |     |     |     |     |     |     |     |     |     |     |     |

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Unit: Employability Skills

BIL: Essential

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Competency: Develop a career plan

Competency Builders:
- Identify current interests and aptitudes
- Identify common barriers to employment
- Describe strategies to overcome employment barriers
- Locate resources for finding employment
- Research job trends
- Identify career options
- Identify advantages and disadvantages of career options (in addition to monetary)
- Identify job requirements
- Investigate education/training opportunities (including speaking with someone in the trade)
- Evaluate personal strengths and weaknesses
- Refine a written educational plan which leads to a specific career field
- Create career passport
Competency: Prepare for employment

Competency Builders:
Identify employment sources
Identify advantages and disadvantages of self-employment
Identify present and future employment opportunities (by geographic location)
Research job opportunities
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity
Demonstrate ability to accurately complete a job application
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Use proper diction in interviews
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions using simulated role playing exercises
Describe procedures for following up after an interview
Evaluate job offers
Give notice to employer of job change
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects)
Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:
Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem
Competency: **Demonstrate job retention skills**

**Competency Builders:**
- Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
- Exhibit appropriate work habits and attitude
- Demonstrate ability to set priorities
- Identify behaviors to establish successful working relationships
- Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
- Identify opportunities for advancement
- List reasons for termination
- List consequences of being absent frequently from job
- List consequences of frequently arriving late for work
- Demonstrate interpersonal relations skills (i.e., verbal and written)
- Demonstrate negotiation skills
- Demonstrate teamwork
- Follow chain-of-command
- Exhibit appropriate job dedication
Competency: Demonstrate knowledge of work ethic

Competency Builders:
Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic
BIL: Essential

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Competency: Exhibit appropriate work ethic

Competency Builders:
- Use time-management techniques
- Avoid personal activity during work hours
- Attend work as scheduled
- Adhere to company and/or governmental policies, procedures, rules, and regulations
- Exercise confidentiality
- Demonstrate appropriate human relations skills
- Adhere to rules of conduct
- Accept constructive criticism
- Offer constructive criticism
- Take pride in work
- Resolve conflict
- Manage stress
- Avoid sexual connotations and harassment
- Adjust to changes in the workplace
- Demonstrate punctuality
- Assume responsibility for personal decisions and actions
- Take responsibility for assignments
- Follow chain-of-command
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Competency: Apply decision-making techniques

Competency Builders:
Identify decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision
Identify ownership of decision to be made
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Competency: Apply problem-solving techniques

Competency Builders:
- Identify problem
- Select appropriate problem solving tools/techniques
- Identify root problem cause(s)
- Track root problem cause(s)
- Identify possible solutions and their consequences (e.g., long term, short term, crisis)
- Use resources to explore possible solutions to problem
- Contrast advantages and disadvantages of each solution
- Identify appropriate action
- Evaluate results
- Identify post-preventive action
BIL: Essential

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Competency: Exhibit characteristics for job advancement

Competency Builders:
- Display positive attitude
- Demonstrate knowledge of position
- Perform quality work
- Adapt to changing situations and technology
- Demonstrate capability/responsibility for different positions
- Identify characteristics of effective leaders
- Identify opportunities for leadership in workplace/community
- Demonstrate initiative to affect change in workplace
- Participate in continuing education/training program
- Respond appropriately to criticism from employer, supervisor, or other employees
- Exhibit awareness of corporate culture
- Prepare for job setbacks
- Exhibit continual growth based on performance evaluation
- Set realistic goals
Unit:  Professionalism

BIL:  Essential

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Competency:  Project professional image

Competency Builders:
- Define professionalism
- Exhibit professional appearance
- Exhibit professional manners
- Project professional attitude
- Identify individual's vital role in organization
- Exhibit proper etiquette in professionally-related situations
Competency: Formulate individual and professional goals

**Competency Builders:**
- Set flexible, realistic, and measurable goals
- Identify potential barriers to achieving goals
- Identify strategies for addressing barriers to goal achievement
- Breakdown long-term goals into short-term goals
- Prioritize goals
- Commit to goals
- Adjust goals
- Obtain support for goals
- Reward goal achievement
BIL: Recommended

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Competency: Organize personal finances

Competency Builders:
- Explain need for personal management records
- Balance checkbook
- Identify tax obligations
- Analyze how credit affects financial security
- Compare types and methods of investments
- Compare types and methods of borrowing
- Compare types and methods of insurance
- Compare types of retirement options/plans
- Identify discretionary vs. non-discretionary expenditures
BIL: Recommended

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Competency: Support community well-being

Competency Builders:
- Identify environmental, educational, and social issues
- Participate in social and/or community/industry activities
- Participate in industry activities and organization
Competency: Achieve organizational goals

Competency Builders:
Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organizational goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission
**BIL:** Essential

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**Competency:** Demonstrate positive relations in the workplace

**Competency Builders:**
- Identify personality types
- Identify methods of working with various personalities
- Identify various management styles
- Support organization expectations
- Support organization decisions
- Accept constructive criticism
- Give constructive feedback
- Adapt to changes in workplace
- List factors to consider before resigning
- Write letter of resignation
BIL: Essential

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Competency: Manage stressful situations

Competency Builders:
- Accept stress as part of daily life
- Identify personal and professional factors contributing to stress
- Describe physical and emotional responses to stress
- Evaluate positive and negative effects of stress on productivity
- Identify strategies for reducing stress
- Identify positive methods to channel stress
- Implement strategies to manage stress
- Create strategies for developing and maintaining support systems
BIL: Recommended

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Competency: Analyze effects of family on work and work on family

Competency Builders:
Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work
**BIL:** Essential

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**Competency:** Apply lifelong learning skills

**Competency Builders:**
Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training
Competency: Manage professional development

Competency Builders:
Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills
Unit: Teamwork

BIL: Essential

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Competency: Demonstrate knowledge of teamwork

Competency Builders:
Define self-direction
Define responsibility
Define accountability
Differentiate work groups and teams (i.e., internal, external)
Identify conditions essential to teamwork (e.g., problem solving)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of team members
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system
Define mutual respect
Define equality
Define "group think"
Provide feedback
Receive feedback
Define communication styles
Define management styles
Define social style

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**Competency:** Demonstrate teamwork

**Competency Builders:**
- Identify purpose of team and intended goal (include time frames)
- Structure team around purpose
- Define responsibilities of team members (e.g., talents, skills, abilities)
- Contribute to efficiency and success of team
- Work toward individual and team milestones
- Analyze results of team project
- Facilitate a team meeting
- Assist team member(s) with problem
- Monitor time frame
- Stress continuous improvement
- Recognize failure as part of learning
### Competency: Use teamwork to solve problems

#### Competency Builders:
- Identify appropriate situations for using teams
- Identify quality management processes/techniques
- Identify quality assurance processes/techniques
- Prepare presentation (e.g., business plan & procedure)
- Identify problem
- Use problem-solving process in a team setting (e.g., Brainstorm, Paredo, Fishbone)
- Identify resources
- Gather data
- Analyze data
- Describe solution options
- Implement solution options
- Review solution
- Review case studies
Competency: Conduct team meetings

Competency Builders:
Plan agenda
Set ground rules
Schedule meeting and location
Set time limitations
Invite appropriate personnel
Set next team meeting
Solicit outside speakers as needed
Select scribe
Select meeting leader
Facilitate ground rules
Select facilitator
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, budget, time frame and accountability to tasks
Monitor time
Overcome team impasse
Close meeting on time
Publish minutes in timely manner
Avoid placing individual agendas above the group's agenda
Unit: Professional Practices

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Competency: Explain professional responsibilities

Competency Builders:
- Explain the need for professional and ethical standards
- Explain responsibility of the individual to apply ethical standards
- Identify responsibility to client(s) and employer(s)
- Explain consequences of unprofessional and/or unethical behavior
- Explain importance of conflict resolution in the workplace
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**Competency:** Identify legal and ethical behavior

**Competency Builders:**
Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior (e.g., loyalty, discretion, solicitation, competitor, supplier)
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior
Practice within scope of the profession
Competency: Function as a self-managed employee

Competency Builders:
Propose project (C)
Organize tasks
Manage time
Meet deadlines
Maintain business records (C)
Make long-term and short-term plans
Evaluate progress
Report progress (C)
Delegate project
Acquire appropriate licenses/registrations
Obtain permits and releases
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Competency: Follow intellectual property rights and copyright laws

Competency Builders:
- Explain purpose of patent
- Explain purpose of copyright
- Explain purpose of licenses
- Explain purpose of trademarks
- Explain rights of the originator
- Explain rights of the public
- Define confidentiality
- Define proprietary
- Explain legal ownership of proprietary material
- Describe stock image/text usage rights
- Explain negotiation of contracts
- Explain reproduction licensing and residual usage
Unit: Workplace Safety

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Competency: Maintain safe working environment

Competency Builders:
Describe what an MSDS sheet is
Comply with HMIS material safety data sheets (MSDS) and OSHA regulations
Comply with all MSDS regulations regarding hazardous materials
Maintain clean work area by removing waste, keeping alleyways clear, cleaning tools, and preventing spills
Minimize workplace causes of environmental burdening, pollutants, and poisoning
Describe pollution solution limits imposed by permits and regulations
Comply with regulatory guidelines in handling, labeling, and disposal of solutions (e.g., fountain chemicals, inks, wash-up solutions, drum grounding)
Identify visual equipment controls (e.g., monitors, read outs)
Identify auditory equipment controls
Comply with workplace safety rules and procedures
Comply with personal safety rules and procedures
Comply with applicable electrical, mechanical, hydraulic and pneumatic safety rules and procedures
Recycle appropriate materials
Use preventive maintenance checklists
Identify location of control panels, shut-off valves, and fire extinguishers
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Competency: Demonstrate knowledge of ergonomics

Competency Builders:
Define ergonomics
Define risk factor
Define maximum permissible limit (MPL) and action limit (AL) for lifting
Define cumulative trauma disorder (CTD)
Identify susceptibility factors for CTD
Minimize extreme joint movement
Minimize use of excessive muscle/physical force
Minimize repetitive tasks
Minimize mechanical stresses (e.g., sharp edges, heat, cold, hard surfaces, weights, vibration)
Minimize awkward body positions
Explain use of rest pauses
Explain need for mats and footrest for standing jobs
Explain need for appropriate working heights of chairs, stools, workbenches, equipment
Explain need for adequate lighting
Explain use of anthropometric (i.e., centering one's view of everything around man) design
Unit: Project Management

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Competency: Explain project management

Competency Builders:
Identify project purpose/goal
Identify project objectives
Identify work breakdown structure (WBS)
Identify resource requirements
Identify project economics/funding
Identify risks
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Competency: Plan projects

Competency Builders:
Apply responsibility assignment matrix (RAM)
Apply Gantt or bar charts
Apply network diagrams
Apply critical path method (CPM)
Apply project education and review techniques (PERT)
Apply software programs
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**Competency:** Implement projects

**Competency Builders:**
- Monitor project
- Control project
- Modify project
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Competency: Evaluate projects

Competency Builders:
Analyze performance
Perform critical review of project
Draw project management conclusions
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**Competency:** Write project summary

**Competency Builders:**
- List project goals
- Document project’s key successes
- Document project’s key failures
- Analyze costs vs. accomplishments
Unit: Problem Analysis

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Competency: Appraise situations

Competency Builders:
Identify concerns
Set priorities
Identify resolution process
Plan resolution
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Competency: Analyze problems

Competency Builders:
- Identify potential problems
- Identify likely causes
- Test for probable causes
- Verify cause
- Identify preventive actions
- Identify contingent actions
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Competency: Analyze decisions

**Competency Builders:**
- Identify objective(s)
- Identify alternatives
- Evaluate alternatives
- Assess risks
- Make final choice
- Determine effectiveness of decision
- Document results
**Unit:** General Administrative Functions

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**Competency:** Maintain work flow

**Competency Builders:**
- Organize work
- Prioritize work
- Apply time-management techniques
- Complete assigned tasks in a timely manner
- Coordinate with team members
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**Competency:** Perform telecommunications operations

**Competency Builders:**
- Display telephone etiquette
- Operate equipment
- Listen assertively
- Verify information
- Record messages
- Place calls
- Organize teleconferences
- Use voice mail/messaging systems
- Operate fax/modem machine
- Use e-mail systems
- Use Internet communications services
- Use videoconference facilities
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Competency: Perform scheduling functions

Competency Builders:
Create calendar/schedule
Maintain and use appointment calendars with accurate addresses and phone numbers
Process requests for appointments
Verify appointments
Competency: Manage records

Competency Builders:
Implement filing system
Implement retention system
Perform electronic filing operations
Maintain inventory records
Retrieve files
Unit: Economic and Business Principles

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Competency: Describe basic economic concepts

Competency Builders:
Identify importance of economic resources
Explain concept of economic resources
Explain importance of economic resources
Explain concept of economic goods and services
Differentiate between economic goods and services
Differentiate between needs and wants
Explain concept of supply and demand
Explain concept of price
Explain how supply, demand, and price are related
Explain concept of private enterprise and business ownership
Explain concept of profit
Explain concept of risk
Explain concept of competition
Explain relationship among risk, competition, and profit
Describe global economic and world markets
Describe economic cycles (e.g., unemployment, recession, inflation, budget deficits)
Describe economic arena's effect on business (e.g., financial, competitor indicators, industry)
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Competency: Describe economic systems

Competency Builders:
Describe free enterprise system
Describe relationship between government and business
Describe relationship between labor and management
Compare types of economic systems
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**Competency:** Understand income statement data

**Competency Builders:**
- Identify revenue
- Identify overhead expenses
- Identify fixed expenses
- Identify direct labor
- Identify indirect labor
- Identify direct and indirect materials
- Identify general and administrative expenses
- Identify selling expenses
- Identify net income
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**Competency:** Explain equipment depreciation

**Competency Builders:**
- Explain straight line
- Explain sum of year’s digits
- Explain declining balance
- Explain IRS strategies
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Competency: Identify cost and profit influences

Competency Builders:
Explain importance of loss prevention
Explain importance of maximizing quality
Explain importance of maximizing productivity
Differentiate between specialized training and cross training
Explain labor, management, and government influences on cost/profit
Explain cost/profit influences of retraining
Define impact of seasonal business cycles
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**Competency:** Describe economic indicators and trends A

**Competency Builders:**
- Define gross national product and gross domestic product
- Define national debt
- Define impact of interest rates
- Define impact of government spending
- Define impact of seasonal business cycles
- Define impact of inflation, growth, recession, and unemployment
- Define impact of national and world events
- Define impact of the growth of international trade
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Competency: Explain international trade

Competency Builders:
- Describe nature and importance of international trade
- Explain marketing in international trade
- Explain balance of trade concepts
- Describe impact of foreign investment
- Describe the influence of national debt
- Describe the effect of currency exchange rates on international trade
Competency: Explain basic business concepts

Competency Builders:
- Identify functions of business
- Explain role of management
- Explain role of labor
- Explain concept of service as a product
- Explain role of administration
- Explain role of operations
- Identify role of company objectives
- Identify importance of ethical business practices
- Identify types of ownership
- Identify components of a business plan
- Calculate break even and payback
- Explain role of depreciation in business decisions
- Explain role of capital gains
- Describe business reporting and information flow
- Map interface of departmental functions
- Describe business communication channels (e.g., formal, informal)
- Explain basic total quality management (TQM/ISO) principles
- Explain the effects of bankruptcy
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Competency: Explain legal concepts

Competency Builders:
- Define legal terminology
- Explain business law concepts
- Identify contracts and/or legal documents
- Explain relationship of laws and regulations to company contracts, policies, and procedures
- Identify laws relating to working conditions, wages and hours, civil rights, social security, disability, unemployment insurance, and exempt vs. nonexempt
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Competency: Explain role of marketing

Competency Builders:
- Identify aspects of sound business image
- Explain purposes of marketing
- Describe functions of marketing
- Describe effects of marketing
- Identify target markets
- Define sales potential
- Explain pricing strategies
- Differentiate among advertising campaigns
- Explain functions of advertising agencies
- Describe sales incentive programs
- Differentiate among types of marketing strategies (e.g. phone, mail, person)
Unit: Basic Computer Concepts and Applications

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Competency: Describe personal computer operations

Competency Builders:
- Explain how data is stored in main computer memory
- Explain how computer system executes program instruction
- Explain computer storage capacity
- Explain how data is represented
- Describe data storage devices
- Identify types of memory
- Describe back-up and archival disciplines
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Competency: Explain information processing cycle

Competency Builders:
Describe computer languages and their use (e.g., machine, postscript, proprietary, graphic description)
Describe difference between data files and program files
Explain PC/Mac layout
Explain PC/Mac network layout
Explain mini/mainframe network layout
Differentiate among hardware, software, and firmware
Differentiate between open from proprietary architecture
Explain upload/download
Competency: Explain operating systems

Competency Builders:
Identify operating systems and their attributes (i.e., DOS, Unix, Macintosh, windows)
Describe compatibility issues
Identify cross-platform file conversion tools
Describe how commands handle tasks in operating systems
Describe various input/output systems
Describe the purpose of operating system utilities
Differentiate between a compiler and an interpreter
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**Competency:** Demonstrate basic computer literacy

**Competency Builders:**
Create directories/folders and sub-directories
Format disks
Manipulate files (copy, rename, delete)
Keyboard proficiently by touch
Competency: Operate computer hardware

Competency Builders:
Practice proper media handling techniques (e.g., magnetic fields, dust, liquids)
Identify hardware and its use
Use hardware (e.g., printers, modems, touch screen, digitizers, plotters, graphic tablets, scanners, film recorders, video, laser image setters)
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures
Perform basic hardware troubleshooting
Explain hardware addressing techniques
Maintain usage and maintenance logs
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Competency: Explain operation of peripheral devices

Competency Builders:
Identify peripherals and operating requirements of each
Identify primary devices used for personal computer auxiliary storage
Describe how data is stored on diskettes and hard drives
List speed and storage capacities of computer auxiliary storage devices
Describe attributes of diskettes and hard disks regarding speed and storage capacity
List types of disk storage used with large computer systems
Define role of tape storage in relation to personal and large computers
Describe security issues
Explain purpose of input devices (e.g., keyboard, mouse, scanners, pens, bar code readers, credit/debit/smart cards, voice, video, gloves)
Describe operation of output devices (e.g., voice, speaker output devices, printers, plotters, printer sharing units, SCSI interface, video display)
Describe operation of multimedia (e.g., video, audiosound)
Describe operation of storage devices (e.g., tape, disk, CD-ROM)
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Competency: Operate peripheral devices

Competency Builders:
Use appropriate reference materials
Load media devices
Start media devices
Unload media devices
Import, edit, and export video and audio
Set up print devices
Operate scanner devices
Operate print devices
Maintain print devices
Monitor peripheral equipment operations
Perform routine maintenance on peripheral devices
List appropriate control procedures
Transmit via modem
Receive via modem
Search a CD-ROM library
Print information from a CD-ROM library
Describe device driver
BIL: Essential

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Competency: Store media

Competency Builders:
Identify need for data library
Retrieve stored media (e.g., on-line, off-line, permanent, off-site)
File stored media (e.g., on-line, off-line, permanent, off-site)
Initialize media
Catalog media
**Competency:** Explain software applications

**Competency Builders:**
- Define software types and functions
- Describe need for application software
- Describe different types of software applications
- Explain advantages and disadvantages of integrated and dedicated software
- List software sources
- Explain software copyright laws
- Explain data compression techniques
- Explain use of passwords/security
- Utilize desktop productivity tools
BIL: Essential

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Competency: Use word processing packages

Competency Builders:
Define word processing terminology
Explain functions of word processing software
Explain word processing applications
Use appropriate reference materials
Keyboard efficiently by touch
Use mouse
Initialize diskette
Prepare backup file
Maintain backup file
Update spelling dictionary and spell check
Perform document functions (e.g., locate, rename, delete, save, retrieve, copy)
Perform formatting functions (e.g., center, underline, bold, cut and paste)
Use edit features
Use sort features
Add page numbers to document
Add headers and footers
Print files, pages, screens and blocks of text
Verify accuracy of output
Create a document
Save a document to disk
Retrieve a document from disk
Edit an existing document
Describe word-wrap
Print a document
Store boilerplate material (e.g. templates, stationary files)
Compose documents at keyboard
Tabulate multiple columns
Prepare new documents from existing ones
Merge selected copy with new information
Prepare various types of table options
Format text
Integrate database, spreadsheet and graphic files
Convert documents from one system to another
Demonstrate use of computer thesaurus
Use multimedia techniques/resources
Perform merge functions
BIL: Essential

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Competency: Use spreadsheet packages

Competency Builders:
Define spreadsheet
Demonstrate knowledge of basic spreadsheet terminology
Define components of spreadsheets
Describe implementation of spreadsheet operations in business scope
Use spell check
Execute an electronic spreadsheet
Enter data, formulas, and functions
Differentiate between labels and numbers
Speculate using "what if..." questions
Sequence keystrokes in the creation of a macro
Create database within spreadsheet and perform data query functions
Move around in spreadsheet and correct errors
Format spreadsheet
Create graphs
Print graphs
Save previously saved files
Load previously saved files
Replicate cells using copy commands
Use electronic spreadsheet to complete business application
Use spreadsheet to plan financial strategies
Prepare spreadsheet
Use multimedia techniques/resources
**BIL:** Essential

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**Competency:** Use databases

**Competency Builders:**
- Define database
- Explain terms used in database systems
- Describe common functions of database systems
- Use database to create, input, edit, and display fields and records
- Analyze structure of database files
- Perform calculations with a database file
- Alter structure of database file
- Sort records based on multiple fields
- Identify advanced database technology
- Use appropriate reference materials
- Utilize relational database
- Enter elements into database
- Proofread database
- Explain database
- Design report formats
- Transfer data to and from remote database
- Print reports using data from multiple databases
- Use database files with other application software
- Verify accuracy of output (e.g., edit reports)
**BIL:** Essential

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**Competency:** Use graphic user interface (GUI) techniques

**Competency Builders:**
- Describe a variety of computer interfaces
- Explain multi-tasking environment
- Setup data exchange between two different applications
- Setup an object link between two different applications
- Explain the use of dynamic link libraries
- Transfer data from instruments to other computers
BIL: Essential

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Competency: Manage software packages

Competency Builders:
Install software packages
Upgrade software packages
Document installation and upgrade of software packages
Apply security levels/procedures to sensitive data
Understand software memory allocation
Manage software preferences
Manage software conflicts
BIL: Essential

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Competency: Maintain computer security requirements

Competency Builders:
- Apply business ethics
- Follow security rules, regulations, and codes
- Implement security procedures
- Document security procedures
- Perform security checks
**BIL:** Essential

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**Competency:** Maintain personal computer systems

**Competency Builders:**
- Monitor system status and performance
- Run diagnostics
- Report computer system malfunction(s)
- Report software malfunction(s)
- Fix recoverable files
- Maintain security
- Maintain computer log
- Perform backup procedure(s)
- Perform preventive maintenance
- Follow log-off and power-down procedure(s)
- Follow equipment maintenance procedures
- Follow quality control procedures
BIL: Essential

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Competency: Demonstrate basic knowledge of networks

Competency Builders:
- Explain communications standards
- Describe network structures
- Explain network types and protocols
- Explain network connectivity
- Explain the function of servers in a graphic network
- Describe various network operating systems
- Explain the difference between network software and individual use software
- Use a network to access, file, and store files
BIL: Essential

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Competency: Use a shared environment

**Competency Builders:**
- List purposes of a network environment
- Define electronic mail
- Identify advantages and disadvantages of electronic mail
- Describe impact of local & wide area networks on mail delivery
- Compose electronic messages
- Send electronic messages using appropriate format
- List categories of electronic mail service
- Transmit document using electronic mail system
- Monitor electronic mail
- Use networked environments
- Search database for properties of materials
- Conduct literature searches using a variety of on-line tools
- Explain access, security, transmission and retrieval
**BIL:** Essential

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**Competency:** Demonstrate knowledge of the Internet

**Competency Builders:**
- Define the Internet
- Explain how the Internet works
- Explain Internet capabilities and limitations
- Explain how to connect to the Internet via modem, ISDN, etc.
- Install Internet software
- Navigate the World Wide Web
- Identify services and tools offered on the Internet
- Use services and tools offered on the Internet
- Explain bookmarks
**BIL:** Essential

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**Competency:** Use the Internet for research

**Competency Builders:**
- Define how the Internet can be used for research
- Use services and tools offered on the Internet for research
- Identify search engines
- Use search engines
- Evaluate Internet resources and accuracy of information
- Access library catalogs on the Internet
- Access commercial and government resources
- Download files
Unit: Documentation

BIL: Essential

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Competency: Demonstrate proficiency in technical documentation

Competency Builders:
Record data
Maintain test logs, if applicable
Compile cumulative reference notebook/record
BIL: Essential

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Competency: Demonstrate proficiency in technical report writing

Competency Builders:
Write out procedures
Design charts and graphs
Outline reports
Write reports
Present reports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals
Unit: Infection Control and Risk Management

BIL: Essential

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Competency: Comply with local, state, and federal regulations

Competency Builders:

- Explain state and federal governmental roles in universal/standard precautions as outlined by the Centers for Disease Control (CDC)
- Comply with Occupational Safety and Health Administration (OSHA) regulations
- Explain purpose of Material Safety Data Sheets (MSDS)
- Comply with Environmental Protection Agency (EPA) regulations
- Report communicable diseases to local health authorities
- Use precautions to prevent contamination
- Demonstrate use of fire and safety equipment
- Correct safety hazards
- Write incident reports for accidents or safety infractions
Competency: Comply with environmental safety standards, accident prevention methods, and disaster plans

Competency Builders:
Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments
BIL: Essential

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Competency: Maintain personal safety and hygiene

Competency Builders:
- Use universal/standard precautions
- Demonstrate isolation techniques
- Wash hands aseptically
- Use eye/face shield protection
- Wear gloves
- Wear mask
- Wear uniform or professional attire
- Apply principles of aseptic techniques and sterility
- Practice proper hygiene
- Immunize self against communicable diseases
- Complete incident reports as required
- Demonstrate proper body mechanics
- Identify safe and effective sterilizing methods for instruments and equipment
- Demonstrate safe and effective use of safety equipment
- Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
- Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
- Identify principles of ergonomics
- Identify common causes of back injuries
- Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Competency: Maintain infection control of work area

Competency Builders:
- Identify modes of transmission of infection
- Identify methods for preventing infection transmission
- Differentiate between bacteriostatic and bacterialcidal
- Identify disinfection techniques
- Define "nosocomial infection"
- Identify terms related to cleaning and disinfecting
- Outline measures to be taken to clean and disinfect
- Outline flow of dirty equipment and materials
- Contain used linens
- Isolate contaminated linens
- Clean work areas
- Disinfect work areas
Competency: Apply aseptic and sterilizing principles

**Competency Builders:**
Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments, if applicable
Disinfect instruments, if applicable
Sterilize instruments, if applicable
Operate sterilizing equipment, if applicable
Store sterilized equipment and supplies
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary
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**Competency:** Dispose of waste materials in compliance with government regulations

**Competency Builders:**
- Practice safe, sanitary, and sterile procedures, if applicable
- Dispose of noninfectious waste
- Dispose of infectious waste
- Dispose of hazardous waste
- Dispose of controlled substances
- Dispose of needles and sharp instruments properly
BIL: Essential

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Competency: Demonstrate isolation techniques

Competency Builders:
Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
BIL: Essential

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Competency: Maintain patient safety
(Not applicable for MLT)

Competency Builders:
Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings
Verify patient identify
Identify self/title to patient
Identify behaviors that may escalate to violence
Identify steps in managing at-risk patient
Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:
Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs
Unit: Medical Terminology

**BIL:** Essential

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**Competency:** Use common medical symbols, abbreviations, and acronyms

**Competency Builders:**
- Identify commonly used symbols (e.g., $O_2$)
- Write out full names of commonly used acronyms
- Write out full names of commonly used abbreviations (e.g., $bx = biopsy$)
- Spell medical terms correctly
**BIL:** Essential

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**Competency:** Demonstrate knowledge of medical terminology

**Competency Builders:**
- Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
- Spell basic Greek and Latin prefixes and suffixes
- Pronounce basic Greek and Latin prefixes and suffixes
- Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
- Define terms related to the integumentary system
- Define terms related to the skeletal system
- Define terms related to the muscular system
- Define terms related to the nervous system
- Define terms related to the circulatory/cardiovascular system
- Define terms related to the lymphatic system
- Define terms related to the respiratory system
- Define terms related to the digestive system
- Define terms related to the endocrine system
- Define terms related to the urinary system
- Define terms related to the reproductive system
- Define terms related to the senses
- Define terms related to immunology
- Define terms related to pathology
Unit: Anatomy, Physiology, and Pathology

BIL: Essential

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Competency: Demonstrate general knowledge of basic chemistry

Competency Builders:
Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases
BIL: Essential

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**Competency:** Demonstrate general knowledge of the human body

**Competency Builders:**
- Define anatomy and physiology and explain their relationship
- Describe the anatomical position
- Identify body directions, planes, and cavities
- Name the major organ systems and their functions
- Classify major organs by the organ system they are within
- Define cell composition, shape and size
- Identify cell regions and organelles and explain their function
- Identify basic life processes of cell division and transportation
- Identify the four major tissue types, their function and subtypes
- Define neoplasm and distinguish between benign and malignant
- Describe effect of aging across the lifespan

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BIL: Essential

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Competency: Demonstrate knowledge of the integumentary system

Competency Builders:
List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions
BIL: Essential

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Competency: Demonstrate knowledge of the skeletal system

Competency Builders:
List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints
**BIL:** Essential

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**Competency:** Demonstrate knowledge of the muscular system

**Competency Builders:**
- Identify types of muscle tissue
- Describe muscle contraction
- Define the parts of a muscle and explain major muscle types
- Define muscle tone, isotonic and isometric contractions
- Name types of movements produced by skeletal muscle contractions
- Identify the major muscles of the human body
- Identify common abnormal conditions of the muscles
- Identify origin, insertion and function of muscles
- Describe common disorders and injuries of the muscles
Competency: Demonstrate knowledge of the nervous system

Competency Builders:
Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principal cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system
BIL: Essential

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Competency: Demonstrate knowledge of the circulatory/cardiovascular system

Competency Builders:
Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system
BIL: Essential

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Competency: Demonstrate knowledge of the lymphatic system

Competency Builders:
Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system
**Competency:** Demonstrate knowledge of the respiratory system

**Competency Builders:**
- Identify major respiratory system organs and structures describing the function of each
- Describe the function of major respiratory system organs and structures
- Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
- Describe the process of gas exchange in the lungs and the tissues
- Explain role of the respiratory muscles in breathing
- Identify brain areas involved in the control of respiration
- Explain respiratory volumes and capacities
- Describe a common disorders and injuries of the respiratory system
Competency: Demonstrate knowledge of the digestive system

Competency Builders:
Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system
BIL: Essential

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Competency: Demonstrate knowledge of the endocrine system

Competency Builders:
- Differentiate between endocrine and exocrine glands
- Identify major endocrine glands and hormones produced by each
- Explain response of body systems to hormones
- Describe common endocrine gland disorders
BIL: Essential

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Competency: Demonstrate knowledge of the urinary system

Competency Builders:
Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system
BIL: Essential

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**Competency:** Demonstrate knowledge of the reproductive system

**Competency Builders:**
- Explain the general function of the reproductive system
- Identify major organs of the reproductive system
- Describe the phases of the menstrual cycle
- Explain the process of meiosis, spermatogenesis, and oogenesis
- Identify stages of embryonic development
- Explain the physiology of childbirth
- Describe common disorders of the reproductive system
BIL: Essential

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Competency: Demonstrate knowledge of the senses

Competency Builders:
Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses
Competency: Demonstrate knowledge of immunology

Competency Builders:
Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders
Unit: Medical Law and Ethics

BIL: Essential

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Competency: Comply with medical law and ethics

Competency Builders:
Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice
Explain process of certification/licensure of health professionals
BIL: Essential

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Competency: Exhibit ethical behavior

Competency Builders:
Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addiction
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals
BIL: Essential

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Competency: Describe legal ramifications of misconduct

Competency Builders:
- Explain terms, principles, and characteristics of legal and ethical behavior
- Explain legal and ethical ramifications of breaching patient confidentiality
BIL: Essential

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Competency: Practice discretion regarding patient information

Competency Builders:
- Identify components of Patient Bill of Rights
- Communicate patient's rights
- Identify patient's rights and responsibilities
- Describe reasons for sharing patient information
- Identify appropriate persons to whom information can be released
- Describe methods of maintaining confidentiality
- Explain truth-in-lending law
- Explain anatomical gift act
- Explain advance directives
- Explain living will
- Explain informed consent
- Identify reasons for termination of patient services
- Explain consequences of noncompliance with physician's recommendations
- Explain remuneration
- Describe impact of communicable diseases
- Describe the importance of proper sample identification
BIL: Essential (RNA Only)

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Competency: Practice personal professional protocol with medical community

Competency Builders:
- Explain process of certification/licensure of health professionals
- Comply with tax requirements
- Maintain integrity of personal files
- Explain the statute of limitation
- Identify ownership of medical records
- Maintain procedures for legal access to patient and/or records
- Investigate professional liability coverage options
Unit: Psychology of Stress

BIL: Essential

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Competency: Analyze factors that influence a patient’s response to stress

Competency Builders:
Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress
Competency: Analyze physiological response to stress

Competency Builders:
Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process
Competency: Analyze psychological response to stress

Competency Builders:
Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient’s ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors
BIL: Essential

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Competency: Provide care for a patient with an ineffective coping response

Competency Builders:
- Assess psychological responses to stress in a patient
- Promote exploration of feelings when providing patient care
- Describe strategies to assist in stress reduction
- Implement strategies to assist in stress reduction
- Evaluate selected patient interventions and suggest alternative measures
Unit: Psychology of Human Relations

BIL: Essential

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Competency: Explain human growth and development

Competency Builders:
Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span
Competency: **Demonstrate appropriate communication techniques**

**Competency Builders:**
- Identify components of provider-client relationship
- Identify ways to cope with stress
- Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
- Treat clients with respect and dignity
- Identify assertive and aggressive responses
- Differentiate between acceptable and unacceptable touching
- Identify barriers to communication
BIL: Essential

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Competency: Establish rapport

**Competency Builders:**
- Describe proper manner for greeting a patient
- Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
- Respond to verbal and nonverbal communication
- Serve as liaison between physician, patient, and others
- Solicit patient’s understanding of communication
- Translate medical terms into language patient can understand
- Interpret patient’s reaction to illness and disability
- Describe individual, cultural and socioeconomic differences in people
- Identify methods in which to communicate with patients or responsible party with sensory disorders
- Support patient/responsible party during the grief process
- Orient patient to policies, facilities, and staff
- Respond to patient/responsible party in a therapeutic manner
- Identify patient personality types
- Treat patient with empathy and impartiality
- Support patient’s right to make decisions regarding care
- Encourage ventilation of patient/responsible party’s feelings
BIL: Essential

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Competency: Follow established procedures for communication and documentation

Competency Builders:
Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display
BIL: Essential

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Competency: Document patient progress

Competency Builders:
- Record current treatment rendered and patient response
- Include parameters in notes (e.g., subjective, objective, assessment, plan)
- Use correct grammar, spelling, and approved abbreviations
- Secure appropriate signatures
- Write legibly
- Use appropriate resources
Unit: First Aid and Medical Emergencies

BIL: Essential

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Competency: Use emergency procedures

Competency Builders:
Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification
**BIL:** Essential

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**Competency:** Perform first aid

**Competency Builders:**
- Assist with first aid for wounds or fractures
- Administer first aid to control bleeding
- Administer first aid for shock
- Administer first aid for burn patient
- Assist with first aid for poisoned patient
- Assist with choking patient
- Assist with patient having seizure
- Assist with syncopal patient
BIL: Essential

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Competency: Maintain cardiopulmonary resuscitation (CPR) according to certification agency standards

Competency Builders:
Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults
BIL: Essential

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Competency: Respond to medical emergencies

Competency Builders:
Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action
Unit: General Administrative Duties
All competencies in this unit are to be addressed as applicable to a specific occupation.

BIL: Essential

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Competency: Perform scheduling and recordkeeping duties

Competency Builders:
Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule routine equipment maintenance and repair
BIL: Essential

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Competency: Perform other departmental duties

Competency Builders:
- Assist in dealing with vendors
- Assist in maintenance of departmental budget
- Assist in writing/revising job description
- Assist in writing/revising forms (e.g., home programs, documentation forms)
- Maintain departmental cleanliness
- Maintain inventory/supplies
BIL: Essential

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Competency: Manage reception area

Competency Builders:
Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients
BIL: Essential

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Competency: Demonstrate telephone handling techniques

Competency Builders:
Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy
Phone non-medication prescriptions to appropriate agency
BIL: Essential

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Competency: Maintain appointment schedules

Competency Builders:
- Write appointments legibly
- Prepare appointment calendar
- Record appointments
- Prepare appointment cards
- Maintain recall system
- Confirm appointments
- Schedule outpatient diagnostic tests
- Make referral appointments for patients
BIL: Essential

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Competency: Maintain medical records and laboratory reports

Competency Builders:
- Obtain patient information
- Prepare folder
- Prepare charge documentation
- Explain importance of records management
- File information alphabetically or numerically according to office protocol
- Retrieve patient record from file
- Prepare cross-reference file
- Process incoming medical reports
- Purge records
- Prepare reports concerning patient care, condition, census, accidents, and incidents
- Maintain current documentation of patient status and care
- Complete immunization records
- Compile patient laboratory reports
- Process completed laboratory reports
- Document results from reference laboratories
- Verify tests ordered and test received
BIL: Recommended

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Competency: Prepare office communications

**Competency Builders:**
- Compose business correspondence
- Edit business correspondence
- Transcribe letters from dictating machine
- Keyboard business correspondence
- Print documents
- Proofread for errors in correspondence
- Complete appropriate consent forms
- Address envelopes
- Process incoming mail
- Maintain files for correspondence
- Classify outgoing mail
- Label outgoing mail
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**Competency:** Use office equipment

**Competency Builders:**
- Operate calculator
- Operate checkwriter
- Operate computer
- Operate copy machine
- Operate fax machine
- Operate multi-line telephone system
**BIL:** Recommended

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**Competency:** Demonstrate knowledge of different payment systems

**Competency Builders:**
- Identify required procedures for private carriers
- Identify required procedures for non-insured patients
- Identify required procedures for health maintenance organization (HMO)
- Identify required procedures for preferred provider organization (PPO)
- Identify required procedures for independent practitioner association (IPA)
- Identify required procedures for U.S. government employees (TRICARE)
- Identify required procedures for Aid to Dependent Children (ADC)
- Identify required procedures for general assistance (GA)
- Identify required procedures for Medicare
- Identify required procedures for Medicaid
- Identify required procedures for worker's compensation
**BIL:** Recommended

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**Competency:** Perform diagnostic coding

**Competency Builders:**
- Stay current with diagnostic coding changes
- Complete forms for international classification of diseases (ICD-9 CM)
- Complete forms for current procedural terminology (CPT)
- Complete forms for health care procedural code (HCPC)
- Complete forms for diagnostic related groups (DRG)
- Complete forms for J-codes
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**Competency Builders:**
- Define primary and secondary carriers
- Define third party administrators
- Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
- Process quick-claim forms
- Use procedure codes
- Log and track insurance claims/forms

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Competency: Perform financial functions

Competency Builders:
- Apply basic bookkeeping fundamentals
- Interpret and explain fees
- Arrange financial agreements
- Complete ledger
- Prepare account summaries
- Collect fees
- Issue receipts
- Maintain petty cash account
- Prepare bank deposits
- Verify invoices
- Collect delinquent bills
- Collect and post payments
- Process credit card transactions
- Prepare checks for signature
- Prepare payroll
- Reconcile bank statements, cash, and/or receipts
- Complete Worker's Compensation forms and Medicare/Medicaid forms
- Prepare schedule of accounts receivable
- Prepare schedule of accounts payable
- Maintain accounts receivable
- Maintain accounts payable
Unit: General Administrative Duties for Medical Assistant

BIL: Essential

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Competency: Perform scheduling and recordkeeping duties

Competency Builders:
- Schedule patient appointments
- Coordinate activities with other departments
- Coordinate activities with community agencies
- Schedule space and equipment for therapy
- Maintain daily charges for equipment/treatment
- Comply with reimbursement requirements
- Maintain patient files/charts
- Maintain patient attendance records
- Schedule routine equipment maintenance and repair
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**Competency:** Perform other departmental duties

**Competency Builders:**
- Assist in dealing with vendors
- Assist in writing/revising job description
- Assist in writing/revising forms (e.g., home programs, documentation forms)
- Maintain departmental cleanliness
- Maintain inventory/supplies
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**Competency:** Manage reception area

**Competency Builders:**
- Prepare reception area
- Greet visitors and patients
- Advise patient of office hours
- Manage children accompanying patient
- Identify ways to communicate with patients with sensory disorders
- Screen non-patient visitors
- Explain delays to patients
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**Competency:** Demonstrate telephone handling techniques

**Competency Builders:**
- Place calls
- Record telephone messages (e.g., date, time, initial calls)
- Screen calls
- Transfer calls
- Obtain information for return calls
- Handle emergency calls
- Make arrangements for patient's admission to hospital
- Make patient referrals
- Phone prescriptions to pharmacy
- Phone non-medication prescriptions to appropriate agency
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Competency: Maintain appointment schedules

Competency Builders:
Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients
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Competency: Maintain medical records and laboratory reports

Competency Builders:
Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received
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Competency: Prepare office communications

Competency Builders:
Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail
**BIL:** Essential

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**Competency:** Use office equipment

**Competency Builders:**
- Operate calculator
- Operate checkwriter
- Operate computer
- Operate copy machine
- Operate fax machine
- Operate multi-line telephone system
BIL: Essential

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Competency: Demonstrate knowledge of different payment systems

Competency Builders:
Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (TRICARE)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation
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Competency: Perform diagnostic coding

Competency Builders:
Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes
BIL: Essential

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Competency: Process insurance claims/forms

Competency Builders:
Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms
BIL: Essential

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Competency: Perform financial functions

Competency Builders:
Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable
Unit: Vital Signs

BIL: Essential

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Competency: Interview patient

Competency Builders:
Complete patient information sheets
Record medical/health history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)
**BIL:** Essential

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**Competency:** Measure temperature

**Competency Builders:**
Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)
BIL: Essential

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Competency: Measure pulse

Competency Builders:
Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse rate that should be reported
Record pulse
BIL: Essential

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Competency: Measure ventilation

Competency Builders:
- Measure rate, depth, and rhythm of respiration
- Identify normal respiratory rate for different age groups
- Report signs of compromised respiration
- Identify factors that may affect respiration
- Record respiration
**BIL:** Essential

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**Competency:** Measure blood pressure

**Competency Builders:**
- Identify myths and misconceptions related to blood pressure and hypertension
- Identify etiology of hypertension
- Identify consequences of untreated hypertension
- Identify normal range of blood pressure for different age groups
- Record blood pressure
- Identify factors that affect blood pressure
- Select appropriate cuff size
- Describe the effect of inappropriate cuff size on accurate blood pressure reading
- Identify variations from normal blood pressure that should be reported
- Demonstrate use of aneroid sphygmomanometer
- Demonstrate use of mercurial sphygmomanometer
- Demonstrate palpated blood pressure
- Demonstrate use of electronic sphygmomanometer
- Demonstrate location of stethoscope bell for proper blood pressure reading
- Identify systolic and diastolic sounds
**BIL:** Essential

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**Competency:** Obtain physical measurements

**Competency Builders:**
- Measure adult height
- Measure adult weight
- Measure adult chest and waist expansion
- Measure infant height
- Measure infant weight
- Measure infant head and chest circumference
- Measure auditory status (e.g., tympanogram)
- Measure visual status (e.g., eye chart)
- Identify color blindness
- Record all results
Unit: Nutrition

BIL: Essential

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Competency: Identify fundamentals of nutrition

Competency Builders:
- Identify nutrients and food groups
- Explain role of nutrients to body functions
- Explain regional, cultural, and religious food patterns
- List factors which must be considered when purchasing food
- Identify component of a balanced diet across the life span (e.g., USDA food pyramid)
- List factors which must be considered when storing food
- Identify methods of food preparation
- Instruct patient in sound nutrition principles
BIL: Recommended

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Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:
Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)
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**Competency:** Draw correlation between diet and exercise

**Competency Builders:**
- Identify methods of exercise
- Explain effect of exercise and food on energy level
- Write an exercise plan
- Identify weight-related issues
BIL: Recommended

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Competency: Identify facets of alternative nutrition (RNA, MA only)

Competency Builders:
- Identify indications and effects of tube feedings
- Identify indications and effects of intravenous fluids
- Identify indications and effects of lipids
- Identify indications and effects of hyperal
Unit: Basic Pharmacology

BIL: Essential

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Competency: Maintain supply of medications, as applicable to the profession

Competency Builders:
Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (e.g., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (e.g., comply with government regulations)
BIL: Essential

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Competency: Calculate dosage according to physician's orders

Competency Builders:
- Explain the need to verify the accuracy of medical orders
- Verify accuracy of medical orders
- Use Physician's Desk Reference (PDR)
- Transcribe medication order
- Calculate oral dosage
- Calculate parenteral dosage
- Calculate sublingual dosage
- Calculate pediatric dosage
- Calculate intravenous dosage and rate of flow
BIL: Essential

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Competency: Instruct patients on use of medications

Competency Builders:
Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)
BIL: Essential

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Competency: Administer medications according to medical orders as applicable to the profession

Competency Builders:
- Identify patient
- Verify patient allergies
- Use reference materials
- Verify accuracy of medical orders
- Calculate dosages
- Prepare oral medication
- Identify correct anatomical sites
- Prepare intramuscular, intradermal, and subcutaneous injectable medications
- Prepare and administer sublingual medications
- Prepare transdermal medications
- Prepare inhalant medications
- Prepare instillation medications
- Prepare and administer topical medications
- Prepare and administer rectal medications
- Prepare and administer vaginal medications
- Assist with administration of local anesthesia
- Administer medications
- Document medication administration
- Document patient response to medications
BIL: Essential

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Competency: Evaluate response to medication

Competency Builders:
Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication
Unit: Patient Education

BIL: Essential

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Competency: Inform patient/family about diagnostic procedures

Competency Builders:
- Distribute literature regarding advised procedure
- Explain diagnostic procedures
- Explain preparation for diagnostic procedures
- Translate medical terminology into lay terms
- Distribute resource materials related to test results
- Schedule patient follow-up
- Obtain informed consent signature
Competency: Educate patient/responsible party about self-care related to results of specific diagnostic procedure/therapy

Competency Builders:
Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications with patient/responsible party (e.g., ortho, dietary, ostomy, splints, orthotics)
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)
BIL: Essential (PTA, RAD, RNA, MA only)

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Competency: Provide psycho-social care for patient/family

Competency Builders:
Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient
**BIL:** Recommended

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**Competency:** Inform patient about World Health Organization (WHO) immunization requirements

**Competency Builders:**
- Instruct patient/family on infant, preschool, adolescent, and adult immunizations
- Instruct patient/family on international requirements
- Reinforce instructions from other health professionals to patient/family member(s)
Unit: Examinations
All competencies in this unit are to be addressed as applicable to a specific occupation

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Competency: Demonstrate general knowledge of diagnostic studies

Competency Builders:
Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations
BIL: Essential

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Competency: Demonstrate principles of body mechanics and ergonomics

Competency Builders:
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair
Assist patient with crutches
Assist patient with cane
Assist patient with walker
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (e.g., range of motion)
BIL: Essential

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Competency: Assist with general examination

Competency Builders:
- Prepare examination room(s)
- Set-up trays and equipment
- Change paper on examination table
- Provide for patient privacy
- Prepare patient for examination
- Communicate with patient with special needs (e.g., hearing or vision disorder)
- Inventory personal property
- Assist physician/therapist with examination
- Carry out physician's/therapist’s orders and treatment plan
- Follow up patient needs
- Ensure procedure documentation and labeling
- Clean examination room after procedure
BIL: Essential

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Competency: Assist with eye, ear, nose, and throat examination

**Competency Builders:**
- Prepare examination room(s)
- Set-up trays and equipment
- Prepare patient for examination
- Assist physician with examination
- Carry out physician's orders
- Follow up patient needs
- Ensure procedure documentation and labeling
- Assist with and chart eye irrigation
- Assist with and chart ear irrigation
- Assist with and chart tympanometry
- Assist with and chart laryngoscopy
- Describe taste bud reactions
- Conduct visual screening
- Conduct auditory screening
- Administer eye, ear, and nose medications
- Clean examination room after procedure
**BIL:** Essential

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**Competency:** Assist with obstetric and gynecological examination

**Competency Builders:**
- Prepare examination room(s)
- Set-up trays and equipment
- Prepare patient for examination
- Assist physician with examination
- Carry out physician's orders
- Follow up patient needs
- Ensure procedure documentation and labeling
- Obtain cytology history
- Assist with Pap smear
- Instruct patient in self breast examination
- Clean examination room after procedure
Competency: Assist with pediatric examination

Competency Builders:
- Prepare examination room(s)
- Set-up trays and equipment
- Prepare patient for examination
- Assist physician with examination
- Carry out physician's orders
- Follow up patient needs
- Ensure procedure documentation and labeling
- Record measurements on growth chart
- Record immunizations
- Apply restraints when needed (e.g., papoose board)
- Clean examination room after procedure
BIL: Essential

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Competency: Assist with proctology and gastrology examination

Competency Builders:
- Prepare examination room(s)
- Set-up trays and equipment
- Prepare patient for examination
- Assist physician with examination
- Carry out physician's orders
- Follow up patient needs
- Ensure procedure documentation and labeling
- Assist with proctoscopy
- Clean examination room after procedure
Competency: Assist with orthopedic examination

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment (e.g., soaks)
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with casting and splinting procedures
Demonstrate use of ambulatory aids
Assist patient in wheelchair transfer to and from examination table
Clean examination room after procedure
BIL: Essential

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Competency: Assist with neurological examination

Competency Builders:
- Prepare examination room(s)
- Set-up trays and equipment
- Prepare patient for examination
- Assist physician with examination
- Carry out physician's orders
- Follow up patient needs
- Ensure procedure documentation and labeling
- Clean examination room after procedure
BIL: Essential

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Competency: Assist with geriatric examination

Competency Builders:
Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure
Unit: Examinations for RNA

BIL: Essential

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Competency: Demonstrate general knowledge of diagnostic studies

Competency Builders:
Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations
BIL: Essential

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Competency: Demonstrate principles of body mechanics and ergonomics

Competency Builders:
- Identify principles of ergonomics
- Identify common causes of back injuries
- Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
- Assist patient in and out of wheelchair/chair
- Assist patient with ambulatory aids
- Assist patient with standing
- Assist patient with cast or splints
- Assist patient to bathroom
- Position patient using supportive devices (e.g., pillows, footboards)
- Perform ROM (e.g., range of motion)
**BIL:** Recommended

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**Competency:** Assist with medical examination

**Competency Builders:**
- Assess patient preparation for procedure
- Prepare examination room(s)
- Set-up trays and equipment
- Change paper on examination table
- Provide for medical asepsis and standard precautions
- Prepare patient for examination physically and psychologically
- Communicate with patient with special needs (e.g., hearing or vision disorder)
- Assist physician/therapist with examination
- Carry out physician's/therapist's orders and treatment plan
- Evaluate patient response
- Follow up patient needs
- Ensure procedure documentation and labeling
- Initiate home care instruction
### Unit: Clinical Assessment

**BIL:** Essential (MA)  Recommended (RCT, RNA)

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**Competency:** Perform tuberculosis testing

**Competency Builders:**
- Administer tine test
- Administer Mantoux test
- Interpret test results
BIL: Essential

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**Competency:** Perform body fluid specimen collection and handling according to CDC requirements

**Competency Builders:**
- Collect specimens
- Label all collected specimens properly
- Describe conditions that must be met if specimens and tests are to be used as legal evidence
BIL: Essential (MA)  Recommended (RCT, RNA)

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Competency: Describe electrocardiograms

Competency Builders:
- Explain a 12-lead electrocardiogram
- Discuss use of Holter monitors
- Observe patient undergoing EKG testing
Unit: Radiography

BIL: Essential

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Competency: Identify characteristics of x-radiation

Competency Builders:
Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Differentiate between ionizing and non-ionizing radiations
Compare different methods of measuring x-radiation
Compare different types of radiation (e.g., alpha, beta, natural, man-made)
BIL: Essential

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Competency: Describe effects of radiation on the human body

Competency Builders:
- Explain somatic and genetic effects of x-rays
- Identify tissues most and least sensitive to radiation
- Differentiate among exposure variables and their effects, both acute and chronic
- Describe methods for reducing patient exposure
- Explain methods of operator protection
- Identify common methods of personnel monitoring
- Describe LD 50/30 (e.g., Lethal Dose)
- Explain Dose Equivalent Limit
BIL: Essential

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Competency: Practice radiation safety procedures in accordance with OSHA and EPA

Competency Builders:
Adhere to safe radiation practices
Demonstrate radiation safety precautions for patients
Demonstrate radiation safety precautions for operators
Comply with equipment safety laws
Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities, injection of an iodinated contrast medium)
Wear radiation monitoring device(s) while on duty
Document personal radiation exposure
Question female patients about possible pregnancy and alert physician
Remove all unnecessary persons from area prior to taking radiograph
Perform safety checks of radiographic equipment and accessories (e.g., lead aprons and gloves, collimator accuracy)
Place protective shield(s) over patient's radio-sensitive organs prior to exposure
Minimize personal and patient radiation exposure through principles of time, distance, and shielding
Demonstrate appropriate infection control technique(s) when radiographing a patient in isolation
Report radiologic accidents and/or spills immediately to proper authorities
Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure; contrast media reactions; respiratory/cardiac distress)
Practice universal precautions
BIL: Essential

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Competency: Prepare patient for radiographic procedures

Competency Builders:
Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities; injection of iodinated contrast media)
Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure, contrast media reactions; respiratory/cardiac stress)
Assist patient in moving, transferring and ambulating
Explain procedure to patient to relieve anxiety and gain patient's cooperation during procedures
Give patient appropriate breathing instructions prior to making exposure
Assist physician in observing vital signs
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Assist physician with radiographic procedure if requested
Monitor medical equipment attached to patient while in radiology department (e.g., IVs, oxygen)
BIL: Essential

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Competency: Perform venipuncture and IV management

**Competency Builders:**
- Differentiate venous from arterial vessel
- Locate appropriate site for venous access
- Prepare skin using aseptic technique
- Introduce needle/catheter to selected vein
- Monitor site for extravasation
- Discontinue IV
- Administer IV contrast material
BIL: Essential

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Competency: Demonstrate principles of proper body mechanics and ergonomics

Competency Builders:
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics used in lifting, moving, transferring, ambulating, and positioning patient
Assist patients with adaptive devices and/or attached medical equipment during movement
BIL: Essential

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Competency: Demonstrate general knowledge of diagnostic radiology procedures

Competency Builders:
Describe common radiological procedures
Perform common radiological procedures
Describe common fluoroscopic procedures
Perform common fluoroscopic procedures
Describe computer tomography as an imaging modality
Describe common mammography procedures
Describe common computerized tomography procedures
Describe common magnetic resonance procedures
Describe common sonography procedures
Describe common special procedures
Describe common nuclear medicine procedures
Describe common quality assurance procedures
Describe common radiation therapy procedures
Differentiate between diagnostic and therapeutic radiology
Describe common surgical procedures, to include c-arm equipment
Describe common contrast exams
Competency: Explain how x-rays are produced

Competency Builders:
- Identify the different parts of the x-ray tube
- Describe the process for production of x-radiation
- Differentiate among the different types of radiation produced
- Describe radiographic density (e.g., contrast and detail)
- Explain the Inverse Square Law and its effect on x-ray production
- Apply radiographic formulas and their effect on x-ray production
- Explain Ma, KvP and time and their relationship on x-ray production
- Describe factors that affect radiographic density, contrast, detail, and distortion
BIL: Essential

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Competency: Demonstrate knowledge of pathological processes that affect radiographic imaging

Competency Builders:
Differentiate between additive and destructive pathologies
Identify pathological processes that affect each body system
Correlate pathological conditions on images from various imaging modalities
**BIL:** Essential

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**Competency:** Demonstrate knowledge of equipment

**Competency Builders:**
- Demonstrate the function of a diagnostic x-ray unit
- Demonstrate the function of a fluoroscopic unit
- Demonstrate the function of a portable x-ray unit
- Demonstrate the function of a portable c-arm unit
BIL: Essential

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Competency: Prepare equipment and materials for radiographic procedures

Competency Builders:
Differentiate among catheters, dilators, guidewires, and needles by size, type, and/or function
Warm up x-ray tube to achieve proper operating conditions
Measure appropriate patient parts for requested examination
Identify appropriate exposure factors
Modify exposure factors for circumstances (e.g., body hibitus, voluntary and involuntary motion, pathological conditions)
Restrict beam exposure to area of interest
Set appropriate exposure factors to achieve optimum image quality
Perform radiographic examination in a sequence which avoids or minimizes undesirable effects
Check radiographs to verify they contain proper identification and are of diagnostic quality
Identify corrective measure if radiograph is not of diagnostic quality
Clean patient and/or equipment to remove anything that might interfere with radiograph quality
Assist physician in fluoroscopy by preparing the fluoroscopic unit and accessories for use and by adjusting controls as requested
Utilize sterile technique
Respond to malfunctioning medical equipment
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Differentiate among contrast media
Prepare contrast media accurately when appropriate
Obtain immobilization devices when necessary
Obtain adequate cassettes and accessories
Competency: Perform radiographic equipment check procedures

Competency Builders:
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Demonstrate knowledge of quality control and quality assurance procedures
Collect data for ongoing quality assurance monitoring
**BIL:** Essential

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**Competency:** Provide accurate radiographic record identification and retrieval

**Competency Builders:**
- Record required information following performance examination
- Retrieve radiographic patient records (e.g., radiographs or reports)
- Identify patient using information on request form
- Confirm patient's identity by checking wristband and/or by questioning patient
- Imprint proper patient identification and markers onto film
- Verify correctness of patient identification and markers on film
- Combine radiographic requisition with radiographs for interpretation and filing
- Check radiographic requisition to verify accuracy of information
Competency: Perform radiographic procedures

Competency Builders:
Follow manufacturer’s instructions for film and equipment placement
Apply universal precautions
Adjust radiographic factors on x-ray equipment
Employ infection control procedures
Align patient, radiographic/fluoroscopic unit, and image receptor to product images of requested anatomical structures/systems
Use immobilization devices as needed
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Initiate rotor prior to making exposure
Give patient appropriate breathing instructions prior to making exposure
Check radiographs to assure optimum diagnostic image quality to include density, contrast, detail, distortion, and positioning
Identify corrective measure if radiograph is not of diagnostic quality
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**Competency:** Expose radiographic film

**Competency Builders:**
- Follow manufacturer's instructions for film and equipment placement
- Adjust radiographic factors on x-ray equipment
- Apply infection control procedures
- Position patient, radiographic/fluoroscopic unit, and image receptor to produce images of requested anatomical structures/systems
- Use immobilization devices as needed
BIL: Essential

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Competency: Process exposed radiographic film

Competency Builders:
Follow manufacturer's instructions for x-ray processors and solutions
Mix solutions for developing and fixing radiographic film
Follow darkroom procedures
Unload cassettes
Handle film properly
Read thermometer
Interpret time and temperature chart
Load film into processor
Follow safety precautions to prevent eye injury and minor burns
Dispose of mixed solutions in accordance with EPA regulations
Reload cassettes
Clean equipment
Monitor performance of automatic processor using sensitometry
Report malfunctions in automatic processor
BIL: Essential

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Competency: Store radiographs and unexposed film

Competency Builders:
Handle film(s) properly
Hang radiographs on viewboxes in proper orientation
File radiographs
Check expiration date
Store exposed and unexposed film properly
BIL: Essential

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Competency: Maintain supply inventory

Competency Builders:
- Identify supplies to be kept in stock
- Identify appropriate stock levels
- Organize supplies
- Re-order supplies
- Maintain a clean working environment
Unit: Respiratory Care

BIL: Essential

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Competency: Identify respiratory care uses

Competency Builders:
List areas in which respiratory therapy is involved with patient services
Describe the rationale for lung expansion therapy
List categories of diagnostic and patient monitoring procedures
List procedures provided by respiratory therapy
List conditions/diseases of patients who receive respiratory therapy treatment
List indications for oxygen therapy
List indications for aerosol and humidity administration
List indications for the use of chest percussion/chest physiotherapy
List indications for naso-tracheal, endotracheal, tracheal suctioning
List goals of pulmonary rehabilitation and patient education
Differentiate between educational programs of various respiratory care practitioners
BIL: Essential

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Competency: Prepare non-life support respiratory therapy equipment for patient use

Competency Builders:
- Explain purpose and application of non-life support equipment
- Identify components and ancillary equipment of non-life support equipment
- Identify oxygen administration devices
- Identify aerosol generators, croup tents, and vaporizer
- Identify humidifiers
- Identify gas delivery, metering, and analyzing devices
- Identify vacuum system components
- Identify patient breathing circuits
- Identify manometers and gauges
- Verify proper assembly of non-life support equipment
- Disassemble non-life support equipment
**BIL:** Essential

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**Competency:** Prepare life-support equipment for patient use

**Competency Builders:**
- Explain purpose and application of life-support equipment
- Identify life-support equipment
- Identify the components and ancillary equipment of life-support equipment
- Verify proper assembly of life-support equipment
- Disassemble life-support equipment for cleaning
- Identify and apply appropriate ventilation mode
- Maintain appropriate parameters as related to clinical status
- Discontinue life support as required
- Identify safety features
- Identify alarms
- Identify electrical and pneumatic supplies to ventilator
- Set-up ventilator
- Perform calculations
- Assess proper function
- Perform ventilation system check
**BIL:** Essential

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**Competency:** Manage airway as appropriate for certification/discipline

**Competency Builders:**
- Select appropriate Laryngoscope size ET tube
- Insert and/or manage ET tube
- Insert and/or manage trach tube
- Insert and manage oral airways
- Insert and manage nasopharyngeal
- Suctioning of/care of laryngoscope equipment, intubation, extubation, trach buttons, speaking valve
- Identify correct tube placement
**BIL:** Essential

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**Competency:** Perform rehabilitation

**Competency Builders:**
- Instruct pursed lip breathing
- Instruct diaphragmatic breathing
- Instruct cough control
- Instruct diet
- Instruct exercise conditioning
- Instruct activities of daily living
- Instruct bronchial hygiene techniques (e.g., Aerochamber, Inhalers)
- Instruct smoking cessation
BIL: Essential

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Competency: Manage pharmacological agents

Competency Builders:
- Administer and evaluate steroids
- Administer and evaluate bronchodilators
- Administer and evaluate antiviral
- Administer and evaluate mucolytics
- Administer and evaluate antibiotics
- Administer and evaluate bronchoconstrictors
- Administer and evaluate nicotene therapy
- Administer and evaluate artificial surfactant
- Administer and evaluate antipneumocystis
- Administer and evaluate topical anesthetics
- Administer and evaluate expectorants
- Administer and evaluate vasoconstrictors
- Administer and evaluate mast cell stabilizer
Competency: Perform assessment

Competency Builders:
Assess level of consciousness
Evaluate level of activity
Assess WOB (e.g., work of breathing)
Evaluate cough
Obtain smoking history
Assess occupational exposure
Obtain family history
Measure chest excursion
Assess level of dyspnea
Assess color
Assess clubbing of fingers
Assess use of accessory muscles
Assess position (e.g., tripoding)
Assess breathing patterns (e.g., Cheynes Stokes)
Assess breath sounds (e.g., wheeze, rhonchi, rales)
Interpret lab values
Evaluate chest radiograph
Obtain and evaluate sputum cultures
Obtain and evaluate EKG
BIL: Essential

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Competency: Demonstrate proper procedures for using flowmeters, regulators, gauges, and compressed gas cylinders

Competency Builders:
Identify the potential dangers associated with the use and transportation of oxygen
Identify safety measures associated with the use, transportation, and storage of oxygen
Outline the procedures for handling, maintaining, storing, and transporting flowmeters, regulators, gauges, and compressed gas cylinders
List methods by which medical gas cylinders are identified
Identify medical gases
Identify oxygen conserving devices
BIL: Essential

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Competency: Change non-life support equipment in patient care areas of a hospital

Competency Builders:
Differentiate between life-support and non-life support equipment
Identify safety measures to be taken before, during, and after changing non-life support equipment
Demonstrate proper communications with the patient whose equipment is being changed
Outline procedure for changing an oxygen delivery device which is in use on a patient
Verify proper operation of non-life support equipment
**BIL:** Essential

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**Competency:** Explain pulmonary pathology

**Competency Builders:**
- Identify common diseases
- Identify diagnostic criteria
- Identify accepted treatments
BIL:  Essential

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Competency:  Plan for discharge

Competency Builders:
Recognize need and arrange for referrals
Conduct home visits
Develop plan of service
Develop plan of care
Assess medical necessity
Demonstrate use and care of home respiratory equipment
BIL: Recommended

Competency: Prepare or demonstrate special procedures

Competency Builders:
Assist with bronchoscopy
Assist with thoracentesis
Perform pulmonary and cardiac stress testing
Assist cardioversion
Perform defibrillation
Assist transtracheal aspiration
Manage transtracheal catheters
Perform sleep apnea studies
Manage apnea monitors
Manage chest tubes
Manage chest drainage systems
BIL: Essential

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Competency: Demonstrate manual ventilation and suctioning

Competency Builders:
Identify patient
Describe differences between manual ventilation equipment
Identify indications, contraindications, hazards, and side effects of manual ventilation and suctioning
Determine if patient is a candidate for suctioning according to CPG (Clinical Practice Guidelines)
Determine type of suction appropriate for the patient
Explain proper vacuum range for suctioning
Demonstrate ability to suction properly maintaining sterile technique
Demonstrate ability to manually ventilate patient
Document and notify appropriate personnel
Assess patient response
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<th>Competency:</th>
<th>Perform bronchopulmonary hygiene</th>
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**Competency Builders:**
- Identify patient
- Determine if patient is a candidate for bronchopulmonary hygiene according to CPG
- Explain indications, contraindications, hazards, and side effects of BPH
- Demonstrate ability to position patient properly for drainage of all lung segments
- Demonstrate proper technique to effectively perform BPH
- Document patient response
- Verify MD order
BIL: Essential

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**Competency:** Administer respiratory therapy medications

**Competency Builders:**
- Identify patient
- Verify accuracy and completeness of medication order
- Explain purpose of respiratory medications to patient
- Explain indications, actions, contraindications, side effects and hazards of respiratory medications
- Demonstrate proper assembly of aerosol delivery device
- Calculate dosages of respiratory therapy medications
- Document patient/client response to medication
**BIL:** Essential

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**Competency:** Perform neonatal/pediatric respiratory care

**Competency Builders:**
- Identify anatomical differences between neonates/pediatrics and adults
- Describe various abnormalities of neonates
- Describe different cardiopulmonary disease processes specific to neonates/pediatrics
- Demonstrate ability to calculate medication dosages appropriate to age and weight
- Identify differences in mechanical ventilation specific to pediatrics/neonates
Competency: Prepare diagnostic equipment for patient use

Competency Builders:
- Explain purpose and application of diagnostic equipment
- Identify diagnostic equipment
- Identify the components and ancillary equipment of diagnostic equipment
- Assemble portable spirometers and electronic devices used to record flow, compliance, resistance, rate, and volume for patient use
- Disassemble portable spirometers, and electronic devices used to record flow, compliance, resistance, rate, and volume for cleaning
- Identify volume and capacity
- Identify major pulmonary tests
- Identify equipment use for pulmonary function testing
- Calibrate testing equipment
- Solicit patient cooperation
- Use equipment to test pulmonary function
- Calibrate testing equipment
- Solicit patient cooperation
- Evaluate test validity and reliability
- Perform a 12-lead EKG
- Identify parts of Swan Ganz catheter
- Identify arterial blood catheter
- Identify techniques used for hemodynamic monitoring
- Perform calculations using data collected from catheters
- Demonstrate ABGs/co-oximetry equipment
- Demonstrate pulse oximetry equipment
- Demonstrate transcutaneous O2 and CO2 equipment
- Demonstrate end tidal CO2 equipment
BIL: Essential

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Competency: Disinfect or sterilize respiratory therapy equipment

Competency Builders:
Define particulates, bacteria, viruses, fungi, rickettsiae, and spores
Describe infectious hazards regarding respiratory therapy equipment
Differentiate between disposable and reusable equipment
Package components and ancillary equipment for sterilization
Identify methods for sterilizing and disinfecting reusable equipment
Outline proper cleaning, disinfecting, and sterilizing methods
Demonstrate safe practice in cold liquid disinfection and sterilization
Demonstrate safe practice in gas sterilization
Explain how spore strip is used in guarantee sterilization of equipment
Explain why proper dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary to protect hospital patients
Identify circumstances which would warrant replacement of liquid disinfectant/sterilization agents
Competency: Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders

Competency Builders:
- List indications for O2 therapy
- Identify and utilize O2 administration devices
- Identify and utilize gas delivery and analyzing device, metering
- Identify and utilize the potential dangers, safety measures and procedures associated with the use, transportation and storage of medical gases
- List methods by which medical gas cylinders are identified
- Differentiate Pin Index Safety System, Diameter Index Safety System and Compressed Gas Association (CGA) Safety System
- Read cylinder pressure remaining in medical compressed gas cylinder and calculate duration
- Identify tools necessary to remove the regulator from a compressed gas cylinder
- List possible hazards involved in changing the regulator on a compressed gas cylinder
- Explain procedure for changing flowmeters, regulators, gauges, and compressed gas cylinders
- Verify proper operation of flowmeters, regulators, gauges, and compressed gas cylinders
- Define bulk gas system
- Define and identify the components of a manifold system
- Define and identify the components of a piping delivery system
- Identify items to be monitored in a bulk manifold compressed gas system
- Explain LOX systems safety and hazards
BIL: Essential

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Competency: Test respiratory therapy equipment for proper operation and patient readiness

Competency Builders:
- Verify that equipment components are assembled properly with all necessary accessories
- Check safety check of all components
- Check equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging
- Verify all equipment functions as required
- Document faulty or defective equipment
- Troubleshoot equipment for proper function
- Change equipment as needed
- Follow manufacturer’s instructions for safe operation of the equipment
**BIL:** Essential

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**Competency:** Demonstrate proper safety precautions in the transport and delivery of equipment

**Competency Builders:**
Outline methods of safe movement of equipment through a hospital environment
Identify safety measures related to the delivery and placement of the equipment in patient care areas of a hospital environment
BIL: Essential

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Competency: Perform hemodynamic monitoring

Competency Builders:
Identify parts of Swan Ganz catheter
Insert artering blood catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters
BIL: Essential

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Competency: Operate mechanical ventilator

Competency Builders:
Identify safety features
Identify alarms
Identify electrical and pneumatic supplies to ventilator
Set-up ventilator
Perform calculations
Assess proper function
Perform ventilation system check
**BIL:** Essential

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**Competency:** Perform electrocardiograms

**Competency Builders:**
- Calibrate testing equipment
- Solicit patient cooperation
- Evaluate test validity and reliability
- Perform a 12-lead EKG
BIL: Essential

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Competency: Evaluate chest x-rays

Competency Builders:
- Identify normal versus abnormal
- Identify tube placements
- Identify relationship to pulmonary diseases
Competency: Perform pulmonary function tests

Competency Builders:
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function
**BIL:** Essential

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**Competency:** Demonstrate therapeutic modalities

**Competency Builders:**
Demonstrate small volume aerosol and list indications
Demonstrate large volume aerosol and list indications
Demonstrate ultrasonic nebulizer and list indications
Demonstrate chest percussion and list indications
Demonstrate lung expansion and list indications
Demonstrate noninvasive ventilation and list indications
Demonstrate dose inhalers and spacers and list indications
Competency: Demonstrate knowledge of proper procedures for changing and monitoring bulk manifold compressed gas cylinders

Competency Builders:
Define bulk gas system, include lox (e.g., liquid oxygen)
Identify the components of a manifold system
Identify the components of a piping delivery system
Identify items to be monitored in a bulk manifold compressed gas system
Demonstrate proper technique for backfeeding oxygen supply
Explain operation and use of zone valves
**BIL:** Essential

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**Competency:** Classify mechanical ventilators

**Competency Builders:**
Identify model of ventilator (including safety features and alarms)
Identify various modes of ventilation
Identify type of ventilators (volume vs. pressure)
Identify electrical and pneumatic supplies to ventilator
BIL: Essential

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Competency: Wean patient from mechanical ventilator

Competency Builders:
Assess patient
Identify criteria for weaning
Demonstrate ability to properly interpret weaning data
Demonstrate extubation procedure
Identify equipment needed for weaning and extubation
**BIL:** Recommended

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**Competency:** Resuscitate neonates/pediatrics

**Competency Builders:**
- Obtain certification in code pink or neonatal advanced life support
- Obtain certification in pediatric advanced life support
**Competency:** Demonstrate proper procedure for hyperinflation

**Competency Builders:**
- Identify patient
- Determine if patient is a candidate for hyperinflation therapy according to clinical practice guidelines
- Determine proper hyperinflation technique for the patient
- Identify contraindications and hazards of hyperinflation therapy
- Demonstrate proper hyperinflation techniques (IPPB and SMI)
- Monitor patient and document therapy given appropriately
Unit: Physical Therapy

BIL: Essential

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Competency: Define patient needs

Competency Builders:
- Obtain data through patient/responsible party interview
- Gather information from medical record
- Observe patient
- Identify activities of daily living, work, and leisure
- Identify architectural barriers to patient mobility
- Identify contraindications for treatment
- Identify need for intervention (e.g., occupational therapy, speech therapy)
- Adjust treatment activities in accordance with patient tolerance
- Demonstrate proper methods of positioning and draping patient
- Provide for patient privacy
- Consult with physical therapist
- Observe, document, and report patient progress
BIL: Recommended

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**Competency:** Monitor patient progress

**Competency Builders:**
- Perform goniometry
- Perform manual muscle test
- Record measurements (e.g., wounds, edema, atrophy)
- Describe progress as defined by goals
- Define changes in patient status (e.g., strength, pain, functional skills)
- Document progress in patient’s record
- Define quality improvement process
- Demonstrate knowledge of commonly used manual test
- Perform home and community re-entry and job simulations
**Competency:** Develop therapeutic interventions

**Competency Builders:**
- Gather data from assessments
- Prioritize patient problems
- Identify realistic goals
- Identify length of time to achieve goals
- Identify therapeutic procedures that have potential for achieving goals
- Identify the influence of biological, psychological, cognitive, social, and cultural factors on compliance and achievement of goals
- Contribute to the development of the treatment plan
- Explain plan of treatment and goals to patient responsible party
- Consult with physical therapist (e.g., treatment termination)
- Review prescribed orders
- Refer to other community resources as needed
- Participate in discharge planning
- Identify medications and potential side effects
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Competency: Perform therapeutic measures

Competency Builders:
Collaborate with the physical therapist
Prepare treatment area
Prepare equipment and modalities
Prepare patient for treatment
Explain indications, contraindications and possible side effects of treatment
Assist patient with relaxation exercises
Assist patient with strengthening exercises
Assist patient with range of motion exercises
Assist patient with endurance exercises
Assist patient with balance exercises
Assist patient with gross motor coordination
Assist patient with gait training
Assist patient with neurological techniques (e.g., NOT, PNF)
Perform manual therapy techniques
Instruct patient in functional activities (e.g., mobility, transfers)
Assist patient with work-hardening activities
Assist with paraffin treatment
Assist with hydrotherapy
Assist with fluidotherapy
Assist with diathermy
Assist with contrast bath
Apply hot packs
Apply cold therapy (e.g., cryotherapy)
Perform ultrasound techniques
Apply therapeutic electrical stimulation (e.g., TENS, MENS, NMES)
Apply ultraviolet treatment
Apply mechanical traction
Apply intermittent venous compression
Assist with prosthetic training
Assist with use of orthotics

232 252
Measure for custom pressure gradient garments
Assist with use of pressure garments
Apply bandages
Apply dressings
Perform wound debridement
Perform therapeutic massage
Perform tilt table treatment
Assist in set-up and removal of electromylogram (EMG) biofeedback equipment
Monitor patient use of therapeutic equipment
Instruct patient in use of body mechanics
Monitor medical equipment attached to patient during treatment (e.g., oxygen, IVs, catheters, drainage tubes)
Competency: Demonstrate basic knowledge of kinesiology

Competency Builders:
Define terminology related to kinesiology
Explain the basis for structural kinesiology
Identify all bones in the appendicular skeleton
Identify the thorax, vertebral column, and skull in the axial skeleton
Identify the types of joints and their respective movements
Explain basic mechanics of muscular action (e.g., structural muscle types, attachments, types of contractions, and neuromuscular basis)
List actions of particular muscles, including origin and insertion in shoulder girdle, shoulder joint, elbow, wrist, hand, fingers, hip joint, knee joint, ankle/foot, and cervical, thoracic, and lumbar spine
Perform muscular analysis of selected exercises and activities
Describe selected exercises and activities using skeletal, muscular, and movement terminology and muscular analysis
Describe methods of inhibition or facilitation of motor responses and principles of sensory integration
Explain basic skills of athletic performance and physical fitness
Competency: Use physical therapy equipment

### Competency Builders:
- Identify need
- Refer for resources
- Seek prescription or refer to outside source if needed
- Request letter of justification from physical therapist
- Instruct patient/responsible party in correct use of equipment
- Assess performance of equipment
- Adjust and modify equipment
- Request termination of equipment with physical therapist and doctor
- Document outcome
- Identify principles of using adaptive equipment

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Competency: Assist in ongoing assessment

Competency Builders:
- Conduct an interview
- Screen patient for need of re-evaluation
- Explain re-evaluation plan
- Administer standardized test
- Consult with physical therapist regarding recommendations
- Record test results and recommendations
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**Competency:** Perform patient chart review

**Competency Builders:**
- Review record for appropriate signatures (e.g., co-signatures)
- Review record for completeness of information (e.g., progress notes, treatment logs, discharge summary information)
- Determine time period to be covered by evaluation/re-evaluation
- Participate in peer review
**BIL:** Essential

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**Competency:** Maintain current certification and continuing education/professional code of ethics

**Competency Builders:**
- Maintain AHA/ARC standards for CPR proficiency
- Prepare for state licensing exam
- Maintain American Physical Therapy Association (APTA) standards of practice and code of ethics
BIL: Essential

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Competency: Identify and respond to special care situations

Competency Builders:
Provide care for the needs of geriatric, mentally/physically challenged, non-English-speaking, and psychologically disturbed patients
Manage behavioral emergencies including disruptive patients
Provide care for the terminally ill
Describe aspects of scene safety
Competency: Apply Center for Disease Control (CDC) guidelines

Competency Builders:
Identify ways communicable diseases can be transmitted
Demonstrate knowledge of CDC guidelines
Practice universal precautions
Describe procedures for reporting and follow-up after exposure to a communicable disease
Describe methods used to disinfect equipment and vehicles involved with an infectious patient
BIL:  Recommended

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Competency: Perform record keeping to maintain billing records

**Competency Builders:**
- Retrieve information to complete records
- Encode records (e.g., ICD & CPT; Dept. specific codes)
- Monitor codes to assure timeframes
- Consult with physical therapy regarding billing (e.g., 3rd party payers, frequency parameters)
- Implement changes in policies & procedures
BIL: Essential

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Competency: Use of orthotics

Competency Builders:
Identify need
Consult with physical therapy
Select or design a pattern
Select equipment/materials
Construct orthosis
Seek prescription or refer to outside source if needed
Fit or modify orthosis
Write instructions for care and usage
Document outcome
**BIL:** Essential

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**Competency:** Treat patient in functional activities

**Competency Builders:**
- Instruct patient in dressing
- Instruct patient in edema control techniques
- Instruct patient in proper positioning techniques
- Instruct patient in time-management
- Instruct patient in employment preparation
- Instruct patient in object manipulation
- Instruct patient in play and leisure activities
- Instruct patient in relaxation techniques
- Instruct patient in assertive behaviors
- Instruct patient in energy conservation techniques
- Instruct patient in joint protection techniques
- Instruct patient in use of public transportation
- Instruct patient in transfer techniques
- Instruct patient in wheelchair mobility
- Instruct patient in bed mobility
- Instruct patient in use of orthosis
- Instruct patient in use of prosthesis
- Instruct patient in use of adaptive equipment
- Retrain patient in hand dominance
BIL: Essential

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Competency: Engage patient in purposeful activities

Competency Builders:
- Involve patient in fine and gross motor coordination activities
- Involve patient in strength activities
- Involve patient in social skill improvement activities
- Involve patient in endurance activities
- Involve patient in range of motion activities
- Involve patient in reflex integration activities
- Involve patient in sensory awareness activities
- Involve patient in sensory motor integration activities
- Involve patient in visual perception activities
- Involve patient in body awareness activities
- Involve patient in cognitive skill activities
- Involve patient in cognitive integration skill activities
- Involve patient in self-concept activities
- Involve patient in situational coping skill activities
- Involve patient in balance activities
- Involve patient in community involvement activities
Unit: The Nursing Process

BIL: Essential

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Competency: Perform patient assessment

Competency Builders:
Put patient at ease
Provide privacy
Demonstrate techniques used in patient assessment (e.g., communication, inspect, auscultate, percuss, palpate)
Evaluate patient's level of comfort, discomfort and pain
Perform assessment of all systems
Complete assessment forms
Document findings
Compare to norms and medical diagnoses
Communicate abnormal findings to physician
BIL: Essential

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Competency: Collect additional patient data

Competency Builders:
- Observe psychological signs and symptoms
- Assess ability to perform ADL's
- Gather relevant data and demographics from patient, responsible party, health records and health care team members
- Complete health history, including prescribed /OTC drugs, patterns and immunization/allergy history
- Observe interaction of patient and/or responsible party
- Observe patient response to care
- Document additional assessment findings
- Assess development age of the patient
**BIL:** Essential

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**Competency:** Formulate nursing diagnoses

**Competency Builders:**
Identify actual or potential health care needs on the basis of analysis and interpretation of assessment data
Establish nursing diagnosis according to prevailing standards of nursing practice
Identify difference between medical and nursing diagnosis
Prioritize diagnoses
Competency: Formulate patient plan of care

Competency Builders:
Participate with the patient, responsible party, and health care team to identify patient-centered goals and objectives
Incorporate patient's cultural and spiritual beliefs into plan of care
Incorporate patient's physiological, psycho-social, and developmental needs and strengths into plan of care
Develop teaching plan
Develop discharge plan
Utilize available resources
Identify priorities for care
Write plan of care
Establish timeframe for nursing interventions
Describe nursing interventions and outcomes
Competency: Implement safe, effective, comforting patient-centered nursing care across the life-span

Competency Builders:
- Implement plan of care according to priority of needs
- Adjust priorities as patient needs change
- Demonstrate competency in nursing skills
- Promote rehabilitation potential of patient
- Promote psychological well-being of the patient and significant others
- Provide for continuity of care
- Make referrals on the basis of patient need and available resources (e.g., community, responsible party)
- Respond to adverse reactions
- Support dying patients and their significant others
- Demonstrate principles of time management in organizing patient care
- Incorporate safety measures into plan of care
BIL: Essential

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Competency: Evaluate outcomes of nursing care

Competency Builders:
Describe/document effect of nursing interventions
Verify patient and/or responsible party compliance with planned care
Identify which outcomes/patient-centered outcomes have been met
BIL: Essential

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Competency: Revise plan of nursing care

Competency Builders:
Reassess patient needs and outcomes of care
Utilize input from patient, responsible party, and health care team members
Modify goals to meet patient needs
Unit: Nursing Communication Skills

BIL: Essential

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Competency: Demonstrate effective patient interviewing techniques

Competency Builders:
Identify methods to obtain information and support patient during interview
Describe factors that facilitate or hinder a patient interview
Apply principles of therapeutic communication
Evaluate response and patient outcomes
Practice confidentiality
BIL: Essential

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Competency: Report assessment of patient outcomes and nursing actions

Competency Builders:
- Explain the legal basis of specific charting guidelines and confidentiality issues
- Identify measures employed to ensure documentation meets agency and legal standards
- Document the assessment of patient and nursing actions in writing
- Identify concise, accurate, and relevant information to convey to others with a need to know
BIL: Essential

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Competency: Implement a teaching plan for an identified patient learning need

Competency Builders:
- Differentiate teaching from learning
- Identify the role of the nurse in health teaching
- Explain ways to reinforce new knowledge
- Describe factors which influence a patient’s readiness to learn
- Identify one or more learning needs of a patient or responsible person/support system
- Identify guidelines for evaluating the effectiveness of the health teaching plan
- Write a health teaching plan
- Identify educational level and learning style of client and/or significant others
- Verify learning
BIL: Recommended

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Competency: Demonstrate use of research strategies

Competency Builders:
- Identify resources relevant to patient care
- Utilize findings relating to research in health care
- Identify print and electronic methods used to research
- Use the problem solving approach in nursing practice
- Identify research problems that need to be studied
- Utilize research data in nursing practice
BIL: Essential

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Competency: Apply management skills for patient care

Competency Builders:
Identify the characteristics of an effective leader
Explain the significance of an organizational chart to communication units
Describe different approaches to management of nursing care (e.g., primary care, team nursing)
Contrast the advantages and disadvantages of each system of nursing care
Participate in a multi-disciplinary team
Prioritize
Identify and implement cost-effective methods of obtaining patient outcomes yet provide for safe, effective care
Identify legal criteria for delegating tasks
Competency: Demonstrate knowledge of the evaluation process necessary for effective management of nursing care

Competency Builders:
Construct an evaluation of nursing performance in measurable terms
Explain how the nursing audit contributes to quality assurance
Explain how medical and nursing audits are used by accrediting and regulatory agencies
BIL: Essential

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Competency: Demonstrate nursing management of groups of patients

Competency Builders:
Assess the nursing needs of patients and the skill level of staff necessary to care for these patients, based on an analysis of acuity
Assess the staff necessary to care for these patients, based on an analysis of acuity
Set goals and priorities based on individual patient care needs
Collaborate with other members of the health care team to provide quality care
Provide coordinated and continuous patient care
Participate in multi-disciplinary team conferences
Assess knowledge level of staff and patients
Plan measures to assist patients and staff members to achieve goals
Assess and delegate, to ancillary personnel procedures/goals
Transcribe physician orders correctly in a timely manner
Give concise and pertinent report to the on-coming shift
Disseminate reports to appropriate units
Write discharge planning criteria for the patient
Evaluate the impact of nursing interventions by health care team members
Participate in quality assurance procedures within a health care institution or agency
**BIL:** Essential

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**Competency:** Discuss trends and issues in health care delivery

**Competency Builders:**
- Describe trends that are evident in promoting transcultural health care
- Illustrate how a health care practitioner can participate in promoting cultural sensitivity in health care practice
- Analyze various practice roles
- Describe the legalities of the health care practitioner’s expanding role
- Discuss the purpose and functions of professional organizations including the American Nurses Association, National League for Nursing, State Board of Nurse Examiners and other regulatory agencies (e.g., JCAHO, Medicaid/Medicare)
- Discuss economic and political factors in health care delivery
BIL: Essential

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Competency: Explain the scope and standards of nursing practice

Competency Builders:
- Define evolution of nursing profession
- Discuss components of Nurse Practice Act
- Interpret laws pertinent to nursing practice
- Examine the legislative process' impact on nursing practice
### Unit: Nursing Clinical Procedures

**BIL:** Essential

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**Competency:** Use safety and legal precautions in performing nursing procedures

**Competency Builders:**
- Identify procedure needed
- Verify doctor order, as appropriate
- Read procedure manual
- Gather equipment
- Explain procedure and expected outcome to patient/resident/client
- Explain possible adverse reactions/complications
- Document procedure and patient response
- Communicate untoward response to physician
- Verify patient identity
- Provide for patient privacy
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### Competency:

Perform or delegate and evaluate basic care skills

### Competency Builders:

- Provide for patient privacy when indicated
- Assist patient with elimination
- Change clothing
- Give patient bath (e.g., assisted; complete)
- Perform hygienic care for skin, hair, mouth, perineum, feet, nails
- Apply athrombic hose
- Administer backrub
- Make different types of beds
- Feed patient
- Measure intake and output
- Record intake and output
- Prevent pressure areas
- Provide care for relaxation and sleep
- Demonstrate patient transfer and transport techniques
- Demonstrate basic care of hearing aid
- Assist with modifying patient food and fluid intake
- Perform range of motion (ROM) exercises
- Assure protective patient positioning
Competency: Demonstrate safe, effective equipment operation in health care settings

Competency Builders:
- Demonstrate use of emergency cart
- Demonstrate safe, effective use of basic therapeutic in patient care area or home
- Demonstrate use of monitoring equipment
- Explain use of basic life-support equipment
BIL: Essential

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Competency: Perform safe and effective non-invasive procedures, using standard precautions

Competency Builders:
Demonstrate proper methods of positioning and draping a patient
Identify steps to admit patient
Inventory patient possessions
Utilize hot/cold therapies
Demonstrate patient restraint methods
Prepare patient for surgery
Receive patient from surgery
Administer post-operative care
Change ostomy appliance
Instruct in coughing and deep breathing exercises
Identify steps to transfer patient to another unit/facility
Remove sutures and staples
Provide postmortem care
Identify steps to discharge patient
Complete discharge summary
Perform cast care
Assist with sitz bath
Empty drainage systems
Create a sterile field
Apply pressure dressings
Provide skeletal traction care
Maintain internal feedings (e.g., nasogastric, gastrostomy)
Maintain chest tube
Provide care of surgical drains
Maintain central venous lines
Maintain intravenous (IV) infusions
Apply binders
Maintain oxygen devices
Maintain airway
BIL: Essential

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Competency: Demonstrate invasive procedures safely and effectively, using standard precautions and protocols according to physician’s order

Competency Builders:
Administer enemas
Insert rectal tubes
Irrigate ostomy
Change dressings
Demonstrate vaginal irrigation/douche
Demonstrate oro/nasopharyngeal suctioning
Demonstrate tracheal suctioning
Irrigate wounds
Insert urinary catheter
Perform intermittent and continuous bladder irrigations
Maintain nasogastric tube
Remove tubes
Perform tracheostomy care
Perform decubitus care
Perform eye irrigation
Perform ear irrigation
Maintain artificial airway
**BIL:** Essential

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**Competency:** Assist with sterile procedures, using standard precautions

**Competency Builders:**
- Don sterile gloves, mask/faceshield, and gown as appropriate
- Prepare patient for procedure(s)
- Assist with procedure(s)
- Carry out physician's orders
- Assist with insertion and removal of sutures and staples
- Remove contaminated dressing
- Apply sterile dressing
- Document procedure and patient response
- Follow-up patient needs
Unit: Medication Use

BIL: Essential

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Competency: Maintain supply of medications

Competency Builders:
Check inventory stock
Contact supplier
Rotate stock
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (e.g., comply with government regulations)
BIL: Essential

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Competency: Calculate dosage according to physician's orders

Competency Builders:
Verify accuracy of medical orders
Use appropriate references for fact-finding and comparisons
Transcribe medication order
Calculate dosage (e.g., oral, parenteral, sublingual, pediatric)
Calculate intravenous dosage and rate of flow
Calculate intravenous dosage and rate of flow
BIL: Essential

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Competency: Administer medications according to physician's orders as applicable to the profession

Competency Builders:
- Identify patient
- Verify patient allergies
- Use reference materials
- Verify accuracy of medical orders
- Identify correct anatomical sites
- Identify dosage forms (e.g., oral, injectable, sublingual, transdermal, inhalant, instillation, topical, rectal, vaginal, and injectable)
- Prepare oral medication
- Administer medications
- Document medication administration
- Prepare intravenous injectable material and patient
BIL: Essential

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Competency: Evaluate response to medication

Competency Builders:
Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication
Unit: Clinical Chemistry

BIL: Essential

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Competency: Use terminology related to clinical chemistry

Competency Builders:
- Define clinical chemistry terms
- Spell clinical chemistry terms
- Identify the designations used for weights and measures
- Use the abbreviations for weights and measures
**BIL:** Essential

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**Competency:** Prepare solutions

**Competency Builders:**
- Prepare molar solutions
- Prepare normal solutions
- Prepare percentage solutions (e.g., w/w, w/v, v/v)
Competency: Handle blood specimens for analysis

Competency Builders:
List differences between serum, plasma, and whole blood
Use anticoagulants for each analysis performed
Explain effects of using improper anticoagulants
Explain ways to prevent hemolysis
Collect blood in collecting tubes for analysis (e.g., clotted, anticoagulant)
**BIL:** Essential

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**Competency:** Handle body fluids for chemical analysis

**Competency Builders:**
- List types of urine preservatives
- Explain when different types of urine preservatives are used
- Perform cerebral spinal fluid analyses
- Perform analyses of other body fluids
Competency: Perform kidney function and clearance tests

Competency Builders:
- Explain kidney function tests
- Perform kidney function tests (e.g., creatinine)
- List the normal values of kidney function tests
- Explain kidney clearance tests
- Perform kidney clearance tests (e.g., creatinine clearance)
- List the normal values of kidney clearance tests
- Calculate kidney function tests
- Identify kidney related pathologies (e.g., renal failure)
Competency: Perform liver function tests

Competency Builders:
Identify liver function tests
Perform liver function tests
Identify tests that are elevated in liver disease
Identify liver enzymes and isoenzymes
List normal values of liver function tests
Identify abnormal values
Identify liver related pathologies (e.g., cirrhosis)
Identify tests that are elevated in obstructive jaundice
Identify tests that are elevated in hemolytic jaundice
BIL: Essential

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Competency: Perform glucose tests

Competency Builders:
Define terminology related to carbohydrates
List the uses of carbohydrates by the body
Describe the tests for all carbohydrates and reducing substances
Describe the true glucose tests (e.g., glucose specific)
Perform blood tests for glucose
Perform urine tests for glucose
Perform spinal fluid tests for glucose
Perform oral glucose tolerance test
Perform intravenous glucose tolerance test
Differentiate among a normal glucose tolerance curve, a diabetic glucose tolerance curve, and a hypoglycemia curve
Identify normal values
BIL: Essential

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Competency: Perform protein tests

Competency Builders:
List functions of proteins
List what makes up a total protein
Explain the A/G ratio
List body constituents made up of protein (e.g., hemoglobin, fibrinogen, enzymes)
Explain the methods of total protein analysis
List normal values of total protein analysis
Explain the principles of total protein analysis tests
Explain the various methods of albumin analysis
List the normal values of albumin analysis
Explain the principles of albumin analysis tests
Explain the various methods of globulin analysis
List the normal values of globulin analysis
Explain the principles of globulin analysis tests
Explain the principle of protein electrophoresis
Explain the various procedures for protein electrophoresis
Describe the proper migration pattern of the plasma proteins
Identify electrophoretic patterns in disease
Perform various methods for protein tests
BIL: Essential

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Competency: Perform electrolytes tests

Competency Builders:
- Define cations and anions
- Explain electrolyte balance
- Define extracellular cations and anions
- Define intracellular cations and anions
- List the normal values of cations and anions
- Perform tests for anions and cations
- List abnormal values
- Calculate anion gap
- Explain methods of electrolyte testing
Competency: Perform carbon dioxide tests

Competency Builders:
- Explain different carbon dioxide tests
- Perform different carbon dioxide tests
- Identify normal values of carbon dioxide tests
- Identify abnormal values
BIL: Recommended

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Competency: Perform blood gas tests

Competency Builders:
List normal blood gas values
Explain the various methods of blood gas analysis
Perform blood gas analysis
Identify abnormal values
Identify respiration acidosis/alkalosis
Identify metabolic acidosis/alkalosis
Competency: Explain mineral metabolism

Competency Builders:
List the minerals of the body
Describe mineral metabolism
List normal values
List abnormal values
Perform mineral analysis
Competency: Perform enzyme analysis

Competency Builders:
Describe methods of enzyme analysis
List the enzymes of the pancreas and their functions
Describe the tests used to determine pancreatic enzyme activities
List the enzymes and isoenzymes of the heart and their functions
List the order in which enzymes and/or isoenzymes of the heart rise and return to normal
Explain LDH1:2 flip
Explain the use of acid phosphatase
Perform various enzyme analysis tests
List the enzymes and isoenzymes of the liver and their functions
Explain the use of acid phosphatase
List the parts of the body that are rich in acid phosphatase
List normal ranges
Competency: Perform thyroid gland tests

Competency Builders:
- Explain the function of the thyroid gland
- Explain various thyroid function tests
- Perform thyroid function tests
- List normal values of thyroid function tests
- Identify thyroid related pathologies (e.g., hyperthyroid disease)
BIL: Essential

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Competency: Perform tests for gout

Competency Builders:
- Explain the principle of the test for gout (e.g., uric acid)
- Perform the test for uric acid
- List the metabolism of purines in food
- Explain how uric acid is formed
BIL: Essential

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Competency: Perform miscellaneous tests

Competency Builders:
- Perform gastric fluid analysis
- Explain principles of electrophoresis
- Perform therapeutic drug monitoring
- Perform tests for drug abuse
- Identify therapeutic values
- Perform tests for HDL, LDL, VLDL, cholesterol, triglyceride, and other lipids
BIL: Essential

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Competency: Use laboratory instruments

Competency Builders:
List the parts of the photoelectric colorimeter and their functions
Explain the principle of the photoelectric colorimeter
Use a photoelectric colorimeter
List the parts of the spectrophotometer and their functions
Explain the principle of the spectrophotometer
Explain the difference between a colorimeter and a spectrophotometer
Describe how light waves are measured
Use a spectrophotometer
Define terminology related to light and wavelengths
Calibrate a colorimeter and spectrophotometer
List the parts of a flame photometer and their functions
Explain the principle of the flame photometer
List the chemicals that are analyzed by the flame photometer
Use a flame photometer
List the parts of an atomic absorption spectrophotometer and their functions
Explain the principle of the atomic absorption spectrophotometer
List the uses of the atomic absorption spectrophotometer
List the parts of the fluorescence spectrophotometer and their functions
Explain the principle of the fluorescence spectrophotometer
List the tests performed on the fluorescence spectrophotometer
Use a fluorescence spectrophotometer
List the parts of continuous flow analysis and their functions
Perform continuous flow analysis
List the instruments that perform discrete analysis, the parts related to them, and their functions
Use discrete analysis instruments
List the parts of a random access analyzer and their functions
Explain the principle of the random analyzer
List the chemicals that are analyzed by a random analyzer
Use a random analyzer
List the parts of a radioimmunoassay (RIA) analyzer and their functions
Explain the principle of an RIA analyzer
List the chemicals that are analyzed by an RIA analyzer
Use an RIA analyzer
List the parts of an enzyme immunoassay (EIA) analyzer and their functions
Explain the principle of an EIA analyzer
List the chemicals that are analyzed by an EIA analyzer
Use an EIA analyzer
List the parts of a nephelometer analyzer and their functions
Explain the principle of a nephelometer analyzer
List the chemicals that are analyzed by nephelometer analyzer
Use a nephelometer analyzer
List the parts of an osmometer analyzer and their functions
Explain the principle of an osmometer analyzer
List the chemicals that are analyzed by an osmometer analyzer
Use an osmometer analyzer
List the parts of an ultraviolet spectrophotometer analyzer and their functions
Explain the principle of an ultraviolet spectrophotometer analyzer
List the chemicals that are analyzed by an ultraviolet spectrophotometer analyzer
Use an ultraviolet spectrophotometer analyzer
List the parts of a fluorescence polarization immunoassay (FPIS) analyzer and their functions
Explain the principle of an FPIS analyzer
List the chemicals that are analyzed by an FPIS analyzer
Use an FPIS analyzer
Use other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette, burette)
BIL: Essential

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Competency: Maintain laboratory instruments

Competency Builders:
Maintain chemical analyzers including calibration, preventive maintenance and routine trouble shooting
Maintain other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette, burette)
Clean glassware and pipettes
Maintain glassware and pipettes
Record all maintenance performed
Unit: Immunohematology

BIL: Essential

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Competency: Use terminology related to immunohematology

Competency Builders:
Define immunohematology-related terminology
Spell immunohematology-related terminology
Define secretors
Explain significance of secretors in immunohematology
Identify blood components
Competency: Explain antigens and antibodies

Competency Builders:
- Explain the principle of antigen-antibody reactions
- Describe the history of the ABO system and the Rh system
- Chart the chemical structure of the H, A, and B antigens
- Describe the antigens of the ABO system
- Describe the antibodies of the ABO system
- List the phenotypes and genotypes of the Rho(D) system
- Explain the genetics of blood group antigen
- Describe additional antigen systems (e.g., M&N, Duffy, Lewis, Kell)
BIL: Essential

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Competency: Describe antibodies

Competency Builders:
List the five major immunoglobulins
List the immunoglobulins or antibodies that are important in the ABO and Rh systems
List the natural antibodies and their functions
List the 7S and 19S antibodies and their functions
Explain the function of bivalent or complete antibodies
Explain the function of univalent, incomplete, or blocking antibodies
Explain Zeta potential
Describe how the anti-human globulin helps in detecting the blocking, univalent, or incomplete antibody
Explain how anti-human globulin is produced
BIL: Essential

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Competency: Describe subgroups of A

Competency Builders:
List the subgroups of A
Describe how subgroups of A are tested
BIL: Recommended

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Competency: Describe enzyme tests

Competency Builders:
List the enzyme tests that are used in immunohematology
Differentiate purposes and methods of enzyme tests used in immunohematology
BIL: Essential

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Competency: Describe Rh nomenclatures

Competency Builders:
- Explain Fisher-Race nomenclature
- Explain Wiener nomenclature
- Explain Rosenfeld nomenclature
- Compare Fisher-Race, Wiener, and Rosenfeld nomenclatures
BIL: Essential

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Competency: Perform Du test

Competency Builders:
Perform Du test in Rh typing
Perform Du test to choose donors for transfusions
Perform Du test for blood recipients
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<th>Competency:</th>
<th>Describe M and N systems</th>
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**Competency Builders:**
- Differentiate M and N systems
- Use M and N systems in immunohematology
**Competency:** Type blood

**Competency Builders:**
- Perform direct or forward blood group method
- Perform reverse typing
- Perform Rho(D) typing
- Perform typing for subgroups of A
- Perform genotyping
- Explain the principle of the antiglobulin test
- Explain the principle of the indirect antiglobulin test
- Perform indirect antiglobulin test
- Interpret indirect antiglobulin test
- List the uses of the indirect antiglobulin test
- Perform direct antiglobulin test
- Interpret direct antiglobulin test
- List uses of direct antiglobulin test
- List drugs responsible for red blood cell sensitization that cause a positive direct antiglobulin test
- Perform direct antiglobulin profile
- Interpret the direct antiglobulin profile
BIL: Essential

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Competency: Crossmatch blood

Competency Builders:
- Explain the principle of the crossmatch procedure
- Perform crossmatch procedure (e.g., anti-human globulin crossmatch)
- Interpret results of crossmatch procedure
- List reasons for autocontrol on crossmatch test
- Perform autocontrol test with crossmatch
- Explain reasons for using Coombs control test
- Perform Coombs control test
- List errors that can occur in the crossmatch procedure (e.g., overmixing after centrifugation, improper washing of Coombs tube before addition of Coombs serum)
- Identify incompatible crossmatch
- Perform follow-up procedures for incompatibility
BIL: Essential

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Competency: Use Rho(D) immune globin criteria

Competency Builders:
- Explain the principle of the Rho(D) immune globin
- List to whom Rho(D) immune globin should be given
- List indications as to when Rho(D) should be given
- List the criteria used to declare patients candidates for receiving Rho(D) immune globin
**Competency:** Elute antibodies

**Competency Builders:**
- Use heat elution to elute antibodies from red blood cells
- Use freeze elution to elute antibodies from red blood cells
- Use acid elution to elute antibodies from red blood cells
BIL: Recommended

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Competency: Draw blood from donors

Competency Builders:
- Explain blood donor requirements
- Perform therapeutic phlebotomies
- Explain various physical criteria
- Explain medical history criteria
Competency: Operate blood bank

Competency Builders:
Visibly inspect units of blood
Dispose of blood bags and patient samples
Store blood and blood products for transfusion
Investigate transfusion reactions
Investigate hemolytic diseases in newborn
Describe blood components
Describe the uses of blood components
Prepare blood for storage
Store blood
Perform quality control on all reagents
Record all quality control procedures
Check label to verify blood type
Identify patient specimen properly
Follow American Association of Blood Bank (AABB) protocols
Unit: Immunology and Serology

BIL: Essential

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Competency: Use immunology and serology terminology

Competency Builders:
Define terminology related to immunology and serology
Spell terminology related to immunology and serology
BIL: Essential

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Competency: Perform immunologic examination

Competency Builders:
- Explain the principle of immunologic examination
- Identify antigen-antibody reaction
- Describe the relationship of T and B cells to antibody production
**BIL:** Essential

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**Competency:** Test for syphilis

**Competency Builders:**
Define syphilis
Describe the stages of infection
Perform different types of serological tests for syphilis
BIL: Essential

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Competency: Perform serologic test for syphilis

Competency Builders:
- Perform qualitative VDRL and RPR tests
- Perform quantitative VDRL and RPR tests
- Perform fundamentals of complement-fixation tests
- List quality control procedures for all immunologic tests
- Perform quality control
BIL: Essential

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Competency: Perform agglutination tests

Competency Builders:
Perform latex agglutination tests
Perform hemagglutination
Competency: Perform immunologic and serologic procedures

Competency Builders:
- Explain theory of C-reactive protein (CRP)
- Perform CRP
- Explain theory of anti-Streptolysin screen (ASO) and titer
- Perform ASO
- Explain theory of heterophile agglutination
- Perform heterophile quantitative with sheep cells, guinea pig, and horse serum absorption
- Perform heterophile qualitative with latex agglutination or blood cell agglutination tests
- Perform rheumatoid arthritis tests (e.g., latex agglutination)
- Perform systemic lupus erythematosis (SLE or LE agglutination) tests
- Perform red cell fragility tests
- Perform anti-nuclear antibody tests
- Perform antigen detection of organisms in spinal fluid (e.g., Directogen™ test and Bactogen™ test)
- Perform fluorescent antibody procedures
- Perform group typing of bacterial growth
- Explain principles of test for radial immunodiffusion (RID)
- Perform the test for RID
- Perform serum pregnancy test (HCG)
- Perform tests for hepatitis
- Perform febrile agglutination tests
- Perform monospot test
- Differentiate among weil felix, widel, and febrile agglutination testing
**Competency:** Explain tests for other viruses

**Competency Builders:**
- Explain test for cytomegalovirus
- Explain test for retrovirus
- Explain test for Epstein-Barr virus
- Explain test for acquired immune deficiency syndrome (AIDS)
**BIL:** Essential

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**Competency:** Detect cold agglutinins

**Competency Builders:**
- Define cold agglutinins
- Perform tests to detect cold agglutinins
- Eliminate cold agglutinins when they interfere with blood grouping and/or crossmatching of blood
Unit: Bacteriology

BIL: Essential

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Competency: Use terminology related to bacteriology

Competency Builders:
Define terms related to bacteriology
Spell terms related to bacteriology
Identify types of bacteria by shapes
Describe the growth curve of bacteria
### Competency:
Identify types and uses of culture media

### Competency Builders:
- Identify the different culture medias
- List the uses of the different culture medias

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Competency: Culture specimens

Competency Builders:
Select appropriate culture media
Use concentration methods for sputum specimens to be cultured for acid-fast bacilli
Culture sputums for acid-fast bacilli
Examine smears for acid-fast bacilli
Type cultures using type-specific typing sera
Perform proper plating techniques
List the uses of culture media (e.g., bile esculin agar, bismuth sulfite [BS], blood agar, Bordet-Gengou, brilliant green agar, chocolate agar with V and X factors, chopped meat glucose broth, cornmeal agar, cystine tellurite blood agar, desoxycholate agar, desoxycholate citrate agar, eosin methylene blue [EMB], Flides enrichment agar, Loeffler's, Lowenstein Jensen [L-J], MacConkey)
BIL: Essential

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Competency: Stain smears

Competency Builders:
- Explain staining procedures (e.g., Gram's, hot and cold acid-fast, Giemsa and Wright's, India Ink, fluorescent, and methylene blue)
- Describe uses of different stains
- Perform stains
BIL: Essential

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Competency: Perform differentiating tests

Competency Builders:
- Perform coagulate test
- Perform bile exculin test
- Perform bile solubility test
- Perform catalese test
- Perform oxidase test
- Perform optochin disc test
- Perform bacitracin disc test
- Perform beta lactam disk test
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**Competency:** Identify gram-positive cocci

**Competency Builders:**
- Isolate gram-positive cocci
- Identify gram-positive cocci
- Differentiate one gram-positive cocci from another
- Differentiate normal/pathologic flora
BIL: Essential

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Competency: Identify gram-positive bacilli

Competency Builders:
Isolate gram-positive bacilli
Identify gram-positive bacilli
Differentiate one gram-positive bacilli from another
Differentiate normal/pathologic flora
BIL: Essential

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Competency: Identify gram-negative cocci

Competency Builders:
- Isolate gram-negative cocci
- Identify gram-negative cocci
- Differentiate one gram-negative cocci from another
- Differentiate normal/pathologic flora
BIL:          Essential

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Competency: Identify gram-negative enterobactereaceae

Competency Builders:
Isolate gram-negative Enterobactereaceae
Identify gram-negative Enterobactereaceae
Differentiate genera and species
Differentiate normal from pathologic flora
BIL: Essential

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Competency: Identify gram-negative bacilli

Competency Builders:
Isolate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli (e.g., Pseudomonas, Bordetella, Hemophilis, Brucella, and Campylobacter)
Identify nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli
Differentiate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli
Differentiate normal from pathologic flora
**Competency:** Perform antimicrobial sensitivity testing

**Competency Builders:**
Use Kirby-Bauer system
Use MIC system
Use automated system
BIL: Essential

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Competency: Use bacterial identification systems

Competency Builders:
- Describe systems for bacterial identification (e.g., API, enterotube, automated systems, biochemical, and carbohydrate systems)
- Perform bacterial identification using biochemical and carbohydrate system
- Perform group typing of bacterial growth
- Perform antigen detection of organism in spinal fluid (e.g., Dimetogen% test and Bactogen% test)
Competency: Culture specimens

Competency Builders:
Culture specimens (e.g., blood urine, stool [feces], sputum, throat, spinal fluid, urethral/cervical)
Use concentration methods for sputum specimens to be cultured for acid-fast bacilli
Culture sputums for acid-fast bacilli
Examine smears for acid-fast bacilli
Type cultures using type-specific typing sera
BIL: Essential

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Competency: Perform routine mycology procedures

Competency Builders:
Perform KOH preparation
Perform methylene blue staining
Perform lacto-phenol cotton blue staining
Perform culture using Sabaroud agar
Use germ tube
Use cornmeal agar
Perform India ink preparation
Competency: Perform special tests

Competency Builders:
Perform group A streptococci rapid enzyme immunoassay test (or other detection kits) from throat swabs
Perform group A streptococci cultures for beta hemolysis screening
Perform clostridium difficile toxin test
Unit: Parasitology

BIL: Essential

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Competency: Use parasitology-related terminology

Competency Builders:
Define terminology related to parasitology
Spell terminology related to parasitology
Identify types of parasites (e.g., protozoa, helminthes)
Describe types of parasites
Classify parasites
BIL: Essential

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Competency: Perform examinations for parasites

Competency Builders:
- Examine feces for parasites (e.g., macroscopic examination, microscopic direct saline and iodine preparations, and various concentration methods)
- Examine blood, urine and other body fluids for parasites
- Examine tissue for parasites
- Perform direct method examination for intestinal parasites (e.g., protozoa, trematodes, cestodes, nematodes)
- Perform concentration method examination for intestinal parasites
**BIL:** Recommended

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**Competency:** Perform tests for blood parasites

**Competency Builders:**
Perform test for malaria
Perform test for filaria
Perform test for trypanosomes
**BIL:** Essential

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**Competency:** Perform tests for fats and occult blood

**Competency Builders:**
- Prepare Sudan IV stain for fats
- Examine stool for fats
- Perform test for occult blood in stool
Competency: Stain for ova and parasites

Competency Builders:
- Prepare permanent smears for ova and parasites
- Stain permanent smears for ova and parasites using iron hematoxylin method
- Stain permanent smears for ova and parasites using trichrome method
- Describe the defining characteristics of the cryptosporidium species
- Identify cryptosporidium
- Stain cryptosporidium
Unit: Urinalysis

BIL: Essential

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Competency: Use terminology related to urinalysis

Competency Builders:
Define terminology related to urinalysis
Spell terminology related to urinalysis
BIL: Essential

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Competency: Identify properties of urine

Competency Builders:
- Explain the formation of urine
- Describe the anatomy of the kidney
- Identify the physical properties of urine
- Identify the chemical properties of urine
- Identify the microscopic structures found in urine
Competency: Explain principles of urine tests

Competency Builders:
- Explain the role of specific gravity in urine tests
- Explain the role of pH in urine tests
- Explain the role of protein in urine tests
- Explain the role of glucose in urine tests
- Explain the role of ketones in urine tests
- Explain the role of occult blood in urine tests
- Explain the role of nitrate in urine tests
- Explain the role of bilirubin in urine tests
- Explain the role of urobilinogen in urine tests
- Explain the role of leukocyte esterase in urine tests
BIL: Essential

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Competency: Perform routine urinalysis and urine diagnostics

Competency Builders:
Perform complete urinalysis
Perform tests for pregnancy
**BIL:** Recommended

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**Competency:** Perform special tests

**Competency Builders:**
- Perform Ictotest™ (Ames) for bilirubin
- Perform Bence Jones protein test
- Perform sulfosalicylic acid test for protein
- Perform test for acetone
- Perform tests for reducing substances
Competency: Identify cells found in urine

Competency Builders:
Identify blood cells found in urine
Describe blood cells found in urine
Identify types of epithelial cells found in urine
Describe types of epithelial cells found in urine
Explain the cause of each type of cell appearing in urine
BIL: Essential

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Competency: Identify casts found in urine

Competency Builders:
Describe casts found in urine
Explain how casts are formed
Explain where casts are formed
Describe the causes of each type of cast found in urine
BIL: Essential

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Competency: Identify foreign matter found in urine

**Competency Builders:**
- Describe types of pathological crystals found in urine
- Identify mucus found in urine
- Explain the significance of mucus found in urine
- Identify parasites found in urine
- Explain the significance of parasites found in urine
- Identify spermatozoa in urine
- Explain the significance of spermatozoa in urine
- Identify bacteria found in urine
- Explain the significance of bacteria found in urine
- Identify cylindroids found in urine
- Explain the significance of cylindroids in urine
- Identify yeast found in urine
- Explain the significance of yeast found in urine
- Identify amorphous material found in urine
- Explain the significance of amorphous material found in urine
Unit: Hematology

BIL: Essential

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Competency: Use hematology terminology

Competency Builders:
Define terminology related to hematology (e.g., erythrocytes, lymphopoieses)
Spell terminology related to hematology
Competency: Demonstrate knowledge of erythrocytes

Competency Builders:
- Explain the life cycle and life span of erythrocytes
- Explain the maturation series of an erythrocyte from its origin to its final destination in the peripheral blood stream
- Explain the formation of bilirubin from the destruction of erythrocytes
- Identify pathologies of erythrocytes (e.g., anemias)
- Identify normal and abnormal values
Competency: Perform erythrocyte tests

Competency Builders:
Explain automated erythrocyte testing
Identify normal erythrocyte values
Perform erythrocyte counts (automated and manual)
Perform hemoglobin determinations
Perform macrohematocrit and microhematocrit determinations
Perform tests used in erythrocyte indices (e.g., mean corpuscular volume—MCV, corpuscular hemoglobin—MCH, and corpuscular hemoglobin concentration—MCHC)
Explain principles and uses of erythrocyte sedimentation rate (ESR)
Describe the types and purpose of Wintrobe, Westergren, and sedimentation rates
Perform each ESR procedure
Perform mathematical calculations for MCV, MCH, and MCHC
Perform reticulocyte counts
Perform sickle cell tests
Perform fetal hemoglobin test
Competency: Demonstrate knowledge of granulocytes, lymphocytes, and monocytes

Competency Builders:
- Explain the maturation series of the neutrophilic granulocytes
- Explain the maturation series of the granulocytic eosinophils and basophils
- Explain the maturation series of the nongranulocytes-lymphocytes
- Explain the maturation series of the nongranulocytes-monocytes
- Explain the maturation series of the thrombocytes (e.g., platelets)
- Explain the origin and function of granulocytes, lymphocytes, and monocytes
- Identify normal percentages of granulocytes, lymphocytes, monocytes, and thrombocytes
- Identify pathologies of white blood cells (e.g., leukemia)
- Identify pathologies of thrombocytes
- Identify normal and abnormal values
**BIL:** Essential

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**Competency:** Prepare blood smear stains

**Competency Builders:**
- Make a blood film/smear
- Use leukocyte alkaline phosphatase stain
- Stain blood films using Wright's and Giemsa's stains
- Stain thick smear for malaria
- Make cytospin slide
- Use Hansel stains on nasal secretions for eosinophiles
- Stain bone marrow smears
BIL: Essential

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Competency: Perform blood counts and tests

Competency Builders:
- Identify functions and elements of blood
- Describe the dimensions of the counting chamber
- Calculate leukocyte and erythrocyte counts using counting chamber
- Perform leukocyte counts
- Perform thrombocyte counts
- Perform white blood cell differential counts
- Perform leukocyte counts on very low very high counts using the manual pipette method
- Correct leukocyte counts in the presence of nucleated red blood cells
- Describe principles of automated cell counters (e.g., Coulter principle and laser principle)
- Perform reticulocyte counts
- Perform direct eosinophile counts
- Perform sickle cell tests
- Perform fetal hemoglobin test
BIL: Essential

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Competency: Perform body fluid counts

Competency Builders:
Perform thoracentesis fluid count
Perform pleural fluid counts
Perform spinal fluid counts
Perform joint fluid counts for cells and crystals
BIL: Recommended

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Competency: Perform sperm counts

Competency Builders:
Define motility
Describe morphological abnormalities
Analyze appearance
Analyze consistency
Competency: Perform coagulation and hemostasis tests

Competency Builders:
Describe principle of hemostasis
Explain the principle of prothrombin time (PT) test
Identify coagulation factors tested for when performing prothrombin time (PT)
Perform PT test
Explain the principle of partial thromboplastin time (PTT or APTT) test
Identify coagulation factors by Roman numeral and common name
Identify coagulation factors tested for when PTT test
Perform PTT or APTT test
Explain the principle of capillary bleeding and clotting time tests
Perform capillary bleeding and clotting time tests
Identify uses of Lee White coagulation time test
Perform Lee White coagulation time test
Perform Duke and Ivy bleeding time test
Identify uses of template bleeding time test
Perform template bleeding time test
Explain the principle of fibrinogen test
Perform fibrinogen test
Explain the principles of fibrin degradation test
Perform fibrin degradation product (FDP) and fibrin split product (FSP)
Explain the principle of fibrin monomere test
Perform fibrin monomere test
Identify uses of clot retraction test
Perform clot retraction test
Perform factor assays
BIL: Essential

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**Competency:** Maintain related instruments and equipment

**Competency Builders:**
- Demonstrate proper use of microscope and centrifuge
- Demonstrate proper use of glassware and pipettes
- Demonstrate proper use of automated coagulation and hematology equipment
- Clean related instruments and equipment
- Store related instruments and equipment
- Report needed repairs
BIL: Essential

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Competency: Perform quality control

Competency Builders:
- Check temperature of coagulation instruments
- Check temperature of hematology instruments
- Check reagents of coagulation instruments
- Check reagents of hematology instruments
- Check maintenance of coagulation instruments
- Check maintenance of hematology instruments
- Perform manufacturer-specific quality control test procedures
- Label reagents
- Inspect reagents
- Prepare reagents
Unit: Phlebotomy

BIL: Recommended

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Competency: Demonstrate knowledge of health care institutions and departments in which a phlebotomist functions

Competency Builders:
Identify the health care providers in hospitals and clinics
Describe the organizational structure of the clinical laboratory department
Discuss the roles of clinical laboratory personnel
Discuss the qualifications for clinical laboratory personnel
List the types of laboratory procedures run in the various sections of the clinical laboratory department
Describe the role of the clinical laboratory in assessing body functions
Competency: Identify the phlebotomist’s role as a member of a health care team

Competency Builders:
Describe the various facilities and departments in which the phlebotomist interacts
Describe the major functions of the various facilities and departments in which the phlebotomist interacts
**BIL:** Essential

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**Competency:** Describe collection equipment, reagents, and interfering factors in blood collection

**Competency Builders:**
- Describe the types of patient specimens that are analyzed in the clinical laboratory
- Describe the phlebotomist’s role in collecting and transporting these specimens to the laboratory
- List the supplies that should be carried on a phlebotomist’s tray when collecting microspecimens
- Describe substances that can interfere in clinical analysis of blood constituents
- Describe procedures used to avoid interference in clinical analysis of blood constituents
- List the types of equipment needed to perform a venipuncture
- Explain the special precautions employed when collecting blood from a newborn infant
- Explain the types of equipment needed to collect blood from a newborn infant
- List the equipment needed to perform a heel stick collection on an infant
BIL: Essential

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Competency: Describe proper blood collection procedure, including handling complications that may arise

Competency Builders:
Discuss the legal and ethical importance of proper patient/sample identification
Identify potential sites for venipuncture
Identify potential sites for capillary puncture
List what effects tourniquet, hand squeezing, and heating pads have on skin puncture
List what effects tourniquet, hand squeezing, and heating pads have on venipuncture
Establish a recollection policy
Identify criteria for rejection of a patient sample for testing
Describe why some sites are more difficult to draw blood from than others
Identify which sites are more difficult to draw blood from
Name frequent causes of phlebotomy complications
Explain frequent causes of phlebotomy complications
### BIL: Essential

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**Competency:** Demonstrate knowledge of the disease process route of infection, infection control, and equipment safety

**Competency Builders:**
- Identify the potential routes of infection
- Identify the methods for infection prevention
BIL: Essential

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Competency: Explain the protocol for communication, transport, and processing specimens

Competency Builders:
- Explain the correct procedure for complying with the request for collection of routine specimens
- Explain the correct procedure for complying with the request for collection of special specimens
- Explain the rationale for the various methods of transport
- Explain the procedure for processing specimens for routine testing from specimen labeling to result reporting manual or computer systems
- Explain the reasons for processing procedures
- Identify essential information that should be on the laboratory requisition or computer order entry
- Describe the significance of time constraints for specimen delivery to the analytical area
- Describe schedule constraints imposed by timed operational factors in the laboratory
- Identify the precautions applicable to verbal test ordering and reporting
- Evaluate results of quality control techniques in specimen collection
- Implement corrective quality control techniques where indicated
Competency: Apply quality control and safety procedures

Competency Builders:
Describe a system for monitoring quality assurance in the collection of blood specimens
Identify policies and procedures used to assure quality in the obtaining of blood specimens
Design a strategy to implement a quality assurance program in specimen collection
Describe safety measures that should be followed at all times by the phlebotomist when collecting blood specimens
Evaluate electrical, radiation, and fire safety procedures
Competency: Describe basic concepts of communications, stress management, professional behavior, and the legal implications of the health-related work environment

Competency Builders:
Describe the protocol for preparing a patient for laboratory testing
Describe the preferred techniques for dealing with family and visitors during the blood specimen collection
Explain intra-laboratory communications techniques
Explain inter-laboratory communications techniques
Unit: Emergency Medical Technology I

BIL: Essential

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Competency: Apply Center for Disease Control (CDC) guidelines

Competency Builders:
Identify ways communicable diseases can be transmitted
Demonstrate knowledge of CDC guidelines
Practice universal precautions
Describe procedures for reporting and follow-up after exposure to a communicable disease
Describe methods used to disinfect equipment and vehicles involved with an infectious patient
BIL: Essential

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Competency: Apply aseptic and sterilizing principles

Competency Builders:
Follow manufacturer’s instructions for safe operation of all equipment and instruments
Maintain infection control
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary
Demonstrate use of sterilized equipment
Competency: Conduct patient assessment for illness/injuries

Competency Builders:
Assess pulse, blood pressure, respiration, and temperature (to include rate, rhythm, quality)
Assess level of consciousness
Assess pupil size and reaction
Assess skin color and temperature
Assess motor neurological status
Assess reaction to pain
Perform an examination for life threatening problems (e.g., primary/secondary survey)
Describe signs and symptoms of patient
Describe the etiology of the patient’s condition
List five diagnostic signs in addition to the vital signs
Demonstrate technique for completing a total patient assessment, recording diagnostic signs and their normal states
Assess a trauma victim
Communicate (in proper sequence) patient assessment information
Record (in proper sequence) patient assessment information
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**Competency:** Treat airway obstruction and respiratory arrest

**Competency Builders:**
- Describe the basic mechanics of respiration
- Maintain an open airway using nasal oropharyngeal equipment
- Clear an obstructed airway
- Provide appropriate oxygen therapy and ventilatory assistance
- Perform mechanical suctioning of airway
- Describe the significance of oxygen to body tissues, particularly the brain
- List five components of the respiratory system and the functions of each
- List three signs of adequate air exchange
- Describe proper usage of oxygen therapy
- Demonstrate safe handling of oxygen equipment
Competency: Treat cardiac arrest

Competency Builders:

- Describe the basic mechanics of circulation
- List signs of cardiac arrest
- Perform CPR on adults, children, and infants
- List three possible complications of CPR
- List three instances when CPR may be terminated
- Describe adjunctive equipment used in administration of CPR
- Identify importance of continuing CPR during movement, extrication, and transport of cardiac arrest patient
**BIL:** Essential

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**Competency:** Treat bleeding and shock

**Competency Builders:**
- Identify the types and signs of external and internal bleeding
- Control bleeding
- Identify the types and signs of shock
- Treat shock
- Use pneumatic counter pressure devices appropriately
BIL: Essential

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Competency: Treat injuries of the head, neck, face, eye, and spine

Competency Builders:
Describe the anatomy and physiology of the autonomic, central, and peripheral nervous system
List signs and symptoms of brain and spinal injuries
Demonstrate care of patients with injuries to skull, face, eye, and neck
Demonstrate care of patients with injuries to the brain and spinal cord
Demonstrate spinal immobilization techniques
Describe assessment(s) of motor, sensory, and perfusion of the extremities before and after assessment, extrication, and transfer
Describe position of the patient after sustaining injuries
Competency: Treat injuries to the chest, abdomen, and genitalia

Competency Builders:
Describe the anatomy and physiology of the abdomen, chest, and genitourinary system
Identify types, signs, and symptoms of injuries to the chest, abdomen, and genitalia
Demonstrate care of patients with injuries to the chest, abdomen, and genitalia
Demonstrate techniques of dressing and bandaging the chest, abdomen, and genitalia
BIL: Essential

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Competency: Demonstrate care for the pediatric patient

Competency Builders:
Assess the pediatric patient
Initiate appropriate age-level treatment
Describe signs, symptoms, and treatment for croup/epiglottis
Identify normal vital signs in children
Explain management of fevers in children
Describe signs of child abuse
Report signs of child abuse
### Competency: Treat environmental emergencies

#### Competency Builders:
- Describe signs, symptoms, and treatment for patients suffering from heat cramps, heat exhaustion, heat stroke, hypothermia, and frostbite.
- Describe signs, symptoms, and treatment for patients exposed to water-related emergencies.

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**Competency:** Maintain patient safety

**Competency Builders:**
- Apply restraints (e.g., soft, vest)
- Monitor use of restraints
- Assist patient to walk with assistive ambulation devices
- Demonstrate safe usage of patient transport equipment
- Demonstrate safe handling of patient medical equipment (e.g., IVs, catheters, oxygen tubing)
- Position patient maintaining proper body alignment, supporting body parts
- Demonstrate patient transfer techniques
- Identify safety needs of medicated patient
- Demonstrate use of cot and immobilization equipment (e.g., side rails, cot straps, shoulder harness, child restraint seats, backboard straps, KED, collars)
- Identify placement of patient call devices/emergency alert devices
- Orient patient to surroundings
- Identify techniques/procedures to patient
Unit: Emergency Medical Technology II

BIL: Essential

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Competency: Describe roles and responsibilities of the Emergency Medical Technician (EMT)

Competency Builders:
Identify the roles and responsibilities of the EMT
Describe the importance of emergency care
Identify legal aspects of emergency care
Identify contributing agencies in local EMS system
List six areas of personal attitude and conduct expected of an EMT
Describe state requirements for EMT certification and recertification
Explain the EMT’s role in the organ donation program
Describe the signs and symptoms of critical incident stress
Explain the need for critical incident stress debriefing
### Competency: Treat soft tissue injuries

**Competency Builders:**
- Describe the anatomy and physiology of the skin
- Identify types, signs, and significance of various wounds
- Provide basic wound care
- Apply dressings and bandages to wounds
- Describe how to care for a patient with an amputation and the care of the amputated part
- List etiology of soft tissue injuries and potential complications of each
- Describe importance of using aseptic technique in treating soft tissue injuries
Competency: Treat musculo-skeletal injuries

Competency Builders:
Describe the anatomy and physiology of the musculo-skeletal system
Identify types, signs, and symptoms of fractures, sprains, and dislocations
Select appropriate splint for treatment of presenting injury
Demonstrate techniques for immobilizing all fractures and dislocations
Identify mechanism of injury
BIL: Essential

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Competency: Treat medical emergencies

Competency Builders:
List methods in which poisons can enter the body
Explain how to contact the appropriate poison control center
Describe the signs, symptoms, and treatments for poison overdose victims
Describe the signs, symptoms, and treatments for victims of venomous bites and stings
Describe the signs, symptoms, and treatments for victims of heart and respiratory diseases
Describe the signs, symptoms, and treatments for victims of cerebro-vascular incidents
Describe the signs, symptoms, and treatments for diabetic patients
Describe the signs, symptoms, and treatments for patients with communicable diseases
Describe the signs, symptoms, and treatments of allergic reactions
Describe the signs, symptoms, and treatments for patients having seizures
Describe the signs, symptoms, and treatments for patients suffering from acute abdominal problems
Describe the signs, symptoms, and treatments for substance abuse patients
BIL: Essential

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Competency: Treat burns

Competency Builders:
Describe dangers of burns to patient and rescuer
Estimate the degree and size of a burn
Provide emergency care to the burned victim
Manage complications of burns (e.g., respiratory compromise, infection)
Report degree and size of burns, along with any complications and care given
Manage dressing changes, scar management
Competency: Manage victims of hazardous materials incidents

Competency Builders:
Describe methods used to identify hazardous material
Describe the threats of hazardous material to victims and the EMT
Describe general principles used to manage a hazardous material victim
Describe methods used to decontaminate or isolate equipment or vehicles used in a hazardous material incident
Identify agencies responsible for handling hazardous material incidents
Describe scene safety
BIL: Essential

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Competency: Manage special care situations

Competency Builders:
Provide care for the needs of geriatric, mentally/physically challenged, non-English speaking, and psychologically disturbed patients
Manage behavioral emergencies including disruptive patients
Manage sexual assault victims
Provide care for the terminally ill
Manage SIDS incidents
Describe aspects of scene safety
BIL: Essential

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Competency: Demonstrate extrication

Competency Builders:
Describe common extrication tools, equipment, and safe handling
Demonstrate methods used to gain access to and extricate patient from entrapment, including a motor vehicle
BIL: Essential

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Competency: Describe mass casualty incidents

Competency Builders:
Define a mass casualty incident (MCI)
Describe the principles involved in management of an MCI
Explain the principle of triage
Describe treatment rationale for MCI
BIL: Essential

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Competency: Demonstrate knowledge of systems operation

Competency Builders:
Identify regulations and recommendations related to driving an emergency vehicle
Describe emergency vehicle and equipment maintenance
Describe the non-medical role of the EMT in situations such as traffic accidents and crime scenes
Unit: Emergency Medical Services

BIL: Essential

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Competency: Demonstrate knowledge of the paramedic profession

Competency Builders:
Define the roles and responsibilities of the paramedic
Differentiate among the various levels of training—from EMT to paramedic
List current state requirements for paramedic certification and recertification
Define continuing education, certification, licensure, and registration
Explain the purposes of a national association, national registry, and professional journals
Describe the benefits of paramedics teaching in their community
Competency: Describe emergency medical services (EMS) systems

Competency Builders:
Define medical control and physician responsibility
Explain pre-hospital stabilization of patients
Differentiate between management of trauma and medical patients
Describe protocols and their development
Explain the relationship between prehospital care and total patient care, including the emergency department and hospital specialty departments
Describe the continuum of patient care and the responsibilities of the paramedic within the transfer of patient responsibility
Describe the response of the EMS system, including system access, dispatcher responsibilities, patient evaluation, medical command, and patient responsibility
Identify groups such as ASTM, NCSEMSTC, ACS, AMAJRC, and USDOT and their roles in the promulgation of national standards
Outline the various paramedic-physician relationships
Describe retrospective evaluation of patient care including report review, continuing education, skill practice, and skill deterioration
Describe the EMT-Paramedic’s initial responsibilities when arriving on the scene
Identify circumstances that require the EMT-Paramedic’s to report incidents to law enforcement or other appropriate authorities
BIL: Essential

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Competency: Demonstrate EMS communication systems

Competency Builders:
- Describe the phases of communication necessary for an EMS event
- Define essential communication terms and equipment
- Describe the advantages and disadvantages of various EMS communication systems
- Describe factors affecting interference, range, and clarity of base, vehicle, and portable radio communications
- Describe the functions and responsibilities of the FCC
- Describe the functions and responsibilities of the EMS dispatcher
- Describe methods of verbal communication of patient information to hospital and to the physician
- Explain the importance of written medical protocols and the written EMS run report
- Demonstrate proper use of portable and mobile transmitter/receivers in a patient situation
- Explain uses of biotelemetry equipment
- Complete a written EMS report
- Describe medical legal issues concerning patient information
BIL: Essential

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Competency: Demonstrate rescue techniques and extrication

Competency Builders:
Identify possible hazards of a rescue scene
Describe procedures for handling hazards at a rescue scene
Describe the equipment and techniques to use to gain access to, package, extricate, and transport patients trapped within a vehicle or other confinement
Describe the integration of patient care into the process of patient disentanglement and rescue
Identify proper response in the presence of hazardous materials
Name proper authorities to notify in the case of hazardous materials
Manage scene and safe patient access
Explain removal and transport of the patient from the scene
Demonstrate procedures and operation of equipment used to gain access to, package, extricate, and transport patients trapped or confined in a vehicle or other type of entrapment
Demonstrate techniques for lifting and handling patients with and without spine injuries and/or other special injury problems utilizing the special equipment found on a rescue vehicle
Demonstrate techniques for lifting and moving patients utilizing typical patient handling/carrying devices
Competency: Describe major incident response

Competency Builders:
Define mass casualty incident (MCI) and when it should be declared
Describe the preplanning phase and response planning for MCI
Describe MCI communications
Describe the components of special resources
Describe the function of scene command, scene triage, and the transferring command function
Describe scene and staging management and a system for patient identification
Define scene safety
**Competency:** Demonstrate knowledge of patient assessment and initial management

**Competency Builders:**
- Describe the primary and secondary survey
- Describe the anatomy, physiology and pathophysiology of the airway and lungs and its anatomical structures
- Describe the use of adjuncts in airway management
- Describe advanced methods of airway management
- Explain the significance of protection of the cervical spine in airway management
- Explain pulmonary ventilation and gas exchange across the alveolar-capillary membrane
- Describe the pathophysiology of open and closed pulmonary injuries
- Describe the techniques for evaluating effectiveness of ventilation
- Describe the anatomy and physiology of the heart and cardiovascular system
- Describe the pathophysiology of cardiac arrest
- Describe the mechanisms of evaluating the effectiveness of perfusion
- Describe hemorrhage control and its benefits and complications
- Assess neurological status
- Explain the pathophysiology of shock
- Define trauma score and its usefulness
- Obtain a relevant patient medical history
- Describe how a patient is packaged and stabilized for transportation to the hospital
- Describe procedures for hospital selection, transportation, and patient monitoring enroute to the hospital
- Perform a rapid assessment
- Set priorities of care based on threat to life
- Perform a secondary survey
- Document general patient findings and treatment
BIL: Essential

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Competency: Manage airway and ventilation

Competency Builders:
Demonstrate methods of airway management on adult, child, and infant manikins both manually and with adjunctive equipment
Demonstrate methods for assessing continued adequacy of airway management and ventilation when using advanced airway devices
Demonstrate use of portable and fixed suction devices for oropharyngeal and tracheal suctioning
Competency: Manage shock

Competency Builders:
Describe the causes, pathophysiology signs, symptoms, clinical manifestations, and management of shock
Describe fluids, fluid transport, and fluid and electrolyte imbalances
Describe resuscitation of the shock patient
Describe hemodynamics of the cardiovascular system
Describe differences in IV fluid composition and their implications in fluid administration
Describe baroreceptors and their affect on blood pressure and perfusion
Describe compensated and uncompensated shock
Describe evaluation of patient’s perfusion status
Define acid-base balance
Describe indications and contraindications of the pneumatic anti-shock garment
Describe methods of fluid replacement and the advantages and disadvantages of each
Demonstrate the steps in shock resuscitation
Demonstrate use of pneumatic anti-shock garment
Demonstrate proper technique for setting up intravenous fluids for administration
Demonstrate proper technique of peripheral and external jugular venous cannulation on the adult, child, and infant patient
Demonstrate proper techniques for troubleshooting an intravenous infusion
Calculate fluid administration rates for intravenous fluids utilizing a variety of administration sets
Demonstrate aseptic IV techniques
Competency: Demonstrate knowledge of pharmacology

Competency Builders:
Identify the various origins and forms of drugs
Differentiate many various names of a drug (e.g., generic, trade, official, chemical)
Identify agencies responsible for regulating drugs and the rationale for regulation
Demonstrate use of the Physician’s Desk Reference (PDR)
Identify local and systemic effects of drugs
List effects of various factors on the action of drugs
Describe methods of drug absorption
Define relevant pharmacology terms
Describe the apothecary and metric systems
Convert between and within the apothecary and metric systems
Describe the routes of administration of various types of drugs
Calculate fractional drug dosages
Identify the advantages and disadvantages of subcutaneous, intramuscular, intravenous, and transtracheal injections
Demonstrate the proper procedure for intramuscular, subcutaneous, intravenous piggyback, intravenous bolus, and transtracheal medication administration
Demonstrate the proper procedure for withdrawing medication from a glass vial and a glass ampule
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Competency: Handle trauma emergencies

Competency Builders:
Describe the general care and transportation of the trauma patient
Describe the priorities of trauma care and triage with multiple patients
Describe the anatomy, physiology, pathophysiology, assessment, and management of trauma to all regions of the human body
Describe methods of hemorrhage control
Demonstrate methods of hemorrhage control
Describe neurological examination, assessment, pathophysiology, and management
Describe rapid on-scene management of the trauma patient
Describe the components of a complete prehospital history and the significance of each
Describe various types of splints used for immobilization of fractures and dislocations and their advantages and disadvantages
Describe the short and long backboard, the various state-of-the-art substitutes available, and their specific uses
Describe various systems designed for scoring the severity of injuries to the trauma patient
Describe the use of a trauma score in quantifying patient condition
Demonstrate advanced methods of airway management and ventilation in the trauma patient
Demonstrate decompression of a tension pneumothorax
Demonstrate application of pneumatic anti-shock garment (MAST)
Demonstrate physical examination of the trauma patient
Demonstrate a neurological examination as performed on a trauma patient
Demonstrate immobilization of the cervical spine
Demonstrate splinting techniques
Define indications of a tension pneumothorax
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Competency: Manage burn injuries

Competency Builders:
Describe the anatomy, physiology, pathophysiology, and assessment of the integumentary system
Describe the movement of body fluids between plasma, interstitial compartments and intracellular compartments
Describe the assessment and management of the burn system
Describe the pathophysiology and treatment of burn shock
Describe the major causes, classifications, and categories of burns
Describe the method of calculating percentages of body surface area burned and various formulas for calculating fluid resuscitation
Assess an inhalation injury
Competency: Handle respiratory emergencies

Competency Builders:
Describe the anatomy, physiology, pathophysiology, and assessment of the respiratory system
Define appropriate medical terms
Identify the normal partial pressures of oxygen and carbon dioxide in the alveoli, arterial and venous blood, and factors that affect those levels
Describe the normal and COPD respiratory drives
Identify the pharmacology, actions, indications, precautions, dosages, contraindications, and side effects of typical respiratory drugs for the adult and pediatric patient
Demonstrate methods of respiratory drug administration
Describe the signs, symptoms, and pathophysiology of conditions affecting the respiratory system
Demonstrate inspection, auscultation, and palpation of the thorax
Identify normal and abnormal lung sounds
Obtain a history from a patient with respiratory complaints
Assess a patient with respiratory problems
BIL: Essential

Competency: Manage cardiovascular emergencies

Competency Builders:
- Describe the anatomy, physiology, and pathophysiology relevant to cardiovascular disease and emergencies
- Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of common emergency cardiovascular drugs
- Identify complications of intracardiac injections
- Describe innervation of the heart, sympathetic, and parasympathetic stimulation, blockade, an effects on the heart rate
- Describe myocardial electrical physiology
- Describe signs, symptoms, and common chief complaints of patients with cardiac conditions
- Describe the historical information, specific observations, and physical findings to be evaluated in the cardiac patient
- Identify actions, uses, and side effects of common prescription drugs relative to cardiac problems
- Describe the etiology of cardiac arrest in adults and pediatric patients
- Describe concepts of ECG monitoring, types and causes of artifacts, and rhythm analysis format
- Identify the wave forms, intervals, and normal values relative to an electrocardiogram (ECG)
- Describe the 12-lead ECG as compared to continuous monitoring
- Describe the etiology, clinical significance, and ECG characteristics of cardiac dysrhythmias
- Describe the indications for use of a precordial thump, vagotonic maneuvers, synchronized cardioversion, and defibrillation
- List energy recommendations for adult and pediatric patients
- Identify wave forms, artifacts, and dysrhythmias on Lead or MCL1 rhythm strips and oscilloscope
- Obtain history from patient with cardiac condition
- Assess dysrhythmias or cardiac condition
Demonstrate application of ECG electrodes
Obtain a sample Lead II or MCL1 rhythm strip
Use defibrillator paddles for Lead II monitoring
Troubleshoot a poor ECG rhythm
Perform a precordial thump, vagotonic maneuvers, synchronized cardioversion, defibrillation, and external cardiac pacing
Use a mechanical CPR device
Explain a team approach when managing cardiac arrest
Competency: Manage endocrine emergencies

Competency Builders:
Describe the anatomy, physiology, and pathophysiology of the endocrine system
Describe the assessment and management of endocrine emergencies
Identify the historical information, observations, and physical findings significant in the patient with endocrine disorders
Identify common prescription drugs that endocrine patients might take and the implications of each
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of relevant drugs
Obtain a history from a patient with endocrine problems
Assess patients with endocrine problems
Administer relevant drugs
Competency: Manage neurological emergencies

Competency Builders:
Describe the anatomy, physiology, and pathophysiology of the neurological system
Describe the assessment and management of neurological disorders
Identify the actions, uses, and side effects of common prescription drugs relative to neurological problems
Identify common prescription drugs that a patient with neurological problems might take and the implications of each
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of relevant drugs
Explain the Glasgow Coma Scale
Use the Glasgow Coma Scale
Differentiate various types of seizures and their phases
Obtain history from a patient with neurological disorders
Assess patients with neurological disorders
BIL: Essential

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Competency: Manage digestive, genitourinary, and reproductive emergencies

Competency Builders:
Describe the anatomy, physiology, and pathophysiology of the digestive, genitourinary, and reproductive systems
Identify the historical information, observations, and physical findings significant in the patient with digestive, genitourinary, and reproductive disorders
Describe the assessment and management of digestive, genitourinary, and reproductive system disorders
Identify common prescription drugs that a patient with digestive, genitourinary, and reproductive problems might take and the implications of each
Describe the basic principles, types, and complications of dialysis
Explain the assessment and management of the dialysis patient, including vascular access
Obtain history from a patient with digestive, genitourinary, and reproductive disorders
Identify the pharmacology, actions, indications, precautions, methods, of administrations, dosages, contraindications, and side effects of relevant drugs
BIL: Essential

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Competency: Manage anaphylaxis emergencies

Competency Builders:
Describe the anatomy, physiology, pathophysiology, causes, signs and symptoms, assessment, and management of anaphylaxis
Identify the historical information, observations, and physical findings significant in the patient with potential anaphylaxis
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects for the adult and pediatric patient for epinephrine, diphenhydramine, aminophylline, and dexamethasone
Obtain history from a patient with potential anaphylaxis
Administer epinephrine, diphenhydramine, aminophylline, and dexamethasone to the adult and pediatric patient
BIL: Essential

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Competency: Manage toxicology, alcoholism, and drug abuse emergencies

Competency Builders:
- Describe toxicologic emergencies
- Identify the routes of entry of toxic substances into the body
- Describe the role of Poison Control Centers in the EMS system and in the management of patients with toxicological emergencies
- Define drug abuse terms
- Identify commonly abused drugs and their effects
- Describe the anatomy, physiology, pathophysiology, assessment, and management of patients with toxicological emergencies, animal or insect bites, stings, drug overdose, and alcoholism
- Describe the incidence of alcoholism, drug abuse, and substance abuse in the United States
- Obtain history from a patient with toxicological emergencies, animal or insect bites, stings, drug overdose, and alcoholism
- Apply a constricting band
- Administer relevant drugs
BIL: Essential

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Competency: Manage infectious diseases

Competency Builders:
Define terms and conditions relative to infectious diseases
Describe the anatomy, physiology, pathophysiology, causes, mode of transmission, incubation period, assessment, and management of typical infectious and communicable diseases and parasites
Identify the historical information, observations, and physical findings significant in the patient with infectious/communicable disease or parasites
Practice universal precautions according to CDC standards
Describe procedures for reporting and follow-up after exposure to a communicable disease according to CDC standards
Obtain history from a patient with infectious/communicable disease or parasites
BIL: Essential

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Competency: Manage radiation injuries

Competency Builders:
- Identify common types and sources of ionizing radiation
- Identify sources of normal background radiation
- Describe the anatomy, physiology, pathophysiology, signs and symptoms, causes, assessment, and management of acute and/or chronic exposure to ionizing radiation
- Identify the historical information, observations, and physical findings significant in the patient with acute and/or chronic exposure to ionizing radiation
- Describe safety procedures for allied health personnel and patients related to exposure to ionizing radiation
- Explain procedures for notifying appropriate health officials of radiological incidents
- Obtain history from a patient with acute and/or chronic exposure to ionizing radiation
- Manage patient with acute and/or chronic exposure to ionizing radiation
**BIL:** Essential

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**Competency:** Manage geriatric emergencies

**Competency Builders:**
Identify the physical, social, and psychological differences between youth and elderly
Identify the historical information, observations, and physical findings significant in the geriatric patient with acute and/or chronic medical problems
Identify illness/complaints that require special consideration in the elderly
Describe the anatomy, physiology, pathophysiology, assessment, and management of common geriatric illnesses
Obtain a history from a geriatric patient
Treat geriatric patients
Describe geriatric abuse
Describe the components and objectives of a gerontology program
Demonstrate communication techniques with a special needs patient (e.g., blind, deaf, dementia)
Competency: Manage pediatric emergencies

Competency Builders:
Identify the general goals of managing the pediatric patient
Identify the historical information and its sources in evaluating the pediatric patient
Describe, by age groups, the relevant aspects of normal growth and development, personality development, relationship to parents, history factors, common illnesses, and accidents
Describe Sudden Infant Death Syndrome (SIDS), the current theories for causes, assessment, management, and the immediate needs of the family
Describe the characteristics of a child abuser
Describe the characteristics of an abused child
Describe the assessment and management of potentially abused children, including management of the family of the child
Identify types of child abuse
Describe the anatomy, physiology, pathophysiology, assessment, and management of common pediatric disorders
Identify the pediatric dosage for relevant drugs
Demonstrate techniques for airway maintenance in the pediatric patient
Describe techniques and sites for intravenous infusion in the pediatric patient
Obtain a history from a pediatric patient
Assess a pediatric patient
Competency: Manage the gynecologic patient

Competency Builders:
Describe the anatomy and physiology of the female reproductive system
Identify the historical information, observations, and physical findings to be evaluated for the gynecologic patient
Describe the pathophysiology and management of gynecological disorders
Describe potential causes, assessment, and management of trauma to the external genitalia
Describe the assessment and management of a sexual assault victim
Obtain a history from a patient with a gynecologic problem
Assess a patient with a gynecologic problem
Report sexual assault
BIL: Essential

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Competency: Manage the obstetric patient

Competency Builders:
Define obstetrical terminology
Describe the process of fetal development and circulation
Identify the historical information, observations, and physical findings to be evaluated for the obstetric patient
Describe early signs and symptoms of pregnancy
Describe potential causes, assessment, and management of trauma to the pregnant mother and the fetus
Describe the effects of pregnancy on pre-existing medical conditions
Describe the anatomy, physiology, pathophysiology, causes, assessment, and management of obstetrics
Describe Braxton-Hicks contractions
Describe the progression of labor
Describe factors that influence transport decisions for the patient in labor
Describe a normal cephalic delivery
Describe the pathophysiology, assessment, and management of delivery complications
Identify the pharmacology, actions, indications, methods of administration, dosages, contraindications, and side effects of oxytocin
Obtain a history for an obstetric patient
Define stages of labor and associated complications
Assess the obstetric patient
Treat obstetrical patients, including assisting with childbirth
Administer oxytocin
Competency: Manage the neonate

Competency Builders:
Describe the anatomy, physiology, pathophysiology, assessment, and routine management of the neonate
Describe the mechanisms, effects, and treatment of hypothermia in the neonate
Define the parameters, numerical values utilized, and the procedure for Apgar scoring
Demonstrate stimulation of CPR for the neonate
Identify observations and physical findings to be evaluated in the neonate
Identify problems and equipment requirements for transportation of the neonate
Obtain a history for a neonate
Assess a neonate
Administer oxygen to a neonate
Suction a neonate using suction and bulb syringe
Calculate Apgar score
Obtain an antepartum and postpartum history of the mother
Competency: Manage behavioral emergencies

Competency Builders:
Define behavioral emergency
Identify factors that may alter the emotional status of the ill or injured
Identify common prescription drugs that a patient with behavioral disorders might take and the implications of each
State reasons for and methods of reassuring patient who is experiencing an emotional crisis
Describe verbal communication techniques useful in managing the emotionally disturbed patient
Describe means to insure the safety of the Paramedic
Describe circumstances when bystanders and relatives should be removed from the scene
Identify factors which increase the risk of suicide and behaviors that are indicators of an impending suicide attempt
Describe techniques that facilitate the systematic gathering and reporting of information about the disturbed patient
Describe techniques that are useful in managing the effects of crisis situations on the Paramedic
Describe techniques that are useful in redirecting anxiety in relatives and bystanders
Identify appropriate action of the Paramedic when confronted with an uncontrollable, armed patient
Describe situations in which the EMT-Paramedic may forcibly restrain or transport a patient
Demonstrate techniques for restraining the violent patient
Demonstrate techniques useful in protecting the EMT-Paramedic when attached by a violent patient
Obtain a history of patients with behavioral emergencies
Assess patients with behavioral emergencies
BIL: Essential

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**Competency:** Demonstrate paramedic skills

**Competency Builders:**
- Demonstrate patient assessment/management (e.g., medical and trauma)
- Demonstrate ventilatory management skills/knowledge (e.g., simple adjuncts, supplemental oxygen delivery, endotracheal intubation, chest decompression, transtracheal jet ventilation/cricothyrotomy)
- Demonstrate management of cardiac arrest patient (e.g., therapeutic modalities, megacode, monitor/defibrillator knowledge, pacing)
- Demonstrate hemorrhage control
- Demonstrate splinting procedures
- Demonstrate IV therapy and IO therapy (e.g., set-up, fluid therapy, medication administration)
- Demonstrate spinal immobilization (e.g., seated and lying patients)
- Demonstrate gynecologic skills and knowledge
- Demonstrate other related skills (e.g., radio communications, report writing, documentation)
BIL: Essential

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Competency: Maintain current certifications and continuing education

Competency Builders:
Meet AHA/ARC standards for CPR proficiency
Meet AHA standards for advanced cardiac life-support proficiency
Meet national registry and state requirements for continuing education (e.g., paramedic refresher, additional continuing education)
BIL: Essential

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Competency: Assist with emergency childbirth

Competency Builders:
Describe the anatomy and physiology relevant to childbirth
Assist mother before, during, and after delivery
Describe potential complications during three stages of childbirth
Manage complications of delivery during three stages of childbirth
Care for neonate
Resuscitate newborn if necessary
Provide appropriate care for premature infant
Provide care for multiple births
Document data relevant to delivery and care given
Unit: Oral Anatomy and Pathology I

BIL: Essential

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Competency: Identify dento-osseous structures

Competency Builders:
- Identify functions of dento-osseous structures
- Identify bones and sutures of the skull
- Identify cranial landmarks
- Identify TMJ structure and ligaments
BIL: Essential

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Competency: Identify facial muscles

**Competency Builders:**
- Explain formation of facial expression
- Explain function of mastication
- Identify origin and insertion of suprehyoid muscles
- Explain function of tongue and hyoid structure
- Identify muscles of tongue
BIL: Essential

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Competency: Explain neurology of head and neck

Competency Builders:
Define reflex arc
Describe function of cranial nerves
Define trigeminal nerve
Differentiate perception of and reaction to various types of pain
**BIL:** Essential

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**Competency:** Describe vascular system of the head

**Competency Builders:**
- Identify functions of blood
- Identify major arteries and branches (e.g., external carotid, internal and external maxillary)
- Identify purpose and location of viscera of head and neck
Unit: Oral Anatomy and Pathology II

BIL: Essential

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Competency: Describe developmental abnormalities

Competency Builders:
- Differentiate normal and abnormal jaws
- Differentiate normal and abnormal lips
- Differentiate normal and abnormal mucosa
- Differentiate normal and abnormal tongue
- Differentiate normal and abnormal salivary glands
- Differentiate normal and abnormal teeth (e.g., size, shape, number, structure, eruption)
BIL: Essential

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Competency: Describe dental caries

Competency Builders:
- Identify etiology of caries
- Describe affects of saliva
- Identify types and clinical features of caries
- Describe histopathology of the caries process
- Explain use of radiographs in caries detection
BIL: Essential

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Competency: Describe pulpal and periapical disease

Competency Builders:
Identify etiology of pulpal disorders
Describe periapical infections and diseases of the supporting bone
Competency: Describe tissue changes in response to physical or chemical injury in the oral cavity

Competency Builders:
- Describe effects of placement of restorations on the pulp
- Describe bruxism
- Classify fractures of the teeth
- Describe ankylosis
- Describe traumatic bone cyst
- Compare sialolithiasis and mucous retention
- Identify consequences associated with wearing removable dental appliances
- Describe effects of drugs and heavy metals on structures in oral cavity
- Identify iatrogenic factors
Competency: Describe neoplasms of oral cavity

Competency Builders:
Define benign and malignant
Describe fibroma, papilloma, hemangioman, tori, adenoma, and premalignant lesions (red and white)
Describe squamous cell carcinoma, adenocarcinoma, osteosarcoma, and metastatic neoplasms
BIL: Essential

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Competency: Describe odontogenic cysts and neoplasms

Competency Builders:
- Define cysts and neoplasms
- Describe dental lamina cysts, lateral periodontal, follicular, periapical, calcifying, and keratocyst
- Describe ameloblastoma, ameloblastic fibroma, and odontoma
**BIL:** Essential

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**Competency:** Describe treatment of patients with special needs

**Competency Builders:**
- Describe treatment of gerodontic patients
- Describe treatment of edentulous patients
- Describe treatment of pediatric patients
- Describe treatment of medically compromised patients
Unit: Chairside Procedures

BIL: Essential

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Competency: Perform patient assessment

Competency Builders:
Correlate medical/dental history with a dental hygiene treatment plan and services to be performed
Identify contraindications to dental treatment in a medical and dental history
Recognize remedial actions or referrals
Correlate extraoral and intraoral examination/findings with a dental hygiene treatment plan and patient services to be performed
Conduct a complete periodontal examination, including probing, radiographic interpretation, mobility assessment, and tissue description
Consult with dentists and physicians to verify dental and medical information
Develop treatment plan to be implemented
Record existing restorations, conditions, and pathologies
Assess patient's nutritional status
Perform soft tissue reassessment
Evaluate the effects of initial dental hygiene therapy
Define oral manifestations and their relations to systemic diseases
BIL: Essential

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Competency: Prepare patient

Competency Builders:
Secure patient's chart
Prepare operatory
Greet patient
Review patient's health history
Position patient for examination or treatment
Drape patient
Adjust chair and lights
Position operator and assistant stools
BIL: Essential

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Competency: Demonstrate principles of body mechanics and ergonomics

Competency Builders:
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper operator and patient body mechanics involved in transfer and positioning of patient
**BIL:** Essential

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**Competency:** Maintain dental operatory

**Competency Builders:**
- Follow manufacturer's instructions
- Prepare disinfectant solutions
- Open operatory
- Disinfect operatory and sterilize equipment
- Dispose of used materials in compliance with OSHA and EPA
- Close operatory
BIL: Essential

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Competency: Provide evacuation and retraction in compliance with OSHA, EPA, and ODPA

Competency Builders:
- Practice infection control procedures
- Interact with patient
- Operate and control high-volume evacuator and low-volume evacuator
- Retract tissue
- Operate air-water syringe
- Perform equipment maintenance and disinfection
### Competency: Identify dental instruments

**Competency Builders:**
- Identify grasp and exchange types of instruments
- Describe the operation zone of grasp and exchange instruments
- Identify rotary handpieces and cutting instruments
- Describe the operation zone of rotary handpieces and cutting instruments
- Demonstrate care and maintenance of dental instruments

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Competency: Transfer instruments

Competency Builders:
Follow dentist's directions
Anticipate procedural steps
Use transfer zone
Deliver instruments
Receive instruments
Maintain sequentially organized tray
**BIL:** Essential

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**Competency:** Explain instrumentation

**Competency Builders:**
- Identify parts, components, and types of instrumentation
- Identify sequence of instrumentation
**BIL:** Essential

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**Competency:** Use instruments

**Competency Builders:**
- Use grasp
- Use fulcrum
- Differentiate use of adaption from angulation
- Use lateral pressure
- Differentiate visibility from accessibility
BIL: Essential

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Competency: Sharpen instruments

Competency Builders:
Use stationary equipment
Use stationary stone
Use supplemental methods
Care for sharpening stone
BIL: Essential

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Competency: Assist with preliminary examination

Competency Builders:
Practice infection control procedures
Prepare basic tray setup
Measure and record vital signs
Record and update patient health history
Interact with patient
Prepare setup for preliminary impression
Take preliminary impression
Record oral condition on patient's chart
Chart patient's teeth
Assist with oral cancer screening
BIL: Essential

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Competency: Assist with administering anesthetic

**Competency Builders:**
Practice infection control procedures
Read and follow manufacturer's instructions
Prepare anesthetic tray setup
Interact with patient
Apply topical anesthetic
Assist with administration of local anesthetic
Monitor patient's respiration rate and behavior
Rinse patient's mouth
Record treatment on patient's chart
BIL:  Essential

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Competency:  Assist with application of rubber dam

Competency Builders:
Practice infection control procedures
Prepare tray for rubber dam application and removal
Explain procedure to patient
Assist with installation of rubber dam according to ODPA
Remove rubber dam
Demonstrate application and removal of rubber dam
BIL: Essential

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Competency: Assist with anterior restoration and aesthetic dental procedures

Competency Builders:
- Interact with patient
- Practice infection control procedures
- Read and follow manufacturer's instructions
- Prepare setup for rubber dam application and removal
- Assist during cavity/tooth preparation
- Assist with shade and materials selection
- Prepare setup for cavity liners and/or acid etch and bonding procedures
- Assist with acid etch and bonding procedures
- Assist with placement of materials
- Assist with finishing and polishing of restoration
- Record treatment on patient's chart
BIL: Essential

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Competency: Assist with in-office bleaching procedures

Competency Builders:
- Interact with patient
- Record present shade of teeth
- Practice infection control procedures
- Assist with product selection
- Read and follow manufacturer's instructions
- Prepare setup for rubber dam application and removal
- Assist with solution application
- Monitor bleaching process
- Prepare setup and assist with topical fluoride treatment
- Instruct patient in postoperative care
- Record treatment on patient's chart
BIL: Essential

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Competency: Assist with home-bleaching procedure

Competency Builders:
Interact with patient
Record present shade of teeth
Practice infection control procedure
Assist with product selection
Read and follow manufacturer's instructions
Prepare setup and assist with impression
Pour and trim model
Fabricate and trim tray
Instruct patient in home use according to dentist’s orders
Record treatment on patient’s chart
### Competency: Assist with posterior restoration

#### Competency Builders:
- Interact with patient
- Practice infection control procedures
- Read and follow manufacturer's instructions
- Assist during cavity preparation
- Prepare setup for rubber dam application and removal
- Prepare setup for cavity liners
- Prepare setup for amalgam filling procedure
- Prepare setup for composite filling procedure
- Prepare for cavity filling
- Assist with placement of materials
- Assist with carving amalgam
- Provide postoperative instructions
- Prepare setup for finishing and polishing amalgam restoration
- Prepare setup for finishing and polishing composite restoration
- Assist with finishing and polishing restoration
- Record treatment on patient's chart
## Unit: Extraoral and Intraoral Examinations

**BIL:** Essential

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**Competency:** Explain examination procedures

**Competency Builders:**
- Identify components of examination
- Identify sequence of examination procedures
BIL: Essential

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Competency: Apply techniques of inspection

Competency Builders:
Use materials and instruments
Describe observations during inspection
Use dental charting symbols
Perform oral cancer screening
Competency: Describe periodontium

Competency Builders:
Identify gingiva and related structures
Describe significance of color, size, and contour
Describe surface texture and consistency
BIL: Essential

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Competency: Examine teeth

Competency Builders:
- Explain enamel hypoplasia
- Differentiate among attrition, erosion, and abrasion
- Identify carious lesions
- Classify carious lesions
- Identify fractures of teeth
- Classify occlusion
- Differentiate between functional occlusion and trauma from occlusion
- Chart periodontal records
Unit: Preventive Oral Hygiene Procedures

BIL: Essential

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Competency: Describe plaque and soft deposits

Competency Builders:
- Define plaque and related terminology
- Describe the relationship of plaque cycle to dental disease (e.g., dental caries, periodontal infections)
- Explain how diet affects plaque and soft deposits
BIL: Essential

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Competency: Describe dental calculus and stains

Competency Builders:
- Explain calculus formation
- Differentiate supragingival from subgingival calculus
- Identify stains of teeth (e.g., exogenous, endogenous intrinsic, exogenous intrinsic)
Competency: Describe scaling and root planing

Competency Builders:
Describe exploratory stroke
Describe coincidental curettage
Describe post treatment procedures
BIL: Essential

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Competency: Remove plaque and stains from teeth

**Competency Builders:**
- Identify disclosing agents
- Explain effects and indications of disclosing agents
- Apply selective polishing
- Use porte polisher
- Use abrasive for polishing (e.g., prophyjet)
- Clean removable denture
BIL: Essential

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**Competency:** Remove hard deposits

**Competency Builders:**
- Assess amount and location of deposits
- Select instrumentation choice (e.g., ultrasonic, handscalers)
- Demonstrate removal of hard deposits
- Describe patient reassessment
BIL: Essential

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Competency: Describe oral disease control

Competency Builders:
- Describe advantages and disadvantages of toothbrushes
- Describe toothbrush procedures (e.g., bass method, rolling stroke, modified stillman, charters)
- Describe supplemental brushing methods
- Identify contraindications for toothbrushing
- Explain care of toothbrushes
- Explain interdental plaque control
- Identify types and uses of dental floss
- Explain oral irrigation
- Explain chemical plaque removal
- Describe dentifrices
- Explain use of mouthrinses
- Describe additional supplemental aids (e.g., proxabrush)
BIL: Essential

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Competency: Apply fluorides

Competency Builders:
- Explain fluoridation
- Identify fluoride in foods
- Identify dietary fluoride supplements
- Explain purpose and use of topical fluoride
- Follow safety precautions for using fluoride
- Use sodium fluoride
- Use acidulated phosphate-fluoride (APF)
- Use stannous fluoride
**BIL:** Essential

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**Competency:** Use desensitizing agents

**Competency Builders:**
- Explain action of desensitizing agents
- Demonstrate methods of desensitization
BIL: Essential

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Competency: Assist with pit and fissure sealants

Competency Builders:
- Interpret and follow manufacturer’s instructions for sealants
- Prepare setup for pit and fissure sealant
- Interact with patient
- Prepare sealant preparation
- Prepare sealant placement
- Record treatment on patient’s chart
Unit: Dental Morphology

BIL: Essential

Competency: Explain dental physiology

Competency Builders:
Describe surfaces and ridges
Identify tooth/oral landmarks
Explain division into thirds
Identify proximal contact areas
Identify interproximal contact areas and spaces
Differentiate between embrasures and escapements
Describe protective contours
Describe cervical curvatures
**BIL:** Essential

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**Competency:** Explain arrangement of teeth and occlusion

**Competency Builders:**
- Explain dental arch formation
- Describe compensating curves of the dental arches
- Describe contact relations of the teeth
- Describe occlusal contact and intercuspid relations
BIL: Essential

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Competency: Describe deciduous teeth

Competency Builders:
Differentiate incisors and canines
Identify molars
Explain occlusion
**BIL:** Essential

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**Competency:** Describe permanent teeth

**Competency Builders:**
- Describe anterior arrangement (e.g., central and lateral incisors, canines)
- Describe posterior arrangement (e.g., first and second premolars; first, second, and third molars)
Unit: Dental Radiography

BIL: Essential

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Competency: Identify characteristics of radiation

Competency Builders:
Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Compare different methods of measuring x-radiation
Competency: Explain how x-rays are produced

Competency Builders:
Identify the different parts of the x-ray tube
Describe the process for production of radiation
Differentiate among the different types of radiation produced
Describe radiographic density—contrast and detail
Explain the Inverse Square Law and its effect on x-ray production
BIL: Essential

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Competency: Describe effects of radiation on the human body

Competency Builders:
- Explain somatic and genetic effects of x-rays
- Identify tissues most and least sensitive to radiation
- Differentiate among exposure variables and their effects, both acute and chronic
- Describe methods for reducing patient exposure
- Explain methods of operator protection
- Identify common methods of personnel monitoring
BIL: Essential

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Competency: Identify structures through the use of radiographs

Competency Builders:
Differentiate between radiopaque and radiolucent structures
Differentiate among different tooth structures
Identify the bone and surrounding structures in the oral cavity
Identify the different restorative materials used in the mouth
Identify different abnormalities that may develop in the oral cavity
Competency: Apply knowledge of the process for developing radiographs

Competency Builders:
- Identify features of a darkroom and necessary equipment
- Identify components and chemicals in dental film
- Describe how film should be stored
- Identify steps for proper film processing
- Describe cleanup procedures
- List common darkroom errors and methods to prevent them
- Identify errors on radiographs
- Operate automatic film processors
- Duplicate radiographs
**BIL:** Essential

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**Competency:** Maintain unexposed film

**Competency Builders:**
- Check expiration date
- Store film
BIL: Essential

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Competency: Identify anatomic landmarks

Competency Builders:
- Locate teeth on radiograph
- Locate supporting structures on radiograph
- Locate canals on radiograph
- Locate foramina on radiograph
- Locate sinuses on radiograph
- Differentiate normal and abnormal structures
BIL: Essential

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Competency: Describe errors in dental radiographic technique

Competency Builders:
- Identify types of possible errors
- Explain foreshortening
- Explain elongation
- Explain cone cutting
- Explain improper film placement
- Explain distortion
- Explain creased film
- Explain film fog
- Explain overexposed and underexposed film
- Explain chemical processing errors
- Describe characteristics of diagnostically acceptable quality
- Explain how errors can be corrected
- Demonstrate error analysis
| Competency: | Expose films |
| Competency Builders: | Follow manufacturer's instructions for film and equipment placement |
| | Adjust voltage, amperage, and timer on x-ray equipment |
| | Apply infection control procedures |
| | Perform "bisecting-the-angle" technique |
| | Follow radiation safety precautions for patient and operator |
| | Follow exposure guidelines |
| | Position patient |
| | Select film size and speed |
| | Position film |
| | Perform paralleling technique |
| | Expose extraoral radiographs (e.g., panoramic) |
BIL: Essential

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Competency: Process radiographs manually

Competency Builders:
- Follow manufacturer's instructions for equipment
- Mix solutions for developing and fixing radiographs
- Follow darkroom procedures
- Handle film properly
- Load film in developing tank
- Read thermometer
- Interpret time and temperature chart
- Follow safety precautions to prevent eye injury and minor burns in compliance with OSHA and EPA
- Clean and disinfect equipment
- Dispose of mixed solutions in accordance with EPA regulations
**BIL:** Essential

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**Competency:** Process radiographs automatically

**Competency Builders:**
- Follow manufacturer's instructions for x-ray equipment and solutions in compliance with OSHA and EPA
- Follow darkroom procedures
- Handle film properly
- Operate automatic processor
BIL: Essential

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Competency: Mount radiographs

Competency Builders:
Handle film properly
Place radiographs in mount
Label mount
Store mounted radiographs
Competency: Apply bisecting technique to expose a full-mouth survey

Competency Builders:
- Explain basic principles of bisecting technique
- Identify common errors in technique
- Demonstrate patient positioning
- Demonstrate uses of film holders
BIL: Essential

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Competency: Apply paralleling technique to expose a full-mouth survey

Competency Builders:
Describe principles and methods of paralleling technique
Describe film placement for all exposures
Prepare instruments for use in oral cavity
Demonstrate use of film holders
BIL: Essential

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Competency: Complete full-mouth survey on child DXTTR or patient

Competency Builders:
Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey
**BIL:** Essential

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**Competency:** Complete full-mouth survey on adult DXTTR or patient

**Competency Builders:**
- Select proper number and size films
- Select appropriate instrument
- Demonstrate proper exposure technique
- Demonstrate proper developing technique
- Properly evaluate full-mouth survey
**BIL:** Essential

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**Competency:** Complete full-mouth survey on edentulous patient

**Competency Builders:**
Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey
Unit: Preventive Dental Assisting Procedures

BIL: Essential

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Competency: Assist with prophylaxis

Competency Builders:
- Prepare prophylaxis and examination tray setup
- Prepare saliva ejector or high vacuum evacuator (HVE)
- Prepare patient
- Interact with patient
- Remove debris with saliva ejector or HVE
- Assist with scaling
- Pass and receive instruments
- Air-dry oral cavity
- Assist with polishing
- Pass and receive dental floss
- Use correct techniques to aspirate and retract
- Rinse patient's mouth
- Instruct patient in home-care procedures
- Record treatment on patient's chart
BIL: Essential

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Competency: Administer topical fluoride

Competency Builders:
- Set-up for fluoride treatment
- Interact with patient
- Air-dry oral cavity
- Measure liquids and gels
- Apply fluoride
- Time treatment
- Instruct patient in post-fluoride treatment
- Record treatment on patient's chart
BIL: Essential

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Competency: Instruct patient about oral hygiene and nutrition

Competency Builders:
Follow manufacturer's instructions on dental products
Prepare tooth brushing and flossing setup
Interact with patient
Demonstrate use of disclosing agents
Demonstrate brushing
Demonstrate flossing
Demonstrate oral hygiene aids
Take plaque index
Examine plaque under microscope
Take a Snyder Test
Incubate Snyder Test
Instruct patient on care of fixed and removal appliances
Instruct patient in recording diet
Analyze dietary report
Instruct patient in proper nutrition
Record treatment on patient's chart
Unit: Dental Specialties

BIL: Recommended

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Competency: Assist with oral surgery

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare patient for oral surgery
Prepare for oral surgery
Assist with anesthesia
Assist with oral surgery
Prepare setup for implant
Assist with implant
Prepare setup for dry socket treatment
Assist with dry socket treatment
Prepare setup for incision and drainage
Assist with incision and drainage
Prepare setup for surgical irrigation
Prepare setup for biopsy
Assist with biopsy
Prepare biopsy for lab
Give postoperative instructions
Prepare setup for suture removal
Assist with suture removal
Record treatment on patient's chart
BIL: Recommended

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Competency: Assist with pediatric dentistry

Competency Builders:
- Interact with patient
- Prepare pedodontics setup
- Practice infection control procedures
- Assist with pedodontic examination
- Assist with topical fluoride application
- Assist with stainless steel crowns
- Assist with space maintainers
- Prepare pulpectomy setup
- Assist with pulpectomy procedures
- Assist with pit and fissure sealant placements
- Record treatment on patient's chart
- Assist with restorative treatment
- Assist with patient management (e.g., restraints)
BIL: Recommended

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Competency: Assist with endodontics

**Competency Builders:**
- Interact with patient
- Practice infection control procedures
- Prepare endodontics setup
- Assist with rubber dam placement
- Assist with endodontic examination
- Assist with opening the pulp cavity, removal of diseased pulp, and root canal enlargement
- Measure reamers and files
- Expose radiographs
- Process radiographs
- Assist with sterilizing and drying canal
- Assist with placement of medicaments
- Assist with root canal filling
- Assist with endodontic surgery
- Record treatment on patient’s chart
BIL: Recommended

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Competency: Assist with fixed prosthodontics

Competency Builders:
- Interact with patient
- Practice infection control procedures
- Prepare patient
- Prepare prosthodontics tray setup
- Assist with administering local anesthetic
- Take preliminary impression
- Remove temporary crowns
- Assist with gingival retraction
- Assist with final impression for crown and bridge
- Assist with crown and bridge try-in and shade selection
- Assist with bite registration
- Assist with fabrication of temporary restorations
- Prepare setup for crown and bridge cementation
- Assist with placing temporary restorations
- Instruct patient in care and maintenance of temporary restorations
- Assist with crown and bridge cementation
- Prepare setup for equilibration
- Assist with equilibration
- Instruct patient in postoperative care
- Record treatment on patient's chart
BIL: Essential

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Competency: Assist with periodontics

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare periodontics setup
Assist with periodontic examination
Assist with scaling and sub gingival curettage
Assist with gingivectomy
Set-up for periodontal dressing
Assist with placement of periodontal dressing
Place periodontal dressing
Assist with removal of periodontal dressing
Remove periodontal dressing
Instruct patient in home-care procedures
Record treatment on patient's chart
BIL: Recommended

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Competency: Assist with removable prosthodontics

Competency Builders:
Interact with patient
Practice infection control procedures
Prepare patient
Prepare prosthodontics tray setup
Take preliminary impression
Assist with final impression
Assist with removable prosthodontics
Assist with bite registration and tooth selection
Assist with denture/partial try-in
Assist with denture/partial insertion
Assist with denture/partial adjustment
Assist with partial denture repair
Record treatment on patient's chart
BIL: Essential

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Competency: Assist with public health dentistry

Competency Builders:
Demonstrate knowledge of assessment, planning, implementation, and evaluation of community health interventions
Analyze research methodologies for community health interventions
Interpret research findings in scientific literature
Apply research findings to dental hygiene care delivery
Apply statistical analysis to health trends and community interventions
Assist dentist in public health clinics, hospitals, schools and nursing homes
Present information on oral health care to school or community group
BIL: Essential

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Competency: Perform direct patient services

Competency Builders:
- Differentiate between deposits and other causes of tooth surface roughness
- Check for calculus removal
- Scale teeth, removing accretions with hand instruments
- Root plane to remove altered cementum
- Manipulate mechanical instruments for deposit removal (e.g., ultrasonics, prophy-jet)
- Perform soft tissue curettage
- Apply desensitizing agents
- Clean removable appliances
- Direct patient in home therapies to maintain and restore soft tissue health
- Provide dietary counseling for health maintenance and specific healing needs
- Recommend patient use of caries prevention agents
Unit: Dental Materials I

BIL: Essential

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Competency: Demonstrate knowledge of dental laboratory materials

Competency Builders:
- Identify gypsum materials
- Pour models and dies
- Describe dental waxes
- Indicate uses of dental waxes
- Wax-up for metal fabrication
- Wax-up for resin processing
- Describe impression materials for laboratory use
- Explain model duplication media
- Identify denture base materials by color and characteristics
- Discern similarities and differences of denture base materials
- Explain the various metals used in dentistry, the metals used in fixed and removable prostheses
- Describe the characteristics and properties of porcelains and ceramic materials
- List the various separating agents
- List composition of various separating agents
- Identify fluxes and antifluxes
- Describe the indications and differences of various laboratory alcohols
- List the amount of pickling agents
- Define wetting agents
- Describe the uses of wax solvents
- Describe the composition of wax solvents
- Identify the variety of abrasives used in finishing appliances
- List the polishing agents for resins
- List the polishing agents for metals
- List the polishing agents for ceramics
- List the properties of laboratory gases
- List the uses of laboratory gases
List the safe handling of laboratory gases
Describe miscellaneous laboratory materials and agents
Competency: Explain dental laboratory material properties

Competency Builders:
Differentiate force and strain
Define compressive, tensile, and shearing
Differentiate between elastic limit and modulus of elasticity
Differentiate between malleability and ductility
Differentiate between flow and creep
Describe the Knoop hardness test
Describe the Brinell hardness test
Explain linear coefficient of thermal expansion
Differentiate between adhesion and viscosity
Unit: Dental Materials II

BIL: Essential

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Competency: Demonstrate use of impression materials

Competency Builders:
- Describe the different impression materials
- Identify types of material set
- Explain mixing ratios of impression materials
- Describe the mixing, working and setting times
- Identify factors affecting setting time
- Describe proper handling of different impression materials
BIL: Essential

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Competency: Use dental cements, liners, and varnishes

Competency Builders:
- Explain the purpose of dental cements, liners, and varnishes
- Identify types of dental cements, liners, and varnishes (e.g., zinc phosphate, zinc oxide eugenol, EBA cement, polycarboxylate, glass ionomer)
- Differentiate between light cure and self cure liners
- Describe the armamentarium for dental cements, liners, and varnishes
- Explain material ratios of gypsum products
- Describe the mixing and setting time
- Identify factors effecting setting time
Competency: Use restorative materials

**Competency Builders:**
- Explain the purpose of using restorative materials
- Identify components of restorative materials use
- Describe the armamentarium for restorative materials use
- Explain material ratios of mercury and alloys
- Explain the purpose of using ketac silver
- Describe the armamentarium for ketac silver use
- Demonstrate the application of ketac silver
- Explain the purpose of using composites
- Identify types of composites
- Describe the advantages and disadvantages of composite use
- Describe the armamentarium for composite use
- Explain material ratios of composite
- Describe the mixing and setting time
- Describe application methods for composites
- Explain acid etching
- Identify factors affecting setting time
- Identify factors affecting mixing time
- Define polymerization
- Define monomers
- Define polymer
- Define curing
- Define catalyst
- Explain the properties of shade selection and its armamentarium
- Explain the bonding types and procedure
- Explain the different bonding products
Competency: Demonstrate dental laboratory procedures

Competency Builders:
- Pour models and dies
- Explain the purpose of using gypsum products
- Identify types of gypsum products
- Describe the armamentarium for gypsum product use
- Explain material ratios of gypsum products
- Describe the mixing and setting time
- Define exothermic reaction, calcining, gauging water, and refractory
- Explain model trimming
- Identify factors affecting setting time
- Fabricate impression trays
- Assemble materials and equipment
- Adapt spacer
- Adapt acrylic
- Trim finished tray
- Fabricate gypsum models
- Select gypsum material
- Rinse and dry impressions
- Apply mathematical ratios
- Pour edentulors models
- Trim models
- Articulate models
Unit: Dental Hygiene

BIL: Essential

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Competency: Explain functions and pathologies of dental-related anatomy

Competency Builders:
Identify structures and functions of head and neck anatomy including bones, muscles, sinuses, salivary glands, nerves, and vessels
Identify embryonic development of the head, oral cavity, and teeth
Identify teeth and their landmarks
Describe histological components of the head, and oral cavity
Describe elements of the teeth and supporting structures
Describe oral pathological conditions
BIL: Essential

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Competency: Maintain dental instruments and equipment

Competency Builders:
Identify various types, functions, and operations of dental operatory and laboratory equipment
Identify types and functions of various dental instruments
**BIL:** Essential

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**Competency:** Assist with dental office emergency care

**Competency Builders:**
- Describe dental office emergencies, their prevention and treatment
- Assist with medical emergency care, including CPR
BIL: Essential

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Competency: Anesthetic application

Competency Builders:
Identify drug requirements, agencies, and regulations
Record a drug prescription
Identify drug actions, side effects, indications, and contraindications
Identify common drugs used in dentistry
Apply a topical anesthetic agent
Identify properties of anesthetics
Prepare syringes for the administration of local anesthetics
Monitor nitrous oxide-oxygen conscious sedation
Competency: Perform preventive dentistry techniques

Competency Builders:
Identify applicable methods of preventive dentistry and instruct patients on their implementation
Prepare setup for oral prophylaxis and anticariogenic treatments
Identify elements of nutrition, basic food groups, and acceptable diets
Identify deficiencies that manifest symptoms in the oral cavity and describe relevant therapies
Formulate diets to address specific dental needs
Unit: Health Information Processing

BIL: Essential

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Competency: Assemble medical records

Competency Builders:
Activate a patient’s health record
Receive registration information
Update or add information
Assign number to patient or verify number already issued
Activate previous records and sign out to appropriate individual or unit
Assure security of master patient index
BIL: Essential

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**Competency:** Perform quantitative analysis on patient’s health record

**Competency Builders:**
- Collect health records of discharged or deceased patient
- Enter date of discharge or death in appropriate place
- Arrange reports in correct order (e.g., laboratory reports placed in record sequence and chronological order)
- Review record for correct patient identification on all pages
- Review record for presence of all necessary reports
BIL: Essential

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Competency: Maintain health record locator system

Competency Builders:
- Complete requisition information
- Perform record search through locator system
- Retrieve and sign out record
- Print computer record
- Copy record from storage system
- Update health record locator system
- Forward record to appropriate location
BIL: Essential

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Competency: Abstract information from a health record

Competency Builders:
- Use computerized abstracting system
- Perform abstract according to Uniform Hospital Discharge Data Set (UHDDS) guidelines
- Verify information on abstract with health record
- Document on health record that abstract has been completed
- Forward abstracted information to appropriate area
BIL: Essential

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Competency: Prepare health record for court of deposition

**Competency Builders:**
- Verify authenticity of court order
- Verify authenticity of subpoena
- Verify treatment of patient
- Analyze record for completeness
- Notify appropriate person if the case may involve the facility, an employee of the facility, or a member of the medical staff
- Remove correspondence or other reports not part of the health record
- Follow department procedures for preparation of record
- Photocopy record
- Obtain notarization for certification statement as needed
- Notify appropriate persons as to the date of appearance
- Record date of appearance in subpoena log
- File legal document in a secure setting outside of original health record
- Retain legal document on file in accordance with department policies/procedures
Unit: Health Information Maintenance

BIL: Essential

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Competency: Trace lost record

Competency Builders:
Receive request for record
Examine sign-out log
Use computer locator system
Check area where record is supposed to be located
Search other departmental areas (e.g., transcription area, correspondence area, coding/abstracting area, microfilm area)
Forward found record to requester
Recompile medical records from available ancillary departments, physicians offices, and/or any other resources
Follow procedures for lost record
Competency: Maintain a tumor registry

Competency Builders:
- Obtain health record of tumor patient
- Record information into accession registry
- Identify severity indicators
- Initiate patient information into tumor registry master patient index
- Update patient information into tumor registry master patient index
- Complete tumor registry abstract form from Department of Health
- Record information of a deceased patient into registry
- Follow guidelines set forth by American College of Surgeons
BIL: Essential

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Competency: Code diagnoses and procedures using the current modification of the International Classification of Diseases (ICD-9-CM)

Competency Builders:
Review entire record for diagnosis to be coded (e.g., physician progress notes, operational reports, labs, medical sheets, pathology reports, etc. for optimal reimbursement)
Select diagnosis according to specific guidelines (e.g., HCFA)
Use coding manual/encoder
Identify diagnosis code number(s)
Select procedures according to specific guidelines (e.g., HCFA)
Check code numbers for accuracy
Check code number for sequencing
Define concurrent coding
Contact physician for further clarification when needed
Competency: Assign Major Diagnostic Classification (MDC) and Diagnostic Related Groups (DRGs)

Competency Builders:
Receive ICD-9-CM coded record
Verify proper sequencing of diagnoses
Verify proper sequencing of procedures
Notify physician regarding questions of possible sequencing changes
Verify proper code numbers for diagnoses
Verify proper code numbers for procedures
Assign severity of illness categories
Validate DRG assignment
Validate output on UB 92 or other billing forms
Use computerized grouper to assign DRG’s
Assign appropriate Major Diagnostic Classification
Assign appropriate Diagnostic Related Group within the MDC
Define DRGs
BIL: Essential

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Competency Builders:
Review outpatient record for diagnoses to be coded
Review outpatient record for procedures to be coded
Select the most appropriate diagnostic test(s) or procedure(s) which correlates to the CPT-4 coding guidelines
Contact physician for further clarification if record documentation doesn’t permit exact coding
Check CPT-4 coding number for accuracy
Check CPT-4 coding number for sequencing
Define ASC (Ambulatory Surgery Center) payment groups
Define APGs (Ambulatory Patient Groups)
Define RBRVS (Reimbursement Based Relative Value System)
BIL: Essential

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**Competency:** Maintain computer files

**Competency Builders:**
- Store material
- Create backup files
- Store documents on disks
- Define optical disc storage
- Update computer files
Unit: **Health Information Clerical Functions**

**BIL:** Essential

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**Competency:** Compose electronic correspondence

**Competency Builders:**
- Identify need to compose correspondence
- Use specified format
- Compose draft of correspondence
- Revise draft of correspondence
- Edit for grammar, spelling, punctuation, and sentence structure
- Prepare final copy of correspondence
- Proofread final copy
- Submit correspondence to appropriate person
BIL: Essential

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Competency: Transcribe recorded dictation

Competency Builders:
Receive dictated material
Select materials to be transcribed in order of priority
Listen to recorded dictation
Transcribe materials in specified format according to departmental policies and procedures
Edit transcribed materials for accuracy and completeness
Record required transcription data on form (e.g., reference initials, date dictated, date transcribed)
Record completion of dictated material in control log
Forward completed dictated material to appropriate area
Receive dictated material
Select materials to be transcribed in order of priority

527
**BIL:** Essential

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**Competency:** Input data on computer

**Competency Builders:**
- Input data into spreadsheet format
- Input data into graphs and charts
- Input data into source documents
- Input data into database files
- Input data with optical character recognition equipment
- Input data with voice activated equipment
- Input data using peripheral equipment available (e.g., mouse, touch screen, graphics tablet, light pen, digital scanner, camera)
BIL: Essential

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Competency: Distribute information

Competency Builders:
- Receive data via modem
- Transmit data via electronic billboard or e-mail
- Monitor electronic bulletin board or e-mail
- Transmit data via modem
- Transmit data via facsimile machines
- Transmit data via local area networks
BIL: Essential

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Competency: Maintain filing system

Competency Builders:
Define filing system(s)
Maintain manual filing system(s)
Maintain cross-referencing filing system
Maintain filing system for magnetic media
Maintain filing system for storing backup copies of disks
Maintain filing system for securing classified or confidential materials
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**Competency:** Prepare health record for storage

**Competency Builders:**
- Verify all forms in record for correct name and hospital number
- Remove and destroy forms not preserved by the hospital
- Check for proper sequence of record
- Follow procedures for specific record storage method
BIL:   Essential

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Competency: Maintain office equipment and supplies

Competency Builders:
Perform basic office equipment maintenance
Monitor hardware and software for working condition
Assist in determining needs for software
Maintain office supplies
Update materials as mandated
Unit: Health Information Quality Control

BIL: Essential

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Competency: Perform qualitative analysis on patient’s health record

Competency Builders:
Review record for appropriate signatures and authentication for all entries
Review record for necessary dictation (e.g., discharge summary, history and physical exam, operative report)
Review record for completeness of information (e.g., inappropriate use of abbreviations)
Review record for accuracy of information
Record all omissions
Reroute incomplete records to responsible practitioners
Reanalyze record after appropriate individuals have had the opportunity to correct identified omissions
BIL: Essential

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Competency: Prepare report for physician’s incomplete records

Competency Builders:
Review physician’s incomplete record file
Identify record(s) not completed within the specified time period according to medical staff by-laws, JCAHO standards, and/or applicable department of health regulations
Retrieve health records to verify delinquency
Determine if physician has received notification of incomplete record(s)
Prepare report of delinquent incomplete record(s)
Forward report to appropriate individual(s) or department(s)
Submit report to hospital administration
### Competency: Evaluate procedure for release of patient information

**Competency Builders:**
- Review procedure for release of patient information
- Determine time period to be covered by evaluation
- Retrieve records listed in correspondence log for specified time period
- Review patient(s) authorization for release of information for appropriate signature and date
- Identify any invalid patient authorization
- Submit findings to appropriate individual(s)
- Verify treatment of patient
- Follow regulatory procedures for handling release of information of drug/alcohol records
- Follow procedure for handing release of information of adoption records
Competency: Evaluate procedure for health record analysis

Competency Builders:
- Review procedure for health record analysis
- Determine time period to be covered by evaluation
- Retrieve record(s) to be reviewed
- Identify any record with omissions
- Submit findings to appropriate individual(s)
- Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings
BIL: Essential

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Competency: Evaluate procedures for abstracting and coding

Competency Builders:
- Review procedures for abstracting and coding
- Determine time period to be covered by evaluation
- Retrieve records to be reviewed
- Reabstract record and check with original information for differences
- Make necessary corrections
- Recode record and check original codes for differences
- Generate change notices, where applicable, for the business/finance office if corrections have an impact on payer reimbursement to the facility
- Submit findings to appropriate individual(s)
- Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings
Competency: Evaluate procedure for transcribing medical records

Competency Builders:
- Review procedures for transcribing medical records
- Determine time period to be covered by evaluation
- Retrieve records to be reviewed for specified time period
- Screen each report for grammar and spelling
- Identify any reports with omissions or errors
- Submit findings to appropriate individual(s)
- Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings
BIL: Essential

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Competency: Perform quality review

Competency Builders:
- Select and/or procure topic for quality review
- Select and/or procure criteria and standards for quality review
- Determine time period to be included in review
- Determine number of record(s) to be selected for review
- Retrieve and sign out records to be reviewed
- Review each record for compliance with criteria and standards
- Record findings of review
- Forward report to appropriate individual(s) or committee(s)
- Implement new and/or revised procedures/policies subsequent to the review and analysis of the quality review findings
BIL: Essential

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Competency: Conduct utilization review process

Competency Builders:
- Determine which health record(s) are to be reviewed on a daily basis
- Determine the standards and/or criteria to be used per each review to be conducted
- Retrieve record(s) for review
- Document findings of the review
- Submit reports to appropriate authority to determine the need for continued hospitalization
- Re-establish a time frame for when the next utilization review will take place if continued hospitalization is authorized
- Contact director for handling of termination notice(s) if continuation of hospital stay is denied
- Retain data abstracted for each review per department policies and procedures
BIL: Essential

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Competency: Prepare materials for accreditation

Competency Builders:
Receive notice of accreditation review
Review standards and criteria for accreditation
Complete accreditation review survey form
Obtain all materials required by the accreditation review team
Correct deficiencies prior to schedule date of accreditation review visit
Notify staff of accreditation review visit
**BIL:** Essential

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**Competency:** Validate data for patient-related information system needs

**Competency Builders:**
- Verify data was obtained from valid sources
- Verify timelines of data sources
- Verify completeness of data sources
- Verify accuracy of data sources
- Verify appropriateness of data sources
- Compare data with standards (e.g., length of stay norms, Medicare mortality rate, department productivity standards)
- Check data for internal consistency
- Perform edit check to monitor data accuracy
- Compare data with other data sources/references to determine consistency
BIL: Essential

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Competency: Analyze data for patient-related information system needs

Competency Builders:
- Prepare data for analysis (e.g., compile data, develop graphs, tables)
- Perform departmental case-mix analysis
- Analyze data in relation to regulatory and accreditation standards
- Analyze case-mix payment rates to determine reimbursement optimization (e.g., DRG)
- Analyze employee performance data in relation to departmental/institutional performance standards (e.g., quality of patient care)
Unit: Health Information Report Preparation

BIL: Essential

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Competency: Prepare census reports

Competency Builders:
Prepare daily inpatient census report
Prepare admissions statistical report
Prepare discharge statistical report
Prepare length of stay statistical report
Prepare monthly statistical report
Analyze statistical reports
Define various statistical terms (e.g., ALOS, LOS, death rates)
BIL: Essential

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Competency: Gather data to support patient-related information system needs

Competency Builders:
Conduct surveys of patients, users of data, health care providers, administrator and/or researchers
Conduct interviews with users of data, health care providers, administrators, researchers and/or others
Tabulate requests for patient related data
Abstract information from patient records for research studies
Abstract information from patient records for reimbursement
Compare claims submitted to third party payers with reimbursement received
Abstract information from patient records for disease, procedures, physician, or other indices
Abstract information from patient records for compilation of registries
Abstract information from patient records for compilation of vital statistics
Abstract information from patient related records to develop user (e.g., physician profiles)
Abstract information from patient records for quality assurance studies
Abstract information from patient records for utilization, review
Abstract information from patient records for risk management
Unit: Health Information Supervision

BIL: Essential

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Competency: Design departmental services and operational systems

Competency Builders:
Develop departmental goals and objectives
Develop departmental plans
Develop departmental policies
Revise departmental policies
Develop departmental procedures
Revise departmental procedures
Develop job descriptions
Revise job descriptions
Develop transition plans for implementation of new or revised systems
Develop goals and objectives for computerized information systems
Develop inservice education programs for departmental staff
Design forms for collection of patient related data (e.g., medical record forms, quality assurance, utilization review forms)
BIL: Essential

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Competency: Identify resources to support departmental operations

Competency Builders:
- Determine personnel needs
- Determine equipment needs
- Determine supply needs
- Determine space requirement needs
BIL: Essential

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Competency: Execute plan(s) for implementing departmental services

Competency Builders:
Select personnel
Orient personnel
Inform organization staff of plan(s)
Implement new/revised policies and procedures
Monitor adherence to system specifications
Implement new/revised policies and procedures
Monitor adherence to system specifications
Implement new/revised information, and/or service and/or operational systems
Monitor adherence to budget (e.g., determine budget variance)
Coordinate on site review activities (e.g., PRO reviews)
Monitor changes in federal, state and local laws, regulations, and joint commission standards
Monitor policy/procedure compliance
Counsel employees
Terminate employees
Design employee staffing schedules
Maintain equipment (e.g., schedule preventive maintenance, arranged for repairs)
Coordinate educational programs for departmental and/or non departmental staff
Conduct meetings
Participate in departmental and/or institutional committees
Confer with providers and users of departmental services

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BIL: Essential

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Competency: Evaluate effectiveness of departmental services

Competency Builders:
Determine variation(s) from established objectives and/or standards of performance
Report progress toward achieving long and short range goals
Monitor accreditation survey results (e.g., JCAHO, Medicare)
Recommend improvement(s) in systems
Evaluate employee performance
Monitor departmental productivity
Monitor work flow
Unit: Medical Assisting X-ray Operator

BIL: Recommended

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Competency: Identify characteristics of x-radiation

Competency Builders:
- Define terms used in radiography
- Explain where x-rays are in the electromagnetic spectrum
- Identify characteristics of x-radiation (e.g., no mass or charge)
- Differentiate between ionizing and non-ionizing radiations
- Compare different methods of measuring x-radiation
- Compare different types of radiation (e.g., alpha, beta, natural, man-made)
BIL:  Recommended

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Competency:  Explain how x-rays are produced

Competency Builders:
- Identify the different parts of the x-ray tube
- Describe the process for production of x-radiation
- Differentiate among the different types of radiation produced
- Describe radiographic density (e.g., contrast and detail)
- Explain the Inverse Square Law and its effect on x-ray production
- Apply radiographic formulas and their effect on x-ray production
- Explain Ma, KvP and time and their relationship on x-ray production
- Describe factors that affect radiographic density, contrast, detail, and distortion
BIL: Recommended

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Competency: Describe effects of radiation on the human body

Competency Builders:
- Explain somatic and genetic effects of x-rays
- Identify tissues most and least sensitive to radiation
- Differentiate among exposure variables and their effects, both acute and chronic
- Describe methods for reducing patient exposure
- Explain methods of operator protection
- Identify common methods of personnel monitoring
- Describe LD 50/30 (e.g., Lethal Dose)
- Explain Dose Equivalent Limit
BIL: Recommended

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Competency: Practice radiation safety procedures in accordance with OSHA and EPA

Competency Builders:
Adhere to safe radiation practices
Demonstrate radiation safety precautions for patients
Demonstrate radiation safety precautions for operators
Comply with equipment safety laws
Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities, injection of an iodinated contrast medium)
Wear radiation monitoring device(s) while on duty
Document personal radiation exposure
Question female patients about possible pregnancy and alert physician
Remove all unnecessary persons from area prior to taking radiograph
Perform safety checks of radiographic equipment and accessories (e.g., lead aprons and gloves, collimator accuracy)
Place protective shield(s) over patient's radio-sensitive organs prior to exposure
Minimize personal and patient radiation exposure through principles of time, distance, and shielding
Demonstrate appropriate infection control technique(s) when radiographing a patient in isolation
Report radiologic accidents and/or spills immediately to proper authorities
Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure; contrast media reactions; respiratory/cardiac distress)
Practice universal precautions
**BIL:** Recommended

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**Competency:** Demonstrate knowledge of equipment

**Competency Builders:**
- Demonstrate the function of a diagnostic x-ray unit
- Demonstrate the function of a fluoroscopic unit
- Demonstrate the function of a portable x-ray unit
- Demonstrate the function of a portable c-arm unit
Competency: Demonstrate general knowledge of diagnostic radiology procedures

Competency Builders:
Describe common radiological procedures
Describe common fluoroscopic procedures
Describe computer tomography as an imaging modality
Describe common mammography procedures
Describe common computerized tomography procedures
Describe common magnetic resonance procedures
Describe common sonography procedures
Describe common special procedures
Describe common nuclear medicine procedures
Describe common quality assurance procedures
Describe common radiation therapy procedures
Differentiate between diagnostic and therapeutic radiology
Describe common surgical procedures, to include c-arm equipment
Describe common contrast exams
BIL:  Recommended

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Competency:  Ready equipment and materials for radiographic procedures

Competency Builders:
Differentiate among catheters, dilators, guidewires, and needles by size, type, and/or function
Warm up x-ray tube to achieve proper operating conditions
Measure appropriate patient parts for requested examination
Identify appropriate exposure factors
Modify exposure factors for circumstances (e.g., body hibitus, voluntary and involuntary motion, pathological conditions)
Restrict beam exposure to area of interest
Set appropriate exposure factors to achieve optimum image quality
Perform radiographic examination in a sequence which avoids or minimizes undesirable effects
Check radiographs to verify they contain proper identification and are of diagnostic quality
Identify corrective measure if radiograph is not of diagnostic quality
Clean patient and/or equipment to remove anything that might interfere with radiograph quality
Assist physician in fluoroscopy by preparing the fluoroscopic unit and accessories for use and by adjusting controls as requested
Utilize sterile technique
Respond to malfunctioning medical equipment
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Differentiate among contrast media
Prepare contrast media accurately when appropriate
Obtain immobilization devices when necessary
Obtain adequate cassettes and accessories
BIL: Recommended

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Competency: Perform radiographic equipment check procedures

Competency Builders:
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Demonstrate knowledge of quality control and quality assurance procedures
Collect data for ongoing quality assurance monitoring
BIL: Recommended

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Competency: Provide accurate radiographic record identification and retrieval

Competency Builders:
Record required information following performance examination
Retrieve radiographic patient records (e.g., radiographs or reports)
Identify patient using information on request form
Confirm patient's identity by checking wristband and/or by questioning patient
Imprint proper patient identification and markers onto film
Verify correctness of patient identification and markers on film
Combine radiographic requisition with radiographs for interpretation and filing
Check radiographic requisition to verify accuracy of information
BIL: Recommended

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Competency: Ready patient for radiographic procedures

Competency Builders:
- Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities; injection of iodinated contrast media)
- Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure, contrast media reactions; respiratory/cardiac stress)
- Assist patient in moving, transferring and ambulating
- Explain procedure to patient to relieve anxiety and gain patient's cooperation during procedures
- Give patient appropriate breathing instructions prior to making exposure
- Assist physician in observing vital signs
- Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
- Assist physician with radiographic procedure if requested
- Monitor medical equipment attached to patient while in radiology department (e.g., IVs, oxygen)
Recommended

Competency: Perform radiographic procedures

Competency Builders:
Follow manufacturer’s instructions for film and equipment placement
Apply universal precautions
Adjust radiographic factors on x-ray equipment
Employ infection control procedures
Align patient, radiographic/fluoroscopic unit, and image receptor to product images of requested anatomical structures/systems
Use immobilization devices as needed
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Initiate rotor prior to making exposure
Give patient appropriate breathing instructions prior to making exposure
Check radiographs to assure optimum diagnostic image quality to include density, contrast, detail, distortion, and positioning
Identify corrective measure if radiograph is not of diagnostic quality
**BIL:** Recommended

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**Competency:** Expose radiographic film

**Competency Builders:**
- Follow manufacturer's instructions for film and equipment placement
- Adjust radiographic factors on x-ray equipment
- Apply infection control procedures
- Position patient, radiographic/fluoroscopic unit, and image receptor to produce images of requested anatomical structures/systems
- Use immobilization devices as needed
BIL: Recommended

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Competency: Process exposed radiographic film

Competency Builders:
Follow manufacturer's instructions for x-ray processors and solutions
Mix solutions for developing and fixing radiographic film
Follow darkroom procedures
Unload cassettes
Handle film properly
Read thermometer
Interpret time and temperature chart
Load film into processor
Follow safety precautions to prevent eye injury and minor burns
Dispose of mixed solutions in accordance with EPA regulations
Reload cassettes
Clean equipment
Monitor performance of automatic processor using sensitometry
Report malfunctions in automatic processor
BIL: Recommended

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Competency: Store radiographs and unexposed film

Competency Builders:
Handle film(s) properly
Hang radiographs on viewboxes in proper orientation
File radiographs
Check expiration date
Store exposed and unexposed film properly
BIL:  Recommended

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Competency:  Maintain supply inventory

Competency Builders:
- Identify supplies to be kept in stock
- Identify appropriate stock levels
- Organize supplies
- Re-order supplies
- Maintain a clean working environment
BIL: Recommended

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Competency: Demonstrate principles of proper body mechanics and ergonomics

Competency Builders:
- Identify principles of ergonomics
- Identify common causes of back injuries
- Demonstrate proper body mechanics used in lifting, moving, transferring, ambulating, and positioning patient
- Assist patients with adaptive devices and/or attached medical equipment during movement
Unit: Medical Assisting Respiratory Care

BIL: Recommended

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Competency: Identify respiratory care uses

Competency Builders:
List areas in which respiratory therapy is involved with patient services
Describe the rationale for lung expansion therapy
List categories of diagnostic and patient monitoring procedures
List procedures provided by respiratory therapy
List conditions/diseases of patients who receive respiratory therapy treatment
List indications for oxygen therapy
List indications for aerosol and humidity administration
List indications for the use of chest percussion/chest physiotherapy
List indications for naso-tracheal, endotracheal, tracheal suctioning
List goals of pulmonary rehabilitation and patient education
Differentiate between educational programs of various respiratory care practitioners
**BIL:** Recommended

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**Competency:** Prepare non-life support respiratory therapy equipment for patient use

**Competency Builders:**
- Explain purpose and application of non-life support equipment
- Identify components and ancillary equipment of non-life support equipment
- Identify oxygen administration devices
- Identify aerosol generators, croup tents, and vaporizer
- Identify humidifiers
- Identify gas delivery, metering, and analyzing devices
- Identify vacuum system components
- Identify patient breathing circuits
- Identify manometers and gauges
- Verify proper assembly of non-life support equipment
- Disassemble non-life support equipment
**BIL:** Recommended

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**Competency:** Perform rehabilitation

**Competency Builders:**
- Instruct pursed lip breathing
- Instruct diaphragmatic breathing
- Instruct cough control
- Instruct diet
- Instruct exercise conditioning
- Instruct activities of daily living
- Instruct bronchial hygiene techniques (e.g., Aerochamber, Inhalers)
- Instruct smoking cessation
**BIL:** Recommended

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**Competency:** Manage pharmacological agents

**Competency Builders:**
- Administer and evaluate steroids
- Administer and evaluate bronchodilators
- Administer and evaluate antiviral
- Administer and evaluate mucolytics
- Administer and evaluate antibiotics
- Administer and evaluate bronchoconstrictors
- Administer and evaluate nicotene therapy
- Administer and evaluate artificial surfactant
- Administer and evaluate antipneumocystis
- Administer and evaluate topical anesthetics
- Administer and evaluate expectorants
- Administer and evaluate vasoconstrictors
- Administer and evaluate mast cell stabilizer
BIL: Recommended

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Competency: Perform assessment

Competency Builders:
Assess level of consciousness
Evaluate level of activity
Assess WOB (e.g., work of breathing)
Evaluate cough
Obtain smoking history
Assess occupational exposure
Obtain family history
Measure chest excursion
Assess level of dyspnea
Assess color
Assess clubbing of fingers
Assess use of accessory muscles
Assess position (e.g., tripoding)
Assess breathing patterns (e.g., Cheynes Stokes)
Assess breath sounds (e.g., wheeze, rhonchi, rales)
Interpret lab values
Evaluate chest radiograph
Obtain and evaluate sputum cultures
Obtain and evaluate EKG
BIL: Recommended

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Competency: Prepare diagnostic equipment for patient use

Competency Builders:
Explain purpose and application of diagnostic equipment
Identify diagnostic equipment
Identify the components and ancillary equipment of diagnostic equipment
Assemble portable spirometers and electronic devices used to record flow, compliance, resistance, rate, and volume for patient use
Disassemble portable spirometers, and electronic devices used to record flow, compliance, resistance, rate, and volume for cleaning
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function
Calibrate testing equipment
Solicit patient cooperation
Evaluate test validity and reliability
Perform a 12-lead EKG
Identify parts of Swan Ganz catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters
Demonstrate ABGs/co-oximetry equipment
Demonstrate pulse oximetry equipment
Demonstrate transcutaneous O2 and CO2 equipment
Demonstrate end tidal CO2 equipment
BIL: Recommended

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Competency: Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders

Competency Builders:
- List indications for O2 therapy
- Identify and utilize O2 administration devices
- Identify and utilize gas delivery and analyzing device, metering
- Identify and utilize the potential dangers, safety measures and procedures associated with the use, transportation and storage of medical gases
- List methods by which medical gas cylinders are identified
- Differentiate Pin Index Safety System, Diameter Index Safety System and Compressed Gas Association (CGA) Safety System
- Read cylinder pressure remaining in medical compressed gas cylinder and calculate duration
- Identify tools necessary to remove the regulator from a compressed gas cylinder
- List possible hazards involved in changing the regulator on a compressed gas cylinder
- Explain procedure for changing flowmeters, regulators, gauges, and compressed gas cylinders
- Verify proper operation of flowmeters, regulators, gauges, and compressed gas cylinders
- Define bulk gas system
- Define and identify the components of a manifold system
- Define and identify the components of a piping delivery system
- Identify items to be monitored in a bulk manifold compressed gas system
- Explain LOX systems safety and hazards
BIL: Recommended

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Competency: Disinfect or sterilize respiratory therapy equipment

Competency Builders:
- Define particulates, bacteria, viruses, fungi, rickettsiae, and spores
- Describe infectious hazards regarding respiratory therapy equipment
- Differentiate between disposable and reusable equipment
- Package components and ancillary equipment for sterilization
- Identify methods for sterilizing and disinfecting reusable equipment
- Outline proper cleaning, disinfecting, and sterilizing methods
- Demonstrate safe practice in cold liquid disinfection and sterilization
- Demonstrate safe practice in gas sterilization
- Explain how spore strip is used in guarantee sterilization of equipment
- Explain why proper dating of sterilized equipment is necessary
- Explain why proper documentation of disinfection and sterilization procedures is necessary to protect hospital patients
- Identify circumstances which would warrant replacement of liquid disinfectant/sterilization agents
BIL:       Recommended

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Competency:       Test respiratory therapy equipment for proper operation and patient readiness

Competency Builders:
Verify that equipment components are assembled properly with all necessary accessories
Check safety check of all components
Check equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging
Verify all equipment functions as required
Document faulty or defective equipment
Troubleshoot equipment for proper function
Change equipment as needed
Follow manufacturer’s instructions for safe operation of the equipment
Recommended

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Competency: Perform pulmonary function tests

Competency Builders:
- Identify volume and capacity
- Identify major pulmonary tests
- Identify equipment use for pulmonary function testing
- Calibrate testing equipment
- Solicit patient cooperation
- Use equipment to test pulmonary function
BIL: Recommended

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Competency: Prepare or demonstrate special procedures

Competency Builders:
- Assist with bronchoscopy
- Assist with thoracentesis
- Perform pulmonary and cardiac stress testing
- Assist cardioversion
- Perform defibrillation
- Assist transtracheal aspiration
- Manage transtracheal catheters
- Perform sleep apnea studies
- Manage apnea monitors
- Manage chest tubes
- Manage chest drainage systems
BIL: Recommended

Competency:
Demonstrate therapeutic modalities

Competency Builders:
Demonstrate small volume aerosol and list indications
Demonstrate large volume aerosol and list indications
Demonstrate ultrasonic nebulizer and list indications
Demonstrate chest percussion and list indications
Demonstrate lung expansion and list indications
Demonstrate noninvasive ventilation and list indications
Demonstrate dose inhalers and spacers and list indications
BIL: Recommended

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Competency: Demonstrate proper procedure for dispensing respiratory therapy medications

Competency Builders:
- Identify patient
- Verify accuracy and completeness of medication order
- Explain purpose of respiratory medications to patient
- Explain indications, actions, contraindications, side effects and hazards of respiratory medications
- Demonstrate proper assembly of aerosol delivery device
- Calculate dosages of respiratory therapy medications
- Document patient/client response to medication
**BIL:** Recommended

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**Competency:** Demonstrate proper procedure for hyperinflation

**Competency Builders:**
- Identify patient
- Determine if patient is a candidate for hyperinflation therapy according to clinical practice guidelines
- Determine proper hyperinflation technique for the patient
- Identify contraindications and hazards of hyperinflation therapy
- Demonstrate proper hyperinflation techniques (IPPB and SMI)
- Monitor patient and document therapy given appropriately
Unit: Medical Assisting Physical Therapy

BIL: Essential

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Competency: Define patient needs

Competency Builders:
- Obtain data through patient/responsible party interview
- Gather information from medical record
- Observe patient
- Identify activities of daily living, work, and leisure
- Identify architectural barriers to patient mobility
- Identify contraindications for treatment
- Adjust treatment activities in accordance with patient tolerance
- Demonstrate proper methods of positioning and draping patient
- Provide for patient privacy
- Consult with physical therapist
- Observe, document, and report patient progress
BIL: Recommended

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Competency: Develop therapeutic interventions

Competency Builders:
- Gather data from assessments
- Prioritize patient problems
- Identify realistic goals
- Identify length of time to achieve goals
- Identify therapeutic procedures that have potential for achieving goals
- Identify the influence of biological, psychological, cognitive, social, and cultural factors on compliance and achievement of goals
- Contribute to the development of the treatment plan
- Explain plan of treatment and goals to patient responsible party
- Consult with physical therapist (e.g., treatment termination)
- Review prescribed orders
- Refer to other community resources as needed
- Participate in discharge planning
- Identify medications and potential side effects
Competency: Perform therapeutic measures

Competency Builders:
Collaborate with the physical therapist
Prepare treatment area
Prepare equipment and modalities
Prepare patient for treatment
Explain indications, contraindications and possible side effects of treatment
Assist patient with relaxation exercises
Assist patient with strengthening exercises
Assist patient with range of motion exercises
Assist patient with endurance exercises
Assist patient with balance exercises
Assist patient with gross motor coordination
Assist patient with gait training
Assist patient with neurological techniques (e.g., NOT, PNF)
Perform manual therapy techniques
Instruct patient in functional activities (e.g., mobility, transfers)
Assist patient with work-hardening activities
Assist with paraffin treatment
Assist with hydrotherapy
Assist with fluidotherapy
Assist with diathermy
Assist with contrast bath
Apply hot packs
Apply cold therapy (e.g., cryotherapy)
Perform ultrasound techniques
Apply therapeutic electrical stimulation (e.g., TENS, MENS, NMES)
Apply ultraviolet treatment
Apply mechanical traction
Apply intermittent venous compression
Assist with prosthetic training
Assist with use of orthotics
Measure for custom pressure gradient garments
Assist with use of pressure garments
Apply bandages
Apply dressings
Perform wound debridement
Perform therapeutic massage
Perform tilt table treatment
Assist in set-up and removal of electromylogram (EMG) biofeedback equipment
Monitor patient use of therapeutic equipment
Instruct patient in use of body mechanics
Monitor medical equipment attached to patient during treatment (e.g., oxygen, IVs, catheters, drainage tubes)
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