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# Medical Assisting

Administrative and Clinical Procedures  
with Anatomy and Physiology

**Eighth Edition**

**Kathryn A. Booth**

RN-BSN, RMA (AMT), RPT, EFR, CPhT, MS

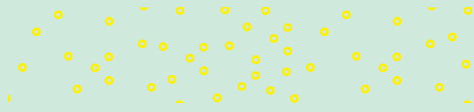
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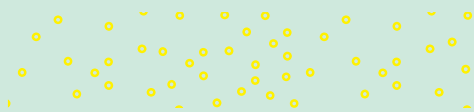
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MEDICAL ASSISTING: ADMINISTRATIVE AND CLINICAL PROCEDURES WITH ANATOMY AND PHYSIOLOGY

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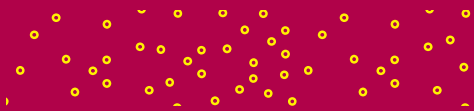
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# About the Authors

**Kathryn A. Booth, RN-BSN, RMA (AMT), RPT, EFR, CPhT, MS** is a medical assistant (RMA) who started her career as a nurse (RN). She has a master's degree in education as well as certifications as a pharmacy technician and in phlebotomy and medical assisting. She is a certified emergency first responder and rescue scuba diver. Kathryn is an author, an educator, and a consultant for Total Care Programming, Inc. She has over 35 years of teaching, nursing, and healthcare experience that spans five states. As an educator, Kathy has been awarded the teacher of the year in three states where she taught various health sciences, including medical assisting in both a classroom and an online capacity. Kathy serves on the AMT Examinations, Qualifications, and Standards Committee and the Cardiac Credentialing International CRAT Exam Committee. She stays current through volunteer employment and obtaining and maintaining certifications. Her goal is to develop up-to-date, dynamic healthcare educational materials to assist her and other educators and to promote healthcare professions, especially medical assisting. Kathy values the medical assisting profession, recognizing that these diverse and dynamic professionals are essential to the future of our healthcare system.

**Leesa G. Whicker, BA, CMA** is a Certified Medical Assistant with a BA in art with a concentration in art history. She is an educator with more than 20 years of experience in the classroom. With 35 years of experience in the healthcare field as a medical assistant, a research specialist in molecular pathogenesis and infectious disease, and a medical assisting program director and instructor, she brought a broad background of knowledge and experience to the classroom. As a curriculum expert, she served on several committees, including the Writing Team for the Common Course Library for the North Carolina Community College System and the Curriculum Committee at Central Piedmont Community College. Leesa was among the first instructors to develop online courses at Central Piedmont Community College. She has presented Methods of Active and Collaborative Learning on the national level. She recently retired from Central Piedmont Community College in Charlotte, North Carolina. Though retired from teaching, she continues searching for novel and varied ways to reach the ever-changing learning styles of today's students.

**Terri D. Wyman, CPC, CMCS, CMRS, AS** has over 35 years of experience in the healthcare field, first as a CMA specializing in hematology/oncology and homecare and then in the medical billing and coding field. At the suggestion of a coworker, she began her career in education as instructor and program director for both medical assisting and medical billing and coding programs for several technical schools in New England before returning to a position in hospital revenue systems. Terri recently retired from her position as the revenue management coordinator for the Baystate Health System's Eastern Region in Massachusetts, and now resides in North Carolina with her husband Dale and puppy Domino. She remains active with AAPC and is on the National Advisory Board for the American Medical Billing Association (AMBA). She provides continuing education opportunities for AMBA members, having written numerous billing and coding courses for them and speaking at their national conferences on medical coding and revenue management topics.



The author team decided to celebrate their careers in Medical Assisting by taking a really big step and soaring in a totally different way!

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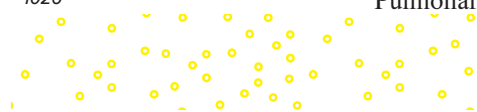
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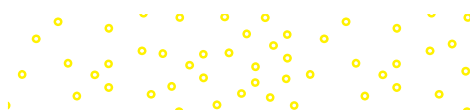
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**Find the list of of NEW! Application-Based Activities (ABAs) with the Instructor Resources on Connect.**

Step into the career of your choice with medical assisting's high growth potential and diversity of skills and workplace locations. A medical assistant performs many tasks. These tasks are always expanding and changing as the healthcare environment changes. Learning these tasks and finding and developing your skills will put you on the highest course towards success. This eighth edition is updated to help students as well as instructors learn these ever-changing tasks and stay current in the healthcare environment. McGraw Hill is committed to helping prepare students to succeed in their educational program and career by providing a complete and easy set of solutions for the educators of these programs. The following will give you a snapshot of some of the exciting solutions available with the eighth edition of *Medical Assisting: Administrative and Clinical Procedures with Anatomy and Physiology* for your Medical Assisting course. Instructors across the country have told us how much preparation it takes to teach medical assisting. To help, we have added more detailed information on how to organize and utilize the many available practice features and activities, as well as a breakdown by Learning Outcomes for corresponding activities entitled the Comprehensive Asset Map, located in the Instructor Resources portion of Connect.



## The Content—A Note from the Authors

The eighth edition of *Medical Assisting: Administrative and Clinical Procedures with Anatomy and Physiology* has many noteworthy updates. With insightful feedback from our users

and reviewers, our experienced author team set out to create a one-of-a-kind, dynamic, practical, realistic, *and* comprehensive set of tools for individuals preparing to become medical assistants as well as the instructors helping them to accomplish this task.

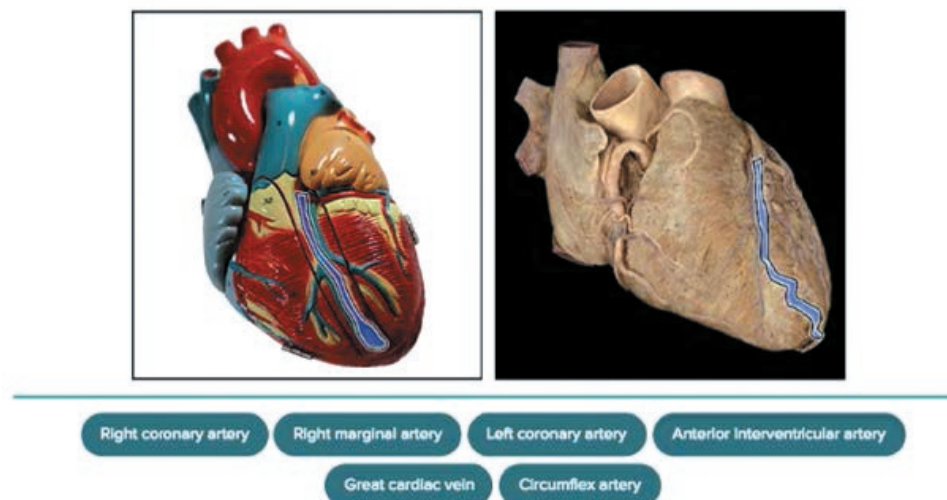
When you begin the book, you will find it is not just about rote memorization of concepts. *Medical Assisting* immerses you in the world of BWW Medical Associates, where you learn as you confront new workplace challenges in each chapter. All elements of the book—from the case studies in each chapter and the Soft Skills Success exercises to the  screenshots and other visuals—immerse the student in a realistic learning environment. Case studies are built around a set of patients who regularly visit BWW Medical Associates, and you will get to know these patients as well as the employees of BWW Medical Associates as you move through the chapters and the accompanying EHR exercises.

Within this framework, we have worked to provide the most up-to-date information about all aspects of the medical assisting profession, with a focus on consistency, authenticity, and accuracy. Along with thousands of minor tweaks and updates, *Medical Assisting*, eighth edition, incorporates the following:

- Over 100  electronic health record exercises correlated to 34 chapters.
- A complete set of 23  exercises included with Chapter 12 Electronic Health Records that provides documentation of EHR proficiency and a “big picture” journey for the student.


### Coronary Circulation: Anterior View

Click on the name of each structure to reveal its location on the model and cadaver photos.



**FIGURE FM-1** The new Practice Atlas.

(left): © 2017 Denoyer-Geppert Science Company; (right): McGraw Hill


- Dozens of BWB EHR documentation/progress note examples in both clinical and administrative chapters.
- Soft Skills Success exercises located within the Chapter Review that test employability skills and link students to related modules in Practice Medical Office (PMO) and Application-Based Activities (ABAs).
- Over 30  screenshots throughout the text to showcase basic EHR skills in the context of the BWB Medical Associates.
- Case studies that are enhanced by the inclusion of more detailed clinical information and link to the new Soft Skills Success activities where applicable.
- Coding content focusing on ICD-10-CM, including detailed 1500 claim form instructions utilizing the 5010 updates to make the form compliant with ICD-10 requirements.
- Thirteen math and dosage videos and questions located as assignments in Connect.
- Inclusion of content and terminology related to all of the current medical assisting standards to help ensure student certification success.
- Brand new level headings in all of the anatomy and physiology chapters titled “Diagnostic Exams and Tests.”
- **Medical Terminology Practice** feature with the anatomy and physiology chapters to bring further understanding of the power of the construction and deconstruction of medical terms, as well as corresponding practice questions in the Chapter Review.
- Corresponding practice of anatomy and physiology with **Practice Atlas** on Connect.

A more detailed list of chapter changes is covered in the next section.

## Key Chapter-by-Chapter Changes

The following chapter-by-chapter list includes the essential changes and updates made to the book. A full list of changes is available in the transition guide provided in the Instructor Resources on Connect.

- Chapter 1 The medical assistant as a patient navigator, scope of practice procedure, standard of care, and practice test provided by certification organizations. A new procedure titled “Locating Your State’s Legal Scope of Practice.”
- Chapter 2 2022 TJC Safety Goals, latest American Board of Medical Specialties and Telehealth.
- Chapter 3 Skills and professional behaviors expected of a medical assistant. Strategies for success and growth in the profession.
- Chapter 4 Effective communication and how it changes throughout life stages. New table outlines non-face-to-face communication styles using electronic technology such as e-mail, texting, and patient portals.

- Chapter 5 Broadly defined compliance. Added statement about the purpose of medical malpractice. Added information about what a medical assistant should do if they become aware of an unethical action.
- Chapter 6 Updated to reflect necessary COVID-related changes and clarifications. Updated penalties for not following OSHA regulations.
- Chapter 7 Updated Internet site for more information regarding access to a medical office for differently-abled individuals to the official ADA site. Added information about working with hearing-impaired individuals.
- Chapter 8 Basic computer information updated to now include information on patient portals as well as technology advances in telehealth and speech recognition software. Also new is a section on Computer Disaster Recovery processes.
- Chapter 9 Emphasized need for using facemasks and protective clothing during sanitization procedures. Added statement about importance of proper room ventilation in conjunction with other infection control procedures in order to control the spread of bacteria and viruses.
- Chapter 10 Electronic communication etiquette updated to include texting and patient portal use. Information on phishing, malware, and ransomware is also included.
- Chapter 11 Patient registration and information updates include sex and sex at birth, as well as patient gender identity and gender pronoun preferences.
- Chapter 12 Expanded promoting interoperability information (formerly known as meaningful use). Increased information on practice management systems with updated EHR content utilizing  program.
- Chapter 13 Retaining files in the office, filing to reflect modern filing standards, records retention rules and regulations.
- Chapter 14 Telecommunication methods used in the office for hard-of-hearing patients. Expanded information on telehealth visits and the medical assistant’s role in these visits, as well as teleconferencing used within the medical office.
- Chapter 15 Electronic media use, defined modeling versus return demonstration; sample e-newsletter, patient information form, and physician information figures added.
- Chapter 16 Scheduling telehealth visits; electronic scheduling via online and patient portals; patient reminders through e-mail, text, and patient portals.



- Chapter 17 Understanding the patient insurance card, updated Medicare information for 2022, expanded information on claim denials and appeals.
- Chapter 18 Explanation of how medical necessity is defined by ICD-10 codes. All figures and exercises updated with 2022 information. New section on “U” codes—Codes for Special Purposes, new for 2022.
- Chapter 19 Updated information on E/M coding using 2021 guidelines, with outline of *proposed changes* for 2023. Avoiding fraud and abuse when submitting claims to third-party payers.
- Chapter 20 Patient payments via patient portal, practice management systems assisting with end-of-day and month-end reporting, accounts payable using electronic banking systems.
- Chapter 21 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; added functions of smooth and rough endoplasmic reticulum; added detail to the mitosis section for a more complete description of the process.
- Chapter 22 Updated terminology to align with the *Terminologia Anatomica*; updated the text to reflect that skin consists of only two layers—epidermis and dermis; clarified that the epidermis is comprised of five sublayers, although only two are discussed; added the free border of nail, nail matrix, and cuticle to the chapter reading and updated the purpose of the lunule and nail root.
- Chapter 23 Updated terminology to align with the *Terminologia Anatomica*; added trabeculae in the discussion of bone structure; expanded on the types of long bones; updated the names of the vertebral curvatures; updated section on false ribs to include pairs 8 through 12 with pairs 11 and 12 being also known as floating ribs.
- Chapter 24 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; heavily revised energy production section by removing lactic acid as an energy source, adding the role of creatine phosphate in resting muscle fibers and glycolysis, and expanding on aerobic respiration; added new section on excess postexercise oxygen consumption to replace previous oxygen debt section; revised muscle fatigue section to include known causes of fatigue during short duration–high intensity and long duration–low intensity exercise.
- Chapter 25 Updated terminology to align with the *Terminologia Anatomica*; reorganized and expanded the cardiac cycle discussion; expanded on how those nerves carry signals created by the cardiac center; revised the effects of potassium ion and calcium ion imbalances on the cardiac cycle.
- Chapter 26 Updated terminology to align with the *Terminologia Anatomica*; added that globin and iron are recycled when RBCs are destroyed; revised text to reflect that the red pigment in RBCs is converted into biliverdin by macrophages after RBCs are destroyed; updated the functions of the white blood cells.
- Chapter 27 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; expanded the function of natural killer cells; reorganized and updated the discussion on T cell and B cell activation; new Figures 27-7 and 27-8 to support the revisions to the T cell and B cell activation section.
- Chapter 28 Updated terminology to align with the *Terminologia Anatomica*; revised the role of the external intercostal muscles in resting exhalation and updated Figure 28-4 to match this revision; added new paragraph on forceful inhalation and exhalation; updated the location and function of the respiratory rhythmicity center.
- Chapter 29 Updated terminology to align with the *Terminologia Anatomica*; updated to resting membrane potential and revised its description to include the average RMP for a neuron and why it exists; added more detail to the description of nerve impulse formation to better clarify why the electrical changes occur; added a new paragraph on the epithalamus.
- Chapter 30 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; revised and reorganized the gross anatomy discussion to focus on the roles of and the structures comprising the functional and nonfunctional portions of the kidney; added that the proximal convoluted tubule performs most tubular reabsorption; described the effects of diuretics on both urine and blood volumes.
- Chapter 31 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; added the role of bulbo-urethral gland secretions in neutralizing the acidity of the male’s urethra; clarified the roles of parasympathetic and sympathetic impulses in female sexual arousal and orgasm; added additional detail to more fully explain the hormonal changes that occur during the female reproductive cycle.
- Chapter 32 Updated terminology to align with the *Terminologia Anatomica*; revised to include the three types of polysaccharides, three types of disaccharides, and three types of monosaccharides.

- Chapter 33 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; added that cholesterol is used to make steroids; updated the functions of luteinizing hormone; added the specific role of melatonin in regulating the biological clock.
- Chapter 34 Updated terminology to align with the *Terminologia Anatomica* and *Terminologia Histologica*; revised the pathway for nerve impulses from the olfactory receptors to the cerebrum; explained the relationship between the rate of nerve impulse conduction and sensory adaptation.
- Chapter 35 Updated CDC Reportable Diseases to 2022 list, added information about droplets versus aerosols, streamlined OSHA worker protection guidelines.
- Chapter 36 Added information regarding reporting abuse, neglect, and exploitation; updated tables.
- Chapter 37 Updated vital signs measurements according to PALS data. Pulse oximetry is in this chapter.
- Chapter 38 Added SARS-CoV-2 to Table 38-1 and updated general guidelines for safety precautions.
- Chapter 39 Table 39-1 updated to screening tests only and included ACOG current recommendations for pelvic exam; updated Table 39-2, ThinPrep test, and Table 39-3.
- Chapter 40 Added causes of jaundice and details about fontanels; added statement about checking vaccines for recall; updated immunization chart.
- Chapter 41 Added enuresis, COVID-19 immunizations, new lens to restore vision due to glaucoma.
- Chapter 42 Updated Figure 42-2, explained RAST test in detail, added latex to contact dermatitis and verrucae vulgaris to Table 42-3.
- Chapter 43 Added blepharitis, added description of conjunctivitis, added info about corneal ulcer, added ARDM surgery to macular degeneration, and added specific treatment for strabismus.
- Chapter 44 Updated wound healing stages.
- Chapter 45 Updated tables to include COVID-19 rapid tests.
- Chapter 46 Added reference to DOT website for transporting infectious substances safely brochure, added a Points on Practice feature for collecting a sputum specimen, added procedure for collecting a nasopharyngeal specimen, updated pathogen tables.
- Chapter 47 Revised the text and illustrations for clarity, and replaced some illustrations with photographs; added new photos for bacteria, yeasts, and parasites.
- Chapter 48 Added rapid diagnostic tests (RDT) with link; added more word parts to key terms.
- Chapter 49 Updated Figure 49-6, updated Table 49-3, added clipper to skin prep and electrode gel build-up to flat line.
- Chapter 50 Updated dosimetry information; updated procedure to reflect conventional X-ray file handling versus digital X-rays.
- Chapter 51 Updated drug names and addressed look-alike/sound-alike drugs.
- Chapter 52 Added additional information about means and extremes; added basic rule for dosage calculations.
- Chapter 53 Updated what needs to be known about drugs to indications, effects, side effects, contraindications, drug interactions, and potential adverse effects; Z-track; and use of lidocaine.
- Chapter 54 Updated information regarding assisting with a wheelchair transfer.
- Chapter 55 Updated to newest MyPlate image, celiac and non-celiac gluten sensitivity, allergy treatments, preventing obesity.
- Chapter 56 All tax documents updated to 2022 versions. Updated information on when incident reports may be required.
- Chapter 57 New Points on Practice feature Recognizing Wounds of Violence, updated Caution box to reflect current pandemic knowledge.
- Chapter 58 Updated to reflect need to include experience with practice management software on résumé; updated salary range based on bls.gov.



# A Guided Tour

## Learning Outcomes, Key Terms, and Textbook Organization

Every learning outcome in *Medical Assisting*, eighth edition, is aligned with a level I heading. McGraw Hill has made it even easier for students and instructors to find, learn, and review critical information. The chapter organization of the eighth edition is organized to promote learning based on what a medical assistant does in practice. The chapters build on one another to ensure student understanding of the many tasks they will be expected to perform. The chapters can be easily grouped together to create larger topics or units for the students to learn. For ease of understanding, content can be organized as follows:

- Unit One, Medical Assisting as a Career—Chapters 1 to 5
- Unit Two, Safety and the Environment—Chapters 6 to 9
- Unit Three, Communication—Chapters 10 to 15
- Unit Four, Administrative Practices—Chapters 16 to 20
- Unit Five, Applied Anatomy and Physiology—Chapters 21 to 34
- Unit Six, Clinical Practices—Chapters 35 to 44
- Unit Seven, Assisting with Diagnostics—Chapters 45 to 50
- Unit Eight, Assisting in Therapeutics—Chapters 51 to 55
- Unit Nine, Medical Assisting Practice—Chapters 56 to 58

Key terms are called out at the beginning of each chapter and are set in bold throughout the text to further promote the mastery of learning outcomes.

LEARNING OUTCOMES	KEY TERMS
After completing Chapter 2, you will be able to:	
2.1 Discuss healthcare trends and their relationship to medical assistant practice.	anaphylactic shock
2.2 Identify medical specialties and specialists certified by the American Board of Medical Specialties (ABMS).	autopsy
2.3 Recognize the duties of various allied health professionals with whom medical assistants may work.	biopsy
2.4 Compare specialty careers that a medical assistant may choose for advancement.	board-certified physician
2.5 Differentiate professional associations that relate to healthcare, and explain their relationship to the medical assisting profession.	electronic health records (EHR)
	hormone
	meridians
	mucous membranes
	osteopathic manipulative medicine (OMM)
	preventive care
	primary care physician (PCP)
	triage
	wellness
	whole foods

## Content Correlations

*Medical Assisting*, eighth edition, also provides a correlation structure that will enhance its usefulness to both students and instructors. We have been careful to ensure that the text and supplements provide coverage of topics crucial to all of the following:

- CAAHEP (Commission on Accreditation of Allied Health Education Programs) Standards and Guidelines for Medical Assisting Education Programs

- ABHES (Accrediting Bureau of Health Education Schools) Competencies and Curriculum
- AAMA (American Association of Medical Assistants) CMA (Certified Medical Assistant) Occupational Analysis
- AMT (American Medical Technologists) RMA (Registered Medical Assistant) Task List
- AMT (American Medical Technologists) CMAS (Certified Medical Assistant Specialist) Competencies and Examination Specifications
- NHA (National Healthcareer Association) Certified Clinical Medical Assistant (CCMA)
- NHA (National Healthcareer Association) Certified Medical Administrative Assistant (CMAA)
- CMA (AAMA) Certification Examination Content Outline
- NCCT (National Center for Competency Testing) National Certified Medical Assistant (NCMA) Detailed Test Plan
- NAHP (National Association for Health Professionals) Nationally Registered Certified Medical Assistant (NRCMA) content outline
- NAHP (National Association for Health Professionals) Nationally Registered Certified Administrative Health Assistant (NRCAHA) content outline
- CAHIIM (Commission on Accreditation for Health Informatics and Information Management Education)
- SCANS Correlation

Correlations to these are included with the instructor resources located on Connect (see later pages for information about Connect™). In addition, CAAHEP requires that all medical assistants be proficient in the 71 entry-level areas of competence when they begin medical assisting work. ABHES requires proficiency in the competencies and curriculum content at a minimum. The opening pages of each chapter provide a list of the areas of competence that are covered within the chapter.

MEDICAL ASSISTING COMPETENCIES	
CAAHEP	ABHES
<b>V.C.15</b> Identify the medical assistant's role in telehealth	<b>1. General Orientation</b> a. Describe the current employment outlook for the medical assistant b. Compare and contrast the allied health professions and understand their role in medical assisting d. List the general responsibilities and skills of the medical assistant. <b>10. Career Development</b> b. Demonstrate professional etiquette c. Identify the importance of continuing education and how it is achieved
<b>V.P.2</b> Correctly use and pronounce medical terminology in health care interactions.	
<b>X.C.2</b> Identify the provider role in terms of standard of care	
<b>XI.C.4</b> Identify professional behavior of a medical assistant	

You will also find that each procedure is correlated to the ABHES and CAAHEP competencies within the workbook on

the procedure sheets. These sheets can be easily pulled out of the workbook and placed in the student file to document proficiency.

## Chapter Features

Each chapter opens with material that includes the Case Study, the learning outcomes, a list of key terms, the ABHES and CAAHEP medical assisting competencies covered in the chapter, and an introduction. Since the learning outcomes represent each of the level I headings in the chapter, they serve as the chapter outline. Chapters are organized into topics that move from the general to the specific. Updated color photographs, anatomical and technical drawings, tables, charts, and text features help educate the student about various aspects of medical assisting. The text features include the following:

- **Case Studies** are provided at the beginning of all chapters. They represent situations similar to those that the medical assistant may encounter in daily practice. The case studies include pictures of each of the patients who come to BWV Medical Associates for care (and, where applicable, matching *avatars* in the new **UHRclinic** and ABAs). Students are encouraged to consider the case study as they read each chapter. Case Study Questions in the end-of-chapter review check students' understanding and application of chapter content.

CASE STUDY

EMPLOYEE INFORMATION	Employee Name	Position	Credentials
	Miguel A. Perez	Administrative Assistant	CMA (AAMA)
	Supervisor	Date of Hire	Other Information
	Malik Katahri, CMM	06/21/2021	Wants to further his education

calls from one of the exam rooms and tells him to call 911 because a patient has just gone into cardiac arrest. So much for coming in early; looks like it is going to be a busy day.

*Keep Miguel in mind as you study this chapter. There will be questions at the end of the chapter based on the case study. The information in the chapter will help you answer these questions.*

Miguel A. Perez, CMA (AAMA), is the administrative assistant at BWV Medical Associates. He came in early to get caught up on some important duties. He needs to schedule consults for Raja Lautu and Ken Washington, call in a medication refill for Sylvia Gonzales, and verify insurance coverage for Cindy Chen. Just as he is getting started, Kaylyn Haddix, RMA (AMT),

CASE STUDY CRITICAL THINKING

Recall Miguel Perez, the administrative assistant from the beginning of the chapter. Now that you have completed the chapter, answer the following questions about his case:

1. What should Miguel Perez do first and why? What type of healthcare professional will respond to the call?
2. Raja Lautu is going to be evaluated for cancer. What type of physician will Miguel Perez most likely be calling for this consult?
3. Ken Washington will need to have his heart evaluated. What type of physician will most likely be consulted, and what type of allied health professional will perform a special test on his heart? What is the name of the test to be performed?
4. Miguel Perez enjoys his work as an administrative medical assistant but would like to expand his role. What specialty career would you recommend for Miguel Perez and why?

- **Procedures** give step-by-step instructions on how to perform specific administrative or clinical tasks that a medical assistant will be required to perform. The procedures are referenced within the content when discussed and found in their entirety at the end of the chapter. In the workbook, the tearable procedure sheets mirror the exact procedures in the book and allow for easy practice and assessment. Critical procedures also can be studied in Clinical or Administrative skills video exercises on Connect, as well as new step-by-step videos of the procedures using the **UHRclinic**.

## PROCEDURE 16-2 Scheduling Appointments

WORK // DOC

**Procedure Goal:** Utilizing the previously created matrix, book patient appointments applying the correct amount of time for each appointment

**OSHA Guidelines:** This procedure does not involve exposure to blood, body fluids, or tissue.

**Materials:** Appointment book and pen or pencil, or electronic scheduler (with appropriate matrix) template, outlining time frames for patient appointment types

### Method:

1. Establish the type of appointment required by the patient, particularly if this is a new patient or a returning patient.  
**RATIONALE:** *New patients typically require a longer appointment time than do returning existing patients.*
2. If necessary, consult the template for the amount of time required for the patient appointment. Keep in mind the reason for the appointment when scheduling (for example, if the patient is required to be fasting).  
**RATIONALE:** *Some appointments are best scheduled*

3. When possible, schedule appointments earlier in the day first and then move to later time frames. Do ask the patient if he or she has a preferred time frame in mind and, if at all possible, accommodate the request.  
**RATIONALE:** *Open appointments later in the day allow space for unexpected appointments required at a later time.*
4. When using an appointment book, enter the patient name, phone number, and reason for the appointment in the appropriate space, blocking out additional blocks of time, if necessary, to accommodate a longer appointment time.
5. If an electronic scheduler is used, use the search option to find the next available appointment for the time frame required for the appointment. Enter the patient name, phone number, and reason for the appointment.
6. Repeat the appointment information to the patient, giving any necessary instructions regarding preparation for the appointment, such as early arrival for blood tests. Also, this is a good time to remind patients about any copayments that will be due at the time of the appointment.

- **Points on Practice** feature boxes provide guidelines on keeping the medical office running smoothly and efficiently.
- **Educating the Patient** feature boxes focus on ways to instruct patients about caring for themselves outside the medical office.
- **Caution: Handle with Care** feature boxes cover the precautions to be taken in certain situations or when performing certain tasks.

### CAUTION: HANDLE WITH CARE

#### Maintaining Standards of Cleanliness in the Reception Area

Cleanliness is (and should be) one of a medical office's hallmarks. Not only is cleanliness required in the examination and testing rooms, it is also expected in the patient reception area. A messy patient reception area reflects badly on the practice. Patients may think, "If they don't care about this, what else do they not care about?" Maintaining standards of cleanliness helps ensure that the reception area is presentable and inviting at all times.

As a medical assistant, you may be involved—along with the physician, office manager, and other staff members—in setting the office's cleanliness standards. Standards are general guidelines. In addition to setting standards, you will need to specify the tasks required to meet each standard. You also may want to create a checklist of the tasks required to meet all of these standards.

The following list outlines standards you may want to consider. Specific housekeeping tasks for meeting those standards are included in parentheses.

1. Keep everything in its place. (Complete a daily visual check for out-of-place items. Return all magazines to racks. Push chairs back into place.)
2. Dispose of all trash. (Empty trash cans. Pick up trash on the floor or on furniture.)
3. Prevent dust and dirt from accumulating on surfaces. (Wipe or dust furniture, lamps, and artificial plants. Polish doorknobs. Clean mirrors, wall hangings, and pictures.)

4. Spot-clean areas that become dirty. (Remove scuffmarks. Clean upholstery stains.)
5. Disinfect areas of the reception area if they have been exposed to body fluids. (Immediately clean and disinfect all soiled areas.)
6. Handle items with care. (Take precautions when carrying potentially messy or breakable items. Do not carry too much at once.)

After the standards have been established, type and post them in a prominent place for the office staff (but not the patients) to see. The cleaning activities checklist may be posted, but the person responsible for cleaning the office also should keep a copy. It is everyone's duty to keep the office looking clean and presentable.

A schedule of specific daily and weekly cleaning activities also should be posted. Less frequent housekeeping duties, such as laundering drapes, shampooing the carpet, and cleaning windows and blinds, can be noted in a tickler file so that they will be performed on a regular basis.

It is always a good idea to have a second staff member responsible for periodically working with the medical assistant on housekeeping responsibilities. That person also may be responsible for handling cleaning duties when the medical assistant is away from the office.

- **Pathophysiology** is featured in each of the chapters on anatomy and physiology. These sections provide students with details of the most common diseases and disorders of each body system and include information on the causes, common signs and symptoms, diagnostic exams and tests, treatment, and, where possible, the prevention of each disease.

## PATHOPHYSIOLOGY

LO 23.11

### Common Diseases and Disorders of the Skeletal System

**Arthritis** is a general term meaning "joint inflammation." Although there are more than 100 types of arthritis, we will discuss the two most common types: osteoarthritis and rheumatoid arthritis.

**OSTEOARTHRITIS**, also known as *degenerative joint disease (DJD)*, is the most common type of joint disorder, affecting nearly everyone to some degree by the age of 70. DJD primarily affects the weight-bearing joints of the hips and knees, and the cartilage between the bones and the bones themselves begin to break down.

**Causes.** Research points to inflammatory processes or metabolic disorders as the etiology of DJD.

**Signs and Symptoms.** These include joint stiffness, aching, and pain, especially with weather changes. There is often fluid around the joint and grating noises with joint movement. The grating noise is usually caused by bone-on-bone contact.

**Diagnostic Exams and Tests.** X-rays of the affected joint are used to determine if osteoarthritis is present. Blood tests are used to rule out rheumatoid arthritis.



**FIGURE 23-14** X-ray image of the Birmingham Hip Resurfacing prosthesis of the left hip.  
Total Care Programming, Inc.

**Causes.** RA is an autoimmune disease. The body's immune response attacks the synovial membranes of the joints, triggering inflammation.

**Signs and Symptoms.** In this disease, the immune response causes edema (swelling), tenderness, and warmth in and around the joints. Tissue becomes granular and thick, eventually

Each chapter closes with a summary of the Learning Outcomes. The summary is followed by an end-of-chapter review with questions related to the case study, as well as 10 multiple-choice exam-style questions.


SUMMARY OF LEARNING OUTCOMES	
OUTCOME	KEY POINTS
2.1 Discuss healthcare trends and their relationship to medical assistant practice.	Medical assistants typically work in ambulatory care settings using EHR and with telehealth. They can expect to work with many older patients and should practice and assist patients with preventive care.
2.2 Identify medical specialties and specialists certified by the American Board of Medical Specialties (ABMS).	The ABMS certifies 24 major medical specialties and multiple subspecialties. The medical assistant may work with practitioners in each of these areas. As medical advances occur, demand for more specialty areas may emerge.
2.3 Recognize the duties of various allied health professionals with whom medical assistants may work.	Medical assistants are members of a healthcare team. The healthcare team includes physicians, nurses, physical therapists, other allied health professionals, and patients. Understanding the duties of other healthcare professionals will assist you as a professional medical assistant. Even if you do not work with some of the team members directly, you may have to contact them through telephone, written, or electronic communication.
2.4 Compare specialty careers that a medical assistant may choose for advancement.	A variety of medical specialty careers are available for the practicing administrative or clinical medical assistant. These careers require additional training or education and/or other certifications.
2.5 Differentiate professional associations that relate to healthcare, and explain their relationship to the medical assisting profession.	Being a member of a professional association is essential to medical assisting practice. Knowledge of other healthcare and medical organizations allows the practicing medical assistant to function successfully within their profession.

- **Medical Terminology** practice exercises have been added to all the anatomy and physiology chapters.

- **Soft Skills Success** practice scenarios emphasize employability skills and critical thinking in complex situations. These new exercise features are included in most non-A&P chapters and are correlated to Practice Medical Office and Application-Based Activities where applicable.

**S O F T S K I L L S S U C C E S S**

A 35-year-old male patient is scheduled for a vasectomy tomorrow. It is within your scope of practice to provide preoperative instruction, and you feel confident in performing this task. When you introduce yourself and explain what you are going to do, the first words out of the patient's mouth are, "How do you know what this is all about? I am the one who is getting things cut!" How would you respond to this patient?



Go to PRACTICE MEDICAL OFFICE and complete the module Admin Check Out Interactions.

The book also includes a glossary and three appendices for use as reference tools. The glossary lists all the words presented as key terms in each chapter, along with a pronunciation guide and the definition of each term. The appendices present a list of common medical terminology, including prefixes, root words, and suffixes, as well as medical abbreviations and symbols. A Diseases and Disorders appendix provides a quick reference point for patient conditions that the student may encounter.

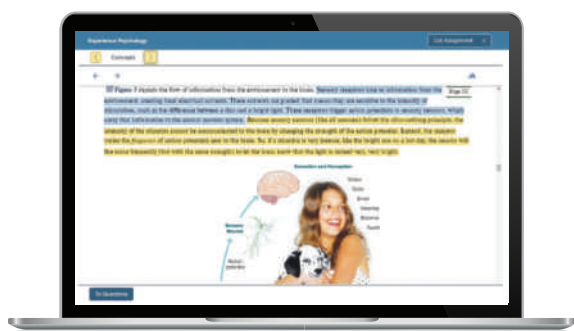
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- Jordan Cunningham,  
Eastern Washington University

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# Digital Materials for *Medical Assisting*

For the eighth edition, we expanded our offerings to better cover all aspects of medical assisting. Links between the textbook and the key study resources are highlighted by eye-catching icons divided by resource type. Digital study resources with icons include BodyANIMAT3D,  electronic health record exercises, and both Administrative and Clinical Skills videos. Real-life practice opportunities include Practice Medical Office and Application-Based Activities, with icons at the end of the chapter.






These different types of icons are then used to call out specific activities and exercises by name. For example, above you can see an icon for Connect skills videos (the resource) about Establishing and Conducting Supply Inventory and Receiving Supplies (the exercise name).

## McGraw-Hill Connect® Medical Assisting

A number of our key resources for *Medical Assisting*, 8e—including BodyANIMAT3D activities, skills video exercises, and  electronic health records exercises—are part of our Connect offering for Medical Assisting.

Here is more on what you can expect to find in Connect for *Medical Assisting*, 8e, specifically:




-  Exercises
  - Over 100 **electronic health record actionable exercises** correlated to over 34 chapters of Booth *Medical Assisting*, 8e. These simulated exercises allow students to navigate the  tool while learning the tasks of a Medical Assistant.
-  **financial practice management exercises** designed to provide students with practical experience with electronic billing, charge capture, payment posting, and more.
- Pre- and Post-Tests.
- End-of-Chapter Exercises.
- Interactive Exercises.
- Administrative and Clinical Skills Video Exercises.\*
- BodyANIMAT3D Exercises.\*
- ICD-10 Coding Exercises.\*
  - Utilizing scenarios developed by the authors, students can practice identifying and inputting the proper ICD-10 codes.

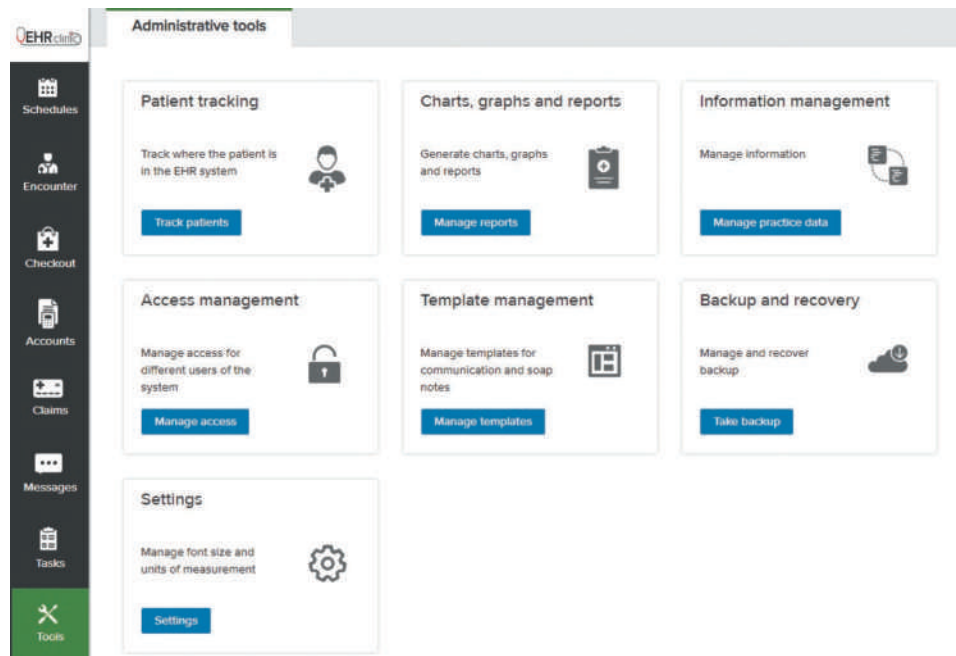
\*in applicable chapters

- Medical Terminology Practice.\*
  - A refresher area for the body systems chapters with Word Part exercises on select terms as well as audio terms with associated spelling practice.
- Math and dosage videos with questions that reinforce basic math needed by Medical Assistant students.\*
- **Practice Atlas** exercises for all of the Anatomy and Physiology chapters. The Practice Atlas for Anatomy & Physiology is an interactive tool that pairs images of common anatomical models with stunning cadaver photography, which allows students to practice naming structures on both models and human bodies. Additional multiple choice questions for practice are available as assignments in Connect.
- **NEW! Anatomy & Physiology Revealed (APR)** is an interactive human cadaver, fetal pig, and cat dissection tool to enhance lecture and lab that students can use anytime, anywhere. APR covers Body Orientation, Body Systems, Cells and Chemistry, and Tissues. Animations, rotatable 3D models, dissection, histology, imaging, and quizzing capabilities aid in preparing students for ultimate success. APR is now assignable in Connect, with integration for you to see the tasks your students complete. The APR Assignment will be visible under the Add Assignment tab. Within this assignment type, instructors will have the ability to assign all the features found in APR: Dissection, Animations, 3D Models, Histology, Radiology, and Quizzes.
- A completely revised and updated Test Bank (also available through the Instructor Resources).

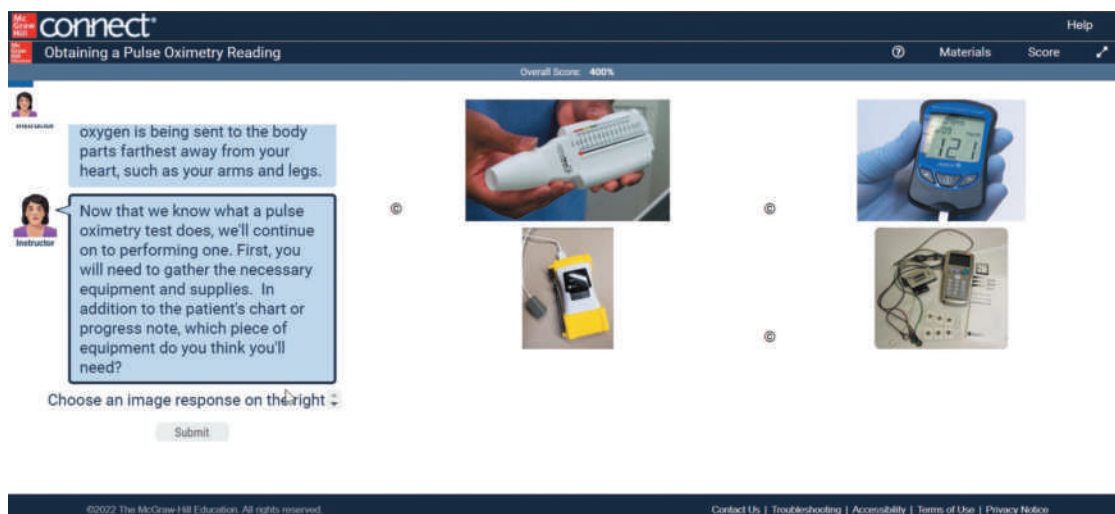
As part of Connect for *Medical Assisting*, we also offer SmartBook's adaptive reading experience. SmartBook provides personalized learning to individual student needs, continually adapting to pinpoint knowledge gaps and focus learning on concepts requiring additional study.

## Simulations and Games for Medical Assisting

, McGraw Hill's electronic health record tool, allows for the look and feel of a real electronic health records system fully integrated with Connect.  provides over 100 exercises directly correlated to 34 chapters of Booth *Medical Assisting*, 8e, with *Chapter 12 Electronic Health Records* being the most robust. These actionable exercises allow students to navigate the  tool, providing practical experience using electronic health records while they learn the tasks of a medical assistant. These simulated exercises are assignable in Connect and are autograded. *Chapter 12 Electronic Health Records* in Connect includes 23 exercises that take the student through the paces of electronic health records, including administrative functions and financial management.



**FIGURE FM-2** The new EHRclinic



**FIGURE FM-3** A new Application-Based Activity (ABA)  
(top left, top right, bottom left): McGraw Hill; (bottom right): ©Total Care Programming, Inc.

Completion of these exercises in total provides the basis for documenting electronic health record practical experience and gives the student “the big picture.”



In **Practice Medical Office (PMO)**, the student takes on the role of a new medical assistant in a 3D, immersive game focused on teaching the six key skills important to working in a medical office—professionalism, soft skills, office acumen, liability,

medical knowledge, and privacy. **Practice Medical Office** features 12 engaging and challenging modules representing the functional areas of a medical practice: administrative check-in interactions, clinical interactions, and administrative check-out interactions. As the players progress through each module, they will be faced with realistic situations and learning events that will test their mastery of critical job-readiness skills in a fun, engaging learning experience. The **PMO modules** will be found together with the **Application-Based Activities** described below.

For a demo of **Practice Medical Office**, please go to [http://www.mhpractice.com/products/Practice\\_Medical\\_Office](http://www.mhpractice.com/products/Practice_Medical_Office) and click on “Play the Demo.” An instructor’s manual for PMO,



correlated to ABHES and CAAHEP standards by learning event, is available in your Instructor Resources on Connect.

For the **Application-Based Activities**, or **ABAs**, the student is immersed in a brief, microsimulation experience, with the ability to practice steps in key Procedures *outside* a lab and “virtually” with an instructor. Along with the **Procedure ABAs**, students will be able to practice real-life **Scenario ABAs** that call upon decision making and application of medical assisting knowledge. Depending on the **ABA**, students will be graded on Objectives such as Clinical Skills, Administrative Skills, Interpersonal Skills, Communication, and more, all of which are aligned with ABHES and CAAHEP standards in the instructor materials. Find a full list of the **ABAs**, as well as resources for how to incorporate in your course, in the Instructor Resources on Connect.



**NEW! Virtual Labs** is a fully online lab solution that can be used as an online lab/clinic replacement, preparation, supplement, or make-up lab to bridge the gap between lab/clinical experience and lecture. These simulations help a student learn the practical and conceptual skills needed, then check for understanding and provide feedback. Students are better prepared, are more efficient, and retain more of the fundamental skills necessary for a successful lab/clinical experience.

On Connect, the ABAs and Virtual Labs can be found within the “Add Assignment” menu.



# Additional Supplementary Materials

## Student Workbook for Use with *Medical Assisting, 8e*—in print and full color (ISBN: 978-1-264-96450-5)

The *Student Workbook* provides an opportunity for the student to review and practice the material and skills presented in the textbook. The workbook is divided into parts and presented by chapter; the first part provides the following:

- Vocabulary review exercises, which test knowledge of key terms in the chapter.
- Content review exercises, which test the student's knowledge of key concepts in the chapter.
- Critical thinking exercises, which test the student's understanding of key concepts in the chapter.
- Application exercises, which include figures and practice forms and test mastery of specific skills.
- Case studies, which apply the chapter material to real-life situations or problems.

Each section, Clinical and/or Administrative, contains the appropriate procedures, presented in the order in which they are shown in the student textbook. These have been revised for ease of use and include correlations to the ABHES and CAAHEP competencies mastered with the successful completion of each procedure. Accompanying Work Product Documentation (work/doc) provides blank forms for many of the procedures that require a specific type of document to complete the procedure. These documentation forms are used when completing many of the application activities as well as procedure competencies. Over 100 procedures as well as multiple application activities in the workbook include correlated work docs.

## Pocket Guide for Use with *Medical Assisting, 8e* (ISBN: 978-1-264-96306-5)

The *Pocket Guide* is a quick and handy reference to use while working as a medical assistant or during training. It includes critical procedure steps, bulleted lists, and brief information all medical assistants should know. Information is sorted by Administrative, Clinical, Laboratory, and General content.

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connect + proctorio

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# Introduction to Medical Assisting

## CASE STUDY

EMPLOYEE INFORMATION	Employee Name	Position	Credentials
	Sandro Peso	Student	In Training
	Supervisor	Date of Hire	Other Information
	Malik Katahri, CMM	10/11/2024	Assigned to Dr. Paul F. Buckwalter



Ryan McVay/Lifesize/Getty Images

Sandro Peso, a father of four in his mid-thirties, lost his job at a local factory. He is now a medical assistant-in-training and is currently working at BWW Medical Associates. He will be working in the administrative, clinical, and laboratory sections of the office. He wants to decide which area he likes best and where he might like to work when he finishes his

training. It will not be long until he graduates and needs to take the test to become credentialed. He is nervous about the exam but really wants to do well to get the best job he can to help support his family.

*Keep Sandro Peso in mind as you study this chapter. There will be questions at the end of the chapter based on the case study. The information in the chapter will help you answer these questions.*

## LEARNING OUTCOMES

After completing Chapter 1, you will be able to:

- 1.1 Recognize the duties and responsibilities of a medical assistant.
- 1.2 Distinguish various organizations related to the medical assisting profession.
- 1.3 Explain the need for and importance of the medical assistant credentials.
- 1.4 Identify the training needed to become a professional medical assistant.
- 1.5 Discuss professional development as it relates to medical assisting education.

## KEY TERMS

- accreditation
- Accrediting Bureau of Health Education Schools (ABHES)
- American Association of Medical Assistants (AAMA)
- American Medical Technologists (AMT)
- certification
- Certified Medical Assistant (CMA)
- Clinical Laboratory Improvement Amendments of 1988 (CLIA '88)
- Commission on Accreditation of Allied Health Education Programs (CAAHEP)
- continuing education
- cross-training
- Health Insurance Portability and Accountability Act (HIPAA)
- licensed practitioner
- multiskilled healthcare professional (MSHP)
- Occupational Safety and Health Administration (OSHA)
- patient navigator
- professional development
- Registered Medical Assistant (RMA)
- registration
- résumé
- scope of practice
- standard of care

- V.C.10** Identify the role of the medical assistant as a patient navigator
- X.C.1** Identify scope of practice and standards of care for medical assistants
- X.C.2** Identify the provider role in terms of standard of care
- X.C.5** Identify licensure and certification as they apply to healthcare providers
- X.P.1** Locate a state’s legal scope of practice for medical assistants
- XI.C.4** Identify professional behaviors of a medical assistant

**1. General Orientation**

- a. Describe the current employment outlook for the medical assistant
- c. Describe and comprehend medical assistant credentialing requirements
- d. List the general responsibilities and skills of the medical assistant

**4. Medical Law and Ethics**

- f. Comply with federal, state, and local health laws and regulations as they relate to healthcare settings
  - 1) Define the scope of practice for the medical assistant per state requirements
  - 2) Describe what procedures can and cannot be delegated to the medical assistant and by whom orders can be given

**10. Career Development**

- b. Demonstrate professional etiquette
- c. Identify the importance of continuing education and how it is achieved

**► Introduction**

Healthcare is changing at a rapid rate. Advanced technology, implementation of cost-effective medicine, and the aging population are all factors that have caused growth in the healthcare services industry. The US Department of Labor projects that medical assisting will grow 18% between 2020 and 2030 with an average of 104,400 openings each year over the decade. The growth in the number of physicians’ group practices and other healthcare practices that use support personnel such as medical assistants will in turn continue to drive up demand for medical assistants. The multifunctional medical assistant is the perfect complement to the changing healthcare industry.

Medical assistants have the training to perform a variety of duties, which qualify them to fill many different job openings in the healthcare industry. This chapter provides an introduction to the medical assisting profession. It presents a general description of your future duties, credentials, and needed training. Some basic facts about professional associations, organizations, and development related to medical assisting also are discussed. All of this to help you understand the career of a medical assistant.

**► Responsibilities of the Medical Assistant**

**LO 1.1**

Your specific responsibilities as a medical assistant will depend on the type, location, and size of the facility, as well as its medical specialties. General tasks performed by most

medical assistants include working and communicating with patients throughout the healthcare experience. In fact, medical assistants often perform the role of **patient navigator**. They help patients find their way through the sometimes complex healthcare system, helping them overcome any barriers they may encounter to help ensure that they get the diagnosis and treatment they need in a timely manner.

Medical assistants work in an administrative, clinical, and/or laboratory capacity. As an administrative medical assistant, you may handle the payroll for the office staff (or supervise a payroll service), obtain equipment and supplies, and serve as the link between the physician or other **licensed practitioner** and representatives of pharmaceutical and medical supply companies. As a clinical medical assistant, you will be the physician’s or other licensed practitioner’s right arm by maintaining an efficient office, assisting the practitioner during examinations, and keeping examination rooms in order. Your laboratory duties as a medical assistant may include performing basic laboratory tests and maintaining laboratory equipment. In small practices, you may handle all duties. In larger practices, you may specialize in a particular duty. As you grow in your profession, advanced duties may be required. Table 1-1 lists various duties of a medical assistant in practice.

You also may choose to specialize in a specific area of healthcare. For example, podiatric medical assistants make castings of feet, expose and develop X-rays, and assist podiatrists in surgery. Ophthalmic medical assistants help ophthalmologists (doctors who provide eye care) by administering diagnostic tests, measuring and recording vision, testing the

**TABLE 1-1** Daily Duties of Medical Assistants

Duty Type	Entry-Level Duties	Advanced Duties
<p>General</p>  <p>monkeybusinessimages/iStock/Getty Images Plus/Getty Images</p>	<ul style="list-style-type: none"> <li>• Recognizing and responding effectively to verbal, nonverbal, written, and electronic communications</li> <li>• Explaining treatment procedures to patients</li> <li>• Providing patient education within scope of practice</li> <li>• Facilitating treatment for patients from diverse cultural backgrounds and for patients with hearing or vision impairments, or physical or mental disabilities</li> <li>• Acting as a patient navigator and advocate</li> <li>• Maintaining medical records</li> </ul>	<p>None</p>
<p>Administrative</p>  <p>JGI/Daniel Grill/Getty Images</p>	<ul style="list-style-type: none"> <li>• Greeting patients</li> <li>• Handling correspondence</li> <li>• Scheduling appointments</li> <li>• Answering telephones</li> <li>• Creating and maintaining patient medical records</li> <li>• Handling billing, bookkeeping, and insurance processing</li> <li>• Performing medical transcription</li> <li>• Arranging for hospital admissions</li> </ul>	<ul style="list-style-type: none"> <li>• Developing and conducting public outreach programs to market the licensed practitioner’s professional services</li> <li>• Negotiating leases of equipment and supply contracts</li> <li>• Negotiating nonrisk and risk managed care contracts</li> <li>• Managing business and professional insurance</li> <li>• Developing and maintaining fee schedules</li> <li>• Participating in practice analysis</li> <li>• Coordinating plans for practice enhancement, expansion, consolidation, and closure</li> <li>• Performing as a <b>HIPAA (Health Insurance Portability and Accountability Act)</b> compliance officer</li> <li>• Providing personnel supervision and employment practices</li> <li>• Providing information systems management</li> </ul>
<p>Clinical</p>  <p>V6stockstudio/Shutterstock</p>	<ul style="list-style-type: none"> <li>• Assisting the licensed practitioner during examinations</li> <li>• Assisting with asepsis and infection control</li> <li>• Performing diagnostic tests, such as spirometry and ECGs</li> <li>• Giving injections, where allowed</li> <li>• Phlebotomy, including venipuncture and capillary puncture</li> <li>• Disposing of soiled or stained supplies</li> <li>• Performing first aid and cardiopulmonary resuscitation (CPR)</li> <li>• Preparing patients for examinations</li> <li>• Preparing and administering medications as directed by the licensed practitioner, and following state laws for invasive procedures</li> <li>• Recording vital signs and medical histories</li> <li>• Removing sutures or changing dressings on wounds</li> <li>• Sterilizing medical instruments</li> <li>• Instructing patients about medication and special diets, authorizing drug refills as directed by the licensed practitioner, and calling pharmacies to order prescriptions</li> <li>• Assisting with minor surgery</li> <li>• Teaching patients about special procedures before laboratory tests, surgery, X-rays, or ECGs</li> </ul>	<ul style="list-style-type: none"> <li>• Initiating an IV and administering IV medications with appropriate training and as permitted by state law</li> <li>• Reporting diagnostic study results</li> <li>• Assisting patients in the completion of advance directives and living wills</li> <li>• Assisting with clinical trials</li> </ul>
<p>Laboratory</p>  <p>Adam Gault/OJO Images/age fotostock</p>	<ul style="list-style-type: none"> <li>• Performing Clinical Laboratory Improvement Amendments (CLIA)–waived tests, such as a urine pregnancy test, on the premises</li> <li>• Collecting, preparing, and transmitting laboratory specimens</li> <li>• Teaching patients to collect specific specimens properly</li> <li>• Arranging laboratory services</li> <li>• Meeting safety standards (OSHA guidelines) and fire protection mandates</li> </ul>	<ul style="list-style-type: none"> <li>• Performing as an OSHA compliance officer</li> <li>• Performing moderately complex laboratory testing with appropriate training and certification</li> </ul>



functioning of eyes and eye muscles, and performing other duties. A discussion of medical specialties is found in the chapter *Healthcare and the Healthcare Team*. For specific information about medical assistant duties within medical specialty practice, refer to the following chapters: *Assisting in Reproductive and Urinary Specialties*, *Assisting in Pediatrics*, *Assisting in Geriatrics*, *Assisting in Other Medical Specialties*, and *Assisting with Eye and Ear Care*.

## ▶ Medical Assisting Organizations LO 1.2

Many organizations guide the profession of medical assisting. These include professional associations such as the American Association of Medical Assistants (AAMA), the American Medical Technologists (AMT), National Healthcareer Association (NHA), and other accrediting and registering organizations. As a future medical assistant, knowledge of these organizations will help you make critical decisions about your career.

Professional associations set high standards for quality and performance in a profession. They define the tasks and functions of an occupation, provide members with the opportunity to communicate and network with one another, as well as offer **continuing education**. Becoming a member of a professional association helps you achieve career goals and furthers the profession of medical assisting. Joining as a student is encouraged, and some associations even offer discounted rates to students for a specified amount of time after graduation.

### American Association of Medical Assistants

The idea for a national association of medical assistants—later to be called the **American Association of Medical Assistants (AAMA)**—was suggested at the 1955 annual state convention of the Kansas Medical Assistants Society. The next year, at an American Medical Association (AMA) meeting, the AAMA was officially created. In 1978, the US Department of Health, Education, and Welfare declared medical assisting as an allied health profession.

The AAMA works to raise standards of medical assisting to a more professional level. It is the only professional association devoted exclusively to the medical assisting profession. The AAMA provides the CMA (AAMA) credential.

The certifying board of the AAMA performs an occupational analysis of the medical assisting profession approximately every five years to ensure the currency and quality of the CMA (AAMA) Certification Exam and the CMA (AAMA) credential. This occupational analysis does not define the legal scope of medical assisting practice. Responsibilities of medical assistants vary from state to state.

**Professional Support for CMAs (AAMA)** When you become a member of the AAMA, you will have a large support group of active medical assistants. Membership benefits include:

- Professional publications, such as *CMA Today*.
- A large variety of educational opportunities, such as chapter-sponsored seminars and workshops about the latest administrative, clinical, and management topics.
- Group insurance.

- Legal information.
- Local, state, and national activities that include professional networking and multiple continuing education opportunities.
- Legislative monitoring to protect your right to practice as a medical assistant.
- Access to the website at <http://www.aama-ntl.org>.

### American Medical Technologists (AMT)

**American Medical Technologists (AMT)** is a nonprofit certification agency and professional membership association representing over 45,000 individuals in allied healthcare. Established in 1939, AMT began a program to register medical assistants at accredited schools in the early 1970s. The AMT provides allied health professionals with professional certification services and membership programs to enhance their professional and personal growth. Upon certification, individuals automatically become members of AMT and start to receive benefits. The AMT provides many certifications, including the Registered Medical Assistant (RMA) (AMT), Medical Administrative Specialist (CMAS) (AMT), Patient Care Technician (PCT), Medical Laboratory Assistant (CMLA), and the Phlebotomy Technician (RPT) credential.

### Professional Support for AMT credentials (RMA, CMAS, PCT, CMLA, and RPT)

- Professional publications.
- Continuing education.
- Membership in the AMT Institute for Education.
- Group insurance programs—liability, health, and life.
- State chapter activities.
- Legal representation in health legislative matters.
- Annual meetings and educational seminars.
- Student membership.
- Access to the website at <http://www.americanmedtech.org>.

### National Healthcareer Association (NHA)

The National Healthcareer Association (NHA) (<http://www.nhanow.com>) was established in 1989 as an information resource and network for today's active healthcare professionals. NHA provides certification and continuing education services for healthcare professionals and curriculum development for educational institutions. It offers a variety of certification exams, including Clinical Medical Assistant (CCMA), Medical Administrative Assistant (CMAA), Billing and Coding Specialist (CBCS), and Electronic Health Records Specialist (CEHRS).

Some of the NHA's programs and services include:

- Certification development and implementation.
- Continuing education curriculum development and implementation.
- Program development for unions, hospitals, and schools.
- Educational, career advancement, and networking services for members.
- Registry of certified professionals.



Healthcare educators working in their various fields of study develop the National Healthcare Association certification exams. The NHA is a member of the National Organization of Competency Assurance (NOCA).

### Other Medical Assistant Organizations

Other organizations assist potential and current medical assisting professionals. These include the National Center for Competency Testing (NCCT) and the National Association for Health Professionals (NAHP).

The National Center for Competency Testing (NCCT) (<https://www.ncctinc.com>) is an independent agency that certifies the validity of competency and knowledge of the medical profession through examination. Medical assistants and medical office assistants receive the designation of National Certified Medical Assistant (NCMA) and National Certified Medical Office Assistant (NCMOA) after passing the certification examination. The NCCT avoids any allegiance to a specific organization or association.

The National Association for Health Professionals (NAHP) (<http://www.nahpusa.com>) offers multiple credentials for healthcare professionals. The organization, which has been in existence for 30 years, prides itself in making the process of obtaining a credential an accessible, affordable, and obtainable goal for individuals who wish to show commitment to their chosen profession. Having multiple credentials with one agency makes maintaining continuing education easier for practicing healthcare professionals. The NAHP offers many credentials, including the Nationally Registered Certified Medical Assistant (NRCMA), the Nationally Registered Certified Coding Specialist (NRCCS), and the Nationally Registered Certified Administrative Health Assistant (NRCAHA).

With the growth of the medical assisting field, new organizations have developed to serve professionals. For example, the American Medical Certification Association (AMCA), founded in 2010, provides certification for clinical and/or administrative medical assistants. The American Registry of Medical Assistants (ARMA) is also one of many national certifying organizations that certify/register medical assistants. Prospective medical assistants should be knowledgeable about the agency they will use to obtain their medical assistant credential.



**FIGURE 1-1** Wearing one of these pins indicates you have obtained a credential in medical assisting. Medical assistants registered by the American Medical Technologists must pass the RMA exam to be certified and can wear the pin on the left. Members of the American Association of Medical Assistants who pass the CMA exam wear the pin on the right. Total Care Programming, Inc.

### ▶ Medical Assistant Credentials LO 1.3

**Certification** is confirmation by an organization that an individual is qualified to perform a job to professional standards. **Registration**, on the other hand, does not guarantee an individual's competence. Instead, registration is the granting of a title or license by a board that gives permission to practice in a chosen profession. Once credentialed, you earn the right to wear a pin that is obtained through the credentialing organization (Figure 1-1).

Medical assistant credentials such as certification and registration are not always required to practice as a medical assistant. However, employers today are aggressively recruiting medical assistants who are credentialed in their field. As discussed in the Medical Assisting Organizations, many credentials are available for medical assisting by various organizations. Small physician practices are being consolidated or merged into larger providers of healthcare, such as hospitals, to decrease operating expenses. Human resource directors of these larger organizations place great importance on professional credentials for their employees. Hiring credentialed medical assistants may lessen the likelihood of a legal challenge. Common administrative and clinical certifications are provided in Table 1-2.

TABLE 1-2 Medical Assisting Credentials		
Type of Certification	Certification Title	Certifying Organization
Administrative and Clinical	Certified Medical Assistant (CMA)	AAMA
Administrative and Clinical	Registered Medical Assistant (RMA) AMT	AMT
Administrative and Clinical	National Certified Medical Assistant (NCMA)	NCCT
Administrative and Clinical	Nationally Registered Certified Medical Assistant (NRCMA)	NAHP
Administrative and Clinical	Certified Clinical Medical Assistant (CCMA)	NHA
Administrative	Medical Administrative Assistant (CMAA)	NHA
Administrative	Certified Medical Assistant Specialist (CMAS)	AMT
Administrative	National Certified Medical Office Assistant (NCMOA)	NCCT
Administrative	Nationally Registered Certified Administrative Health Assistant (NRCAHA)	NAHP



## State and Federal Regulations

Certain provisions of the **Occupational Safety and Health Administration (OSHA)** and the **Clinical Laboratory Improvement Amendments of 1988 (CLIA '88)** are making mandatory credentialing for medical assistants a logical step in the hiring process. OSHA and CLIA '88 regulate healthcare but presently do not require that medical assistants be credentialed. However, various components of these statutes can be met by demonstrating that medical assistants are certified. For example, some physician offices perform moderately complex laboratory testing onsite. The medical assistant can perform moderately complex tests if they have the appropriate training and skills.

## AAMA Credential

The **Certified Medical Assistant (CMA)** credential is awarded by the Certifying Board of the AAMA. The AAMA's certification examination evaluates mastery of medical assisting competencies based on the Occupational Analysis of the CMA (AAMA), which is available at <http://www.aama-ntl.org/resources/library/OA.pdf>. The National Board of Medical Examiners (NBME) also provides technical assistance in developing the tests.

Students who have completed medical assisting programs accredited by CAAHEP and ABHES are eligible to take the certification examination. The AAMA offers the Candidate's Guide to the Certification Examination to help applicants prepare for the examination. This guide explains the test format and test-taking strategies. It also includes a sample examination with answers and information about study references. Some schools also have incorporated test preparation reviews into their programs.

The CMA (AAMA) examination is a computerized test that may be taken any time at a designated testing site in your area. You may search the Internet for an application and test review materials. Once you have successfully passed the CMA (AAMA) examination, you have earned the right to add that credential to your name, such as Miguel A. Perez, CMA (AAMA).

CMAs (AAMA) must recertify the credential every 5 years. To be recertified as a CMA (AAMA), 60 contact hours must be accumulated during the 5-year period: 10 in the administrative area, 10 in the clinical area, and 10 in the general area, with 30 additional hours in any of the three categories. In addition, 30 of these contact hours must be from an approved AAMA program. The AAMA also requires you to hold a current CPR card.

The recertification mandate requires you to learn about new medical developments through education courses or participation in an examination. Hundreds of continuing education courses are sponsored by local, state, and national AAMA groups. The AAMA also offers self-study courses through its continuing education department.

## AMT Credentials

The American Medical Technologists (AMT) organization credentials certified medical assistants as **Registered Medical**

**Assistants (RMA)** or Medical Administrative Specialists (CMAS). This section focuses on the RMA credential; you can find more about the CMAS credential on the AMT website at <https://americanmedtech.org/Medical-Administrative-Specialist>.

Requirements for the RMA (AMT) credential include:

- Graduation from a medical assistant program that is accredited by ABHES or CAAHEP or is accredited by a regional accrediting commission, by a national accrediting organization approved by the US Department of Education, or by a formal medical services training program of the US Armed Forces.
- Alternatively, employment in the medical assisting profession for a minimum of 5 years, no more than 2 years of which may have been as an instructor in the postsecondary medical assistant program.
- Passing the AMT examination for RMA (AMT) certification.

RMAs (AMT) must accumulate 30 contact hours for continuing education units (CEUs) every 3 years if they were certified after 2006. Once a medical assistant has passed the AMT exam, they have earned the right to add RMA (AMT) to their name: Kaylyn R. Haddix, RMA (AMT).

## Credentialing Examinations

Credentialing examinations are rigorous. Participation in an accredited program will help you learn what you need to know. Each certification examination is based on a specific content outline created by the certifying organization. Most organizations provide their content outline as well as practice examinations for potential medical assistants to prepare. You should research the Internet to gain additional information regarding any of these certifications. See Procedure 1-1, Obtaining Certification/Registration Information Through the Internet.

## ▶ Training Programs

LO 1.4

The role of the medical assistant is dynamic and wide-ranging. Changes in healthcare have expanded the expectations for medical assistants. The knowledge base of the modern medical assistant includes:

- Administrative and clinical skills.
- Patient insurance product knowledge (specific to the workers' geographic locations).
- Use of technology for electronic health records and telehealth.
- Compliance with healthcare-regulating organizations.
- Exceptional customer service.
- Practice management.
- Current patient treatments and education.

The medical assisting profession requires a commitment to self-directed, lifelong learning. Healthcare is changing rapidly and a medical assistant who can adapt to change and is continually learning will be in high demand.

Formal programs in medical assisting are offered in a variety of educational settings, including vocational-technical high schools, postsecondary vocational schools, community and junior colleges, and 4-year colleges and universities. Vocational school programs usually last 9 months to 1 year and award a certificate or diploma. Community and junior college programs are usually 2-year associate's degree programs. Training can be obtained through traditional classroom as well as online settings.

An accredited medical assisting program is competency based; this means that standards are set by an accrediting body for skill and proficiency in administrative and clinical tasks. It is the educational institution's duty to ensure that medical assisting students learn all medical assisting competencies and that evidence is clearly documented for each student. Periodic evaluations are performed by the accrediting agencies to ensure the effectiveness of the program.

## Program Accreditation

**Accreditation** is the process by which programs are officially authorized. The US Department of Education recognizes two national entities that accredit medical assisting educational programs:

- **Commission on Accreditation of Allied Health Education Programs (CAAHEP).** CAAHEP works directly with the Medical Assisting Educational Review Board (MAERB) of Medical Assistants Endowments to ensure that all accredited schools provide a competency-based education. CAAHEP accredits medical assisting programs in both public and private postsecondary institutions throughout the United States that prepare individuals for entry into the medical assisting profession.
- **Accrediting Bureau of Health Education Schools (ABHES).** ABHES accredits private postsecondary institutions and programs that prepare individuals for entry into the medical assisting profession.

Accredited programs must cover the following topics:

- Anatomy and physiology
- Medical terminology
- Medical law and ethics
- Psychology
- Oral, written, and electronic communications
- Laboratory procedures
- Clinical and administrative procedures

Medical assisting programs also must include a practicum (externship) or work experience. This applied training is for a specified length of time in an ambulatory care setting, such as a physician's office, hospital, or other healthcare facility. Additionally, the AAMA lists its minimum standards for accredited programs. This list of standards ensures that all personnel—administrators and faculty alike—are qualified to perform their jobs. These standards also ensure that financial and physical resources are available at accredited programs.

Graduation from an accredited program helps your career in three ways. First, it shows that you have completed a program

that meets nationally accepted standards. Second, it provides recognition of your education by professional peers. Third, it makes you eligible for registration or certification. Students who graduate from a CAAHEP- or ABHES-accredited medical assisting program are eligible to take the CMA (AAMA) or RMA (AMT) immediately.

## Work Experience

Your practicum (externship) or work experience is mandatory in accredited schools. The length of your experience will vary, depending on your particular program, so familiarize yourself with the program requirements as soon as possible. Because this is a required part of the program, no matter how good your grades are in class, if the work experience is not completed, you will not graduate.

Your practicum (externship) or work experience is an extension of your classroom learning experience. You will apply skills learned in the classroom in an actual medical office or other healthcare facility. You also earn the right to include this applied training experience on your résumé under job experience, as long as you title it as "Medical Assistant Practicum, Externship, or Work Experience." The *Preparing for the World of Work* chapter will further explain your practical work experience.

## Professional Development

LO 1.5

**Professional development** refers to skills and knowledge attained for both personal development and career advancement. During your training, you should strive to improve your knowledge and skills. This will help you transition into your first job. You also can gain valuable knowledge and skills through volunteering prior to or in addition to work experience obtained as a student.

Once you have entered the world of work as a medical assistant, you will want to continue to develop in your profession. You can do this through additional training, **cross-training**, and other forms of continuing education.

## Volunteer Programs

Volunteering is a rewarding experience. Before you even begin or during your medical assisting program, you can gain experience in a healthcare profession through volunteer work. As a volunteer, you will get hands-on training and learn what it is like to assist patients who are ill, disabled, or frightened.

You may volunteer as an aide in a hospital, clinic, nursing home, or doctor's office, or as a typist or filing clerk in a medical office or medical record room. Some visiting nurse associations and hospices (homelike medical settings that provide medical care and emotional support to terminally ill patients and their families) also offer volunteer opportunities. These experiences may help you decide if you want to pursue a career as a medical assistant.

The American Red Cross also offers volunteer opportunities. The Red Cross needs volunteers for its disaster relief programs locally, statewide, nationally, and abroad. As part of a disaster relief team at the site of a hurricane, tornado, storm,

flood, earthquake, or fire, volunteers learn first-aid and emergency triage skills. Red Cross volunteers gain valuable work experience that may help them obtain a job.

Because volunteers are not paid, it is usually easy to find work opportunities. Just because you are not paid for volunteer work, however, does not mean the experience is not useful for meeting your career goals.

Include information about any volunteer work on your **résumé**—a document that summarizes your employment and educational history. Be sure to note specific duties, responsibilities, and skills you developed during the volunteer experience. Refer to the *Preparing for the World of Work* chapter for examples of résumés.

## Scope of Practice

Professional development includes knowing your **scope of practice** and working within it. Medical assistants are not “licensed” healthcare professionals, and most often work under a licensed healthcare provider, such as a nurse practitioner or physician. Licensed healthcare professionals may delegate certain duties to a medical assistant, provided they have had the appropriate training through an accredited medical assisting program or through on-the-job training provided by the medical facility or physician.

Questions often arise regarding the kinds of duties a medical assistant can perform. There is no universal answer to these questions. There is no single national definition of a medical assistant’s scope of practice, so the medical assistant must research the state in which they work to learn about the scope of practice. You can find this information online by entering “medical assistant scope of practice” and the name of your state in any major search engine. See Procedure 1-2, *Locating Your State’s Legal Scope of Practice*. In general, a medical assistant may not perform procedures for which they were not educated or trained. Examples of procedures medical assistants may not perform include administering intravenous medications (without advanced training), diagnosing patients or informing patients of a diagnosis, and giving any advice to a patient unless permitted by a facility’s standard policies and procedures. The AAMA and AMT are good resources to assist you in your research. The AAMA Occupational Analysis is also a helpful reference source that identifies the procedures that medical assistants are educated to perform.

Do not confuse the terms *scope of practice* and *standard of care*. A medical assistant’s scope of practice is the set of procedures that can be performed and the actions that can be taken under the terms of their professional license and training. **Standard of care** is a legal term that refers to the care that would ordinarily be provided by an average, prudent healthcare provider in a given situation.

## Networking

Networking is building alliances—socially and professionally. It starts long before your job search. By attending professional association meetings, conferences, or other functions, medical assistants generate opportunities for employment and personal and professional growth. Networking, through continuing education conferences throughout your career, keeps the doors open to employment advancement.

## Multiskilled Healthcare Professionals

Medical assistants are trained to be multiskilled. Hospitals and healthcare practices are embracing the idea of a **multiskilled healthcare professional (MSHP)**. A medical assistant who is a cross-trained team member is able to handle many different duties. If you are multiskilled, you will have an advantage when job hunting. Employers are eager to hire multiskilled medical assistants and may even create positions for them. Cross-training to become a MSHP helps the healthcare facility and your career.

**Reducing Healthcare Costs** By hiring multiskilled healthcare professionals, healthcare organizations can reduce personnel costs. MSHPs can perform the functions of two or more people, so they are cost-effective employees and are in high demand.

**Expanding Your Career Opportunities** Career opportunities are vast if you are self-motivated and willing to learn new skills. Following are some examples of positions for medical assistants with additional experience and certifications:

- Medical office manager
- Medical biller and coder
- Medical assisting instructor (with a specified amount of experience and education)
- ECG technician
- Sterilization technician
- Patient care technician
- Phlebotomy technician

You can gain multiskill training by showing initiative and a willingness to learn every aspect of the medical facility in which you are working. When you begin working in a medical facility, establish goals regarding your career path and discuss them with your immediate supervisor. Indicate to your supervisor that you would like cross-training in every aspect of the medical facility. Begin in the department in which you are currently working and branch out to other departments once you master the skills needed for your current position. This will demonstrate a commitment to your profession and a strong work ethic. Cross-training is a valuable marketing tool to include on your résumé.

## PROCEDURE 1-1 Obtaining Certification/Registration Information Through the Internet

WORK // DOC

**Procedure Goal:** To obtain information from the Internet regarding professional credentialing

**OSHA Guidelines:** This procedure does not involve exposure to blood, body fluids, or tissue.

**Materials:** Computer with Internet access and printer

### Method:

1. Open your Internet browser and use a search engine to search for the credential you would like to pursue—for example, Certified Medical Assistant or Registered Medical Assistant. If you are unsure of the credential you would like to pursue, you may just want to search for “Medical Assisting Credentials.”
2. Select the site for the credential you are pursuing. Avoid sponsored links. These links are paid for and typically will not take you to the site of a credentialing organization. For example, to navigate to the home page:
  - For the CMA (AAMA) credential, enter the site <http://www.aama-ntl.org>.



- For the RMA (AMT) or CMAS (AMT) credential, enter the site <http://www.americanmedtech.org>.



- For other selected credentials navigate to the selected organization.
  - National Association for Health Professionals (NAHP): <http://nahpusa.com/>

- National Center for Competency Testing (NCCT): <https://www.ncctinc.com/>
  - National Healthcareer Association (NHA): <http://www.nhanow.com/>
3. Determine the steps you must take to obtain the selected credential. You will need to navigate to the information about the requirements for eligibility, certification standards, and the examination outline.
  4. Print or write down the qualifications you must obtain.  
**RATIONALE:** *Maintaining a record of needed qualifications will be a reference as you pursue your chosen credential.*
  5. Once you have met the qualifications, you will need to apply for the examination or certification. Download the application and the application instructions for the RMA (AMT) or the CMAS (AMT) or the candidate application and handbook for the CMA (AAMA).
  6. To view or print these instructions, you may need to download Adobe Reader. You can click on a link to download Adobe Reader after you click on the “Apply Online” link for AMT or “Apply for the Exam” for AAMA.
  7. Before or after you apply for the examination, you will need to prepare for the examination. Select the link “Study for the Exam” on the AAMA site or the “Prepare for Exam” link under the “Get Certified” drop-down menu on the AMT site.
  8. Prepare for the exam by reviewing the content outline, obtaining additional study resources, or taking a practice exam online.
  9. Print or save downloaded information in a file folder on your desktop labeled “Credentials” or another name you can recognize. To print, click the printer icon found at the bottom of the web page or click the printer icon in your browser.
  10. Return to the appropriate site if you have additional questions. For the CMA (AAMA) site, you may want to check the “FAQs on CMA (AAMA) Certification” link. On the AMT site for RMA or CMAS, find the link “Take the Exam” and download the FAQs regarding the testing process.
  11. Any questions you have that are not addressed on the sites can be e-mailed to the organizations.

## PROCEDURE 1-2 Locating Your State’s Legal Scope of Practice

WORK // DOC

**Procedure Goal:** To obtain information from the Internet regarding your state’s scope of practice

**OSHA Guidelines:** This procedure does not involve exposure to blood, body fluids, or tissue.

**Materials:** Computer with Internet access and materials to document and report your findings through a written or oral report

### Method:

1. Open your Internet browser and use a search engine to find your state’s Scope of Practice for Medical Assistants. Consider a search such as [“your state name” scope of practice for medical assistants].
2. Verify that the Internet site is credible and save the site address(es) as a reference.