



READINESS FOR RESIDENCY BOOTCAMP IMPLEMENTATION PLAYBOOK

**A Framework for
Colleges of Osteopathic
Medicine**





Table of Contents

Residency Readiness & COVID-19	4
Background	5
Chart I. Summary of Activities on Residency Readiness	5
Understand Your Capacity and What You Need at Your Institution	7
Understand Your Approach to Residency Preparedness	8
One Size Doesn't Fit All: Bootcamp Set Up	9
Figure I. Residency Boot Camp Logistics	9
Keep It Simple: Assess Few but Critical Knowledge and Skills	10
Chart II. What Core Knowledge/ Skills Do Students Need Before Entering Residency?	10
Refresh Before and After the Bootcamps	14
List of Procedures (General/ Speciality Specific)	14
Acknowledgments	16



Residency Readiness & COVID-19

The American Association of Colleges of Osteopathic Medicine (AACOM) Board of Deans established the UME-GME Task Force in 2022 to address critical issues affecting osteopathic medical education, including the transition to and readiness for residency. In 2021, AACOM began working with the nation's colleges of osteopathic medicine (COMs) to explore ways to support residency preparation efforts for fourth-year medical students after the onset of the COVID-19 pandemic. There were increased concerns during this period about the preparedness of medical students who likely missed clinical experiences and patient encounters due to the pandemic. As such, COMs across the nation developed mechanisms to evaluate and provide additional refreshers to their medical students to better prepare them to start residency.

To follow on these efforts, the UME-GME Task Force's Transition to Residency Working Group established an action group on residency-readiness bootcamps in 2022. The action group was tasked with developing a national framework for COMs to consider in their efforts to support students in their fourth year of

medical school as they transition to residency. The framework is intended to serve as a guide that will be tailored to meet the specific needs and resource capacity of COMs. It is hoped that a national framework will facilitate increased collaboration and the sharing of tools and information across the nation and will demonstrate to residency program directors that all osteopathic medical students are fully prepared to enter and succeed in a residency position.

To that end, this playbook was developed for faculty and staff to serve as a guide to supplement existing efforts to prepare students for residency. It outlines specific skills that are transferable across specialties (such as responding to codes and performing physical exams) and should be assessed during a residency-readiness bootcamp to be held in the fourth year of medical school.

The model is similar to the Clinical Competency Committee (CCC) in the Accreditation Council for Graduate Medical Education (ACGME) whose role is to attest and sign off for learners.

Feedback on the specific skills was solicited and attained from program directors across specialties, clinical deans, deans and others, both MD and DO.

Background

Developing a national residency-readiness bootcamp framework will provide substantial benefit to osteopathic medical students and COMs. Such a bootcamp may increase the competitiveness of osteopathic medical students applying for residency.

In a survey of clinical deans conducted in 2021, the nation's COMs reported that they desire national-level support for residency readiness. There was also interest in a national repository of resources for residency readiness that all COMs can use for their students as well as a desire to have standardized resources or programs that are available to all COMs. Finally, COMs reported a desire to have a standardized framework for the goals, objectives and assessment benchmarks of residency-readiness bootcamps. To date, several assessment metrics exist, including Entrustable Professional Activities (EPAs) and specialty milestones to assess readiness.

The challenges and limitations of establishing and maintaining residency-readiness bootcamps identified by clinical deans from the COMs in 2021 include:

- Financial cost limitations for implementing a program
- Time constraints for faculty and students
- Limited space and resources available for use by COMs

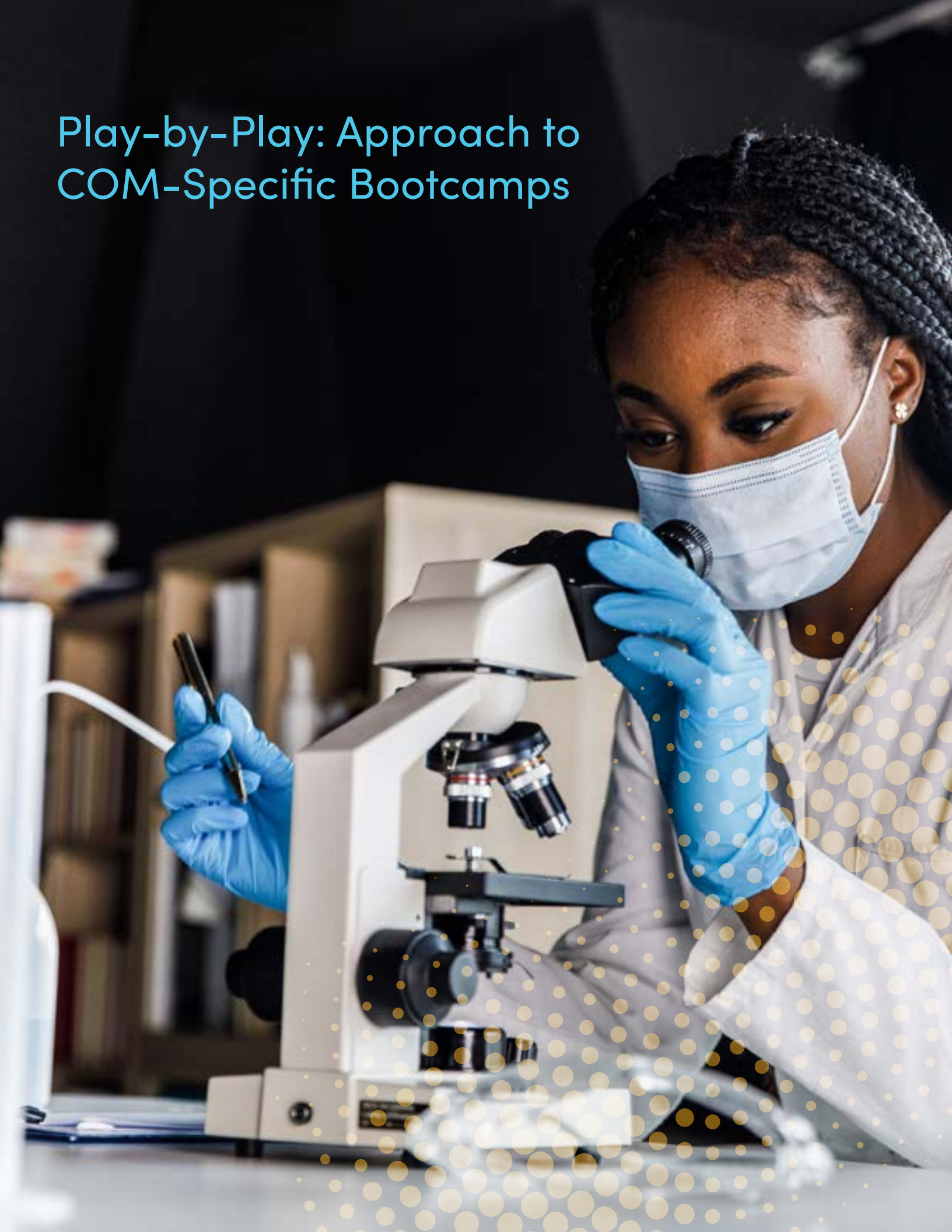
Several COMs have already implemented residency-readiness programming. These include:

- Structured Objective Structured Clinical Examination (OSCEs) and other clinical scenarios
- Simulations using standardized patients for those COMs that have an on-campus simulation center/facility
- Residency-readiness bootcamps (in-person and virtual bootcamps)
- Curriculum-based initiatives and didactics/coursework dedicated to residency readiness

CHART I. SUMMARY OF ACTIVITIES ON RESIDENCY READINESS

Structured OSCEs
Simulations with standardized patients for COMs with and without a simulation facility
Curriculum-based initiatives and coursework
Weekly messages about how to handle scenarios
Sessions with residency program directors
Focus on 5 things residency program directors want: The ability to perform history, a physician exam, good oral summary, proper documentation and to recognize an emergency
Simulation program for OMS IVs
Three-day online/in-person events
Focus on EPAs as foundation or basis of competency/entrustability
AAMC pilot program: program directors are surveyed after students have been in GME for six months
In-person bootcamp catered to specialty that student matched into

Play-by-Play: Approach to COM-Specific Bootcamps



PLAY 1: Understand Your Capacity and What You Need at Your Institution

Consider the following questions at the national and school level when determining how to support residency preparation for medical students:

- What are the benchmarks for residency preparation?
- Who should determine the benchmarks or when to assess them?
- When should COMs observe the benchmarks?
- What goals and objectives should be met in the residency-readiness efforts?
- What is the best time to assess benchmarks prior to graduation?
- Do you need simulation centers/training mediums?
- What partnerships should COMs be striving to obtain if they don't already exist in a specific region (other schools or hospital partnership) and, if necessary, where would funding for partnerships be achieved?
- How could COMs cover some of the important residency skills that are not necessarily covered in milestones or EPAs—like difficult conversations with patients or family members?
- What established resources could be made available and who would oversee them?

CHECKLIST

- Complete resource evaluation at COM
- Determine number of faculty members who can commit to residency bootcamp
- Determine number of days required
- Evaluate the feasibility of bringing students to campus
- Assess ability to leverage clinical sites to host bootcamps

PLAY 2: Understand Your Approach to Residency Preparedness

Consider the following recommended approaches to residency readiness:

- Longitudinal/continuity in residency readiness across the four years of medical school
- Establish a safe learning environment to identify gaps and resources
- Build flexibility into the attestation process: Consider intertwining mentorship opportunities with residents at clinical sites and having the “home base” at a COM as a resource
- Strive to test via practical demonstration rather than via paper to hone procedure-based interpersonal communication skills
- Do not make bootcamps high stakes or an impediment to graduation
- Use the bootcamps as an opportunity to validate skills rather than an opportunity to teach the skills. Resources to refresh the medical students’ knowledge on the skills and procedures should be readily available to students to access online asynchronously (see pages 14-15).

CHECKLIST

- Create communication plan to students on purpose and goals for the bootcamp
- Create communication plan for faculty and evaluators
- Ensure buy-in from leadership
- Organize resources for refreshers that can easily be accessed
- Offer library resources for procedural skills

The structure of the bootcamps can vary, but COMs are encouraged to establish “skill stations” that assess a specific number of skills that can be marked complete once mastery is demonstrated by the student. Remediation should be offered to students until they have mastered these skills.

PLAY 3: One Size Doesn’t Fit All: Bootcamp Setup

The setup of the residency-readiness bootcamp can vary based on the COM, its location and appropriate timing based on schedules and existing curriculum. There may be opportunities to assess skills in a virtual setting as well, as outlined in Chart II. As such, there is no standard recommendation on the number of faculty needed to execute an in-person bootcamp. The action group recommends a flipped classroom approach and arranging stations based on the skills that will be assessed. There can be one station per skill or skill set and students can rotate through each station to demonstrate proficiency. Each skill station should be approximately 15 minutes per skill. The instructor will start with a demonstration and then students will demonstrate their own competency. If a student fails to show competency, that skill will not be checked off and the student’s skills will be remediated at the completion of all the stations.

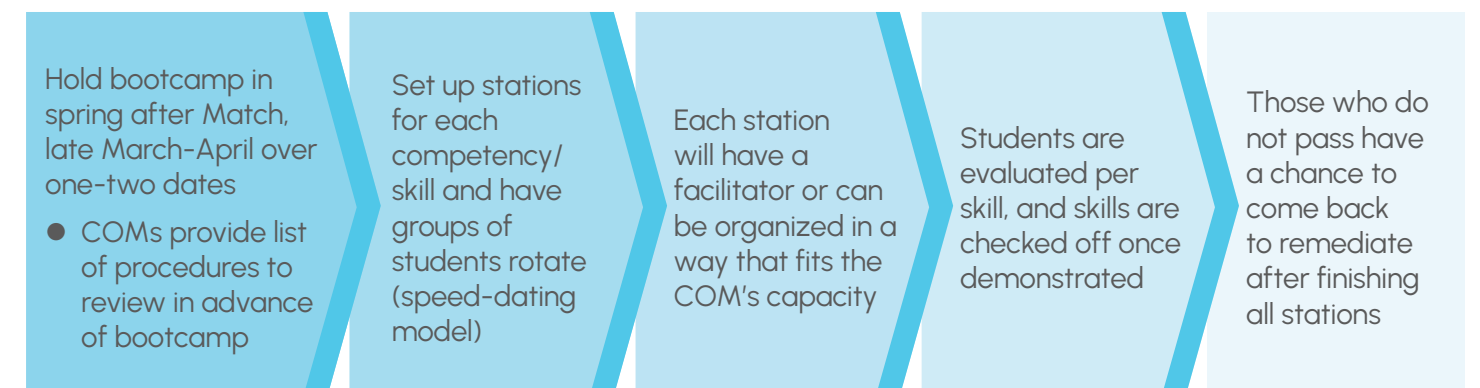
TIMELINE

The action group strongly recommends that the bootcamps are conducted during the spring of the fourth year of medical school, after students have matched and may have more flexibility to attend an in-person bootcamp.

CHECKLIST

- Determine location of residency bootcamp
- Set up tables/stations with a set number of skills to evaluate
- Ensure adequate staff support for bootcamp day(s)
- Consider ways to include the COM’s efforts to assess and validate skills prior to residency in the Medical Student Performance Evaluation

FIGURE 1. RESIDENCY BOOT CAMP LOGISTICS



PLAY 4: Keep It Simple: Assess Few, but Critical, Knowledge and Skills

There are key knowledge and skills needed before entry into residency that should be validated before starting residency, which should be checked off longitudinally during the four years of medical school (see Chart II). The list of skills and knowledge align with EPAs.

Some skills are critical, yet they fade with time and will need to be assessed longitudinally throughout the four years of medical school. Table 2 outlines both the skills that need to be checked off longitudinally and those that need to be validated through a residency-readiness bootcamp before entry into residency.

Cross-Walk of Core Skills with ACGME Core Competencies

Internal Medicine Transition to Residency Individualized Learner Plan (ILP) Templates by Alliance of Academic Internal Medicine

PRE-AND-POST RESIDENCY BOOTCAMP SURVEY TEMPLATES:

[Pre-bootcamp survey template](#)

[Post-bootcamp survey template](#)

CHECKLIST

- Assess skills that align with curriculum
- Determine whether some skills can be assessed in a virtual setting
- Develop rubrics for assessment

CHART II. WHAT CORE KNOWLEDGE/SKILLS DO STUDENTS NEED BEFORE ENTERING RESIDENCY?

Knowledge/Skills Needed	Longitudinal Check Offs During Medical School	Validated Items Before Starting Residency	Can Be Validated Online
ACLS/PALS: Intubation, running a code	X	X	
Acid/Base balance	X	X	X
Consenting for procedures	X	X	X
DNR	X	X	X
How to hand off a patient	X	X	X
Inserting peripheral IV	X	X	
Triage patients when on call	X	X	X
History taking	X	X	X
Physical exam	X	X	
Oral presentation	X	X	X
OPP/OSCE	X	X*	
Ultrasound skills (POCUS)	X*	X*	
Reading and presenting a chest X-ray	X	X	X
Admissions, transfer and discharge documentation	X	X	X
Fluid resuscitation	X	X	
Assessing suicide risk	X	X	X
EKG interpretation	X	X	X
Sutures	X	X	
Access evidence-based resources at point of care	X		
Comfort care transition or goals of care discussion	X		

Knowledge/Skills Needed	Longitudinal Check Offs During Medical School	Validated Items Before Starting Residency	Can Be Validated Online
Communicating with consultants (formal, verbal or written consult request)	X		
How to advocate for patients and health equity as a resident	X		
Communicating with non-physician colleagues (what are appropriate requests)	X		
How to efficiently review the EMR (key tabs and in what order)	X		
Time management, prioritizing tasks (e.g., consults then orders, then family updates, then notes, etc.)	X		
Delivering bad news	X		
Assessing patient's decision-making capacity	X		
DPOA vs. medical decision-maker, POLST vs. advanced health directive	X		
Basics of health insurance	X		
Basics of quality improvement projects	X		
Receiving and providing feedback	X		
Hospice vs. LTAC vs. SNF -> transferring care decisions	X		
Fundamentals of antibiotics	X		
Fundamentals of sedation/analgesia medications	X		
Guides on other procedures like thoracentesis, paracentesis, arthrocentesis, chest tube placement, etc.	X		
Growth mindset	X		
Self-care/wellness	X		

*Based on curriculum at COMs



PLAY 5: Refresh Before and After the Bootcamps

It's ideal to offer an online resource that students can log onto with virtual resources (documents, videos, simulations, etc.) to review skills that they have run into and identify as an individual problem. An online resource would be accessible when needed, and not mandatory or punitive. However, this must be balanced by the program director's need for an attestation of proficiency.

LIST OF PROCEDURES (GENERAL/SPECIALTY SPECIFIC)

Subscription to *New England Journal of Medicine* required to access videos

✔ Abscess Incision and Drainage

✔ Ankle-Brachial Index for Assessment of Peripheral Arterial Disease

✔ Arterial Puncture for Blood Gas Analysis

✔ Arthrocentesis

✔ Basic Laceration Repair

✔ Basic Splinting Techniques

✔ Blood-Pressure Measurement

✔ Bone Marrow Aspiration and Biopsy

Central Venous Catheterization

✔ Internal Jugular Vein

✔ Subclavian Vein

✔ Femoral Vein

✔ Chest-Tube Insertion

✔ Clinical Evaluation of the Knee

✔ Conscious Sedation for Minor Procedures in Adults

✔ Cricothyroidectomy

✔ Diagnosing Otitis Media - Otoscopy and Cerumen Removal

EKG Interpretation

✔ Emergency Pericardiocentesis

✔ Endometrial Biopsy

✔ Endotracheal Extubation

✔ Examination of the Larynx and Pharynx

CHECKLIST

Determine which procedures may apply to specific specialties if wanting to provide more specialty-specific refreshers

Provide resources at institution that may require a fee to access, e.g., through library

Share reference lists in advance of any residency bootcamp activity

✔ Fiberoptic Intubation

✔ Gastrostomy-Tube Exchange

Genitourinary Exam

Male

Female

✔ Hand Hygiene

✔ How to Perform a Punch Biopsy of the Skin

✔ Intraosseous Catheter Placement in Children

✔ Laryngeal Mask Airway in Medical Emergencies

✔ Lumbar Puncture

✔ Nasogastric Intubation

✔ Orotracheal Intubation

✔ Paracentesis

✔ Pelvic Exam

✔ Peripheral IV Insertion : Peripheral Intravenous Cannulation

✔ Placement of an Arterial Line

✔ Positive-Pressure Ventilation with a Face Mask and a Bag-Valve Device

✔ Procedural Sedation and Analgesia in Children

✔ Pulmonary-Artery Catheterization

✔ Pulse Oximetry

✔ Reduction of a Pulled Elbow

✔ Repositioning Dislocated Temporomandibular Joints

✔ Thoracentesis

✔ Ultrasound-Guided Insertion of a Radial Arterial Catheter

✔ Ultrasound-Guided Internal Jugular Vein Cannulation

✔ Ultrasound-Guided Peripheral IV Placement

✔ Umbilical Vascular Catheterization

Urethral Catheterization

✔ Men

✔ Women

✔ Girls

✔ How to Read a Chest X-Ray (iEM, registration required)

✔ Interpretation of the Adult Chest X-Ray

✔ How to Read an Abdominal X-Ray

✔ Approach to Abdominal X-Ray Interpretation

✔ MSK X-ray (Use Musculoskeletal)

✔ Mental Status Exam

Hand Hygiene

Skin Prep, Draping—proper technique

Suture (simple, running, subcutaneous, mattress)/ laceration repair, staples

Incision and Drainage Procedure

Digital Block (administer a local anesthetic)

NG Tube Placement (describe maintenance and proper removal)

Foley Catheter Placement (describe maintenance and proper removal)

IV Access

PAP/Bi-Manual Exam

Male Genital Exam

Rectal Exam

Breast Exam

Wet Mount

Basic MSK Splinting

Wound Dressing

OMT Hospital vs. Outpatient

Vaginal Delivery (FM, OB, EM)

C-Section (appropriately assist with)

Cord Blood Collection

STI Collection

Read Head CT, r/o acute intracranial bleed

IV Fluid Use (pediatric versus adult bolus versus maintenance)

Blood Product Use

Management of DKA

Admission Orders

Discharge Orders and Note

Procedure Note

Post Delivery Note

Outpatient SOAP note

Fetal Heart Tracing

APGAR

Pre-Op Evaluation

Aseptic Protocols

Calculate Creatinine Clearance

Basic Lab Interpretation—CBC, chem panel, UA

Acknowledgments

We would like to acknowledge the members of AACOM UME-GME Task Force's Residency Readiness Bootcamp Action Group for developing the contents of this playbook.

We would also like to thank the residency program directors, colleges of osteopathic medicine deans, clinical deans and members of the Assembly of Osteopathic Graduate Medical Educators and its Residency and Fellows Council for their feedback and input.

Special thank you to AACOM UME-GME Task Force's Transition to Residency Working Group, chaired by Tami Hendriksz, DO, for overseeing this effort. Thank you to the AACOM UME-GME Task Force at large for their contributions.

AACOM UME-GME TASK FORCE'S RESIDENCY READINESS BOOTCAMP ACTION GROUP

CHAIR:

Natalie Nevins, DO

Chair, Associate Dean of GME & Program Development
Touro

May Lin, DO

Assistant Dean of GME & Program Development
Touro

Carrie Champine, DO

Associate Dean of OMS IV and GME
VCOM

Wendy Finch

Clinical Career Advisor
RVUCOM

Praful Patel, MD

Chair and Assistant Professor of OB/GYN & Surgery
ACOM

Amber Fedin, DO

Associate Dean for Clinical Affairs & Associate Professor of Family Medicine
DUQCOM

Ananya Seth

OMS III
VCOM

Alissa Hendricks-Wenger, PhD

OMS III
LMU-DCOM

Kenneth Heiles, DO

Campus Dean, KCU-COM Joplin; Associate Dean for GME, KCU-COM; Secretary/Treasurer (Officer), AOGME
Kansas City University College of Osteopathic Medicine

Samaneh Bolourchi, DO

PGY-1
Touro CA

Abigail Frank, DO

Assistant Dean of GME
WVSOM

Lawrence LeBeau, DO

Chair of Graduate Medical Education Department
ATSU-SOMA

Jordan Spencer, DO

Former RFC Chair
Barrier Islands Psychiatry

Machelle Linsenmeyer, EdD

Associate Dean for Assessment and Clinical Education
WVSOM

Danish Javed, MD

Assistant Professor
ATSU-SOMA

UME-GME TASK FORCE'S STEERING COMMITTEE

Go to [page 17](#).

AACOM UME-GME Steering Committee Membership

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Tami Hendriksz, DO

Dean and Chief Academic Officer, Touro University College of Osteopathic Medicine-California (TUCOM-CA)

CHAIR: UME-GME TASK FORCE

Brian Kessler, DO

Dean, Chief Academic Officer, Campbell University Jerry M. Wallace School of Osteopathic Medicine

CHAIR: WORKING GROUP 3

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OSTEOPATHIC TRAINING WORKING GROUP

Richard Terry, DO

Associate Dean of Academic Affairs, Lake Erie College of Osteopathic Medicine at Elmira College Campus (LECOM at Elmira)

MEMBERS

Luis Banuelos, OMS III

Medical Student, Sam Houston State University College of Osteopathic Medicine (SHSUCOM)

Katherine Bombly, OMS IV

Medical Student, Philadelphia College of Osteopathic Medicine, South Georgia (PCOM South Georgia)

Linda Boyd, DO

Vice President for Academic Affairs and Dean, West Virginia School of Osteopathic Medicine (WVSOM)

Robert Cain, DO

President and CEO, American Association of Colleges of Osteopathic Medicine (AACOM)

Michael Clearfield, DO

Retired, Former Dean, Touro University College of Osteopathic Medicine-California (TUCOM-CA)

DeAundre Dyer, DO

Staff Physician, WakeMed Health

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Ashley Gullett, DO

PGY2 Resident Physician, University of Michigan Health - West

Victor Kolade, MD

Member of AIAMC Board of Directors & Programming Committee, Alliance of Independent Academic Medical Centers (AIAMC)

Christopher Loyke, DO

Dean and Chief Academic Officer, Lincoln Memorial University DeBusk College of Osteopathic Medicine (LMU-DCOM)

Elizabeth McMurtry, DO

Associate Dean for Clinical Education and Faculty Development, Pacific Northwest University of Health Sciences College of Osteopathic Medicine (PNWU-COM)

Rishikesh Menon, OMS III

Medical Student, Touro University College of Osteopathic Medicine-California (TUCOM-CA)

Thomas Mohr, DO

Dean, Sam Houston State University College of Osteopathic Medicine (SHSUCOM)

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Terri Donlin Huesman, MBA

President/Chief Executive Officer, Osteopathic Heritage Foundations (OHF)

STAFF

FACILITATOR OF TASK FORCE

Joshua Mintz

President, CHP Mintz, LLC

Alegneta Long

Vice President, GME Initiatives, AACOM

Madhumita Napa

Project Manager, UME-GME Task Force, AACOM

We also would like to acknowledge Brian Nohomovich, DO, PhD, resident physician with the Internal Medicine Residency Program at Western Michigan University Homer Stryker MD School of Medicine, and member of the Assembly of Osteopathic Graduate Medical Educators' Residents and Fellows Council for his help reviewing this playbook.

NOTES

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