TRANSITION IN A TIME OF DISRUPTION

Practical Guidance to Support Learners in the Transition to Graduate Medical Education

Updated April 2022

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Introduction

The COVID-19 global pandemic has disrupted almost all aspects of life for over two years. Medical education is no exception. Through it all, this community has exhibited remarkable innovation and resilience. Medical students, residents, fellows, educators, and other health care workers have selflessly provided care for patients, oftentimes sacrificing elements of their own professional development while deepening care to others.

As a new academic year approaches, the American Association of Colleges of Osteopathic Medicine (AACOM), the Association of American Medical Colleges (AAMC), the Accreditation Council for Graduate Medical Education (ACGME), and the Educational Commission for Foreign Medical Graduates (ECFMG), a member of Intealth, came together to update voluntary guidance, toolkits, and other resources to assist learners in the transition to their first year of post-graduate medical education and training. These four organizations first came together prior to the 2021 academic year to develop the first toolkit. The collective aim is to provide support to residency programs in the delivery of safe, high-quality patient care while also supporting the well-being, professional development, and equitable treatment of all incoming residents.

These four organizations, along with multiple partner organizations involved in undergraduate and graduate medical education, recognize that "we are all in this together." It is imperative that to recognize the remarkable challenges the majority of incoming first-year residents have faced over the last two years and the challenges they will face as they transition to residency. Many of these incoming residents had their clinical experiences disrupted to some degree during medical school. Others, particularly those from other countries, faced other unique challenges as COVID-19 raged globally. Medical school and the transition to residency are intensely developmental experiences, made even more so in the face of an ongoing and unprecedented pandemic. Medical schools, residency programs, and those in academic medicine must take on the work of transition, emphasizing learners' well-being and professional development while also ensuring patient safety.

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This toolkit was created by a work group with members from the undergraduate-to-graduate medical education continuum. It begins with an important message from the work groups' student members and a first-year international medical graduate (IMG) who entered residency during the height of the pandemic. The toolkit is divided into three sections.

Section I provides a framework and list of questions medical schools, residencies, and learners should review during this transition.

Section II provides a matrix of possible activities to help learners and residency programs implement a successful transition. The recommendations are ***not mandates***; approaches to the transition will need to be tailored based on local needs and resources.

Section III provides a compendium of resources for both learners and programs. The resources are provided to help facilitate a successful and seamless transition to residency and to create the necessary conditions to fully support young physicians' early professional development.

Finally, an Appendix provides questions to guide a learner self-needs assessment.

Email questions regarding the transition to residency and this toolkit to umegmetoolkit@acgme.org.

The Transition to Residency: A Message from Peer Colleagues

Following the rollercoaster of emotions that accompany Match Week comes a rush of deadlines and required paperwork that often surmounts an under-discussed tale of transition: a tale of transformation.

The transition to residency is both exciting and daunting. Not only is it the culmination of a dream that took years of dedication at great personal expense, it also represents a fundamental shift in identity: we are physicians now. At this milestone, we encourage you to take a moment to appreciate your identity and background. We come in all shades of skin color, cultural backgrounds, languages, appearances, sexual orientations, genders, and personalities. Our challenge as residents will be to resist the pressure to liquify our unique identities, and instead translate our lived experience as assets in our role as clinicians - to paint with our own colors everything we touch. As residents, we will learn to embrace a wide spectrum of change while reacting constructively to experiences, patient encounters and diverse groups of health care professionals. This is a time to grow through the difficulties we may face without letting them erode the carvings of ourselves. For this, we must learn how to translate our personalities, and possibly our language, into a new community.

The COVID-19 pandemic had a profound effect on our class: from rescheduled board exams and canceled clinical rotations, to limited away rotations and a second virtual interview season. Our personal and professional lives were completely upended. At a time when we were supposed to be hopeful for the future, we were apprehensive: concerned for our present and unclear what this would mean for our futures in medicine. However, we are resilient. What we have seen amongst our classmates and soon to be colleagues in medicine is a resounding sense of optimism. Collectively, we are hopeful that this time of great uncertainty will provide the impetus for needed change and advancement within the health care profession.

This new phase brings both responsibility and autonomy. Throughout the past period, stakeholders across academic medicine have worked to minimize the long-term effects of this pandemic on our career progression and on our ability to fulfill the core duty of our profession: to provide safe and compassionate care for our patients. The AACOM, AAMC, ACGME, and ECFMG | FAIMER collaborated to create this toolkit to aid incoming first-year residents in all programs and specialties from all institutions in the transition to residency process at this stage of the pandemic. While COVID-19 still imposes uncertainty, it is imperative to ensure a safe, high-quality educational experience for newly minted physicians. To facilitate this, we have prepared these resources to help incoming residents and program directors optimize the graduate medical education curriculum for PGY-1s. We hope the disruptions and missed experiences during our undergraduate medical education will present as opportunities for further education and training in residency.

Our experiences will continue to shape and refine our unique identities as physicians and complex individuals. And while we stress the importance of the foundations set by our past selves, it is certain that we will emerge from residency as different people. We must learn to balance the tension between the transformation inherent to becoming physicians and the roots of our authentic selves. It is at this equilibrium that we can do right by our patients, families, loved ones, and communities. With the tides of change, every receding shoreline comes a rising bank. We are the next generation of physicians: shaped by a pandemic and ready for what future may come.

Alexander L. Lindqwister (Class 2022)
Ahmad Mahdi MD (Class 2020)
Marni Wilkoff (Class 2022)

Statement Regarding the Impact of Implicit Bias on First-Year Resident Performance Evaluation

Because of the substantial variation in clinical experiences for this year's incoming resident class caused by multiple surges of COVID-19, consideration of how receiving residency programs will determine the level of preparedness of its starting first-year residents presents a unique challenge. 2020 and 2021 saw the recrudescence of racial, ethnic, and immigrant animus, and the biases within societal structures have been further illuminated more carefully than ever before. In seeking to increase the diversity of the US graduate medical education (GME) workforce, and to provide inclusive learning environments, all must remain cognizant that implicit bias can adversely influence performance evaluations. Some individuals may be overvalued and others undervalued based on these perceptions, perhaps to the detriment of each. This toolkit includes an opportunity for faculty development on bias, specifically focused on evaluation of first-year residents for competencies they bring to a new learning environment. Fair assessment, free from harmful bias, is at the core of professionalism, the commitment to duty and expertise, in any competency evaluation process for determination of readiness, performance, or promotion. Engage faculty members to review the material provided in this toolkit on recognizing and mitigating the various types of implicit bias common in medical education in preparation for welcoming the entering first-year residents. Making the learning environments work for everyone is essential to the collective medical education mission to provide safe care to patients and successfully educate the diverse learners so desperately needed.

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I. Key Topics and Questions for the 2022 Transition to Residency

> NOTE: The topics and questions listed below are intended as a guide only. Given the COVID-19 pandemic is still ongoing and evolving, medical schools and residency programs should consult their institutional policies, local health departments, and the Centers for Disease Control (CDC) regarding specific guidance for COVID-19 illness and vaccination.

Introduction

Despite encouraging signs that the current Omicron surge is abating, the pandemic is still highly active, and it is expected to continue into 2023. As soon as possible after the Match, program directors should share and review their institution's travel, quarantine, and sick leave policies with their incoming first-year residents.

Residency programs should also establish and share their COVID-19 vaccine policies with incoming residents as soon as possible after the Match, including the program's plans for vaccinating new first-year residents who have not yet been vaccinated or received a booster. It is important to note that multiple studies have demonstrated the importance of the booster in helping to prevent serious disease from COVID-19.

- US medical schools should strive to offer a COVID-19 vaccine or if applicable, a booster, to all graduating students as they will be frontline clinical care providers in residency.

To the fullest extent possible, US medical schools should meet with and guide graduating students to identify any possible gaps in their educational program or personal competencies that could affect their transition to residency. This needs assessment should address any gaps in clinical experiences, procedural practice, etc., particularly those important for the specialty into which an individual resident has matched. The goal is to empower the graduating student to engage in a systematic, "warm hand-off" with the residency program.

Residency programs should work with all incoming first-year residents to identify specific needs, review their past clinical experiences, conduct a needs assessment, and address any needs related to relocation. Residency programs should also consider whether they need to organize schedules based on the incoming first-year residents' experiences and needs assessment, the type of supervision that will be needed in the first three to six months, any changes that might be required during orientation, and specific didactics or skills labs that could be used to further identify and fill gaps. In addition, residency programs should inform and coordinate their transition activities with their designated institutional official (DIO) and Graduate Medical Education Committee (GMEC). Many of the challenges and issues will be similar across the residency programs and within each institution.

Newly graduating US medical students should also be provided with information related to their options for access to health insurance during the transition, as gaps in coverage may occur between medical school and entry into GME.

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Below are topic areas and specific questions to assist those working with learners in the transition to GME. Recognizing that many residency programs may have already developed their own protocols during the pandemic, the questions are meant to serve as a guide for programs seeking to develop and/or strengthen their own best practices.

COVID-19 Safety

If required, how can residency programs ensure incoming first-year residents' vaccination against COVID-19, including a booster dose?
- How is tracking of vaccination status and any exceptions maintained?

- What processes are in place for incoming residents who are not vaccinated?

How will the residency program track and monitor the impact of COVID-19 variants?
- Will the residency program require booster doses of the vaccination?

Will there be quarantine rules if a learner develops a COVID-19 infection during the transition?
- If so, how will the residency program manage the transition to allow timely starts?

Will the residency program continue current COVID-19 infection policies or are revisions related to issues such as quarantine and sick time needed?
- Are there visa implications for foreign national IMGs (i.e., non-US citizens) in need of extended sick time/leave as a result of COVID-19 infection?

What are the residency program's personal protective equipment (PPE) training and verification processes? Do these need to be revised?

Readiness/Patient Safety

Undergraduate medical education (UME) experiences for incoming first-year residents who graduated during the pandemic may have been altered or interrupted. The entire GME system needs to ensure a culture that supports identification of possible competency gaps in new/rising first-year residents as a result of the pandemic and supports filling those gaps while ensuring patient safety.

Key questions related to recent US medical school graduates include:
- Post-Match, what role do US medical schools have in preparing newly graduated students to enter residency?

- What can US medical schools and learners do to ensure an effective hand-off from UME to GME?

- What role can US medical schools play in new or enhanced transition-to-residency courses?

Key questions related to orientation and onboarding of new residents include:
- How should the residency program's orientation change (assessment and training) to identify individual learner needs?

- How should supervision change to ensure patient safety, support first-year resident growth positively, and not negatively impact supervisor (resident and faculty member) well-being?

- How can incoming learners be supported in providing an informed self-assessment, including a review of their various medical school experiences and identification of any significant experiential gaps?

- How will the residency programs tailor first-year residents schedules, if needed, based on individual needs assessments and review of possible gaps encountered during medical school due to COVID-19?

- How will the residency program monitor and ensure incoming first-year residents are not inappropriately labeled or judged (e.g., labeling bias, first impression bias, stereotyping, racial, and ethnic bias)?

First-Year Resident Well-Being

How can learners be best supported as they deal with common transition pressures, such as relocation and connecting with new peers?

- How can programs best support learners were interviewed virtually and had not visited the community?

- What travel and relocation issues still exist for incoming residents?

- What support can be given to foreign national IMGs who are unable to have family members accompany them to the US due to the pandemic?

How can incoming residents' life events and COVID-19-related concerns best be addressed?

- Much of life has been put on hold for over two years. How has this impacted incoming residents?

- What are incoming residents' concerns about their professional competence and preparedness for residency?

- How will residency programs address and support first-year residents' fears of exposures/becoming ill?

- How will residency programs address the ongoing impact of current national spotlight on racism—personal, family, and community impacts?

- How will residency programs create a sense of community and belonging, especially for underrepresented minorities and foreign national IMGs challenged during the COVID-19 pandemic?

- How will residency programs address the ongoing burden of caring for increased numbers of very ill and dying patients?

Transition Logistics

How can residency programs connect incoming first-year residents with current residents who have similar life experiences?

- Does the program have a process for identifying residents or others in the community with similar backgrounds, needs, or experiences to connect with a new resident?
    - Connection for identification of school systems
    - Connection to finding housing or family resources

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Questions to Guide a Self-Needs Assessment

The following is a set of questions to help guide a self-reflective process for both program directors and incoming residents regarding experiences that may have been interrupted during medical education due to the pandemic.

First-Year Resident Questions

- Which, if any, educational experience in medical school was the *most* disrupted?

- Did the pandemic cause you to miss any of your clerkships or electives? If yes, which ones?

- Which clinical experiences were done in a virtual setting versus the clinical setting?

- Did the pandemic impact your ability to observe or perform procedures that are relevant to your specialty?

- In which procedures do you believe you need additional education and training due to missed opportunities given the circumstances?

- What concerns you most about any disruptions to your medical education with respect to beginning residency?

- How confident do you feel in your ability to look up evidence-based recommendations and access point-of-care diagnostic aids?

- Based on your medical education experiences, is there any additional education, training, or other experience that you would like to receive during the transition to residency?

- Were you able to complete elective experiences germane to your specialty, and if so, what skills are you bringing with you from these experiences as you transition to residency?

- Based upon this reflection, what education/training schedule adjustments and learning resources or experiences would be of most assistance to you? How do these reflections change your learning plan?

- Did the pandemic interrupt your ability to complete rotations in certain clinical settings (ICU, inpatient, emergency department, outpatient clinic, etc.) during medical school?

Program Director Questions

- What information would be helpful to have about your incoming residents with respect to disruptions to their individual medical education experiences?

- How can the program provide flexibility to accommodate individual learner needs?

- Did the pandemic interrupt incoming residents' ability to complete rotations in certain clinical settings (ICU, inpatient, emergency department, outpatient clinic, etc.) during medical school?

- Are there specific clinical procedures or skills you feel students should have been exposed to in order to be prepared for starting the PGY-1 in your program's specialty?

- What additional education and/or training could your program provide to assist incoming residents in closing perceived gaps in their knowledge or confidence? For example, could you provide extra didactic lectures, simulation experiences, or clinical observations?

- How can program administrators and directors assess the skill sets of their incoming residents, considering some were able to complete elective experiences while others may not have had that opportunity?

A Message to Designated Institutional Officials (DIOs), Institutional Coordinators, and Other Leaders of ACGME-Accredited Sponsoring Institutions

The COVID-19 pandemic has introduced widespread, protracted disruptions for over two years to the medical education process in the US, creating new challenges for ACGME- accredited Sponsoring Institutions as they fulfill required responsibilities for oversight and support of GME. DIOs, institutional coordinators, clinical and academic officers, and other leaders within Sponsoring Institutions are responsible for ensuring that clinical learning environments facilitate safe, successful transitions from UME to GME in these altered circumstances.

Individuals with authority for overseeing GME in Sponsoring Institutions are encouraged to review this toolkit and consider how its framework, matrix, and compendium of resources can be employed across ACGME-accredited programs. DIOs, in collaboration with the GMEC at their respective Sponsoring Institutions, may wish to use this toolkit to ensure appropriate oversight and coordination of programs' efforts to address the common and specialty-specific needs of learners making the UME to GME transition in 2022. The DIO and GMEC may consider referring to this toolkit or its contents when providing guidance to Clinical Competency Committees (CCCs). Consistent with ACGME Institutional Review Committee guidance, to avoid sharing information about resident performance with GMEC members (e.g., other residents) who should not have access, GMECs should not engage in CCC activities related to the assessment and remediation of individual residents.

Institutional leaders can support programs by reviewing professional development opportunities for program directors and core faculty members to ensure appropriate support for modified supervisory and educational responsibilities within and across programs. To optimize the likelihood of successful learner transitions, DIOs, GMECs, and others who engage in GME oversight may consider providing enhanced monitoring of the clinical learning environment for first-year residents in areas including, but not limited to, supervision, clinical and educational work hours, patient safety, transitions of care, and well-being. Sponsoring Institutions can enhance efforts to optimize learner transitions by engaging clinical leaders of GME participating sites in institutional planning for the UME to GME transition in 2022. By providing targeted and integrated oversight, Sponsoring Institutions are contributing to systematic approaches that mitigate pandemic-related risks to the educational progression of new physicians.

II. Recommendations to Facilitate the UME to GME Transition during the COVID-19 Pandemic

Focus	March-June: Medical Schools	June (Orientation): Residency Program	July-September: Residency Program
Curricular	• Consider hosting a "specialty bootcamp" or "introduction to the specialty" if the graduating student cannot attend a national one or one does not exist for the specialty. • Review "can't miss" conditions in the specialty or provide a refresher course (could be mini one-to-two- week clinical clerkship). • Introduce learners to the specialty Milestones. • Review core clinical and evidence-based practice skills; consider using online resources for practice and self-assessment. • Complete a needs assessment of medical school experiences, including disrupted rotations and/or clinical experiences (*refer to Section I: Questions to Guide a Self-Needs Assessment*).	• Review clinical and curricular medical school experiences with a program director/associate program director/advisor to identify strengths and gaps. • Review "can't miss" conditions in the specialty; provide a refresher course. • Introduce learners to the specialty Milestones. • Review the *Milestones Guidebook for Residents and Fellows* (Eno et al. 2020) in conjunction with the residency schedule (especially during the first six months). • Provide training in hand-offs, etc. • Consider standardized hand-offs for rotational transitions (not just daily transitions).	• Consider revising the initial clinical rotation schedule and/or didactic curriculum based on a needs assessment. • Consider pairing first-year residents with more senior residents and core faculty members for the first months of the program. • Provide more oversight and direct supervision (and define what that means, and the behaviors involved) for the new residents. • Continue providing didactics of "can't miss" conditions in the specialty. • Maintain a heightened focus on core clinical skills, evidence-based practice, acclimation to institutional systems.
Special considerations for all IMGs (i.e., foreign national medical graduates and US citizen graduates of international medical schools)	• These activities may be difficult for IMGs as many will have graduated from a medical school several years prior to matriculating to a US residency this year. The ECFMG will communicate information related to specialty Milestones to incoming J-1 Visa physicians.	• All activities apply to IMGs.	• All activities apply to IMGs.

Focus	March-June: • Medical Schools	June (Orientation): • Residency Program	July-September: • Residency Program
Assessment	• Consider conducting an initial assessment using the specialty Milestones; can be combined with guided self-assessment (Direct Observation of Clinical Skills (DOCC) app; Hauff et al. 2014; Santen et al. 2015). • Encourage faculty members to perform three to four direct observations of core clinical skills (could use frameworks from the DOCC app).	• Introduce learners to the specialty Milestones. • Conduct a guided self-assessment using the specialty Milestones. • Distribute and review the *Milestones Guidebook for Residents and Fellows* (Eno et al. 2020). • Perform a baseline objective structured clinical examination (OSCE) formative assessment (Lypson et al 2004; Pandya, Bhagwat, Kini 2010; CarlLee et al. 2019).	• Frontload direct observations of core clinical skills. • Empower first-year residents to use evidence-based clinical skills frameworks to both ask to be observed and to use for guided self-assessment (Sargeant et al. 2010; Sargeant et al. 2008). • Consider earlier CCC review of first-year residents as a check-in.
Special considerations for IMGs	• These activities may be difficult for IMGs as many will have graduated from a medical school several years prior to matriculating to a US residency this year. If an IMG is still clinically active between the Match and entry into residency, the individual could ask a peer or colleague to observe and assist them in these activities.	• All activities apply to IMGs.	• All activities apply to IMGs.

Focus	March-June: • Medical Schools	June (Orientation): • Residency Program	July-September: • Residency Program
Advising	• Perform review of third- and fourth-year clinical experiences to identify strengths and potential gaps. • Develop a transition strategy or draft a learning plan for residency that accounts for these strengths and gaps.	• Develop an initial individualized learning plan. • Review initial six-month schedule to set goals and identify potential challenges.	• New residents should meet with their assigned advisor monthly for the first three months, review initial assessments and experiences; at a minimum, ensure at least one meeting within the first three months. • Review the initial individualized learning plan and revise it if needed.
Special considerations for IMGs	• This activity may be difficult with respect to IMGs. Programs could include questions about clinical experiences in their initial outreach to newly matched IMGs.	• All activities apply to IMGs.	• All activities apply to IMGs.

References on Facilitating the GME Transition

These references support the suggestions in the previous section.

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Guidance Regarding Assessment and Bias in Transition Activities

Valid, accurate assessment is essential for effective professional development. However, assessment in medical education has a long and unfortunate history of bias in the ratings and judgments of medical students and residents. Residency programs must be cognizant of and monitor for bias in assessment, especially given the major disruptions many incoming first-year residents have experienced during their medical school clinical education and training. As a result, bias issues may be heightened for incoming residents this year.

There are three major categories of bias:
- **Implicit Bias**: relatively **unconscious** and relatively **automatic** features of prejudiced judgment and social behavior (Stanford Encyclopedia of Philosophy)
- **Explicit Bias**: the attitudes and beliefs we have about a person or group on a conscious level (Perception Institute)
- **Microaggressions**: brief, everyday exchanges that send **demeaning messages** to people because of their group affiliation (Stanford Encyclopedia of Philosophy)

Residency programs must continue to actively work to reduce gender and racial/ethnic bias in assessment, and must also be vigilant for additional common biases in ratings that may be more prevalent toward incoming residents, including (Dickey et al. 2017):
- **First Impression Bias**: too much weight placed on initial impressions that subsequently affects future assessments
- **Labeling Bias**: assessment in residency affected by misinterpreting assessments or data from medical school, or future assessments too heavily influenced by initial ratings and/or performance
- **Confirmation Bias**: focusing on data that confirm an opinion and overlooking evidence that refutes it

Institutions, programs, and individual faculty members can mitigate bias through a variety of efforts and activities. On the institutional and program levels, the following can be helpful (Black 2021):
- Implement unconscious bias training
- Schedule open forums to discuss diversity, equity, and inclusion
- Survey students and residents regarding their experience
- A more real-time assessment and intervention conveys support and improves the learning environment more quickly
- Develop strategic plan to increase diversity among learners
- Support learners who engage in diversity work

Dr. Aba Black, who conducts implicit bias training as part of an assessment course at Yale University, notes, "While unconscious bias training has demonstrated a reduction in implicit bias, the evidence suggests we can't fully eliminate bias. More multidimensional bias training can decrease implicit bias for as many as 8 weeks after training (e.g., awareness activities, training participants to be concerned about its effects, and de-bias training)" (Atewologun et al. 2018).

Work has shown that training on the nature of implicit bias is useful in recognition of that form of bias when practiced by others, but insufficient to eliminate those same biases in one's own behaviors (Pronin and Kugler, 2007). Strategies that assume bias, focus on understanding the mechanism of those biases, and focus on subsequently undermining those mechanisms are the most effective in reducing implicit bias in management evaluation (Jost, et al., 2009). Putative assessment of the capabilities of incoming residents from marginalized groups based on medical school evaluations may benefit from considering mechanisms by which implicit bias may have colored the strength of that evaluation.

Finally, the following individual-level activities can be helpful for faculty members (Black 2021):
- Be aware of your personal biases and the spectrum of social inequities

- Know your program's performance metrics for learners and use them

- Use behavior-based, specific language when evaluating learners

- Practice mindfulness

- Use self-directed tools
  - Gender Bias Calculator
  - Implicit Association Test via Project Implicit

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Equity Practice and Inclusive Pedagogy for Faculty Members in GME

The ACGME has created a new course in its online learning portal, Learn at ACGME. The course is based on a presentation by Dr. Sunny Nakae, senior associate dean for equity, inclusion, diversity, and partnership, and associate professor of medical education at the California University of Science and Medicine. The course, "Equity Practice and Inclusive Pedagogy for Faculty in Graduate Medical Education," focuses on implicit bias in performance reviews and will be especially helpful for program directors. Note that a Learn at ACGME account is required for access; registration is free.

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III. Available Resources to Support Transition

Resources by Competency

Medical Knowledge/Patient Care
- [HumanDx](#)
  A useful resource, especially for internal medicine
- [Society to Improve Diagnosis in Medicine](#)
  This society offers videos to view, including some on [clinical reasoning](#)
- [Bedside Medicine Exam Skills | Stanford Medicine 25 | Stanford Medicine](#) Resource on bedside and physical examination skills

Clinical Skills
- [University of Utah Review Laboratory Medicine Curriculum](#)
  For interpreting laboratory results
- [Suturing Videos and Online Lessons](#)
- Heart Sound Auscultation and Interpretation:
  - [https://www.practicalclinicalskills.com/heart-sounds-murmurs](#)
  - [https://www.easyauscultation.com/heart-sounds](#)
- [Harvard University Wave-Maven](#)
  For electrocardiogram (EKG) interpretation
- [Yale University Neuroexam.com](#)
  For neurological exam review
- [East Virginia Medical School](#)
  Imaging review course
- [Penn Medicine](#)
  Chest x-ray review course
- [Society of US in Medical Education ultrasound review modules](#)

Mobile Apps for Clinical Skills
- VisualDx – PoC DDx aid ([iOS](#) | [Google Play](#))
- Sanford AntiMicrobial Therapy Guide ([iOS](#) | [Google Play](#))
- Sublux Radiology PoC aid ([iOS](#) | [Google Play](#))
- MDCalc ([iOS](#) | [Google Play](#))
- CDC Vaccine Schedules ([iOS](#) | [Google Play](#))
- AHRQ and USPSTF Preventive Screening Guidelines ([iOS](#) | [Google Play](#))
- Epocrates ([iOS](#) | [Google Play](#))
- Canopy Speak Medical Translation App ([iOS](#) | [Google Play](#))

Communication and Interpersonal Skills
- [DocCom](#)
  Web-based modules on communication skills. This is a paid subscription service, but its free resources include:
  - [Three free modules](#)
  - [A demonstration](#)
- [Delivering Bad or Life-Altering News](#)
  Review breaking bad or difficult news frameworks from the American Academy of Family Physicians
- [VitalTalk App](#)
- [Interprofessional Education Collaborative](#)
  Communication teamwork competencies
- [AMA Telehealth Clinical Education Playbook](#)

Professionalism
- [American Board of Internal Medicine Foundation Charter on Medical Professionalism](#)
- [American Medical Association Journal of Ethics](#)
- Review the [specialty-specific Milestones](#)
- [ACGME AWARE Well-Being Resources](#)
  These resources are accessed in the Learn at ACGME platform; they require registering for a free account.

Practice-based Learning and Improvement

Useful Activities
- Review I-PASS or another hand-off framework
- Understand the basics of reflective practice, motivation, and self-regulated learning
- Understand feedback and how to seek it
- Read the book *Thanks for the Feedback* (by Stone and Heen), on how to *receive* feedback

Resources
- Review an ILP template and write an initial draft
- [Evidence-Based Practice](#)
- Review constructing a PICO(T) question using information from the University of Toronto
- Review **R**apport, Explore **R**eactions, Explore **C**ontent, **C**oach for Change (R2C2) framework from Sargeant and colleagues at Dalhousie University.
  - [R2C2 framework for residents](#)
- Review the ADAPT model of Feedback, via the University of Washington: https://sites.uw.edu/uwgme/adapt/

Systems-based Practice
- AMA's health systems science modules
  Access at [Online Medical Student Education from the AMA's Accelerating Change in Medical Education Consortium](#)

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AACOM Resources

[Osteopathic Considerations for Core Entrustable Professional Activities (EPAs) for Entering Residency](#)

Residency Readiness Resources

The AACOM Clinical Education Transformation Working Group compiled curriculum elements and resources for fourth-year medical students as they prepare to transition to residency. The resources include selected curriculum elements linked to [Entrustable Professional Activities (EPAs)](#) and resources to help students and faculty assess and review the content. The resources are organized by EPA, highlighting the minimum threshold a student is expected to achieve for each EPA, and where possible, resources are also included. Specific resources include: history and physical script; patient encounter rubric; EHR Facilitator Guide; Differential Diagnosis resources; understanding and applying information on laboratory data; urinalysis; interpreting the X-ray; pharmacology: how to write and understand prescriptions; 14-minute patient encounter; documentation example; guidelines for oral presentation; central line procedure and more. The focus of these resources is on the graduating physician, not specific to a specialty. Access the [residency readiness resources](#).

[Optimizing Your Transition from Match Day to PGY-1 Day](#)
This webinar, hosted by the Assembly of Osteopathic Graduate Medical Educators (AOGME) Residents and Fellows Council (RFC) leadership, shares helpful tips on the transition to the first year of residency. The RFC leadership addressed questions and concerns on what to expect, wellness and life skills, orienting yourself to a new setting, and more. [View the webinar recording](#).

[Understanding Your Residency Contract](#)
This presentation from Susan Sanford, JD guides fourth-year medical students through the residency contract process. Ms. Sanford provides an overview of what to expect in a resident agreement, including common provisions and language. [View the webinar recording](#).

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AAMC Resources

The AAMC's COVID-19 resources include:

- [AAMC's Coronavirus Resource Hub](#)

- [Clinical Teaching and Learning Experiences: A Resource Collection to Support Innovations in Health Professions Education](#)

- [The AAMC Building Better Curriculum Webinar Series: Special Edition: Clinical Learning Remotely due to COVID-19](#)

- [MedEdPORTAL's collection on virtual learning](#)

- [AAMC Competency Based Medical Education website](#)

COVID-19 Resource Hub

The AAMC continues to monitor guidance from federal, state, and local health agencies as it relates to COVID-19. [This website](#) includes broad information and updates from the AAMC on this global health concern for a variety of stakeholders.

Clinical Teaching and Learning Experiences: A Resource Collection to Support Innovations in Health Professions Education

Designed by diverse educators, this working collection features clinical learning experiences that can be readily used or easily adapted for specific, local settings. The collection is actively used by thousands of medical educators around the world.

Initially launched in response to the COVID-19 pandemic's significant impact on the teaching and learning of health professionals, this open repository of curated resources is intended to complement *MedEdPORTAL's* [collection on virtual learning](#) and the special edition of [Building Better Curriculum series](#) on learning remotely (see below for both).

As this collection continues to grow and evolve beyond the pandemic, new teaching and learning experiences across both virtual and in-person settings will be added. All submissions are welcome but innovations on these topics are of particular interest**: (1) diversity, equity, and inclusion, including antiracism; (2) quality improvement and patient safety; and (3) telehealth**.

The AAMC Building Better Curriculum Webinar Series: Special Edition: Clinical Learning Remotely due to COVID-19

The special edition of a long-standing series highlights innovative and new approaches to the curriculum as schools respond to the pandemic and work to ensure high-quality learning experiences. All sessions are available for free on this website. Topics include:

- Teaching Remotely during COVID: A Closing Celebration of our Most Viewed Resources (October 22, 2020)
- Arts and Humanities Teaching Amidst the Pandemic (October 8, 2020)
- COVID-Care (September 24, 2020)
- Remote Teaching of Pain and Opioid Use Disorder (September 10, 2020)
- From Service Projects to Formal Curricula (August 13, 2020)
- Supporting Learner and Faculty Wellness During COVID-19 (July 30, 2020)
- Teaching Patient Safety During the Pandemic (July 16, 2020)
- Teaching Anti-Racism and Health Equity Part II (July 2, 2020)

MedEdPORTAL Virtual Learning Resources during COVID-19

This collection features peer-reviewed teaching resources that can be used for distance learning, including self-directed modules and learning activities that could be converted to virtual interactions. As always, the resources are free to download and free for adaptation to local settings.

Select Resources:

- COVID-19 Pneumonia and Status Asthmaticus With Respiratory Failure in a Pediatric Patient: A Simulation for Emergency Medicine Providers
- Down to the Last Dollar: Utilizing a Virtual Budgeting Exercise to Recognize Implicit Bias
- Leveraging Podcasts to Introduce Medical Students to the Broader Community of Health Care Professionals
- Osteoporosis: A Small-Group Case-Based Learning Activity
- Foundational Telemedicine Workshop for First-Year Medical Students Developed During a Pandemic
- How Assumptions and Preferences Can Affect Patient Care: An Introduction to Implicit Bias for First-Year Medical Students
- Virtual Interactive Case-Based Education (VICE): A Conference for Deliberate Practice of Diagnostic Reasoning
- It's Getting Hot in Here: Piloting a Telemedicine OSCE Addressing Menopausal Concerns for Obstetrics and Gynecology Clerkship Students

AAMC Competency-Based Medical Education Website

This site includes information about CBME, including the *AAMC New and Emerging Areas in Medicine* series, which was developed by leaders from across the medical education and clinical practice communities. These competencies are intended to add depth to key emerging areas to guide curricular and professional development, formative performance assessment, cross-continuum collaborations, and, ultimately, improvements in health care services and outcomes. Areas include: Quality Improvement and Patient Safety; Telehealth; and Diversity/Equity/Inclusion.

ACGME Resources

The following resources can be found on the ACGME website or in the ACGME's online learning portal, Learn at ACGME. Links are embedded below.

All Milestones resources can be found on the Resources page in the Milestones section of the ACGME website.

Milestones Guidebooks and Research Publications

- Assessment Guidebook
- Clinical Competency Committee Guidebook – Third Edition
- Implementation Guidebook
- Milestones Guidebook – Second Edition
- Milestones Guidebook for Residents and Fellows – Second Edition
- Milestones National Data Reports with PPVs – 2019 and 2020
- Milestones Research and Reports
- Milestones Bibliography of Research

Faculty Development

- Faculty Development in Assessment Courses
  Course information, including information on the regional hubs, and registration links (when available) can be found here.

- Web-Based Interactive Modules
  These short, 15-20-minute modules cover basics of assessment and the Milestones:
  - Assessment 101
  - A Milestones Primer

- Direct Observation of Clinical Care (DOCC) App
  This app contains a set of evidence-based frameworks that can guide medical interviewing, clinical reasoning, informed decision-making, hand-offs, breaking bad news.

- Teamwork Effectiveness Assessment Module (TEAM)
  This is a web-based multisource feedback assessment tool that specifically targets interprofessional teamwork.

American Medical Association (AMA) Resources

- The **American Medical Association [Personal Priorities in Transition](#)** program guides graduating students through an informed self-assessment to identify their unique strengths and potential gaps in preparation for residency. The tool prompts learners to create an individualized learning plan for the transitional period and offers relevant resources. The tool is intended to spur developmental conversations between residents and GME programs.

  Rising first-year residents can complete this process independently and retain control whether to share their self-assessment and/or learning plan.

  Program directors interested in formally enrolling their program should email gme@ama-assn.org for additional resources.

- **Facilitating Effective Transitions Along the Medical Education Continuum.** Access at: [Facilitating Medical Education Transitions Along the Medical Education Continuum](#)

- **Organizational Steps to Support Medical Educators**
  Access at: [Protecting the Education Mission During Sustained Disruption](#)

- AMA's **health systems science modules**
  Access at: [Online Medical Student Education from the AMA's Accelerating Change in Medical Education Consortium](#)

Resources for IMGs

- [ECFMG Well-Being Module](#)
  Addresses common transitional and ongoing well-being challenges for foreign national medical graduates

- [ECFMG Pre-Arrival Information](#)
  Addresses issues such as arrival in the United States, housing, transportation, and more

- [National Academy of Medicine (NAM)](#)
  A robust library of resources for physicians working during COVID-19

- [Interim Clinical Guidance](#)
  The US Centers for Disease Control and Prevention (CDC) guidance for the management of patients with confirmed COVID-19

- Review data on [COVID-19 vaccinations around the world](#) (updated each morning Greenwich Mean Time)

- [US State Department](#)
  This website contains up-to-date travel requirements

Well-Being Resources
AAMC
- Review this AAMC resource for mindfulness in GME.

- National Academy of Medicine (NAM) Action Collaborative on Clinician Well-Being and Resilience
  NAM has a portfolio of resources that can be helpful, including a Clinician Well-being Knowledge Hub (linked above).

- WellConnect (commercial)
  The WellConnect site has several programs that medical schools and residencies may find helpful. There is a fee for their products.

- Compendium of Resources related to Clinician Well-Being

- *New England Journal of Medicine*: Preventing a Parallel Pandemic — A National Strategy to Protect Clinicians' Well-Being
  Article by Victor J. Dzau, MD; Darrell Kirch, MD; and Thomas Nasca, MD

- Edge for Scholars Suicide Prevention Resource
  This includes content for medical students and residents/fellows.

ACGME
- Well-Being in the Time of COVID-19
  The ACGME developed COVID-19-specific well-being resources, including information about the AWARE suite of resources and app, available in Learn at ACGME.

- To address the challenges of the global COVID-19 pandemic on residents and fellows and their teachers, the ACGME assembled and engaged some of the nation's experts to create "Well-Being in the Time of COVID: A Guidebook for Promoting Well-Being during the COVID-19 Pandemic."

- **AWARE Podcasts**
  Search "ACGME AWARE" on any podcast platform for additional well-being-related podcasts from the ACGME. Other AWARE well-being resources can be found in Learn at ACGME.
  - Transition Challenges: Medical School to Residency and Residency to Practice
  - The Impact of COVID-19 on Well-Being during Training
  - A four-podcast series "Cognitive Skill-Building for Well-Being" explores mindsets such as impostor phenomenon and maladaptive perfectionism and how they can be managed.
    - Episode 1
    - Episode 2
    - Episode 3
    - Episode 4

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Financial Guidance

Many graduating students face substantial financial pressures. The following resources may be helpful to learners during the transition.

- Federal Student Aid (US Government)
  This site provides information about COVID-19 and forbearance for students, borrowers, and parents.

- AACOM Chat with the Residents Post-Election and PSLF
  A webinar on public service loan forgiveness (PSLF).

- AAMC Financial Information, Resource, Services and Tools (FIRST)
  This website contains useful resources for learners, including tip sheets, videos, and webinars, including:
    o Videos on financial aid
    o A budget worksheet

Transition Resources Offered by Program Director Groups

American College of Radiology – TEACHES Program

Radiology-TEACHES uses case vignettes integrated with the ACR Select® clinical decision support (CDS) to simulate the process of ordering imaging studies. ACR Select is a digital representation of the ACR Appropriateness Criteria® for diagnostic imaging. Learners receive evidence-based feedback at the virtual point of order entry, thereby better understanding appropriate imaging utilization and empowering them to reduce waste. Programs register for the program which provides modules based on clerkship rotation. Scores and reporting are available through the education portal.

Council on Resident Education in Obstetrics and Gynecology (CREOG)

- CREOG has a post-Match curriculum for learner entering residency.

Association of Program Directors in Internal Medicine (APDIM)

- Faculty Development Resources
  Resources for UME to GME transition
- Resident-Led Handoffs Training for Interns: Online Versus Live Instruction with Subsequent Skills Assessment
  Published in 2017, incoming residents may find the overall themes helpful
- IM Sub-Internship Curriculum 2.0
  This resource is part of the UME–UME Program Resources page and the curriculum highlights skills program directors wish to see in rising residents
- Transition to Residency Course Educators
  Social media posts that share best practices to help incoming residents
- In-Training: The Agora of the Medical Student Community
  These articles are written by medical students

Coalition for Physician Accountability

The Coalition for Physician Accountability created guidance for the UME to GME transition in May of 2020 that was updated in January 2021 and can be helpful to programs.

A work group of the Coalition also answered Frequently Asked Questions regarding away rotations.

Appendix A
Preparing for Your Transition: Questions for a Self-Needs Assessment

The transition to residency continues to be uniquely challenging due to the ongoing pandemic. It is recognized that some portion of new residents' medical school experience was likely disrupted over the last two years. Prior to arriving at their new residency program, new first-year residents are encouraged to perform a self-needs assessment, ideally in partnership with a trusted medical school faculty member or advisor, to help ensure as smooth a transition as possible.

Questions for a Self-Needs Assessment

- Which educational experience in medical school was the *most* disrupted?

- Did the pandemic cause you to miss any of your clerkships or rotations? If yes, which ones?

- Which clinical experiences were done in a virtual setting versus a clinical setting?

- Did the pandemic impact your ability to observe or perform procedures that are relevant to your specialty?

- In which procedures do you believe you need additional education and/or training due to missed opportunities given the circumstances?

- What concerns you most about the disruptions to your medical education with respect to beginning residency?

- How confident do you feel in your ability to look up evidence-based recommendations and access point-of-care diagnostic aids?

- Based on your medical education experiences, are there additional training, education, or other experiences that you would like to receive during the transition period to residency?

- Were you able to complete elective experiences germane to your specialty, and if so, what skills are you bringing with you from these experiences as you transition to residency?

- Based on this reflection, what education and training schedule adjustments and learning resources or experiences would be of most assistance to you? How do these reflections change your learning plan?

- Did the pandemic interrupt your ability to complete rotations in certain clinical settings (ICU, inpatient, emergency department, outpatient clinic, etc.) during medical school?

Additional Recommendations

- Review the core clinical skills needed for your new residency.

- Perform review of your third- and fourth-year clinical experiences – identify strengths and potential gaps.

- Ask to be observed by faculty members, if possible, seeing several patients for some last-minute coaching on clinical skills.

- Review your specialty's Milestones (go to www.acgme.org, select the applicable specialty from the "Specialties" menu, and then click on the Milestones link in the menu on the right-hand side of the page), as well as the *Milestones Guidebook for Residents and Fellows*, here.

- Review the basics of proper patient hand-offs (i.e., daily sign-outs).

- Talk with your new program director before arriving for orientation. Consider sharing your needs assessment with your new program director.

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Appendix B

Examples of Individualized Learning Plans (ILPs)

Incoming first-year residents can use this structured worksheet to complete a learning needs assessment as they transition into the next phase of their career. After completing a draft, work with the program director, an advisor, or mentor to review and consult about an ILP.

Example 1

Step 1: Completing a Learning Needs Assessment

Define Career Goals
Long-Term (over fellowship or into practice and beyond)

a.

b.

c.

Short-Term (next six to 12 months)

a.

b.

c.

Self-Assessment

I) Patient Care
Compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

STRENGTHS:

AREAS FOR IMPROVEMENT:

II) Medical Knowledge
Established and evolving biomedical, clinical, and cognate (e.g., epidemiology and social-behavioral) sciences and the application of this knowledge to patient care

STRENGTHS:

AREAS FOR IMPROVEMENT:

III) Practice-Based Learning and Improvement
Involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care

STRENGTHS:

AREAS FOR IMPROVEMENT:

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IV) Interpersonal and Communication Skills
Result in effective information exchange and teaming with patients, their families, and other health professionals

STRENGTHS:

AREAS FOR IMPROVEMENT:

V) Professionalism
Commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population

STRENGTHS:

AREAS FOR IMPROVEMENT:

VI) Systems-based Practice
Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value

STRENGTHS:

AREAS FOR IMPROVEMENT:

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Step Two: Defining Learning Objectives

Try to come up with three objectives you will work to achieve over the next six months. Take into consideration the strengths and weaknesses you just identified earlier in the ILP process. Each objective should try to follow the SMART criteria: Specific, Measurable, Achievable, Relevant, Time-based.

Step Three: Identifying Strategies/Tools/Resources

Once you have set your objectives, decide what you will need to accomplish them. There may be books, new journal subscriptions, online resources, or courses you wish to take. There may be tools you need, such as an electronic calendar, a dry erase board in your office, or other organizational equipment from an office store. People may also be resources, and you may plan to set up a meeting or to have coffee with a prospective mentor or more senior faculty member to arrange research strategies, clinical experiences, career counseling, etc. You may even set up time with a peer to coordinate group study, research efforts, or board review plans.

Step Four: Evaluating Your Learning

You need to state how you will evaluate the results of what you have planned. How will you know that you have accomplished the above? Some measures are simply that you have completed a set task. Some require more specific outcome measures. Examples for fellowship may be improved scores on in-training exams, a specific percentile on practice tests, or passing the board exam. For those entering practice, specific goals may target procedural experience, or setting goals for performance on quality and patient safety measures. Others are publication or submission of a research idea. The organizational pieces can be measured by observations from colleagues or family or self. Competencies for many positions have systems in place already to measure those.

Lastly, set a time to follow up with your practice advisor/mentor for those entering clinical practice or with the fellowship program director if entering subspecialty education and training. Decide when you will review how you did on these plans, and likely continue to make further plans at that time.

Created by: Moutsios, Sandra A. 2009. Adapted from Burke, Amy. "Individualized Learning Plans: Faculty as Facilitators. MedEdPORTAL. Accepted Dec. 15, 2008.

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Example 2

Goal	Timeline 1	Timeline 2	Resources Required	Challenges	Identifiable Results
Describe a specific, observable learning objective or goal (can be a milestone subcompetency)	When will you begin?	When do you expect to see results?	Identify the resources needed. Who else will you involve? What learning will be necessary?	What may get in the way of accomplishing this objective or goal?	How will you know the results are obtained? What observable measures demonstrate you have achieved this objective or goal?
1)					
2)					
3)					

Template courtesy of Joan Sargeant, Dalhousie University, Canada

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