AMERICAN ACADEMY OF FAMILY PHYSICIANS

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Recommended Curriculum Guidelines for Family Medicine Residents

Residents as Teachers and Precepting in Postgraduate Practice

This document was endorsed by the American Academy of Family Physicians (AAFP).

Introduction

Each family medicine residency program is responsible for its own curriculum. The AAFP Commission on Education's Subcommittee on Graduate Curriculum has created this guide as an outline for curriculum development, and it should be tailored to the needs of the program.

Through a series of structured and/or longitudinal experiences, the curricula below will support the overall achievement of the core educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME) and provide guideposts to program requirements specific to family medicine. For updates and details, please refer to the ACGME website at www.acgme.org. Current AAFP Curriculum Guidelines may be found online at www.aafp.org/cg. These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies, as indicated on each guideline.

Preamble

While some graduating residents may not have a formal role in teaching medical students and residents, these skills can translate into everyday practice. Residents who graduate with excellent teaching skills often provide improved care through better patient education, are strong team leaders, and are more effectively engage their patients in shared medical decision-making assessment. The development of residents'

teaching skills can assist with a future career in academic medicine. Therefore, it is crucial to improve the education for generations of future family physicians, physicians in other specialties, and other health care professionals.

The ACGME Residency Review Committee for Family Medicine recommends that senior residents and fellows serve in supervisory roles during their training, recognizing their progress toward independence. This curriculum guideline provides recommendations that family medicine training programs should include in their curricula. Incorporating these recommendations will improve the education of residents and students and potentially translate to better education of patients and future generations of physicians.

Patient Care

At the completion of residency, a family medicine resident should be able to:

- Recognize that teaching is valuable to clinical care in the following ways:
  - Teaching students is an important skill for physicians, and experience improves this skill and solidifies knowledge.
  - Teaching students improves the family medicine experience and develops colleagues inside and outside of family medicine.
  - Incorporating teaching into a physician's career increases job satisfaction and reduces physician burnout.
  - Having a better understanding of teaching and learning makes people better learners.
  - Patients respect physicians who are teachers.
  - Learning how to teach makes physicians better patient educators.

Medical Knowledge

In the appropriate setting, a family medicine resident should demonstrate the ability to apply knowledge of the following:

1. Educational principles
   a. Adult learning theory
      i. Goal-oriented and directed to incorporate both cognitive and clinically based skills
      ii. Autonomous and self-directing
      iii. Build upon pre-existing resources and experiences of the learner and respects previous learning
      iv. Understand the limits of human attention, the need for breaks, and the potential for fatigue to inhibit learning seem particularly germane to educational principles reflective of the Cognitive Load Theory
   b. Apply principles of Master Adaptive Learning to develop lifelong and adaptive habits
   c. Describe the roles of teachers and learners
   d. Understand that different techniques may be needed for knowledge acquisition versus skill training

2. Assessment
    a. Understanding assessment objectives
        i. To target teaching (e.g., ensuring competency, meeting minimum standards)
        ii. To motivate
        iii. To provide feedback
    b. Assessment methods (e.g., observation, questioning, patient cases, self-assessment)
    c. Objective versus subjective
    d. Validity and reliability of assessments

3. Evaluation and feedback
    a. Summative versus formative
    b. Characteristics of effective feedback
    c. Standard feedback formats
        i. Ask-Tell-Ask
        ii. Plus delta format
        iii. Ask, Reinforce, Confirm, Help (ARCH) feedback for clinical teaching
    d. Common assessment errors, pitfalls, and strategies to overcome them

4. Management of learners at the extremes of the spectrum: challenging to excellent
    a. Identifying common challenges
    b. Techniques for addressing common challenges
    c. Methods of stimulating and challenging excellent learners

5. Requirements for integrating learners into a clinical practice
    a. Supervision
        i. ACGME and American Osteopathic Association (AOA) requirements for residents
        ii. Liaison Committee on Medical Education (LCME) requirements for students
    b. Practice preparation
        i. Welcoming learners
        ii. Setting expectations
        iii. What students and residents can learn in a practice
        iv. Methods for maintaining clinical safety and efficiency while teaching in culturally and psychologically safe learning environments
    c. Billing and coding
        i. Documentation requirements for preceptors of students and residents
        ii. Billing rules when working with students and residents

6. Teaching skills
    a. Recognize differences in knowledge acquisition and apply several different learning aids and strategies
        i. Visual (spatial)
        ii. Aural (auditory-musical)
        iii. Verbal (linguistic)
        iv. Physical (kinesthetic)

v. Logical (mathematical)

b. Provide varied learning environments to maximize educational opportunities acknowledging situational learning
   i. Social (interpersonal)
   ii. Solitary (intrapersonal)
c. Create a safe and active learning environment
   i. Ensure information is relevant, practical, and contextual
   ii. Create an environment that is positive, respectful, antiracist, and inclusive
   iii. Teaching self-reflection as a strategy for:
      a) Quality improvement
      b) Practice-based improvement and management
      c) Lifelong learning
      d) Personal growth
   iv. Assist learners in constructing and carrying out their learning plans
   v. Involve learners in evaluating their learning
   vi. Stimulate learning through social interactions
   vii. Model self-directed learning
   viii. Effectively use questioning during teaching to probe for information and decision-making skills
   ix. Reinforce prior learning and facilitate the application of general principles to various clinical problems by encouraging concept mapping to connect old knowledge to knowledge acquisition
   x. Practice interleaving and spaced learning
   xi. Demonstrate enthusiasm
d. Teaching strategies in various settings
   i. Group learning
      a) Small group discussions
      b) Large group lectures
      c) Case-based discussions
      d) Facilitation of problem-based learning
      e) Flip the classroom technique
      f) Teaching in a virtual environment
   ii. Clinical teaching
      a) Inpatient
      b) Outpatient
      c) Procedures
      d) Bedside
      e) Telehealth and virtual
e. Structured teaching styles
   i. One-minute preceptor/five-step microskills model
   ii. Prepare, Orchestrate, Educate, Review (POwER) precepting
   iii. Summarize, Narrow, Analyze, Probe, Plan, Select (SNAPPS) model
   iv. “What if” model
f. Mentoring and being a role model
   i. Demonstrate self-directed learning
   ii. Demonstrate effective teaching skills

iii. Demonstrate patient care skills and communication

Interpersonal and Communication Skills

At the completion of residency, a family medicine resident should be able to:

1. Identify one's attitudes and behaviors, and recognize the importance of those attitudes as they relate to teaching others

2. Actively engage in giving feedback to and receiving feedback from learners (formative/summative, written/verbal)

3. Use evaluation tools for assessment
   a. Identifying one's own knowledge and experience
   b. Assessment of learner's knowledge, ability, and interest, and adjustment of teaching to this assessment
   c. Collaborate with learner to validate learner's self-assessment
   d. Set learner-appropriate expectations/agenda

4. Provide evaluation and feedback
   a. Demonstrate various methods of evaluation (e.g., direct observation,questioning)
   b. Give useful verbal and written/electronic feedback
   c. Receive feedback and use it to enhance teaching performance
   d. Ability to use evidence-informed medical education to apprise teaching

Systems-Based Practice

At the completion of residency, a family medicine resident should be able to:

- Recognize that physicians are interdisciplinary teachers (e.g., resident teachers teach colleagues,other professionals, junior residents, medical students, and patients)
- Strategize incorporating learners into clinical and non-clinical learning environments while emphasizing maintenance of excellent patient care and clinical efficiency

Practice-Based Learning and Improvement

At the completion of residency, a family medicine resident should be able to:

- Identify strengths and weaknesses in the knowledge base of the clinical team and utilize job aides, huddle boards, practice-level meetings, or coaching to close any gaps
- Be capable of setting learning and improvement goals for themselves, their learners, and clinical teams
- Develop a skillset to evaluate practice guidelines and protocols, update them, and effectively teach their clinical teams how to perform new standards or procedures
- Assess learners in a developmentally appropriate manner using a standardized framework to provide summative and formative assessments
- Effectively provide direct positive and constructive feedback to learners promptly and

be able to navigate individual barriers to the feedback process

Professionalism

At the completion of residency, a family medicine resident should be able to:

- Be timely and present when asked to teach or lead a clinical discussion
- Take teaching responsibilities seriously, always presenting family medicine and residency program in the highest esteem
- Recognize the value of, and incorporate opportunities for, teaching a variety of learners (e.g., students, residents, colleagues, patients) regarding the clinical practice of medicine
- Recognize that physician teachers' role encompasses skill development in professionalism and wellness, not strictly medical content because teachers are seen as role models for learners.

Implementation

This curriculum should be taught during focused and longitudinal experiences throughout the residency program. This may include a selected combination of workshops, observed teaching opportunities, videotaping with review and self-reflection, readings, and even more focused courses or retreats, as appropriate to fit the needs of each program.

Often, concentration is helpful before or during the latter years of residency. Residency programs should offer opportunities to practice teaching in different environments. These might include clinical settings (e.g., hospital, clinic, nursing home), group learning sessions (e.g., lectures, small group discussions), and practice teaching for different purposes (e.g., improving clinical decision making with medical knowledge, professionalism, patient care topics).

Implementation should model the desired teaching behaviors and attitudes. For example, it should be active, including various modalities, and have some repetition to avoid skill regression and promote lasting skills. Faculty who can model excellent teaching skills should have primary roles in the resident-as-teacher curriculum.

It is recommended that assessment and evaluation of the teaching resident be included. Self-evaluation, evaluation by learners, and evaluation by faculty "expert" teachers are encouraged. Some programs may wish to implement observed structured teaching examinations to give a standardized opportunity to observe teaching skills.

Resources

Chowdhury RR, Kalu G. Learning to give feedback in medical education. *Obstet Gynecol.* 2004;6(4):243-247.

Donato AA, Harris I. Use of portfolios for assessment of resident teaching skills. *J Grad Med Educ*. 2013;5(3):476-480.

Erlich, DR, Shaughnessy AF. Student-teacher education programme (STEP) by step: transforming medical students into competent, confident teachers. *Med Teach*. 2014; 36(4):322-332.

Fromme HB, Whicker SA, Paik S, et al. Pediatric resident-as-teacher curricula: a national survey of existing programs and future needs. *J Grad Med Educ*. 2011;3(2):168-175.

Hill AG, Srinivasa S, Hawken SJ, et al. Impact of a resident-as-teacher workshop on teaching behavior of interns and learning outcomes of medical students. *J Grad Med Educ*. 2012;4(1):34-41.

Hill AG, Yu TC, Barrow M, Hattie J. A systematic review of resident-as-teacher programmes. *Med Educ*. 2009;43(12):1129-1140.

Irby DM. Practical teaching: great presentations every time. *Clin Teach*. 2004;1(1):5-9.

Lacasse M, Ratnapalan S. Teaching-skills training programs for family medicine residents: systematic review of formats, content, and effects of existing programs. *Can Fam Physician*. 2009,55(9):902-903.

Lake FR, Ryan G. Teaching on the run tips 11; the junior doctor in difficulty. *Med J Aust*. 2005;183(9):475-476.

Mann KV, Sutton E, Frank B. Twelve tips for preparing residents as teachers. *Med Teach*. 2007;29(4):301-306.

Muller J, Irby DM. Practical teaching: how to lead effective group discussions. *Clin Teach*. 2005;2(1):10-15.

Reamy BV, Williams PM, Wilson C, Goodie JL, Stephens MB. Who will be the faculty of the future? Results of a 5-year study growing educators using an immersive third postgraduate year (PGY-3) faculty development mini-fellowship. *Med Teach*. 2012;34(6):e459-e463.

Seehusen DA, Miser WF. Teaching the outstanding medical learner. *Fam Med.* 2006;38(10):731-735.

Vickery AW, Lake R. Teaching on the run tips 10: giving feedback. *Med J Aust*. 2005;183(5):267-268.

Yu TC, Hill AG. Implementing an institution-wide resident-as-teacher program: successes and challenges. *J Grad Med Educ.* 2011;3(3):438-439.

Yuan D, Bridges M, D'Amico FJ, Wilson SA. The effect of medical student feedback about resident teaching on resident teaching identity: a randomized controlled trial. *Fam*

Med. 2014;46(1):49-54.

Website Resources

Alliance for Academic Internal Medicine (AAIM). Residents as Teachers Curriculum Modules.www.im.org/resources/resources-program/curriculum-resources/residents-as-teachers

Society of Teachers of Family Medicine (STFM) Teaching Physician. www.teachingphysician.org/ (STFM login required)

University of North Carolina (UNC) Department of Pediatrics. Primary Care Pediatrics Residency Curriculum. www.med.unc.edu/pediatrics/education/new-primary-care-track/curriculum/

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