

# Chapter 8

## Teaching Residents

### How to Teach

**Heidi Kromrei**

*Detroit Medical Center, USA*

**William L. Solomonson**

*Oakland University, USA*

**Mark S. Juzych**

*Wayne State University, USA*

#### **ABSTRACT**

*In this chapter, the context of medical education is reviewed in terms of how to teach in the health care setting, commonly used instructional strategies, and the clinical learning environments of the medical student and resident trainees. Although accreditation bodies require residents to teach, and it is an activity that is assigned, it is often not delivered by the sponsoring institution. Key terms in education, learning theories, and instructional strategies are presented. In particular, strategies for medical educators to prepare residents to teach effectively in their residency program are provided. Finally, an instructional development plan for residents, with supporting worksheets and examples, is presented.*

#### **INTRODUCTION**

A core task of residency is to teach medical students as well as patients, families, students, and other health professionals. Nevertheless, very little, if any, evidence-based practical instruction is provided to residents to perform this task well. It is common for residents who have high levels of subject matter expertise, but no background in adult learning theory, instructional strategies, or instructional design, to be tasked with teaching. This issue can be addressed by instilling residents with a basic knowledge of learning theories and/or approaches to instruction for certain types of learners as well as by providing tools to help develop instruction. To this end, foundational concepts, instructional models, and instructional strategies for use in a residency teaching setting are presented.

The goal of this chapter is to provide medical educators, such as program directors, faculty, and chief residents, with basic instructional frameworks and tools to develop the teaching competencies of residents. The learning objectives of the chapter are for learners to:

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## **Teaching Residents How to Teach**

- Review the contextual setting of medical education.
- Understand key terms: learning theory, pedagogy, andragogy, behaviorism, and cognitivism.
- Recognize effective instructional strategies for medical education settings.
- Develop or assist in the development of a plan for teaching residents to teach.

## **BACKGROUND**

The process of educating physicians in the United States is both complex and highly regulated. Before entering into a residency program, allopathic undergraduate medical students in the United States must graduate from a Liaison Committee on Medical Education (LCME)-accredited medical school. After graduation, students are matched with a graduate medical school to complete their residency training. Graduate medical education (GME) typically requires an additional three to seven years of education, depending on the medical student's specialization. Allopathic residency and fellowship programs are accredited by the Accreditation Council for Graduate Medical Education (ACGME). Approximately 700 sponsoring institutions, such as hospitals, universities, medical centers and medical schools, are evaluated for accreditation by ACGME. These institutions sponsor approximately 9,600 individual residency training and fellowship programs, which also are evaluated and accredited by ACGME (2016).

These two regulatory agencies that accredit medical schools and residency programs in the United States mandate that residents be trained to teach and assess medical students and others, as noted above. The LCME requires that:

*Residents who supervise or teach medical students and graduate students... must be familiar with the educational objectives of the course or clerkship and be prepared for their roles in teaching and assessment.... There should be central monitoring of the level of residents' participation in activities to enhance their teaching and assessment skills. There should be formal evaluation [of these skills] with opportunities provided for remediation... if needed. (LCME ED-24, 2016, pp. 10-11)*

In 2001, approximately 50% of ACGME-accredited programs surveyed reported some formal teaching training for residents (Morrison et al., 2001). LCME mandates that institutions that offer medical education programs must be prepared to describe policies and programs designed to teach residents how to teach and assess the performance of medical students in addition to noting how resident participation in these training programs is monitored. Further, the ACGME considers teaching skills to be a core resident competency and expects that residents will develop the ability to teach patients, families, students, visiting resident rotators, and other health professionals (ACGME, 2016). Analyses of "residents-as-teachers" programs show positive outcomes related to the perceptions of participants but limited evidence of program effectiveness (Hill, Yu, Barrow, & Hattie, 2009). Despite requirements and expectations that residents are taught how to teach medical students and others, many medical schools and residency programs report non-compliance with this requirement, and those that are compliant are often unable to ascertain program effectiveness.

Aside from the accreditation requirement for residents to teach, there are inherent benefits of teaching for residents. First, as most instructors will verify from personal experience, teaching a course is

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