CHAPTER 6 NEW SUPERVISION STANDARDS: DISCUSSION AND JUSTIFICATION

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Background

Supervision is a key concept in graduate medical education, with educational and clinical origins, and it is deeply rooted in traditional concepts of the education of physicians.[1,2] It is critical in ensuring safe and effective patient care.[1,3,4] Research has shown lack of supervision as a cause or contributing factor in adverse events,[5] and good supervision has been associated with improved clinical outcomes.[6–8] Supervision and the resulting feedback are important to residents' acquisition of clinical skills and professional development and socialization into the profession.[9,10] Finally, faculty supervision is required for faculty to be compensated when residents participate in care.[11,12] Combined with gradually increasing authority and independence, supervision and feedback allow residents to make the transition from novice learner to proficient practitioner at the completion of residency training.[13] At the same time, excessive supervision without progressive independence, as residents acquire knowledge and skills, may hamper their progression from learner to competent practitioner in their discipline.[13]

The Institute of Medicine's report entitled ''To Err Is Human''[14] did not focus on teaching settings or provide recommendations for enhancing supervision. However, much of the subsequent literature on supervision referenced the report for its alarming data on preventable health care errors that lead to adverse outcomes for patients, with calls for enhanced transparency, oversight, and attention to human factors.[15,16] The IOM's 2008 report entitled ''Resident Duty Hours: Enhancing Sleep, Supervision, and Safety''[17] expressly recommended enhancing supervision in teaching settings.

Empirical Evidence for the Supervision Standards

A systematic review of the literature on supervision in 2000 concluded that ''current supervisory practice in medicine has very little empirical or theoretical basis'' and borrows from other disciplines such as nursing, education, and social work,[9] and much of the early practical guidance on supervision came from other disciplines.[18] Research over the past decade has developed a conceptual framework and guidance for supervision of medical residents. This includes research in the Department of Veterans Affairs,[19–21] single-site studies,[22,23] surveys of residents' perceptions of their supervision,[24] and studies that have explored the value of increasing on-site faculty presence and supervision after the institution of the 2003 duty hour limits.[25,26] Some studies developed models for supervision that seek to promote safety and resident learning.[27] Of particular value is the work by Tara Kennedy and colleagues,[13,28–31] which explores the relationship between supervision and progressive independence and was used to develop the supervision framework on which the ACGME common standards are based.

Supervision and Patient Safety

Appropriate supervision is critical to patient safety. To many, the advent of oversight and increasing regulation of the resident work environment resulted from the 1984 death of Libby Zion in a New York teaching hospital.[32] The inquiry that followed implicated the lack of supervision of the first- and second-year residents who provided most of her care and ultimately prompted the New York State Board of Health to establish regulations governing resident physician duty hours and the level of supervision provided to them.[33,34] Other

accounts of adverse events in teaching institutions also implicate lack of adequate supervision. A study of nearly 4000 patients who presented with a variety of diagnoses that included asthma/chronic obstructive pulmonary disease, chest pain, abdominal pain, hand laceration, head trauma, and vaginal bleeding reported that the quality of care benefited from direct supervision regardless of the residents' level of training.[3] Research on the effect of admission during a weekend on hospital mortality found a larger ''weekend effect'' in major teaching hospitals compared with nonteaching hospitals and minor teaching hospitals, which may be attributable to reduced availability of faculty for supervision.[35] Other studies have also found that reduced availability of faculty supervision over the weekend was associated with increased mortality for patients whose treatment depended on rapid availability of services and personnel.[36] A longitudinal analysis of adverse events in teaching hospitals between 1979 and 2001 revealed that this prevalence of adverse events associated with problems with supervision may have declined, as clinical supervision has increased during the past 2 decades. The study found that improvements in supervision during the latter one-half of the study period (1993–2001) significantly reduced the frequency of events in which suboptimal supervision was a cause or contributing factor (61% versus 47%; $P = .01$).[5]

Supervision and the Acquisition of Competence for Independent Practice

The importance of supervision to the acquisition of competence for independent practice is made prominent in the work of K. Anders Ericsson[10] and colleagues[37] on expert performance, which makes a strong case for ''deliberate practice'' in the acquisition of a high level of skill. Although residents may feel their learning benefits from the increased autonomy, this work has shown that guided practice is instrumental in the development of higher-order competence in complex cognitive and haptic tasks.[10,37]

A number of studies have explored supervision in graduate medical education during the past 2 decades, finding that residents who were more closely supervised through direct observation acquired primary-care skills more rapidly than those who were supervised after the fact.[38] Practice without adequate supervision also may result in learners failing to adopt the best models for care. A classic study[4] showed that when faculty physicians personally examined patients cared for by residents, they reached different conclusions about the severity of patients' illness, diagnosis, treatment and required follow-up and were more critical of the residents' assessment and care plan than when they provided remote supervision.

Supervision is important in allowing residents to receive guidance for giving and coordinating care, even as they progress toward independent practice. A commentary on the fallacies of common recommendations for residency education settings noted that the recommendation to ''let residents run the teams,'' together with ''mistakes are valuable learning opportunities,'' is used as a justification for absent faculty supervision, even for junior residents, and diminishes faculty oversight of care, along with faculty members' active practice of the science and art of supervision.[39]

Recent work has explored supervision from the perspective of those being supervised.[22–27,40] A qualitative study of residents and their supervising faculty revealed that an important aspect of the supervisory relationship entails recognizing and dealing with uncertainty and ensuring that residents know when to involve their supervising physician.[27] Two early studies also defined attributes of a functioning supervisor-supervisee relationship. Research in pediatrics showed that residents were able to evaluate supervision and distinguish between good and poor supervision, with positive characteristics including supervisors who are approachable, nonthreatening, enthusiastic, who provide clear explanations and feedback, and who give residents autonomy that is appropriate for their competence and clinical experience.[40] The same study found that

characteristics of poor supervision included lack of guidance, oversupervision, poor clinical decisions, and overuse of resources by faculty supervisors.[40] Helpful forms of supervision, as defined by supervisors and those being supervised, include linking theoretic concepts to actual practice; personal supervision and guidance on clinical tasks work, with residents reporting that it is more helpful when they are encouraged early to provide their thoughts on diagnosis and treatment; and opportunities for joint problem solving, and providing reassurance to learners.[41]

Justification for the 2011 Common Supervision Requirements

Evidence shows that supervision contributes to high-quality clinical outcomes and resident learning and professional development, particularly when combined with focused feedback. The new Common Program Requirements include enhanced supervision standards that explicitly define the levels of supervision provided to residents for different stages of their training and for various levels of knowledge and skills, to create a seamless transition from highly supervised care during the early years of residency to progressive independence, culminating in a fully trained physician capable of independent, unsupervised practice.

> In the clinical learning environment, each patient must have an identifiable, appropriately credentialed attending physician with privileges who is ultimately responsible for that patient's care. Supervision may be exercised through a variety of methods. Some activities require the physical presence of the supervising faculty member. Other portions of care provided by the resident can be adequately supervised by a more advanced resident or fellow. The program must demonstrate that the appropriate level of supervision is in place for all residents caring for patients.

This preamble to the new, detailed supervision standards and the associated expectations for enhanced supervisory practices and oversight in residency programs and sponsoring institutions is in keeping with the overarching goal of the 2011 common duty hour standards of promoting a climate of patient safety.

Levels of supervision:

> Direct supervision: The supervising physician is physically present with the resident and patient.
>
> Indirect supervision:
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> - With direct supervision immediately available: The supervising physician is physically within the hospital or other site of patient care and is immediately available to provide direct supervision.
> - With direct supervision available: The supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide direct supervision.
>
> Oversight: The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.

This section of the standards is based on the work by Tara Kennedy and colleagues, who conducted extensive observational field work and qualitative interviews of faculty physicians, residents, medical students, and other health care personnel to explore themes around supervision and faculty oversight of clinical care.[28–31] Their research produced the graded levels of supervision, with progressively increasing responsibility and autonomy used in the new standards, to ensure that supervision is commensurate with the residents' knowledge and clinical competence, and with patient severity of illness and intensity of care.

> The privilege of progressive authority and responsibility, conditional independence,

and a supervisory role in patient care delegated to each resident must be assigned by the program director and faculty members.

The preceding section defines that the assignment of progressive responsibility must be made by the program director and faculty and must be based on an assessment of the given resident's ability to safely provide care and, ideally, with educational benefit from the level of autonomy that is being assigned. An early study of resident physicians found that they desire autonomy and that this is critical to their professional development.[42] Other studies similarly have shown that residents desire less supervision than attending physicians want to provide, although both groups agree on the patient care events that require direct supervision and/or involvement of the supervisory physician.[23,27] Residents' self-assessments regarding their need for clinical supervision are problematic in light of research suggesting that self-monitoring or ''reflection-in-practice'' requires high-quality data and the ability to distinguish high-quality data from projection, even in experienced clinicians.[43] In this context, proper balancing of supervision and autonomy, in measures appropriate to a given resident's developing capabilities, is the key to appropriate progressive assignment of independent responsibility. Farnan and colleagues[44] described this ongoing conversation and negotiation between the resident and the supervisor as ''a 2-way street.''

A study of the factors guiding clinical supervisors' decisions to trust residents with critical patient care tasks showed the importance of these faculty decisions and found that 4 sets of factors determined these ''entrustment'' decisions: characteristics of the resident, the attending physician, the clinical context, and the criticality of the task.[45] Kennedy and colleagues[28] found that faculty varied their degree of supervision from ''routine oversight'' to ''responsive oversight'' when routing monitoring revealed concerns. When supervisors' concerns or the situation warranted it (when clinical demands exceeded the resident's abilities), the supervisor would readily move from clinical oversight to ''direct patient care.''[28]

These findings suggest that the ideal set of standards is specific about the level of supervision and, at the same time, allows sufficient flexibility to be applicable to multiple specialties and over the continuum of multiple year levels. The standards were created to allow individual Residency Review Committees latitude in defining what the qualifications of the supervising physician are. The standards affirm that it is appropriate and, in many cases, educationally desirable, to have a senior resident provide supervision to a more junior resident.

Programs must set guidelines for circumstances and events in which residents must communicate with appropriate supervising faculty members, such as the transfer of a patient to an intensive care unit or end-of-life decisions.

Beyond allowing for flexibility for the individual RRCs, the responsibility for supervision can be individualized even further and more appropriately at the level of the training program when instances of significant changes in care arise. Components of an effective supervisory relationship include reassuring the residents that it is appropriate to call the supervisor and that there will be no negative consequences for seeking the attending physician; ready availability of the supervising attending physician, and sharing contact information and responding promptly to questions and requests for assistance; balancing supervision and resident decision autonomy; planning regular communication times; defining in advance the role each resident will play on the team; and setting clear expectations for the types of clinical scenarios that always warrant attending physician input (such as end-of-life and legal issues, transfers to the intensive care unit,

resuscitations, or assistance with navigating difficult systems-level issues).[27]

> Each resident is responsible for knowing the limits of his or her scope of authority, and the circumstances under which he or she is permitted to act with conditional independence.

As adult learners and physicians, residents are expected to take responsibility in the area of supervision. By formally stating that residents are responsible for knowing their limits and the scope of their authority, the standards promote a culture that allows residents to seek assistance, and one in which faculty are trained to provide it. Concurrently, the program director and faculty are expected to assess the knowledge and skills of each resident and change the level of supervision when warranted.

> In particular, during the PGY-1, residents should be supervised either directly or indirectly, with direct supervision immediately available. Each RRC must describe the achieved competencies that PGY-1 residents must possess to be supervised indirectly, with direct supervision available.

The standards establish that, as the least experienced residents, PGY-1 residents should always have direct supervision immediately available. They contain a provision that allows determination of competencies that a PGY-1 resident would need to demonstrate to allow supervision from home by a faculty physician or more senior resident.

Institutional Oversight for Supervision

Creating the environment for appropriate supervision goes beyond setting and complying with supervision standards at the level of the individual residency program. The larger institutional environment, and how faculty are scheduled, rewarded, and developed for the process of teaching and supervising residents, are important in promoting appropriate supervision and faculty oversight of care. To ensure this, the ACGME will monitor sponsoring institutions for compliance with the Institutional Requirements that set forth expectations for institutional monitoring of resident supervision, to ensure that supervision is consistent with ''a) [p]rovision of safe and effective patient care; b) [e]ducational needs of residents; c) [p]rogressive responsibility appropriate to residents' level of education, competence, and experience....''[46]

In addition, as defined in the Institutional Requirements, the designated institutional official is required to make an annual report for the sponsoring institution's and major participating site's Organized Medical Staff and governing body that, among other items, addresses resident supervision and resident clinical responsibilities.

Preparing Faculty for their Role as Supervisors

The quality of the supervisory relationship is very important, as noted in a systematic review of the literature in supervision, which affirmed ''that the quality of the relationship between supervisor and resident is probably the single most important factor for effective supervision.''[9] A recent commentary on supervision called for enhancing faculty development for their role as supervisors of the residents, noting that ''[a]vailable and involved master clinician-educators are integral to the delicate balance of effective supervision, clinical service, and learner autonomy,'' and also sought to dispel the notion that supervision and autonomy are mutually exclusive.[39]

Given the need for a balance between supervision and granting autonomy to facilitate residents' professional development, faculty should receive added training and professional development for their role as supervisors. However, current training for supervisors, when provided, often is not theoretically or empirically based. Guidance should come from studies of effective supervision, which have identified openness, availability, and clear feedback,

including feedback about errors; on the other hand, ineffective supervision includes rigidity, low empathy, failure to offer support, and failure to follow the supervisees' concerns.[27–31] It is encouraging that residents may feel greater satisfaction with attending physicians who are more often present on the floors and may perceive better medical care and autonomy with them at the bedside.[47] A study comparing resident perceptions of the ideal clinical supervisor in 1994 and 2003 found that the supervisor role gained significant prominence in 2003 versus 1994, and the importance of the role of ''physician'' declined concurrently.[48]

Developing faculty as supervisors may require enhanced teaching of skills that residents consider as desirable components of their supervision—but report as being largely absent in many supervisors—including active coaching in clinical skills and procedures, effective communication skills, and clinical decision making that incorporates the principles of cost-appropriate care.[39]

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