The Art, Science, and Study of "Senioring": A Narrative Review on the Role of the Supervising Resident

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ABSTRACT

Background Despite increasing focus on developing senior residents' teaching and supervisory skills, few studies have identified the components of the supervisory resident role. To develop curricula to prepare residents for this role, we must clearly define the supervising role.

Objective To summarize the literature regarding the characteristics and behaviors of effective supervising residents and to propose a model of the supervisory resident role.

Methods We performed a narrative review, searching PubMed and SCOPUS for literature discussing the supervisory resident role. Titles, abstracts, and articles were screened for inclusion, as were the reference sections of included articles. Using inductive thematic analysis, we coded qualitative statements, survey items, and curriculum goals and organized them into themes based on iterative, reflexive discussion. We used these themes to present a model of the supervisory role.

Results Thirty-six works met our inclusion criteria. The articles represented perspectives from faculty members, residents, and medical students and utilized qualitative and quantitative methods. They indicated that the supervising resident is responsible for teaching, managing daily tasks, advocating on behalf of their team members' well-being, and creating a psychologically safe learning environment. Emphasis on each of these components varied by role on the medical team.

Conclusions This is one of the first studies to incorporate multiple perspectives to describe the multifaceted role of the supervising resident, and suggests that individuals' positions on the medical team guide their perception of this role. The literature lacks adequate exploration of junior residents', medical students', interdisciplinary team members', and patients' and families' descriptions of this role.

Introduction

The supervisory role of senior residents is a critical component of residency training. Structured as nearpeer teaching, it provides residents with opportunities to build and hone their teaching, mentoring, and supervisory skills. Across residency programs, it fulfills the requirements of the Accreditation Council for Graduate Medical Education (ACGME) for residents to demonstrate competence in leading a health care team and in educating medical students, junior residents, and other interprofessional colleagues. Given increasing emphasis on the role of residency in creating quality educators and supervisors, further understanding of how we define the role of the supervising resident is critical.

Multiple studies have explored the role of supervising residents as teachers, using existing frameworks for effective clinical teaching to evaluate residents' teaching skills.³⁻⁵ Discussions with medical students have further expanded this work, eliciting additional teaching strategies and leadership skills

that students believe to characterize effective supervisory residents.^{6,7} Further studies have sought current residents' perspectives on the role of the supervising resident and on the types of support they desire from their supervisory residents.⁸⁻¹¹ However, few studies have defined the role of the supervising resident across multiple perspectives.

Supervising residents are responsible for meeting the expectations of many members on a medical team: they oversee medical students and junior residents, report to attending physicians, and collaborate with interprofessional colleagues, patients, and patients' families. Therefore, all these perspectives should be included when defining the role of the supervising resident and elucidating the behaviors and characteristics displayed by effective supervising residents, As more residency programs have sought to develop curricula to enhance the skills and efficacy of their supervising residents, a clear definition of the supervisory resident role is needed to guide the development of these curricula.

This review aims to summarize existing literature regarding the definition of the supervising resident role from the perspectives of all members on the medical team. With this summary, we propose a working model of the multifaceted supervisory resident role, and we outline those characteristics and behaviors that identify an effective supervisory resident.

Methods

We chose a narrative review to explore our topic of interest given the limited existing literature in this field, the need to interpret and synthesize data from multiple perspectives, and the desire to utilize sources that were not represented as published manuscripts^{12,13} (eg, curricula). Initial literature searches yielded a lack of MeSH (Medical Subject Headings) indexing for many relevant articles, which further guided our choice to utilize a narrative review in the interest of ensuring adequate inclusion of pertinent work. Our institution did not require institutional review board approval for conduction of this review.

In consultation with a librarian, we searched titles and abstracts in PubMed and SCOPUS for inclusion of the terms "senior resident," "supervising resident," and "supervisory resident." We selected PubMed and SCOPUS because of their focus on medical literature and our desire to include multiple types of work (eg, curricula). We defined "supervising resident" to mean residents tasked with supervising postgraduate year (PGY) 1 residents or medical students in a clinical environment. Since a "supervising resident" is often described as a "senior resident," we included both terms in our search.

Titles with the specified terms, titles that discussed resident-led education and dynamics between medical students, attendings, and residents, and titles that mentioned "mentorship," "advising," "teaching," or "debriefing" were included in abstract review, as we hypothesized that these may represent components of the supervisory resident role. We screened remaining abstracts and full-text articles for discussion of the definition, components, or assessment of the supervisory resident role. Given consensus among initially reviewed works that teaching is a critical part of the supervisory role, we included literature that delineated qualities of effective resident teachers even if it failed to differentiate between teaching inside and outside of the supervisory role; we limited inclusion of these articles to those that discussed senior residents (>PGY-2) teaching in a clinical context to ensure closer alignment with the supervisory role. Finally, we reviewed the reference sections of included works and additional literature we were familiar with using identical screening criteria. Works were excluded if they were written in a language other than English, did not have a full-text article available, or were outside of the medical field, as we were exclusively interested in studying the supervisory role of resident physicians. Works were also excluded if they discussed the chief resident role, as this position often encompasses further job responsibilities and represents a distinct hierarchical role within residency programs 14,15 (FIGURE 1).

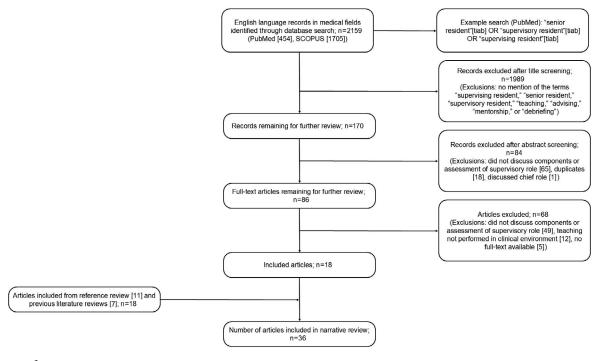


FIGURE 1
PRISMA Diagram of the Search and Exclusion Process Used to Identify Relevant Articles for Inclusion

We then performed semantic thematic analysis of the data from included articles, according to the methodology proposed by Braun and Clarke.¹⁶ Data were analyzed using an inductive approach, such that codes were derived directly from the data and no pre-identified theoretical framework was used to guide coding. 16 To identify codes, one author (E.A.L.) read all articles to familiarize herself with the data. The author then extracted qualitative statements, survey items, and curriculum goals describing the role of the supervisory resident and independently assigned codes to these units of text. These codes were reviewed by the other two authors (P.F., A.K.W.), and disagreements were discussed until consensus could be reached. All authors met regularly to organize codes into categories, which were then synthesized into themes based on triangulation of the authors' interpretations of the data and existing literature. Consensus regarding the organization of codes and definition of themes was obtained at each stage through verbal discussion.

As is common among narrative reviews, 12,13,17 our determination of relevant articles and interpretation of their findings was guided by our experiences. Dr Lang is a third-year pediatrics resident who spends most of her time acting in the supervisory role; as such, she is attuned to trainee perspectives regarding the definition and demands of the supervisory role within her residency program. Dr Fazzio's and Dr Weiss' involvement in program leadership at the fellow and resident level similarly guides their perspectives on the importance of creating supportive learning environments on trainee teams and on the skills they expect supervisory residents to display. To ensure that all perspectives were equally represented and accounted for throughout the review process, all authors discussed and agreed upon the initial definition of terms, inclusion and exclusion criteria, and interpretation and coding of included studies' results, as well as their subsequent organization into themes.

Results

Initial search of the literature revealed 36 works that met our inclusion criteria (TABLE). Fifteen articles presented curricula, ¹⁸⁻³² 10 studies utilized qualitative interviews, ^{6,8-11,33-37} 8 articles used quantitative surveys, ^{3,5,7,38-42} and 2 utilized mixed methods^{2,43} to discuss the role of the supervising resident. One article is a review. ⁴⁴ The articles represented perspectives from program directors, faculty members, residents, and medical students. More than half of the articles (n=22) described program directors^{2,43} and faculty members^{5,18-28,30-32,38-41,44} perspectives. Fourteen articles involved speaking with residents, ^{8-11,19,20,28,29,32,34-37,42} while 4 included medical students' opinions. ^{3,6,7,33} Some articles included multiple perspectives (TABLE).

Review of the literature demonstrated that the supervisory resident role comprises multiple components. After reviewing and itemizing each of these components, we developed a model that summarizes the many responsibilities of the supervising resident. In this model, the supervising resident is responsible for teaching, managing the team's daily tasks, advocating on behalf of their team members' well-being, and creating a psychologically safe learning environment (FIGURE 2). We discuss each of these roles and their corresponding components below (FIGURE 2).

Teacher

Teaching was the most commonly emphasized component of the supervisory resident's role.^{2,3,5-11}, 18,19,21-31,33,36-41,44</sup> Effective resident teachers used multiple strategies to enhance supervisees' learning. Faculty members, residents, and medical students described supervising residents who tailored teaching to their learners' needs, 5,7,11,18,19,24,26,27,31,33 who stimulated critical thinking by eliciting clinical rationale, 5,6,18,19,21,23,27,29,31,33,36 who provided constructive feedback, 2,5,6,8,18,19,23,24,26-31,33-35,38,40 who demonstrated procedural skills, 7,18,27,29,36,38 who prioritized teaching, ^{6,8,19,21,24,28,33,39,40} and who demonstrated strong clinical competency^{5,7,8,25,38-40} as the most effective clinical teachers. Additionally, faculty members and medical students highlighted supervisory residents' ability to utilize clinical examples, 7,31 to summarize information,7 and to provide illustrations to clarify teaching points^{7,36} as relevant to their overall efficacy as teachers. Separately, faculty members and interns (first-year residents) emphasized the importance of teaching in short, focused sessions^{5,36} (FIGURE 2). Thus, individuals at all levels of training emphasized the importance of quality teaching as a supervising resident; however, the specific descriptors of effective clinical teachers varied by role.

Task Manager

In addition to teaching, supervising residents were also viewed as responsible for managing daily tasks. ^{2,3,8-11,19-22,25,27-30,34,37,39-41,43,44} Across roles, faculty members, residents, and medical students expected supervising residents to be capable of completing tasks efficiently. ^{3,8,10,20,25,37,40,41} In qualitative interviews, residents described the supervising residents' role in completing logistically complex tasks and in assisting with overall task burden as one of the most tangible supports supervisory residents provided in times of stress. ¹⁰ Similarly, medical students, faculty members, and residents expected supervising residents to clearly position themselves as the leaders of the team and effectively manage

TABLE
Characteristics of Included Studies and Curricula

Study	Country	Study Design	Role of Those Describing the Supervisory Role	Represented Specialties
Al Achkar et al (2017) ²	United States	Qualitative, quantitative	Program directors	Emergency medicine, family medicine, general surgery, internal medicine, OB/GYN, pediatrics, psychiatry
Li et al (2018) ⁴³	United States	Qualitative, quantitative	Program directors	Pediatrics
Bing-You et al (1997) ³⁸	United States	Quantitative	Faculty	Internal medicine, pediatrics
Boschee et al (2022) ²²	Canada	Curriculum, quantitative	Faculty	Pediatrics
Cherney et al (2018) ⁴¹	United States	Quantitative	Faculty	Emergency medicine
Dang et al (2010) ²³	Canada	Curriculum, quantitative	Faculty	Psychiatry
Farretll et al (2006) ¹⁸	United States	Curriculum	Faculty	Emergency medicine
Griffith et al (1998) ³⁹	United States	Quantitative	Faculty	Internal medicine
Hayes et al (2020) ³¹	United States	Curriculum, qualitative, quantitative	Faculty	Family medicine
Hillburg & Coyle (2020) ²¹	United States	Curriculum, quantitative	Faculty	Internal medicine
Kilinsky et al (2021) ⁴⁰	United States	Quantitative	Faculty	Family medicine, internal medicine, pediatrics
Messman et al (2018) ⁴⁴	United States	Review	Faculty	Emergency medicine, family medicine, internal medicine, pediatrics, psychiatry
Morrison et al (2004) ³⁰	United States	Curriculum, quantitative	Faculty	Family medicine, internal medicine, pediatrics
Ofshteyn et al (2021) ²⁴	United States	Curriculum, quantitative	Faculty	General surgery
Schnapp et al (2020) ²⁵	United States	Curriculum, quantitative	Faculty	Emergency medicine
Spickard et al (1996) ²⁶	United States	Curriculum, quantitative	Faculty	Internal medicine
Weisgerber et al (2011) ²⁷	United States	Curriculum, quantitative	Faculty	Pediatrics
Zabar et al (2004) ⁵	United States	Quantitative	Faculty	Internal medicine
Kobritz et al (2022) ²⁸	United States	Curriculum, quantitative	Faculty and residents (PGY-1-PGY-5)	General surgery
Martincheck et al (2017) ³²	United States	Curriculum, qualitative, quantitative	Faculty and residents ^a	Internal medicine
Wipf et al (1995) ²⁰	United States	Curriculum, quantitative	Faculty and residents (PGY-1-PGY-3)	Internal medicine
llgen et al (2011) ¹⁹	United States	Curriculum	Faculty and senior residents (PGY-3-PGY-4)	Emergency medicine
Barak et al (2023) ³⁷	United States	Qualitative	Fellows and senior residents (PGY-2-PGY-3)	Pediatrics
Mai et al (2021) ⁹	United States	Qualitative	Senior residents (PGY-2-PGY-3)	Pediatrics
Moore et al (2020) ¹⁰	United States	Qualitative	Senior residents (PGY-2)	Internal medicine
Coe et al (2023) ⁸	United States	Qualitative	Residents (PGY-1-PGY-8)	General surgery
Dunnington & DaRosa (1998) ²⁹	United States	Curriculum, quantitative	Residents (PGY-1-PGY-5)	General surgery
Ho et al (2024) ³⁴	United States	Qualitative	Residents (PGY-1-PGY-5)	General surgery
Rassos et al (2022) ³⁵	Canada & The Netherlands	Qualitative	Residents (PGY-1-PGY-3)	Internal medicine

TABLE
Characteristics of Included Studies and Curricula (continued)

Study	Country	Study Design	Role of Those Describing the Supervisory Role	Represented Specialties
Torres-Landa et al (2021) ¹¹	United States	Qualitative	Residents (PGY-1-PGY-7)	General surgery
Maker & Donnelly (2008) ⁴²	United States	Quantitative	Junior residents (PGY-1-PGY-3)	General surgery
Seltz et al (2016) ³⁶	United States	Qualitative	Junior residents (PGY-1)	Pediatrics
Karini et al (2014) ⁶	United States	Qualitative	Medical students (MS3)	Internal medicine, pediatrics
Melvin et al (2014) ⁷	United States & Canada	Quantitative	Medical students (MS3-MS4)	Internal medicine
Montacute et al (2016) ³³	United States	Qualitative	Medical students (MS1-MS4)	Family medicine
Rutz et al (2019) ³	United States	Quantitative	Medical students ^a	Emergency medicine

^a The level of resident or medical student was not specified in the original article.

Abbreviations: OB/GYN, obstetrics and gynecology; PGY, postgraduate year.

Note: Classification of senior vs junior resident was based on each paper's terminology.

the team's workflow.^{2,3,11,22,28,30,37,39} For residents and faculty members, team leadership was often most clearly demonstrated by organizing and leading rounds.^{27,29,30,40} Residents and faculty members also highlighted the importance of effective

communication, ^{8,9,11,20,21,25,34,44} efficient time management, ^{9,19,22,44} and flexibility ⁹ as one assumed the supervising resident role. Separately, faculty members noted that they expected residents to be able to correctly prioritize tasks ^{22,43} (FIGURE 2).

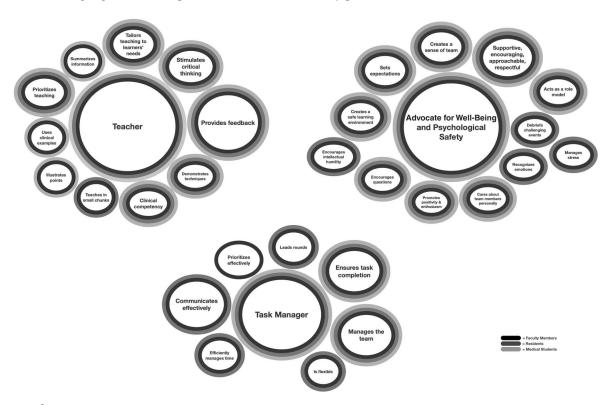


FIGURE 2
Model of the Senior Resident Role

Note: The 3 primary components of the supervisory resident role: teacher, task manager, and advocate for well-being and psychological safety are presented with associated qualities and behaviors organized around them. The shaded outlines of each circle represent the type of team member (faculty member, resident, or medical student) that endorsed each component as relevant to the supervisory role. Circles are sized based on the number of papers or curricula that endorsed each component, such that circles that are larger in size represent components that were more frequently cited.

Advocate for Well-Being and Creators of Psychological Safety

All team members emphasized the role of the supervising resident in ensuring the well-being of their team members and in creating a supportive learning environment. Faculty members, residents, and medical students all highlighted the need for supervising residents to demonstrate care for the personhood and well-being of their team members inside and outside of the hospital. 6,9,10,19,23,43 Residents and faculty members particularly emphasized the importance of providing emotional support and of debriefing traumatic events in effective "senioring" (the act of serving in the supervisory role). 9,10,32 Similarly, they identified the ability to recognize and discuss burnout and depression among supervisees, as well as the willingness to share and develop strategies for self-care and stress management, as important aspects of the supervisory role^{5,8,10,20,22,34} (FIGURE 2).

All team members viewed supervising residents as responsible for creating psychologically safe learning environments^{6,8,19,24,26,27,31,33,45} by setting clear expectations^{6,8,9,19,24,29,30,34} and promoting positivity. 9,33,38 Similarly, they suggested that supervising residents who encouraged questions, 5,6,19,21,24 modeled intellectual humility, ^{18,19,24} created a sense of team and belonging, ^{6,11,26,33-35,38-40} and were supportive, encouraging, approachable, and respect-ful^{3,5,7,8,11,19,24,33,34,38,39,41} were more effective as clinical teachers and leaders. All perspectives also highlighted the role of the supervising resident in functioning as role models for junior residents and medical students^{6,8,11,30,33,39,44} (FIGURE 2). While all parties emphasized the importance of supervising residents' abilities to support team members' well-being and create a psychologically safe learning environment, different team members placed greater emphasis on distinct components of this role.

Discussion

In conducting this review, we found that existing literature on the supervising resident role includes perspectives from faculty, residents, and medical students and suggests that this role is complex and multifaceted. Faculty members, residents, and medical students all described teaching, task management, supporting well-being, and creating a psychologically safe learning environment as the primary responsibilities of the supervising resident.

These domains align well with the model of clinical teaching proposed by Ullian and colleagues.⁴ After reviewing clinical faculty's evaluations from residents, their group found that effective clinical

teachers acted in 4 roles: Teacher, Supervisor, Physician, and Person, such that they emphasized teaching, provided autonomy and encouraged discussion, demonstrated excellent clinical knowledge and patient relationships, and provided emotional support to residents. This model suggests that the role of clinical teachers similarly comprises aspects outside of traditional didactic instruction and emphasizes the importance of additional skills, such as the ability to create a psychologically safe learning environment and demonstrate emotional intelligence, as core tasks of clinical teachers.^{20,45} It also points to the similarities between effective supervising residents and effective clinical faculty, suggesting that existing curricula used to promote faculty teaching could be adapted to prepare supervising residents for their roles.

Notably, we found differences in how individuals from various perspectives on the medical team conceptualize the supervising resident role. In qualitative interviews, junior and senior residents primarily focused on managing daily tasks and providing emotional support when discussing the supervisory role.8-11,20 In contrast, studies exploring aspects of supervising resident role from the perspective of program directors and faculty members focused on teaching competence, effective supervision, and promotion of team well-being. 2,5,18-27,43,44 While medical students similarly highlighted the importance of effective clinical teaching among supervising residents, they consistently described residents' ability to create a psychologically safe learning environment and to function as role models as most important to their efficacy as supervising residents.^{3,6,7,33} This suggests that one's perception of the most relevant part(s) of the supervisory role is highly impacted by one's role on the clinical team. These divergent opinions also demonstrate that supervising residents are tasked with simultaneously fulfilling distinct expectations for their supervisors, their junior residents, and their medical students. Future research is needed to further identify the specific expectations each team member holds for the supervising resident across the different components of their role.

As increasing numbers of residency programs are implementing curricula designed to support the educational and supervisory skills of supervising residents,² our model of the supervisory role (FIGURE 2) may provide guidance on the skills and behaviors these curricula aim to develop in supervisory residents. It also provides insight into which behaviors supervising residents could emphasize for each member of the medical team. For example, it shows that while supervising residents may focus on teaching medical students with clinical examples and illustrations, they could place greater emphasis on debriefing challenging events and effective communication

when working with junior residents (FIGURE 2). When designing curricula to prepare residents for the supervisory role, training programs could utilize this model to both identify the skills and behaviors their curricula should instill in their supervising residents and to highlight how the perceived importance of these qualities may vary by medical team member to ensure that supervising residents can adapt their behavior to best meet different team members' expectations.

This article is limited in its generalizability to all residency programs. Although we incorporated literature across specialties, we anticipate that the specific expectations of the supervising resident may vary by subspecialty; additionally, we were unable to find literature representative of all ACGME residency programs. This article was also influenced by our a priori assumptions regarding the role of the supervising resident, which are guided by our perspectives as a senior resident (E.A.L.) and as attendings, program directors, and former trainees (P.F., A.K.W.). While we mapped the qualities and skills of supervisory residents into themes based on iterative, collaborative discussion, many of these domains could be viewed as overlapping and might be modeled differently by another research team with perspectives different from our own. Furthermore, given the overrepresentation of faculty's and program directors' perspectives in the included articles, the results may unduly highlight faculty members' beliefs on the qualities and skills of effective supervising residents.

Additionally, we found that perspectives of junior residents were lacking in this review: while 14 of the included articles investigated resident perspectives on the role of the supervisory resident, only 2 focused solely on intern perspectives. 36,42 First-year residents represent a particularly important partner in this discussion, as supervising residents are interns' nearest peers and most direct supervisors in the training hierarchy. Given the closeness of this relationship, as well as our finding that faculty, residents, and medical students emphasized distinct aspects of the supervisory resident role, the lack of understanding around what first-year residents need and desire from their supervising residents limits our ability to develop curricula that fully prepare supervisory residents to support their interns. Furthermore, as first-year residents continue to develop their skills throughout intern year, their perspectives on how supervisory residents should support them may change. Future research should aim to elicit the qualities and behaviors of successful supervising residents from first-year residents at the beginning and end of their intern year to characterize how supervising residents may best support interns throughout the year.

Medical students' perspectives were similarly underrepresented in this review: only 4 articles elicited their thoughts regarding the behaviors and characteristics of effective supervisory residents. Additionally, we did not find any literature discussing interprofessional colleagues' or patients' and families' perspectives on this topic. While this may be for myriad reasons, including work suggesting that patients and families may be unaware of the different roles held by physicians on their medical team⁴⁶ and lack of a systematic review, it limits our ability to fully understand what all team members expect and desire from supervisory residents. In turn, this prevents us from preparing supervisory residents to meet these expectations. Future research should specifically request input from medical students, interprofessional colleagues, patients, and families regarding their definition of the supervising resident's role. As these perceptions are defined, curricula designed to prepare residents for the supervisory role may incorporate these viewpoints.

Conclusions

Effective supervisory residents are excellent clinical teachers and task managers, advocates for trainee well-being, and creators of psychological safety. An individual's role on the medical team guided their perception of supervising residents' roles, underscoring that supervising residents are responsible for meeting unique expectations for different team members. Despite variation in these expectations, the current literature lacks adequate definition of the supervisory resident role from the perspectives of junior residents, medical students, interdisciplinary team members, and patients and families, which subsequently limits our ability to develop and implement curricula designed to better prepare supervising residents for their roles.

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