

The Resident Voice: Identifying Qualities of Resident Leadership with a Focus Group of Second Year Internal Medicine Residents

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Abstract

Background

The Accreditation Council for Graduate Medical Education (ACGME) Internal Medicine Residency Program Guidelines identifies leadership as a core competency. The definition of strong resident leadership is not clearly defined. Prior studies have identified characteristics of resident leadership from the perspective of residency program leaders with little emphasis on the resident point of view.

Objective

This study aims to identify qualities of effective resident leadership from the perspective of Internal Medicine (IM) residents.

Methods

Participants were recruited through email invitations. An online focus group with five IM residents was conducted in September 2020. The transcribed discussion was inductively analyzed using thematic data analysis.

Results

Analysis resulted in four main themes of strong resident leadership: mentorship, team ownership, communication, and emotional intelligence. All four themes were further characterized by subthemes. Being a mentor as a resident leader was described as having the ability to guide, motivate, and empower team members. Team ownership was defined as caring about team image, adaptability, and accountability for team performance. Communication skills included setting expectations, giving feedback, and utilizing closed-loop communication. Emotional intelligence was characterized as practicing empathy, psychological safety, and appreciation.

Conclusions

Strong resident leadership is crucial to providing effective residency training and the highest level of patient care. This study identifies from the perspective of residents, the principal characteristics of strong resident leadership: mentorship, communication, team ownership, and emotional intelligence. The identification of these characteristics provides an opportunity to create leadership curricula for residents that focus on developing these specific skills.

Trial Registration

The University of Miami institutional review board (IRB) approved this study: IRB number MOD0041899 on September

14, 2020.

Declarations

Ethics Approval and Consent to Participate

All methods were carried out in accordance with relevant guidelines and regulations. Informed consent was obtained from all participants in this study. The University of Miami institutional review board (IRB) approved this study: IRB number MOD0041899 on September 14, 2020.

Consent for publication

Not applicable.

Availability of Data and Materials

The datasets generated and analyzed during the current study are not publicly available due to restrictions by the University of Miami Institutional Review Board but are available from the corresponding author on reasonable request.

Competing Interests

The authors declare that they have no competing interests.

Funding

Not applicable.

Authors' Contributions

CC and DH designed the study, submitted the study to the University of Miami IRB, and facilitated the study focus group. CC and DH transcribed, analyzed, and interpreted focus group data. CC, DH, BI, and ST contributed writing and editing the manuscript. All authors read and approved the final manuscript.

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Introduction

Internal Medicine (IM) residency in the United States is a three-year experience during which residents are expected to lead a team of physicians and medical students in their second and third years of training. This structure of physician training has led to many residents finding themselves in leadership positions by circumstance rather than by deliberate choice [1, 2]. Leadership is identified as a core competency in the Accreditation Council for Graduate Medical Education (ACGME) Internal Medicine Residency Program guidelines. While the ACGME provides well defined educational goals for other competencies, its guidelines lack a clear definition of what resident leadership entails and how it should be assessed by training programs; instead, the ACGME guidelines state “the program is expected to define its specific program aims consistent with the overall mission of its Sponsoring Institution, the needs of the community it serves and its graduates will serve, and the distinctive capabilities of physicians it intends to graduate” [3]. Prior studies have identified qualities that make an effective resident leader such as providing effective communication, team motivation, and feedback but these attributes are from the perspective of chief residents, attending physicians, and consultant companies [4-6]. This study aims to understand qualities that contribute to ideal resident leadership from the perspective of current second year Internal Medicine residents.

Methods

All 38 second-year residents from one internal medicine residency program at a large academic institution in Florida were invited to participate in this study. Participants were recruited through email invitations. Five residents agreed to participate. Participation was

voluntary and participants did not receive any compensation. The study investigators (C.C. and D.H.) were both medical doctors and second-year Internal Medicine residents in the same residency program as the participants. The study investigators obtained verbal consent from all participants before discussions began. A one-time focus group discussion was conducted in September 2020 to explore the understanding of Internal Medicine residents of what makes an effective or “strong” resident leader. An inductive thematic analysis approach and constructivist paradigm was used to analyze the data gathered in this study with emphasis on participants' subjective experiences and interpretations [7, 8].

Data Collection

Due to the COVID-19 pandemic, an online focus group discussion was conducted by a zoom-video meeting rather than in-person. Before the start of the focus group, the participants completed a demographic data survey (Appendix 1). The interview guide (Appendix 2) focused on open-ended questions that explored different aspects of resident leadership. Questions were developed from prior research studies [5, 9]. Two investigators (C.C. and D.H.) facilitated the discussion. All interview questions were answered during the one-hour and thirty-minute discussion during which data saturation was reached. The discussion was audio recorded and transcribed in a deidentified manner using randomly assigned code names for participants by the first investigator (D.H.). The transcription was then checked for accuracy by the second investigator (C.C.).

Data Analysis

Qualitative descriptive methodology was used to inductively an-

alyze the gathered data. Two investigators (D.H. and C.C.) independently coded the focus group transcript, discussed, and reconciled differences. A coding scheme was developed using a thematic approach. Transcripts were first coded line-by-line for semantic and conceptual data. Inductive reasoning was followed to sort codes and identify patterns in the data. Similarities among codes led to clustering into themes and subthemes [4]. No identifying information was collected about the participants in order to protect privacy. Only the study investigators had access to the audio recording and transcription. Two of the investigators were in the same residency class as the participants. Reflexivity was utilized to promote open and honest conversation. The moderators were able to create a psychologically safe environment having gone through the same experiences as the participants [10]. This also facilitated in-depth analysis of the explicit and implicit meanings in the data. The University of Miami institutional review board (IRB) approved the study on September 14, 2020; IRB number MOD0041899.

Results

Five second year Internal Medicine residents participated in this study. Data analysis resulted in four main themes used to charac-

Mentorship

In the medical community, mentorship, defined as a partnership in personal and professional growth, is crucial to the continued development of the physician [11]. To be an effective mentor one must guide, motivate, and empower their fellow mentees. The participants emphasized these qualities of a mentor as crucial to strong resident leadership

terize the qualities of strong resident leadership: mentorship, team ownership, communication, and emotional intelligence. All four themes were further characterized by subthemes.

Figure 1. Themes and Subthemes

Themes	Subthemes
Mentorship	<ul style="list-style-type: none"> ● Guidance ● Motivation ● Empowerment
Team Ownership	<ul style="list-style-type: none"> ● Empathy ● Psychological Safety ● Appreciation
Communication	<ul style="list-style-type: none"> ● Expectations ● Closed Loop Communication ● Feedback
Emotional Intelligence	<ul style="list-style-type: none"> ● Empathy ● Psychological Safety ● Appreciation

Figure 2. Mentorship Subthemes

Subtheme	Quote
Guidance	<ul style="list-style-type: none"> ● "...because you already mastered this. Like, you already know how to do this so let's move on to what I want you to learn next. What I would like you to improve upon next." ● "The planification of the leader needs to be voiced in order to set some goals and see improvement..." ● "I agree with the guiding part, the leader definitely needs to guide" ● "the concept of guiding like are you telling people what to do or are you leading by example and I think it is very important to lead by example" ● "we [upper level residents] are guiding them [interns] to navigate the system but we are also teachers on how to be residents" ● "When I think about the best residents as an intern that I had it's people that I wanted to model"
Motivation	<ul style="list-style-type: none"> ● "I believe a leader is someone that motivates you to be a better resident overall. That motivates you to do research or to achieve your goals." ● "how can we make you [the intern] improve"
Empowerment	<ul style="list-style-type: none"> ● "little by little, giving the interns more responsibilities" ● "...he [the intern] has some sort of freedom to go evaluate the patient and bring up a plan"

Guidance

We began the focus group with the question, "what does resident leadership mean to you?" The very first response was "I believe leadership means guidance; it means someone that is supportive." Providing effective guidance was further classified as active guidance (i.e. setting clear goals) and passive guidance (i.e. leading by example). One participant noted at the start of residency "he [the intern] is so lost that he needs some sort of figure that can guide him." This situation requires active guidance as the resident teaches the intern how to place orders, call consultants, and write notes. Passive guidance was noted to be equally as critical to effective leadership. One participant noted "we [upper-level residents]

are guiding them [interns] to navigate the system but we are also teachers on how to be residents" and that teaching how to be residents is accomplished with "leading by example."

Motivation

Participants identified the ability to motivate as another key characteristic of resident leadership. One resident stated, "I believe a leader is someone that motivates you to be a better resident overall. That motivates you to do research or to achieve your goals." This concept of encouraging individual development was reiterated by other participants as they recognized a resident leader as a person who thinks about "how can we make you [the intern] improve"

and works “little by little, giving the interns more responsibilities.”

were explicitly identified by the participants as part of the skillset of an effective resident leader.

Empowerment

Empowerment was identified as another element of effective leadership. As described by one of the participants, “at some point you need to allow the intern to start transitioning to be a senior.” Empowerment was noted to be accomplished by building trust, assigning critical tasks, and offering visible support all of which

Team Ownership

Team ownership was defined as caring about the image of the team, evaluating and adapting to the needs of the team, and assuming accountability for team failures.

Figure 3: Team Ownership Subthemes

Subtheme	Quotes
Caring about team image	<ul style="list-style-type: none"> ● “not because he [the upper-level resident] doesn’t want to talk but because he doesn’t have to add information because he already prepared the team” ● “someone that was there to catch the mistakes before rounds” ● “you [upper-level resident] want to make the team look good” ● “For med students, he [the upper-level resident] said like, ‘hey probably they are going to ask you this, just prepare the patient in this way” ● “...at the end of the day the work needs to be done and I think a good leader will be taking everything into consideration like our team needs to be a good team and our patients need to be safe.”
Adaptability	<ul style="list-style-type: none"> ● “the job of a leader is to analyze the situation and to say okay we are in this stage” ● “someone that is mobile and knows how to do everything in the system” ● “like hey you should help out not only because you are part of the team but because the fact that I can do everything doesn’t mean I have to do everything. Like, we are a team.” ● “hey man, I’m going to make sure the patients have labs. I’ll make sure the sign out is done. Just focus on the notes and whoever finishes first can help out”. ● “I can still help, and they will learn it later” ● “At the end of the day, it’s not like you are an intern and you do your job and I just like, supervise you. If I need to take your part and do it myself, I think that is also what makes a good leader.”
Accountability	<ul style="list-style-type: none"> ● “As a whole team when things go wrong, we [upper-level residents] have to look into ourselves and say what happened? Where did I fail us as a leader?” ● “recognize you’re a human being and that you make mistakes when you’re stressed and acknowledge this, you have to own it, because otherwise, how are you going to grow?” ● “...I feel like that was a big thing to acknowledge your mistakes.” ● “You [upper-level resident] have to make sure you’re on top of everything” ● “Basically, they [upper-level resident] will be responsible for whatever happened, and they are not going to try to cover it up.” ● “...you have to like, make yourself accountable for what you are missing in your leadership.”

Caring About Team Image

Participants emphasized that effective leaders must invest in team preparation before rounds during which patient care plans are discussed with the supervising physician or attending. Strong resident leaders are recognized as being quiet during rounds “not because he [the upper-level resident] doesn’t want to talk but because he doesn’t have to add information because he already prepared the team.” Furthermore, the leader should be “someone that [is] there to catch the mistakes before rounds.” This early morning coaching was deemed necessary for the desired team cohesion in front of the attending as “you [upper-level resident] want to make the team look good.”

Four participants noted that some of their worst experiences as interns were under the leadership of residents who would unapologetically interrupt their team members stating, “oh no, that’s completely wrong”. All focus group members expressed frustration when working with this type of resident leader. One participant proposed that the intention of this type of poor leadership, inter-

rupting and discrediting other team members, is to be perceived as the most knowledgeable person on the team by making others appear incompetent.

Adaptability

Throughout the focus group, adaptability was noted to be essential to effective leadership as one participant remarked, “a leader needs to have the ability to assess the team and adapt, because every team is different.” In order to be adaptable, a resident leader is forced to be “someone that is mobile and knows how to do everything in the system” so that if the need arises the leader can perform any task, from administrative paperwork commonly referred to as “scut work” to prescribing medications. The resident leader dismantles traditional power structures and recognizes that as an effective team leader, she or he must graciously perform any team task no matter how menial it seems to be.

Accountability

As the head of the team, the resident leader must take account-

ability for not only their own mistakes but also the mistakes of the team. One participant noted, “As a whole team when things go wrong, we [upper-level residents] have to look into ourselves and say what happened? Where did I fail us as a leader?” This requires resident leaders practice self-reflection and humility. As another participant stated, as a leader you must “recognize you’re a human being and that you make mistakes when you’re stressed and acknowledge this, you have to own it.”

Communication

The ability to effectively communicate is essential for physicians. Successful communication is so fundamental that some residency training programs have developed curriculums dedicated to improving the communication skills of their trainees [6, 12]. As a resident leading a healthcare team, clearly communicating with team members is the foundation of strong leadership. In this study, we identify three subthemes as the elements of effective communication: expectations, closed-loop communication, and feedback.

Figure 4: Communication Subthemes

Subtheme	Quotes
Expectations	<ul style="list-style-type: none"> • “...setting expectations is so important.” • “...this is what I want from you, and then you discuss it and then you’re not lost, and you don’t waste time, so clear expectations” • “It’s like you have a big picture. And also, me as a resident I was like okay, so we have a plan. It was nice.” • “...expectations are pivotal” • “It [expectation] is so important, especially in like a high, intense, highly stressful environment...”
Closed Loop Communication	<ul style="list-style-type: none"> • “With poor communication like orders get repeated, medications get put in twice, the patient can get the medication twice...” • “They [upper-level residents] were so passive aggressive and would never tell us anything to our faces and then just walk away...but what’s going on? Why did she get mad? What did we do wrong? And she’d never actually say what we did wrong.” • “I remember being very frustrated because I had to double check. Like I had to go over all the orders because my resident was putting in orders without telling me.” • “With very bad communication so many things were lost and then we [interns] were held to blame for things that weren’t done.”
Feedback	<ul style="list-style-type: none"> • “I would have appreciated learning by someone telling me, ‘hey maybe you can do this to be more efficient.’” • “Feedback early on is helpful or in the moment” • “I prefer to know if I can do it better then I will try to do it better” • “I prefer to know straightforwardly what I did wrong. Like you’re doing this wrong, do it better. And I know this is the problem. But I hate when it’s like, a little bit of passive aggressiveness”. • “...it goes both ways, it’s not just us giving it [feedback] to the interns but also how can we [upper-level residents] be better.” • “You [upper-level resident] need to be able to receive feedback.” • “I am always asking the teams like what works or what’s helpful or how can I be better...”

Expectations

All participants acknowledged the importance of setting clear expectations as a characteristic of effective resident leadership with statements such as “setting expectations is so important” and “expectations are pivotal.” Specifically setting expectations at “the start of the rotation is really important because everyone is kind of lost and you need someone to tell you okay, these are your responsibilities. This is what we expect from you but I’m here to help.” One participant reflected on her experience under poor leadership without clear expectations in which “you [the intern] waste time and then you get frustrated, the little things like that, just make the day so much harder.”

Closed-loop Communication

Closed-loop communication is a method of communication that involves a three-step process: (1) the sender dispatches a message, (2) the receiver accepts the message and acknowledges its receipt, and (3) the sender confirms the message has been received and interpreted accurately [13, 14]. Study participants identified closed-loop communication as necessary to ensure efficiency, decrease

stress levels, increase team satisfaction, and ultimately provide the highest level of patient care. When resident leaders fail to communicate in a closed-loop fashion, one participant described the chaos that ensues: “They [upper-level resident] end up doing stuff and then not telling the intern and then it’s just a mess.”

Feedback

Feedback has been recognized as instrumental to the development of physicians in training [15]. The ability to give and receive growth oriented clear real-time feedback was considered by all participants to be a crucial aspect of effective resident leadership. One participant noted frustration when her resident leader was unable to provide feedback stating “I prefer to know straightforwardly what I did wrong. Like you’re doing this wrong, do it better. And I know this is the problem. But I hate when it’s like, a little bit of passive aggressiveness.” On the topic of feedback, participants pointed out issues with the current culture of feedback as “basically, I don’t want to hurt your feelings” instead of being growth oriented and constructive. In multiple studies researchers noted that a culture of politeness often impedes honest and constructive

feedback [16-18]. The participants pointed out that we must give “feedback beyond personality” with the understanding that feedback is the means to development. Finally, participants noted that feedback must be bidirectional, a practice that is being increasingly recognized as important for a collaborative work environment [9]. Effective leaders should not only provide growth-oriented feedback to team members but also be able to act on the feedback they receive from others. As one participant noted “...it goes both

ways, it’s not just us giving it [feedback] to the interns but also how can we [resident leaders] be better.”

Emotional Intelligence

Emotional intelligence defined as the ability to acknowledge, appreciate, and manage emotions in yourself and in others was identified by study participants as the third aspect of effective resident leadership [20, 21].

Figure 5: Emotional Intelligence Subthemes

Subtheme	Quotes
Empathy	<ul style="list-style-type: none"> • “...like [getting you] a pastry from the café, like things that are small but they really make a difference because you feel like somebody cares about you.” • “I don’t like when people are like drowning...full of work and they don’t know what to do and some [leadership] style is like that is your responsibility, you need to do it [all].” • “I had great residents, they were great doctors, they had good clinical skills but the ones that I loved the most were the ones that actually cared about overall our wellbeing.” • “My favorite resident was like asking me, ‘Did you have water? Because you haven’t been to the bathroom to pee in a while, so take your water because you need to be hydrated.’”
Psychological Safety	<ul style="list-style-type: none"> • “But just with a safe environment I believe you have 90% of what makes a good leader.” • “If you feel safe, like work will be fun.” • “They [interns] need to feel that they can say that they made a mistake and they will feel supported by the resident.” • “If you feel like you can’t speak up or you feel you’re getting put down it makes your life as an intern absolutely miserable and I had good experiences and then really, really bad experiences just based off of team dynamics.”
Appreciation	<ul style="list-style-type: none"> • “...making everyone feel equal.” • “...the resident would put on a smiling face and talk about all this stuff that happened because of him when like you were the one, I guess the poor resident [the intern], running around the hospital to be able to get all these things done.” • “The residents that I didn’t enjoy as much, would be like during rounds saying, ‘oh, there’s like this and that and I did this and that’...even when, for example, when I went to the micro lab or IR or to path or whatever...to get things expedited.”

Empathy

The practice of empathy by healthcare workers is known to increase team effectiveness [22, 23]. The participants of this study identified empathy for team members as one of the principal characteristics of resident leadership. One participant stated, “I had great residents, they were great doctors...but the ones that I loved the most were the ones that actually cared about our overall wellbeing, the wellbeing of the team.” Participants noted that upper-level residents must balance providing patient care and sensitivity to the team’s wellbeing. Ensuring team members ate lunch, stayed hydrated, and left on time on a regular basis were provided as examples of qualities of great resident leaders. The group noted that in our current physician training system, a resident could provide high quality patient care while failing to care for the team. While describing an experience with one such resident leader, one participant stated “...he didn’t fail patients but he failed to manage the team in the sense that everybody was angry or upset or uncomfortable going to work.”

Psychological Safety

Establishing psychological safety is another key component of effective leadership as one participant noted, “just with a safe envi-

ronment, I believe you have 90% of what makes a good leader.” Effective leaders are those who create a work environment where team members feel safe and thereby are able to speak freely about mistakes, share opinions, and make suggestions which ultimately help them overcome any obstacles and stressors faced as they move towards accomplishing a common goal [24]. One participant described her experiences in a psychologically unsafe work environment stating “I felt so intimidated and I felt like I couldn’t speak up and I shut down. I was ineffective.” The inability to foster psychological safety as noted by this participant leads to an inability to perform.

Appreciation

While discussing experiences with ineffective resident leaders, the participants reported frustration with consistent underappreciation of their work efforts. Team member appreciation was identified as another component of strong leadership. One participant described one of her worst experiences under the guidance of an ineffective resident leader in which “...the resident would put on a smiling face and talk about all this stuff that happened because of him when like you were the one, I guess the poor resident [the intern], running around the hospital to be able to get all these things done.”

This participant then went on to describe her unhappiness this type of team.

Discussion

Four principal characteristics were identified as vital to effective resident leadership: mentorship, team ownership, communication, and emotional intelligence. While prior studies have discussed what qualities make a resident leader, none to our knowledge have defined resident leadership from the perspective of current second year Internal Medicine residents who were recently subject to different resident leadership styles during their first year in training. Previous studies focused on the importance of mentorship and communication skills for effective leadership, qualities also identified in this study [4, 25]. However, this study also found emotional intelligence and team ownership equally important. The role of emotional intelligence is often overlooked in studies identifying leadership qualities from the non-resident perspective. Prior studies reported “patient ownership” or “decision ownership” as necessary qualities of resident leaders [25, 26]. This study expands upon the concept of ownership by introducing the concept of “team ownership” as a necessary quality of effective resident leadership. Residents demonstrate team ownership by assuming responsibility for not just patient care but also for the wellbeing of team members and all team decisions including any mistakes.

The importance of mentorship has been highlighted in prior studies of resident leadership training programs. In one curriculum, two of the five commitments of resident leadership were ‘modeling the way’ and ‘enabling others to act’ [4.] In another study, inspirational motivation was noted to be a crucial component of effective resident leadership [25]. It should be noted that both of these studies defined the characteristics of effective resident leadership from the perspective of individuals other than current residents to design curriculums for residents [4, 24].

Studies from many disciplines (business, management, psychology, and philosophy) describe the importance of ownership and its effects on motivation and behavior [26-28]. A strong association exists between ownership and other desirable qualities of a leader such as commitment, sense of responsibility, and stewardship [5, 28]. Team ownership in residency training is a concept we identified in this study as one of the key characteristics of effective resident leadership.

The need for clear communication to be an effective leader is not a novel concept. This study defined communication as it pertains to resident leadership as setting expectations, closed loop communication, and feedback with special attention paid towards the faults of current feedback systems. In Vu et al., surgical residents deemed it the responsibility of the resident leader to seek feedback on their leadership skills from members of their team [19]. Similarly, the current study’s participants acknowledged the need for leadership specific feedback but noted that the current system of evaluation lacked written feedback specific to leadership skills from the perspective of team members most impacted by the resident’s leadership. Additionally, the participants felt providing tangible actionable feedback to colleagues and attendings difficult due to the fear of retribution and a learning environment where feedback is focused more on personality and less on competences.

Teaching residents how to give and receive feedback should be a main focus when developing curriculums and trying to improve resident leadership abilities.

In the healthcare setting, emotional intelligence has been identified as an important characteristic of effective leadership [16, 17]. In a leadership course for internal medicine residents, “leading with emotional intelligence” was identified as a core competency for strong resident leaders and was one of the four main topics discussed over the four-week course [22]. Throughout the focus group discussion of the current study, participants continually spoke about effective resident leaders as individuals who are sensitive to the emotions of their team members, create psychological safety, and appreciate their team members’ efforts - all of which are components of emotional intelligence. In prior studies, creating psychological safety was deemed crucial to the efficacy of the medical team [22, 29]. It is logical that emotional intelligence is critical to fostering team member wellness, which ultimately impacts patient care as was described by the participants and similarly, identified in a prior study [29].

While other studies of leadership curriculums for internal medicine residents identified the qualities of effective resident leadership from the perspective of faculty, leadership coaches, and chief residents, they did not include the views of current residents [5, 6, 22]. Future research endeavors should focus on developing customized leadership curricula committed to developing the characteristics of effective resident leadership as identified by current resident physicians.

Limitations

The study findings are limited by the small focus group size of five participants from a single center residency program. Additionally, the participants were mostly international medical graduates. The size of the focus group and the background of participants may limit the generalizability of study results to other Internal Medicine residency programs.

Conclusion

Strong resident leadership is crucial to providing effective residency training and the highest level of patient care. This study identifies from the perspective of current second year internal medicine residents, the principal characteristics of resident leadership: mentorship, communication, team ownership, and emotional intelligence. The identification of these characteristics provides an opportunity to create leadership curricula for residents that focus on developing these specific skillsets.

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