

RESEARCH ARTICLE

Clinical Excellence in Graduate Medical Education: Program Directors Describe their Most Outstanding Residents

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Abstract

Objectives: Because limited research has been performed to characterize clinical excellence in graduate medical education, we used qualitative methods to characterize elements most pertinent to excellence in patient care delivered by residents across all medical and surgical specialties.

Methods: Annually, each residency training program director at our large academic medical institution is asked to identify their single most clinically excellent resident and submit a nomination letter for the Frank Coulson Resident Clinical Excellence Award. One hundred and five nomination letters for award-winning residents, as submitted by 38 residency program directors from 2012 to 2018, were independently analyzed by two researchers to identify themes related to clinical excellence.

Results: Seven recurrent themes emerged in these letters: professionalism, being knowledgeable with superior clinical judgment, endearing personal attributes, communication skills, humanism, a commitment to discovery and advancing systems, and effective collaboration with others. Professionalism was described most frequently (261 total mentions), while being extremely knowledgeable and having superior clinical judgment was cited in the highest percentage of letters (86%). The examples depicted in the letters usually included anecdotes from patient care, personal impressions from program directors, and comments from colleagues.

Conclusions: In showing how residency program directors think about excellence in clinical care delivered by their residents, it may now be possible to define clinical excellence in residency training. This work may inform the goals and learning plans of trainees, as well as coaching by faculty, in order to help residents to realize their aspiration to move towards clinical excellence during their training.

Keywords: clinical excellence; graduate medical education; professional development.

INTRODUCTION

The Accreditation Council for Graduate Medical Education, or ACGME, is a private accreditation system in the United States that ensures training programs and institutions meet quality standards in preparing their graduates for independent practice.¹ The ACGME accredits and evaluates 9,000 residency programs across 135 specialty areas to establish educational standards within each. In 2002, the ACGME defined 6 core competencies that every resident had to achieve during their training: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.² Since 2016, the outcomes-based ‘Milestones Project’ has been used to evaluate objectives unique to each specialty to measure resident performance and ensure their satisfactory accomplishments across the 6 core competencies. Each milestone is designed to help residency programs produce highly competent physicians, and to ultimately demonstrate that every resident deserves to graduate.¹

As every residency training program hopes to produce not just competent but, rather, exceptional graduates, the question of what defines clinical excellence becomes extremely relevant. The failure to recognize clinical excellence at institutions and hospitals that are training the next generation of physicians may result in adverse sequelae.³ Most of these medical centers have tripartite missions focused on education, research, and clinical care; recognizing accomplishments along all mission critical domains for individuals at various stages of their careers in medicine is imperative.^{4, 5} At Johns Hopkins University School of Medicine, the Miller-Coulson Academy of Clinical Excellence was established to recognize and promote excellence in patient care for the benefit of the individuals and communities served. One of this working Academy’s programs is the Frank L. Coulson Resident Clinical Excellence Award, which serves to annually honor the

most clinically outstanding residents from every training program.

Using qualitative methods, we studied 105 nomination letters, submitted by a total of 38 residency program directors, for residents who were selected for the Frank L. Coulson Resident Clinical Excellence Award. This data represents all of the letters written for each award winning resident from the years 2012-2018. The goal of the analysis was to identify elements named recurrently in the letters as a means of deriving a definition of clinical excellence in graduate medical education (GME).

METHODS

Study design, Setting, and Subjects

This was a qualitative study that analyzed nomination letters describing residents training at either Johns Hopkins Hospital or Johns Hopkins Bayview Medical Center in Baltimore, MD. The program directors of these residency training programs were contacted annually from 2012 to 2018 and asked to select the one resident in their program that was most deserving of the Frank L. Coulson Resident Clinical Excellence Award. There are no specific criteria for the award and each residency program is asked to select their trainee that is most outstanding in caring for patients. The residency program directors (PDs) were encouraged to solicit input from core faculty about their most clinically excellent trainee. It was assumed that the PDs were best to decide who was most deserving of the award (with input from others) because of both subjective feedback and objective data that flows to them about the clinical performance of all trainees. The PDs understood that whoever they selected would be receive this award and they were asked to write a nomination letter of 2-4 paragraphs in length about why they were choosing this person so that we could understand the elements of clinical excellence that they value most in their trainees.

The study was reviewed and approved by the institutional review board at the Johns Hopkins University School of Medicine.

Data Analysis

Letters were analyzed using an “editing analysis style,” a qualitative analysis technique in which researchers identify “meaningful units or segments of text that both stand on their own and relate to the purpose of the study.”⁶ The authors, one of whom (S.M.W.) has much experience with qualitative methods⁷⁻⁹ developed the initial coding template based upon the review of resident attributes and skills described in several of the letters. Then, two authors (D.V.D and J.E.L.) reviewed and coded all letters independently using the coding template which was iteratively revised during the coding phase. In cases of discrepant coding, the 2 investigators, along with the senior authors (P.N. and S.M.W), discussed the coding and the team was able to reach consensus in all instances. The final list of codes was then organized into themes that were felt to systematically summarize clinical excellence in GME. These themes were sent to the nominating program directors and they

unanimously agreed that the themes were representative of their perspectives about clinical excellence in resident trainees (triangulation).

The authors reviewed all coded excerpts under each theme and agreed upon the representative quotes to be included in the results section below. Every quotation shown from a letter in the Results section below is taken from a distinct letter. In not to reveal the identity of the letter writer or the resident winner, the pronoun “she” will be used as convention and the specific year or residency training program will not be described.

RESULTS

All but 9 of the 105 nomination letters submitted for the award were less than 1 page in length, and none exceeded 2 pages. Coded text from the letters were ultimately organized into seven themes. These themes represent the manner in which the award winning residents were viewed to be clinically excellent according to their program directors. Table 1 shows the seven themes, the number of times each theme was cited, and the percentage of nomination letters referring to the theme.

Table 1. Themes about clinical excellence in graduate medical education that emerged from the analysis of the 105 nomination letters written by residency program directors

Theme	Number of times each theme was mentioned in all submissions	Number and (%) of nomination letters in which the theme was mentioned
Professionalism	261	87 (83)
Knowledgeable with superior clinical judgement	233	90 (86)
Endearing personal attributes	186	76 (72)
Skillful in communication	145	70 (67)
Humanistic	123	73 (70)
Commitment to advancing systems and knowledge	108	53 (51)
Collaborates effectively with others	88	55 (52)

Professionalism

Professionalism appears to be at the forefront of a resident being recognized as clinically excellent. Professionalism in medicine has been defined previously¹⁰ and, as shown by the letter writers in this study, entails being responsible, organized, thorough, dedicated, culturally sensitive, mature, respectful of others, able to take initiative, and being invested in self-improvement. Examples from the nomination letters illustrate a commitment to excellence.

“A 9-year-old girl with a history of cognitive limitations and behavioural disturbances was admitted. Dr. X was not willing to accept at face value the history which identified the family as chronically non-adherent. Instead, she met repeatedly with the parents and through building that relationship, came to appreciate that they too were cognitively limited and what had appeared to others as poor adherence, was in fact confusion about what their daughter needed. Dr. X then ensured that the needed supports for the entire family were made available to them.”

This anecdote demonstrates how the resident’s determination allowed her to discover clinically relevant information that had been missed by others.

Other passages from letters show amazing fiduciary responsibility that these residents demonstrated towards patients, as well as their reliability and initiative as part of their professional identity.

“She is incredibly humble and behind a very quiet and unassuming personality is an exceptionally high degree of integrity. She always puts the needs of patients first and comes early or stays late as needed to get the work done. She also goes the extra mile to help mentor her junior residents devoting some of

her personal time to help them to advance their surgical skills.”

“She pours her heart and soul into this profession. [She] does everything humanly possible to help her patients, and she is always trying to find ways to better serve them.”

Knowledgeable with Superior Clinical Judgement

The program directors described how the nominees’ funds of knowledge evolved additively over time. Built through the study of basic clinical science and reading the medical literature, clinical judgment was described to be layered on top of this as a somewhat more amorphous talent. Related to the latter, it was explained how the award-winning residents developed a refined intuition that informs their reasoning about the most appropriate diagnostic or therapeutic plan for each individual patient.

With respect to knowledge, many letters referenced objective summative scores on standardized tests:

“...scored 99-100% on In-Service Training exam each year, the highest possible score on this exam.”

Some letters spoke of superb clinical judgment, explaining that the respected residents had the ability to critically analyze and integrate information to arrive at an intelligent management strategy.

“She has a wonderful clinical mind and displays great judgement both in the outpatient clinic and in the operating room. She is able to very efficiently break down patients’ medical and anatomic issues and synthesize an effective medical and surgical plan... I frequently receive compliments from colleagues on other services about the clinical care she has given their patients and leadership in challenging situations, such as in airway emergencies.”

“We had a PACU patient that had occult abdominal bleeding undetected by surgeons that she picked up on. She then called/coordinated with the surgeons for urgent intervention (level 1 emergency) which saved the patient’s life; she provided exceptional care.”

Endearing Personal Attributes

Confidence, passion, patience, inquisitiveness, cleverness, humility, and kindness were some of the most frequently referenced fine traits noted by the program directors about their exceptional resident nominees. Being well-rounded and open-minded were also highly valued, and these characteristics were often described in the context of being able to appear comfortable in challenging clinical situations.

“Her diagnostic skills are strong, as is her willingness to re-think cases, openness to new ideas, and determination to learn”

“Her always-positive outlook, thoughtful and thorough care of her patients, and ability to remain calm under even the most stressful situations has made her an outstanding clinical performer in our Department.”

“She is a kind and wonderful person. He is the type of doctor whom anyone would want to take care of them. She is friendly, polite, and has a very sweet sense of humor.”

“There is no one I (or any of our faculty) could think is more deserving of this award than [her]. Funny thing, she would never think it... I haven’t seen a resident during my almost 30 years at Hopkins who has the total skill that [she] has. She could operate on me if I had the need.”

Skillful in Communication

The letters described these clinically excellent residents as being highly skilled in talking with and forming bonds with their patients, their patients’ families, and others in the workplace. Effective communication was

explained to be at the heart of the residents’ ability to build rapport and trust with patients when doing history taking, diagnosis, explaining a proposed plan or uncertainty, and engaging in shared decision-making.

“She is a superb communicator who listens well, speaks clearly, and engages in bidirectional sharing of information.”

“She is able to explain complicated topics including diagnosis and treatment recommendations in language that makes sense to the patients and their families and is not frightening or intimidating even with pediatric patients.”

“She has superb interpersonal skills; he is universally loved and respected up and down resident and faculty ranks. She treats nurses and staff as he would a family member.”

Humanistic

In the letters, the nominated residents were termed as compassionate, selfless, and caring to all. Their empathy was named repeatedly in many letters, and it was communicated that they had a desire to try to understand what it must be like to walk a mile in their patients’ shoes.

“She tailors medical care to the patient and families’ individual needs and perspectives. Dr. Y is one of those rare clinicians in her implementation and consideration of the medical, psychological, emotional, and cultural aspects of care when designing treatment plans... She truly understands the human condition and brings respect, compassion and humanism to all encounters. [She] readily gains the respect of patients and families... Her ability to remain present and offer support contribute to her ability to be a true healer”

“Nurses have reported to me that Dr. Z’s performance is most exceptional in her interactions with patients and their families. She exhibits genuine kindness, caring, and compassion.”

Commitment to Advancing Systems and Knowledge

Clinically excellent residents were cited as having a passion for quality improvement within the healthcare system. The program directors' letters clearly valued accomplishments in this realm and reiterated that these efforts importantly differentiated their clinically most outstanding residents from their peers. The letters also acknowledged that residents who are actively involved in ameliorating systems of practice are showing promise to be future healthcare leaders.

"As a scholar, she has been productive in her clinical research and has written two first author journal publications during her residency, and one book chapter."

"I am continuously impressed by her ability and courage to choose a difficult case, dissecting it to determine the systems issues that need changing, and facilitating a group discussion that is collegial, collaborative and growth promoting for all those who attend. [She is] truly a master in this situation."

"[She] is always a resident I can count on to do whatever is needed; often volunteering to serve on task forces and committees to problem solve or review our programs."

Collaborates Effectively with Others

Being terrific team players, valuing teamwork, and effectively collaborating with colleagues across interdisciplinary lines were written about at length in the nomination letters. These residents were said to contribute positively to a fun and productive clinical environment such that the program directors noted that things run more smoothly when these residents are around.

"She works effectively with peers, colleagues, faculty and members of all disciplines across settings. [She] gains the respect and confidence of all those with whom she works and they trust her implicitly."

"What makes [her] even more exceptional is her commitment to her

colleagues, which equals her dedication to each patient – She was recently selected by her peers as one of the residents most likely to rescue them in a difficult situation."

"I would argue that her interpersonal skills have made her a favorite on more attending, fellow, resident, and nurses cell phones than anyone else in the Children's Center."

DISCUSSION

In this analysis of 105 nomination letters for the Frank L. Coulson Resident Clinical Excellence Award winning residents submitted by their residency program directors, recurrent themes associated with clinical excellence in graduate medical education were identified. This study can serve as a foundation upon which to define clinical excellence for residents, and it can also serve as an aspirational beacon showing where those who are genuinely committed to greatness can aim.

To our knowledge, this is the first study to examine the skills and attributes that set outstanding residents apart from their peers across medical and surgical specialties. From the letters themselves and from personal communications with the submitting program directors, we know that many core faculty members who are heavily involved in these GME programs weighed in to select the winners. These carefully considered decisions about 'who was most deserving' and 'why' emerged from reputable, well-informed sources with a breadth of perspective. From a study looking at professionalism and clinical excellence in anesthesiology residents, it became apparent that unprofessional behavior and clinical excellence rarely coexist in the same resident.¹¹ Assessment of trainees, specifically with an eye towards recognizing those who are the strongest and those who are truly struggling, continues to be a major challenge in medical education.¹²⁻¹⁴ While there are numerous direct observation tools that can be used for formative or summative assessment of residents and other medical learners, the data

from many of these instruments have limited validity evidence.¹⁵ Further, while they may be valuable in detecting those who are weak or in need of remediation, they do not add substantively to our understanding of those who are outstanding or most excellent.¹⁵ The nomination letters tell wonderful stories that highlight specific actions, practices, and qualities of residents that are judged to be clinically excellent by residency program directors.

In analyzing the data, it was interesting to observe that many of the stories describing these clinically excellent residents show that they truly shine in almost all aspects of clinical care; many of the letter spoke to all 7 of the themes. These award winners were repeatedly described as being willing to do whatever it takes to satisfy patients so as to ensure that they get whatever they need, rising to the occasion even under the most challenging of circumstances. The clinically excellent resident embodies the attributes of the servant leader,¹⁶ advocating effectively and being attentive to the needs of their patients.

A couple of limitations of this study are worth considering. First, although letters were collected from across all medical and surgical training programs, these all come from the residency programs at a single academic institution. From a methodological perspective and related to the notion of purposive sampling, the institution's culture, which has a longstanding tradition steeped in clinical excellence, may have made this the ideal place to conduct this research. Second, because there was little guidance given about what to include in the letters about why the award winning resident was so deserving, it is likely that the attributes described in these letters were not an exhaustive or fully comprehensive list of all of the clinically excellent traits that pertain to any

of the nominated residents. To this end, because we could not ask for the nomination letters to speak to each theme (as they were not known before the analysis), the frequency of mentions for any specific category of attributes does not infer its relative importance to the definition of clinical excellence in GME.

This study serves as a starting point for defining clinical excellence in graduate medical education. In using qualitative methods to analyze these letters describing clinically excellent residents across many training programs, hypotheses have been generated in the form of the seven themes about what is exemplary about the patient care delivered by these trainees. Future work may involve testing of these findings using quantitative methods with a large sample of residents across multiple institutions. Specifically, it may be interesting to consider whether differential weighting might be appropriate across distinct clinical fields; this might account for assessing the relative importance of unique features of clinical excellence in each GME residency training program. Establishing a definition of clinical excellence in graduate medical education may be helpful for assessing trainees globally for evaluation purposes, providing feedback, coaching, and in setting goals with residents as they strive to become exceptional clinicians.

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