Abstract

Purpose
Uncertainty in medical decision making is a well-described phenomenon, and numerous scholars have acknowledged and illustrated the process of training medical students to grapple with this aspect of medical practice. While clinical uncertainty has been defined previously, medical trainees face additional forms of uncertainty beyond the clinical setting that have not, as yet, been investigated empirically. One area in which uncertainty can manifest outside of the clinical setting is during professional development. Medical students face substantial stress and ambiguity throughout their training, with the residency application period representing a culmination of these pressures. Here, the authors examined medical students’ experiences during the residency application period and used these findings to define training for professional uncertainty.

Method
In 2018–2019, 6 focus groups of fourth-year medical students were conducted exploring students’ experiences during the residency application period, including but not limited to Step 2 Clinical Knowledge, away rotations, and securing letters of recommendation. The authors then used constructivist, phenomenological methods to analyze participant responses.

Results
Students frequently discussed challenges they faced during the residency application period. From these conversations, 2 themes were identified: (1) professional uncertainty related to career-based advice, which resulted from mixed messaging and inadequate information, and (2) professional uncertainty related to competing responsibilities, which students experienced when determining how to allocate a limited amount of time to multiple conflicting forces.

Conclusions
These results were used to define a novel concept—training for professional uncertainty. By navigating the residency application process, students learned to face various facets of professional uncertainty that they will continue to face throughout their careers. Since uncertainty can have many negative effects, including declining performance and burnout, defining professional uncertainty and training students to grapple with it is necessary to maximize their success throughout their careers.

Training for Professional Uncertainty: Socialization of Medical Students Through the Residency Application Process

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Transitions

Throughout medical training, medical students face, and must be trained to cope with, considerable uncertainty. Though a somewhat challenging concept to define, broadly, uncertainty can be defined as a physiological and psychological state that results from incomplete knowledge about a particular topic.1 In practice, physicians must grapple with uncertainty surrounding clinical diagnosis and treatment.2,3 When making decisions in the face of such clinical uncertainty, clinicians must first identify the point of confusion and then determine its source so that they can properly assess it.4,5 Uncertainty can be categorized as problems of (1) ambiguity, which comes from conflicting expert opinions or evidence; (2) complexity, which stems from multiple factors impacting the final result; and (3) probability, which results from no treatment or outcome being completely certain.6

The concept of clinical uncertainty was first described in 1957 by Renée Fox, who introduced the theory of "training for uncertainty" within professionalization of physicians.2 Her foundational research, and much of the scholarship that built upon it, showed not only that trainees face clinical uncertainty but also described how they are socialized to handle it.2,3 Training for uncertainty occurs, these scholars showed, when medical students witness faculty not knowing all the answers to medical questions, yet acknowledging this openly and handling their lack of knowledge as an everyday occurrence. Additionally, students are socialized to face their uncertainty as their peers admit their own ignorance and affirm classmates even when they do not have the answers. Thus, in a process akin to both the informal and hidden curricula,6,7 students receive the message that some clinical uncertainty is inherent to medicine, which decreases trainees’ fear in the face of this uncertainty. Students subsequently learn to acknowledge their uncertainty, which allows them to recognize that they share this experience of clinical uncertainty.2,3 This further normalizes and diminishes the anxiety tied to uncertainty as trainees gain acceptance of its inevitability.

This type of training for uncertainty is important, for there is strong evidence that for both medical students and clinicians, uncertainty impacts clinical decision making and generates anxiety, self-doubt, feelings of inadequacy, and
frustration. Decreased tolerance of uncertainty is also correlated with poorer clinical performance, decreased desire to work with underserved populations, and increased psychological distress in medical students. Thus, physicians must develop, and medical training must help them to develop, strategies for recognizing and mitigating this uncertainty, such as seeking other perspectives and educating themselves about ambiguity to reduce uncertainty as much as possible before making patient care decisions. Nevertheless, debate exists among medical educators regarding how to most effectively incorporate training for clinical uncertainty and failure into medical curricula.

While training for clinical uncertainty has been well defined and illustrated, other types of uncertainty faced throughout medical training have not yet been explored. Indeed, the COVID-19 pandemic has exacerbated many of these uncertainties as medical professionals face not only clinical uncertainty but also career uncertainty as they navigate upended research plans and curricula. These additional types of uncertainty are documented but have yet to be named and defined within medical education literature. Moreover, literature has not yet addressed how trainees are socialized to grapple with these other uncertainties. For instance, medical trainees regularly face uncertainty in decision making related to various aspects of their careers, particularly surrounding decisions related to specialty discernment and the residency application process. Despite the importance of the residency application period and the significant uncertainty faced during this time, few studies have examined medical students’ experiences while they undergo this fraught process.

Using data obtained through focus groups with fourth-year medical students, this study aims to investigate the impact of students’ understandings of medical school norms and residency program expectations on students’ experiences during the residency application period. Employing a fully inductive theory development model, we use our data to define and describe the novel concept of training for professional uncertainty. We chose the term “professional uncertainty” to highlight a type of uncertainty associated with professional socialization and professional identity formation. Rather than using uncertainty as a theoretical framework to analyze our results, we used our results to extend the existing theory of training for uncertainty to introduce and define our new concept of training for professional uncertainty.

Method
As part of a study during the 2018–2019 academic year initially designed to explore medical student experiences with the United States Medical Licensing Examination (USMLE) Step 2 Clinical Knowledge (CK) exam, we conducted focus groups using the following inclusion criteria: fourth-year medical students who had already taken Step 2 CK. A focus group methodology was chosen for this study to encourage dialogue among participants, which allowed us to explore similarities and differences in their experiences. This study was conducted at the Chicago campus of the University of Illinois College of Medicine (UICOM-Chicago), which provided our team with a large and diverse student population from which to gather our data. Notably, the curriculum and timeline to graduation at UICOM-Chicago reflects that of many medical schools nationwide. Participation was voluntary, and all students who met inclusion criteria were able to partake. Participants were recruited through class-wide emails and were entered into a raffle for a $25 gift card. This study was approved by the University of Illinois at Chicago Institutional Review Board.

The researchers conducting these focus groups and subsequent analysis represented a variety of academic backgrounds. The senior author (L.E.H.) is a sociologist and medical educator, and at the time of the focus groups, S.M.R., J.R.G., and H.R. were all senior medical students. Our additional team member (T.M.T.) is an associate professor of emergency medicine and, at the time of the focus groups, the assistant dean for residency preparedness. All members assisted in development of the focus group guide and provided insights unique to their positions and experiences when selecting topics of discussion.

Focus groups were conducted and audio recorded by L.E.H., an experienced focus group facilitator, with the help of an assistant facilitator (S.M.R., J.R.G., or H.R.), who were all trained in focus group facilitation by L.E.H. The audio recordings were transcribed and deidentified. After 6 focus groups, the research team concluded that sufficient information power for data analysis was achieved and thus stopped data collection.

Constructivist, phenomenological methods were then used to analyze the data. This paradigm assumes the position that multiple, equally valid realities are possible since reality is created in the mind of the individual. Thus, an iterative, inductive approach to data analysis was used to identify common themes among participants’ realities. Three researchers (S.M.R., J.R.G., and H.R.) coded the transcripts, using NVIVO qualitative software (Version 12.4.0, QSR International Inc., Burlington, Massachusetts), with each transcript having at least 2 coders. Discrepancies were discussed and resolved with the senior author (L.E.H.). Open coding was used to identify general themes; then, following group discussion, we developed a codebook of focused codes, which we used to reanalyze the dataset in a more systematic fashion. Two of the authors (S.M.R. and J.R.G.) wrote initial, analytic memos to illustrate broad themes developed through focused coding and reported these back to the research group. At this stage, we identified factors contributing to students’ experience of uncertainty and developed additional integrative memos focused specifically on this theme. These were ultimately used to develop our analytic model of professional uncertainty. As this was fully inductive theory development, the theory of training for uncertainty was not used to structure the initial steps of this research; rather, the iterative process of data collection and analysis drove our formation of the theory of training for professional uncertainty.

Results
We completed 6 focus groups. Twenty-three fourth-year medical students participated. Participants planned to pursue a wide range of future specialties with emergency medicine (n = 5, 21.7%) and internal medicine (n = 4, 17.4%) having the greatest presence. Fifteen participants (65.2%) were women, and 8 (34.8%) were men.
In their discussions of the pressures of the residency application period, students articulated a type of uncertainty faced in medical training that has not previously been described—a form of uncertainty we label “professional uncertainty.” Our participants described not only how they experience such uncertainty but also how they are socialized to grapple with it. We identified 2 types of professional uncertainty: (1) uncertainty due to career-based advice and (2) professional uncertainty surrounding competing responsibilities. Uncertainty related to career-based advice arises from a lack of and conflicting information regarding how to navigate a given professional situation; for our participants, these situations most frequently involved choices related to their future residency careers. Uncertainty surrounding competing responsibilities describes the uncertainties that arose from allocating limited resources to several conflicting obligations, such as those that students face in the months preceding submission of residency applications (see Figure 1). While our original focus in this study was Step 2 CK, the findings encompassed other aspects of the residency application period and are thus applicable to the whole timeframe. Furthermore, while this paper highlights the professional uncertainty faced during the residency application period, our results provide insights into trainees’ experiences of professional uncertainty that may be extrapolated to other stages of training.

**Professional uncertainty and advice**

While student strategies toward approaching the residency application period were highly dependent on their choice of specialty, mixed messaging about best practices during this period was widely reported. For example, students described hearing mixed messages regarding the weight that USMLE scores have in the residency application process:

“There’s the student lil’ acrobatics or whatever that happens there. And then, from the administration, they are giving talks on how [Step 2 CK] is becoming more and more important and yada yada yada…. And then, depending on your specialty, you can ask your program director and they would go either, “We don’t care,” or, “Yeah, yeah, it’s important I guess.” [laughter]

In particular, residents and faculty were more likely than student affairs or college administration to minimize the weight of Step 2 CK in residency selection and assure students that the exam would not make or break students’ competitiveness for residency when compared with other aspects of their application.

This conflicting information from advisors, program directors, residents, and faculty generated confusion and misconceptions among medical students, which contributed to increased uncertainty and stress. Students frequently turned to members of their chosen specialty for information and recommendations about the residency application process in attempts to clarify things. However, clear and uncomplicated advice from members of their future specialties was the exception rather than the rule. For instance, the majority of our participants lamented that the Fellowship and Residency Electronic Interactive Database (FREIDA) from the American Medical Association did not provide useful information for trainees in their specialty. Students commented that either they could not find information about whether certain USMLE scores were necessary for interviews or they found that FREIDA’s information conflicted with responses from corresponding program directors or program websites.

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**Figure 1** Conceptual model of professional uncertainty mapped to a sample timeline of undergraduate medical education. This figure illustrates the timeline to graduation of the focus group subjects at the University of Illinois College of Medicine–Chicago, and, in doing so, demonstrates the competing pressures students face during this brief time period. Above, a representation of the authors’ theory of professional uncertainty is provided. Abbreviations: USMLE, United States Medical Licensing Examination; CK, Clinical Knowledge; CS, Clinical Skills; ERAS, Electronic Residency Application Service.
Students felt frustrated when their searches for clear data yielded mixed or lacking results, which only exacerbated the uncertainty they were already experiencing.

Moreover, students received variable amounts of information from members of their specialties and residency programs regarding expectations for and emphasis on USMLE scores compared with other aspects of their residency applications. In particular, students struggled to determine whether Step 2 CK scores were a prerequisite for interview invitations or if they were only used in final ranking of residency candidates. Despite consulting multiple sources, students were unable to find this information and thus struggled to determine whether to take Step 2 CK before or after the Electronic Residency Application Service (ERAS) deadline. However, when students began to hear about interview invitations, they learned some programs were withholding invitations until students submitted their scores:

In that interview period, I had a couple programs message me through ERAS saying, “Hey we noticed your Step 2 score isn’t there yet.” And I was like, “Yeah, I just took it. And as soon as I get my score, I’ll let you know.” And I got my score, submitted it, emailed those programs saying, “Hey, my score is in,” and I got interviews from those programs basically right away.

I have friends who are going into Emergency [Medicine], who took it earlier and got their scores back, got interview offers from certain programs. While some of us were waiting [for our scores] and when those scores went in, I started to hear back one way or the other. And so, I was like, okay so clearly, this school was waiting to hear back [about my scores], and it would have been nice if that had been somewhere, but it just wasn’t.

Other program directors told students that the absence of a Step 2 CK score could filter out applications altogether:

One thing that I did hear was that some PDs [program directors] will just download everyone’s application the one time and then won’t go back to redownload new applications that appear after September 15. I think that was another motivator to make sure I had everything in. Just in case my Step 2 [CK] score fell through the cracks or didn’t get updated to the people it needed to get to.

Participants across all focus groups shared similar experiences of such mixed messaging from program directors, which affected decision making and contributed to uncertainty. When trying to determine how to allocate a limited amount of time to various aspects of their residency application, students searched for information about how different components affected their competitiveness. Collectively, the lack of transparency and potential disqualification from residency consideration generated significant stress and heightened anxiety among medical trainees. At the same time, while the mixed messaging that students faced was ubiquitous, the common experience also normalized uncertainty as a standard aspect of both the residency application period and medical training in general.

Professional uncertainty and competing responsibilities

The residency application period includes pressure to finalize choice of specialty, obtain letters of recommendation, rotate at other programs, write their residency application, and prepare for USMLE Step 2 CK and Clinical Skills exams (see Figure 1). Thus, students found it difficult to determine how to prioritize various competing stressors, including Step 2 CK. These opposing forces caused medical trainees to feel uncertain about how best to use their time, which led to stress and anxiety as they navigated these opposing forces: “Sometimes you feel a little set up for failure…. You feel like you’re in an obstacle course trying to dodge obstacles.”

Our participants also shared that they felt other parts of their application, such as letters of recommendation, mattered more than Step 2 CK. Consequently, when faced with a limited time frame, students prioritized letters over studying for their exams, though they were not always confident about this choice:

I think it wasn’t made clear to me how little time there was for me before applications were due to get those letters and all that exposure [to other fields], so it was a kind of a scramble towards the end. Also, I knew I needed a letter during my sub-[internship], and there’s so much riding on these 2 weeks that I spend with someone, so it’s a very stressful time.

Participants described experiencing a substantial amount of uncertainty, stress, and confusion about the best strategies for choosing their schedules for their rotations and exams:

As participants in this exchange highlighted, medical students juggle pressures related to performing well on high-stakes exams and in their clerkships (especially so-called “audition” or away rotations) with the uncertainty of trying to strategize the most effective way to plan their schedules and to use their time. Indeed, for students who plan to complete away rotations, the window in which they can prepare for USMLE exams and complete their residency applications may shrink even further.

Students frequently schedule these external rotations during the early part of their fourth year to maximize their chances of securing letters of recommendation and to demonstrate their capabilities to desired residency programs before interview selection occurs. For some participants, away rotations pushed Step 2 CK after the ERAS deadline:

For those who do away rotations, the timing of [when to take Step 2] CK becomes more of an issue…. You want to do your away rotations before your ERAS application goes out because you get can get letters of [recommendation] from those places…. I went right from the end of M3 year [and] jumped to 2 months of away rotations. Then I still needed 4 weeks to prep, so I did it as early as possible, and that by definition resulted in CK not being on my original transcript [for residency applications].

These competing forces absorbed much of students’ emotional energy; as a result, they were not able to focus as much of their attention on these exams as they otherwise would have liked. However, as our focus group participants frequently reiterated, students also came to accept some of this professional uncertainty as inherent to the process; consequently, resignation toward their exams was both due to limited emotional energy and recognition that some uncertainty was expected and acceptable. This type of uncertainty, which results from the necessity to prioritize competing professional responsibilities throughout their careers, provides key lessons about
how medical trainees should use limited information to allocate their limited time, and is thus paramount for their training.

Discussion
In this study, we aimed to understand how medical students navigate the competing responsibilities they face while preparing for the residency application process. We found that students’ concerns and frustrations about the residency application period largely centered on 2 major themes: (1) determining how to allocate limited time when preparing their residency applications and studying for USMLE exams and (2) making these decisions with conflicting and often lacking information about each contributing factors’ importance in the residency application process. These larger themes are both examples of what we have termed “professional uncertainty,” which we define as the uncertainty that medical students face while making decisions about their education and future careers, especially common amongst early fourth-year students approaching specialty decision and residency application. Previously, this term has been used in passing to describe a professional, mature approach to clinical uncertainty. 27 However, professional uncertainty faced by medical students when making career decisions has yet to be defined. Furthermore, our results illustrate how students grappled with this professional uncertainty and thus were implicitly trained for the professional uncertainty they will face in their future careers. 9 This concept of training for professional uncertainty, modeled off of Renée Fox’s original “training for uncertainty,” extends her theory of socialization of medical trainees to explore how they learn to handle uncertainty in a professional setting outside the clinical realm.

Here, we explored how medical students navigated and, in the process, were trained to navigate professional uncertainty as they balanced away rotations, letters of recommendation, residency applications, and preparation for USMLE exams. Like physicians making decisions in the face of clinical uncertainty, 26 our participants sought information about these competing priorities to determine which ones should receive more of their time. Ultimately, however, the perspectives they gained from advisors, residents, faculty, and administration often contradicted each other, creating greater uncertainty. Just as clinical uncertainty generates distress in medical students, this professional uncertainty surrounding the residency application period caused significant stress and anxiety in focus group participants (see Table 1). Through this process, however, students were socialized to handle competing career pressures, which normalizes and decreases trainee anxiety when they face similar situations in the future.

Navigating professional uncertainty
As we have noted, the professional uncertainty we identified can largely be categorized as (1) professional uncertainty related to career-based advice and (2) professional uncertainty surrounding competing responsibilities. Uncertainty related to career-based advice results from mixed messaging and lack of transparency. In particular, this lack of transparency stemmed from various perspectives within a given specialty; expectations specific to different specialties; and differing advice from faculty, residents, staff, and other students. This conflicting evidence resembles the ambiguity present in clinical decision making (see Table 1). Specifically, in both situations, uncertainty arises from differing opinions and unclear information surrounding a given choice, which is not necessarily resolved through gathering more information. This incomplete and conflicting information leads to ambiguity about the best course of action, and students must determine how to handle this professional uncertainty when the ramifications can impact their residency competitiveness.

Competing professional responsibilities reflect another dimension of professional uncertainty. Inevitably, medical students and physicians face competing interests and have to prioritize these interests without knowing which endeavor will lead to the greatest success. This concept parallels both complexity and probability in clinical uncertainty, for students face multiple factors that will influence their ultimate residency placement, yet no outcome is guaranteed (see Table 1). 2

Table 1
Parallels Between Clinical Uncertainty and Professional Uncertainty

<table>
<thead>
<tr>
<th>Component of uncertainty</th>
<th>Definition in clinical uncertainty</th>
<th>Definition in professional uncertainty</th>
<th>Examples from results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguity</td>
<td>Conflicting expert opinions or advice surrounding best practices in diagnosis and treatment; cannot be reduced 2</td>
<td>Conflicting advice from mentors and advisors about how to proceed in a given career decision</td>
<td>Advisors and program directors suggested that students submit their Step 2 CK scores to residency programs early, yet faculty and residents minimized the importance of these scores.</td>
</tr>
<tr>
<td>Complexity</td>
<td>Multiple factors impacting the final diagnosis or treatment outcomes; can be reduced through gathering information about these various components 2</td>
<td>Multiple obligations contribute to the outcome of a professional goal, such as matching into a residency program, which requires completing subinternships, acquiring letters of recommendation, preparing applications, and taking Step 2 CK and CS</td>
<td>Students face numerous competing pressures during the residency application period, but they attempt to reduce the uncertainty from this by gathering information about which components of their application are weighted the most.</td>
</tr>
<tr>
<td>Probability</td>
<td>No diagnosis or treatment is completely certain; cannot be reduced 2</td>
<td>While medical professionals can put significant time and effort into achieving a career goal, they are not guaranteed to accomplish said goal</td>
<td>While students attended to competing pressures during the residency application period, they still experienced uncertainty about whether or not they would match.</td>
</tr>
</tbody>
</table>

Abbreviations: CK, Clinical Knowledge; CS, Clinical Skills.
As in clinical decision making, students attempted to reduce professional uncertainty through gathering information (see Table 1).67 such as using the National Resident Matching Program Program Directors Survey to determine which portions of their application were most important.38 However, they could not be certain that an individual residency program's selection criteria would correlate precisely with that information. Consequently, students expressed emotional distress as they navigated this uncertainty.

Training for professional uncertainty

Notably, by undergoing this stressful process, trainees are being socialized to grapple with professional uncertainty. The same messaging from faculty and residents that causes confusion for trainees also informs them that some uncertainty is inherent to the residency application process. Through talking with residents who have successfully applied for and matched into residency, students come to accept that this uncertainty, while difficult to handle, will not necessarily impede their path to matching.

Furthermore, despite differences in specialties, students largely deal with professional uncertainty in similar ways, such as turning to established resources for answers and gradually resigning themselves to some level of uncertainty during the residency application period.

Another indication of medical students' increased ability to handle professional uncertainty, for example, having been "trained for professional uncertainty," relates to the way they experienced anxiety during the residency application process. When students are grappling with uncertainty, some stress and anxiety is expected. The default response to irreducible uncertainty is subjective and physiological stress, which, if prolonged, can lead to anxiety, depression, and burnout.1,29,30 While these are not definitively tied to professional uncertainty, students in our study frequently commented on their stress and burnout in the face of uncertainty. However, while participants described stress and anxiety during the residency application process, they frequently commented on how much less stressed they were when compared with the period leading up to Step 1.9 This is notable, since the residency application period contains significantly more unknowns, and thus, arguably, more stressors, than the study period preceding Step 1. Furthermore, students frequently mentioned discussing the anxieties of the residency application process with their peers, which demonstrates that students do not believe this uncertainty is wholly personal and thus feel affirmed in expressing their uncertainty. This parallels the way students discussed and affirmed clinical uncertainty among their peers in Fox's foundational study.2

Normalizing professional uncertainty and learning how to navigate it will prepare trainees for their future careers, for professional uncertainty does not stop after the residency application period. Training for this professional uncertainty is necessary, but so is minimizing uncertainty by identifying and addressing areas of complexity, which can be addressed through correcting misconceptions, increasing transparency of selection and promotion processes, and improving comprehensibility of available information. All residents and faculty experience some degree of uncertainty in professional decision making, but some groups will inevitably experience this more than others. For instance, underrepresented minorities in medicine face a professional responsibility disparity known as the "minority tax," which, among many factors, includes their disproportionate representation in diversity committees.31,32 This adds yet another responsibility to the preexisting competing responsibilities of clinical work, research, and education, and this service is often not factored into promotion considerations.31,32 Furthermore, all medical professionals experience uncertainty when they seek mentorship about their choices and priorities throughout their careers, but those from groups underrepresented in medicine and those without well-developed faculty development will face greater difficulty in finding mentors who can address their specific uncertainties, which could decrease career satisfaction, slow career progression, and increase the possibility of leaving academia altogether.31–33 Additionally, international medical graduates face increased professional uncertainty as they assimilate to practicing in a new culture not only of the United States but also of our medical system.34 While numerous groups will face additional professional uncertainty, everyone will experience competing pressures and mixed messaging. Students' training for professional uncertainty through the residency application process may prepare them to handle this with less fear and anxiety than they otherwise would experience.

Limitations

Our study was limited by the fact that it relied on volunteers rather than random sampling; thus, volunteer bias may have affected our findings. While the student population was relatively diverse, it did not represent all specialties and backgrounds. Of note, relying on volunteers can create a pool of students who perform above average on USMLE exams, which means our results may reflect students who had more positive experiences than the typical medical student. Those medical students who performed worse on their exams are likely to have experienced even more professional uncertainty than our participants described. Additionally, this study was completed within a single institution. Different career development and advising programs may impact the specific experiences of medical students. While the study was conducted in the United States, and thus the details described by our participants may be specific to the United States, the broader themes of professional uncertainty are likely experienced by those in academic medicine training and practicing in other countries as well.

Conclusions

Professional uncertainty, defined as uncertainty related to professional decision making, is just as integral to careers in medicine as clinical uncertainty. Here, we have defined and described this novel phenomenon using a diverse sample of fourth-year medical students. Particularly during the residency application period, medical students experience uncertainty related to both advising and competing professional responsibilities. They will continue to face unclear messaging and competing responsibilities around this period, no matter how the landscape around residency selection shifts in the future. As this professional uncertainty will continue throughout their future careers, this difficult introduction implicitly trains students how to grapple
with such uncertainty in the future. Indeed, though we have focused here on the residency application period, professional uncertainty related to career-based advice and uncertainty from competing responsibilities is prevalent at all levels of medical training and practice. Recognizing and describing this phenomenon is the first step toward addressing it so that physicians can minimize burnout and maximize their success in the face of the unknowns.

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