Title

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A need for time and training: pediatric program directors' perceptions about mentorship of residents

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Abstract

Objective
We aimed to describe pediatric program directors' perceptions of existing mentorship programs in pediatric residencies, to assess whether characteristics used for mentor-mentee assignments impact mentoring outcomes, and to identify barriers to success in mentorship programs.

Methods
With the support of the Association for Pediatric Program Directors Research Task Force, we conducted a cross-sectional survey study of all associate pediatric program directors (APDs) in the United States in March 2022.

Results
Nearly half (82 of 197, 41.6%) of programs responded. Most (87.8%) report having a formal mentoring program. Half of programs (51.4%) do not provide training to residents on how to be a mentee, and only slightly more than half (62.5%) provide training to faculty mentors. Most programs (80.6%) do not provide protected time for faculty mentors. There were no meaningful associations with characteristics used for mentorship matches and perceived successful mentorship. Top barriers from the program leadership perspective included faculty and residents lacking time, residents lacking skills to be proactive mentees, and inadequate funding.

Conclusions
While a majority of programs have formal mentorship programs, many do not provide training to mentors or mentees. Barriers to mentorship include a lack of funding and time. National organizations, such as APPD and the ACGME, have an opportunity to provide guidance and support for protected time, funding, and training for mentors and mentees.

Abbreviations: PD (program director), APD (associate program director), APPD (Association of Pediatric Program Directors), ACGME (Accreditation Council for Graduate Medical Education), FTE (full-time equivalent), GME (graduate medical education)

Introduction

Mentorship in medical training has been shown to benefit mentees and institutions in myriad ways, including mentee career satisfaction and productivity, as well as increased faculty retention.[1–6] The Accreditation Council for Graduate Medical Education (ACGME) Program Requirements for Pediatrics mandate that all pediatric programs implement a mentorship program for their trainees. Specifically, programs must provide "faculty mentorship to help residents create learning goals and systems for tracking and monitoring progress toward completion of the individualized learning plan."[7] Mentorship has sometimes been defined as separate from the role of a coach or sponsor, but for the purposes of capturing support for resident's growth more broadly, we used the Association of Pediatric Program Director's (APPD's) definition, which emcompasses roles of career development, champion/sponsor, coach, confidant, and counselor.[8] (see figure 1)

Current literature about mentorship in pediatric residencies focuses on specific types of mentorship, such as within the context of research tracks, rather than the description of the current landscape of mentorship programs.[9-12] Within other specialties, including surgery, neurosurgery and urology, national surveys of program leadership have been conducted to characterize existing mentorship programs, including identification of barriers to formal mentorship and to successful mentor/mentee relationships.[13-15] One barrier to successful mentor relationships suggested in the literature is a lack of concordant mentors, in particular for women and those underrepresented in medicine.[16-19] It is unknown whether a lack of concordance may impact successful mentor/mentee relationships within pediatric residency programs. While needs assessment data has yet to be gathered within pediatrics, the Association of Pediatric Program Directors (APPD) did publish a toolkit for mentors and mentees in 2016, suggesting that there is a need for resources.[8] Generally, formal mentorship

programs have been shown to improve resident satisfaction with mentoring; however, the presence of formal mentorship programs and the role they play for pediatric trainees remains unknown.[20]

Each year, the ACGME distributes a survey to pediatric trainees as a means of providing oversight of existing accredited training programs, which includes questions about mentorship. However, little is actually understood about how programs are built, what contributes to success, and which barriers exist. The aim of this study is to describe existing mentorship programs in pediatric residency training programs, to assess whether program characteristics or characteristics used for mentor-mentee assignments impact perceived mentoring program satisfaction, and to identify barriers to successful mentorship programs from the program leadership perspective.

Methods

We conducted a cross-sectional survey study of pediatric program leadership using an electronic platform. To add content validity evidence for the survey, the needs assessment was developed using content experts, based on author experience in resident mentorship, and in review of similar published surveys from other specialties. The APPD Mentorship Toolkit was used for defining the aspects of a mentorship program (figure 1). Given previous research indicating the importance of concordance between mentors and mentees demographic and career characteristics, these were included in questions about making mentorship matches.[16-19] To provide response process evidence, cognitive think-aloud was done with three program directors. The survey was subsequently reviewed and edited by the University of Chicago Survey Lab. The APPD Research and Scholarship Learning Community (RSLC) approved the survey for the APPD listserv of pediatric APDs. The APPD RSLC directed the survey to all APDs with a script encouraging them to forward the survey to the person in leadership who is most intimately involved with the mentorship program. The survey was built in LimeSurvey Professional[21] and distributed to 197 pediatric US programs' APDs in March 2022 by email; three reminder emails were sent. Only one response per program was allowed. APPD survey administrators provided demographic data and fully

deidentified results prior to analysis. We obtained non-responder demographic data, including program size and region, to compare the sample of responders to non-responders using logistic regression.

Descriptive statistics were used to describe demographic items. Data analysis was performed in MS Excel version 16.37 and Stata/SE 17.0.

For qualitative analysis, we used thematic analysis with a post-positivist orientation. Themes were identified from the free-response items in the survey by two authors, NO and MS, and disagreements were resolved by consensus. Thematic saturation was not achieved due to the limited responses; however, rich data was gathered in the qualitative analysis of the open-ended questions. The qualitative data was divided into responses to questions 5 and 6, about career and personal characteristics used for matching; responses to question 20, reasons for unsuccessful mentorship matches; and responses to question 28, aspects of the mentorship program that could be improved. In terms of reflexivity, all authors have experience being mentees and mentors over their careers. This study received an exempt determination from the University of Chicago IRB.

Results

Of 197 programs surveyed, 82 APDs (response rate: 41.6%) responded. When responders were compared with non-responders, there was no significant difference in program type (e.g., university-affiliated or community-based) or region (e.g., Northwest or Southeast). Of the responding programs, the median number of faculty in a department was 145 (range 11-1000), with a median of 25 faculty participating as mentors (range 3-150), revealing that on average only 25% of pediatric faculty members in a department participate as mentors (range 0.8-100%) (Table 1).

Nearly all responders (87.8%, 72 of 82) reported having a formal mentoring program, with 10 years being the median duration of the programs. In formal programs, there was a median of 1 faculty mentor per resident (range 1-3) and 2 mentees assigned to each faculty member (range 1-34). In informal programs, there was a median of 1.5 (range 1-4) faculty mentors per resident.

Mentorship matches. When responders with a formal mentoring program selected one or more methods they used for matching, the majority (n = 58/72, 80.6%) used the program director (PD) to pair mentors and mentees, with the second most common method being the residents choosing a mentor themselves (n = 44/72, 61.1%). More than half (n=39/68, 4 programs with formal mentoring did not respond, 57.4%) of these programs asked residents about their preferences for mentors. Career characteristics were more commonly used to pair mentors with mentees than personal characteristics (Table 2). Matches were most often made after orientation in the first part of the intern year (n = 33/72, 45.8%). 13 of 72 (18.1%) programs made matches before orientation, and 19 of 72 (26.4%) made matches during orientation.

Leadership perception of satisfaction. The majority of leaders completing the survey reported satisfaction with their mentorship program and also perceived that faculty and residents were satisfied (table 5). We found that respondents from residencies with formal mentorship programs were not more satisfied with mentorship than respondents from residencies with informal mentoring programs.

Program Structure

Program meeting logistics. Of formal programs, nearly 70% (n = 50 of 72) had an individual who was responsible for providing program oversight. Most often, meetings between mentors and mentees were required twice per year (n = 41 of 72, 56.9%), while some programs (n = 9 of 72, 12.5%) had no minimum meeting

requirement. Many programs (n = 47 of 72, 65.3%) reported that the meetings occurred more often the minimum requirement.

Training for mentorship. For faculty, many (n = 45 of 72, 62.5%) of the programs provide training in at least one of the following categories: career development, being a champion or sponsoring, keeping confidence, coaching, or counseling or advising skills, or provide bias training related to mentorship. For programs who provided mentor training, career development skills was most common (n = 38 of 45, 82.2%), followed by coaching skills (n = 31 of 45, 68.9%), counseling or advising skills (n = 23 of 45, 51.1%), bias training (n = 17 of 45, 37.8%), champion or sponsorship skills (n=8 of 45, 17.8%), and skills in maintaining confidence (n = 8 of 45, 17.8%). 27 of 72 programs (37.5%) provide none of these types of training related to mentorship. Half of the programs (n = 37 of 72, 51.4%) do not provide mentee skills training to residents.

Evaluation of program. Tools used to evaluate formal programs included surveys (n = 23 of 72, 31.9%), exit interviews (n = 30 of 72, 41.7%), fellowship or career outcomes (n = 18 of 72, 25.0%), or 43 of 72 (59.7%) used ACGME survey results. Some training programs (n = 26 of 72, 36.1%) never had residents evaluate the mentorship program, and more than half (n = 38 of 72, 52.8%) never had faculty evaluate the mentorship program.

Need for changing mentors. In the survey, 38 of 72 (52.8%) programs reported at least one change in mentors in the last three years. In qualitative responses to the question 20 regarding reasons for changing mentors, we identified themes of lack of faculty availability, mismatch in resident interest, personality conflict between the mentor and mentee, and residents needing more support (Table 7).

Barriers

Time and funding as barriers to mentorship and improvement in the program. Top barriers reported by programs were faculty lacking time (93.9%, n = 77 of 82), residents lacking time (82.9%, n = 68 of 82), residents lacking skills to be proactive mentees (74.4%, n = 61 of 82), faculty lacking skills to help mentees with goals (69.5%, n = 57 of 82) and funding being inadequate (62.2%, n = 51 of 82) (table 3). About half indicated that lack of resident and faculty buy-in was a barrier. Of mentors in formal programs, 80.6% (n = 58 of 72) did not have protected time for mentorship. Funding was the most common barrier to improvements to the program (n = 39 of 82, 47.6%), followed by available faculty mentors (n = 38 of 82, 46.3%) (table 4).

Thematic analysis of free text responses yielded two major themes, with seven sub-themes, that contribute to a successful mentorship program (Table 6). Under the first theme, "Personal characteristics of mentors and mentees," subthemes including identity fit, professional fit, and personality fit were identified. Across all three subthemes, concordance of personal characteristics was often considered and prioritized. Some programs allowed residents to indicate which personal characteristics were most important to them in matching:

> *On their [mentor preference] survey, residents are asked to evaluate how important certain characteristics are to them in a mentor. These include race/ethnicity [and] gender. There is a free-text box where residents can request additional characteristics.*

The second theme, "Structural characteristics of mentorship programs," was further divided into four subthemes including resources, training, program oversight, and program evaluation. Under the resource subtheme, protected time for mentors to meet with mentees and recognition for mentorship work within the promotion process were most often cited as critical to successful mentorship programs:

> *We simply lack enough interested faculty. There is no reward, either monetary or recognition, nor dedicated time, for mentoring residents.*

Overall, qualitative analysis revealed that the majority of pediatric residency program respondents in our survey are facing similar barriers to success in formal mentorship programs.

Discussion

This study adds to the body of literature regarding mentorship at the GME level by being, to our knowledge, the first US survey of pediatric leadership to elucidate the structure of exisiting mentorship programs. The quantitative results and written comments reflect that variability exists in the structure of mentorship programs and in the processes used to match mentors and mentees. Additionally, results showed that the primary exisiting barriers are a lack of support for protected time, training, and funding at the institutional level for mentorship. Pediatric residency leadership voices represented in our study are reporting a need for faculty time and resources for training.

Overcoming Barriers

Similar to national surveys done in other specialties,[13-14] we found that a lack of faculty time was a primary barrier to mentorship. The literature describes improved mentorship outcomes after protecting time for a GME-wide advisor to facilitate the implementation of formal mentorship programs, and evidence for sustainability over several years.[22] While some barriers may be overcome by providing support for program oversight or with resources such as APPD's toolkit,[8] neither of these will address the reality that faculty lack time. It is clear from both the thematic analysis and quantitative data that a lack of protected time for faculty is unsustainable in many programs since this was cited as a common barrier. Based on our finding that most programs rely on less than 25% of faculty in the department as mentors, the lack of sustainability could be amplified by the smaller pool of faculty willing or able to fill the mentor role. Although the ACGME common program requirements mandate mentorship programs, and this is tracked through the annual survey, there currently are no recommendations to protect time for faculty for this essential role. Further, the ACGME revised requirements for full-time equivalents

(FTEs) of program leadership in 2022 without addressing the need for protected time for faculty advisors or mentors. The findings of our study highlight the critical opportunity for intervention on a national level by organizations such as APPD.

Our results also confirm that, similar to other subspecialities, pediatric residency programs are challenged by a lack of faculty and resident interest or "buy-in" (Table 3)[13-14]. Part of the lack of buy-in on the faculty end may be related to competing priorities and clinical duties, which could be addressed by securing protected time. However, given that 37.5% programs provide no training related to mentorship for mentors, and 51.4% provide no training for mentees, there is a missed opportunity to convey the value and optimize the impact that mentorship can have for trainees. Mentorship training programs that empower mentors to support professional development, board study plans, and scholarly activity[14] can improve the both the training experience for residents and program success. Tracking mentorship program success using regular evaluation is infrequently done and could increase buy-in by providing mentees and mentors a voice and improving the program structure.

Concordance matching

Despite the fact that many programs are taking mentee characteristics into account when making matches, this practice is done in variable ways and has unclear impact. This study was not designed to assess the importance of concordance, and future studies of trainees on their perspectives of concordance in mentoring are needed. There are important outcomes, such as completion of residency training, trainee satisfaction with the training experience, and resident opinions about the mentorship program that are essential to evaluate in future studies. Further research to better understand trainee experience and satisfaction with the use of mentor concordance in pediatrics is needed to determine best practices for using demographic and personal characteristics in matching.

Looking to the Future

Based on qualitative responses received in our open-ended questions, we identified the following tips for program directors to consider:

1. Training both residents and faculty to be mentees and mentors.
2. Developing formal recognition for faculty by the program or the institution (e.g., awards).
3. Tracking outcomes: survey both mentees and mentors to evaluate the program and show the local impact. Allow residents and faculty to be a part of improving the program and therefore more invested.
4. Matching based on concordance of with identity, professional, or personality may benefit residents.
5. Advocating at local and national levels for protected time, training, and administrative help for mentorship.

While our qualitative results suggest a path forward to make mentoring programs more robust, it will be important to explore more fully with a future focused qualitative study of mentees, mentors, and program leaders to develop best practices in pediatric residency mentorship.

Limitations of our study include having a response rate less than 50%, although this is higher than the average response rate for APPD national surveys. We were able to show that the responders were not significantly different from responders in program type and region. Validity was addressed through piloting and expert review including a formal survey lab, but we did not address other aspects of validity and it is possible that the interpretation of questions was not what we intended. Another important limitation is that we asked leadership for their impressions about resident and faculty satisfaction, and we cannot infer what the actual resident or faculty satisfaction is from this question.

Conclusions

A lack of funding to support resident mentorship and lack of ability to protect faculty time are major barriers to ongoing mentorship efforts at pediatric residency programs. National organizations, such as APPD and the

ACGME, have an opportunity to provide guidance and support for protected time, funding, and training for mentors and mentees. Locally, faculty and resident investment could be addressed by providing training not only to faculty but also to resident mentees, and expanding regular evaluation of mentorship programs by both mentors and mentees.

We have described common characteristics of mentorship programs, but our ability to draw conclusions about best practices for mentorship is limited by surveying only program leadership. Further research on mentorship within the field of pediatrics with a focus on resident perspectives would help to determine the factors most important for successful mentorship.

Figure 1. Definition of mentoring according to the Association of Pediatric Program Directors

Mentor Role	What a Good Mentor Does
Career Development	- Introduces the mentee to others – networking - Clarifies goals - Idenitifies and suggests opportunities - Encourages development of a focus - Facilitates decision making
Champion/ Sponsor	- Nominates for awards or organizational offices - Shares credit - Celebrates successes
Coach	- Encourages and supports - Motivates - Role models - Promotes independence _
Confidant	- Listens - Maintains confidential conversations _
Counselor	- Advises - Encourages work-life balance

Table 1. Respondent demographics, overall n = 82

Region	n (%)
Southeast	17 (20.7)
Mid-America	15 (18.3)
Midwest	11 (13.4)
New York	11 (13.4)
Western	10 (12.2)
Mid-Atlantic	8 (9.8)
New England	5 (6.1)
Southwest	5 (6.1)
Program type	
University-Based	44 (53.7)
Community-based, university-affiliated	37 (45.1)
Military	1 (1.2)
Faculty	
Median number of faculty in department	145 (range 11-1000)
Median faculty participating as mentors	25 (range 3-150)
Median faculty mentors per resident	1 (range 1-3)
Median mentees per faculty	2 (range 1-73)
Mentoring program	
Presence of formal mentoring program	72 (87.8)

Table 2. Characteristics used to match mentees with mentors in formal mentoring programs, n=72

Career characteristics		Personal characteristics	
	Typically or sometimes		Typically or sometimes	Not used

	used n (%)	n (%)		used n (%)	n (%)
Career focus	55 (80.9)	13 (19.1)	Hobbies/interests	41 (60.3)	27 (39.7)
Research skills of mentor	43 (63.2)	25 (36.8)	Gender	34 (50.0)	34 (50.0)
Faculty years of experience	36 (52.9)	32 (47.1)	Race/ethnicity	37 (54.4)	31 (45.6)
Performance-based	42 (61.8)	26 (38.2)	Relationship status	15 (22.1)	53 (77.9)
Other	37 (54.4)	31 (45.6)	Religion	12 (17.7)	56 (82.3)
			Sexual orientation	13 (19.1)	55 (80.9)
			Family status	28 (41.2)	40 (58.8)
			Other	17 (25.0)	51 (75.0)

Table 3. Program leadership-reported barriers to mentorship, n = 82

	Barrier, n (%)	Not a barrier, n (%)
Faculty lack time	77 (93.9)	5 (6.1)
Residents lack time	68 (82.9)	14 (17.1)
Residents lack skills to be proactive mentees	61 (74.4)	21 (25.6)
Faculty lack skill in how to help with mentee goals	57 (69.5)	25 (30.5)
Funding is inadequate	51 (62.2)	31 (37.8)
Faculty interest insufficient	46 (56.1)	36 (43.9)
Resident interest insufficient	45 (54.9)	37 (45.1)
Perception that formal mentorship is unnecessary	32 (39.0)	50 (61.0)

Table 4. Barriers to improving mentorship, n =82	n (%)
Perceived value on promotion track	24 (29.3)
Funding	39 (47.6)
Available faculty mentors	38 (46.3)
N/a; none of these	11 (13.4)

Table 5. Leadership perception of satisfaction with resident mentoring program, n = 82

	Very satisfied	Mostly satisfied	Equal parts satisfied and dissatisfied	Mostly dissatisfied	Very dissatisfied	Unsure

	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Leadership (PD or APD)	9 (11.0)	43 (52.4)	25 (30.5)	4 (4.9)	1 (1.2)	0 (0%)
Perception of resident satisfaction	3 (3.7)	44 (53.7)	26 (31.7)	3 (3.7)	0 (0%)	6 (7.3)
Perception of faculty satisfaction	5 (6.1)	51 (62.2)	21 (25.6)	2 (2.4)	0 (0%)	3 (3.7)

Table 6. Qualitative descriptors of components of a strong mentorship program

Theme	**Subtheme**	**Representative quote**
Personal characteristics of mentors and mentees	Identity fit	"On their [mentor preference] survey, residents are asked to evaluate how important certain characteristics are to them in a mentor. These include ***race/ethnicity [and] gender.*** There is a free-text box where residents can request additional characteristics, like ***'is Jewish'"*** (Q6, other personal characteristics)
	Professional fit	"We have two mentors for each resident. The first is a faculty advisor who is assigned early in intern year […]. Some effort is taken to match available advisors for the year with career focus, interests, or other connections (alumni of previous institutions etc.). ***The second is a career mentor that the residents choose themselves with attention to career focus***." Q5, other career for faculty skill-based characteristics)
	Personality fit	"Usually the resident will give some guidance on type of career advisor that they are looking for, though they can also describe characteristics, like ***faculty with children, someone with a spouse in medicine, someone who is really approachable*** […]" Q5, other career for faculty skill-based characteristics) "Similar personality characteristics, like ***if a resident is quiet and reserved*** or having difficult time speaking up, pairing with mentor who ***also had to find that confidence*** to speak up." (Q6, other personal characteristics)
Structural characteristics of mentorship programs	Resources (protected time, programmatic support)	"We simply lack enough interested faculty. ***There is no reward, either monetary or recognition, nor dedicated time, for mentoring residents"*** (Q28, what aspects of mentorship at your program could be improved?) "[…] I do find it hard to meet with my mentees as often as I would like. I need to be more proactive in setting up meetings […] but often at least one is missed due to not scheduling far enough in advance and then not being able to coordinate schedules. ***An improvement in the program might be to have a scheduler get those dates on a calendar on behalf of the mentor/mentee pair."*** (Q28, what aspects of mentorship at your program could be improved?)
	Training	"We have separate academic advisors that are members of program leadership, and then assign faculty career mentors part-way through intern year. The program leadership have had a lot of faculty development in the advisor role, but ***faculty career mentors could probably use more development****."* (Q28, what aspects of mentorship at your program could be improved?) "[In addition to a career mentor], ***all residents are assigned a faculty coach*** who is specifically NOT in their area of interest who ***undergoes a training program which is based on positive psychology*** to help residents to set and

		achieve goals without the pressure or worry that this faculty member will have a role in their future as this person is not in their chosen field. This pair stays together throughout residency." (Q28, what aspects of mentorship at your program could be improved?)
	Program oversight	"I just came on as the ***Director of Mentoring*** for our program…We have a robust "matching" process for the incoming interns, check in annually for re-assignments that need to happen, quarterly remind pairings to meet, have a suggested topic list for each quarter depending on mentee year. We offer an annual orientation that goes over the role of the mentor and the role of the mentee which expands in topics every year. And intermittently we have some offerings for the faculty to build skills as a mentor and intermittently pandemic-depending have social gatherings for the pairings." (Q28, what aspects of mentorship at your program could be improved?)
	Program evaluation	"[We would benefit from] having outcomes measures; feedback on value; method for information to bubble up to [the curriculum committee] or other needed group" (Q28, what aspects of mentorship at your program could be improved?)

Table 7. Qualitative descriptors of reasons for needing to change mentors

Lack of faculty availability	"Faculty left the program or was unavailable to the mentee." "…mentors dropped out due to time constraints."
Mismatch in resident interest	"We recommended residents switch their mentors annually if desired, particularly as career goals/fellowship plans changes or develop" "Resident had dramatic shift in career interests and desired new mentor in chosen field to support fellowship or job application."
Personality conflict	"Conflict between mentor and mentee in clinical setting that precluded mentoring relationship from moving forward." "Not a good personality match."
Resident needing more support	"The residents were struggling. One was reassigned based on the need for a mentor with more familiarity with residency requirements and who could be a more intense academic mentor. The other asked to be reassigned to a faculty member he felt he had a strong relationship with to help guide him through his struggles both personally and professionally." "The resident involved needed a lot of faculty support for her performance in professionalism. She ended up forming a strong relationship with the faculty member who oversaw her professionalism remediation, so it seemed natural that

	this faculty member would serve as her academic advisor.”

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Supplemental File (Survey)

Dear APPD community,

We need your input!

The Research and Scholarship Learning Community of APPD is surveying Pediatric Residency Programs about their **advising/mentorship of their trainees.**

This anonymous survey will give us information about the existing types of mentorship at your program. With this data, we aim to **better understand the ways that residents are mentored throughout their residency.** We cannot seek out appropriate support for mentoring in our discipline without evidence about how things currently stand and need your help to document this.

You can access the survey here: https://associationresearch.limequery.com/585389?token=RpiC8OHMORvAX0k&lang=en.

Participation in this survey is optional, and no harm or benefit will come from not participating. The survey should take you about **10 minutes** to complete, and you can stop at any time without penalty. By advancing to the next page and completing the survey you consent to participation in this study. At the conclusion of the study, data will only be reported in the aggregate. This survey has been found exempt by The University of Chicago's IRB.

If you have questions at any time about the survey, please contact Nicola Orlov at 773-834-5630 or norlov@bsd.uchicago.edu. **Thank you** for your time and support.

Sincerely,

Sarah Gustafson, MD Harbor-UCLA Medical Center

Nicola Orlov, MD MPH University of Chicago

PART 1

1. Does your residency program have a mentoring program?

Definition of formal mentoring: There is a formally assigned mentor for each resident, who helps with the minimum ACGME requirement of "assist[ing] residents in developing individualized learning plans to capitalize on their strengths and identify areas for growth." Definition of informal mentoring: There is no formal mentor for each resident. Definition of mentor: For the purposes of this study, we define advising or "advisor" as interchangeable with mentoring or "mentor."

- Yes, we have a formal mentoring program
- Yes, we have an informal mentoring program
- No

BRANCHING LOGIC -> if informal, will jump to part 2.

2. Does your program assign mentors to residents in any of the following ways?

- The Program Director or designated faculty member assigns mentors to mentees
- A residency leadership committee assigns mentors to mentees
- Resident mentees choose a mentor
- Faculty mentors choose a resident
- Informal mentoring only; no formal mentoring

3. At what point is the resident mentee informed of who their mentor will be?

- After match day, before orientation
- After orientation, during the first part of their intern year
- During orientation
- Other

4. When mentors are assigned and are not resident-chosen, are residents asked about their preferences in mentor characteristics before mentors are assigned?

- Yes
- No
- Not applicable

5. When mentors are assigned and are not resident-chosen, which of the following career or faculty skill-based characteristics are used to assign mentors to mentees?

- Career focus (e.g. general pediatrics vs subspeciality)
- Faculty years of experience
- Research skills of mentor
- Performance-based (e.g., struggling resident matched with faculty mentor with more experience in area of weakness)
- Other career or faculty skill-based characteristics [Please describe what these characteristics are.]

Options for each category:

- Typically used for match
- Sometimes used for match
- Not used for match

6. When mentors are assigned and are not resident chosen, which personal characteristics are used to assign mentors to mentees?

- Hobbies/interests
- Gender
- Race/ethnicity
- Religion
- Relationship status
- Family status
- Sexual orientation
- Other personal characteristics [Please describe what these characteristics are.]

Options for each category:

- Typically used for match
- Sometimes used for match
- Not used for match

7. What is the minimum required frequency of mentor-mentee meetings per year?

- Twice a year
- Three times per year
- Four or more times per year
- No minimum requirement
- Other [free response]

8. On average, how often do mentor-mentees actually meet? Please try to make your best guess.

- The minimum frequency that is required by our program
- Fewer than the minimum frequency that is required by our program
- More than the minimum frequency that is required by our program

- Have no sense of this
- Other [free response]

9. About how many faculty members (regardless of academic appointment status) are in your department? [numerical entry]

10. How many faculty members (regardless of academic appointment status) participate as formal mentors for residents? [numerical entry]

11. On average, how many faculty mentors does an individual resident have? [numerical entry]

12. For faculty who participate as formal mentors, what is the typical number of assigned resident mentees per faculty member (total in one year)? [numerical entry]

13. Do your mentors receive dedicated protected time for mentorship (excluding protected time for other duties)?
    - Mentorship responsibilities are a part of their medical education FTE
    - No, no protected time for mentorship
    - Other [free response]

14. About how many years has your residency program had this mentoring system in place? [numerical entry]

15. Is there an individual or committee responsible for overseeing the mentorship program?
- Yes
- No
- Other

16. Do you use any of the following tools to evaluate your mentorship program?
    - Survey
    - Exit interviews
    - ACGME survey results
    - Fellowship or career outcomes

Options for each category:
    - Yes
    - No
    - Uncertain

17. How often do residents conduct a formal evaluation of the mentoring program (aside from the ACGME survey, e.g., do they fill out an evaluation that is reviewed or have a meeting to give feedback on the program)?
- Twice or more per year
- Once per year
- Never

- Unsure
- Other [free response]

18. How often do faculty conduct a formal evaluation of the mentoring program (e.g., do they fill out an evaluation that is reviewed or have a meeting to give feedback on the program)?
- Twice or more per year
- Once per year
- Never
- Unsure
- Other [free response]

19. In the past three years, how often have you had an unsuccessful mentorship pairing (i.e.; the resident needed to be assigned to a new mentor)?
- More than 3 times
- 3 times
- Twice
- Never
- Once
- Unsure

20. Why was this mentorship pairing(s) unsuccessful? [free response]

21. What skill training do you provide for your faculty mentors (actions as defined by the APPD mentoring toolkit)?
- Career development skills (networking, clarifies goals, identifies and suggests opportunities, encourages development of a focus, facilitates decision making)
- Champion/Sponsorship skills (nominates for awards, shares credit, celebrates successes)
- Coaching skills (encourages and supports, motivates, role models, promotes independence)
- Confidence skills (Listening, maintaining confidential discussions)
- Counseling/advising skills (advises, encourages work-life balance)
- Bias training (specifically in the context of their mentorship role)
- None of the above

Options for each category:
- Yes
- No
- N/A

22. Do you provide training to your residents to help them have a successful mentor-mentee relationship (such as strategies for being proactive about sending updates to mentors, scheduling meetings, identifying when a mentoring relationship is unfulfilling, and seeking out new mentors)?
- Yes
- No

- Other

PART 2

Question for informal programs only (answered informal for question 1):

23. Typically, how many faculty mentors does an individual resident have? [number]

24. Please rank the barriers to mentorship at your program:
- Faculty lack time
- Residents lack time
- Faculty interest insufficient
- Resident interest insufficient
- Funding is inadequate
- Perception that formal mentorship is unnecessary
- Residents lack skills to be proactive mentees
- Faculty lack skill in how to help with mentee goals

Options for each category:
- Not a barrier
- Top 1 or 2 barrier
- Lesser barrier

25. Overall, how satisfied are you with mentorship at your program?
- Very satisfied
- Mostly satisfied
- Equal parts satisfied and dissatisfied
- Mostly dissatisfied
- Very dissatisfied

26. Overall, how satisfied do you think that your residents are with their mentorship at your program?
- Very satisfied
- Mostly satisfied
- Equal parts satisfied and dissatisfied
- Mostly dissatisfied
- Very dissatisfied
- Unsure

27. Overall, how satisfied do you think that your faculty are with their roles as mentors?
- Very satisfied
- Mostly satisfied
- Equal parts satisfied and dissatisfied
- Mostly dissatisfied
- Very dissatisfied
- Unsure

28. What aspects of mentorship at your program could be improved? [free response]

29. What are the barriers that exist to improving mentorship at your program?

- Perceived value on promotion track
- Funding
- Available faculty members
- None of these
- Other [Free response]

Region

- Western
- Southwest
- New England
- Mid-America
- Midwest
- Mid-Atlantic
- New York
- Southeast
- Western

Program Setting

- Community-based, university-affiliated
- University-Based
- Military

Total residents [number]

Categorical residents [number]