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Women Physicians: Choosing a Career in Academic Medicine

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Abstract

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Purpose

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Despite recent efforts to understand the complex process of physician career development, the medical education community has a poor understanding of why, how, and when women physicians embark on a career in academic medicine.

Method

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In 2010, the authors phone-interviewed women physicians in

academic medicine regarding why, how, and when they chose an academic medicine career. Project investigators first individually and then collectively analyzed transcripts to identify themes in the data.

Results

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Through analyzing the transcripts of the 53 interviews, the investigators identified five themes related to why women choose careers in academic medicine: fit, aspects of the academic health center environment, people, exposure, and clinical medicine. They identified five themes related to how women make the decision to enter academic medicine: change in specialty, dissatisfaction with former career, emotionality, parental influence, and decision-making styles. The authors also identified four themes regarding when women decide to enter academic medicine: as a practicing physician, fellow, resident, or medical student.

Conclusions

Go to:

Choosing a career in academic medicine is greatly influenced by the environment in which one trains and by people—be they faculty, mentors, role models, or family. An interest in teaching is a primary reason women choose a career in academic medicine. Many women physicians entering academic medicine chose this after or during fellowship, which is when they became more aware of academic medicine as a possible career. For many women, choosing academic medicine was not necessarily an active, planned decision; rather it was serendipitous or circumstantial.

I'm not sure...that I made a conscious choice to choose academic medicine as a medical career...it was just that I never really thought about anything else ...I actually never considered anything else.

Academic medicine is one of several options available to a physician deciding on a practice. During the 1980s, women entered academic medicine at higher than expected rates,¹ and today women enter medical school in equal proportions to men, yet of the

125,070 current medical school faculty, only 35% are women.² After reviewing more than 300 articles, the authors of a recent literature review found that the reasons physicians, particularly women, choose academic medicine are unclear.³ Of the 300 articles, the authors reviewed 60 that focused on gender, however only two specifically addressed the reasons women choose academic medicine.^{4,5} According to the review,³ these two articles indicated that the intellectual challenge of academic medicine is as important to women as it is to men, but that achieving national recognition as a physician or being viewed as a leader (valuable to many in academia), is less important to women than it is to men.⁵ Additionally, women physicians are less likely than their male colleagues to identify role models for professional-personal balance,⁵ and the literature suggests that women choose academic careers because of the quality of life, earnings potential, and organizational rewards.⁴ Changing the environment of academic medicine could enhance career satisfaction and success for both women and men.³

The remaining 58 articles (of the 60 reviewed) focused on women's advancement in medicine and more general concerns (e.g., satisfaction, barriers) regarding their career in academic medicine *after* they had already embarked on this pathway. The literature on women in academic medicine that has been published since the review (which included articles published through 2006)³ continues to focus on such issues.^{6,7} This current study builds on the literature review's examination of gender³ to focus on how women physicians embark on a career in academic medicine; specifically it explores the question: "Why, how, and when, do women physicians choose a career in academic medicine?"

Our inquiry is important and timely. Women continue to enter medicine in larger numbers than ever before, and understanding how they decide to enter academic medicine is vital, especially in light of surmounting physician shortages and faculty retirements. Prompted by the development of the Association of American Medical Colleges (AAMC) Careers in Medicine Program⁸ during the last decade, many medical schools currently offer support for students who are making decisions about specialty.⁹ While medical

educators, counselors, and advisors are better equipped than ever before to help students make informed decisions about specialty choice, they lack knowledge and an understanding regarding the next step in physician career development—that is, choosing a practice option or career path in medicine. Understanding women physicians' choice to pursue a career in academic medicine will help begin to fill the gap regarding academic medicine as a practice option, particularly for women physicians.

Method

Go to:

To answer the question, “Why, how, and when do women physicians choose a career in academic medicine?”, we interviewed women physicians in the academic medicine community. We felt that interviewing women would provide fresh insights and allow a deeper analysis of factors promoting careers in academic medicine since such qualitative approaches offer the ability to understand the meaning participants attach to their experiences.¹⁰

Procedures

After obtaining institutional review board approval from our respective institutions, we mailed a letter to the women liaison officers (WLOs) of each of the AAMC-member medical schools in the central and southern regions of the United States. The letter included information about the study and a request for a list of the names of women physician faculty at the institution. We also asked for the women faculty member's academic rank, ethnicity/race, and specialty. After we received the roster from each school's WLO, we randomly sorted the names of prospective participants from each school so that their names were not in alphabetical order. We then sorted participants by academic rank and ethnicity. Finally, we produced a representative list of women physicians in academic medicine by randomly selecting prospective participants based on their academic rank and ethnicity. For example, if one school had three non-Caucasian women listed as associate professors, we used a random process to select a prospective participant from within this grouping to ensure diversity in our sample. Once we identified prospective participants and created a representative sample of women physicians, one of us, the principal investigator of this study

(N.J.B.), contacted the WLO at each school, asking her to e-mail the prospective participants in order to notify them of their selection for the study and to inform them that a study investigator would be contacting them. If the WLO agreed, the principal investigator then directly e-mailed prospective participants describing the study and inviting them to participate. Once the prospective participant agreed to participate in the study, we obtained consent and scheduled a phone interview.

We developed a structured set of questions ([Appendix](#)) based both on Savickas' Career Style Interview¹¹ and on the input of career development and medical education experts. We pilot tested the questions with a convenience sample of six women physicians in academic medicine who were not part of the interview sample, and we made no changes. In 2010, project team members (the authors and one medical student) conducted and digitally recorded one-on-one phone interviews with women physicians in academic medicine. Interviews lasted from 10 to 45 minutes, and a qualified transcriptionist produced verbatim transcripts of the interviews. We sent participants a \$50 gift card for participating in this study.

Three of us, the co-investigators of the study (N.J.B., A.M.N., A.C.G.), first reviewed all of the transcripts for accuracy and broad themes. Once we agreed on the themes, each of us selected between three to six interviews for preliminary assessment in an effort to establish a code book. Two of us (N.J.B. and A.M.N.) coded a small subset of transcripts and reviewed the coding to achieve consensus on the code book. Then, we (N.J.B. and A.M.N.) individually used the resulting codebook to qualitatively evaluate the remaining transcripts. Last, one of us, the remaining co-investigator (A.C.G.), reviewed all of the coded transcripts to verify coding and to resolve any discrepancies.

Results

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Interviews

We contacted 73 WLOs, and of those 7 (9.6%) returned a list of faculty. We contacted 81 of the women physicians from this list, and of those, we interviewed 53 (65.4%). We used 13 interview transcripts to produce the code book.

Demographics

The 53 women physicians in academic medicine who participated in this study represented seven medical schools in the central (n = 3) and southern (n = 4) regions of the United States, according to the AAMC's geographic regions. See [Table 1](#) for further demographic and career information on the participants. The distribution of participants' academic rank and ethnicity in our study is slightly higher than national figures.²

Table 1

Demographics of 53 Women Physicians Who Were Interviewed, 2010

Category	N(%* of53)
Rank	
Assistant professor	20 (37.7)
Associate professor	19 (35.8)
Full professor	11 (20.8)
Ethnicity	
Caucasian	39 (73.6)
Other	11 (21.0)
Years in practice	
1 – 10	24 (45.2)
11 – 20	21 (39.6)
> 20	6 (11.3)
Type of medical school attended	
University/Academic medical center	19 (35.8)
Community-based	6 (11.3)
Type of residency program attended	
University/Academic medical center	33 (62.3)
Community-based	9 (17.0)
University/community	2 (3.8)
Military	2 (3.8)
Specialization[†]	
Primary Care	12 (22.6)
Non-primary care	40 (75.5)

*In some cases percentage does not equal 100 due to participants not providing the information.

[†]The participants' specialties (not listed with number and percentage to protect the anonymity of the respondents) are as follows: anesthesiology, surgery (general, trauma, thoracic, oncology), pediatrics (general, child abuse, anesthesiology,

hospitalist, infectious disease, intensive care, rheumatology), psychiatry, pulmonary, pathology, obstetrics/gynecology, neurology, nephrology, neonatology, geriatric medicine, general internal medicine, gastroenterology, family medicine, endocrinology, critical care medicine

Why did women choose academic medicine?

We asked the women in our study to rank order the aspects of academic medicine (teaching, research, administration, clinical practice) in which they were most interested when they made the decision to enter academic medicine. The majority of women physicians (33 [62.3%]) ranked teaching as the aspect in which they were most interested. In comparison, 15 (28.3%) of women ranked clinical practice first, 4 (7.5%) ranked research first, and only 1 woman (1.9%) ranked administration first ([Table 2](#)).

Table 2

Frequency and Percentages of Rankings Regarding Aspects that Interested 53 Women Physicians Most at the Time They Decided to go into Academic Medicine, 2010

Ranking	No. (%) Ranking Each Aspect			
	Clinical practice	Administration	Research	Teaching
1	15 (28.3)	1 (1.9)	4 (7.5)	33 (62.3)
2	21 (39.6)	7 (13.2)	9 (17.0)	16 (30.2)
3	15 (28.3)	18 (34.0)	16 (30.2)	4 (7.5)
4	2 (3.8)	27 (50.9)	24 (45.3)	0

Through our thematic analysis of the transcripts, we identified five main themes (and several subthemes) related to why the women we

interviewed chose academic medicine careers: (1) fit; (2) aspects of the academic health center (AHC) environment; (3) the influence of people in their lives; (4) exposure to academic medicine; and (5) an interest in practicing clinical medicine.

The concept of fit In career development theory, the concept of fit is central to understanding people's career decisions.¹² "Fit" posits that people know that the career path they have taken suits them because they feel a sense of congruence between their lives and their careers; they are satisfied with their decision and how it has played out in their lives. Many participants in this study saw academic medicine as a good fit for themselves, as illustrated by one woman who noted,

I hardly ever, never from the day I contemplated being a physician, ever had a picture of myself hanging out a shingle somewhere and practicing medicine...in the community...it just was not part of the picture for me...I never had that vision. I always had a vision of being in a medical school...where I could do research and teach and do other things.

The subthemes under fit that we identified were prestige, personality, interest, and salary as a non-issue (Table 3). *Prestige* seemed to be a quality associated with a career in academic medicine that attracted some women in our study. They perceived—and sought for themselves—a certain distinction associated with the practice of academic medicine and with its reputation for being on the forefront of medical knowledge and research. For several women, *personality* emerged as a lens through which to view their congruence with the academic medicine environment. These women articulated having similar traits as others with whom they work (e.g., passion for teaching or research), and they saw various aspects of their personalities as suited to working in a competitive, multifaceted environment. Other participants noted their *interest* in academic medicine as a practice option. They said that it was the practice option that most captivated them. Some participants discussed the idea that *salary was a non-issue*. That academic medicine physicians often earn less than doctors in private practice did not matter to these participants, as exemplified by one participant's words: "for me I

really did not care that much about what my salary was going to be.”

Table 3

Themes Related to Why Women Choose Careers in Academic Medicine, Gleaned from Interviews with 53 Women Academic Physicians, 2010

Theme	Subthemes	Associated quotations
Fit	Prestige	I had gone to a medical school that was academic...I could see how they looked down on private doctors... if you are out in the field doing the actual work, you are not an intellectual, you're not interested in research, you are not up to date...I wanted to stay in the glamour of research.
	Personality	I think there is a personality type for a person [who] goes into it [academic medicine] that is very different from private practice. You have to have a certain personality to do this [academic medicine]; not everybody is cut out to do it.
	Interest	I think the main thing was my interest and love for academic medicine...if I had desired, I could have gone into private practice....it was really just a question of what I was interested in.

Theme	Subthemes	Associated quotations
	Salary as a non-issue	[M]oney was never an issue with me...I was not looking at the economics of the whole thing...I was looking at what I would be more comfortable doing.
Aspects of the academic health center environment	Mobility	[It was] less of a transition to go from one academic environment to another [compared to going into private practice].
	Intellectual stimulation	<p>- I chose academic medicine because I liked the intellectual aspects, and I liked the intellectual challenge.</p> <p>- Well, I think I believed I would constantly want to learn...just the fact that I can participate in ongoing learning...maybe right or wrong, but I've always felt that private practice might probably stunt the ability to do that.</p>
	Teaching	<p>- I was attracted to teaching... and having a role in education. It was my experience as a teacher as a resident that attracted me to [a career in academic medicine].</p> <p>- I wanted to be a teacher before I wanted to be a physician. I probably wanted to be a teacher since early elementary school, and it wasn't actually until mid to late high school that I changed that,</p>

Theme	Subthemes	Associated quotations and related comments
		<p>medicine. So teaching medicine was just a good marriage of the two things that I really wanted.</p> <p>- I've actually had the opportunity to get some experiences in other career paths before kind of settling in academic medicine...but for me even when I was a resident, I knew that I wanted to teach... I've always had a desire to teach...and when I was in private practice, enjoyed the times that I had the opportunities to work with residents when I was doing inpatient rounds and to work with medical students when they were taken through our office.</p>
	Variety	<p>I felt that [academic medicine] was going to give me a range of responsibilities, clinical experience, administrative [work], and research.</p>
	Training opportunity	<p>[An] opportunity ... arose as I was finishing residency in which there was an academic position available...so I thought I'd give it a try.</p>
	Remaining current	<p>- I felt [that] in an academic setting people were more up to date and kind of looking for new things.</p> <p>- I guess I just felt like it was</p>

Theme	Subthemes	Associated quotations
		<p>...to stay up to date; with the field of medicine constantly changing, I thought ... forcing myself to be in a position where I was teaching others would keep me more up to date than if I were out practicing on my own without anyone else to worry about.</p>
	Subspecialty practice	<p>I had always been interested in [specialty] and most of those types of positions were available in large academic teaching institutions.</p>
Lifestyle and flexibility		<p>- [A]cademic medicine allows for a lot more flexibility...I knew that I would be starting a family at the end of residency, and I wanted to be in a position where I could adjust my schedule accordingly and not be locked into...30 patients every day.</p> <p>- [I]t was the flexibility...I was able to work part time, which was what I wanted when I had children.</p> <p>- I was attracted to a practice where I would have more flexibility with my time...that is pretty much it.</p> <p>- [B]ack in those days, academic medicine was very female friendly in terms of hours and responsibility because you did not have to be there for</p>

Theme	Subthemes	Associated quotations
		<p>hands-on care because you had residents and fellows [who] would work while you did your research, or while you diapered your children, or while you made dinner for your family. It was kind of almost a cushy lifestyle.”</p>
	Patient acuity	<p>I also decided that I wanted... an academic health center because I wanted to keep up with the latest medical care and wanted to continue seeing patients [who] received a higher level of care.</p>
People	Mentors	<p>I guess people would be at the top of my list. When I was a fourth-year medical student, I did a [specialty] rotation and I met someone who became my mentor both in residency and in fellowship ...she was also involved in teaching....I wanted to be like her.</p>
	Role models	<p>I guess you could say every single attending [who] taught me and everyone [whom] I learned from during my residency were all role models for me. They were all in academic medicine; all my role models were in academic medicine. I think that was just a natural track for me: to just follow in their footsteps.</p>
	Colleagues	<p>During residency I had a</p>

Theme	Subthemes	Associated quotations
		<p>feeling if I went into private practice ...that I would miss the excitement...and also miss working with colleagues...I would really miss out on the collegiality.</p>
	Parent/family	<p>- My father was a researcher...I would go to work with him and I would sit in the lab...I knew from the get go that I wanted to be a professor. Because he always said being a professor was the best job you could have...I just wanted to be a professor of science because I wanted to be like my dad.</p> <p>- I think for me part of it has to do with [the fact that] my entire family ...are teachers...I think my family placed a high value on education and on the value of teaching others.</p>
Exposure	Positive/Negative exposure	<p>Probably a lot of it came from exposure; especially during residency...everything was academic based; probably a lot of constant exposure and what I had experience with. My community [and]... the private sector that I was exposed to weren't as positive experiences...as the more academic models.</p>
Clinical medicine	--	<p>- I like being on the clinical side of it.</p> <p>- [I like] seeing all kinds of</p>

Theme**Subthemes****Associated quotations**

AHC environment Related to the notion of fit were aspects particular to AHCs; certain qualities of the academic medicine setting drew some women to practice in this environment. The 9 subthemes under AHC environment constitute the qualities that attracted some women: mobility, intellectual stimulation, teaching, variety, training opportunities, remaining current, subspecialty practice, lifestyle/flexibility, and patient acuity (see [Table 3](#)). Our study participants perceived these qualities as congruent with their own values or with their perception of what is important in the practice of medicine

People The influence of individuals in these women's lives also emerged as a key factor in their decisions to practice academic medicine. This theme's four subthemes—mentors, role models, colleagues, and parents/family members—delineate the various roles played by the people who encouraged the women in our study to consider and ultimately choose an academic medicine career path. One woman noted,

[A]s I was doing my fellowship, I came into contact with academic [specialists] who I sort of found [to be] mentors and people I looked up to, and I thought I want to be just like them.

And another woman stated,

I was feeling a push away from private practice and feeling a pull toward academic medicine...because of the people I was working with.

Exposure The women also discussed various types of exposure to academic medicine—including both positive and negative events—as key factors in their career decisions. One interviewee commented,

I had a lot of exposure to research and mentors who were very involved in that arena and [who] gave me a very positive

experience.

Clinical medicine Although they did not elaborate on it in great depth, many women alluded to patient care, taking care of patients, and the more clinical aspects of medicine when describing why they chose academic medicine.

How did women choose academic medicine?

Five themes capture *how* our participants made the decision to enter academic medicine: (1) change in specialty; (2) dissatisfaction with former career; (3) emotionality, which includes the two subthemes of affinity and fear; (4) parental influence; and (5) decision-making styles, which includes the four of subthemes: serendipitous/passive, reflective/intuitive, active/planned, and foreclosure (see also [Table 4](#)).

Table 4

Themes Related to How Women Choose Careers in Academic Medicine, Gleaned from Interviews with 53 Women Academic Physicians, 2010

Theme	Subthemes	Associated quotations
Change in specialty	--	[B]ecause when I decided to do a [specialty] fellowship, I did [this specialty] for [some] years and then I decided that I wanted to focus on [another specialty], and so I did [a] fellowship and then I was looking for a job [in this specialty]... most of the [positions in this specialty] are academic based...[My specialty] was kind of the

Theme	Subthemes	Associated quotations
Dissatisfaction with former career	--	I actually did private practice when I left residency for two years ...it was not academically challenging or interesting to me...it was completely patient-care-focused with no educational or academic component to it.
Emotionality	Affinity	I think for a number of reasons...first I've always loved academics...I've loved research...I've loved teaching.
	Fear	I ask myself that question a lot...I think my reasons have changed over the years...I think initially it might have been fear-based...I wasn't so sure about the business aspects of medicine... and when I went through [medical school, residency], there really weren't any courses about the business of medicine...and that somewhat frightened me.
Parental influence	--	[Y]our parents always influence you in some regard...my parents are not academic...but they

Theme	Subthemes	Associated quotations on academic[s].
Decision-making styles	Serendipitous/Passive	<p>- I kind of fell into it... when I finished up my training there was a job available at the academic hospital where I did my fellowship. So, it was just very convenient to stay [in] academic medicine.</p> <p>- [W]hen I completed residency and was looking for jobs, my residency program offered me a position on faculty and I wasn't having a whole lot of luck at the time finding prospects, and I took the job and have been here ever since.</p>
	Reflective/Intuitive	<p>My path to [academic] medicine is a little bit different from other people's...I came to [academic] medicine after already having a career in [another field in] education, so my background sort of led me to academics for the most part...I think I had a predisposition because I had already had an educational ... background, and it ... was a logical progression</p>

Theme	Subthemes	Associated quotations for me.
	Active/Planned	<p>I knew all along I wanted to teach...but when I was a resident, I found that the best teachers were ones [who] actually had some clinical background or a reason for why they were teaching [in] the way [that] they were....the teachers [I] sort of avoided were the ones [who] went straight from residency into education...they just didn't have the real word experience to impart...so my original plan was to go into private practice... which is what I did... for[some] years until a position opened up at the university.</p>
Foreclosure	Foreclosure	<p>- I'm not sure...that I made a conscious choice to choose academic medicine as a medical career...it was just that I never really thought about anything else ...I actually never considered anything else.</p> <p>- I honestly never considered any other path...I think part of it was [that] during medical school and training my mentors were all in</p>

Theme	Subthemes	Associated quotations
		academic medicine and that was really what I was exposed to, and I loved it and really did not consider anything else.

Change in specialty A career change prompted some participants to consider academic medicine. These women initially entered one specialty and later decided to work in another specialty or to further sub-specialize, and this new choice prompted them to think about and ultimately to choose academic medicine. To illustrate, one interviewee said,

I was a community [specialist], sort of a private practice [specialist]...I realized this was not the career I wanted to pursue for the rest of my life...made calls back to the academic center to see if there was an academic position.

This respondent went on to subspecialize and received additional training in a specialty that is more common to academic medicine than to private practice. In other, similar cases, academic medicine was the *only* environment in which some of the women could practice because theirs is not a sub-specialty frequently found in private practice.

Dissatisfaction with former career Dissatisfaction with their initial specialty choice prompted some women to enter academic medicine. One woman explained,

I did private practice for a year...it wasn't a learning environment...it wasn't how I had seen myself living the whole rest of my life....

Such women pursued a position in academic medicine, but maintained their specialty.

Emotionality Many participants mentioned emotional aspects, using words such as “like,” “love,” and “fear,” to describe elements of

their decisions. Participants expressed sentiments of affinity most often in relation to teaching (“I’ve loved teaching”), and they expressed fear in describing managing a practice (“I wasn’t so sure about the business aspects of medicine”). Both fondness for teaching and concerns regarding practice management pushed them toward academic medicine (see also [Table 4](#)).

Parental influence Parental influence emerged as a theme in how – as well as in why – women chose careers in academic medicine. Our participants usually described the influence of their parents in an indirect but positive manner:

I come from a family of teachers... not physicians...but teachers...and always loved to teach

Decision-making styles In our analysis of our participants’ explanations of how they made their decisions, we noted various decision-making styles, which we labeled serendipitous/passive, reflective/intuitive, active/planned, and foreclosure (see [Table 4](#)).

When did women choose academic medicine?

Thematic analysis revealed four themes that offer explanations of when our participants decided to enter academic medicine: (1) as a practicing physician, (2) as a fellow, (3) as a resident, and (4) as a medical student ([Table 5](#)). None of our participants indicated that they had decided on academic medicine prior to medical school. Overwhelmingly, participants indicated that as medical students they did not know enough about academic medicine to choose it as a career. Three women we interviewed made the decision to practice academic medicine while attending medical school, but, among our study participants, their experiences appear to be the exception rather than the rule. Among the women we interviewed, fellowship or residency seemed to be critical points in considering academic medicine; some women indicated that they became more aware of academic medicine as a career path during residency but did not solidify their decision to work as an academic physician until during a fellowship. Finally, some participants chose academic medicine while in practice, sometimes after trying private practice first. These respondents each had their individual reasons for entering academic

Table 5

Themes Related to When Women Choose Careers in Academic Medicine, Gleaned from Interviews with 53 Women Academic Physicians, 2010

Theme	Associated quotations
As a practicing physician	<p>I thought about it in medical school and in residency... decided to do private practice for several years...then ultimately after doing that for two years decided that I just wanted to go back to doing academics...the final decision was [when I was] out [in private practice].</p>
As a resident and fellow	<p>- I had been thinking about it during residency...I don't think during medical school I really had any clue what academic medicine was about...I sort of started thinking about it when I was in residency because you begin thinking about what the next step is going to be...and I didn't decide finally until I looked at different job options...when I got out of fellowship, I thought, well, I can do this.</p> <p>- I started thinking about it in my fourth year of residency, and then as I applied for my fellowships, I sort of started thinking about it more and while I was doing my fellowship there were two women who were in the fellowship...And so, when I looked at them and some of the other people there, I was like...this is the kind of job I want.</p> <p>- Well, in residency I was not going to do a fellowship...I was just going to hang up my shingle... then I met a woman who became my mentor and got very, very excited about becoming a [specialist]...so the next step was doing a fellowship in [specialty]... once you become a top specialist the chances of your staying in academic medicine are much higher.</p>

Theme **Academic residents** I did a month-long stint with a private practice guy and when I started looking for jobs...just felt he was running patients through...he just did not seem happy...he did not ever stop at the end of the day to look up anything, to read about a patient...I thought, “Aren’t you interested in the new drugs or what is going on?” I thought, I don’t want to lose that.

As a medical student

- I think I solidified it in medical school
- I probably was on that career path by the end of ... medical school because I took an elective in academics at that point...but I think the decision was actually permanently made in early residency.
- In medical school...nothing...I really didn’t know anything...there was so much else going on that my understanding of what it meant to be an academic physician was minimal.
- When I was a student academic medicine to me was where residents go to get trained and then it’s where attendings teach, other than that I thought, “Oh, when people graduate they will probably go into private practice.” I didn’t really know all the draws for academic medicine. I just thought it was the place where people go when they liked to teach.

Knowledge of academic medicine during education and training years

Although our main objective was to answer the question, “Why, how, and when do women choose careers in academic medicine?”, we also asked the women we interviewed about what they knew about the field of academic medicine during their education and training. Participants indicated that during medical school they knew very little—they described themselves as “naïve” regarding careers academic medicine—and they indicated that, as residents, they knew a little bit more than they did as students. Several themes related to

our main question re-emerged: the influence of others including parents; aspects of the AHC environment, particularly variety; and fit, especially salary as a non-issue (see [Table 6](#)). The theme of exposure reemerged the most often among respondents.

Table 6

Themes Related to What Women Knew about Careers in Academic Medicine During Their Training (Medical School and Residency), Gleaned from Interviews with 53 Women Academic Physicians, 2010

Theme	Associated Quotations
People/other people's influence	<p>- [W]hen I was a kid, my father was a chair of a department....we had people at our house all the time...somebody visiting from some foreign country...some visiting professor from somewhere....that's what I thought academic medicine was...this very intellectual... exciting sort of...lifestyle... where you were always working on new things and exciting ideas...when I got to medical school I realized that not everybody was my family.</p> <p>- [W]e have faculty [who] are very, very, close to the student body... so it was that give-and-take relationship that really made academia such a great career choice.</p> <p>- I had several academic general pediatricians who were role models, so I got a bit of a glance of how they were able to combine their family life with their work life, too.</p>
Variety	<p>- As a resident, I think I started to get an understanding at that point...because I worked with people who were in academic medicine...I understood there were some people who devoted most of their time to research and some people</p>

Theme	Associated Quotations
	<p data-bbox="470 11 1101 100">[who] devoted most of their time to clinical practice.</p> <p data-bbox="470 123 1220 504">- I knew then that [for] practice in an academic center ... there was some component of teaching in combination with clinical work...to some extent some people did more reseach than others...But I knew of the combination, and I think that was also when it appealed to me to do different parts of [my] job on different days.</p> <p data-bbox="470 526 1220 683">- I guess as a student and a resident what I saw was an intellectually challenging environment that had a lot going on and everyday was not the same.</p>

Salary is a non-issue	<p data-bbox="470 750 1220 907">- I knew that people in academic medicine made less money than people in private practice, but that was not really a consideration for me.</p> <p data-bbox="470 929 1220 1476">- As a resident. ... [academic medicine physicians] seem[ed] to have, from what I could see, ... they had a pretty comfortable lifestyle; I was not struck that anybody was wealthy. I think I became aware during residency of the pay differences...I was aware that [academic medicine physicians] were paid less....But I also had a sense that they had more flexibility as a trade off for that... I also became more aware of the benefits of being in academics.</p>
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Academic health center environment	<p data-bbox="470 1545 1220 1825">- I knew that in academics...well your focus is always on learning more and teaching up-to-date [material] and research...and where in private practice...your focus is on seeing as many patients as possible...so it's a totally different focus.</p> <p data-bbox="470 1848 1220 2219">- [Academic medicine] seemed very rigorous and it seemed very research based, and it was a little scary...[laughter]...I am not going to lie.... these really smart people running around doing these really wonderful things completely changing the way we practice medicine...it was really intimidating.</p>
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Theme

Associated Quotations

Exposure

- Well, I think what I mostly knew was what we saw....outstanding clinicians who are also really good teachers...as a student that was most of what I appreciated about academic medicine is that these people get to teach and they get to ...provide clinical care ...then in my residency and certainly my fellowship...more of the physician scientist model came into view because that was more of what I saw.

- As a student, I would say my appreciation for academic medicine was limited; as a resident, I was able to work closely with faculty members who were involved in academics and who were productive; and so I was able to see them in the clinical aspect, the teaching aspect and also the research aspect.

- They seemed happy; they all seemed to enjoy what they did....Most of them at the time to me were effective teachers; at the time most important to me was they seemed to enjoy what they did.

- I really didn't understand academics versus private practice...I would say that as a resident you start to become more familiar with the academic process...how it works...and I had the impression that the physician could impact the practice of medicine more if they had their hand in teaching, in research, and sort of always being around where things were happening...and I'd say that residency served to confirm all of those impressions.

- When I was a resident, I realized a lot of my attendings were staying on because they liked the patients they were providing care for; they liked their job; it wasn't just about the teaching—that was just an aspect of the job; but it was really the clinical time they spent; the support they had there; the level of care they had here and just the all around experience. It was such a fuller picture of what an academic [specialist] really does; it wasn't

The me

Associated Quotations to teach; it was a lot more than that; they really had a passion for serving their community; liked their patient population.

Discussion and Conclusions

Go to:

This qualitative study of women academic physicians and their reflections provides insight into the process of selecting academic medicine as a career. The current study helps to fill a void in the literature, contributes to an area of inquiry that greatly needs further investigation, and begins to answer questions raised by the extensive literature review conducted in 2010.³ The environment in which one trains appears to be a substantial influence. For example, those participants who received training in a teaching hospital expressed formative experiences resulting from simply being in an environment where teaching and research were a daily presence. In addition to the environment where the physicians trained, the people around them, including faculty, mentors, role models, and family, serve as influential factors. Some women are fortunate to cross the path of someone or multiple “someones” who suggest, introduce or expose them to, and shape their interest in academic medicine. The serendipitous nature of these chance encounters may indicate that physician educators miss opportunities to cultivate the talents of trainees who have not necessarily been identified as having interests in academic medicine but who, nonetheless, may be—or could become—interested.

Medical schools and residency programs can take steps to purposefully and thoughtfully introduce careers in academic medicine to medical students and residents. Just as a school works with individual medical students as they investigate various specialty choices, so, too, a school could provide early exposure to practice options through formal or informal experiences, such as specialty interest groups, panel discussions, career interviews, and shadowing experiences.

The women physicians in academic medicine whom we interviewed frequently mentioned an interest in teaching as a reason for pursuing

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a career in academia. Some of our respondents were aware of their affinity for teaching prior to entering medical school, whereas others' interest in teaching surfaced during residency or fellowship when they actually had the opportunity to teach medical students and other trainees. Programs and initiatives, including teaching electives for medical students, aimed at developing medical students' and residents' teaching competencies are becoming more common.^{13,14} These increased opportunities for medical trainees to understand and learn teaching skills may lead more students and residents to consider an academic career.

Limitations

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As with all research studies, our study has limitations. We developed a code book through consensus and one of us reviewed the assessments of our other team members; nonetheless, others may have identified different themes and subthemes. As qualitative work focuses on the particulars of a phenomenon, the results of this study may not be generalizable to all women in academic medicine. We attempted to gather a representative sample of women physicians based on rank, specialty, and ethnicity, but we did not necessarily capture all perspectives. Further, our study sample included only women physicians in the southern and central regions of the United States. In addition, women in this study self-selected to participate. Other women physicians in academic medicine had the opportunity to participate but chose not to for unknown reasons. Finally, we did not interview men who work as physicians in academic medicine. A study of male physicians in academic medicine could provide further insights into and understandings of how men and women differ from and parallel one another in coming to their decision to enter an academic medicine career. Given that the number of women in medical school has only recently equaled the number of men, and that male faculty continue to far exceed the number of women faculty,^{1,2} we felt focusing this study on women physicians was important.

Implications

While not surprising, it was unsettling to learn that entering a career in academic medicine was not necessarily an active, planned

decision; rather it was serendipitous or circumstantial. Physician career development—specifically engaging medical students in the decision-making process early—is important if the medical education community wants to have physicians who are satisfied with their specialty and practice setting decisions. Educators have an obligation to medical students and residents to develop their knowledge and skills, including those related to career development, for effectively practicing medicine. Our study shows that faculty can play a key role in helping students and residents with their career planning. Based on the findings of this study, we suggest that medical educators and administrators seriously consider providing programming and opportunities at their schools and residency programs to expose not only women, but all medical trainees, to careers in academic medicine. Assisting these trainees as they determine whether the AHC environment is a good fit for them is vital for the future of academic medicine.

Acknowledgments

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Ethical approval: Ethical approval was granted by Institutional Review Boards at Wright State University (Dayton, Ohio) and Virginia Commonwealth University (Richmond, Virginia) and through an internal exemption at the Association of American Medical Colleges (Washington, DC).

Protocol for Interviews of 53 Women Who Have Chosen Careers in Academic Medicine, 2010

Hello, my name is [] and I am from [school]. Dr. [Women Liaison Officer Name Here] has been in touch with you recently because we are conducting a study to understand “How, when, and why women physicians choose an academic career in medicine?” My understanding is that you have agreed to participate in this study. I have a copy of the e-mail you sent. Just a reminder that I’ll be taping the interview, so that it can be transcribed. The investigators of this study will then review the transcripts for themes to help us answer our research questions.

I’ll start with a few demographic questions:

What is your specialty?

What is your academic rank?

What is your ethnicity?

How many years have you been in academic medicine?

What type of medical school [and residency program] did you attend? (Public, Private; [Teaching/Academic], Community Based)

Thanks. Now I’ll move on to questions about “How, when, and why you have chosen a career in academic medicine.”

1. Why academic medicine? Why did you choose this career path—as opposed to other career paths available to physicians?
2. How did you choose a career in academic medicine? What factors led you to choose this career path? Are there any particular experiences that influenced your decision? Who influenced your decision to enter academic medicine?
3. When did you decide to pursue a career in academic medicine? During medical school, residency, fellowship, after?
4. [Considering] when you decided to go into academic medicine, rank order the following according to what aspects interested you most at the time:

Teaching

Research

Administration

Clinical practice

5. What did you know about academic medicine when you were a student? A resident?

Those are all the questions I have. Is there anything else you would like to mention about how, when, and why you choose academic medicine as a career path?

Thank you very much for participating in the interview. Do you have any questions for me?

Footnotes

Go to:

Other disclosures: None

Previous presentations: The authors have previously presented some of this research as the following: Borges NJ, Navarro AM, Grover A. Women physicians' reflections on choosing an academic medicine career. Research paper presented at the annual meeting of the Association for Medical Education in Europe, Vienna, Austria, September 2011, and Borges NJ, Navarro AM, Grover A. A qualitative study of women physicians and their choice of a career in academic medicine. Oral abstract presented at the Research in Medical Education (RIME) conference at the annual meeting of the Association of American Medical Colleges, Denver, CO, November 2011.

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