



2018

Perceptions of Specialties and Primary Care Careers: Findings from West Virginia Medical Student and Resident Focus Groups

April L. Vestal, Laura Boone, Robert Walker, A. Brianna Sheppard, Dakota Morris, and Ashley J. Noland

DOI: <http://dx.doi.org/10.18590/mjm.2018.vol4.iss4.10>

Author Footnote: The authors wish to thank the members of the Rural Health Initiative Leadership group including Craig Boisvert, DO, George Boxwell, DO, Lorenzo Pence, DO, Jennifer Plymale, MA and Larry Rhodes, MD for contributions to this project.

Follow this and additional works at: <https://mds.marshall.edu/mjm>

 Part of the [Higher Education Commons](#), [Medical Education Commons](#), and the [Medical Specialties Commons](#)

Recommended Citation

Vestal, April L.; Boone, Laura; Walker, Robert; Sheppard, A. Brianna; Morris, Dakota; and Noland, Ashley J. (2018) "Perceptions of Specialties and Primary Care Careers: Findings from West Virginia Medical Student and Resident Focus Groups," *Marshall Journal of Medicine*: Vol. 4: Iss. 4, Article 10.

DOI: <http://dx.doi.org/10.18590/mjm.2018.vol4.iss4.10>

Available at: <https://mds.marshall.edu/mjm/vol4/iss4/10>

This Brief Report is brought to you for free and open access by Marshall Digital Scholar. It has been accepted for inclusion in Marshall Journal of Medicine by an authorized editor of Marshall Digital Scholar. For more information, please contact zhangj@marshall.edu, beachgr@marshall.edu.

References with DOI

1. National Rural Health Association Policy Brief. Health care workforce distribution and shortage issues in rural America 2012. <https://www.ruralhealthweb.org/getattachment/Advocate/Policy>
2. Petterson SM, Liaw WR, Phillips RL, Rabin DL, Meyers DS, Bazemore AW. Projecting US primary care physician workforce needs: 2010-2025. *Ann Fam Med*. 2012;10(6):503-509. <https://doi.org/10.1370/afm.1431>
3. Kaiser Family Foundation. Primary Care Physicians by Field September 2016. <http://kff.org/other/stateindicator/primary-care-physicians-by-field/?currentTimeframe=0>. Accessed December 29, 2016.
4. Grobler L, Marais BJ, Mabunda S. Interventions for increasing the proportion of health professionals practicing in rural or other underserved areas. *Cochrane Database Syst Rev*. 2015;6:1-81. <https://doi.org/10.1002/14651858.cd005314.pub3>
5. Health Resources & Services Administration (HRSA) Data Warehouse Health Profession Shortage Area Find. <https://datawarehouse.hrsa.gov/tools/analyzers/hpsafind.aspx>. Accessed December 16, 2016.
6. Pollard C. West Virginia state health plan: rural health. <http://www.hca.wv.gov/policyandplanning/Documents/Background%20Material/shpRurPollard.pdf>. Accessed December 29, 2016.
7. Borges NJ, Gibson DD. Personality patterns of physicians in person-oriented and technique-oriented specialties. *J Vocat Behav*. 2005;67:4-20. <https://doi.org/10.1016/j.jvb.2003.12.015>
8. Brooks RB, Walsh M, Mardon RE, Lewis M, Clawson A. The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: a review of the literature. *Acad Med*. 2002;77(8):790-798. <https://doi.org/10.1097/00001888-200208000-00008>
9. Laven G, Wilkinson D. Rural doctors and rural backgrounds: how strong is the evidence? A systematic review. *Aust J Rural Health*. 2003;11:277-284. <https://doi.org/10.1111/j.1440-1584.2003.00534.x>
10. Patterson DG, Andrilla CHA, Larson EH. Graduates of rural-centric family medicine residencies: determinants of rural and urban practice. Policy Brief #159. Seattle, WA: WWAMI Rural Health Center, University of Washington, July 2016.
11. Rabinowitz HK, Diamond JJ, Markham FW, Santana AJ. The relationship between entering medical students' backgrounds and career plans and their rural practice outcomes three decades later. *Acad Med*. 2012;87(4):493-497. <https://doi.org/10.1097/acm.0b013e3182488c06>
12. Jackson J, Shannon CK. Validity of medical student questionnaire data in prediction of rural practice choice and its association with service orientation. *J Rural Health*. 2015;31:373-381. <https://doi.org/10.1111/jrh.12123>
13. Compton MT, Frank E, Elon L, Carrera J. Changes in U.S. medical students' specialty interests over the course of medical school. *J Gen Intern Med*. 2008;23(7):1095-1100. <https://doi.org/10.1007/s11606-008-0579-z>
14. Senf JH, Campos-Outcalt D, Kutob R. Factors related to the choice of family medicine: a reassessment and literature review. *J Am Board Fam Pract*. 2003;16:502-512. <https://doi.org/10.3122/jabfm.16.6.502>

-
15. Teitelbaum HS, Ehrlich N, Travis L. Factors affecting specialty choice among osteopathic medical students. *Acad Med.* 2009;84(6):718-723. <https://doi.org/10.1097/acm.0b013e3181a43c60>
 16. Grayson MS, Newton DA, Thompson LF. Payback time: the associations of debt and income with medical student career choice. *Med Educ.* 2012;46:983-991. <https://doi.org/10.1111/j.1365-2923.2012.04340.x>
 17. Phillips JP, Wilbanks DM, Salinas DF, Doberneck DM. Educational debt in the context of career planning: a qualitative exploration of medical student perceptions. *Teach Learn Med.* 2016;28(3):243-251. <https://doi.org/10.1080/10401334.2016.1178116>
 18. Maron BA, Fein S, Maron BJ, Hillel AT, El Baghdadi MM, Rodenhauser P. Ability of prospective assessment of personality profiles to predict the practice specialty of medical students. *Proc (Bayl Univ Med Cent).* 2007;20:22-26. <https://doi.org/10.1080/08998280.2007.11928228>
 19. Borges NJ, Savickas ML. Personality and medical specialty choice: a literature review and integration. *J Career Assess.* 2002;10:362-380. <https://doi.org/10.1177/10672702010003006>
 20. Motowidlo SJ, Van Scotter JR. Evidence that task performance should be distinguished from contextual performance. *J Appl Psychol.* 1994;79(4):475-480. <https://doi.org/10.1037/0021-9010.79.4.475>

Perceptions of specialties and primary care careers: findings from West Virginia medical student and resident focus groups

April L. Vestal MPH¹, Laura Boone JD², Robert Walker MD², A. Brianna Sheppard PhD¹, Dakota Morris MPA², Ashley J. Noland MS²

Author Affiliations:

1. West Virginia University, Morgantown, West Virginia
2. West Virginia Higher Education Policy Commission, Charleston, West Virginia

The authors have no financial disclosures to declare and no conflicts of interest to report.

Corresponding Author:

April L. Vestal MPH
West Virginia University
Morgantown, West Virginia
Email: avestal@hsc.wvu.edu

Abstract

The purpose of this study was to improve the understanding of how perceptions of practicing specific medical specialties contribute to career decisions. Participants included medical students and residents from training programs in West Virginia. Focus groups were conducted between September 2013 and February 2015. Thematic content analysis of focus group interviews was used to identify phrases indicating perceptions of person- versus technique-oriented personality medical specialties.

“Self-focused” and “other-focused” themes emerged within person-oriented comments. Factors affecting “self”, including work/life balance and salary and practice environment, made certain specialties more appealing. Technique-oriented comments included working in a hospital setting, performing technical procedures, and solving immediate problems as opposed to long-term management. Technique-oriented comments from students emphasized learning about disease, and resident comments emphasized treatment as their primary focus.

The majority of participants’ comments suggested that a strong patient-doctor relationship and continuity of care are rewarding components of primary care and more compatible with person-oriented personalities. Participants selecting person-oriented specialties viewed rural practice locations more favorably, especially the opportunity to become an integral part of a community. Participants selecting technique-oriented specialties preferred limited interactions with patients and stated that problem-solving and learning about disease states were the most appealing aspects of practicing medicine.

Keywords

rural, focus groups, medical resident, medical student, technique-oriented, person-oriented

Introduction

Population growth, aging, and insurance expansion have increased the demand for a primary care workforce, especially in rural areas where disparities in access to primary and specialty care already existed.^{1,2} Currently, the ratio of primary care providers (general practice, geriatrics, family medicine, internal medicine, obstetrics and gynecology, and pediatrics) to specialists in West Virginia, a rural state, is approximately one to one.³ However, all physicians are disproportionately located in more urban areas.⁴ Thirty of West Virginia’s fifty five counties qualify as single-county Primary Care Health Professional Shortage Areas.⁵ Therefore, recruitment and retention of primary care providers to underserved areas remains a priority in West Virginia.⁶

Factors influencing specialty choice and practice are presented in Table 1. Although personality is one of the most studied factors influencing specialty choice,⁷ studies have yielded varied results.¹⁹ The influence of personality factors on specialty choice may be better understood by examining an individual’s perception of the importance of tasks required by a specialty and the contexts in which those tasks are performed.^{19,20} For example, Borges and Gibson⁷ found that only one of the “Big Five” Personality Factors, “Agreeableness”, could discriminate between individuals selecting person-oriented specialties including the primary care disciplines of family

medicine, pediatrics, psychiatry, and internal medicine versus more technique-oriented specialties such as emergency medicine, surgery, and anesthesiology. The trait of “Agreeableness” was associated with trust, altruism and cooperation, characteristics important for delivering continuity of care in primary care settings.⁷ Maron and colleagues reported similar findings with regard to “Agreeableness” of students choosing a family medicine specialty.¹⁸

Table 1: Factors Influencing Specialty Choice and Practice Location

Background ^{7,8,9,10}	Training ^{7,8,9,10}
Lifestyle ^{7,8,9,10}	Personality ^{7,8,9,10}
Rural Upbringing ^{7,8,9,10}	Spouse from a rural background ^{7,8,9,10}
Medical and post-graduate training in a rural area ^{7,8,9,10}	Clerkship performance ¹⁰
Practice intention at onset of medical school ¹¹	Student debt/financial considerations ^{15,16,17,18}
Service Orientation ¹²	Desire to work with individuals ^{13,14,15}

The purpose of this study was to improve the understanding of how perceptions of practicing specific medical specialties contribute to career decisions. This study was part of a larger project designed to identify factors influencing medical professional career decisions to guide policies and interventions for improving recruitment and retention of primary care physicians in West Virginia.

METHOD

Participants included twenty-seven fourth year medical students from the three West Virginia medical schools and twenty nine medical residents in their second and third postgraduate years from three in-state residency programs. Demographic variables including race, ethnicity and gender were not collected as part of this study. Students and residents were invited to participate through emails sent by their respective programs.

Three separate sessions were conducted with medical students from each school between September and November 2013. Three separate sessions with medical residents from each program were conducted between November 2014 and February 2015. All sessions lasted 90 minutes and consisted of a written survey and focus group format interviews developed from a review of published literature on recruitment and retention factors.

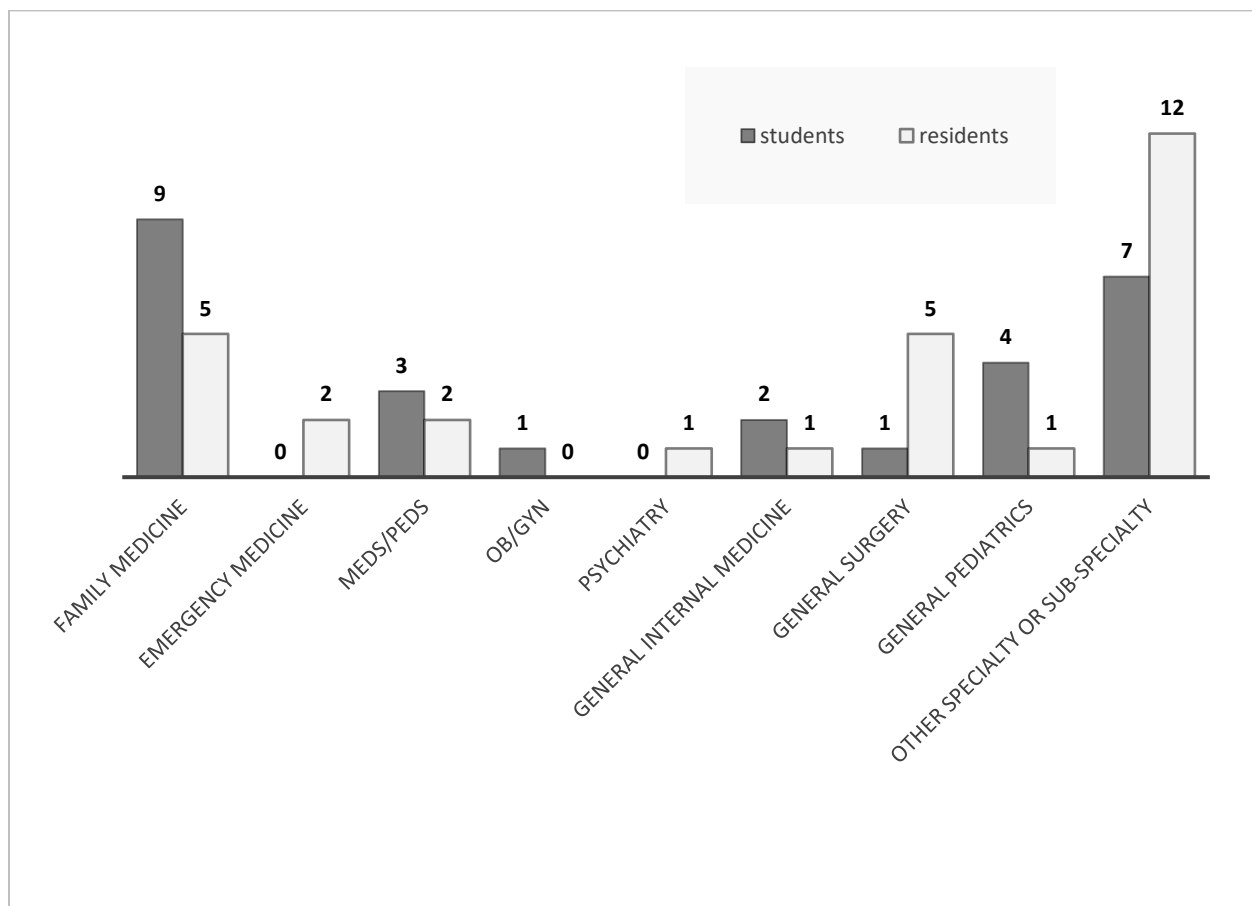
All sessions were facilitated by one investigator for consistency. Other investigators attended focus groups as observers. Focus group discussions were audiotaped and transcribed and participants’ responses were de-identified (interview questions are appended). Transcripts were reviewed by all investigators. Thematic content analysis and survey responses were employed to identify factors influencing career decisions including specialty. Rural was defined as a location with a population of approximately 20,000 inhabitants or less. We specifically examined comments about the perceptions of practicing person-oriented specialties and technique-oriented specialties.⁷ Person-oriented specialties, used as a proxy for primary care in this study, included family practice, internal medicine, obstetrics and gynecology (OB/GYN), pediatrics, psychiatry,⁷ and internal medicine/pediatrics. Technique-oriented specialties included anesthesiology,

dermatology, emergency medicine, otolaryngology, pathology, radiology, surgery⁷, cardiology, neurology, ophthalmology, and urology. Investigators reached consensus on themes and qualitative data including coding agreement, and additional analyses on the influence of perceptions on career decisions were analyzed using MAXQDA v.12 (Berlin, Germany).

RESULTS

Similarity matrix analyses indicated a high level of coding agreement across transcripts between independent reviewers with a range of 0.78-1.0, where 1.0 indicates the highest level of similarity (MAXQDA v12). Figure 1 shows specialty career choices of both students and residents based on survey responses; two students and one resident stated they were undecided about specialty at the time of the study. The number of participants pursuing primary care and non-primary care specialties were similar, 26 and 27, respectively. Seventeen students were pursuing primary care specialties compared to nine residents. Of the 100 unique comments reflecting personality characteristics, 56% were from residents and 44% from students. Resident comments included 35 person-oriented and 21 technique-oriented. Student comments included 29 person-oriented and 15 technique-oriented.

Figure 1: Medical Student and Resident Specialty Choice

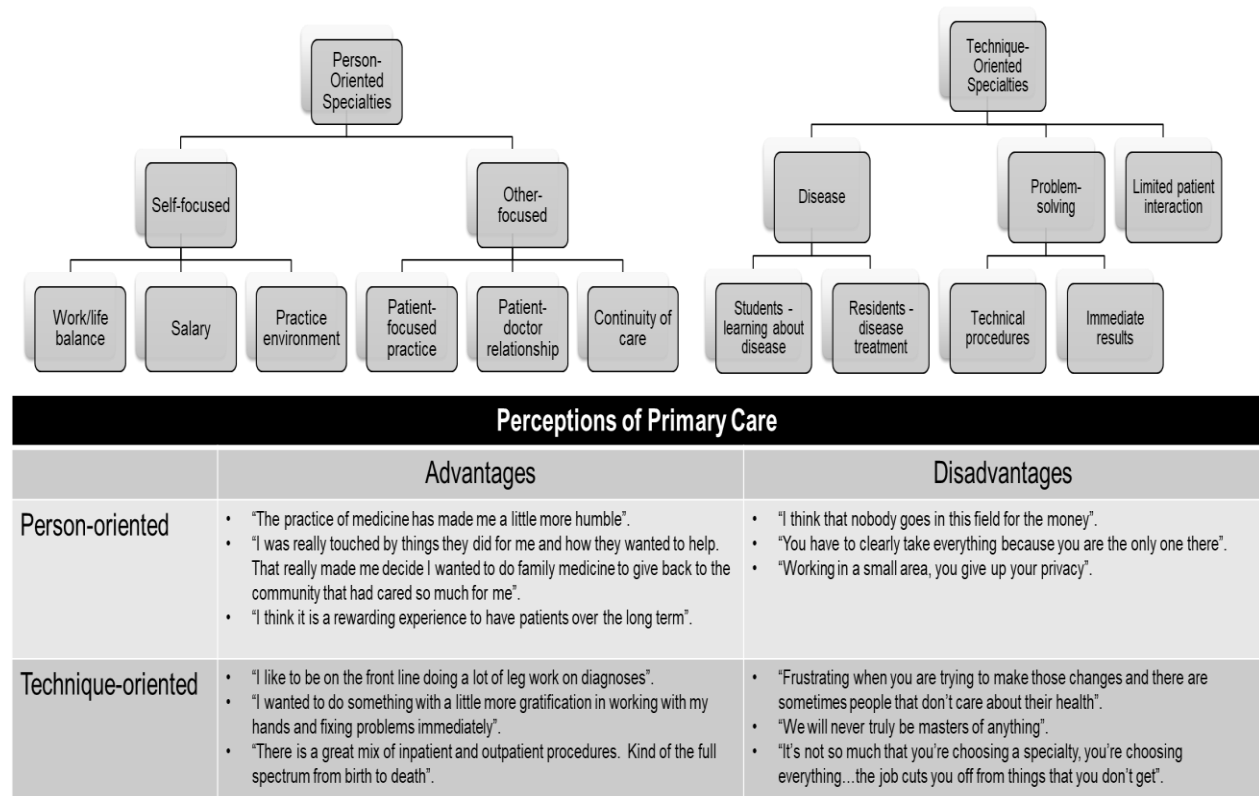


Other specialty or sub-specialty choices: cardiology, cardiothoracic surgery, neurology, neurosurgery, ophthalmology, orthopedic surgery, otolaryngology, pediatric cardiology, pediatric dermatology, radiology, and urology.

“Self-focused” and “other-focused” themes emerged within person-oriented comments. Factors affecting “self”, including work/life balance and salary and practice environment, made certain specialties more appealing. For example, one resident enjoyed working as part of a team in a fast-paced environment, and therefore, selected emergency medicine. “Other-focused” comments described advantages and disadvantages of primary care specialties. Comments about advantages were categorized as follows: a patient-focused approach to practice, a positive doctor-patient relationship, the ability to serve a community, and the rewards of providing continuity of care. Disadvantages of primary care included frustration with patients unwilling to adapt to healthier behaviors, interactions with patients outside of the clinical setting, and a practice based on continuity of care. One student leaning away from primary care stated that loss of privacy was a disadvantage, especially in rural areas.

Technique-oriented comments from students emphasized learning about disease and resident comments emphasized treatment as their primary focus. Technique-oriented comments included working in a hospital setting, performing technical procedures, and solving immediate problems as opposed to long-term management. One resident chose their specialty because of limited interactions with patients; an option perceived as unavailable in primary care. Another resident perceived difficulty of mastering the required breadth of knowledge as a disadvantage of primary care. However, the same resident perceived breadth of knowledge as a motivator for continuing learning. One student repeatedly noted that primary care lacked the prestige of specialization. Figure 2 illustrates emergent themes and provides example comments regarding perceived advantages and disadvantages of primary care categorized by specialty orientation.

Figure 2: Person- Versus Technique-Oriented Focus Areas



DISCUSSION

The purpose of this study was to improve the understanding of how perceptions of specific medical specialties contribute to career decisions. The current study adds to the understanding of how perceptions of person-versus technique-oriented specialties influence the decision to select a primary or non-primary care specialty. Perceptions of person-versus technique-oriented specialties also influenced choice of practice location.

The majority of participants' comments suggested that a strong patient-doctor relationship and continuity of care are rewarding components of primary care and are more compatible with person-oriented personalities.^{7,18} Participants admired altruistic traits such as self-sacrifice and patient advocacy demonstrated by primary care providers. All residents, including those that selected non-primary care specialties, recognized the rewarding aspects of practicing primary care. Participants preferring person-oriented specialties viewed rural practice locations more favorably, especially the opportunity to become an integral part of the community. Students and

residents, regardless of specialty orientation, agreed that primary care specialties were not fairly compensated.

Participants interested in technique-oriented specialties preferred limited interactions with patients and stated that problem-solving and learning about disease states were the most appealing aspects of practicing medicine. These individuals stated a preference for hospital-based practice locations and perceived limited diagnostic and procedural resources as disadvantages at rural practice locations. Students interested in technique-oriented specialties expressed frustration with poor patient compliance, especially in rural areas. Students were more concerned about issues of privacy and prestige than residents.

Limitations of the current study include an inability to correlate intended medical specialty with each coded comment and participant availability was constrained by clinical schedules and geographic distance. Some of the focus group questions for students and residents were different. Non-verbal communication that may have indicated widespread agreement or disagreement to a comment or response was not recorded. Participants were provided with definitions of primary and rural at the beginning of each focus group. However, answers provided by participants during the discussion did not always follow the bounds of the definitions.

References

1. National Rural Health Association Policy Brief. Health care workforce distribution and shortage issues in rural America 2012. <https://www.ruralhealthweb.org/getattachment/Advocate/Policy->
2. Petterson SM, Liaw WR, Phillips RL, Rabin DL, Meyers DS, Bazemore AW. Projecting US primary care physician workforce needs: 2010-2025. *Ann Fam Med.* 2012;10(6):503-509.
3. Kaiser Family Foundation. Primary Care Physicians by Field September 2016. <http://kff.org/other/state-indicator/primary-care-physicians-by-field/?currentTimeframe=0>. Accessed December 29, 2016.
4. Grobler L, Marais BJ, Mabunda S. Interventions for increasing the proportion of health professionals practicing in rural or other underserved areas. *Cochrane Database Syst Rev.* 2015;6:1-81.
5. Health Resources & Services Administration (HRSA) Data Warehouse Health Profession Shortage Area Find. <https://datawarehouse.hrsa.gov/tools/analyzers/hpsafind.aspx>. Accessed December 16, 2016.
6. Pollard C. West Virginia state health plan: rural health. <http://www.hca.wv.gov/policyandplanning/Documents/Background%20Material/shpRurPollard.pdf>. Accessed December 29, 2016.
7. Borges NJ, Gibson DD. Personality patterns of physicians in person-oriented and technique-oriented specialties. *J Vocat Behav.* 2005;67:4-20.
8. Brooks RB, Walsh M, Mardon RE, Lewis M, Clawson A. The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: a review of the literature. *Acad Med.* 2002;77(8):790-798.
9. Laven G, Wilkinson D. Rural doctors and rural backgrounds: how strong is the evidence? A systematic review. *Aust J Rural Health.* 2003;11:277-284.
10. Patterson DG, Andrilla CHA, Larson EH. Graduates of rural-centric family medicine residencies: determinants of rural and urban practice. Policy Brief #159. Seattle, WA: WWAMI Rural Health Center, University of Washington, July 2016.
11. Rabinowitz HK, Diamond JJ, Markham FW, Santana AJ. The relationship between entering medical students' backgrounds and career plans and their rural practice outcomes three decades later. *Acad Med.* 2012;87(4):493-497.
12. Jackson J, Shannon CK. Validity of medical student questionnaire data in prediction of rural practice choice and its association with service orientation. *J Rural Health.* 2015;31:373-381.
13. Compton MT, Frank E, Elon L, Carrera J. Changes in U.S. medical students' specialty interests over the course of medical school. *J Gen Intern Med.* 2008;23(7):1095-1100.
14. Senf JH, Campos-Outcalt D, Kutob R. Factors related to the choice of family medicine: a reassessment and literature review. *J Am Board Fam Pract.* 2003;16:502-512.
15. Teitelbaum HS, Ehrlich N, Travis L. Factors affecting specialty choice among osteopathic medical students. *Acad Med.* 2009;84(6):718-723.
16. Grayson MS, Newton DA, Thompson LF. Payback time: the associations of debt and income with medical student career choice. *Med Educ.* 2012;46:983-991.
17. Phillips JP, Wilbanks DM, Salinas DF, Doberneck DM. Educational debt in the context of career planning: a qualitative exploration of medical student perceptions. *Teach Learn Med.* 2016;28(3):243-251.
18. Maron BA, Fein S, Maron BJ, Hillel AT, El Baghdadi MM, Rodenhauser P. Ability of prospective assessment of personality profiles to predict the practice specialty of medical students. *Proc (Bayl Univ Med Cent).* 2007;20:22-26.
19. Borges NJ, Savickas ML. Personality and medical specialty choice: a literature review and integration. *J Career Assess.* 2002;10:362-380.
20. Motowidlo SJ, Van Scotter JR. Evidence that task performance should be distinguished from contextual performance. *J Appl Psychol.* 1994;79(4):475-480.

Appendix: Focus Group Questions

Medical Students

1. What specialty are you leaning toward?
2. What has been your favorite part of medical school thus far?
3. Think back and share the types of experiences that have influenced your career path?
4. What do you feel are the advantages and disadvantages to practicing primary care in West Virginia?
5. Do you have any role models who you would say influenced you and your career path?
6. What suggestions do you have to address barriers to practicing primary care in West Virginia?
7. What is the factor you consider most important in influencing your practice location?
8. What do you feel would need to change in order for you and your peers to view primary care as more appealing?
9. How would you say that you and your medical school peers feel about mid-level practitioners?
10. How have the physicians you rotated with/worked with influenced your thoughts on primary care?
11. Suppose you had one minute to talk to the governor about improving the recruitment and retention of physicians in West Virginia. What would you say?
12. Is there anything else you would like to say?

Medical Residents

1. Tell me what residency you are completing and what specialty or sub-specialty you intend to practice?
2. Think back and share the types of experiences that have influenced your residency choice and career path (share examples if you are able)?
3. What do you feel are the advantages and disadvantages to practicing primary care?
4. What do you feel are the advantages and disadvantages to practicing primary care in West Virginia?
5. What do you feel are the advantages and disadvantages to practicing in a rural area?
6. Do you have any role models who you would say influenced you and your career path?
7. What suggestions do you have to address barriers to practicing primary care?
8. What suggestions do you have to address barriers to practicing in WV?
9. What factors make practicing primary care in WV appealing?
10. What factors do you feel would make practicing primary care in WV more appealing?
11. How would you say that you and your peers feel about mid-level practitioners?
12. Suppose you had one minute to talk to the governor about improving the recruitment and retention of physicians in West Virginia. What would you say?
13. Is there anything else you would like to say?