Medical Students Career Choices and Perceptions in Family Medicine and Primary Care

Leilanie A. Nicodemus, MD[1]; Ian Kim B. Tabios[1]; Ourlads Alzeus G. Tantengco[1] and Gabriel Ignacio P. Alejo[2]

Background: Maldistribution and dearth of primary care practitioners is a continuing health human resource problem of many countries particularly in developing countries like the Philippines. The call to strengthen primary care for better health outcomes is a battle-cry that has never been resolved due to lack of physicians, trained and untrained, serving the rural areas. Family physicians are primarily the workforce in primary care settings but few medical graduates pursue this kind of career track. This study aimed to describe the career choices of medical students and factors that influenced them including their perspectives of family medicine as career choice.

Methods: On-line survey using google form was used to reach a total of 1800 medical students from 41 medical schools across the country in November 2016. Purposive sampling was done to allocate at least 40 students per school coordinated through the APMC Student Network representatives. They were sent with a link of the pre-validated questionnaire on career choices after medical school and reasons influencing their career choices based from prior studies.

Results: Of the 1,800 students, 1010 (81%) completed the questionnaire. Majority opted residency training (92%) after graduation and few pursue rural health practice (14%). Family medicine ranked 10th as first choice for training with IM and surgery consistently the top choices regardless if it is the first, second or third choice. Family medical needs influenced these choices. Family medicine was considered by majority as the primary care providers (94.1%) but lack of emphasis on it in their curriculum was experienced by most.

Conclusion: Most of the medical students want to pursue residency training in internal medicine and surgery while few in family medicine. Their choice of training is influenced by medical needs of the family. Family medicine as primary care provider was recognized but most experienced of lack emphasis in their medical curriculum.

Keywords: career choice, primary care, Family Medicine

Introduction

Career in primary care is not a popular choice among medical graduates. This is a continuing challenge to the health human resource development of many countries that espouse Universal Health Coverage as health care reform. In Southeast Asia, the challenges for human resources for health is unique because of the factor of international trade of health services including health workers.[1] It is not the lack of enough health workers manning health services that are noted as problems but rather, the balance of production and employment. In the Philippines, factors such as

[1] College of Medicine, University of the Philippines Manila
[2] Ateneo School of Medicine and Public Health

limitation in the capacity of the country to employ with just compensation of health workers causes the migration from rural to urban areas or to well-developed countries. Human resources for health (HRH) assessment showed that in 2017, the annual production of doctors, nurses and midwives in the country is about 3,000, 60,000 and 3,500, respectively that does not fall within the WHO threshold for a need for additional health workers per 1,000 population.[1] The same assessment indicated that nurses exceeded this threshold which means that production is more than the need. It is therefore the maldistribution creates the HRH problem in the country. The World Bank data reflected also that there are more doctors and nurses employed in private hospitals than in the government sector.[2]

The dearth of primary care physicians in providing frontline care is the greatest challenge that government shall face in the implementation of Universal Health Care. The projected need for physicians in the next 7 years will be 23,080 based on estimated population growth[3], with one primary care physician serving 10,000 patients following WHO standards.[4] Based on unpublished data of the Philippine Academy of Family Physicians (PAFP), there are about 4,500 actively practicing family physicians who can provide the primary care services prescribed in the Senate Bill 1896, also known as the Universal Health Care (UHC) for All Filipinos Act.[5]

While primary care physicians in other countries like the US include family physicians/GPs, general internal medicine, general pediatrics and obstetrics and gynecology as named by Health Security Act[13,15], in the Philippines it is the family and community medicine that considers primary care the core of its discipline and practice.[14] This is similar with Thailand where the primary care workforce are physicians who received certification of proficiency by preventive, general practice and family medicine.[16]

This study described the career choices of medical students and factors that influenced these choices. The understanding of such perspective is needed since scaling-up primary care requires targeted strategies to improve the number of medical graduates pursuing this career path. These strategies can guide selection process and curricular frameworks to enable positive experiences in primary care through family and community medicine courses in the undergraduate medical education.

Patients and Methods

Cross-sectional study was utilized to gather responses of medical students in 41 medical schools in the country. Each medical school was conveniently allocated 40 respondents in an online survey using google form of a validated questionnaire. Purposive sampling was used to identify the respondents per medical school by the student representatives of the Association of Philippine Medical Colleges Student Network (APMC-SN) in the different institutions. Link to the questionnaire was emailed to students who consented to participate in the study from November 1 to 15, 2016.

The 15-item survey instrument gathered information from the respondents on career choices including their perspective on family medicine as primary care provider and factors that influenced their career choices. The questions on career choices were on ranking of 17 training programs including family and community medicine according to first, second and third choices if residency training was chosen as a career path after graduation. Other non-clinical choices were added such as research, academic medicine and postgraduate degree if training is not chosen. Inclusion of rural health practice such as Doctors to the Barriors (DTTB) and Municipal Health Officer (MHO) was done to account for primary care track in the government sector. The questions on the influences were rated using 5-point Likert scale, with 1 as no influence and 5 as with more influence. These 27 influencing factors were culled from previous studies[6-8] and were categorized into general themes such as family factors, practice characteristics and scope, prestige, societal needs and presence of role models. The questionnaire was content and construct validated by expert in primary care and a family medicine specialist.

Descriptive statistics that measured the frequency and mean of the variables of the study was done using Epi-info.

Results

A total of 1010 students (91%) completed the survey out of 1,800 samples. Majority of the respondents were females, mostly from the National Capital Region (NCR), at the first-year level of medical education with an age range of 16-36 as shown in Table 1.

Table 1. Sociodemographic characteristics of respondents (N=1010).

Socio-Demographic Data	Descriptive Statistics N=1010
Sex, frequency (%)	
Male	396 (39.21)
Female	614 (60.79)
Age, mean (+/- SD)	24+/- 6
Island Group, frequency (%)	
Luzon	152 (15.05)
Visayas	252 (24.95)
Mindanao	101 (10.0)
NCR	505 (50.0)
Nationality, frequency (%)	
Filipino	974 (96.43)
Dual Citizenship	8 (0.80)
Other	26 (2.57)
No answer	2 (0.20)
Year Level, frequency (%)	
First Year	416 (41.19)
Second Year	280 (27.72)
Third Year	214 (21.19)
Fourth Year	100 (9.90)

Table 2 shows the career choices of the respondents after graduation. it is notable that a sizeable number (92.48%) of respondents would want to pursue residency training. Majority (68.98%) of them said they preferred to enter into a government hospital-based residency program as opposed to training in a private institution.

Only a little over than 1/3 of the respondents would consider going to rural health practice like rural health practice such as joining DTTB or becoming an MHO. A small percentage (14.26%) would consider going directly to private practice without training.

Other than clinical training or patient care, small percentage (28.32%) would consider going into the academe. A lesser number would consider going into post-graduate education (19.21%) and research (19.11%) respectively.

Table 2. Career choices after graduation.

Career Choice	Descriptive Statistics N=1010
Residency, frequency (%)	
Yes	934 (92.48)
No	76 (7.52)
Rural Health Practice (DTTB, MHO), frequency (%)	
Yes	377 (37.33)
No	633 (62.67)
Academe, frequency (%)	
Yes	286 (28.32)
No	724 (71.68)
Post-graduate degree, frequency (%)	
Yes	194 (19.21)
No	816 (80.79)
Research, frequency (%)	
Yes	193 (19.11)
No	817 (80.89)
Private practice without training, frequency (%)	
Yes	144 (14.26)
No	866 (85.74)
Not related to medicine, frequency (%)	
Yes	10 (0.99)
No	1000 (99.01)

Since majority of the respondents chose pursuing residency as their major option, they were also asked about

their choice of program. Figures 1 to 3 detail their first, second and third choices. Most respondents gave their first (90%), second (94%) and third (90%) choices respectively. The top 3 first choices of the respondents were Internal Medicine, General Surgery and Pediatrics. Family and Community Medicine was 10th in the list.

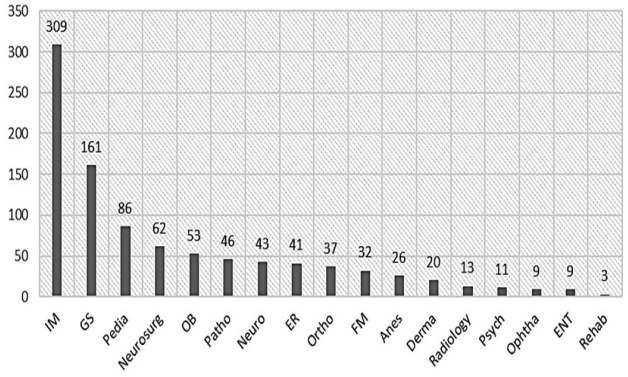

Figure 1. Frequency distribution of first choice of residency of medical students in the Philippines.

In terms of their second choice, the top 3 picks were still the same with Family and Community Medicine in the 6th place.

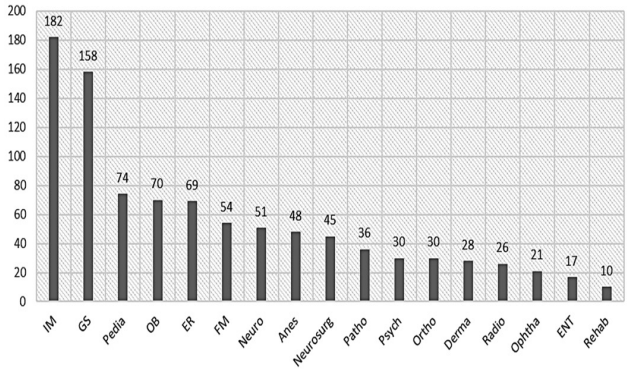

Figure 2. Frequency distribution of second choice of residency of medical students in the Philippines.

Their top 3 picks for their third choice still included Internal Medicine and General Surgery but Pathology ranked as the 3rd. Family and Community Medicine was only their 13th choice.

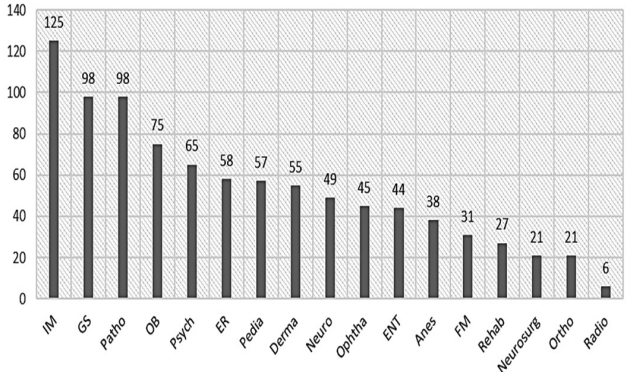

Figure 3. Frequency distribution of third choice of residency of medical students in the Philippines.

Figure 4 summarizes the responses as to the factors influencing career choices. The top reason in terms of highest number of responses was to address medical needs of their family members followed by acceptable hours and flexibles schedule. It is notable that income is only the 4th most cited reason while suggestion of family had the least frequency.

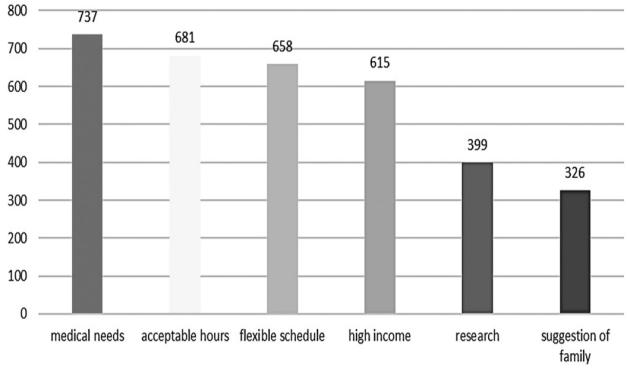

Figure 4. Factors influencing career choices in medical students in the Philippines.

Most of the students considered family medicine practitioners as the primary care providers (94.1%),

while half of them considered internists (54%) and paediatricians (49%) as primary care providers also. It is notable that among these respondents, adequate knowledge and exposure to family and community medicine was experienced by most students from government subsidized schools (91%) as opposed to those from private medical schools (37%).

Discussion

This study showed that most medical students' career choice is towards pursuing residency training, with internal medicine and surgery consistently chosen as their first until their third choice. Few considered family medicine and rural health practice. Their career choices were anchored on family factors more than financial considerations.

Notably, the respondents considered family physicians as primary care providers more than internists and pediatricians, which would reflect previous assertion that family and community medicine is the field of medicine in the country that explicitly expressed in the curriculum, both in the undergraduate courses and postgraduate training, the attributes and values of primary care such as accessible, comprehensive, coordinated, continuous and accountable holistic care.[14-15]

Career choices of medical graduates are well-studied with special interest on family medicine as a career track. Considering that this type of practice is crucial in providing essential cost-effective health care to most of the people, few medical students deem it as a choice. The same findings were shown in this study where family and community medicine as first and second choice is ranked as the 10th and 6th respectively. This accounts for 9% of the medical students who participated in this study, that is even lower than the 20% in Canada.[8] This finding raises the question if an adequate exposure to family and community medicine in medical school would have influences in choosing family medicine as career path because Canada is known to have strong emphasis on family medicine and primary care in their medical curriculum.[12] The review of Bland, et al. provided an answer to this where high proportion of students chose family medicine among schools having longitudinal primary care exposures in medical schools in the United States. This might also be the reason for the result of the present study that emphasis on family and community medicine in the medical curriculum is lacking that consequently effected the appreciation of the students of the discipline. The same proof of concept was shown in the study in Ethiopia that medical school role in orienting students in rural/remote practice is crucial in career selection among senior medical students.[17]

Financial considerations such as future earnings were found to be very important determinant for career choices in other countries.[10] This was related to the debt incurred to support medical education in these countries which is not a practice in the Philippines, explaining financial considerations only ranks fourth (4th) in the factors influencing career choices. What is noteworthy in this study are family factors, particularly medical needs are the most influential in the career choices of medical students over presence of role model and scope of practice. This is very distinct for this study as compared with other studies which showed that student's values are negligible determinants of career selection.[6-7] This is because the close-knit relationships still exist as core to the culture of Filipino family. Culture of caring for family members particularly the vulnerable ones like the sick and elderly puts great pull towards the family which can influence immensely career choices of family members.

In comparison with other studies that other sociocultural variables such as rural origin, age, marital status and gender were described to have influence in career choices of medical students[7], the present study did not correlate if indeed these are predictive variables for the career selection. Although most of the respondents of the present study are studying in the National Capital Region (NCR), the authors can only surmise that this factor may have influenced in the top choices of specialty training in internal medicine and surgery.

This study was built on previous studies in identifying determinants of career choices, but the authors included

rural health physician practice such as MHO or DTTB as a choice. This item is unique to the study because it accounts for the recent direction of medical education in the country where outcomes are focused on health systems strengthening and social accountability. Few respondents considered this as career track because of the same reason where there is lack of emphasis on primary care and family medicine in the current medical curriculum. This emphasizes the need of longitudinal primary care exposure in the medical curriculum. Older studies that were included in the meta-analysis of Bland et al showed that medical students with consistent primary care experiences across all year levels have significantly higher proportions of medical graduates who entered family medicine training.

The scope of the study was limited on understanding career options of students on specific disciplines and there was no further analysis if those who chose internal medicine, obstetrics and gynecology or pediatrics considered general practice serving in primary care or would they further undergo sub-specialization of these disciplines. In addition, this study did not consider doing stratified sampling method to account for adequate representation of medical schools with large student population.

Conclusion

The proportion of medical students pursuing residency training in internal medicine and surgery was high compared to family medicine and rural health practice. These choices are influenced mostly by family medical needs more than practice characteristics and financial considerations. This study provided answer to this trend among our medical students, where emphasis of primary care in medical curriculum is inadequate for better appreciation of the practice. This is an initial ground work that needs to be followed with further understanding of determinants of career selection for family medicine practice focusing on curriculum frameworks and instructions in family and community medicine courses in the undergraduate medical program.

Ethical Considerations

The study was registered in the UP Manila Research Grants Administration Office (RGAO). Ethical review was not obtained from each medical school but the methods of data collection, gathering, processing and management were in accordance with the Implementing Rules and Regulations of the Data Privacy Act of 2012 as stipulated in Section 28, under Guidelines for Technical Security Measures, of the Implementing Rules and Regulations of the Data Privacy Act of 2012. Participants were informed about the survey and consent was obtained by APMC SN representatives per medical school using sign-up sheet with details of their email addresses. The participants voluntary answered the questionnaire online in their own convenience during the study period.

Acknowledgements

The research was conducted by representatives of APMC-SN and AMSA in different medical schools. The authors acknowledge and wish to thank Dr. Maria Elinore Concha and Dr. Shiela Marie Lavinia, who analysed the enormous data collected.

References

1. Kanchanachitra C, Lindelow M, Johnston T, Hanvoravongchai P, Lorenzo FM, Huong NL, and Dela Rosa JF. Human resources for health in southeast Asia: shortages, distributional challenges, and international trade in health services. The Lancet 2011; 377(9767): 769-81.
2. The World Bank. (2011). The Philippine Health Sector Reform Review. Transforming the Philippine health sector: challenges and future directions. Downloaded at http://documents.worldbank.org/curated/en/500561468295233918/Philippine-health-sector-review-challenges-and-future-directions
3. Domingo EO. Reforms in the health human resource sector in the context of Universal Health Care. Acta Medica 2010; 44(4): 43-57.
4. World Health Organization. (2016). Global strategy on human resources for health: workforce 2030. Downloaded at http://www.who.int/hrh/resources/globstrathrh-2030/en/
5. 17th Congress of the Republic of the Philippines. (2018). Senate Bill 1896. Universal Health Care for All Filipinos Act. Downloaded at http://www.senate.gov.ph/lisdata/2819524451!.pdf

6. Scott I, Gowans M, Wright B, Brenneis F, Banner S, and Boone J. Determinants of choosing a career in family medicine. Canadian Med Assoc J 2011; 183(1): E1-E8.
7. Bland CJ, Meurer LN, and Maldonado G. Determinants of primary care specialty choice: a non-statistical meta-analysis of the literature. 1995
8. Wright B, Scott I, Woloschuk W, and Brenneis F. Career choice of new medical students at three Canadian universities: family medicine versus specialty medicine. Canadian Med Assoc J 2004; 170(13): 1920-4.
9. Chiang TL. Taiwan's 1995 health care reform. Health Policy 1997; 39(3): 225-39.
10. Morra DJ, Regehr G, and Ginsburg S. Medical students, money, and career selection: students' perception of financial factors and remuneration in family medicine. Fam Med 2009; 41(2): 105.
11. Senf JH, Campos-Outcalt D, and Kutob R. Factors related to the choice of family medicine: a reassessment and literature review. J Am Board Fam Pract 2003; 16(6): 502-12.
12. O'Neill TR, Peabody MR, and Puffer JC. Differences in Canadian and US medical student preparation for Family Medicine. Family Medicine 2016; 48(10): 770-4.
13. Agency for Healthcare Research and Quality. The distribution of the U.S. primary care workforce. Downloaded at https://www.ahrq.gov/research/findings/factsheets/primary/pcwork3/index.html
14. Leopando ZE, Olazo RA. Training specialist in family medicine in the Philippines. Asia Pacific Fam Med 2003; 2: 38-41.
15. Yordy KD, and Vanselow NA. Defining Primary Care: An Interim Report. National Academies. 1994
16. Wibulpolprasert S, and Pengpaibon P. Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience. Human resources for health 2003; 1(1): 12.
17. Assefa T, Mariam DH, Mekonnen W, and Derbew M. Medical students' career choices, preference for placement, and attitudes towards the role of medical instruction in Ethiopia. BMC Med Educ 2017; 17(1): 96.