Identifying Ways Graduate Medical Education Can Increase Retention Among the New Generation of Physicians

by

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Abstract

Physician shortage is a critical issue that is impacting the health care delivery systems in the United States. It is important that we use multi-faceted strategies to address this challenge because it impacts the health care delivery system through access to care in some communities and patient overall outcomes. Graduation Medical Education (GME) plays a crucial role in healthcare delivery because it is the initial experience of any graduated medical student. So GME programs need to make sure that they start employing strategies and really take care of the residents entering the practice at the beginning as that can greatly influence a reduction in turnover. And some ways for GME programs to work towards addressing this critical issue and increasing retention among the next generation of physicians are to provide resources for mental health and well-being, have a mentoring program and provide flexibility with schedules. Health care organizations need to increase resources to recruit the next generation of physicians, and more importantly, some changes in the health care delivery system will be needed to retain them.

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1.1 Overview of Staff Shortage in the US

Historically, the healthcare provider shortage has been a challenge for many health care systems and organizations, not only in the United States but around the world. This worldwide issue has been arising and persisting since 1936 for nurses,[1] and a shortage of physicians has been emerging in recent years which has become a growing concern for many health care organizations.[2] According to the Association of American Medical Colleges, it was forecasted that the physician shortage will increase by up to 124,000 physicians in the next 10 years.[6]

Among all of the States, 34 of them are estimated to face some level of physician shortage by 2030.[7] And it was seen that a few states, such as Massachusetts and Vermont, are currently able to meet the demand for physician services, while several others, such as New Mexico and Mississippi, have a large unbalance ratio of physicians over their overall population (Figure 1).

Rank	States	Region	Change in Population	2030 PHY Surplus	2030 PHY Shortage	2017 Shortage Ratio	2030 Shortage Ratio	2030 Ratios Surplus | Shortage	2017 Grade	2030 Grade	Change in Shortage Ratios
1	Massachusetts	Northeast	212,993	10,133		-183	-145		A	A	39
2	Vermont	Northeast	31,138	673		-146	-95		A	B	52
3	New York	Northeast	-91,319	14,875		-105	-76		B	B	29
4	Rhode Island	Northeast	6,347	677		-93	-59		B	B	34
5	Connecticut	Northeast	34,457	1,409		-71	-38		B	C+	33
6	Delaware	South	69,907	334		-87	-33		B	C+	54
7	Maryland	South	695,261	1,408		-51	-20		C+	C	31
8	Nebraska	Midwest	25,380	274		-51	-15		C+	C	36
9	Ohio	Midwest	-94,920	1,648		-43	-14		C+	C	29
10	Maine	Northeast	12,607	175		-63	-12		B	C	51
11	New Hampshire	Northeast	161,873	161		-55	-10		C+	C	45
12	New Jersey	Northeast	459,502	557		-37	-6		C+	C	32
13	Michigan	Midwest	46,320	247		-32	-2		C+	C	30
14	Pennsylvania	Northeast	19,207		32	-32	0		C+	C	33
15	Indiana	Midwest	246,614		265	-24	4		C	C	28
16	Oklahoma	South	222,552		562	-17	14		C	C	31
17	Minnesota	Midwest	541,994		2,260	2	33		C	C-	31
18	Wisconsin	Midwest	214,335		2,263	-3	37		C	C-	40
19	North Dakota	Midwest	-27,067		234	-8	39		C	C-	47
20	Virginia	South	1,176,686		3,911	10	40		C	C-	30
21	Utah	West	622,179		1,418	20	41		C	C-	21
22	Oregon	West	724,952		2,008	19	42		C	C-	23
23	Colorado	West	652,453		2,424	15	42		C	C-	27
24	Illinois	Midwest	274,228		6,203	19	46		C	C-	27
25	South Dakota	Midwest	851		370	0	46		C	C-	47
26	Missouri	Midwest	306,012		3,102	18	48		C	C-	30
27	Iowa	Midwest	-71,659		1,660	19	56		C	C-	37
28	Hawaii	West	68,788		876	26	60		C	D	34
29	Texas	South	5,926,674		20,420	43	61		C-	D	19
30	Alabama	South	184,833		2,988	32	61		C-	D	29
31	West Virginia	South	-95,863		1,079	22	63		C	D	41
32	South Carolina	South	432,367		3,230	23	63		C	D	40
33	North Carolina	South	1,942,187		7,725	38	63		C-	D	25
34	Wyoming	West	-6,867		335	7	64		C	D	57
35	Kentucky	South	173,091		2,926	34	64		C-	D	31
36	Georgia	South	1,538,674		8,012	41	67		C-	D	25
37	Washington	West	1,490,025		6,037	54	70		C-	D	16
38	Alaska	West	118,729		609	18	70		C	D	52
39	California	West	5,484,918		32,669	49	70		C-	D	21
40	Arkansas	South	234,482		2,303	42	71		C-	D	29
41	Kansas	Midwest	70,905		2,102	39	72		C-	D	33
42	Florida	South	6,631,870		21,978	26	77		C	D	51
43	Arizona	West	2,845,080		8,280	38	77		C-	D	39
44	Tennessee	South	768,162		5,989	55	81		C-	D	26
45	Montana	West	35,093		894	33	86		C-	D	53
46	Idaho	West	294,759		1,743	64	88		D	D	24
47	Nevada	West	1,068,738		4,177	81	98		D	D	17
48	Louisiana	South	109,220		4,820	69	100		D	D	31
49	New Mexico	West	38,384		2,118	44	101		C-	D	57
50	Mississippi	South	64,467		3,709	85	120		D	F	35
	All 50 States		35,891,599	32,571	171,731						
	2030 National Net Physician Shortage			139,160							

Figure 1 – States organized by BLS-defined region and the change in physician-related factors for 2017–2030.[7]

There are several driving forces for the physician shortage in the United States which are the barriers of entry, burnout and stress, workforce violence, early retirement because of the Covid-19 pandemic and the growing of aging population.[3] All of these factors are putting a strain on the United States Healthcare. Burnout had especially amplified for physicians because of the pandemic stress, which has contributed to many healthcare providers leaving the medical profession.[4] However, the physician turnover is causing more burden and additional workload to the remaining active physicians. Furthermore, the annual rate of physician turnover has significantly increased to 43% between 2010 and 2018.[27] And throughout the past decade, a steady turnover rate increase has been seen among the different medical specialties; with primary care and medical consistently having the highest turnover rate among all of them (Figure 2).

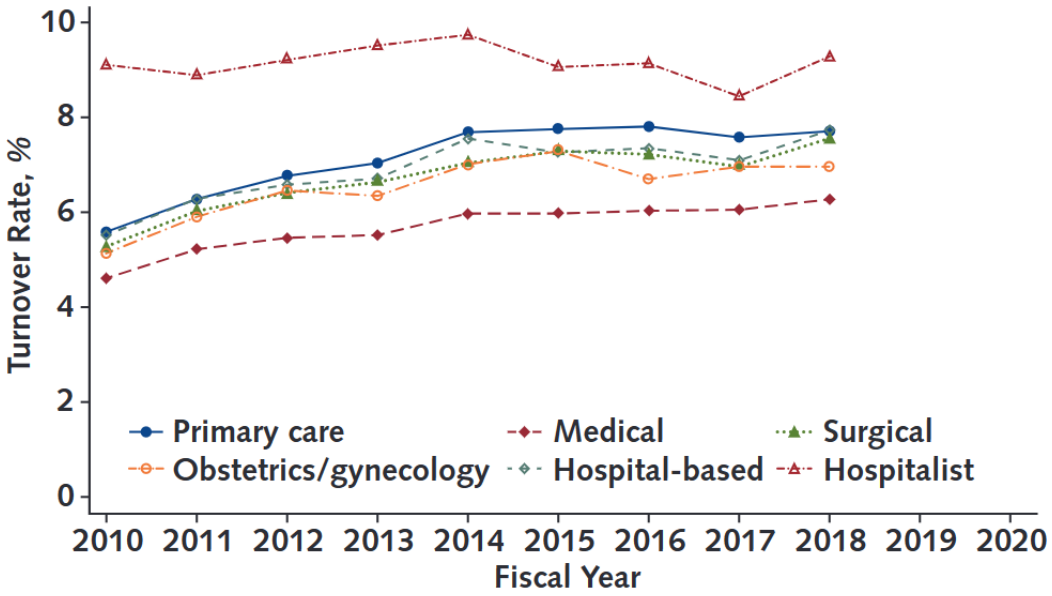

Figure 2 – Standardized physician turnover rate, by year and specialty, 2010–2020.[27]

Because of the various barriers of entry such as the length of study and costly tuition, it is a challenge to keep up with the rising demand for physicians. Meaning the supply for competent

physicians is slow and lengthy while the demand is fast arising every year. Between 2010 and 2022, the US population has grown by 7.7%, meanwhile the number of physicians has increased from 850,085 to over 1 million during the past 10 years which is not enough when it comes to the physician ratio necessary to provide care to the overall population.[5] Additionally, the American Medical Association estimated that around 35% of physicians will be leaving the workforce in the coming years due to nearing retirement, which will be contributing further to the increase of the aging population.[3]

1.2 Staffing Shortage as a Public Health Concern

The healthcare provider shortage is negatively affecting the U.S. healthcare delivery in various ways. Firstly, it is impacting access to quality care, and patient experience and outcomes. This is because inadequate staffing levels can have a substantial impact on the quality of care received by patients. Also, there is a correlation between adequate staffing levels and patient outcomes which means the more understaff a health organization is, the more that can contribute to negative patient outcomes and lead to more readmission.[8] And this is putting patient safety on the line. Because safe care is quality healthcare, and patients are at high risk of medical incidence and errors when it is not put in practice.[9] Moreover, it puts a strain on patient experience in the health system. This is because inadequate medical staffing ratios can negatively impact patient satisfaction.[10]

Secondly, not having enough medical staff to take care of patients may increase the risk of medical errors. And burnout is one of the reasons for that. This should not be taken lightly because there is a significant association between burnout and medical errors.[11] This means that it is likely

to see a high occurrence of medical errors as the burnout level of physicians or medical staff increases. Due to the shortage, the current active medical staff have additional workload that they have to do as well as their own job and that can quickly add to their work-related stress and increase their burnout. And this is one of the big contributing factors to why the overworked medical staff are leaving the practice and changing their profession. Lastly, the physician turnover is affecting the quality of care and patient access to certain medical specialties. And it creates barriers to treatment for patients and may impact their overall outcomes. Hence, the medical staff shortage is a public health concern because it affects patients' experience in the health system and their overall safety, and the quality of care.

2.0 Graduate Medical Education and Its Role in Health Care Delivery System

2.1 Overview of Graduate Medical Education in the US

Graduate Medical Education (GME) is the period where medical school graduates receive training to acquire clinical knowledge, hands-on experience and skills to become competent physicians in the medical field. The length of this training period may vary depending on the medical specialty (residency) or subspecialty (fellowship), but they typically can range from three to seven years. Effective GME training and fellowship programs are accredited by the Accreditation Council for Graduate Medical Education (ACGME) in the United States. It is noteworthy that only accredited residency training programs are able to receive Medicare funding from Centers for Medicare and Medicaid Services (CMS).[14] ACGME's mission is to "improve health care and population health by assessing and enhancing the quality of resident and fellow physicians' education through advancements in accreditation and education".[12] Also, they act as a professional regulatory body that sets standards for GME programs in hospitals and it makes sure to continuously monitor that those programs are complying to them.[12] Moreover, ACGME has six core competencies as framework that programs must adhere to as a requirement. The six core competencies are patient care and procedural skills, professionalism, medical knowledge, practice-based learning and Improvement, interpersonal and communication skills, and systems-based practice.[13]

2.2 Impact of Graduate Medical Education on the US Health Care Delivery System

Graduate medical education has an important role to play in preparing competent and trained physicians to serve the population. GME programs impact the US healthcare delivery system in several ways. Firstly, GME programs help in preserving access to care by preparing well trained and quality healthcare providers to serve the communities around the United States.[15] Secondly, GME programs help in improving patient safety by thoroughly assessing strategies and new processes for quality and continuous improvement of residency and fellowship programs.[16] Moreover, GME programs help in expanding access of community health needs through succession planning.[17]

3.0 Multi-Generational Workforce

3.1 Overview of Current Workforce Composition

Currently, we have the most diverse workforce in the United States. This is because the workforce is composed of five different generations where the majority, approximately 92%, are the Baby Boomers, Generation X, and Millennials (Figure 3). The Baby Boomers are preparing to leave the workforce as they are gradually reaching retirement age every year. And it is estimated that about 75% of the workforce will be occupied by Millennials by 2025,[19] whereas approximately 30% of the workforce will be composed of Generation Z in 2030.[18]

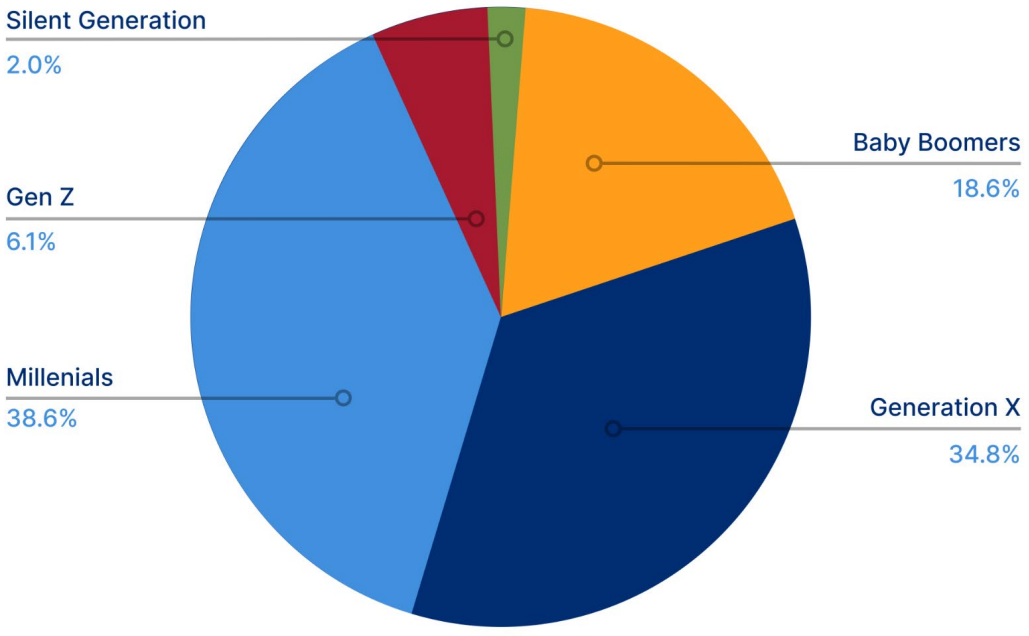

Figure 3 – Percentage of US workforce composition by generations in 2020.[18]

Each generation has its own defined characteristics, traits, work style, and preferred communication style. However, as a new generation comes in, it usually brings a new outlook or trend with them. With a multi-generational workforce, employers need to realize that they have different points of view and will need to find ways to be adaptable to be able to meet all of their needs.

3.2 Gen Z: The Next Generation of Physicians

Currently, the outlook of Generation Z is a strong preference for flexibility, personal well-being and work-life balance. They want flexibility with schedule, ways/methods of working, and education.[24] With information at their fingertips, new graduate medical students will make sure to thoroughly research the success of residency programs but also the organizational culture, working environment, coaching style and ability to meet their career growth and development goals.[23]

Moreover, the new physicians who are coming to the medical profession already know how demanding it can be with the extended and intense shift hours. They recognize that people need to be in their best well-being self to be able to care for others. This is why they will prioritize wellness and better working environments in their workplace to help alleviate or deal with the resulting mental and physical fatigue.[22] At the end of the day, they want to serve and care for people, but they also want their work to be fulfilling and professionally satisfying.[22]

4.0 Policy Recommendations

In the next few years, the US workforce will be going through a generation change in employee demographics as the Baby Boomers are starting or preparing to retire while Generation Z is gradually entering the workforce. And it will be challenging to engage a workforce with multiple generations, and especially harder to retain the next generation of physicians. Moreover, an understanding of physicians' point of view, their needs and preferences is necessary, especially of Generation Z, to address this issue.[21]

Thus, graduate medical education will need to use innovative and creative strategies to make each health care provider, such as physician, resident and fellow, feel uniquely valued. And they should focus on identifying ways to meet the needs of this multi-generational workforce to increase productivity and retention.

Here are a few recommendations that I am proposing for graduate medical education to work in achieving this objective.

- GME programs need to actively advocate for their trainees and physicians' well-being and invest in their wellness. One way to do that is to have wellness resources available and some clinical social workers dedicated only to care for the well-being and mental health of the residents, fellows and physicians. It is important for health practitioners to have a place and trained personnels to talk to, provide emotional support, and advocate for them in the workplace. Clinical social workers can fit this role as they are trained to provide some form of counseling or therapy to people, and treat and prevent mental health conditions. Doing this can help physicians with possibly decreasing their mental fatigue and increasing their job satisfaction. Moreover, I suggest that GME programs employ two tactics to increase

the engagement of residents, fellows and physicians with the wellness resources. Firstly, they need to make the first meeting with the clinical social worker mandatory as part of their orientation. By making it a requirement to meet with the clinical social worker within their first two weeks, they will be able to get to know the clinical social worker and become acquainted with each other. Also, it is a good way to build trust and address any stigma. Secondly, they need to have a system in place that rewards and gives prizes to encourage the physicians to keep engaging with the clinical social worker afterwards and participating with other wellness resources. They can set it up where there are different levels or types of rewards depending on the number of times that the physicians see the clinical social worker in a year and use the wellness resources.

The aim for this reward system is to motivate and incentivize the physicians to participate and engage as much as possible with the wellness resources. Also, GME programs should make sure to involve the residents, fellows and physicians in choosing the types of rewards or prizes that they would want or be interested in.

- GME programs should consider establishing a formal mentoring program. It is found that mentoring activities can significantly influence better inter-professional relationships, improve overall health and well-being, improve work engagement and job satisfaction, and professional development.[25] For the implementation of the mentoring program to be successful, it needs to run in a set period of time, such as a year, with clear set goals and expectations. The residents and fellows who want to participate in the mentoring program will apply to be on it, and they would be paired with a mentor, either assigned by the program or requested by them. Throughout the mentoring program, GME programs should make sure that resources are available, and conduct periodic surveys to check and evaluate

the progress and experience of both mentors and mentees. One obstacle that GME programs should be aware of is the scheduling conflicts. And to solve this issue, they need to make sure to pair mentor and mentee from the same residency or specialty programs. The main aim for the mentoring program is to positively impact the residency experience of new residents and fellows, and to create an environment that foster professional relationship and connection with an attending physician where they can receive support, learn and grow under their guidance.

- GME programs need to create and provide flexible options for schedules. Having flexibility will give physicians more control over their schedules and have a better work life balance. One suggestion can be providing an option to work hybrid in some days, such as, taking patients via telemedicine during a specific chosen day of the week. Another suggestion is to have medical grand rounds and other educational learnings online or remotely. This will help in reducing overall work-related stress or burnout, increasing job satisfaction and improving retention.[26]

5.0 Conclusion

Physician shortage critically affect access to care in many communities in the United States. As we have a diverse workforce, Graduate Medical Education will need to use different strategies to close the generational gap and engage their health care providers. Also, it is important that GME focuses on engaging residents and fellows early on to increase their job satisfaction and reduce the possibility of turnover. Moreover, there are a lot of solutions in place or strategies being considered to help in tackling the physician shortage, and one of them is expanding the scope of practice of other health professionals such as Nurse practitioners.[20] However, this will not do much to help unless we directly take care of the root causes of this issue, listen to the needs of the physicians, and make changes in the health care delivery system.

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