

Finding a Place for Unmatched Residents

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Abstract

The primary care provider shortage in the United States is the largest it has been in the last 80 years. In response, medical school enrollment has significantly increased, however the growth of residencies has been much slower. This disparity in growth has resulted in an increase in the number of unmatched graduates and an opportunity for state lawmakers. In 2014, Missouri passed a bill allowing unmatched residents to provide primary care in underserved areas in their state under a newly created position, the “assistant physician”. Several states have implemented similar bills since, with potentially more to follow. These bills have clear upsides for the states, patients, and unmatched residents alike. However, the long-term effects and potential safety and quality problems may outweigh the benefits. This paper proposes that, in contrast to allowing unmatched residents to provide care in newly created, unpaid and temporary positions, unmatched residents be allowed to work as paid physician assistants in underserved areas indefinitely.

Introduction

The United States healthcare market has a long list of problems. Among them is the shortage of physicians and the primary care they provide; this shortage is expected to increase in the coming years. In 2013, a third of the MDs in the US were over the age of 55, in the past few years, half of them have retired or reduced the number of patients they’ve see, with the rest soon to follow. Doctors aren’t the only ones getting older either, the American population is aging. A greater proportion of the population is becoming elderly, demanding anywhere from two to four times the amount of care that those under 65 do. The increase in demand means that the number of visits could increase 53% by 2020 with only 75% of the number of practicing doctors in 2013 (Laliberte, 2007). The results would be a physician shortage of 200,000, the largest shortage of doctors by percent of demand in the United States in the past 80 years (Cooper, Getzen, McKee, & Laud, 2002). Furthermore, this deficit is highly focused in rural areas because about 20% of the population lives rurally, while only 9% of the nation’s physicians practice rurally (Rosenblatt & Hart, 2000).

The effects of this shortage have already been seen across the country. People are traveling further to get care, spending less time with their physicians, waiting longer for their appointments and a lot of doctors aren't accepting new patients¹ (Laliberte, 2007). Moreover, this shortage disproportionately affects those who are traditionally underserved to begin with: the elderly, those who live rurally, and those who live in poor urban areas (Kuehn, 2008). A decrease in the labor supply coupled with an increase of demand for primary care has also resulted in increased costs for patients. Healthcare organizations have been forced to offer greater compensation and benefit packages to retain current staff and attract new employees. In 2018 alone, nurse compensation went up 19% and the salaries of almost every non-clinical position has increased since 2015 (Lapointe, 2018).

It would seem that the obvious solution to this problem would be to increase medical school enrollment, however the more immediate problem is that there aren't enough residencies available for medical school graduates. To be licensed to practice medicine, a medical school graduate must complete a residency. That means that increasing medical school enrollment, while maintaining the same number of residencies will not increase the number of practicing doctors. Between 2002 and 2016, medical school enrollment increased 27% in the United States, however, according to Dr. Janis Orłowski, chief health care officer of the Association of American Medical Colleges, "the number of US graduates who were not accepted (for a residency) went up" rather than the number of practicing doctors (Nedelman, 2017, paragraph 6). From 2002 to 2016, the ratio of year 1 residencies per applicant dropped from 0.88 to 0.79, representing a decrease of more than 10% (National Residency Matching Program, 2018).

Increasing the number of residencies would solve this shortage, but that proves to be difficult given the political climate and source of funding for residencies in America. Graduate medical education receives the large majority of its funding from government programs, in particular Medicare, which accounts for approximately 73% of public funding (Goodman & Robertson, 2013). The Balanced Budget Act of 1997 capped funding from Medicare and calls for additional government funding have been met with congressional resistance and disinterest. It has been over 20 years since this cap has been in place and it has not been altered, despite the

¹ In Massachusetts, almost all primary practices are not accepting new patients, 16% of patients wait 2 months or more for appointments, and some patients have to drive as far as 75 miles to see a family doctor.

passage of bills that have had major impacts on the healthcare system and increased its overall funding, such as the ACA. As David Goodman, a physician and health services researcher at Dartmouth, and Russell Robertson, former dean of the Chicago Medical School put it, “The current system is remarkably inflexible... There are few meaningful mechanisms or incentives to change” (Goodman & Robertson, 2013, p. 1891)

Some states have come up with creative solutions to ease the shortage of primary care provided in their states. In 2014, Missouri passed Senate Bill 754, creating a new category of health care providers, assistant physicians (unrelated to physician assistants). According to the bill, an assistant physician is, “any medical school graduate who... has successfully completed Step 1 and Step 2 of the United States Medical Licensing Examination... and has not completed an approved postgraduate residency” (Missouri Senate Bill No. 754, 2014, p. 20). This law is an attempt to give unmatched residents a way to provide primary care. However, APs can only provide care in designated underserved areas, work under a collaborating physician, and do not get paid for their services (Missouri Senate Bill No. 754, 2014). Kansas, Arkansas, and Utah have passed similar laws in the past couple years, and Oklahoma, Georgia, Virginia, New Hampshire and Washington may be soon to follow as they consider enacting similar bills in their own states (Associated Press, 2017) (Association of Medical Doctors Assistant Physicians, 2018). However, several concerns have arisen over these bills.

This paper argues that the unmatched resident bills were able to get passed and overcome the transitional gains trap in licensing because the bills do not adversely affect physicians. Furthermore, allowing qualified unmatched residents to indefinitely practice medicine as paid physician assistants in medically underserved areas will address the issues with unmatched resident bills, reduce the shortage of patient care in underserved areas, and get more highly trained medical professionals in relevant careers without substantially sacrificing the quality of care provided.

Literature Review

In 1975, Professor Gordon Tullock introduced a new theory to modern economics in his paper, “The transitional gains trap”. He examined the short and long-term effects of government granted aids to special interest groups. He concluded that initially, the beneficiaries receive transitional gains because barriers to entry are created, competition is weakened, and monopoly

power is gained. However, over time, the protected industries are found to be no more profitable than unprotected industries as gains become capitalized. Furthermore, if the government granted protection is taken away, the groups will be injured, resulting in an inefficient outcome. According to Tullock, there is typically no compensation scheme that would result in the gradual reversal of the government aid, hence why the situation is referred to as a trap.

Occupational licensing is very common in the United States and often becomes a transitional gains trap. Doctors were among the first occupations in the United States to require licensing for practice. Between 1890 and 1910, most states had enacted licensing laws for practitioners. However, years before these laws were put in place, Adam Smith warned of the privileges of graduation for doctors in response to reforms increasing the education required for medical degrees (Smith, 1774). Milton Friedman augments Smith's arguments in his book "Capitalism and Freedom" (1962), contesting that, especially in medicine, "licensing destroys opportunities and suppresses benefits while achieving little to nothing in the way of quality assurance above what could be achieved by less coercive arrangements, whether they be optional state certification or purely voluntary and private forms of assurance" (Stephenson & Wendt, 2009, p. 185). In other words, in a system without license requirements to practice, the market encourages doctors to voluntarily find ways to signal quality to their patients, such as state certifications or assurances, to compete for patients.

Licensing also acts as a barrier to entry. Proponents of licensing would argue that that's the very reason for licensing; it prevents entry by lower quality providers. Opponents to licensing would point to the fact that additional barriers to entry result in reduced supply, less competition, and higher wages. Kleiner and Krueger (2008), found that licensing is associated with significant wage increases. Because the theoretical benefit of licensing is increased quality, a significant amount of research has been conducted to determine if the theory materializes. However, measuring quality is difficult due to the nature of its ambiguity and imperfect metrics and studies have concluded very different quality outcomes. When analyzing real estate agents, Johnson and Loucks (1986) conclude that licensing regulations result in higher quality agents. However, Carroll and Gaston (1981, p.973) found contrary results in their study of seven occupations determining that "there existed a strong negative association between per capita numbers of an occupation and measures of per capita quality of service received" and "restrictive licensing may

lower received service quality”. Other studies have concluded that there is no correlation between licensure and quality. Paul (1984) found no support that state licensing of physicians was associated with higher levels of health care quality.

Regarding the unmatched resident bills passed in recent years, not enough time has passed for there to be considerable amounts of academic literature on the subject. The problem of significant amounts of unmatched residents itself is a relatively new idea. However, some others have proposed solutions for this problem. Goodman and Robertson (2013) propose a new funding mechanism and review process for graduate medical education so the proper number and specialty of doctors is trained to meet the demands of the population. New teaching organizations and residency programs would be started and would compete with existing ones. As incentive to change, an independent organization would review all the programs over a decade with low scores leading to decreased funding.

Unmatched Resident State Bills and the Physician Licensing Transitional Gains Trap

Missouri was the first state to pass a law to give unmatched residents a way to provide primary care, effectively decreasing licensing requirements. The qualified applicants must have graduated medical school without revocation, suspension, or probation, passed the first two steps of the USMLE², not have completed a residency program, and in most cases, not be more than two years out of medical school. Those approved to operate as a provider of primary care can order prescriptions and must work under a general practitioner located within 50 miles. The newly created “assistant physician” position is unpaid and is designed to help unmatched residents match for residencies in the future (Association of Medical Doctor Physician Assistants 2018).

The laws passed in other states are mostly similar but have some distinct differences. In Arkansas’s bill for instance, they refer to the new position as a “graduate registered physician”, in Utah’s, the “associate physician”, in Missouri’s the “assistant physician”. Also, in contrast to the law in Missouri, other states have caps on the length of time approved applicants can provide care for. In Arkansas, each GRP can only work up to two years, and in Utah associate physicians

² The United States Medical Licensing Exam is a three-step exam for medical licensure. Each step of the exam assesses the readiness of a medical student to become a doctor. Most medical students only take the first two steps.

can only provide care for four years (Arkansas Graduate Registered Physician Act, 2015) (Association of Medical Doctor Physician Assistants 2018). Perhaps the most important difference is that Missouri is the only state to have implemented their bill. As of 2017, 23 registered assistant physicians practiced throughout the state (Associated Press, 2017). Regardless of these differences, all of these bills have decreased medical licensing requirements.

In a transitional gains trap, the group initially aided by the government receives transitional gains in the form of increased profits, monopoly power and decreased competition. In the case of medical licensing, this would be the physicians that already meet the additional license requirements enacted by the government. However, in the long run, the gains doctors initially received become capitalized and only normal profits ensue. The gains for family doctors have primarily been capitated through the time and money cost of undergraduate education, medical school education and residencies. Comparing the annual yield on the educational investment over a working life illustrates this capitation. Family doctors receive 15.9% annual yield compared to 29.0% for those with business degrees and 25.4% for those with law degrees (Weeks, Wallace, Wallace, & Welch, 1994).

Typically, there is no apparent scheme to reverse licensing laws without significantly hurting the originally aided group. However, due to the severity of the shortage of primary care, and the manner in which doctors are paid, the unmatched resident bills did not adversely affect practicing physicians. In a free labor market, with everything else held constant, the increase in the supply of primary care provided (from unmatched residents) would result in a decreased price for primary care, which would decrease wages for doctors. In practice, the salary for doctors is not expected to change. The shortage is great enough that the additional care provided by unmatched residents will not fully satisfy demand. Moreover, the salary of doctors is not directly tied to market forces, the industry is highly price regulated by the government and hospitals which set artificial prices for different services (Arora, Moriates, & Shah, 2015). If this were not true, it is unlikely that the Missouri Academy of Family Physicians would have remained “neutral on the legislation” (Herman, 2014, paragraph 10).

The long-term effects of this decrease in licensing are social benefits (McLaughlin, Mitchell, & Philpot 2017). For patients and states, the benefits may not be in terms of affordability, but rather in terms of accessibility. The Missouri bill increases the number of

primary care providers, resulting in a decrease in the shortage of primary care provided. Unmatched residents also see benefits in that they are given a better opportunity to match for residencies in the future. However, there are concerns with these bills.

Concerns with Unmatched Resident Bills

An initial problem with these bills is that they don't address long term shortages. These bills are designed to make unmatched students better candidates to get a residency during the next matching process and in most states, they can only act as assistant physicians for 2-4 years. However, this will result in more applicants competing for the same number of positions. To illustrate, last year there were 4,314 unmatched first year physician residents in the US (National Residency Matching Program, 2017). If all of them qualified to work as assistant physicians and the number of residency positions and medical school graduates remained constant, two years later, the amount of people who would fail to match would approximately double (35,969 medical school graduates + 4,314 assistant physician applicants = 40,283 total applicants – 31,757 positions = 8,526 unmatched residents).³

Additionally, medical associations, organizations, and physicians alike have expressed safety and quality concerns regarding the newly created assistant physician and graduate registered physician positions. The Association of American Medical Colleges and the American Association of Colleges of Osteopathic Medicine argue that medical school is not intended to prepare physicians to go directly into practice, but rather to lay a foundation for clinical residency training. Dr. Tammy Hart, a Missouri physician, reiterates this idea stating, "By no means are you ready to assume being a physician when you graduate from medical school" (Associated Press, 2015).

The Accreditation Council for Graduate Medical Education has questioned the quality of unmatched residents because the people in that pool are the same people who have been not deemed quality residency candidates. Medical school graduates face higher odds of remaining unmatched when they have poor scores or retakes on national board exams, graduate overseas at less prestigious schools, and when they interview poorly (Bailey, 2016). Looking at 2017 data in

³ Source for data on the number of applicants and graduates comes from the National Residency Matching Program

Missouri, assistant physician test scores were lower on average than matched students on every step of the USMLE (Porter, 2018). Unmatched residents signal lower quality relative to their matched counterparts.

The Graduate Medical Education community center is also concerned about the amount of supervision current Missouri assistant physicians get. These relatively inexperienced graduates can practice as far as 50 miles away from their collaborating physician, while only having 10 percent of their patient charts get reviewed (Porter, 2018). A final concern addressed is that allowing lower quality practice in underserved areas establishes an inappropriate standard for those areas.

A Physician Assistant Solution

The first Physician Assistant program started at Duke University in 1964 with the recommendation of the American Medical Association. During that time, the United States faced a primary care shortage and a lot of trained military medical corps were coming home from Vietnam. The 2-year program was designed to teach students human biology and how doctors provided services. Programs quickly spread across the country and students graduating from these schools worked under physicians who directly controlled their activities and responsibilities (Cawley, Cawthon, & Hooker, 2012).

Today, the role of physician assistants is to fill a flexible role in their team of providers. Their roles can be customized by physicians and the extent of their scope of practice is determined by their experience and by the physicians. In order to be able to provide a care service, PAs must request clinical privileges that have to be approved by their medical staff (American Academy of Physician Assistants, 2017). PAs operate under the supervision of physicians in all 50 states. Depending on the state, this supervision may mean the physician reviews anywhere from 10-100% of their assistant's charts. However, general practitioners and PAs don't have to be physically together so long as they're in constant dialogue (Schwartz, 2010).

The current situation in America is similar to the situation faced in the 1960s; there is a primary care provider shortage and thousands of medically trained graduates not able to provide care. These medically trained graduates should be able to provide care as Physician Assistants.

This proposal differs from the unmatched resident bills in several ways. To begin with, unmatched residents would operate as PAs for an unlimited amount of time, rather than a maximum of 2-4 years. Additionally, unmatched residents would be paid the wages of a PA, instead of working unpaid. Finally, unmatched residents would have the same supervision and scope of practice as PAs in their state, rather than having vague and unestablished supervision and scope of practice. Allowing medical school graduates to operate as physician assistants would address many of the concerns with the unmatched residency bills and the states, patients, and unmatched residents would still receive the same benefits.

Addressing Unmatched Resident Bill Problems and Quality and Safety Concerns

One of the problems with the unmatched resident bills is that they don't address the shortage of primary care in the long run. Reiterating an earlier idea, if the number of residencies doesn't increase, the number of new primary care doctors practicing each year won't. However, the amount of primary care provided would increase long term if unmatched residents practiced in a career as a licensed physician assistant. Furthermore, because the regulations, expectations, and scope of practice is already firmly established for PAs, this would get rid of confusion for patients, unmatched residents, doctors, and hospitals.

Questions of quality and safety are addressed by examining the training and requirements to become a licensed physician assistant in the United States. Medical school graduate unmatched residents are actually more qualified to provide primary care than current PAs are. If the same stipulations were to apply to medical school educated PAs as they do for graduate registered physicians in Arkansas, those qualified to practice as physician assistants would have graduated medical school and completed the first two steps of the United States Medical Licensing Examination (USMLE). This would be without ever having been suspended or put on probation (Association of Medical Doctor Assistant Physicians, 2017).

To become a licensed physician assistant by traditional means in the United States requires the completion of the Physician Assistant's National Certifying Exam (PANCE) and only 26.5 months of post-graduate education that is, "in essence... a condensed version of medical school" (Cawley, 2012, paragraph 11). Additionally, PA students need to complete a minimum of 2,000 hours of supervised clinical practice by graduation (American Academy of Physician Assistants, 2017). Medical graduates on the other hand will graduate with at least

3,300 supervised clinical hours and likely much more (Accreditation Council for Graduate Medical Education, 2017) (Stanford School of Medicine, 2018) ⁴. Notably, PAs are also not required to complete a residency in the vast majority of states to become licensed (Smith-Barrow, 2014). This means that unmatched resident PAs would have more education than traditional PAs, more clinical experience, while also having passed a similar test in the USMLE as PAs do with the PANCE.

Furthermore, a student going to school to become a physician assistant can signal low quality and still practice medicine. The student could have low test scores, multiple test retakes, and graduate overseas. However, as long as they have their education deemed US equivalent, an occupational visa, and pass the PANCE, they are entirely eligible to become a licensed physician assistant (Accreditation Review Commission on Education for the Physician Assistant, 2018). That would suggest that there is just as much reason to be concerned about the quality of care provided by traditionally trained PAs as there would be with unmatched resident PAs.

Despite comparatively less education and clinical experience, studies have shown that there is very little reason to be concerned about the quality of care put forth by PAs. In fact, a study conducted at George Washington University from 2006 to 2010 found that the quality of care provided by PA's is almost indistinguishable from the quality of care provided by primary care doctors. The study measured the quality of care for 23,000 separate patient visits using 9 patient-level outcomes. The results showed that in 7 of the 9 outcomes studied, there was no statistically significant difference in the quality of care provided by physician assistants and physicians (Kurtzman & Barnow, 2017).

In regard to the supervision of unmatched resident PAs, they would be treated just like any other PA. Their supervising physician and team of providers would determine what care they could provide. As they gain experience their scope of practice would increase, rather than being able to provide a wide range of primary care from day one.

One concern that persists is that allowing lower quality practice in underserved areas could establish an inappropriate standard for those areas. It is true that lower quality practice

⁴ Derived total hours based on information from Stanford Medical School Hand Book. (There are 4.345 weeks per month multiplied by 50 hours of clinicals a week equals 217.26 hours of experience a month. Multiplying that by the minimum of 15.5 months of clinical rotations equals 3,367.56 total clinical hours.)

likely means lower quality care, but that does not necessarily mean inappropriate standards. When looking at the triple aim of health care in providing affordability, accessibility, and quality, it may be more inappropriate to go to great lengths to maintain quality at great expense to affordability and accessibility. Unmatched residents are still very highly trained and qualified, and patients will be better off receiving care from them as physician assistants under the supervision of doctors than receiving very limited amounts of care, or none at all.

Reducing Patient Care Shortage

Depending on how an unmatched resident is defined determines how many there are each year. If they are defined as anyone who applied to a medical residency of any kind (perhaps a pharmaceutical or radiography residency) and didn't initially match, withdrew, or didn't put in a rank list there's around 14 to 15 thousand unmatched residents a year (figure 1).

However, only around 10 thousand fail to initially match for first year physician residencies (figure 2). In 2017, the National Resident Matching Program announced that a record-high 35,969 medical school graduates applied for 31,757 positions, meaning only 4,314 first year residents who did not withdraw or fail to put in a rank list remained unmatched (102 positions remained unfilled after the SOAP).

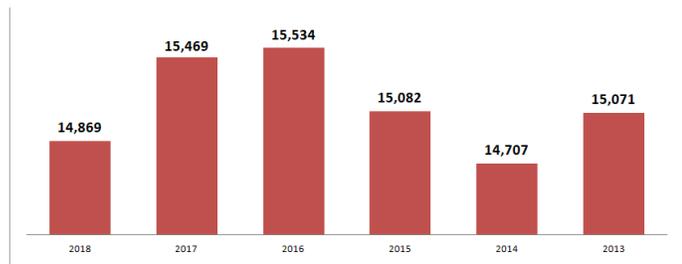


Figure 1. Graph of number of applicants that didn't match, withdrew, or didn't put in a rank list. Value 2013-2018. Source is NRMP

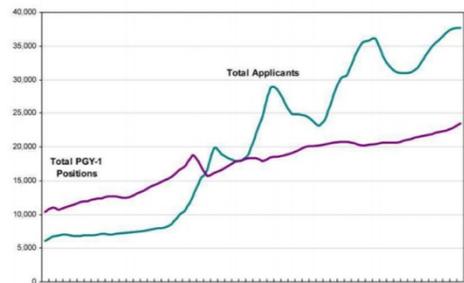


Figure 2. Applicants and 1st Year Positions in the Match. Value 1952 – 2011. Source is NRMP

Expected shortages for primary care physicians will be around 200,000 by 2020 (Cooper, Getzen, McKee, & Laud, 2002). Unmatched physician assistants could significantly decrease this shortage. Given experience and approval, primary care PAs can see patients for the 10 most common reasons patients go to see a provider⁵ (Advisory Board, 2013). In fact, there are very few services a primary care doctor can provide that an experienced and supervised PA cannot,

⁵ Skin disorders; osteoarthritis and joint disorders; back problems; cholesterol problems; upper respiratory conditions; anxiety, depression, and bipolar disorder; chronic neurologic disorders; high blood pressure; headaches and migraines; and Diabetes.

including; acting as a supervisor for diagnostic tests, endoscopy⁶, hospice care⁷, and supervising cardiac and pulmonary rehabilitation programs⁸ (American Academy of Professional Coders, 2011) (Day, Inadomi, Somsouk, & Siao, 2013) (American Academy of Physician Assistants, 2018).

If the number of unmatched residents were to remain constant with the 2017 number of 4,314, and most qualified to transition their career path to work as PAs, the physician shortage could be mitigated by a significant amount yearly. If 4,314 unmatched resident physician assistants were to perform 80% of the work physicians do (the maximum scope of practice recognized for PAs) that would be the equivalent of the work of 3,451 physicians (Schwartz, 2010). In reality, not all unmatched residents would qualify to become PAs and not all of them would provide 80% of the work of physicians. A more realistic range would be 50% - 75% of that maximum, or the work of 1,726 – 2,588 physicians. In 2015, 3,594 medical school graduates entered first-year family medicine residencies (American Academy of Family Physicians, 2016). Even ignoring the fact that not all of these graduates will not go on to practice family medicine, unmatched resident PAs would provide the equivalent of a 48-72% increase in the number of family practice doctors graduating yearly⁹.

Getting Highly Trained Students into a Relevant Career

Under the current system in the United States, medical school graduates that can't find a residency have eight years of university education and a median education debt of \$190,000 (Kellermann & Saguil, 2018). These unmatched residents have three choices; the first being to find a residency by other means. Those unmatched are automatically enrolled in the Supplemental Offer and Acceptance Program (SOAP), a one-week process that seeks to fill the few remaining residency positions. If students remain unmatched, they can take a year to improve their resumes. For many students, this means taking another year of medical school, finding a research fellowship, or teaching science classes (Antol, 2016).

⁶ Some PAs can perform endoscopy if they are specifically trained to provide it, and in some cases, PAs can administer flexible sigmoidoscopy.

⁷ As of Feb 9, 2018, PAs can manage and provide hospice care to terminally-ill Medicare patients.

⁸ as of Feb 9, 2018, PAs can supervise cardiac and pulmonary rehabilitation programs under the Medicare program.

⁹ 3,594 first year resident plus 1,726 equals 5,320. 5,320 divided by 3,594 equals 1.48 or a 48% increase. 3,594 first year resident plus 2,588 equals 6,128. 6,128 divided by 3,594 equals 1.72 or a 72% increase.

Given the current medical field structure, medical school graduates who don't complete a residency will never be able to practice medicine. As plastic surgeon, Dr. Edmond Cabbabe puts it, "there is no place for them (unmatched residents) in the health care delivery system without having a residency" (Bailey, 2018, paragraph 6). That means option number two is going back to school to pursue a different career. However, going back to school is very costly when considering tuition and housing expenses, foregone wages, and time. Furthermore, most medical graduates have already incurred significant amounts of debt from their previous education. The third option for graduates is to find a job in a different career.

There are careers available for unmatched residents. For example, Dr. Margarita Loeza, a family doctor and the chief medical information officer at a community health center in Los Angeles, hires unmatched residents as electronic health record trainers. This position pays about \$77,000 a year. The Association of American Medical Colleges also gives suggested career routes for unmatched residents that don't require significant additional training including; public health and service, health education, dietitian, medical informatics, medical science, and physician consulting.

According to the Bureau of Labor Statistics, all these careers post growth rates between 13-20% and offer median salaries between \$39,000-\$82,000 a year. However, there is no guarantee that an unmatched resident could get a job in any of these careers and there is a lack of research indicating what careers unmatched residents ultimately end up having.

Although adequate job opportunities exist, allowing unmatched residents to practice as physician assistants would enable these highly trained individuals to have a career that is in high demand and extremely relevant to their education and training. According to the US Bureau of Labor Statistics, Physician assistants get paid \$104,000 yearly and the career is experiencing 34% growth. Working as a PA, unmatched residents would directly apply their eight years of university education, rather than letting that investment become a sunk cost.

Conclusions and Implications

Both the total number of Americans and the number of Americans over the age of 65 are expected to greatly increase in the next few decades, undoubtedly increasing the demand for healthcare. At the same time, the labor supply will drop as the number of physicians and nurses

retiring outpaces the number of physicians, nurses, and PAs entering the workforce (Patlak, M., Levit, Patlak, & Levit, 2009). Decreased supply and increased demand will result in higher prices in an industry that has been struggling to control price growth for decades.

Missouri Senate Bill 754 was an attempt to try to address this ongoing problem by making use of highly trained unmatched residents in the delivery of primary healthcare. More and more states have followed in Missouri's footsteps, creating their own laws. These bills are a step out of the medical licensing transitional gains trap and were able to get passed because the situations allowed for a decrease in license requirements without hurting doctors. This is paramount because occupational licensing trap are very difficult to reverse, and the tendency is for them to get worse over time. The bills still present a number of concerns, however, most of which would be addressed if unmatched residents were able to provide primary care in underserved areas as physician assistants.

Unlike unmatched resident bills currently in place, this would not create a greater shortage of residencies in the future. Also, more patient care would be provided in underserved areas where it is most needed, unmatched residents will be able apply their 8 years of education directly, and there wouldn't be significant decreases in the quality or safety of care provided by physician assistants. Furthermore, medical school graduated PAs would be more supervised and held to just as high of quality standards as traditionally trained PAs.

As time passes it will be critical to collect data and information on the effects of these bills as more states implement their laws. In particular, it will be important to investigate these bills' impacts on the salaries of primary care physicians, and the shortage of residencies. It will also be important to measure the quality of care provided by the unmatched residents practicing in these newly created positions.

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