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A True Perspective: The Intricacies of the Primary Care Physician Shortage Impact on Urban Populations

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Section II – Overview and Introduction

A True Perspective: The Intricacies of the Primary Care Physician Shortage Impact on Urban Populations

Introduction

Oftentimes when discussing the pitfalls of the ongoing health care system's challenges in supplying equitable and quality care for all patients the steadily increasing physician care shortage is often overlooked and undermined. In a society that deems itself foundational on prestige and return of investment, many individuals pursuing medicine are often prompted to specialize in a field that can abundantly create a return on their hard-earned education. With the ever-increasing tuition costs of medical school and overall health are utilization due to an increasingly unhealth population within the United States, we are now more than ever promoted to investigate the underlying issues relating to the formerly stated issue. To further explore its ramifications, we must first work to understand that after the Affordable Care Act, a huge change that is increasingly imperative is the mandating for insurance companies to cover chronic diseases. At first, this just seems to be more of an objective than an issue until we see that there is simply not enough institutional support within the medical system to deal with the health care management of many individuals with underlying chronic diseases. Furthermore, with the lack institutional support we often see that those with a lower socioeconomic status and access such to medical care, such as those existing in urban populations simply become a part of the ever-increasing gap created by this issue. Due to this, within these urban populations it is evident that there is a lack of general care within the space of children's health, general surgery and mental health therefore also leading to a lack of specialty utilization as primary care physicians are the first point of contact for many individuals of a lower socioeconomic status.

Throughout the previous evaluation of the current circumstances surrounding the primary care physician shortage within urban populations, there are several identifying and pertinent questions that must be positioned to gain foundational grounding. To begin, what are some current solutions towards the physician shortage within the United States and how could they be altered to become more affective for urban populations? In addition to this, will increasing the number of residents within primary care help with the effects of the shortage? With this in mind, an investigation of the data and numbers behind the lack of physician supply and access to care in a majority of urban communities is required. A propositional item and focal point for policy would be improving and expanding the number of primary physicians in inner cities, through providing more educational opportunities for aspiring doctors. Through the means of utilizing more policy implementation addressing care, quality, and access, we can work to alleviate both sides of the totem pole. Conclusively, this policy brief will be culmination of the serval recommendations to provide of the former aspects.

Research Overview

To inform the basis of this policy brief, a discussion of different policy implementations through research is imperative to the understanding of future recommendations. To begin, we must first assess whether a physician shortage itself truly exists. The primary focal point of research is made by "Reassessing on the Data on Whether a Physician Shortage Exists" by Gudbranson et al[1]. As we further investigate the research done by Gudbranson et. al, we observed that there is a utilization of multiple sources of previously collected data from the "Gaps in supply of physicians, advanced practice nurses and physician assistants" by Sargen et. al and from the Association of Medical Colleges reaffirming the looming physician shortage. Furthermore, within this research proposition we witness that they collect points of data from all sources rather than collecting their own. To further expand, many of these source's manifest through surveys, enrollment data points and insurance data. Through investigating this question,

in evaluating the article written by Gudbranson et. al, it seems to be that the main investigative factor could begin with first figuring out if the population of primary care physicians is sufficient for the United States[1]. Despite the calculation, as stated by Gudbranson et. al, it appears to be that for every one out of 2000 Americans, a physician could comfortably take care of them without being strained[1]. In addition to this the main factors responsible for the shortage are reliant on the amount pf physician working hours, physician retirement and the age gap of our ever-increasing population. Due to the location and structure of certain physician work environments, it creates an increased room for inefficiency amongst many physicians[1]. In a similar manner, health care appointments including follow up visits and extra mediation support could be done by the other healthcare providers. All in all, the lack of evenly distributed manpower amongst physicians really continues to contribute to the ongoing primary care physician shortage with the United States[1].

Despite the ongoing issues, unlike most policies we have seen the rise of several solutions to address the ongoing shortage. Within the article exploring how "Estimating the Residency Expansion Required to Avoid Projected Primary Care Physician Shortages by 2035", it projected the true amount of physician shortage and its comparison to the growth of residency and ages of retirement. To accomplish such a feat, Petterson et. al, utilized an Ambulatory Medical care survey investigate demographic changes. Furthermore, to specific age of retirement they utilized the 2014 American Medical Association Masterfile. In addition to this, for residency calculations they used data points from the American Osteopathic association. Conclusively, to get the number of shortages they calculated the number of physicians that would be needed for each year based on current burdens. Throughout these methods, it was discovered that a primary support for identifying a solution for this issue lies on the notion of primary care physicians having the ability to alleviate with the costs of many patient issues, due to the preventative and continual nature of primary care physicians versus specialists[2]. In many circumstances, shifting the responsibilities of physicians to other allied health professionals can truly be pushed so far without experiences administrative burden or constraints. To alleviate the implementation of more physicians it's imperative to investigate the number of residency slots currently existing as well as the necessary implementation of physicians into all economic environments[2]. More importantly can the amount of the physician shortage be predicted and what would be the apparent effects of that within the upcoming years. All in all, it is evident that decreasing this shortage will not be as simple as increasing the number of medical schools or decreasing debts.

At large the factors considered within increasing the number of opportunities through increasing residency slots have been considered, however it is imperative to also improve the nature and attractiveness of the job. To further understand this aspect, the utilization of the American journal of medicine was required. Within identifying the "Solutions to the primary care physician shortage", many points of data were sampled from the "Kaiser Family Foundation's Primary Care Health Professional Shortage Areas" [3]. With the support of multiple other research articles through tracking physician data gain an understanding of the upcoming presented solution. To embark, through creating a less stressful environment for residents during rotations in regard to primary care, it could lead to a heightened interest in primary care for residents[3]. In a similar manner, primary care services and loan repayment programs for primary care allow for more opportunity and interest from medical students. For instance, it used to be that many primary care physicians would not be paid for time they spent doing administrative work, however as of late there has been an increase in technology to track the amount of time physicians spend on administrative tasks such as sending emails and patient follow ups[3]. To further expand, it's imperative to uphold and create a program that will uphold and honor the work of physicians in and out of the patient room[3]. More importantly, the burden that exists amongst current primary care physicians due to the

constant and strict regulations surrounding their method of practices continues to contribute to the lack of interest in the field[3]. Overall, the pertinency of increasing the interest in this field, could be the solution to creating greater equity to care and healthcare delivery for patients.

Naturally, it's plausible to believe that there is a higher count of primary care physicians within urban areas, however there is not a super evident correlation between healthcare delivery within urban areas and physician shortages. With the emphasis on research done on population characteristics through a 1993 telephone survey of 6,674 California residents by Grumbach et. al, investigating "Physician supply and aces to care in urban communities", we see the importance behind the utilization of comprehensive health data[4]. As of late, it is beginning to appear that many populational characteristics such as socioeconomic status, race, and environment contribute to the lack of equitable care[4]. On top of this, many physicians, due to the nature of the work put in into their education, prefer to specialize for reasonable economic justification[4]. However, with the lack of programs in urban areas targeting lower end individuals, and a less and less interest in primary care, it is plausible to assume that the shortage may play a factor within this current issue. Considering all factors, after serval analyses on a population of urban Californians, it is evident that with the increased number of physicians many individuals within the urban areas had higher access to care. To further enlarge upon this notion, many individuals after being explored for having a lower socioeconomic status in conjunction of their environment, had better health outcomes with the increased presence of physicians[4]. With healthy policy adjustments to the number of physicians, expanding care to those who have fallen within the gap could contribute to an equal totem pole of access, care, and quality[4]. In most cases, even with the improvements of disturbing the number of physicians across all populations within urban areas, it is still a bit difficult to meet healthcare delivery goals[4]. As we delve deeper into the study, through the analyzation on Grumbach et. al, we see that those who had less than thirty primary care physicians for every 100,000 people in their population had the lowest experience in terms of access to care[4]. In addition to this, those who had a low self-rate access score often had the highest wait times and traveling times to even see a physician[4]. More importantly, for two individuals who had similar characteristics of socioeconomic status, health issues and insurance plans had completely different outcomes based upon the amount of physician presence within their area. Overall, an investigative measure would have to be analyzed in analyzing what solutions could in turn increase physician presence amongst the current shortage.

In addition to the visible impact of residential location on the access to care for many individuals, the attributed factors of urban locations and residential segregation contributes to the education and job opportunities affecting this population. Within the investigation of residential segregation and the availability of primary care physicians by Gaskin et. al, through combining data from the 2006 and 2000 American Medical Association files, we see that it is evident that metropolitan areas often suffer the most from physician shortages[5]. To further expand upon this data, an interesting aspect was the linking of the data from the medical association to national residential and demographic data[5]. More specifically, the zip codes associated with everyone, and health data point was utilized to investigate the relationship of residential attainment to physician shortages across many urban areas nationally[5]. The apparent constraints tied to an individual's intersectionality warrant for conceptual framework to understand why certain communities have minimal access to an abundance of primary care physicians[5]. An investigation of economic theory recertifies the impact of physician availability of the equity care, and delivery of health care within metropolitan areas. Furthermore, many of these populations would implore doctors to accept more Medicaid and uninsured patients into their target pool[5]. As a result, many primary care physicians are often turned away as this often makes their operational costs higher which in turn lowers

their take home pay. Overall, with the already existing shortage this continues to expand the access of an urban population's ability to receive an equal totem pole as discussed prior.

In a thorough investigation of multiple research points, it is evident that the increase of physicians can work to in turn aid a population with high points of inequity. Throughout this paper an evaluation and application of this research will be utilized to understand what true outcomes sprout from working to increase the amount of primary care physicians amongst the populations. All in all, it seems to be there with one being dependent on the other, it is in the best interest, with a preventative based mindset, to incentivize and increase the number of primary care physicians.

Figure 1: Impact of Segregation on the Odds Being a Primary Care Physicians Shortage Area for Majority Black Zip Codes

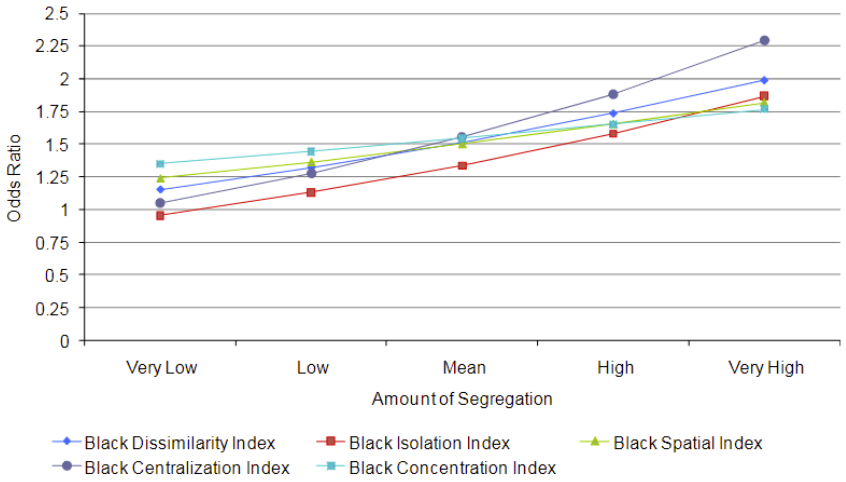


Figure 1: Primary Care Physician Shortage amongst Black Urban Populations[5].

Figure 2: Impact of Segregation on the Odds Being a Primary Care Physicians Shortage Area for Majority Hispanic Zip Codes

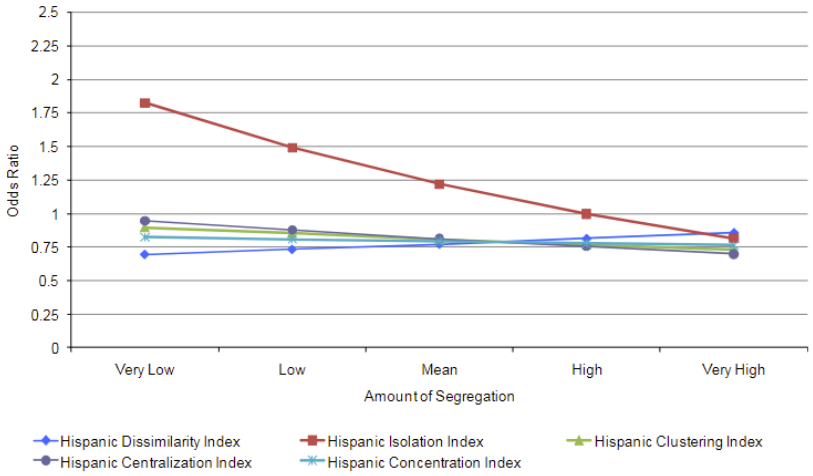


Figure 2: Primary Care Physician Shortage amongst Hispanic Urban Populations[5].

Section III – Policy Review and Recommendations

A True Perspective: The Intricacies of the Primary Care Physician Shortage Impact on Urban Populations

Introduction

Within the occurrence of shortages of primary care physicians across a multitude of urban cities and environments, the rise of several policy portions to limit this issue is steadily increasing. Through and through, a collective approach to cultivate this number and produce more physicians has manifested itself through several manners. Primarily, policy that works to allure and maintain the amount of physicians may want to explore the addition of several initiatives that will appeal to the desires of many physicians. For instance, through financial avenues such as loan repayment and also performance bonuses, this provides a stable and charming outlook on the field of healthcare which can improve the abundance of physicians in urban areas. With the support of initiatives like this it creates and nurture a more attractive pursuit of medicine that appeals to more individuals overall[1]. As a result of this, students in turn will feel like they have more of work life balance that identifies with the lifestyle that they desire[3]. In order to alleviate this issue it is imperative to increase the sentiment surrounding the job and make it more sustainable for the officials working it. To further expand on the financial aspect it is imperative to sustain the building more forgiveness programs that give back to the individual as they work in urban centers burdened by high patient demands.

Table 1
Summary of Health Reform Provisions to Increase Primary Care Capacity

Policy	Description	Potential Impact
Payment Reform	Designated primary care practitioners receive a 10 percent Medicare bonus payment (effective 2011-15); Medicaid payment rates for specific primary care services provided by primary care physicians increased to at least equal Medicare levels (effective 2013-14).	Some modeling suggests higher payment rates can increase the quantity of primary care services provided; however, a temporary increase may have less impact.
Care Delivery Reforms and Pilot Programs	Medicare Shared Savings/accountable care organizations (ACO) Program; community health teams to support patient-centered medical homes.	Health care organizations, such as ACOs, may encourage development of team-based primary care practices to increase capacity and improve efficiency.
Support Primary Care Training in Academic Settings	Awards grants to plan, develop and operate training programs in primary care; provides financial assistance to trainees and faculty; enhances faculty development in primary care and physician assistant programs.	Students recruited through targeted training programs are more likely to enter primary care in underserved areas. However, such programs may require large investment with a relatively small yield. Also, if residency slots are fixed, increases in U.S. graduates may merely displace international graduates, resulting in minimal impact on the net primary care workforce.
Creating New Primary Care Residency Programs	Redistributes residency positions in case of vacancies, and mandates 75 percent of new Medicare-supported residencies be in primary care, including internal medicine; academic medical centers or teaching hospitals may obtain grants for primary care residency programs.	Focusing on residency programs historically has a higher yield than creating academic training programs. Residents can also provide patient care and generate revenue for hospitals during their training.
Scholarships for Students Planning to Practice Primary Care	Grants to medical schools to recruit students likely to practice in rural areas; grants to train residents in preventive medicine specialties.	Students who are more likely to practice primary care, particularly in underserved areas, are also likely to face financial barriers to obtaining medical training; scholarships can address this barrier.
Loan Forgiveness and Direct Financial Incentives for Primary Care Practicioners	Increases annual and aggregate maximum on loans for nurses; increase in National Health Service Corps scholarships and loan forgiveness funding for primary care practitioners that practice in shortage areas.	Relative to scholarships, loan forgiveness has much lower dropout rates, higher retention and satisfaction.

Source: Authors' analysis of the 2010 Patient Protection and Affordable Care Act

Figure 1: Summary of Health Reform Provisions to Increase Primary Care Capacity[5].

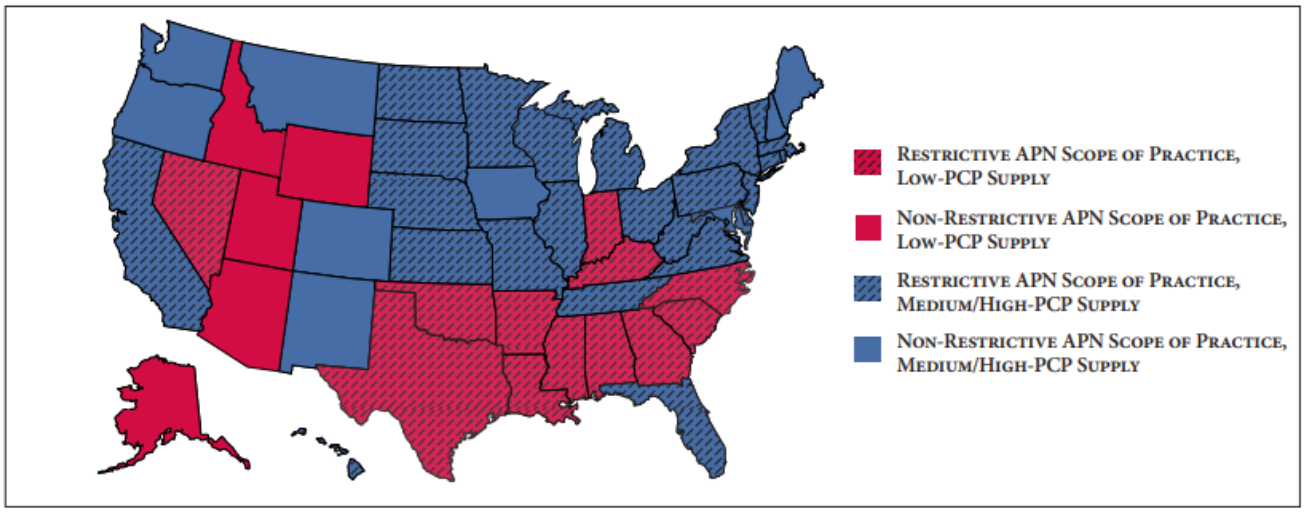
A couple other instances of policy measures exhibited by many states and legislators surround the expansion of the primary care workforce through doubling down on the training and allied health profession entities. Primarily, many programs have worked to alleviate the issue of minimal doctors through increasing the number of residency positions primarily for the roles of primary care physicians. Through increasing the amount of primary care physicians we have seen a larger increase in the impact on urban communities as it supports the continual and overall care of the individuals due to the heightened supply and availability of medical professionals [2]. In addition to this, the increase of allied health professionals such as nurse practitioners and physician assistants alleviates the workload of primary care physicians and spreads the overall responsibility across multiple individuals [2]. Oftentimes, many of these professionals can perform tasks that primary care physicians perform. Due to this, the burden caused through the lack of primary physicians within the system gets relieved. In many cases we see the elements of concordance assist in cases such as that of this one[1]. The burden often caused by the lack of primary care physicians can be looked under the lens of concordance in order to provide an equitable and suitable solutions to 4 out of 10 urban health cases [4]. The exhibition of representation concordance within the scope of medicine is created when patient has a trust and general sense of agreement surrounding their provider and their future health decisions. Throughout the last couple of years, we have witnessed the increased implementation of medical schools accepting more individuals from traditionally underserved communities to increase this aspect of concordance, Furthermore, the amount of students who have a strong desire to work in the areas have also increased by 14% significantly providing a slight alleviation to the ongoing issue [2]. To be even more revolutionary, the increase of residency programs hosted in urban areas allows for students to experience and get accustomed to the many situations that occur within the scope of urban primary care. To further expand, the increase of these professionals is not only by their effort but also by the addition of many community centers that often provide care to many low income and minority populations within inner cities. Subsequently the increase of policies within this effort would in turn foundationally support the maintenance and growth of primary care physicians to this effort and cause. Though implied, these community centers have the perfect platform for educational avenues in terms of alleviating these issues[1]. Through the establishment of programs linking urban primary care physicians with community members, and aspiring doctors it could foster morale to alleviate the issue[4]. More importantly, the education of the urban health environment within medical schools is essential to the attempts to maintain and increase the amount of beneficial primary care physicians within the area[3]. In an attempted discussion to summarize these issues, it's evident that there is a heightened pertinence towards policies of attraction within the field and maintenance of the support exhibited within the area. Despite the many policies listed, my main focus will illustrate the manner in which policies surrounding economics, education and expansion work to alleviate the primary care physician shortage within urban populations[3].

Policies targeting economic insurgency within the field of medicine often tend to work effectively due to the attraction and stability of the career post change[4]. In many cases of insurgency, there is an implementation of financial incentives such as of the four policies surrounding loan repayment, student loan forgiveness, sign on bonuses and salary support programs. In many instances these factors tend to be good starting points to increase the amount of primary care physicians. Historically, primary care physicians have been paid less that specialists, which often has caused the increase of specialists in comparison to primary care physicians. On top of this, the burden produced by the cost of medical school leads many individuals to choose a career that will have a better return on their investment, rather than what is typically available. With primary care physicians being the gatekeeper and point of continual care, the increase of loan forgiveness programs would work to create a more distributed workforce as a result of the attractiveness of not having to pay a hefty sticker price of an average of 300,000 to become a

practicing physician[4]. Despite this policy having a lot of financial benefits, it is limited to the amount of funding and also accessibility of 23% individuals within that area [2]. Furthermore this tends to create an overall stagnancy and difference across many hospitals programs and care centers. In order for this to work it would have to be implemented across many urban areas and populations[1]. Furthermore, the availability of funding and allocation of resources to support this initiative would have to be weighed out by legislation which varies form state to state. To further expand, there are some states that have higher interests in alleviating the issue than others, which causes discrepancies nationwide[3]. In evaluating cost, this would be one of the more expensive implementations as it is being allocated per individual versus towards an overall group. In addition, this would also require some sort of binding commitment of health workers to stick toward the profession that they initially selected to be effective in their positioning[1]. Despite it having a high cost, in turn it also has a high return of investment. Through and through this policy can assist in increasing the amount of primary care physicians in urban areas through creating more stable income, loan repayment and overall satisfaction with the career choice.

Figure 1

State Variation in the Projected Need for Primary Care Physicians (PCPs) and Scope-of-Practice Laws for Advanced Practice Nurses (APNs)



Note: Low-PCP supply is defined as fewer than 11.5 primary care physicians per 10,000 population. Restrictive APN scope of practice is defined as state policies requiring APNs to have physician involvement for either treating or prescribing.

Sources: Cunningham, Peter J., State Variation in Primary Care Physician Supply: Implications for Health Reform Medicaid Expansions, *Research Brief No. 19, Center for Studying Health System Change (HSC), Washington, D.C. (March 2010); and Pearson, Linda J., "Map 1: Overview of Diagnosing and Treating Aspects of NP Practice" and "Map 2: Overview of Prescribing Aspects of NP Practice,"* The Pearson Report *(2010)*

Figure 2: State Variation in the Projected Need for Primary Care Physicians (PCPs) and Scope-of-Practice Laws for Advanced Practice Nurses(APNs)[5].

In addition to the evaluation of the four policy options described above, the educational expansion within 3 types of policies targeted admissions, urban residency programs and the establishment for community health centers. Principally, targeted admissions in terms of policies allow for many students to be able to work in urban settings whilst creating an educated population that understands how to deal with the growing pains of urban health care. Furthermore, through the implementation of these programs, a direct pipeline for residency expansion is created which allows for students to gain more insights into the pertinent work of a primary care physician in an ever changing urban environment, Throughout and through, the presence of these programs leads to the health community centers in the area having increased support and a foundation to attract and maintain their physicians [2]. However, in

discussing this policy, there are many factors that come out to pay, due to it's vast nature. For instance, there is not a one size fit's all approach for each community so legislators would have to consider what the ongoing and prevalent issues are within different communities and then allocate the resources to create the appropriate amount of opportunities for it. Furthermore, the reliance on a cyclical scale in terms of students, practicing physicians and community centers influencing each other is great when they are efficient but can be a source of pain when one is underperforming[1]. To further expand, the allocation of fund to support the community centers and maintain them could be costly, and also lead to physicians performing more administrative work rather than practicing. Subsequently leading everything back to the root issue of alleviating the primary care physician work and expanding it in urban areas. To think through this format, the initial set up would be costly often costs an average of 41% more as there would have to be allocation of funding to create more residency slots, as well as the creating of community health centers or the renovation of old ones [2]. In addition to this, urban centers often serve as high cost centers so the allocation of resources to this would have to be accounted for in terms of adequately serving the entire population. Failure to do so would result in the compromise of health for many individuals, in certain causes about 2 out of 10 that many not have anywhere else to go [2]. Despite the evident cost, this could lead to the improvement within the preventative and continual care of patients in urban settings due to the many points of care that they would have access to. Through the care of primary care physicians and the reinforcements by community health centers this promotes overall well being and early detection when it comes to many diseases and factors that strike urban populations. The essence of continual care is the foundation of equitable health for many individuals that exists within an urban environment. Indirectly the implementation of more educational factors could lead to the increase of overall health for those individuals within the environment[1]. The implementation of more education has educational expansion measures could lead to as stated before inequal distribution of resources from city to city therefore leading to coverage gaps.

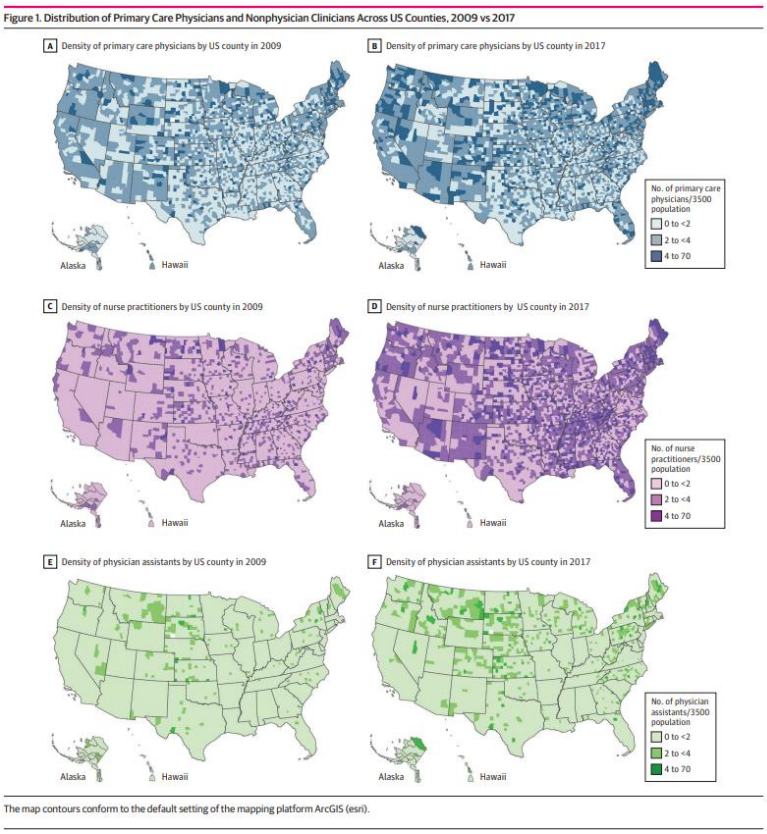


Figure 3: Distribution of Primary Care Physicians and Nonphysician Clinicians Across US Counties, 2009 vs 2017 [5].

Despite all of the pros and cons, expanding the financial incentives and education endeavors within the role of primary care physicians is essentially one of the best ways uplift and alleviate the burden currently placed on urban primary care physicians [4]. Through the assistance of further programing it is imperative to consider the collaboration of multiple sources within the key policy initiatives and to highlight the endeavors of all individuals and the impact of these implementations. Subsequently, placing more emphasis on the community and building up the responsibility amongst the scope of care and community officials to provide equitable, safe and well-rounded care[3].

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