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Prior Authorization and Referral Process in Healthcare and its Administration Burden

Megan Hosfield

Abstract

Prior authorization, a requirement for healthcare providers to obtain insurance approval before delivering services, has become a significant administrative challenge in the U.S. healthcare system. According to an American Physical Therapy Association survey, 75% of patients reported delays in accessing necessary care due to prior authorization. In comparison, 80% of healthcare staff see it as a factor in burnout. This paper examines the implications of preauthorization on healthcare service delivery, focusing on practitioner distribution, patient care accessibility, and financial impacts. The research explores the association between state-level preauthorization restrictions and the availability of healthcare practitioners, particularly in rural areas and specialties. Findings suggest that more restrictive prior authorization processes correlate with reduced practitioner availability, negatively affecting access to care and patient outcomes. Additionally, the paper discusses the financial strain on patients and the healthcare system and the need for policy reforms to address the administrative and economic burdens of prior authorization.

Introduction

In the United States, an American Physical Therapy Association survey revealed that 75% of their patients considered prior authorization an administrative burden, leading to a 25% delay in accessing medically necessary care (apta.org[1]). Prior authorization, i.e. "pre authorization," is a process in which healthcare providers must obtain permission from the consumers' health insurance prior to performing a service (Kyle, 2021[2]). Staff also felt pre-authorization was a burden, with 8 out of 10 stating that pre-authorization contributed to their burnout and delay in service.

Regional constraints imposed on authorization limits have repercussions on employment opportunities, potentially leading to a reconfiguration of preferred practice locales among practitioners. This dynamic is particularly pertinent given that practitioners often operate as independent contractors. Shifts in practitioner distributions have long-term implications on the prevalence of noncommunicable diseases within various regions. For instance, LoSardo et al.[3] (2023) found that the prevalence of 115 different diseases related to access to different types of health services, including specialized healthcare. The availability of practitioners with expertise on a particular disease within a given area also influences the access to care that given areas receive. Rural areas tend to have higher pre-authorization restrictions for less sought out services. Seeking authorization for medical prescriptions or facing prolonged delays in securing consultations with suitable healthcare practitioners has become an omnipresent phenomenon. This, in turn, gives rise to diminished rates of favorable clinical outcomes, contributing to reduced patient adherence due to costs and clinical capabilities. The distress of waiting for insurance to proceed with medical interventions introduces problematic barriers and procedural contingencies for healthcare providers and employees. This issue is intersectional, as it impacts not solely the quality of care by limiting the service utilization of necessary care, but it also limits the amount of accessible practitioners in a given area.

Moreover, substantial funds are being directed toward this widespread prior authorization process instead of being utilized for medical care that could significantly benefit patients. The preauthorization process allocates consumer funds for healthcare services through insurance providers. However, patients remain vulnerable to financial discrepancies in healthcare funding due to inadequate healthcare regulations. This gap leads to errors in financial transactions and billing. The absence of a defined financial limit on healthcare costs results in escalating expenses, potentially pushing individuals to make unwise financial decisions for their healthcare needs. This financial dilemma could lead to economic desperation and decisions misaligned with prudent fiscal healthcare management. This should prompt policymakers to establish regulations aimed at addressing these dynamics, recognizing their eventual role in needing government funding for healthcare related expansions.

Monthly financial restrictions can legally bind someone without prior awareness to insurance contracts that are financially predatory. In particular, preauthorizations do not guarantee payment from a consumer's insurance. As the consumer's insurance agreement legally protects the insurer, clinician, and organization from the costs of care, the patient has no ability to prevent the uncovered care from occurring (Hargraves, 2003[4]). Preauthorization is a vital part of insurance claims to receive patient payment unless the medical group deems it unnecessary. This means the consumer proactively agrees to assume responsibility for the expenses of a medical procedure if the insurance company decides it cannot during or after the preauthorization period.

Consumers' limited understanding of complex healthcare terms also exposes them to manipulation. Exploitative entities may leverage this information gap, making consumers susceptible to uninformed decisions. The process itself is also confusing and difficult to follow for lay people. The billing process is initiated by the healthcare provider when they submit a claim to the consumer's insurance. The provider must then wait for approval from the insurance before proceeding with the procedure. This process can place consumers in a position of lack of autonomy regarding knowledge of how much their services will be and what services are considered billable.

Finally, the implementation of the Affordable Care Act aimed to enhance healthcare accessibility for Americans in part by reducing restrictions on healthcare pre-authorization procedures. The Affordable Care Act provides certain patient protections pertaining to insurance, some of which include making it illegal to turn down applications due to health status or charging more for health insurance based on gender. However, each state has different restrictions and minimum protections for insurance providers. Not every state has the same level of coverage. This research also examines the association between restriction level per state and access to practitioners. The restriction levels determine financial allotments for certain services the state mandates to be covered, influencing prior authorization procedures

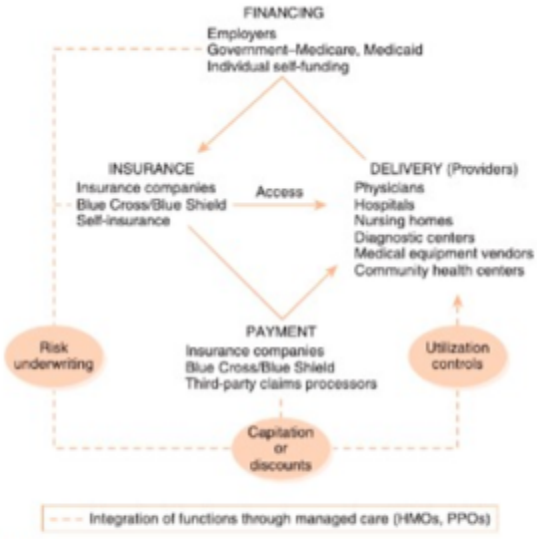
This paper accomplishes two main objectives. First, it focuses on establishing the positive association between preauthorization restrictions and the availability of currently practicing practitioners in different regions. This will be achieved through the use of publicly accessible data, using IBSS to employ a bivariate analysis. The author also conducted an interview with a healthcare professional familiar with these procedures to get a better understanding of the challenges with prior-authorization from an insider standpoint. Furthermore, it suggests that future research must be conducted to better understand the underlying causal mechanisms that may lead to this phenomenon. Second, this study investigates whether variations in pre-authorization code restrictions at the state level, specifically between general practitioner health services (which are commonly and easily sought) and specialty services (less frequently

sought), have a positive association with the number of practicing healthcare professionals in each state. This research is significant due to its implications for healthcare provider availability in specialties, which subsequently influences job opportunities for healthcare practitioners, nurses, and secretaries. This also can potentially contribute to the prevalence of severe illnesses in specific geographic areas.

Literature Review

History of Preauthorization

There exists a notable dearth of current literature concerning the variances in prior authorization restrictions among states and their consequential effects at the state level. While antecedent research efforts exist, the present literature review scrutinizes their relevance in the context of this investigation: the influence of severity levels of prior authorization restrictions on the practitioner workforce. Severity levels refer to the amount of restrictions that the preauthorization rates have regarding service utilization. This study pioneers an examination of this particular relationship.



Note. Figure clarifies the Financial Foundations of U.S. Healthcare Delivery. From *Shi, L., & Singh, D. A. (2019). Essentials of the U.S. Health Care System. Jones & Bartlett Learning.*

Fig. 1 Managed Care: Integration of Functions

It is important to understand why the process of prior authorization had to be implemented in the first place. In the 1960s, the first utilization review was created as billing misuse trended upward. As such, the term "medical necessity" was coined. The utilization review was a process similar to preauthorization, where patient services were reviewed by a third party to ensure that there was no misconduct regarding billable services. For instance, a physician may bill for a service never given. During the time utilization reviews were implemented, physicians still found a way to overcharge by having patients stay inpatient longer than necessary. Preauthorization was created to protect the patient as physicians were recommending patients to stay inpatient for illnesses that could be treated at an outpatient level, thus raising the treatment costs for patients upon discharge (Behrendsen, 2017[5]). There are medical services

that are considered exclusions from coverage depending on what is deemed "medically necessary" and on an insurance company's utilization review through the pre-authorization or referral process.

To understand the relationship between the preauthorization processes and patient care, there needs to be a distinction between insurance type and the medical group that is aligned with consumer insurance. Financial coverage is dependent on the medical group type, not necessarily medical insurance (Woltman, 2023[6]). For example, if a consumer is covered under Blue Shield of California, they could possibly be in an HMO, PPO, EPO, or POS (Hosfield, M[7]). Some insurance companies could offer a combination of all four medical group subtypes or exclude some. Prior authorization functions as a method of a consumer's insurance company authorizing payment for a serviceThe four types of insurance have differences in financial coverage, monthly cost, referral, and preauthorization screening processes. The insurance medical group preauthorization is a burden on consumers as it creates issues such as long authorization periods for specialty services, confusing repetitive processes, and a lack of informed consent for consumers through confusing medical terminology (Gaines, 2020[8]). Within highly sought services such as preventative care, a consumer might need a specialty service for a rare condition. This rare condition might not exist as a billing code within their healthcare plan and thus prolongs their ability to seek out this service as they may need to contest coverage made by their healthcare plan (if they have the resources to do so).

For instance, Blue Shield of California is an insurance that many consumers in California utilize. However, the medical group determines the type of services and financial compensation consumers are eligible to receive coverage for. An HMO, also known as a Health Maintenance Organization, provides a consumer's health services at a fixed fee. Consumers' out-of-pocket fees are lower, but they have less flexibility regarding the choice of provider or hospitals outside of their plan. They also need their primary care physician to refer them to specialists first. A consumer is unable to seek services outside of their plan, and would not receive coverage for out-of-network costs. This is optimal for managed care. In a PPO, also known as Preferred Provider Organization, a consumer doesn't need a primary care physician to obtain a referral to seek services from other doctors. They have more out-of-network coverage. They have more flexibility for out-of-network services, but the cost is a lot higher and the copays are higher, too. It is less managed healthcare and better for people who prefer having more options. An EPO, or Exclusive Provider Organization, is where a primary care physician is not required, and there is easier access to specialists. There is also a large network of providers, but no coverage for out-of-network specialist care. This plan has more available specialists within a consumer's network available. It is similar to an HMO but with no primary care physician referral required. A POS, or Point of Service, plan is a plan where the consumers pay less if they use doctors, hospitals, and other healthcare providers that belong to the plan's network. They require the

consumer to obtain a referral from their primary care doctor to see a specialist. It is a combination of a PPO and an HMO plan where they pay no deductible and have a minimal copay when they use a doctor in their preferred network.

When medical services involve rare conditions or are in areas with limited support for specialized treatments, practitioners might choose to move to regions with strong job markets for greater opportunities. This is because not all states and rural areas have the same levels of pre authorization restrictions, thus impacting a practitioner's compensation and creating differential consumer accessibility (Jack & Mitchell, 1997[9]).

Difficulties With Preauthorization

The American Medical Association (AMA) surveyed 1,001 physicians and found that they complete 45 prior authorizations per physician per day, each working week (ama-assn.org[10]). This equates to 14 hours per week — nearly two business days per worker. 88% of physicians described these burdens as high or extremely high, and 94% described the prior authorizations as delays in access to necessary care (ama-assm.org). These authorizations are prolonged because the methods of delivery are typically via fax or telephone and is generally quite involved. A service that a consumer seeks out has a specific billing code (Shi, 2019[11]). There is a classification of healthcare workers that the consumers call to schedule a medical appointment or fill a prescription. That healthcare worker then fills out a form and faxes it to the consumer's health insurance processing office. This process can take hours to several business days depending on the consumer's insurance type and billing code type (Shi, 2019[12]). If the insurance accepts the code as a billable service then an invoice and copayment is generated for the consumer. If it is rejected the process can be contested and restarted with a separate form type, depending on the insurance.

There is also a reported lack of transparency among physicians, as physicians have self reported. When physicians prescribe medication, they are typically unaware if it needs preauthorization from a consumer's health insurance. Over time, politicians have gradually recognized the troublesome nature of this issue for Americans. In 2010, the Affordable Care Act prohibited health plans from requiring prior authorization for emergency services, regardless of whether the hospital is considered in-network or out-of-network. The Affordable Care Act also requires states to establish their own state-level regulations determining what is considered medically necessary and the extent of pre-authorization required, with the exception of emergencies (Hutchins, 2012[13]). However, it's important to note that even in emergency situations, the Act does not guarantee that the consumer's health insurance will cover the costs.

Previous literature published through BMC Health Services Research involved a meticulous investigation concerning the accessibility to specialized medical services within rural populations situated in the United States. The study rigorously examined the classification known as the Rural-Urban-Area (RUCA), a system that delineated and classified 33 distinct zones, ranging from urbanized locales to isolated small rural regions. It is asserted within the article that the United States maintains a predominantly rural composition. However, it is noteworthy that approximately one-fifth of the entire populace inhabits these territories. Correspondingly, a mere one-tenth of healthcare practitioners extend their services within these particular zones. These underserved populations often comprise veterans, immigrants, marginalized communities, or those without insurance coverage, leading to a tendency towards reduced access to specialized care in rural areas.

Ultimately, the American healthcare system continues to grapple with numerous bureaucratic complexities. This seemingly convoluted state of affairs perplexes many, as the rationale behind such intricate procedures remains obscure and have become an onerous burden for healthcare practitioners. The protracted waiting periods to administer treatment significantly impinges upon their personal and professional lives, eliciting substantial concerns among healthcare professionals. Consumers are burdened as well, with impact to service delivery, predatory financial billing, and medical services available in healthcare policy based on state restrictions.

Methodology

Important Notes:

Statistically Significant = .05 or less

.001 to .200 **is a weak correlation**
.201 to .300 **is a weak to moderate correlation**
.301 to .400 **is a moderate correlation**
.401 to .500 **is a moderate to strong correlation**
.501 and above **is a very strong correlation (and rare)**

This research employed a Bivariate Pearson Correlation with P-value of 0.05 or lower to establish statistical significance. A bivariate correlation analysis examines if and how the linear relationship between two variables is statistically significant. It allows researchers and statisticians to understand how closely two variables correlate with each other and analyze the complexity of their relationship based on their statistical significance. This research aims to show a correlation in various quantitative data by state level and display a bivariate correlation against the complexity of state-level pre authorization regulations.The variables are the current number of family practitioners, oncologists, and endocrinologists; the pre authorization rules; the average salary of the three practitioners; speciality professional health shortage areas per state; average income of U.S. citizens per state; the portion of the population that is insured; and the portion of the population that is uninsured. Correlation is notable as research pertaining to preauthorization and currently practicing practitioners per state is novel. This acts as a foundational frame for subsequent investigations into the disparities within healthcare and the oftentimes disregarded procedural aspects.

State Restriction (Level)	SPSS Code
NR (Not Reported)	0
N/A (State does not have comprehensive capitated managed care or has carved out the pharmacy benefit)	1
Required To Be No Less Restrictive	2
Required To Be No More Restrictive	3
Required To Be The Same	4
Required To Be More Restrictive	5
Varies (MCO policies on PA or step therapy may vary by MCO, population, or drug, relative to FFS policies)	8
Other	9

Fig. 2 Table describing restrictions based on prior authorizations per state level.

This research uses IBM SPSS, a statistical software for advanced analytics and multivariate analysis. This research utilized State Health Facts Data, which was sourced from KFF.org, an autonomous platform specializing in health policy analysis, polling, and news. This data was then imported into SPSS, where a bivariate correlation analysis was performed. The data include the

following: the count of active practicing Family Medicine/General Practice practitioners per state and their salaries, amount of practicing oncologists per state and their salaries, and the amount of practicing endocrinologists and their salaries. These three practitioners were chosen due to accessibility levels based on level of consumer utilization for services provided, as a means of service accessibility representation. Family Medicine/General Practitioners are the most commonly sought practitioners with publicly accessible data with relatively high preauthorization rates. Oncologists were the next commonly sought type of practitioner but were relatively difficult to receive preauthorization for. Endocrinologists were the next type of practitioners, with services that had relatively low utilization rates due to their services being less commonly sought and lower preauthorization rates.

In order to obtain a more accurate Bivariate analysis, the preauthorization restrictions per state — originally qualitative values — were coded into quantitative values. The state restriction codes were based on what state restrictions were allowing for certain health plans to require certain health plan initiatives. This could include requiring a general practitioner in health plans or certain classifications of practitioners to be included in health plans. The number values attributed to SPSS are based on the restrictions compared to Medicare and private insurance coverage. This allowed the researcher to compare a naturally qualitative value and understand its influence on demographics. The initial codes detailed specific limitations imposed by each state concerning the Affordable Care Act reform and analyzed how these limitations influenced the diversity of healthcare regulations. Each state was assessed on a scale from "1-5" and comprehending the variations in healthcare accessibility due to pre-authorization restrictions would likely correlate positively with the presence of healthcare practitioners in a given area. It is important to note that codes "8 " and"9 " for SPSS imply missing values, and do not indicate values as increased restriction.

Table 1 Table comparing the current amount of Family Medicine/General Practitioners in the United States and Differences in Prior Authorization Rules by State MCO Benefits Regulated by the Affordable Care Act.

Correlations

		Current Amount of Family Medicine/General Practitioners in the United States	(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act
Current Amount of Family Medicine/General Practitioners in the United States	Pearson Correlation	1	.493**
	Sig. (2-tailed)		<.001
	N	51	44
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	.493**	1
	Sig. (2-tailed)	<.001	
	N	44	44

**. Correlation is significant at the 0.01 level (2-tailed).

Results

The first Bivariate correlation run is the current number of Family Medicine/General Practitioners in the United States per state and the Differences in Prior Authorization Rules by State MCO Benefits regulated by the Affordable Care Act. When quantitatively compared,

it was found that there was a strong correlation of .493 between the two variables and they were statistically significant, with a P-value of <.001. From this data, there is correlation between prior authorization rules per state and associations with the amount of Family Medicine/General Practitioners that occur per state.

The next dataset analysis was the average income of Family Medicine/General Practitioners in the United States per state and the Differences in Prior Authorization Rules by State MCO Benefits Regulated by the Affordable Care Act. The data set was found to have a strong correlation of .042 and was statistically significant. This allows the researcher to deduce that pre-authorization rules implemented per state level are positively associated with the salary of Family Medicine/General Practitioners in the United States.

Table 2 Table comparing the (numerical) differences in prior authorization rules by state MCO benefits regulated by the Affordable Care Act and the average salary of current family medicine/general practitioners in the United States.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Average Salary of Current Family Medicine/General Practitioners in the United States
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.042
	Sig. (2-tailed)		.788
	N	44	44
Average Salary of Current Family Medicine/General Practitioners in the United States	Pearson Correlation	.042	1
	Sig. (2-tailed)	.788	
	N	44	51

The researcher also analyzed if prior authorization regulations implemented at state levels were associated with specialty service practitioners. The researcher compared the prior authorization regulations and its associations with actively practicing Oncologists . The researcher then compared this result to those of endocrinologists, a less sought specialty practitioner.

Table 3 Table comparing the (numerical) differences in prior authorization rules by state MCO benefits regulated by the Affordable Care Act and the current number of oncologists in the United States.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Current Amount of Oncologists in the United States
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.427**
	Sig. (2-tailed)		.004
	N	44	44
Current Amount of Oncologists in the United States	Pearson Correlation	.427**	1
	Sig. (2-tailed)	.004	
	N	44	51

**. Correlation is significant at the 0.01 level (2-tailed).

At the outset, the bivariate correlation of the Current Amount of oncologists in the US (Per State) compared among Authorization Rules by State MCO benefits regulated by the Affordable Care Act showed a strong positive correlation of .427 and proved to be statistically significant with a p-value of 004. This allowed the researcher to deduce that the level of restrictions that prior authorization rules implemented at a state level are positively associated with the number of oncologists active per state.

The subsequent dataset analysis compared the mean earnings of oncologists across different states in the United States, along with variations in Prior Authorization Rules by State MCO Benefits Regulated by the Affordable Care Act. The data displayed a weak correlation of .198 and was found to not be statistically significant. Thus, one may infer that the extent of limitations imposed by state-level prior authorization rules are negatively associated with the average salary of practicing oncologists in each state.

Table 4 Table comparing the (numerical) differences in prior authorization rules by MCO Benefits regulated by the Affordable Care Act and the Average Salary of Current Oncologists in the United States.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Average Salary of Current Oncologists in the United States
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.198
	Sig. (2-tailed)		.198
	N	44	44
Average Salary of Current Oncologists in the United States	Pearson Correlation	.198	1
	Sig. (2-tailed)	.198	
	N	44	51

The following bivariate correlation examined the correlation between the existing quantity of endocrinologists within each state of the United States and the disparities in state-level Managed Care Organization (MCO) Benefits' Prior Authorization Rules, as overseen by the Affordable Care Act. This data was found to have a strong correlation of .420 and to be statistically significant at the .004 level. This led the researcher to deduce that the degree of constraints imposed by state-level prior authorization rules are positively associated with the current amount of active endocrinologists per state.

Table 5 Table comparing the (numerical) differences in prior authorization rules by state MCO benefits regulated by the Affordable Care Act and the current number of Endocrinologists in the United States.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Current Amount of Endocrinologists in the United States
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.420**
	Sig. (2-tailed)		.004
	N	44	44
Current Amount of Endocrinologists in the United States	Pearson Correlation	.420**	1
	Sig. (2-tailed)	.004	
	N	44	51

**. Correlation is significant at the 0.01 level (2-tailed).

The following examination of the dataset entailed a comparison of the average earnings of endocrinologists across various states in the United States against discrepancies in Prior Authorization Rules governed by state-level Managed Care Organization (MCO) Benefits under the Affordable Care Act. It was found to have a weak correlation of .062 and no statistical significance.

Additionally, bivariate correlations were conducted on different quantitative variables, one of which encompassed a Health Professional Shortage Area. As defined by the Bureau of Health Workforce, Health Professional Shortage Area (HPSA) designations refer to regions and demographic segments within the United States facing an insufficiency of healthcare practitioners. These designations mainly revolve around medical, dental, and mental health domains.

Table 6 Table comparing the (numerical) differences in prior authorization rules by state MCO benefits regulated by the Affordable Care Act and average salary of current endocrinologists in the United States.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Average Salary of Current Endocrinologists in the United States
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.062
	Sig. (2-tailed)		.691
	N	44	44
Average Salary of Current Endocrinologists in the United States	Pearson Correlation	.062	1
	Sig. (2-tailed)	.691	
	N	44	51

The first bivariate analysis was a comparison of the HPSA across states compared against the variations in Prior Authorization Rules by State MCO Benefits Regulated by the Affordable Care Act. It was found to have a moderate correlation of .232, however, it is not statistically significant. This suggests that there may possibly be a relationship between state-level prior authorization regulations and HPSA regions per state; however, further research would need to be conducted to test for causation.

Table 7 Table comparing the (numerical) differences in prior authorization rules by state MCO benefits regulated by the Affordable Care Act and specialty services and primary care health professional shortage areas per state.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Specialty Services and Primary Care Health Professional Shortage Areas Per State
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.232
	Sig. (2-tailed)		.130
	N	44	44
Specialty Services and Primary Care Health Professional Shortage Areas Per State	Pearson Correlation	.232	1
	Sig. (2-tailed)	.130	
	N	44	51

The subsequent bivariate correlation involved contrasting the Health Professional Shortage Area (HPSA) with the mean income of U.S. residents on a state-by-state basis. It was found to have a weak negative correlation -.031 and found to not be statistically significant. It could be inferred that the average citizen income and HPSA areas per state are negatively associated with one another.

Table 8 Table comparing specialty services and primary care health professional shortage areas per state and average income of U.S. citizens per state.

Correlations

		Specialty Services and Primary Care Health Professional Shortage Areas Per State	Average Income of U. S. Citizens Per State
Specialty Services and Primary Care Health Professional Shortage Areas Per State	Pearson Correlation	1	-.031
	Sig. (2-tailed)		.827
	N	51	51
Average Income of U.S. Citizens Per State	Pearson Correlation	-.031	1
	Sig. (2-tailed)	.827	
	N	51	51

Subsequently, the researcher obtained data concerning the count of individuals who are insured and uninsured at the state level with data obtained by World Health Statistics. These statistics were then subjected to a bivariate correlation analysis alongside other quantitative variables, aiming to discern possible correlations between an individual's insurance status, income, and average state income.The initial Bivariate Correlation examines the count of uninsured

Table 9 Table comparing the average income of U.S. citizens per state and population per state that is uninsured.

Correlations

		Average Income of U. S. Citizens Per State	Population Amount Per State That is Uninsured
Average Income of U.S. Citizens Per State	Pearson Correlation	1	.093
	Sig. (2-tailed)		.517
	N	51	51
Population Amount Per State That is Uninsured	Pearson Correlation	.093	1
	Sig. (2-tailed)	.517	
	N	51	51

individuals at the state level in comparison to the mean income of U.S. citizens within each state. The data revealed a weak correlation of 0.093 and was not statistically significant. Thus, there is no correlation between income and an individual's uninsured status.

The subsequent bivariate correlation explores the population that possesses insurance at the state level, in relation to the mean income of U.S. citizens in each respective state. The data exhibited a statistically insignificant correlation of 0.184. Thus, there is no correlation between income and being insured.

Table 10 Table comparing the average income of U.S. citizens per state and population amount per that is insured.

Correlations

		Average Income of U.S. Citizens Per State	Population Amount Per State That is Insured
Average Income of U.S. Citizens Per State	Pearson Correlation	1	.184
	Sig. (2-tailed)		.196
	N	51	51
Population Amount Per State That is Insured	Pearson Correlation	.184	1
	Sig. (2-tailed)	.196	
	N	51	51

The following Bivariate Correlation assesses the count of uninsured individuals within each state, in relation to discrepancies in Prior Authorization Rules for state-level Managed Care Organization (MCO) Benefits, regulated by the Affordable Care Act. The correlation exhibited a moderate strength at 0.326 and is statistically significant at the 0.031 level. This enabled the researcher to infer that state-level Prior Authorization rules indeed correlate with the number of uninsured individuals within each state.

Table 11 Table comparing the population amount per state that is uninsured and the (numerical) differences in prior authorization rules by state MCO benefits regulated by Affordable Care Act.

Correlations

		Population Amount Per State That is Uninsured	(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act
Population Amount Per State That is Uninsured	Pearson Correlation	1	.326*
	Sig. (2-tailed)		.031
	N	51	44
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	.326*	1
	Sig. (2-tailed)	.031	
	N	44	44

*. Correlation is significant at the 0.05 level (2-tailed).

The subsequent bivariate correlation examines the population that holds insurance within each state, in relation to variations in Prior Authorization Rules for state-level Managed Care Organization (MCO) Benefits, regulated by the Affordable Care Act. The correlation demonstrated a moderate level of association at 0.386 and is statistically significant at a 0.010 p-value. This enabled the researcher to deduce that state-level Prior Authorization rules do correlate with the count of insured individuals within each state.

Table 12 Table comparing the (numerical) differences in prior authorization rules by state MCO benefits regulated by the Affordable Care Act and population amount per state that is insured.

Correlations

		(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Population Amount Per State That is Insured
(Numerical) Differences in Prior Authorization Rules by State MCO Benefits Regulated by Affordable Care Act	Pearson Correlation	1	.386**
	Sig. (2-tailed)		.010
	N	44	44
Population Amount Per State That is Insured	Pearson Correlation	.386**	1
	Sig. (2-tailed)	.010	
	N	44	51

**. Correlation is significant at the 0.01 level (2-tailed).

Finally, the author conducted a Bivariate analysis of insured individuals per state against the quantities of uninsured individuals per state to examine the association. The findings indicated a correlation of .656, which also exhibited significant statistical importance at a p-value of <.001. This indicates a positive association between one another.

Table 13 Table comparing population amount per state that is insured and population amount per state that is uninsured.

Correlations

		Population Amount Per State That is Insured	Population Amount Per State That is Uninsured
Population Amount Per State That is Insured	Pearson Correlation	1	.656**
	Sig. (2-tailed)		<.001
	N	51	51
Population Amount Per State That is Uninsured	Pearson Correlation	.656**	1
	Sig. (2-tailed)	<.001	
	N	51	51

**. Correlation is significant at the 0.01 level (2-tailed).

Qualitative Results

Within this research, the author conducted an interview with a healthcare professional named Adson Director, who is affiliated with San Ysidro Health in San Diego. Adson works directly with patients and helps them with referrals and appointment scheduling. Adson explained that pre-authorization from insurance does not guarantee financial coverage from insurance companies. If a patient's insurance company is unable to offer coverage, then the health clinic offering services would work with the patient to put together a payment plan. Adson reiterated that doctors do not accept all types of insurance, as they are independently contracted specialists and can deny services to patients at any point. It is ultimately the doctor's discretion to accept a patient; their decision may be swayed by the length of time it takes a consumer's insurance to pay the doctor. For practitioners, the preauthorization process is an administrative burden because of the tedious and lengthy process it takes to receive payment. Providers similarly grapple with the vexing uncertainty pertaining to the acquisition of funds through the preauthorization process. This suggests that frustration with certain medical groups' preauthorization practices may have resulted in practitioners migrating out of certain areas of the United States (Hadley, 1997). This trend raises significant concerns since a decline in the number of specialty physicians in a particular area can lead to inadequate healthcare access for the local population.

Discussion

As a result of the statistical analysis conducted, it can be concluded that pre-authorization is positively associated with a variety of factors including, but perhaps not solely limited to, the number of active practitioners in each state and the number of insured and uninsured citizens in those states. It is important to understand that, although the Affordable Care Act was implemented to alleviate the burden on Americans collectively, this research suggests that it might possibly contribute to a workforce issue for providers and an accessibility issue for consumers in the long term.

This is important in understanding why scholars see patterns of heightened healthcare issues in one demographic area — it could be related to a migration of providers. A few of these heightened healthcare issues include discriminatory access to care based on service availability as a result of preauthorization processes, long processing and waiting times for services due to insurance preauthorization rates, and retracted insurance compensation for healthcare services. The analysis above suggests that there is a decrease in providers in a certain area, and this may play a role in certain health concerns in one area. It is notorious in healthcare policy for specialty services to be delivered poorly in comparison to their other healthcare practice counterparts. Many approaches to healthcare issues are overly complicated and thus result in delayed services.

These preauthorization protocols delineate the stringency and stipulated criteria dictating a patient's eligibility to access financial coverage for medical treatment within a specific medical practitioner's domain.

Notwithstanding the objectives of the Affordable Care Act to mitigate disparities in insurance coverage, the complexity inherent in this process remains intricate and calls for targeted intervention. This phenomenon stems from a multifaceted interplay of factors. Although comparatively reduced service prerequisites, it may lead to specialized medical practitioners tending to aggregate within urban settings to bolster their professional endeavors. Consequently, rural regions find themselves reliant upon primary care providers to address a majority of their healthcare exigencies (Cyr, 2019[14]). A pivotal dilemma surfaces concerning the operational capability of healthcare systems to relay transparency and comprehensive insights into the administrative mechanisms governing their services.

Geographical constraints emerge as a central predicament, accentuated by the recurrent motif of patients needing to travel considerable distances to access medical treatment, an issue explored in depth across six distinct scholarly works. While potential remedies exist, such as the implementation of telemedicine, the efficacy of such solutions remains contingent upon appropriateness and alignment with consumers' necessities, all the while upholding stringent criteria of quality and effectiveness.

The positive association between insured and uninsured demographics are significant due to the provisions of the Affordable Care Act. A possible interaction could be due to legislation allocating funding to individuals who lack the means to afford medical services, a provision that intersects with federal funding available in select states exhibiting leniency in their healthcare policies.While there may be a link between the positive outcomes of preauthorization and usage rates, there needs to be more examination between the rules and procedures at policy level as the oversight has been lacking and there hasn’t been enough scrutiny. Persistent mismanagement of these regulatory aspects holds the potential to exacerbate the prevailing issue.

Undoubtedly, the predicament at hand is influenced by factors encompassing the availability of superior services. However, embracing this perspective entails acknowledging the comparable weight carried by constrictions. Potential avenues for enhancing this research include procuring data regarding the prevalence of specialized and generalized establishments in the United States that have integrated both Electronic Health records (EHR) and non-EHR pre-authorization systems.

Limitations and Future Directions

Limitations within this research include the infancy of the statistics as this summer investigation regarding pre authorization and positive or inverse association with practicing practitioners was novel. New analytical methods should be used to confirm these associations. Future research should investigate whether the quality of care is impacted by the service availability for underserved populations and the preauthorization rates dependending on private insurance (by type) versus state or federally funded insurance.. Future directions can include incorporating other types of statistics tools such as “R” or multivariate correlations using SPSS. The author recommends future research examines how preauthorization rates for State Funded Insurance affects service utilization rates. A Bivariate Correlation found a positive association between the two variables, but future directions can include incorporating other systems such as COBRA as a means of examining the relationship of these correlations Future directions could suggest a further analysis examining if correlation infers causation. .

Subsequently, leveraging these datasets for the purpose of exploring potential causal mechanisms emerges as an imperative strategy, as the effects of Preauthorization and the ACA restrictions per state do correlate with the amount of practitioners based on service allotment (per state). Due to the novelty of this research, future work should compile current demographic information that includes the insured, uninsured, and mean income statistics to explore issues regarding marginalization. These factors may have an impact on the types of insurance consumers chose and the demographic areas they are utilizing services in. This effort might be coupled with a comparative analysis approximating the pre-authorization restrictions imposed by distinct private insurance entities alongside those mandated at the state level.

Future research can examine potential causal linkages between prior authorization policies and healthcare practitioner migration patterns, examining a state-level analysis and its possible policy-level implications. Succeeding research endeavors can examine the average indebtedness amassed by individual medical groups and private insurance types. Furthermore, such investigations could seek to enlighten any potential correlations existing between said indebtedness and the prevalence of preauthorization protocols.

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