

Want A Healthier California? Invest in Primary Care.

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ABSTRACT:

Jashdeep Singh Dhillon examines California's primary care shortage and its impact on pediatric asthma emergency visits. Through analysis of healthcare workforce trends and social determinants of health, this article reveals how inadequate primary care access dispropor-

tionately affects vulnerable communities. In response, this article recommends increasing primary care residency funding, implementing value-based payment models, and adopting community-oriented healthcare approaches.

A 6-year-old girl rushes into an emergency department (ED) on a gurney, her chest violently heaving as her lungs beg for oxygen. Her uncontrollable wheezing indicates something more severe as she is placed in a treatment room. The breathing is loud enough that the medical team can hear the deep crackles of an inflamed airway. A mask hissing with evaporated mist is placed over her mouth. Only then do her lungs stop gasping.

This was not the work of a novel coronavirus.

This was asthma.

This was one of many harrowing images I saw as a frontline medical scribe in California's emergency rooms. This is not something I want to continue seeing long after my own medical training as a clinician.

PROBLEM STATEMENT

Asthma is a chronic respiratory disease-causing inflammation of the airways, the lung's primary mechanism of breathing. If it is not appropriately treated, it can lead to hospitalization and even death. In the United States, it affects 1 in every 13 people, with 8.4% of them being children.¹ Approximately 1.5 million children in California have been diagnosed, making exercise, school, and simply breathing all the more difficult.²

Seeing these episodes play out in an emergency room only brought up the question: *How can we reduce ED visits and improve the quality of life for children diagnosed with asthma?*

Suppose the mismatch between coverage and primary care access can be resolved through community and institutional measures. In

that case, it prevents families from suffering through agonizing waits in ERs, high costs of care for systems and individuals, and the pain of not being able to breathe. However, the situation is not one-dimensional; it requires a holistic understanding of the various factors that led us to the current state of chronic disease burden in California.

PROBLEM FACTORS

As California has augmented insurance and health system reforms under the Affordable Care Act (ACA), the shortage of primary care clinicians, coupled with the aging healthcare workforce, presents an uncertain future for the effective delivery of primary care services. A litany of research has exposed the dwindling growth in the supply of primary care professionals³ in the state.

Recent statistics signal macabre projections with an estimated shortfall of 10,500 primary care clinicians by 2030, with 4,100 additional primary care physicians needed to close the health gap. Even among the mid-level providers, there is a scattered distribution in the supply of primary care services: 22% of physician associates (PA) and 50% of nurse practitioners (NP) provide primary care, in contrast to 36% of active full-time equivalent physicians.⁴ To make matters worse, the latest report by Coffman et al. shows the current supply of primary care physicians barely meets the minimum per capita ratio recommended by the Council of Graduate Medical Education.⁴

SOCIAL DRIVERS OF HEALTH

A paramount concern is access to adequate healthcare and a population's social vulnerability. Research by Nayak et. al found regions with high social vulnerability, explained

by poor social support resources such as housing, employment, and disability, were more susceptible to asthma flare-ups and an increased chance of visiting the ED.¹ These same regions were afflicted by low coverage of primary care providers simultaneously. Additionally, in 2012, Largent et al. demonstrated that access to quality healthcare is a significant barrier to adequate asthma treatment and has had significant impacts on the rates of emergency department (ED) visits, most prevalently in the children's age group of 0-4 years.⁵

Data from *Let's Get Healthy California* in 2019 reveals that Fresno County, a region in the San Joaquin Valley with notoriously low rates of licensed primary care physicians, unfortunately, boasts an asthma ED visit rate nearly double the state average (125.9 versus 63.4 visits per 10,000 residents, respectively). This effect is compounded by other social factors, such as household income, health insurance coverage, and poverty, which affect access to outpatient care downstream.

Disparities in asthma prevalence are rooted in systemic drivers of poor health and poor health access, including:

- Structural racism
- Poverty
- Poor housing conditions
- Educational status
- Employment status
- Insurance coverage
- Nutritional access
- Safety (Physical, Emotional, Psychological)

The literature demonstrates that communities with higher asthma prevalence and ED visits for asthma are extensively linked to such factors.⁶ For example, an asthmatic young girl of a single parent living in a high-poverty neighborhood is more likely to be exposed to indoor allergens (i.e., dust mites, asbestos), byproducts of pollution from adjacent industrial sites, and second-hand smoke. In addition, this child is more likely to live in an area of hospital closures and may not have access to long-term preventative care and the necessary asthma medications to control her symptoms. It is paramount to acknowledge the systemic racial processes that predispose certain communities to increased asthma risk factors.

EFFECTS OF PRIMARY CARE SHORTAGE

Research has clearly shown the negative effects of reduced primary care access on healthcare outcomes. However, it is also crucial to understand two key points: (1) why the shortage of primary care clinicians is significant, and (2) why emergency rooms cannot effectively replace primary care services.

Why does the lack of primary care providers matter?

Primary care serves as the first point of contact between a patient and the healthcare system. Generally, primary care specialties are comprised of:

- Family Medicine
- General Internal Medicine
- General Pediatrics
- General Obstetrics and Gynecology (OB-GYN)

These medical teams aim to help individuals and families navigate the healthcare system among the frenzy of lab work and further specialty care that patients may need. They help to address medical needs ranging from chronic disease to end-of-life care.

It is paramount to create a robust infrastructure for primary care practitioners to root themselves in communities they serve. They have a unique opportunity to support individuals and families in the continuum of care.

Additionally, investing in the primary care workforce can lower costs for the system overall. In a 2013 report discussing the state of primary care, Naomi Freundlich et al. posited that “if everyone used a primary care provider as their predominant source for healthcare, our nation would save \$67 billion each year in healthcare costs.”

To put this into perspective, cardiovascular disease (CVD) is a significant leading cause of death in America. Suppose patients are not regularly screened for CVD to measure the health of their heart and blood vessels. In that case, manageable conditions like atherosclerosis or high blood pressure can lead to further risk of developing heart disease. Such instances can lead to individuals suffering from heart attack, for example, and the need to seek expensive treatments, increasing costs on specialty and hospital services.

Why are emergency departments not an adequate substitute for primary care?

Emergency departments provide immediate medical care in stable, urgent, and critical settings. Patients can present to the ED with benign stomach pain, an acute asthma episode, or a traumatic gunshot wound. The primary goal of the emergency department is to stabilize patients and either discharge a stable patient or admit patients to the hospital who require further management.

In a setting of decreased investment in primary care, the reduced availability and timeliness of primary care options, such as the availability of timely office appointments, is a significant factor for the overwhelming number of non-emergent visits to EDs.

There are several reasons why emergency departments are unable to manage such patient care:

- 1. History:** Historically, the ED is designed to stabilize patients through required diagnostic testing, medicines, and procedures before shifting the care to the hospital or discharge.
- 2. Time:** In specific geographical settings (i.e., dense inner-city EDs), providers may not have enough time, with too many acutely ill patients to attend to before focusing on patients with more chronic and complex illnesses.
- 3. Education:** Since ED providers are not trained in primary care, there may be anxiety in situations of uncertainty and unfamiliarity with referral to a wrong resource or the potential of misdiagnosis. Further, ED clinicians may not have enough education and training to manage certain types of illnesses and their evidence-based treatments.
- 4. Team-based structure:** Among the many challenges within the ED setting in managing acutely ill patients, there may be a disintegration or lack of team-based structure in addressing patients with complex social and behavioral health needs that primary care providers could manage. For example, there may be a lack of coordination between ED physicians, nurses, and social workers, making it difficult to discharge patients with sufficient community-based resources or the optimal referral to a primary care provider.

Among these factors, the concern for the state's healthcare workforce persists as the apparent shortage of primary care professionals is likely contributing to the rate of chronic illnesses beyond asthma. As Dr.

Coffman clearly states: “If we continue along our current path, more and more Californians will need to visit the emergency room for conditions like asthma, ear infections or flu because they lack a primary care provider.”⁴ If California continues to operate on these margins, we are significantly compromising the state’s healthcare system and its population, leading to a waste of resources and unnecessary complications and deaths.

California must begin developing programs and policies to address the great shortage of primary care clinicians. This will allow the state to effectively support its children, the next generation of adults, and beyond.

POLICY ALTERNATIVES

Addressing primary care investment in California has increasingly shown a pronounced effect on population health and equitable health outcomes.⁷ Realizing these benefits requires investing in primary care by developing payment systems, building clinical workforce capacity, and addressing underlying social factors.

Recommendation 1: Investing in primary care training

1. Increase funding to primary care residency programs. This mechanism will support more space for burgeoning health professionals to train in providing equitable access to care. This is in part due to California’s Song Brown Healthcare Workforce Training Act, which aims to ensure access to primary care services by bolstering the training of such healthcare providers. For example, recently, the California Office of Statewide Health Planning and Development (OSHPD) awarded \$875,000 to UC Davis Health residency training programs.⁸ This funding supports specific programs, such as creating more pediatric health training

or funding faculty mentors for behavioral health skills development.

2. Develop residency programs within under-resourced regions of California. Areas like Inland Empire, LA County, or the San Joaquin Valley have disproportionately higher rates of chronic diseases, like asthma, and require place-based programs that meet their clinical needs. Programs like UC Davis’s PRIME or position students within underserved areas and train them to enter primary care practice in an accelerated timeline to improve the availability of services in these areas and increase workforce numbers.⁹ Developing place-based residency programs by recruiting individuals from these regions (i.e., safety net populations) can allow them to develop meaningful relationships with the communities they grew up in. Supporting such programs can amplify efforts to provide meaningful access to primary care.

Recommendation 2: Implementing value-based payment models

Access to primary care, among other factors, depends upon the support primary care providers receive. In other words, a sustainable business model is needed to retain a new generation of providers and allow it to be a viable career option.

1. Increase the share of healthcare costs towards primary care. In recent years, states such as Colorado and Oregon have experimented with systems tailoring payment to primary care clinicians on goals of population health management, instead of outpatient or specialty care.¹⁰ Paying primary care providers (and coordinated care organizations) for reaching specific primary care targets instead of a per-service model

(e.g., after performing a procedure) ensures specific primary care attributes are reached. For example, a practice group of physicians may enforce a time-bound spending target to reduce medical expenditures by 15% through efficient coordination of their patient’s blood glucose levels. Instead of requiring every 3-month lab and visit by their patients, they can hire a nursing coordinator to regularly monitor and check up on their patients through phone calls and have automatic alerts set up to their electronic medical records for critical glucose level readings done at home. Through such a model, payment is risk-adjusted to reflect the health status of the served population; this cost shifting reduces unnecessary use of hospital/emergency services, and any saved expenses are categorized as investments into these physician groups.

2. Measure and track data. Public and private healthcare organizations and payers should share the goal of publicly reporting the share of expenditures on primary care. This can be used to standardize payment caps and find ways to reduce unnecessary waste through feedback from improvement specialists, funders, policymakers, and advocacy organizations. In addition, progress can be measured to track if there are increases or decreases in primary care spending to identify the impact, or lack thereof, of specific changes in funding. This public data can be used to create a report card assessing gaps in healthcare value among primary care services across the state.¹⁰

Recommendation 3: Adopting a more socialized medicine model

1. Organize a community-oriented primary care model. Often, commu-

nity organizations within local regions and municipalities have a deeper understanding of the community’s needs and can assume responsibility for supporting healthcare teams in identifying them. This approach can be used to not only treat diseases (e.g., asthma) but also develop coordinated programs for health prevention, healthy lifestyle, and social support. Organizations like the Jakara Movement (California’s largest Sikh-Punjabi CBO) leverage the broad impact it has across their community in the Central Valley through years of strategic partnerships and relationships with community leaders to advance new health models. For example, Jakara has increased health access and support measures of health outcomes for families and individuals through door-to-door interactions, phone follow-ups, and town hall events that create an enduring relationship with the local community. In addition, they have developed health literacy workshops, organized health resource fairs, and supported community member case management for issues related to Medi-Cal, CalFresh, and CalWORKs.

2. Exchange data with CBOs through partnerships. Gathering data from community organizations that have formed extensive relationships with specific patient populations can help define critical social metrics. Organizations can share these social determinants data and information to integrate within healthcare services, such as healthcare screenings or validating current medical assessment tools.¹¹

3. CalAIM 1115 Waiver Program. The CalAIM 1115 Waiver is a part of California’s Medi-Cal program designed to improve healthcare for the state’s

vulnerable populations through a focus on value-based care, reducing overall healthcare costs and streamlining Medi-Cal benefits/services through:

- a.** Enhanced care management: Care coordination for beneficiaries with complex health and social needs.
- b.** Community supports: Provision of non-clinical services (i.e., housing assistance, respite care, food access) to avoid hospitalizations, ED visits, and long-term facility placements.
- c.** Behavioral health reform: Integration of mental health and substance use disorder treatment.

CONCLUSION

Episodes of severe asthma exacerbations are just the tip of the iceberg regarding California's inadequate investment in the primary care workforce. Concerted efforts to develop stronger residency programs, adopt value-based payment models, and integrate socialized mechanisms of community support are innovative ways to tackle an issue that will define the next generation of Californians. From a cost-savings standpoint, increasing the share of healthcare spending toward primary care can improve health outcomes and reduce unnecessary costs by prioritizing population health management over fee-for-service models. Risk-adjusted payment models further incentivize these efforts by reflecting the health needs of the population served and redirecting savings into primary care investments. In addition, addressing social drivers of health through regional, community-based, and state programs can reduce the health disparities gap in the primary care crisis in California.

ENDNOTES

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