

# *Health Policy & Politics*



Vol 1. Issue 1  
Fall 2023

Institute of Health Policy & Politics  
College of Health  
Lehigh University

Editors-In-Chief

Professor Eduardo J. Gómez  
Max DeCaro

Associate Editors

Kareem Hargrove  
Aliya Dworkin  
Maya Neumann  
Sofia Rousseau  
Julie Wright  
Helen Keetley  
Elif Ozturk

## Introduction the Inaugural Journal by IHPP

It is an honor to introduce the first issue of the online journal *Health Policy & Politics*, published by the Institute of Health Policy and Politics, a key research unit within the College of Health at Lehigh University, directed by Professor Eduardo J. Gómez. Like the journal, the College of Health at Lehigh University is relatively new, having opened in 2020 in the early months of the COVID-19 pandemic. No event in my lifetime has better demonstrated the profound influence of politics on health policy, and thus on health outcomes of people across the globe. It is fitting, then, that both the Institute and the journal of *Health Policy & Politics* examine the effects of politics and policy on human health.

The mission of the College of Health is to improve outcomes for populations, communities, and individuals through research, teaching, and service. Much of our faculty research focuses on upstream causes of health and disease—the multiple determinants of health—including the political determinants of health. And, experiential learning, including research with faculty is a core feature of our teaching. In keeping with this last point, each essay in the inaugural issue of *Health Policy & Politics* represents a collaboration between a faculty researcher and student author, or, in one case, a former student who is now himself a professor. Impressively, the journal itself is edited by a team of student editors.

The essays address the impact of policy and politics on health outcomes worldwide over the last thirty years. Michael Gusmano and Cheryl Qin analyze the effect of 2009 healthcare reform in China on access, the workforce, quality of services, and more. Xiaohui Guo, Chad Meyerhoefer, and Lizhong Peng examine elementary and middle school students' health and academic outcomes related to enrollment in Pennsylvania's Children's Health Insurance Program (CHIP). Sameen Basha highlights the failure of governments around the world to make lasting changes that will enable healthcare workers to provide effective care. And, Eduardo J. Gomez and Lanie Fenster point to a particular failure; they diagnose a public health side effect of COVID-19 pandemic policy as an increase in obesity rates—and offer concrete policy actions to mitigate this failure.

I hope you will join me in celebrating and learning from the inaugural edition of *Health Policy & Politics*.

Professor Elizabeth Dolan  
Dean, College of Health  
Lehigh University

## Table of Contents

Cheryl Qin and Michael Gusmano, “China’s Healthcare Systems - A Status Update from the 2009 Major Health Care Reform.”

Sameen Basha, “Healthcare and Political Obstacles in the Way of Quality Healthcare.”

Xiaohui Guo, Chad Meyerhoefer, and Lizhong Peng, “The Effects of Continued Enrollment in the Children’s Health Insurance Program on Health and Educational Outcomes.”

Eduardo J. Gómez and Lanie Fenster, “The Commercial Determinants of Health in the Context of COVID 19.”



## **China's Healthcare Systems- A Status Update from the 2009 Major Health Care Reform**

Cheryl Qin and Michael Gusmano  
College of Health  
Lehigh University

### **Abstract**

China's healthcare has undergone several transformations. For the past 15 years, China has tried to expand insurance and improve access to appropriate pharmaceuticals. These efforts; however, have been undermined by inadequate funding and decentralization of responsibility to the provinces, leading to uneven implementation of reform throughout the country. In this article, we present a brief history of the Chinese health system and then present findings from a systematic literature review focused on the implementation of the 2009 reform. Within this review, we explore the impact of reform on access and use of health care services, changes to the health care workforce, the quality of health care, the expansion of insurance coverage, drug regulations, health care financing, efforts to improve the efficiency of the system, and public opinions on the reform effort. We conclude that, while reforms have noticeably improved China's health system, several problems persist.

In 2009, after years of debate, China adopted a major reform of its health system. The goals of reform included expanding health insurance, reducing health care disparities, increasing the use of primary care, improving the use of pharmaceuticals, and strengthening the public health workforce (Wang et al. 2011). The government's aim was to reduce inequities in the use of health care and strengthen access to essential services by 2020. In this paper we assess the implementation of health reform in China based on findings from a systematic review of the English language literature. We find that China has succeeded in expanding insurance and reducing regional variation in the use of health care. Efforts to strengthen the primary care system, increase the size of the workforce, and regulate pharmaceuticals, however, have been less successful. To achieve the health reform goals articulated more than a decade ago, China must make additional investments in primary care and its public health infrastructure.

In the next section of the paper, we provide a brief overview of the Chinese health system and its evolution since 1949. Next, we describe how we conducted our literature review and summarize its findings. We conclude with some reflections on the status of health reform in China.

## **Background**

Following the establishment of the People's Republic of China under Mao Zedong, the state provided public medical care and labor insurance and relied on two types of hospitals (Li and Li, 2019). Government-owned hospitals were open to the general public, receiving full compensation from the government, and state enterprise-owned hospitals were only open to enterprise employees- those who work on behalf of government-owned assets and their families (Wang et al., 2011). This system created inequities because most people working for government agencies lived in urban areas. While these populations were able to enjoy free healthcare, those in rural regions oftentimes lacked access to medical treatment, including government-owned hospitals. To improve the situation, Mao attempted to increase overall access to care in rural surroundings in 1965 with the rise of the Rural Cooperative Medical System and training of barefoot doctors, or village doctors (Li and Li, 2019). The Cooperative Medical Scheme also established a health care system with three tiers: the first level consisted of these barefoot doctors who had basic medical training, the second tier consisted mostly of clinics usually funded by local residents for emergency related cases, and the third tier consisted of large city hospitals reserved for serious medical situations (Daemmrich, 2013).

### *Market Reforms*

In 1979, Deng Xiaoping ushered in the next phase health reform by introducing market-oriented policies. This took place in a larger context in which the role of markets was expanded in several sectors, not just health care (Li and Li, 2019). This led to a reduction of subsidies for state owned first level hospitals, which resulted many hospital closures and a reduction in access to care (Wang et al., 2011). Similarly, enterprise owned first-level hospitals withdrew from providing primary healthcare services because of insufficient revenue. From 1997-2001, higher level hospitals increased in number as first-level hospitals decreased (Wang et al., 2011). To increase revenue, the remaining first-level hospitals shifted away from primary care and emphasized drug prescriptions. These facilities came to be known as symbols of low-quality service where doctors were seen as being overall less competent and reliable than those employed in larger hospitals (Wang et al. 2011).

### *The WHO, SARS, and Calls for Reform*

The SARS outbreak in 2002 had a profound influence on Chinese health policy (Huang 2004). The disaster alarmed the Chinese government to the pressing need for better public health infrastructure and basic healthcare at the community level. SARS also reinforced China's reaction to a WHO report in 2000, which ranked the country's healthcare system 188th out of 191 evaluated countries (Wang et al., 2011). The report brought attention to the weaknesses of the system and embarrassed the government. SARS reaffirmed the system's problems, including the inadequacy of its epidemiological surveillance, a weak outpatient care system, limited funding for primary care, and large out-of-pocket expenses that discouraged people from seeking needed care.

## *2009 Health Reform*

In response to these issues, the country officially launched a plan focused on ensuring more equitable access to services in 2009. The government set out to increase public health spending and expand social insurance coverage for almost 95% of the population (Ma et al., 2015). Later, the government adopted additional measures designed to enhance efficiency and quality of care, including new drug regulations. To assess the impact of these reforms to date, this paper presents findings from a systematic literature review, which synthesizes findings about the implementation of Chinese health reform since 2009.

### **Methodology**

We conducted a systematic literature review to identify studies about the implementation of the 2009 healthcare reform in China. Our analysis focused on articles written between 2011 and 2022 because the earliest articles about the implementation of reform in the academic literature did not appear until that year. We conducted a preliminary search across the three search engines: Google Scholar, ProQuest and PubMed. The keywords were “*primary care*” and “*China*” returning several million results in Google Scholar and ProQuest and thousands of results on PubMed. Next, we conducted a search using “*community-based care*” and “*China*” and “*health care reform*” and “*China*.” These latter searches returned fewer results across all engines.

After reviewing a random sample of 50 articles from each search, we selected PubMed and the terms “*health care reform*” and “*China*” for the final search because it generated the most relevant articles. The results from PubMed returned 168 articles for “*health care reform*” and *China* from 2011-2022. After excluding articles that included only brief references to health care reform in China, but did not include a substantive assessment of its implementation, we were left with a total of 99 articles in the final sample.

To identify the key themes within these articles, we conducted a review of the abstracts and identified several themes for the analysis. These include: equitable access; the use of health care; the use of primary care; the health care workforce; health care spending; insurance; quality of care, regulation of drugs; and public satisfaction and opinion. Our review of the abstracts was replicated by a colleague who identified the same themes with a 90% level of agreement. We met to discuss and resolve the remaining discrepancies. Below is a summary of the findings from this review on each of the themes listed above.

### **Findings**

#### *Equitable access*

Regional inequity in health care resources and inequality in access to health care continue to be a problem in China, but there is some evidence of improvement. Although spending increases are still greater in wealthier regions, some studies support the claim that regional inequity in health care has actually been decreasing yearly.

In 2009, China adopted the Basic Public Health Service (BPHS) to provide public health services for all residents at no cost, regardless of geographic location (Tao et al., 2020). This effort focused on services like vaccination, health education, communicable

disease reporting, and health management for different demographic groups among many others (Tao et al., 2020). A study by Tao and colleagues found that this program improved maternal health services and the treatment of patients with hypertension (Tao et al. 2020). BPHS is not yet universal, and there are inequities between rural and urban populations, but differences in access to care among the regions of China have narrowed. The implementation of medical alliances (MA), which involve coordination of care among several medical organizations, have also improved care in rural areas (Ran et al., 2020).

Although the implementation of health care reform increased the number of inpatients receiving care in MAs, the gap in capacity *among* MAs was widened. The Chinese reforms encouraged competition among MAs and the expansion of some MAs took away market share from others. This undermined inpatient services among MAs that lost market share. Some studies claim that the allocation of human resources has become less equal since the implementation of health care reform (Yang and Dong 2014). Notably, the gap in medical personnel working in rural and urban regions has grown wider, undermining efforts to produce regional equity in access (Yang and Dong, 2014).

### *Use of Health Care Services*

The literature suggests that the use of health care services in China has become more efficient since the implementation of health care reform. A multistage stratified randomized design was used to conduct a sample of health service use and factors relating to equity during the past ten years in each county. One study found that the use of necessary health care services has increased while the use of unnecessary services has decreased (Guo et al. 2022). For instance in Ningxia China, when the prevalence of chronic illness increased, the rate of receiving a medical consultation in the last two weeks along with the rate of hospital admission also increased (Guo et al., 2022). Likewise, the rate of not receiving a medical consultation and the rate of “hospital avoidance” (defined as the failure of patients to use hospital services that would have improved their health condition) both decreased (Guo et al., 2022).

Another sign that system efficiency is improving is a decrease in the declining percentage of patients using larger hospitals, suggesting a possible shift into increased use of primary care in more appropriate settings (Hu and Wang, 2022). A study that collected outpatient data from 24 departments from a large, Beijing General Hospital first reveals that the number of patients in specific departments are in fact decreasing, such as for patients with chronic illnesses who benefit more from family doctors. This cut out the time consuming process of traveling to larger hospitals for routine drugs or checkups (Hu and Wang, 2022).

The decrease in the use of large hospitals for primary care services is significant because the inappropriate use of these hospitals for primary care has been a long standing problem. Before the 2009 reform, the Chinese government developed health care policies that were aimed at increasing the accessibility of medical services for the Chinese people. However, such policies resulted in people being typically diverted to larger hospitals (Hu and Wang, 2022). Patients did not mind being diverted because the care was still affordable and perceptions of quality were viewed as more important than cost because of overall affordability (Wang et al., 2011). Additionally, large public hospitals often made it a goal to maximize profits to subsidize their employees’ wages, providing an incentive to offer

more medical resources which are in turn likely to attract increased numbers of patients (Hu and Wang, 2022).

Although the 2009 effort has increased the use of appropriate primary care, there is still a need to strengthen the treatment and prevention of chronic diseases for China's aging population (Guo et al., 2022). Fortunately, free access to physicals for those older in age have also resulted in higher rates of chronic disease being diagnosed (Guo et al., 2022), but this has placed greater strain on the system to meet these needs. This makes it especially important to enhance trust in the health care system among the general public to encourage the appropriate use of primary care. Unfortunately, the use of primary care is still inadequate.

### *Use of Primary Care*

One study using a cross-study among adults from 2004-2015 found that the use of primary care in China remains low. Data obtained in waves from over 9000 patients in 2004, 2006, 2009, 2011, and 2015 show primary care use rates at 3.29%, 3.13%, 3.77%, 4.95% and 2.73%, respectively (Wu et al., 2020). After the 2009 healthcare reform, there was a sharp increase in use of primary care, but this has declined since 2015. During the first few years after the adoption of health reform, from 2009-2011, primary care use increased because the government expanded social health insurance and restored basic medical services. In more recent years, primary care use has declined to pre-reform levels because the government failed to invest sufficiently in resources to improve the delivery of appropriate primary care services (Wu et al., 2020).

Data from the 2015 China Health and Retirement longitudinal study also takes a similar approach and reaches a similar conclusion (Tao et al. 2021). Tao and colleagues analyzed what prompted people to use more or less primary care. Those receiving more education, experiencing longer travel times to a facility, paying more out of pocket, and having heart problems were less likely to use primary care (Tao et al., 2021). Having more children, being actively employed, and experiencing diabetes or arthritis were associated with greater use (Tao et al., 2021).

Another factor is the general public's attitude about the healthcare system. The Chinese tend to emphasize treatment as being more important than prevention while men also tend to perceive themselves as being more "invulnerable" to illness than women (Wu et al., 2020). Not surprisingly, the trend among women in China with regard to the use of primary care has been more promising than it has been for men. A study of primary care use in maternal health services in the Shaanxi Province found that, after the 2009 health care reform, rates of primary care use were higher in both rural and urban areas. Primary care usage also increased five times among urban women and almost fifteen times among rural women following the implementation of reform (Fan et al., 2020).

Despite some positive findings, the Chinese public's poor perceptions of primary care centers continues to serve as a barrier to the use of primary care. In Hanzhou, Zhejiang province from 2014-2015, focus group and individual interviews revealed that 65% of reported patients preferred hospital care even for minor conditions and the percentage rose to 76% if the patient had a child (Wu et al., 2017). Overall, findings from the literature on the implementation of health care reform in China indicate that reform has not resulted in sustainable increases in the use of primary care. The limited capacity of the system,



particularly in rural areas, and the persistent reluctance of men to use primary care services are challenges that have yet to be sufficiently addressed.

### *Workforce*

Another major issue addressed by the 2009 health care reform was China's healthcare workforce. Workforce issues include problems with job satisfaction and performance among providers. Multiple studies examine the impact of the 2009 health reform on provider satisfaction based on the assumption that increased job satisfaction may contribute to a more positive healthcare experience for patients. One analysis focused on community health workers (CHW) in urban China and identified nine themes that, when combined, would indicate their overall job satisfaction: financial rewards, governance, career development, interpersonal relationship, respect, infrastructure, work itself, work stress, and job security. The survey showed that after reform, workers were neither particularly satisfied or dissatisfied, but financial opportunity and professional development were the biggest predictors of satisfaction rates (Zhang et al., 2015). Another study examined the attitudes of village doctors, who are the gatekeepers in China's rural health systems. They continue to be dissatisfied with China's recent health reforms with only 12.72% of village doctors indicating that were very satisfied or satisfied with their jobs (Zhang and Fang, 2016). Inadequate pay, training, and poor relationships with patients were all cited as reasons for village doctor dissatisfaction.

These problems are reflected in the quality of primary health care providers as measured by the European Primary Care Monitoring System (EPCMS), showing diagnostic processes and outcomes remaining low among such providers (Li et al., 2020). Village doctors only did 15% of recommended examinations and addressed 36% of essential questions for a proper diagnosis (Li et al., 2020). Prescribing behavior still include the overuse of antibiotics and there are problems with physician adherence to treatment guidelines for certain conditions. Wide gaps also exist in the service training and education levels of primary health care professionals. In 2016, more than one third of primary health care clinicians did not receive Continuing Medical Education, a program that primary care health professionals in China are required to attend and earn a specific number of credits in (Li et al., 2020). In 2018, 25% of PHC doctors in community health centers had less than a junior medical college level of education. This represents an increase of 41% since 2010, but is still unacceptably low (Li et al., 2020).

The provider population is likewise aging and it is getting harder to keep up with medical demands. Between 2009 and 2017, the proportion of physicians who are over 60 increased from 7.2% to 13.2% (Lin et al., 2020). At the same time, the 2009 healthcare reform had expanded medical insurance coverage, but the supply of health care services is not keeping up with the subsequent increase in demand. In 2018, there were around 2.2 physicians per 1,000 people in the population, with a total increase of only 1.2 million physicians throughout a 10-year span from 2008-2018 (Lin et al., 2020). In general, China's healthcare physicians are continually experiencing heavy workloads, long work hours, unsatisfactory income, and less than optimal relationships with their patients, which may be the reason why fewer and fewer of them are willing to enter the workforce.

### *Insurance*

The 2009 reform expanded basic medical insurance (MI) with two major financial-related goals: one being wider coverage and the other being higher funding. From 2008-2010, national coverage for two existing insurance schemes, urban residents (URBMI) and the new rural cooperative medical system (NRCMS), increased. While medical insurance alleviates a financial burden for certain populations and an increase of proper use of health services, it could also lead to people excessively requesting medical services when they are not always needed, otherwise known as demand induction. One study compared results from before and after the 2009 reform and found that, in general, more outpatient and inpatient visits occurred after the implementation of reform, and that out-of-pocket expenses have also decreased. This indicates an improvement in access to care, but there are differences among insurance schemes (Wang et al., 2014). Another study measured reimbursement trends of China's Health Insurance System (CHIS). Overall, coverage has improved by nearly 100% and disease burden has been reduced as a result, but additional increases in reimbursement could be helpful (Zhang et al. 2015). Unfortunately, as we discuss below, other evidence suggests that the recent financial investments have not overcome perceptions of poor quality.

### *Quality of Care*

Even with an increase in financing support, quality remains suboptimal in China's primary care (Li et al. 2020). There is a lack of consistency and coordination across areas of care because primary care institutions are managed separately, resulting in few opportunities to minimize excess waste from redundant interventions. In addition, primary care physicians often fail to coordinate specialists (Li et al., 2020). In 2015, the Chinese government called for the creation of a tiered healthcare delivery system that would integrate care by creating alliances among provider groups, but competition among hospitals have limited their formation (Li et al., 2020).

Despite the remaining problems, a study of inpatient mortality (IM) among patients with five diseases and six different surgical procedures saw overall IM decline in 2010, 2011, and 2012. This result suggests progress in improving hospital quality for some patients (Ma et al., 2015). For example, IM associated with pneumonia, craniocerebral injury, and coronary artery bypass graft remain relatively unchanged, but rates associated with myocardial infarction, cerebral hemorrhage, heart valve replacement, and hip and knee replacement have all seen great reductions (Ma et al., 2015). Another article further provides an example of positive patient outcomes with hypertension. Among the population over the age of 45 in Zhejiang and Gansu provinces, hypertension management improved and an increased percentage of patients reported being aware of their condition. There were also noted increases in those receiving treatment and those with their conditions under effective control. The highest rates of improvements were in rural regions, suggesting a decrease in the disparity in quality of care among urban and rural regions (Hou et al., 2016).

### *Regulation of Drugs*

The regulation of drugs was another focus on the 2009 reform. Since the 1980s, state-owned first level hospitals had shifted to the sale of drugs to sustain revenue. Drug companies allowed these hospitals to capture a 15% or greater markup on drugs (Chen et al., 2014). As a result, physicians often overprescribed medications and drugs in order to maximize financial gain, resulting in the need for major drug-related policy changes as a key part of proceeding health reforms. The new essential medicine's program (EMP) that was a part of the 2009 reform aimed to eliminate economic incentives to overprescribing. A comparison design included over 8200 prescriptions in 2007 and in 2010 from 83 healthcare facilities (Chen et al., 2014). Indicators for medicine use like total number of medicines and pharmaceutical expenditure per patient, along with medication use per disease-specific prescription were analyzed (Chen et al., 2014). Results show that antibiotics are still being overused and changes in these indicators since the implementation of reform has not been significant. However, certain diseases like diabetes saw improvement in antibiotic use (Chen et al., 2014). Western drugs also saw a decrease while traditional Chinese medicines increased.

In 2012, another reform also focused on controlling healthcare expenditure and reducing over-prescriptions of medicines. This included a zero-markup drug policy, getting rid of the 15% markup of drug products at public hospitals. It led to a decrease in drug spending and an increase in expenditures for medical services to compensate for the potential revenue loss, with overall health expenditures remaining about the same (Fu et al., 2018). Hospitals that used to rely on drug revenue now spend more on diagnostic testing. But, it is also possible that this has led to the prescription of more expensive drugs to make up for the loss of quantity (Fu et al., 2018). It is not yet clear whether the current price controls are effective at reducing expenditures, but there have been calls to adopt prospective payment methods like DRGs to decrease excess spending (Fu et al. 2018).

Another problem before the 2009 reform was the lack of invested money in China's public healthcare systems. Fortunately, the total amount of money spent on health care has increased enormously from 2009 to 2018. The Chinese government increased funding by more than 10-fold to Chinese delivery systems based on primary health care to prevent and manage infectious and chronic diseases (Li et al., 2020). This noticeable mark in increase resulted in an investment of around 19 billion yuan in 2008 to 197 billion yuan in 2018 (Li et al., 2020). In general, trends in total health expenditure from 2000 to 2017 also showed faster increases in health expenditure specifically by government and social health insurance programs than through out-of-pocket payments, with 2015 being the first year when government health expenditure exceeded that of out-of-pocket payments (Li et al., 2020).

Despite the increase in health care spending, public attitudes about the health care system are mixed. A study in Jilin province in 2013 found that patients of county hospitals continued to complain about wait times, bad attitudes from staff, and higher expenses. In contrast, a study among those using outpatient community health centers found higher rates of satisfaction following health reform (Li et al., 2016). Although the change has been gradual, healthcare in China is shifting from being centered on economic concerns to being focused on more people-centered care. Average satisfaction did increase throughout these years, with a national score of 66.21 out of 100 in 2013 turning to 69.73 out of 100 in 2015

(Peng et al., 2021). While Central and West China saw relatively high satisfaction scores, Northeast China had the lowest (Peng et al., 2021). On the other hand, the recent comprehensive pricing plan in China was found to be unfavorable among the public. In Beijing 2017 and 2018, patients thought that the cost-of-service fees and medications were still too high (Wang et al., 2019).

## **Conclusion**

After considerable effort to improve the Chinese health system since 2009, the academic literature suggests that there has been noticeable improvement in some aspects of the system. Yet, even with progress in the use of health care services and expanded medical insurance, the adequacy of the health care workforce and regulation of drugs remain problematic. Health reform has led to mixed results when it comes to overcoming regional disparities in access to care, improving the quality of care, and the use of primary care services. There is also significant variation in use and quality of care by gender and age within the country.

Although the national and provincial governments within China increased spending on the health system, the evidence to date suggests that the governments investments to improve primary care and the coordination of the health system have been inadequate. During the first decade of the 21<sup>st</sup> Century, China's embarrassment over the low ranking of its health care system by the WHO, coupled with the SARS outbreak, spurred the health reform efforts we have reviewed in this paper. It is not clear that the COVID-19 pandemic will generate similar political pressure for the Chinese government to increase health spending. Although the government responded faster to the COVID-19 outbreak than it had to SARS, many of the same strategies, including delays in acknowledging the outbreak and the implementation of mass quarantine measures, were used during the COVID-19 pandemic. Furthermore, much of the rapid economic growth that marked the past several decades in China has started to slow (Brandt et al. 2020; Canuto 2022). The recent decline in productivity growth may make it more challenging for the government to increase its investments in health substantially. To date, there is no evidence that the pandemic has led China to further strengthen its public health system or primary care systems (Bouey 2020). The 2009 reform represents a major effort to improve the Chinese healthcare system, but studies of its implementation make it clear that the country continues to face challenges that it must address during the coming decades. As its population ages and its economy slows, maintaining a sufficiently high level of investment in the health system will be a significant political and policy challenge.

## **References**

- Bouey, J. (2020). Strengthening China's Public Health Response System: From SARS to COVID-19. *American Journal of Public Health*. 110(7): 939-940.
- Brandt, Loren; Litwack, John; Mileva, Elitza; Wang, Luhang; Zhang, Yifan; Zhao, Luan. (2020). China's Productivity Slowdown and Future Growth Potential; China's Productivity Slowdown and Future Growth Potential. Policy Research Working Paper;No. 9298. © World Bank, Washington, DC.

- Canuto, O. (2022). Whither China's Economic Growth. Policy Center for the New South, Policy Brief PB-53/22, August.
- Chen, M., Wang, L., Chen, W., Zhang, L., Jiang, H., and Mao, W. (2014). Does economic incentive matter for rational use of medicine? China's experience from the essential medicines program. *PharmacoEconomics*, 32(3), 245–255. <https://doi.org/10.1007/s40273-013-0068-z>
- Daemmrich A. (2013). The political economy of healthcare reform in China: negotiating public and private. *SpringerPlus*, 2, 448. <https://doi.org/10.1186/2193-1801-2-448>
- Fan, X., Kumar, M. B., Zhou, Z., Lee, C. H., Wang, D., Liu, H., Dang, S., and Gao, J. (2020). Influence of China's 2009 healthcare reform on the utilisation of continuum of care for maternal health services: evidence from two cross-sectional household surveys in Shaanxi Province. *International journal for equity in health*, 19(1), 100. <https://doi.org/10.1186/s12939-020-01179-3>
- Fu, H.; Li, L.; Yip, W. Intended and unintended impacts of price changes for drugs and medical services: Evidence from China. *Soc. Sci. Med.* 2018. [10.1016/j.socscimed.2018.06.007](https://doi.org/10.1016/j.socscimed.2018.06.007)
- Guo, W., Liu, G., Ma, L. *et al.* The impact of healthcare reform on the dynamic changes in health service utilization and equity: a 10-year follow-up study. *Sci Rep* 12, 3576 (2022). <https://doi.org/10.1038/s41598-022-07405-y>
- Hou, Z., Meng, Q., and Zhang, Y. (2016). Hypertension Prevalence, Awareness, Treatment, and Control Following China's Healthcare Reform. *American journal of hypertension*, 29(4), 428–431. <https://doi.org/10.1093/ajh/hpv125>
- Hu, X., and Wang, P. (2022). Has China's Healthcare Reform Reduced the Number of Patients in Large General Hospitals?. *International journal of environmental research and public health*, 19(9), 5428. <https://doi.org/10.3390/ijerph19095428>
- Li, J., Wang, P., Kong, X., Liang, H., Zhang, X., Shi, L. Patient satisfaction between primary care providers and hospitals: a cross-sectional survey in Jilin province, China, *International Journal for Quality in Health Care*, Volume 28, Issue 3, June 2016, Pages 346–354, <https://doi.org/10.1093/intqhc/mzw038>
- Lin, J., Zhou, J., and Wang, L. (2020). Health care reform in China from the perspective of physicians. *Bioscience trends*, 14(2), 151–155. <https://doi.org/10.5582/bst.2020.01015>
- Li, X., Krumholz, H. M., Yip, W., Cheng, K. K., De Maeseneer, J., Meng, Q., Mossialos, E., Li, C., Lu, J., Su, M., Zhang, Q., Xu, D. R., Li, L., Normand, S. T., Peto, R., Li, J., Wang, Z., Yan, H., Gao, R., Chunharas, S., ... Hu, S. (2020). Quality of primary health care in China: challenges and recommendations. *Lancet (London, England)*, 395(10239), 1802–1812. [https://doi.org/10.1016/S0140-6736\(20\)30122-7](https://doi.org/10.1016/S0140-6736(20)30122-7)
- Li, Z., and Li, J. (2019). Lessons and prospects of Universal Health Coverage in China: the importance of equity, quality, and affordability. *Asian bioethics review*, 11(1), 21–40. <https://doi.org/10.1007/s41649-019-00077-3>
- Ma, X. M., Chen, X. H., Wang, J. S., Lyman, G. H., Qu, Z., Ma, W., Song, J. C., Zhou, C. K., and Zhao, L. P. (2015). Evolving Healthcare Quality in Top Tertiary General Hospitals in China during the China Healthcare Reform (2010-2012) from the Perspective of Inpatient Mortality. *PloS one*, 10(12), e0140568. <https://doi.org/10.1371/journal.pone.0140568>

- Mingji Zhang, Rongrong Yang, Wei Wang, James Gillespie, Susan Clarke, Fei Yan, Job satisfaction of urban community health workers after the 2009 healthcare reform in China: a systematic review, *International Journal for Quality in Health Care*, Volume 28, Issue 1, February 2016, Pages 14–21, <https://doi.org/10.1093/intqhc/mzv111>
- Peng, X., Tang, X., Chen, Y., and Zhang, J. H. (2021). Ranking the Healthcare Resource Factors for Public Satisfaction with Health System in China-Based on the Grey Relational Analysis Models. *International journal of environmental research and public health*, 18(3), 995. <https://doi.org/10.3390/ijerph18030995>
- Ran, Y., Gao, H., Han, D., Hou, G., Chen, Y., and Zhang, Y. (2020). Comparison of inpatient distribution amongst different medical alliances in a county: a longitudinal study on a healthcare reform in rural China. *International journal for equity in health*, 19(1), 142. <https://doi.org/10.1186/s12939-020-01260-x>
- Tao, T., Hou, L., and Shao, R. (2021). Factors associated with the choice of primary treatment at the community level among the middle-aged and elderly in China. *The International journal of health planning and management*, 36(2), 442–458. <https://doi.org/10.1002/hpm.3093>
- Tao, W., Zeng, Z., Dang, H., Li, P., Chuong, L., Yue, D., Wen, J., Zhao, R., Li, W., and Kominski, G. (2020). Towards universal health coverage: achievements and challenges of 10 years of healthcare reform in China. *BMJ global health*, 5(3), e002087. <https://doi.org/10.1136/bmjgh-2019-002087>
- Wang, H., Gusmano, M. K., and Cao, Q. (2011). An evaluation of the policy on community health organizations in China: will the priority of new healthcare reform in China be a success?. *Health policy (Amsterdam, Netherlands)*, 99(1), 37–43. <https://doi.org/10.1016/j.healthpol.2010.07.003>
- Wang, S., Liu, L., Li, L., and Liu, J. (2014). Comparison of Chinese inpatients with different types of medical insurance before and after the 2009 healthcare reform. *BMC health services research*, 14, 443. <https://doi.org/10.1186/1472-6963-14-443>
- Wang, Y., Zhang, Y., Ma, C., Jiang, Y., Li, Y., Wang, X., and Ma, S. (2019). Limited effects of the comprehensive pricing healthcare reform in China. *Public health*, 175, 4–7. <https://doi.org/10.1016/j.puhe.2019.06.014>
- Wu, D., Lam, T. P., Lam, K. F., Zhou, X. D., and Sun, K. S. (2017). Challenges to healthcare reform in China: profit-oriented medical practices, patients' choice of care and guanxi culture in Zhejiang province. *Health policy and planning*, 32(9), 1241–1247. <https://doi.org/10.1093/heapol/czx059>
- Wu TT, Liu WW, Zou M, *et al* Changes in preventive care utilisation and its influencing factors among Chinese adults before and after the healthcare reform: cross-sectional evidence from the China Health and Nutrition Survey in 2004–2015. *BMJ Open* 2020;10:e038763. <https://doi.org/10.1136/bmjopen-2020-038763>
- Yang, Q., and Dong, H. (2014). Have health human resources become more equal between rural and urban areas after the new reform?. *International journal of health policy and management*, 3(7), 359–360. <https://doi.org/10.15171/ijhpm.2014.129>
- Zhang Xiaoyan, Fang Pengqian (2016) Job satisfaction of village doctors during the new healthcare reforms in China. *Australian Health Review* 40, 225 <https://doi.org/10.1071/AH15205>

## Healthcare and Political Obstacles in the Way of Quality Healthcare

Sameen Basha

College of Health  
Lehigh University

**Abstract:** This paper discusses several political and policy ramifications related to healthcare access for individuals in the US, specifically for undocumented and legally present immigrants in the United States. The political and policy ramifications of the research in this article center around the need for comprehensive healthcare reform to ensure that all individuals, regardless of immigration status, have access to healthcare and health services. The argument expands into the effect of healthcare worker shortages, insurance status, and immigration status. The research concludes that each negatively impact and pose an obstacle to individuals in the United States receiving quality healthcare. It is found that policy reform and new initiatives are needed to offset the effect of these obstacles in access to healthcare.

### Introduction

Physicians vow to provide care for their patients no matter the circumstances. Administrative failure and holes in the healthcare system stand between doctors and their oaths. The Hippocratic oath states, “I will prevent disease whenever I can, for prevention is preferable to cure” (National Library of Medicine, 2012.). Patients are held back from getting the treatment the doctors vow to give by administration and cost. As a whole humanity is facing a lack of access to affordable quality healthcare worldwide, but governments around the globe have hesitated to make lasting changes. In addition, many legal obstacles such as insurance, citizenship, and drug pricing stand in the way of the ability of healthcare workers to effectively treat and care for their patients. The lack of access to affordable and quality healthcare, as well as administrative and legal obstacles, negatively impact the ability of healthcare workers to provide the best care possible. Poor health outcomes, patient dissatisfaction, and burnout among healthcare workers may be caused by a reduced ability for healthcare workers to provide quality care. It is important for governments, healthcare organizations, and stakeholders to work together to address these challenges and improve the healthcare system for both patients and healthcare workers.

### Methodology

This research was conducted through the *NIH (National Institute of Health)* search engine and each article was verified to be published within the past 5 years to provide the most accurate and up-to-date information. I chose to use the *NIH* database because it is not only accredited but reliable and all of the articles are already peer-reviewed. In addition, because my research subject was health-focused this database provided the most accurate and

relevant information. I performed keyword searches to better identify articles that would best align with my research. Keywords I used in my search included: “Hippocratic oath”, “public insurance”, “lack of insurance”, “undocumented”, “physician shortage”, and “immigration”. Using these keywords, I found pieces 1, 3, 4, 5, 6, and 7 in my bibliography. Articles 2 and 9 were found on the *AAMC (Association of American Colleges)* website and research database. I chose to use the *AAMC* as a source because like the *NIH* it is both reliable, accredited, and peer-reviewed. Articles 8 and 10 were found by following citations of other articles. For example, article 10, *Access to Health Services - Healthy People 2030*, was found through the *AAMC* article. *Access to Health Services - Healthy People 2030* is part of a health initiative by the *U.S. Department of Health* that aims to identify and target social determinants that put individuals’ health at risk in an attempt to assist populations in obtaining a healthy life.

I conducted this research as a result of speaking to individuals with relevant experiences and knowledge of the shortcomings of the healthcare system. Research on related causes and potential barriers was then done in an attempt to identify causation and add to the conversation of why access to healthcare is so hard to come by.

### **Lack of Insurance Can Lead to Inability to Receive Healthcare**

There are many obstacles to obtaining quality healthcare, lack of insurance coverage being a key factor and one that ties into many others. A lack of insurance often contributes to a lack of healthcare. Not having insurance means patients are faced with overwhelming costs when just trying to stay healthy. If one does not have coverage by public or private insurance, one is expected to pay all medical bills out of pocket, whether that be a dental visit or an emergency surgery. No matter the case, paying cash for medical needs is not usually a feasible option for most, especially those who do not have access to necessary insurance coverage. Financial need and insufficient coverage to pay medical bills can lead people to skip necessary care for themselves and their families, including preventive screenings, dental care, and pediatric visits that track important childhood health milestones (*Access to Health Services - Healthy People 2030*).

The lifetime health consequences of missing these appointments have prompted many health systems to launch initiatives that provide services to uninsured or underinsured patients. However, without government support and funding, these programs are short-lived. Lack of insurance coverage has significant impacts on healthcare. When individuals lack health insurance, they may forego necessary medical care because of the cost (*Access to Health Services - Healthy People 2030*).

As a result, health conditions are left untreated, which may lead to more serious health problems and complications. Furthermore, individuals without insurance may not have access to preventive care, such as regular check-ups and screenings, which help detect health issues early on when they are easier to treat. Lack of insurance coverage can also lead to financial difficulties for individuals and families. Without insurance, medical bills are expensive and generally unaffordable, leading to debt and even bankruptcy in some cases. In addition, lack of insurance coverage puts a strain on healthcare providers and facilities, as they may have to provide uncompensated care or absorb the cost of caring for uninsured patients. The more expenses a hospital assumes the less care there is for everyone, including those with insurance.



## **Healthcare Staffing Shortages Create Burnout and Long Wait Times**

Another obstacle to physicians providing the best care they can is the overall lack of healthcare staff. By 2034, The Association of American Medical Colleges calculates that the American healthcare system could be up to 124,000 doctors short (Association of American Medical Colleges, 2021). These staffing shortages are mainly primary care physicians. However, the deficits are not just physicians; nurses, technologists, and vital roles in the hospital ecosystem experience shortages, too. According to the AAMC, “These gaps affect everyone, but particularly patients already in “healthcare deserts” such as rural areas” (Association of American Medical Colleges, 2021). These shortages and healthcare deserts lead some experts to recommend expanded use of technology such as telehealth to increase providers’ capacities and address these gaps.

With more US doctors choosing to specialize in exciting new fields rather than address the growing need in primary care, it leaves that field even more lacking (Association of American Medical Colleges, 2021). Globally, brain drain is a continued issue. Brain drain is when physicians leave the countries they studied in for new opportunities, and those countries are left with holes in their healthcare systems.

Staffing shortages have led to overworked and overwhelmed hospital staff providing subpar healthcare. In order for quality healthcare to be provided, these shortages must be addressed and fixed. Healthcare staffing shortages can have a significant impact on the quality of healthcare delivery. When there are not enough healthcare professionals to provide care, patients may experience longer wait times, reduced access to care, lower quality of care, and increased workload for those who are available, which can lead to burnout and lower job satisfaction (Association of American Medical Colleges, 2021).

Specific ways in which healthcare staffing shortages affect healthcare include reduced access to care: when there are not enough healthcare professionals to meet the demand for care, patients may have to wait longer to see a doctor or may have difficulty finding a healthcare provider who is accepting new patients. Longer wait times can result in delays in diagnosis and treatment, which can lead to worse health outcomes. Overworked staff resulting from shortages: when there are not enough healthcare professionals to meet the demand for care, existing staff may be overworked and have to work longer hours or take on additional responsibilities (Association of American Medical Colleges, 2021). This extra work can lead to burnout and an increased risk of medical errors. Staffing shortages also created increased costs: healthcare providers may have to pay more to recruit and retain staff, which can lead to higher healthcare costs for patients. Finally, staffing shortages cause a reduced quality of care: overworked healthcare providers or understaffed care units, reduce the quality of care may suffer. Patients may receive suboptimal care, and there may be an increased risk for medical errors.

Overall, healthcare staffing shortages can have a significant impact on the quality of care that patients receive (Association of American Medical Colleges, 2021). The shortage of healthcare providers can also lead to a decrease in the quality of care provided. For example, healthcare providers may be rushed and not able to spend as much time with each patient, which can lead to mistakes and a lack of thoroughness in diagnosis and treatment. In addition, when there are not enough healthcare providers, patients may not be

able to see a specialist or receive specialized care, which can lead to delays in diagnosis and treatment. The healthcare staffing shortage can be caused by several factors, including an aging workforce, high rates of burnout and turnover, and a lack of resources for training and education. The shortage can be particularly acute in rural and underserved areas, where there are often fewer healthcare providers and fewer resources to attract and retain them. Addressing the healthcare staffing shortage is critical for ensuring that patients receive high-quality healthcare. Addressing staffing shortages will require a multifaceted approach, including increasing the number of healthcare professionals, improving working conditions for existing staff, and exploring new models of care delivery that make better use of existing resources. This may include investing in training and education programs, increasing pay and benefits for healthcare providers, and developing strategies to attract and retain healthcare providers in underserved areas.

### **Access to Public Insurance Coverage can Lead to Discrimination and Prolonged Wait**

While access to some coverage is better than access to none, the short fallings of public insurance at times outweigh the benefits. The most notable public insurance in the US is Medicaid. Policy changes such as the Affordable Care Act have opened the door for public insurance and granted access to more in need. As stated in the “Barriers to Care and Health Care Utilization among the Publicly Insured” by Elizabeth Allen (et al. 2017, page 2), “The Patient Protection and Affordable Care Act (ACA) seeks to improve healthcare quality and expand access to health insurance by expanding Medicaid coverage. As a result of its implementation, 17.6 million uninsured individuals gained health insurance between October 2013 and March 2015.”

However, according to recipients of these programs, prejudice, and judgment were often received when using the benefits of these government-provided programs which created an unwillingness to visit healthcare facilities. Allen also writes that “29% of the study population delayed seeking needed medical care in the past year, 14% had foregone needed medical care, and 24% had not received any preventive care in the past year” (Allen, et al. 2017, page 5). Frequent discrimination was named as one of the main reasons behind delayed or foregone care. Allen expands to say, “Similar studies report a relationship between discrimination and unmet health needs where the number of experiences with discrimination is positively associated with a greater odds of delay in seeking medical care” (Allen, et al. 2017, page 7). It was identified that among those who reported frequent discrimination, 31% reported going without preventive care that year.

In addition, those who receive public healthcare coverage face a multitude of barriers when attempting to receive care. These barriers include transportation, wait time in physician’s offices, and getting an appointment compared to those with private insurance. Lack of transportation is found to be associated with delayed care (Allen, et al. 2017, page 7). The findings from the study *Barriers to Care and Healthcare Utilization among the Publicly Insured* connect these access barriers with both delayed and foregone care showing that even small access problems can make it difficult to meet healthcare needs.

There are multiple barriers to accessing barrier and having insurance may mitigate but not eliminate access problems. In this case, having public insurance as opposed to no

insurance did not eliminate the accessibility problems; it just reformed them. Interventions targeting these barriers, with an emphasis on systemic barriers, may improve healthcare access and therefore improve population health. Reducing disparities in accessing needed healthcare services for underserved populations will likely require multiple-level strategies.

### **Citizenship Status Prevents Access to Public Resources**

In a recent study, policymakers in Connecticut considered various state-funded policy options to improve insurance coverage among undocumented and legally present immigrants in the state (Rao, Giroi, Eibner, 2022, page 1). The pressing issue being that almost 60 percent of people placed in either category lacked health insurance (Rao, Giroi, Eibner, 2022, page 1). The lack of insurance for legally present and undocumented immigrants is a trend across the United States. Connecticut policymakers considered removing immigration status from Medicaid eligibility.

With recent national policy reforms such as the ACA the undocumented population in the US was excluded. Legal status stood in the way of millions of US residents being unable to receive healthcare. Connecticut policymakers concluded that “removing immigration status requirements for Medicaid and individual market subsidy eligibility would decrease uninsurance among the undocumented and legally present recent immigrant populations by 32 to 37 percent...” (Rao, Giroi, and Eibner, 2022, page 1). It could also improve available insurance coverage and affordability in Connecticut for this population while not impacting other Connecticut residents (Rao, Giroi, Eibner, 2022, page 1).

Documented and legally present immigrants are unable to obtain Medicaid coverage until 5 years after they have been deemed legally present in the country (Rao, Giroi, Eibner, 2022, page 1). Undocumented immigrants are never eligible. Seven percent of the US population are legally present immigrants, and another 7 percent are undocumented immigrants (American Immigration Council, 2021). In sum, 14 percent of the total US population does not have access to healthcare (American Immigration Council, 2021). Rao, Giroi, and Eibner (2022, page 1) estimate that expanding Medicaid coverage and individual market subsidy eligibility to otherwise-eligible undocumented and legally present recent immigrants would lead to an increase in coverage among these populations by at least 21,000 to 24,000 individuals and movement from ESI and unsubsidized individual market coverage into the new health insurance options (Rao, Giroi, Eibner, 2022, page 1). Overall, expanding Medicaid and individual market subsidy eligibility to individuals who would qualify were it not for their immigration status has promise to improve insurance coverage and affordability in Connecticut for undocumented and legally present recent immigrant populations, while not substantially impacting legal residents.

Physician advocacy plays a crucial role in healthcare. A recent study, “*Why Physicians Should Advocate for Undocumented Immigrants’ Unimpeded Access to Prenatal Care.*” *AMA Journal of Ethics, U.S. National Library of Medicine* by Rachel Fabi (2019, page 1) lays out “why Physicians should advocate for undocumented immigrants’ unimpeded access to prenatal care.” Almost 7% of babies born in the US every year have at least one parent who is an undocumented immigrant (Fabi, 2019, page 1). However, many pregnant undocumented immigrants are ineligible for public insurance covering

prenatal care due to their immigration status. Fabi (2019, page 1) reviews national-level and state-level policies affecting access to prenatal care for members of this population. The study also considers ethical challenges posed by some policies that create obstacles to patients' accessing health care that is universally recommended by professional guidelines (Fabi, 2019, page 1). Undocumented immigrants are also more likely than the US general population to experience complications of labor, which begs the question and concern of why they are not receiving the proper care they need before labor. Fabi's (2019, page 1) study accredits these complications to a lack of prenatal care. Undocumented immigrants are left with very few choices for healthcare that they can afford. This study states that while there are federally qualified health centers where they can seek care on a "sliding-fee scale," access to those centers is dependent on location, transportation, and language barriers so they are essentially not an option for many women.

Policy restriction on insurance coverage for pregnant undocumented immigrants once again poses an ethical obstacle for physicians. They are under an obligation and knowledge to provide full prenatal care, yet politics will not allow them to do that. Fabi (2019, page 4) states "When clinicians are caught between a professional obligation and to provide comprehensive prenatal care to this population and policy restrictions on which services are and are not covered, it can cause significant moral distress", defined by Nancy Berlinger as "an acute feeling of risk to one's own personal and professional integrity that it associated with the perception of powerlessness to prevent some wrong" (Garcini, et al. 2022). The inner feeling that these policy restrictions are inherently unjust because immigration status is the only thing in the way of this population from receiving medical and social services that other pregnant patients are able to receive could sharpen a clinician's feeling of moral distress.

In 2017, the American Medical Association voted to adopt policies to improve the health of immigrants and refugees (Fabi, 2019, page 5). There are many challenges that immigrants face on a daily basis. Being an immigrant in the US is not an easy journey. It is a difficult and challenging feat with new obstacles every day. Racism, prejudice, financial burden, family, documentation, housing, work opportunities, and what we have spoken about: access to healthcare. While all immigrants face these harsh challenges, Latino/a immigrants have been under more extreme regulation and scrutiny in recent years. Despite being a large presence in the U.S., undocumented Latino/a immigrants continue to be disproportionately at risk for health problems and disease. For undocumented Hispanic Americans, getting the needed documentation to have the necessary access to healthcare and subsidized health programs like Medicaid has always been a long struggle. Their immigration status puts undocumented Hispanic Americans in greater, more prolonged exposure to high levels of stress (Galvan, Lill, Garcini, 2021, page 1). This created an increased risk for many diseases and health issues. This prolonged stress is also due to the trauma exposure pre and post-migration, as well as from the constant threat of deportation that has been magnified over recent years as a result of prevalent anti-immigrant actions and rhetoric in the U.S (Galvan, Lill, Garcini, 2021, page 7).

The most recent studies using demographic modeling show that there are about 22.1 million undocumented immigrants in the United States (Galvan, Lill, Garcini, 2021, page 1). Undocumented immigrants face challenges day to day including their living, social, and work environments, having less economic stability, and having restricted access to opportunities. Latino/a immigrants who do not have papers are as stated by Galvin, Lill,

and Garcini (2021, page 1) in *Another Brick in the Wall: Healthcare Access Difficulties and Their Implications for Undocumented Latino/a Immigrants* in the Journal of Immigrant and Minority Health, “ineligible for federally subsidized health insurance programs, tend to hold jobs that do not provide private health insurance, are unable to use safety net services due to fear of deportation and do not generally benefit from legislative efforts that aim to increase healthcare access to health insurance coverage, like the Affordable Care Act.” So, many delay seeking medical care in an attempt to avoid the immense financial cost that comes with health services. In addition, limited English proficiency, difficulty navigating unfamiliar healthcare systems, discrimination, and a general distrust of the US systems adds to the long list of barriers that further restrict this population’s ability to use health services (Galvan, Lill, Garcini, 2021, page 2). Citizenship status can significantly impact access to healthcare in many countries, including the United States. In the U.S. for example, individuals who are not citizens or legal permanent residents may not be eligible for Medicaid, which is a government-funded healthcare program for low-income individuals and families. This means that individuals without citizenship or legal permanent residency may have limited access to healthcare, and they may not be able to afford necessary medical treatments and procedures.

Undocumented immigrants, in particular, may face even greater barriers to accessing healthcare due to their lack of legal status (Galvan, Lill, Garcini, 2021, page 1). Fear of deportation and other legal consequences can deter undocumented individuals from seeking medical care, even if they have serious medical conditions that require treatment. In some cases, undocumented individuals may avoid seeking medical care until their condition becomes so severe that they require emergency room treatment, which is often more expensive and less effective than early intervention. Lack of access to healthcare for non-citizens can also have broader public health implications, as untreated infectious diseases can spread more easily among individuals who do not have access to preventative care and treatment. There are programs that have been created to assist in this battle like “Proyectos Voces” which is a multiphase, cross-sectional study focused on understanding the physical and mental health of undocumented Latino/a immigrants (Galvan, Lill, Garcini, 2021, page 1). However, for these programs to make the lasting and positive effect that they need to, they require assistance and support from the U.S. government.

## **Conclusion and Analysis**

In conclusion, healthcare workers face a range of obstacles in providing quality care to their patients. From lack of insurance coverage to healthcare staffing shortages, these obstacles can have significant impacts on patient health outcomes, patient satisfaction, and healthcare worker burnout. It is essential for governments, healthcare organizations, and stakeholders to work together to address these challenges and improve the healthcare system for both patients and healthcare workers. This can include initiatives such as expanding insurance coverage, increasing funding for healthcare programs and staff, and implementing technology like telehealth to address staffing shortages. With collaboration and commitment, we can work towards a healthcare system that is accessible, affordable, and effective for all. It is essential for governments, healthcare organizations, and stakeholders to work together to address these obstacles and improve the healthcare system's quality for both patients and healthcare workers. By addressing these challenges,

we can create a more equitable and effective healthcare system that provides high-quality care for all individuals. The political and policy ramifications of the lack of access to affordable and quality healthcare, administrative and legal obstacles, and healthcare staffing shortages are significant. In terms of lack of insurance coverage, policies such as the Affordable Care Act in the US have attempted to address this issue, but it remains a challenge in many countries. The lack of insurance coverage puts a strain on healthcare providers and facilities, leading to reduced access to care and increased costs. Healthcare staffing shortages are a significant issue in many countries, and policies must be implemented to address this issue, including increased funding for medical education and incentives to attract and retain healthcare professionals. In addition, governments and healthcare organizations must work together to expand access to telehealth and other technologies that can help address staffing shortages and improve access to care. Overall, political and policy changes are necessary to address the challenges that healthcare workers face in providing quality care to their patients and improve the healthcare system for both patients and healthcare workers.

In conclusion, the lack of insurance coverage for undocumented and legally present immigrants in the United States remains a major challenge in ensuring access to healthcare for this population. The study done in Connecticut in 2022, suggests that expanding Medicaid coverage and individual market subsidy eligibility to these individuals would significantly improve insurance coverage and affordability without substantially impacting legal residents. However, policy restrictions on insurance coverage for pregnant undocumented immigrants pose an ethical obstacle for physicians, who are obligated to provide comprehensive prenatal care but are often unable to do so due to policy restrictions. The challenges faced by immigrants, particularly undocumented Hispanic Americans, extend beyond healthcare and encompass issues such as racism, prejudice, financial burden, and documentation. It is crucial for policymakers to consider the impact of their policies on vulnerable populations and for physicians to advocate for unimpeded access to healthcare for undocumented immigrants.

## Bibliography

1. "Greek Medicine - the Hippocratic Oath." U.S. National Library of Medicine, National Institutes of Health, 7 Feb. 2012, [https://www.nlm.nih.gov/hmd/greek/greek\\_oath.html](https://www.nlm.nih.gov/hmd/greek/greek_oath.html).
2. The Complexities of Physician Supply and Demand: Projections from 2019 ... <https://www.aamc.org/media/54681/download?attachment=>.
3. Allen, Elizabeth M, et al. "Barriers to Care and Health Care Utilization among the Publicly Insured." Medical Care, U.S. National Library of Medicine, Mar. 2017, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5309146/>.
4. C;, Rao P; Girosi F; Eibner. "Expanding Insurance Coverage to Undocumented Immigrants in Connecticut." Rand Health Quarterly, U.S. National Library of Medicine, <https://pubmed.ncbi.nlm.nih.gov/36484077/>.
5. Fabi, Rachel. "Why Physicians Should Advocate for Undocumented Immigrants' Unimpeded Access to Prenatal Care." *Journal of Ethics | American Medical Association*, American Medical Association, 1 Jan. 2019,

- <https://journalofethics.ama-assn.org/article/why-physicians-should-advocate-undocumented-immigrants-unimpeded-access-prenatal-care/2019-01>.
6. LM;, Galvan T; Lill S; Garcini. “Another Brick in the Wall: Healthcare Access Difficulties and Their Implications for Undocumented Latino/a Immigrants.” *Journal of Immigrant and Minority Health*, U.S. National Library of Medicine, <https://pubmed.ncbi.nlm.nih.gov/33755839/>.
  7. Garcini LM; Nguyen K; Lucas-Marinelli A; Moreno O; Cruz PL; “‘No One Left Behind’: A Social Determinant of Health Lens to the Wellbeing of Undocumented Immigrants.” *Current Opinion in Psychology*, U.S. National Library of Medicine, <https://pubmed.ncbi.nlm.nih.gov/36055083/>.
  8. “Immigrants in the United States.” *American Immigration Council*, 21 Sept. 2021, <https://www.americanimmigrationcouncil.org/research/immigrants-in-the-united-states>.
  9. “AAMC Report Reinforces Mounting Physician Shortage.” *AAMC*, 11 June 2021, <https://www.aamc.org/news-insights/press-releases/aamc-report-reinforces-mounting-physician-shortage>.
  10. “Access to Health Services.” *Access to Health Services - Healthy People 2030*, <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/access-health-services#:~:text=Lack%20of%20health%20insurance%20coverage%20may%20negatively%20affect%20health.&text=Uninsured%20adults%20are%20less%20likely,%2C%20cancer%2C%20and%20cardiovascular%20disease>.

## **The Effects of Continued Enrollment in the Children's Health Insurance Program on Health and Educational Outcomes**

Xiaohui Guo

Capital University of Economics and Business, China

Chad Meyerhoefer

Lehigh University

Lizhong Peng\*

University of West Georgia

### **Abstract**

We determine how enrollment in the Children's Health Insurance Program (CHIP) over an extended period of time affects medical and dental care use, health status and academic achievement. In contrast to prior research, which focuses on the program's effects during infancy and early childhood, we examine CHIP enrollment among elementary and middle school students. Using the 1999-2007 panels of the Early Childhood Longitudinal Study, Kindergarten Class and an instrumental variables model to address selection bias, we find that an additional year of CHIP enrollment increases the regular use of routine medical care by 16 percent, but has no detectable effects on overall parent-reported health status, obesity or test scores in reading and math.

**Keywords:** CHIP; Continued Enrollment; Child Health; Academic Performance

**JEL classifications:** I13, I21, H75

---

\* Data availability statement: We use restricted access ECLS-K, 1998 data with state identifiers. Author disclosure statement: this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The authors have no conflicts of interest.



## 1. Introduction

The Children's Health Insurance Program (CHIP), provides children in low- and moderate-income households who do not qualify for traditional Medicaid coverage with free or low-cost health insurance. Depending on the child's state of resident, CHIP is administered through Medicaid, or as a separate program. By 2020, approximately half of U.S. children were enrolled in CHIP, making it a critical component of the social safety net.<sup>21</sup> A large literature in the social sciences that investigates both Medicaid and CHIP coverage finds that very young children have greater access to health care, and has documented some improvements in health status.<sup>5</sup> Studies also find that public health insurance coverage through Medicaid and CHIP improves human development by freeing up income for non-medical expenditures.<sup>18</sup> The longer term benefits of early-life exposure to Medicaid and CHIP through both direct and indirect channels include higher educational attainment, better labor market outcomes, and fewer risky behaviors in adulthood.<sup>4,9,21</sup> However, many of these studies only measure eligibility for CHIP, not actual enrollment, and they focus on exposure to CHIP during infancy or early childhood. Much less is known about CHIP enrollment during middle childhood (ages 6-14) when children begin to build human capital through educational investments.<sup>3</sup>

Our paper is among the first to evaluate the health and education effects of CHIP enrollment during middle childhood. Our empirical analysis uses the restricted-use version of the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999.<sup>35</sup> This dataset contains detailed information on academic performance and parent-reported medical and dental care use and health status. Importantly, parents were asked whether their child had public insurance in the first through eighth grade waves of the ECLS-K. The longitudinal aspect of the data allows us to calculate CHIP enrollment over an eight-year period for each child.

Our empirical strategy relies on cross-state variation in CHIP enrollment caused by changes in the program's income eligibility criteria, similar to the seminal work of Currie and Gruber.<sup>11</sup> In particular, we estimate a multivariate regression model with an instrumental variable constructed using differences in state eligibility rules. This allows us to remove the bias from endogenous program participation (i.e., spurious changes in child outcomes due to factors other than exposure to CHIP coverage). The results show that CHIP enrollment during middle childhood improves take-up of routine medical care. Specifically, our estimates indicate that one additional year of CHIP enrollment leads to a 9 percentage-point increase in the parent-reported probability that a child received an annual medical checkup, which is a 16 percent increase relative to the sample mean. However, we do not detect any statistically significant effect of CHIP enrollment on parent-evaluated child health status, obesity status, or test scores in reading or math.

Our study makes two contributions. First, most research examining the effects of Medicaid/CHIP expansions in the 1980s and 1990s is limited to pregnant women and children aged up to 5.<sup>4,5,12,14,17,19,26,28,34,36</sup> We extend the literature by considering CHIP enrollment during middle childhood. To the best of our knowledge, there is only one other study that analyzes this age range, finding that CHIP enrollment has no statistically significant impact of academic test scores in the first and third grades.<sup>10</sup> Our paper complements this earlier study by extending the analysis period through middle school and considering health outcomes and the use of medical care.

The second contribution concerns how we measure CHIP enrollment. Previous studies measure either CHIP eligibility or enrollment during a single year, but we measure total years of CHIP enrollment from first through eighth grade. The distinction between single and multiple year enrollment is important because by 2001, all states extended CHIP eligibility to children through age 18, creating a potentially large gap in health insurance coverage between CHIP-eligible and ineligible children.<sup>13</sup> In addition, using

multi-year enrollment to measure health insurance coverage allows us to account for the potential benefits of medical care investments over an extended period of time.<sup>34</sup>

## 2. Empirical Strategy

We assess the impact of cumulative CHIP enrollment on child outcomes using a parametric regression model, specified as:

$$Outcome\_8th_{ijs} = \alpha + \beta Years\_Enroll_{ijs} + \gamma' X_{ijs} + \varepsilon_{ijs}, \quad (1)$$

where  $Outcome\_8th_{ijs}$  is one of the outcomes measuring medical or dental care utilization, health status, or academic performance for child  $i$  attending school  $j$  in state  $s$ , measured in eighth grade,  $Years\_Enroll_{ijs}$  is the number of years that the child has been enrolled in CHIP during the sample period (i.e. the duration of CHIP enrollment),  $X_{ijs}$  is a vector of individual, household, school, and state characteristics and  $\varepsilon_{ijs}$  is a white noise error term. The parameter of interest is  $\beta$ , which measures the change in the outcome due to an additional year of CHIP enrollment. Equation (1) represents a linear regression model that is appropriate for modeling continuous outcome variables using ordinary least squares. When the outcome is a 0/1 indicator that the child belongs to a category (e.g., the child has excellent health), we use a probit model. Since the probit model is nonlinear, the effect of a one-year increase in CHIP enrollment is measured using a marginal effect that is a function of all model parameters, including  $\beta$ .

Ordinary regression methods will not generate an accurate estimate of the parameter  $\beta$ , or the marginal effect of an additional year of CHIP enrollment more generally, due to selection bias. There are three different possible types of selection that we need to address. First, children from low-income families who are less healthy and less prepared to succeed in school may be more likely to enroll in CHIP. Second, families who seek to enroll in CHIP may move to states with less onerous eligibility requirements or more comprehensive CHIP coverage. Third, states with healthier or wealthier populations may offer more generous insurance coverage.

We correct for selection bias using the method of instrumental variables (IV), which makes use of variation in CHIP enrollment that is beyond the individual's control to identify the effect of CHIP enrollment on the outcome variable. This variation is not subject to selection bias, so it generates an accurate (unbiased) estimate of  $\beta$ . The IV method is most easily described as a two-stage estimation process whereby the endogenous variable,  $Years\_Enroll$ , is first projected onto an instrument that isolates exogenous variation, and the predicted value of the endogenous variable is included in a second stage equation, such as equation (1). To generate reliable estimates, the instrument must be strongly correlated with  $Years\_Enroll$ , but not correlated with unobservable factors that determine the outcome. Following Currie and Gruber, we use a "simulated instrument" that leverages exogenous changes in state-level CHIP eligibility rules and is less affected by potential migration of individuals to states with generous benefits or eligibility than alternative formulations of the instrument.<sup>11</sup> We implement this approach by simulating CHIP eligibility on a fixed national sample to circumvent the confounding effects of both individual selection into CHIP and changes in state demographic composition that could be correlated with CHIP enrollment and child outcomes.

To construct the simulated instrument, we first draw a nationally representative sample of kindergarteners from our data. Critically, this sample is fixed prior to our study timeframe, such that the demographic characteristics of the kindergarten cohort do not vary across states or over time. We then collapse the fixed sample to household size-race-gender-age cells, and calculate the proportion of children in each cell that would have qualified for CHIP if they had lived in each individual state and in every year of the relevant timeframe, using the CHIP income eligibility limit for that particular state-year pair. For

example, the fraction of black girls eligible for CHIP in our sample who are 5 years and 3 months old and live in a family of four is 0.58 when we apply the CHIP income limit for Pennsylvania in 2000, whereas the eligible fraction for the same cell is 0.16 when we apply Tennessee's 2004 CHIP income eligibility criteria. We then calculate the duration of simulated eligibility by summing up the fraction of years that the children could have been eligible for CHIP during our sample period by state and year cell. As a final step, we link simulated eligibility duration to the children in our analysis sample (post-kindergarten) by their demographic characteristics, state of residence, and survey year.

### 3. Data

We use data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K). The ECLS-K tracked the school experiences of a cohort of approximately 22,000 students at their entry to kindergarten in the fall of 1998, progression through elementary school, and transition into middle school. Data were collected from students, parents, teachers, and school administrators on seven occasions: the fall and spring of kindergarten (1998-1999), the fall and spring of first grade (1999-2000), the spring of third grade (2002), the spring of fifth grade (2004), and the spring of eighth grade (2007). Due to data availability on CHIP enrollment, we use the spring waves of the ECLS-K from first grade through eighth grade. The surveys were conducted in 43 states and D.C. (excluding AK, ID, MT, NH, ND, SC, VT, and WV). Identifiers for state of residence are contained in the restricted-use version of these data.

We merge to the ECLS-K information on each state's CHIP policy parameters for the years 2000, 2002, 2004, and 2007, which we obtained from various sources (see Table A1). Our sample consists of approximately 2,700 middle school children with family incomes between 100 and 300 percent of the federal poverty line (FPL) who were surveyed in the 2007 wave and who had parent-reported information on CHIP enrollment in four survey waves between the spring of first grade and the spring of eighth grade. We use 100 percent FPL as the lower income limit for our sample because the Omnibus Budget Reconciliation Act, 1990 required states to cover all children below the poverty line through the Medicaid program. We set the upper income limit in our sample to 300 percent FPL because, by 2007, some states were covering children at this income level. We also exclude children covered by military insurance and other public insurance plans.

When parents report enrollment in both private insurance and CHIP, we assign them to the latter. Because of the growing trend towards managed care, it is common for states to outsource CHIP to insurers in the hope of ensuring budget neutrality. Consequently, it is reasonable to assume that children whose parents reported they had both CHIP and private health insurance were actually enrolled in CHIP.<sup>18, 27</sup>

Since information on CHIP enrollment was collected at a point in time during each survey wave starting in the spring of first grade (year 2000), the exact start and end date of CHIP enrollment is not observable. We therefore use the mid-point between survey waves to measure when a child enters or exits CHIP. For example, if a child who is uninsured in the third grade enrolls in CHIP by the fifth grade, we use one year as the duration of the CHIP spell (as of fifth grade). We calculate the duration of simulated eligibility using the sample of children in the spring kindergarten wave using the same method.

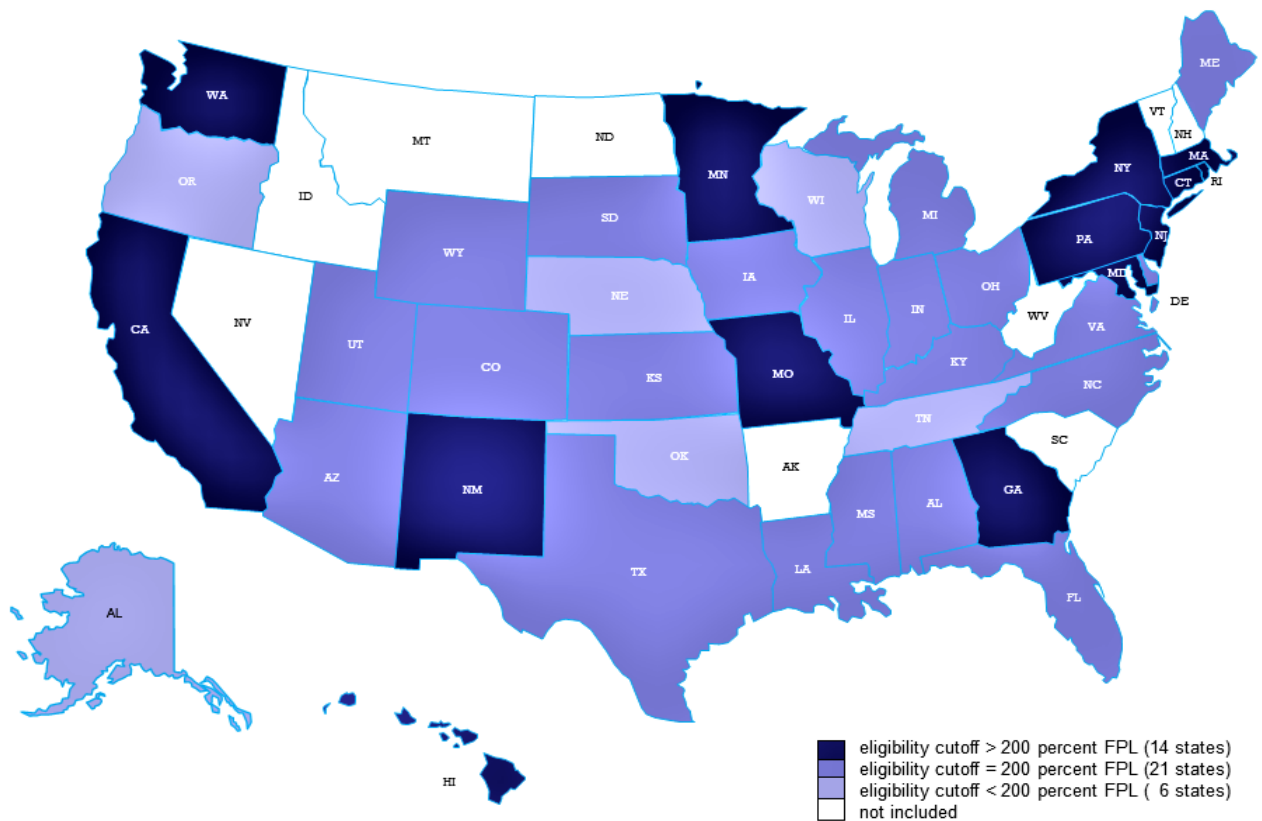
Our health care utilization measures are derived from combined first-, third-, fifth-, and eighth-grade parent interviews, all of which contain questions on how recently children had last seen medical and dental care providers for routine care. We construct two indicator (0/1) variables for whether parents reported that their child had either routine medical or dental care in every survey wave between the first and eighth grades. To measure health outcomes, we construct an indicator for whether parent reported the child was in excellent health, and whether the child was clinically obese in that his/her body mass index (weight in kilograms divided the square of height in meters) was in the 95<sup>th</sup> percentile or higher of the

U.S. Center for Disease Control growth charts. Both weight and height were measured by trained field staff in the eighth grade. Following the standard value-added model of academic achievement, we measure academic performance using changes in item-response theory theta scores in reading and math between first and eighth grade.<sup>23</sup> These theta scores follow a standard normal distribution in all waves, and have well-documented advantages over other types of scores for measuring longitudinal academic gains.<sup>24</sup>

We include the following individual-, household-, and school-level control variables in our models: child age (continuous in months), gender, race/ethnicity (white, black, Hispanic, and other), birth weight, grade repetition, population density of residence (urban, suburban, and rural), family income, family size, the highest year of schooling the parents completed, school type (public or private), and the proportion of children at the school eligible for a free/subsidized lunch.

In Figure 1 we display state CHIP income requirements as of 2007, which corresponds to the ECLS eighth grade wave. It is clear that there is considerable variation across states in CHIP income eligibility, and that high-income states tend to set higher income eligibility cutoffs. This is in part due to differences in the cost of living across states, but it could also reflect policy preferences.<sup>7-8</sup> We account for both factors by including control variables in our models for real per capita income (from the U.S. Census Bureau), the state prevalence of obesity among boys and girls and percentages of overweight and obese adults (from the U.S. Centers for Diseases Control and Prevention), public school student-teacher ratio, real total tax revenues per student, real instruction spending per teacher, percentage of population holding a bachelor degree or above (from the U.S. Department of Education), and the percentages of students participating in the National School Lunch Program, School Breakfast Program, and Summer Food Services Program (from the U.S. Department of Agriculture).

Figure 1. CHIP income eligibility by state, 2007.



In our regression models, we use the ECSL-K longitudinal sampling weights to generate nationally representative estimates, and cluster the standard errors at the state level.

## 4. Results

### 4.1. Summary Statistics

Table A2 lists the weighted means and standard deviations of the variables used in our models for the full estimation sample as well as for two sub-samples that include children whose parents reported they were enrolled in CHIP during at least one survey wave (the “ever-CHIP” sample), and those who were never enrolled in CHIP (“non-CHIP”). Children ever-enrolled in CHIP were more disadvantaged in that they had lower family incomes and their parents had less education. On average, the length of the CHIP enrollment during grades first through eighth was four and a half years.

### 4.2. Model Estimates

Table 1 contains marginal effect estimates from the IV models in Panel B that measure the effect of an additional year of CHIP enrollment on the specified outcome. For comparison purposes, we report in Panel A estimates from an ordinary regression model that does not account for selection bias. Columns 1-2 contain estimates from models where the outcome measures medical or dental care utilization; columns 3-4, health status; and columns 5-6, academic performance. Appendix Table A3 contains the key regression parameter from the first stage of the IV model as well as the F-test of statistical power to measure whether the simulated instrument is sufficiently correlated with years of CHIP enrollment to produce reliable estimates. The F-statistic of 17.4 is above the conventional threshold of 10 for a sufficiently powerful instrument.<sup>33</sup>

The estimate from the IV model in column 1, Panel B of Table 1 indicates that an additional year of enrollment in CHIP increases by 9 percentage points the probability that parents report their child had routine medical care for every survey wave between first and eighth grade. This is a 16 percent increase relative to the overall sample mean (see column 1 of Table A2). In contrast, the corresponding estimate from the ordinary regression model in Panel A is 2.6 percentage points, which is more than three times smaller than the IV estimate. This discrepancy suggests that children less likely to receive routine medical care are more likely to enroll in CHIP, and underscores the need to use appropriate statistical methods, such as IV, to accurately estimate the causal effect of CHIP enrollment on the outcomes. While both the IV and non-IV marginal effects for routine medical care are statistically significant at the 1 percent level, the marginal effects for dental care use are not significant, nor are the estimates for the health outcomes (overall excellent health and obesity) or changes in reading and math test scores.

Table 1. Regression of outcome variables on years of CHIP enrollment.

	Health care utilization		Health outcomes		Academic performance	
	Routine care	Dental care	Excellent health	Obesity	Reading score	Math score
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A. Non-IV marginal effect</i>						
Years of CHIP enrollment, 1st-8th grade	0.026*** (0.006)	-0.007 (0.006)	-0.018 (0.005)	-0.002 (0.005)	0.006 (0.006)	-0.006 (0.006)
<i>Panel B. IV marginal effect</i>						
Years of CHIP enrollment, 1st-8th grade	0.090*** (0.034)	0.062 (0.050)	0.010 (0.135)	-0.008 (0.050)	0.035 (0.047)	-0.001 (0.034)
Observations	2,700	2,700	2,700	2,550	2,600	2,650

Notes: Levels of significance are \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Standard errors that are clustered on the state level are reported in parentheses. The numbers of observations are rounded to the nearest 50 in order to comply with Department of Education non-disclosure requirements for ECLS-K, 1998. For routine/dental care (no parent-reported having gone a year or more without routine/dental checkups 1st-8th grade), excellent health (parents reported in 8th grade), and obesity (using measured weight and height in 8th grade), probit and IV probit models are estimated. In particular, we estimate the IV probit model using the two-stage residual inclusion (2SRI) approach. Note that results for these binary outcome variables are qualitatively similar but less precisely estimated when using IV linear probability models. For reading and math scores (changes in theta scores 1st-8th grade), OLS and 2SLS models are estimated. The individual-, household-, and school-level characteristics included, but not shown, are: sex, age, race (white, Hispanic, or other races, with black excluded), birth weight, grade repetition, population density (urban or suburban, with rural excluded), the type of school (with private excluded), the percentage of free/subsidized meals eligible students; family income, family size, highest years of schooling parents completed. The state-level controls included, but not shown, are: real per capita income, the percentage of population with a bachelor's degree or higher, the prevalence of obesity among boys and girls, the percentages of overweight and obese adults, the public school student to teacher ratio, real total state tax revenue per student, real instruction spending per teacher, and the percentages of students participating in the National School Lunch Program, School Breakfast Program, and Summer Food Services Program.

To demonstrate that our model estimates are accurate, we subject them to several robustness tests, which we describe in Appendix Section B.

## 5. Conclusions

In this paper we examine the effect of CHIP enrollment over an eighth year period on medical and dental care use, health status and academic test scores of children during middle childhood. By using a model of instrumental variables (IV) we are able to identify the *causal* effects of CHIP enrollment on these outcomes rather than the associations from ordinary regression models that are subject to selection bias. While we find that an additional year of CHIP enrollment increases the probability that children regularly receive routine medical care during by 16 percent, we find no evidence that CHIP enrollment increases regular use of dental care, improves health status or increases reading or math test scores.

### 5.1. Discussion of Main Estimates

Our finding that CHIP increases use of routine medical care is largely consistent with previous studies. For example, a meta-analysis reports that single-year CHIP enrollment is associated a 12 percentage-point increase in routine well-child checkups.<sup>22</sup> In addition, our inability to find an effect on dental care use is consistent with the limited participation of dentists in Medicaid and CHIP during this time period due to low reimbursement rates.<sup>2</sup> It is interesting that we do not find any improvement in child health or educational outcomes despite increased access to routine medical care. However, this result is not necessarily contradictory with the improvements in adult health or educational attainment attributed to the 1980s Medicaid expansions.<sup>9,34</sup> One possible explanation for our findings is that improvements in health and academic performance take time to materialize, and our sample period is too short to measure these effects.<sup>12</sup> Another possibility is that the ECLS-K's relatively small sample size prevents us from identifying statistically significant effects on health and education, when the causal effects are small in magnitude. However, ours is not the first study that fails to find statistically significant effects of CHIP on health outcomes.<sup>5</sup> In contrast, there is only one study that we are aware of that considers the impact of CHIP enrollment on educational outcomes, and it also finds no effect on CHIP on reading and math test scores, also using the ECLS-K.<sup>10</sup>

Our study has some limitations. Because the ECLS-K data are available biannually from 2000-2004 and are available at a lower frequency thereafter, we cannot capture high-frequency changes in CHIP enrollment. This may cause measurement error in the duration of CHIP enrollment, which is often referred to as “seam bias”, and could attenuate our estimates.<sup>20</sup> However, most states have provisions that permit children to remain on CHIP up to 12 months, suggesting that it is less likely that changes in CHIP status occurred within waves than between waves.<sup>31</sup> In particular, our data indicate that children experiencing transitions in CHIP between waves make up less than 3 percent of the sample (see column 2 of Appendix Table A6). Therefore, we believe that seam bias should have limited impact on our estimates.

### 5.2. Policy Considerations

Despite these limitations, our results have important implications in the current policy context. A recent study by Alker, Osorio and Park suggests that the Families First Coronavirus Response Act (FFCRA) reduced uninsurance for children during the Covid-19 pandemic.<sup>1</sup> However, some key provisions in the FFCRA that bar states from involuntarily dropping children from Medicaid/CHIP expired on March 31, 2023 (although states have 12 month to transition to normal eligibility and enrollment procedures). Alker and her colleagues forecast that approximately 6.7 million children are expected to lose their coverage,

and three quarters of them will be dropped from their coverage for administrative rather than eligibility reasons. Importantly, states with higher baseline uninsured rates experienced greater coverage gains following the pandemic protection. Taken together, our finding that CHIP increases routine checkups suggests that the FFCRA expiration may exacerbate inequalities in access to preventive care for children. And the children losing coverage might in turn face greater Covid- or other virus-related morbidity/mortality risks.<sup>32</sup>

In addition, disadvantaged populations stand to benefit more from improved access to care due to potential CHIP expansions. For instance, according to the American Community Survey (ACS), in 2019 approximately 43 percent of immigrant children were uninsured, compared to six percent of U.S. citizen children. However, extending CHIP coverage to immigrant children can face legal and practical challenges. On the legal front, undocumented children do not qualify for coverage in most cases. And immigrant children with permanent legal status must wait five years before they can enroll in CHIP. These barriers stem from some lawmakers' concerns about the costs and fairness of entitlement programs.<sup>30</sup> Furthermore, language and cultural factors, such as limited English proficiency and fears about becoming a "public charge," may prevent immigrants from accessing and using their Medicaid/CHIP coverage.<sup>29</sup> Policies aimed at expanding public health insurance coverage to immigrant children are an important area for future research.



## References

1. Alker J, Osorio A, Park E. Number of Uninsured Children Stabilized and Improved Slightly During the Pandemic. Georgetown University, D.C.: Center for Children and Families; 2022.
2. Almeida R, Hill I, Kenney G. Does SCHIP Spell Better Dental Care Access for Children? An Early Look at New Initiatives. Occasional Paper 50. Urban Institute; 2001.
3. Almond D, Currie J, Duque V. Childhood Circumstances and Adult Outcomes: Act II. *Journal of Economic Literature*. 2018; 56(4):1360-1446.
4. Brown D, Kowalski A, Lurie I. Medicaid as an Investment in Children: What is the Long-Term Impact on Tax Receipts? *Review of Economics and Statistics*. 2020; 87(2):792-821.
5. Currie J, Duque V. Medicaid: What Does It Do, and Can We Do It Better? *American Academy of Political and Social Science*. 2019; 686(1):148-179.
6. Cassidy A, Fairbrother G, Newacheck P. The Impact of Insurance Instability on Children's Access, Utilization, and Satisfaction with Health Care. *Ambulatory Pediatrics*. 2008; 8(5):321-328.
7. Cawley J, Meyerhoefer C, Newhouse D. The Impact of State Physical Education Requirements on Youth Physical Activity and Overweight. *Health Economics*. 2007; 16(12):1287-1301.
8. Cawley J, Frisvold D, Meyerhoefer, C. "The Impact of Physical Education on Obesity among Elementary School Children. *Journal of Health Economics*. 2013; 32(4): 743-755.
9. Cohodes S, Grossman D, Kleiner S, Lovenheim D. The Effect of Child Health Insurance Access on Schooling: Evidence from Public Insurance Expansions. *Journal of Human Resources*. 2016; 51(3): 727-759.
10. Cullen J, DeCicca P, Volden C. The Impact of State CHIP Programs on Early Childhood Health Insurance Coverage, Utilization and Outcomes. University of Michigan, Ann Arbor: Economic Research Initiative on the Uninsured; 2005.
11. Currie J, Gruber J. Saving Babies: The Efficacy and Cost of Recent Changes in the Medicaid Eligibility of Pregnant Women. *Journal of Political Economy*. 1996; 104(6):1263-1296.
12. Currie J, Decker S, Lin W. Has Public Health Insurance for Older Children Reduced Disparities in Access to Care and Health Outcomes? *Journal of Health Economics*. 2008; 27(6):1567-1581.
13. Currie J. Inequality in Mortality over the Life Course: Why Things are not as Bad as You Think? *Contemporary Economic Policy*. 2018; 36(1): 7-23.
14. East N, Miller S, Page M, Wherry L. Multigenerational Impacts of Childhood Access to the Safety Net: Early Life Exposure to Medicaid and the Next Generation's Health. *American Economic Review*. 2023; 113(1):98-135.

15. Evans W, Schwab R. Finishing High School and Starting College: Do Catholic Schools Make a Difference? *Quarterly Journal of Economics*. 1995; 110(4): 941-974.
16. Fairbrother G, Emerson H, Partridge L. How Stable is Medicaid Coverage for Children? *Health Affairs*. 2007; 26(2): 520-528.
17. Goodman-Bacon A. The Long-Run Effects of Childhood Insurance Coverage: Medicaid Implementation, Adult Health, and Labor Market Outcomes. *American Economic Review*. 2021; 111(8):2550-2593.
18. Gruber J, Simon K. Crowd-Out 10 Years Later: Have Recent Public Insurance Expansions Crowded Out Private Health Insurance? *Journal of Health Economics*. 2008; 27(2):201-217.
19. Guldi M, Hamersma S. The Effects of Pregnancy-Related Medicaid Expansions on Maternal, Infant, and Child Health. *Journal of Health Economics*. 2023; 87:102695.
20. Ham J, Li X, Shore-Sheppard L. Seam Bias, Multiple-State, Multiple-Spell Duration Models and the Employment Dynamics of Disadvantaged Women. Working Paper 15151. National Bureau of Economic Research; 2009.
21. Hendrix L, Stock W. Investing in Health and Public Safety: Childhood Medicaid Eligibility and Later Life Criminal Behavior. *Journal of Human Resources*. 2022; 50(2):317-372.
22. Howell E, Kenney G. The Impact of the Medicaid/CHIP Expansions on Children: A Synthesis of the Evidence. *Medical Care Research and Review*. 2012; 69(4):372-396.
23. Kaestner R, Grossman M. Effects of Weight on Children's Educational Achievement. *Economics of Education Review*. 2009; 28(6):651-661.
24. Kieffer M. Converging Trajectories: Reading Growth in Language Minority Learners and Their Classmates, Kindergarten to Grade 8. *American Educational Research Journal*. 2011; 48(5):1187-1225.
25. Kreider A, French B, Aysola J, Saloner B, Noonan K, Rubin D. Quality of Health Insurance Coverage and Access to Care for Children in Low-Income Families. *JAMA Pediatrics*. 2016; 170(1):43-51.
26. Levine P, Schanzenbach D. The Impact of Children's Public Health Insurance Expansions on Educational Outcomes. *Forum for Health Economics & Policy*. Berkeley Electronic Press; 2009.
27. Lo Sasso A., Buchmueller T. The Effect of the State Children's Health Insurance Program on Health Insurance Coverage. *Journal of Health Economics*. 2004. 23(5):1059-1082.
28. Miller S, Wherry L. The Long-Term Effects of Early Life Medical Coverage. *Journal of Human Resources*, 2019; 54(3):785-824.
29. Miller S, Wherry L. Coverage Undocumented Immigrants: The Effects of a Large-Scale Prenatal Care Intervention. Working Paper 30299. National Bureau of Economic Research; 2022.

30. Ollove M. More States Offer Health Coverage to Immigrant Children. Pew Research Center, D.C: Stateline; 2022.
31. Pei Z. Eligibility Recertification and Dynamic Opt-In Incentives in Income-Tested Social Programs: Evidence from Medicaid/CHIP. *American Economic Journal: Economic Policy*. 2017; 9(1):241-276.
32. Pradhan R. Why Millions on Medicaid Are at Risk of Losing Coverage in the Months Ahead? National Public Radio, D.C.: Health News; 2022.
33. Stock J, Wright J, Yogo M. A Survey of Weak Instruments and Weak Identification in Generalized Method of Moments. *Journal of Business and Economic Statistics*. 2002; 20(4):518-529.
34. Thompson O. The Long-Term Health Impacts of Medicaid and CHIP. *Journal of Health Economics*. 2017; 51:26-40.
35. Tourangeau K, Nord C, Le T, Sorongon A, Najarian M, Hausken E. Combined User's Manual for the ECLS-K Eighth-Grade and K-8 Full Sample Data Files and Electronic Codebooks (NCES 2009-004). Department of Education, D.C.: National Center of Education Statistics, Institute of Education Sciences; 2009.
36. Wherry L, Meyer B. Saving Teens: Using a Policy Discontinuity to Estimate the Effects of Medicaid Eligibility. *Journal of Human Resources*. 2016; 51(3):556-588.

## Appendix, Section A.

Table A1. Summary of CHIP characteristics by state for the years 2000, 2002, 2004, and 2007.

State	Type of program	Percent FPL eligibility threshold, 6-16 years old				12-month eligibility	continuous
		2000	2002	2004	2007		
Alabama	Combined	200	200	200	200	Yes	
Alaska	Medicaid	200	200	175	175	No	
Arizona	Separate	200	200	200	200	Intricate	
California	Combined	200	250	250	250	Yes	
Colorado	Separate	185	185	185	200	No	
Connecticut	Combined	300	300	300	300	Intricate	
Delaware	Separate	200	200	200	200	Intricate	
Florida	Combined	200	200	200	200	Intricate	
Georgia	Separate	200	235	235	235	No	
Hawaii	Medicaid	100	200	200	300	No	
Illinois	Combined	185	185	200	200	Yes	
Indiana	Combined	150	200	200	200	Intricate	
Iowa	Combined	185	200	200	200	Yes	
Kansas	Separate	200	200	200	200	Yes	
Kentucky	Combined	200	200	200	200	No	
Louisiana	Medicaid	150	200	200	200	Yes	
Maine	Combined	185	200	200	200	Yes	
Maryland	Combined	200	300	300	300	Intricate	
Massachusetts	Combined	200	200	200	300	Intricate	
Michigan	Combined	200	200	200	200	Yes	
Minnesota	Medicaid	275	275	275	275	Intricate	
Mississippi	Combined	200	200	200	200	Yes	
Missouri	Medicaid	300	300	300	300	No	

Table A1. Summary of CHIP characteristics by state for the years 2000, 2002, 2004, and 2007, continued.

State	Type of program	Percent FPL eligibility threshold, 6-16 years old				12-month eligibility	continuous
		2000	2002	2004	2007		
Nebraska	Medicaid	185	185	185	185	Intricate	
New Jersey	Combined	350	350	350	350	Intricate	
New Mexico	Medicaid	235	235	235	235	Intricate	
New York	Combined	222	250	250	250	Yes	
North Carolina	Separate	200	200	200	200	Yes	
Ohio	Medicaid	150	200	200	200	No	
Oklahoma	Medicaid	185	185	185	185	No	
Oregon	Separate	170	170	185	185	No	
Pennsylvania	Separate	200	235	235	235	Intricate	
Rhode Island	Medicaid	250	250	250	250	No	
South Dakota	Combined	140	200	200	200	No	
Tennessee	Medicaid	N/A	N/A	100	100	No	
Texas	Combined	100	200	200	200	No	
Utah	Separate	200	200	200	200	No	
Virginia	Separate	185	200	200	200	No	
Washington	Separate	250	250	250	250	Intricate	
Wisconsin	Medicaid	185	185	185	185	No	
Wyoming	Separate	133	133	185	200	Yes	

Notes: The TennCare program in Tennessee provided an eligibility waiver to children based on their lack of insurance up to 2004, suggesting no upper limit on income. As of 2000, Texas covered children under age 6 up to 133 percent FPL, while all other states in our sample implemented the same income eligibility for children between the ages of 2 and 16. Maryland and South Dakota established separate CHIP programs separate from Medicaid in 2002. States categorized as “intricate” in the last column had gone through changes to the 12-month continuous eligibility provision during the sample period from 2000 to 2007 (Connecticut, Delaware, Indiana, Massachusetts, Nebraska, New Jersey, New Mexico, and Washington) or had differential continuous eligibility provisions across the risk pools of their public health insurance programs (Arizona, Florida, Maryland, Minnesota, and Pennsylvania). We obtained the above information from the National Governors Association Center (NGA) and the Kaiser Notes, continued: Family Foundation (KFF). When there are discrepancies among these sources, we deferred to state Medicaid agencies, including Department of Children & Family Services in Louisiana, Department of Health in New York State, Department of Social Services in South Dakota, and Department of Social Services in Virginia.

Table A2. Descriptive statistics for children in families with income between 100 and 300 percent of the FPL in 2007.

	Full sample	Ever-CHIP sample	Non-CHIP sample
<b><i>Outcome variables</i></b>			
Routine medical care (no parent-reported having gone a year or more without a routine wellness checkup 1st-8th grade)	0.570 (0.495)	0.615 (0.487)	0.545 (0.498)
Dental care (no parent-reported having gone a year or more without a dental checkup 1st-8th grade)	0.694 (0.461)	0.603 (0.489)	0.744 (0.437)
Excellent health (parents assessed in 8th grade)	0.493 (0.500)	0.418 (0.493)	0.534 (0.499)
Obesity (using measured weight and height in 8th grade)	0.206 (0.405)	0.228 (0.420)	0.194 (0.396)
Reading score (change in reading theta scores, 1st-8th grade)	1.182 (0.371)	1.198 (0.414)	1.173 (0.346)
Math score (change in math theta scores, 1st-8th grade)	1.363 (0.327)	1.345 (0.341)	1.373 (0.319)
<b><i>CHIP enrollment and eligibility</i></b>			
Duration of CHIP enrollment 1st-8th grade (years)	1.595 (2.516)	4.503 (2.185)	0.000 (0.000)
Duration of simulated eligibility 1st-8th grade (years)	4.249 (1.717)	4.616 (1.709)	4.047 (1.688)
<b><i>Child and household characteristics</i></b>			
Age (months)	171.535 (4.466)	171.100 (4.682)	171.773 (4.325)
Female	0.467 (0.499)	0.485 (0.500)	0.457 (0.498)
White	0.611 (0.488)	0.450 (0.498)	0.698 (0.459)
Hispanic	0.191 (0.393)	0.262 (0.440)	0.151 (0.359)

Table A2. Descriptive statistics for children in families with income between 100 and 300 percent of the FPL in 2007, continued.

	Full sample	Ever-CHIP sample	Non-CHIP sample
Black	0.141 (0.348)	0.228 (0.420)	0.092 (0.290)
Other races	0.058 (0.234)	0.059 (0.236)	0.058 (0.233)
Birthweight (oz.)	91.146 (53.849)	87.909 (54.149)	92.922 (53.617)
Grade repetition	0.100 (0.300)	0.159 (0.366)	0.068 (0.251)
Urban	0.389 (0.488)	0.387 (0.487)	0.389 (0.488)
Suburban	0.350 (0.477)	0.320 (0.467)	0.367 (0.482)
Rural	0.261 (0.439)	0.293 (0.455)	0.244 (0.430)
Family income (\$1,000s)	54.813 (34.796)	36.163 (22.354)	65.045 (36.134)
Family size	4.475 (1.242)	4.425 (1.381)	4.502 (1.158)
Highest year of schooling the parents completed	14.231 (2.277)	13.386 (2.152)	14.695 (2.210)
<i>School and state characteristics</i>			
Public school	0.913 (0.282)	0.965 (0.183)	0.884 (0.320)
Students in free/subsidized meals in school (%)	42.806 (22.621)	49.579 (23.611)	39.090 (21.165)

Table A2. Descriptive statistics for children in families with income between 100 and 300 percent of the FPL in 2007, continued.

	<b>Full sample</b>	<b>Ever-CHIP sample</b>	<b>Non-CHIP sample</b>
Real per capita income (\$1,000s)	37.912 (4.867)	37.622 (4.948)	38.071 (4.816)
Obese boys (%)	34.315 (3.913)	34.687 (3.913)	34.111 (3.900)
Obese girls (%)	28.998 (4.529)	29.862 (4.206)	28.524 (4.629)
Overweight adults (%)	36.579 (1.248)	36.580 (1.339)	36.579 (1.196)
Obese adults (%)	26.768 (2.675)	27.028 (2.665)	26.625 (2.671)
Public school student-teacher (%)	15.575 (2.471)	15.463 (2.536)	15.636 (2.433)
Real total tax revenues per student (\$1,000s)	11.012 (2.175)	10.901 (2.232)	11.072 (2.142)
Real instruction spending per teacher (\$1,000s)	59.703 (10.247)	58.968 (10.714)	60.107 (9.961)
Population with a bachelor's degree or higher (%)	26.372 (3.978)	26.100 (3.966)	26.521 (3.978)
Students in the National School Lunch Program (%)	63.519 (11.008)	64.266 (11.639)	63.110 (10.756)
Students in the School Breakfast Program (%)	20.929 (7.306)	22.377 (7.520)	20.136 (7.064)
Students in the Summer Food Services Program (%)	3.680 (2.685)	3.800 (2.819)	3.615 (2.608)
Observations	2,700	850	1,850

Notes: Standard deviations in parentheses. Sample sizes are rounded to the nearest 50 in order to comply with Department of Education non-disclosure requirements for ECLS-K, 1998. The “ever-CHIP” sample includes children who have ever gained CHIP coverage at any time during our sample period in 2000 through 2007, while the “non-CHIP” sample includes children who have not.



Table A3. Regression of years of CHIP enrollment on simulated eligibility instrument.

	Years of CHIP enrollment 1st-8th grade
Years of simulated CHIP eligibility, 1st-8th grade	0.176*** (0.042)
F-statistic	17.39
Observations	2,700

Notes: Levels of significance are \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Standard errors that are clustered on the state level are reported in parentheses. The numbers of observations are rounded to the nearest 50 in order to comply with Department of Education non-disclosure requirements for ECLS-K, 1998. The F-statistic corresponds to the hypothesis test that the coefficient on the duration of simulated CHIP eligibility is equal to zero. The control variables are the same as in Table 1.

**Appendix, Section B, Robustness Tests.**

We conduct a set of falsification tests to assess the validity of our identification strategy. To streamline the presentation of the results, we focus on routine medical care because the IV estimates are statistically significant only for this measure. To explore whether the increase in routine medical care due to CHIP enrollment is driven by preexisting trends in medical care utilization, we regress the probability of having a routine care in kindergarten on the duration of CHIP enrollment between first and eighth grade. Because we do not find a statistically significant association between these two variables it suggests our models are not picking up a spurious correlation (column 1 of Table A4).

While we cannot formally test the exclusion criteria of our instrument, we can examine whether the instrument has a direct effect on the outcome. Specifically, we include as a regressor the instrument in a probit model. This indirect test has been used by another paper examining the effect of attending Catholic schools on educational outcomes.<sup>15</sup> The estimates in column 2 of Table A4 indicate that the duration of simulated CHIP eligibility is not directly associated with the outcome variable.

In order to assess potential policy endogeneity, we also regress the duration of simulated eligibility on the set of state economic and demographic characteristics. None of the estimated coefficients are statistically significant, providing little evidence for the presence of policy endogeneity (see Table A5).

Finally, we subject our analysis to alternative analytical samples. It is not uncommon for children to experience short gaps in enrollment (generally 2-4 months) because CHIP's means-tested rules involve income and asset verification for enrollment and renewal.<sup>16</sup> If children with enrollment gaps were less likely to have access to routine medical care, then our estimates will be upwardly biased.<sup>6</sup> To address this concern, we investigate the sensitivity of our results by re-estimating two sets of models after removing: (i) children with multiple CHIP spells (trimming about 2.6% of the sample), and; (ii) states that provide 12 months of continuous eligibility (regardless of changes in household income during the year) in their CHIP programs during the sample period (AL, CA, IL, IA, KS, LA, ME, MI, MS, NY, NC, and WY). The estimates (Table A6) are largely unchanged using these subsamples, suggesting that short gaps in CHIP enrollment are unlikely to affect our main results.

Table A4. Falsification tests for the validity of the instrument.

	Kindergarten routine care	Routine care 1st-8th grade
	(1)	(2)
<i>Panel A. Non-IV marginal effect</i>		
Years of CHIP enrollment, 1st-8th grade	-0.002 (0.003)	0.026*** (0.006)
<i>Panel B. IV marginal effect</i>		
Years of CHIP enrollment, 1st-8th grade	-0.001 (0.027)	0.025*** (0.006)
Years of simulated CHIP eligibility, 1st-8th grade		0.015 (0.011)
Observations	2,600	2,700

Notes: Levels of significance are \*p<0.1, \*\*p<0.05, \*\*\*p<0.01. Standard errors that are clustered on the state level are reported in parentheses. The numbers of observations are rounded to the nearest 50 in order to comply with Department of Education non-disclosure requirements for ECLS-K, 1998. For column 1, an IV probit model is estimated. In column 2, we include the duration of simulated eligibility as a regressor in a probit model. All other control variables remain as described in the notes to Table 1.

Table A5. Regression of duration of simulated eligibility on state characteristics.

	OLS marg. effect
Real per capita income (\$1,000s)	0.000 (0.000)
Obese boys (%)	-1.464 (5.518)
Obese girls (%)	0.858 (5.737)
Overweight adults (%)	-0.314 (0.210)
Obese adults (%)	0.019 (0.135)
Public school student-teacher (%)	-0.042 (0.177)
Real total tax revenues per student (\$1,000s)	-0.000 (0.000)
Real instruction spending per teacher (\$1,000s)	0.000 (0.000)
Population with a bachelor's degree or higher (%)	0.086 (0.104)
Students in the National School Lunch Program (%)	-2.561 (2.478)
Students in the School Breakfast Program (%)	5.013 (4.692)
Students in the Summer Food Services Program (%)	4.802

(8.757)

Observations

2,700

---

Notes: Levels of significance are \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Standard errors that are clustered on the state level are reported in parentheses. The numbers of observations are rounded to the nearest 50 in order to comply with Department of Education non-disclosure requirements for ECLS-K, 1998.

Table A6. Estimated effect on access to routine medical care under alternative samples.

	Baseline	Excluding children experiencing multiple CHIP spells	Excluding states providing 12-month continuous eligibility
	(1)	(2)	(3)
<i>Panel A. Non-IV marginal effect</i>			
Years of CHIP enrollment, 1st-8th grade	0.026*** (0.006)	0.028*** (0.007)	0.024*** (0.006)
<i>Panel B. IV marginal effect</i>			
Years of CHIP enrollment, 1st-8th grade	0.090*** (0.034)	0.108*** (0.029)	0.086** (0.040)
First stage F-statistic	17.39	14.72	10.95
Observations	2,700	2,600	1,600

Notes: Levels of significance are \*p<0.1, \*\*p<0.05, \*\*\*p<0.01. Standard errors that are clustered on the state level are reported in parentheses. The numbers of observations are rounded to the nearest 50 in order to comply with Department of Education non-disclosure requirements for ECLS-K, 1998. In column 2, we exclude children experiencing multiple CHIP spells during the sample period in 2000 through 2007. In column 3, we exclude the states of Alabama, California, Illinois, Iowa, Kansas, Louisiana, Maine, Michigan, Mississippi, New York, North Carolina, and Wyoming, all of which have the 12-month continuous provision during this period. All other control variables remain as described in the notes to Table 1.

# The Commercial Determinants of Health in the Context of COVID 19

Eduardo J. Gómez and Lanie Fenster  
College of Health  
Lehigh University

**Abstract:** One of the major public health side effects of the COVID-19 pandemic was its contribution to non-communicable diseases (NCDs) and their associated risk factors such as obesity. At the same time, public health researchers became increasingly cognizant of how the commercial determinants of health contributed to this challenge. In this article, we contribute to this literature by discussing how major beverage and fast-food companies took advantage of this situation through a variety of strategies that essentially increased their profits at a time of worsening COVID-19 and NCD conditions. Despite overwhelming data highlighting worsening NCD and obesity problems, governments did not recognize this situation and introduce policies limiting industries from taking advantage of the pandemic situation. We conclude by providing several concrete political and policy actions that political leaders can take to avoid this situation in the future.

## Introduction

Within the past 2-3 decades, scholars and policymakers have become increasingly interested in the commercial determinants of health (CDoH). At its core, CDoH discusses the various ways through which major corporations—from soft drinks to gambling, social media, tobacco, and alcohol—influence our health. There has been evidence suggesting a correlation between the rise and prosperity of these industries and their harmful effects on population health, such as non-communicable diseases (NCDs) and their associated risk factors, e.g., obesity and type-2 diabetes. This association has kindled a large body of research and even the creation of university courses and programs that are focused on the commercial determinants of health.

However, in this article we wish to address the relationship between CDoH and the COVID-19 pandemic. Specifically, how did this pandemic facilitate industries' ability to affect our health and wellbeing? Did lockdowns and business closures, for example, create more venues for industries to market and sell their products? Did these industries target specific socioeconomic groups and demographics when advertising and selling their products? Have governments recognized these trends and done anything about it?

In this article, we argue that industries took advantage of the COVID-19 pandemic to advance their interests and products. When compared to pre-pandemic levels, marketing and sales of sodas and unhealthy fast foods burgeoned, especially in developing nations. Moreover, marketing and sales have, it seems, disproportionately affected children and the poor in these countries. Although several countries have been vocal proponents of addressing NCDs, their risk factors, such as obesity, have only gotten worse since the

pandemic emerged. Nevertheless, we find that governments have done little to deepen their commitment to regulating the commercial sector and its impact on our health.

## Methodology

In this article, we took a qualitative methodological approach to research. That is, we based our analysis on the usage of secondary qualitative data obtained from documents, such as peer-reviewed books, journal articles, policy reports, and media articles. We obtained this qualitative data through on-line search engines, such as *Google*. When searching for relevant documents, we used key word search terms, such as “COVID 19” and “NCDs” and “junk food.” Our research for this article started in July 2022 and concluded in March 2023.

## COVID-19 and NCDs

Non-communicable diseases (NCDs) are the leading causes of death, disease and disability worldwide. These diseases contribute to over 70% of global annual death rates, with the most common being cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes.<sup>2</sup> One’s likelihood of experiencing an NCD depends on numerous risk factors including behavioral, economic, environmental, and the social determinants of health. An individual is at a higher risk of developing an NCD if they engage in harmful behaviors, such as tobacco use, unhealthy eating habits, lack of physical activity, and alcohol abuse. Other risk factors include growing global urbanization (which may affect physical activity and diet, and more people living in heavily polluted environments), poverty and economic inequalities (which result in limited access to resources to maintain a healthy lifestyle), and biological factors such as genetics, age, and sex.<sup>3</sup>

In 2015, the World Health Organization estimated that 200 million people in North and South America were living with NCDs, and that if the modifiable risk factors, such as tobacco use, poor diet, insufficient physical inactivity, and alcohol use, were eliminated, 80% of all heart disease, stroke, and type 2 diabetes would be prevented and over 40% of cancer would be prevented.<sup>4</sup> The United States ranks 12th in the world for obesity, and approximately 36.9% of American adults over the age of 20 were considered obese, according to 2015-2016 data.<sup>5</sup>

---

<sup>2</sup> www.paho.org. (n.d.). *Noncommunicable Diseases - PAHO/WHO* | Pan American Health Organization. [online] Available at: [https://www.paho.org/en/topics/noncommunicable-diseases#:~:text=Noncommunicable%20diseases%20\(NCDs\)%20kill%2041](https://www.paho.org/en/topics/noncommunicable-diseases#:~:text=Noncommunicable%20diseases%20(NCDs)%20kill%2041).

<sup>3</sup> Jan 29, P. and 2019 (2019). *The U.S. Government and Global Non-Communicable Disease Efforts*. [online] KFF. Available at: <https://www.kff.org/global-health-policy/fact-sheet/the-u-s-government-and-global-non-communicable-diseases/#:~:text=Impact>.

<sup>4</sup> paho.org. (n.d.). *Non-communicable Diseases in the Americas: All sectors of society can help solve the problem*. [online] Available at: <https://www.paho.org/hq/dmdocuments/2011/paho-policy-brief-1-En-web1.pdf>.

<sup>5</sup> worldpopulationreview.com. (2022). *Obesity Rate by State 2020*. [online] Available at: <https://worldpopulationreview.com/state-rankings/obesity-rate-by-state>.



These alarming numbers can be heavily accredited to the rise of Big Food and Soda companies. According to a 2021 analysis conducted by *The Guardian* and *Food and Water Watch*, a small number of corporations have a significant influence on the majority of groceries purchased by Americans, accounting for almost 80% of the market share.<sup>6</sup> The study examined various products such as breakfast pastries, chips, soda, meat and animal products, and revealed that in most cases, only four corporations controlled the majority of the market.<sup>7</sup> Processed foods make up around 70% of the average American diet.<sup>8</sup> In terms of sugary drinks, in 2020 *Coca-Cola* and *PepsiCo* produce more than half of all soda consumed globally, and sales are especially on the rise in developing countries.<sup>9</sup> In recent years, Big Food and Soda companies have begun heavily investing in vulnerable, developing countries, marketing themselves as affordable options for meals, especially in regions of food insecurity. However, many of these countries are, in turn, reporting higher rates of obesity and other NCDs. The diets of humans globally are increasingly driven by several multinational food companies that primarily focus on maximizing profits rather than focusing on providing sufficient, nutritional options that can reduce the prevalence of NCDs.

Since the beginning of the pandemic, the situation has not improved, as the frequency of NCDs is currently on the rise. This can be accredited to two main reasons. First, COVID-19 has been a catalyst for destructive, modifiable risk factors. Global stay-at-home orders, travel restrictions, unemployment, online learning, and business closures are among a few of the numerous contributions to inactivity. A study published in England in late 2021 concluded that nationwide physical activity levels were 30% lower in the year 2020 compared to the levels of the population from 2016 to 2019.<sup>10</sup> Fitbit reported that within the first ten days of COVID-19's pandemic status, the United States saw a 12% decrease in step counts.<sup>11</sup> Additionally, now that people were staying home, the methods of obtaining food changed for many, resulting in an increased use of food delivery services (i.e., Doordash, UberEats, GrubHub, etc.). These services greatly benefited from the

<sup>6</sup> Walsh, O. (2022). *The Big Problem with Big Food*. [online] The Humane League. Available at: <https://thehumaneleague.org/article/big-food#:~:text=Monopolization%20of%20the%20food%20sector&text=%22It's%20widely%20agreed%20that%20consumers.%2C%22%20according%20to%20the%20researchers>

<sup>7</sup> Walsh, O. (2022). *The Big Problem with Big Food*. [online] The Humane League. Available at: <https://thehumaneleague.org/article/big-food#:~:text=Monopolization%20of%20the%20food%20sector&text=%22It's%20widely%20agreed%20that%20consumers.%2C%22%20according%20to%20the%20researchers..>

<sup>8</sup> Ryssdal, K. (2013). *Processed foods make up 70 percent of the U.S. diet - Marketplace*. [online] Marketplace. Available at: <https://www.marketplace.org/2013/03/12/processed-foods-make-70-percent-us-diet/>.

<sup>9</sup> Benjamin Wood, Phil Baker, Gyorgy Scrinis, David McCoy, Owain Williams, and Gary Sacks. 2021. "Maximising the Wealth of Few at the Expense of the Health of Many: A Public Health Analysis of Market Power and Corporate Wealth in Income Distribution in the Global Soft Drink Market," *Globalization and Health* 17(138).

<sup>10</sup> Strain, T., Sharp, S.J., Spiers, A., Price, H., Williams, C., Fraser, C., Brage, S., Wijndaele, K. and Kelly, P. (2021). Population level physical activity before and during the first national COVID-19 lockdown: A nationally representative repeat cross-sectional study of 5 years of Active Lives data in England. *The Lancet Regional Health - Europe*, [online] 12, p.100265. doi:<https://doi.org/10.1016/j.lanepe.2021.100265>.

<sup>11</sup> Fitbit Blog. (2020). *The Impact Of Coronavirus On Global Activity*. [online] Available at: <https://blog.fitbit.com/covid-19-global-activity/>.

pandemic. Since 2019, global installs of these applications increased by 25% in 2020, and 21% more in 2021.<sup>12</sup> While these installation rates are significant, rates of in-app use are even more remarkable. Global food delivery through these apps increased by 88% in 2020 (compared to 2019), and another 43% in 2021.<sup>13</sup> In North America specifically, these rates were even higher, with 122% more use in 2020, and 45% more in 2021.<sup>14</sup>

With more people ordering, higher volumes of fast foods and heavily-processed foods were being consumed. Along with this, alcohol consumption has increased during the pandemic, as a survey of U.S. adults showed that excessive drinking increased by 21%.<sup>15</sup> Therefore, like these junk foods, it appears that alcohol consumption increased during the pandemic when people were staying at home more often. Furthermore, scientists predict that this increase in alcohol consumption will result in “8,000 additional deaths from alcohol-related liver disease, 18,700 cases of liver failure, and 1,000 cases of liver cancer by 2040. In the short term, alcohol consumption changes due to COVID-19 are expected to cause 100 additional deaths and 2,800 additional cases of liver failure by 2023.”<sup>16</sup> Additionally, smoking behavior was heavily altered during the pandemic. A survey regarding smoking habits in relation to COVID-19 was administered in May 2020 by the Massachusetts General Hospital’s Tobacco Research and Treatment Center. The survey included current and former daily smokers who had been hospitalized prior to the pandemic and had previously participated in a smoking cessation clinical trial at hospitals in Massachusetts, Tennessee, and Pennsylvania.<sup>17</sup> 32% of respondents reported an increase in smoking, 37% decreased, and 31% remain unchanged.<sup>18</sup> The increase in smoking could

---

<sup>12</sup> Wetzler, T. (2021). *Food delivery apps continue to thrive following COVID-19-driven growth* | Adjust. [online] www.adjust.com. Available at: <https://www.adjust.com/blog/food-delivery-apps-thrive-following-covid-growth/>.

<sup>13</sup> Wetzler, T. (2021). *Food delivery apps continue to thrive following COVID-19-driven growth* | Adjust. [online] www.adjust.com. Available at: <https://www.adjust.com/blog/food-delivery-apps-thrive-following-covid-growth/>.

<sup>14</sup> Wetzler, T. (2021). *Food delivery apps continue to thrive following COVID-19-driven growth* | Adjust. [online] www.adjust.com. Available at: <https://www.adjust.com/blog/food-delivery-apps-thrive-following-covid-growth/>.

<sup>15</sup> Massachusetts General Hospital. (n.d.). *Alcohol consumption during the COVID-19 pandemic projected to cause more liver disease and deaths*. [online] Available at: <https://www.massgeneral.org/news/press-release/Alcohol-consumption-during-the-covid-19-pandemic-projected-to-cause-more-liver-disease-and-deaths#:~:text=A%20one%2Dyear%20increase%20in>.

<sup>16</sup> Massachusetts General Hospital. (n.d.). *Alcohol consumption during the COVID-19 pandemic projected to cause more liver disease and deaths*, page 1. [online] Available at: <https://www.massgeneral.org/news/press-release/Alcohol-consumption-during-the-covid-19-pandemic-projected-to-cause-more-liver-disease-and-deaths#:~:text=A%20one%2Dyear%20increase%20in>

<sup>17</sup> Cunningham, J. (2021). *Study reveals changes in cigarette smoking during the COVID-19 pandemic*. [online] massgeneral.org. Available at: <https://www.massgeneral.org/news/press-release/study-reveals-changes-in-cigarette-smoking-during-the-covid-19%20pandemic>.

<sup>18</sup> Cunningham, J. (2021). *Study reveals changes in cigarette smoking during the COVID-19 pandemic*. [online] massgeneral.org. Available at: <https://www.massgeneral.org/news/press-release/study-reveals-changes-in-cigarette-smoking-during-the-covid-19%20pandemic>.

be attributed to boredom and stress as a product of the pandemic, and the decrease could be due to the fear of catching COVID-19 and experiencing more severe side effects.<sup>19</sup>

The United States has seen a significant rise in NCDs since before the pandemic. A March 2021 American Psychological Association survey found that participants gained an average of 30 pounds of extra weight since the start of the pandemic.<sup>20</sup> An August 2021 study found that obesity rates in children between the ages of 5 and 11 increased by 9% in those few months (from 36% to 35%).<sup>21</sup> In February 2022, researchers found that rates of conditions, such as heart failure and stroke, were significantly more frequent in individuals who had contracted and recovered from COVID-19 compared to similar individuals who had not.<sup>22</sup> The study compared 150,000 individuals who survived COVID-19 infection and two groups of uninfected individuals.<sup>23</sup> The survivors showed remarkable increases in 20 cardiovascular problems over the year following infection.<sup>24</sup> They were 52% more likely to have had a stroke compared to the control groups, and the risk of heart failure rose by 72%.<sup>25</sup>

However, what role(s) did the commercial sector play in contributing to these NCD challenges during the COVID-19 pandemic? How, specifically, did they take advantage of the pandemic to advance their interests and profitability? And what can governments do about this? The next couple of sections explain.

## Industry Sales and Marketing Strategies During the Pandemic

For several decades, scholars have been following the rise and influence of major corporate entities. Since the advent of economic globalization through neoliberalism (i.e., increased trade and investment) beginning in the 1990s, major food and beverage companies have increased their investments in countries around the world, especially in developing nations.<sup>26</sup> The soft drink and ultra-processed foods sectors, for example, have seen the Global South as a wonderful opportunity to advance their products and sales. Indeed, recent

---

<sup>19</sup> Cunningham, J. (2021). *Study reveals changes in cigarette smoking during the COVID-19 pandemic*. [online] massgeneral.org. Available at: <https://www.massgeneral.org/news/press-release/study-reveals-changes-in-cigarette-smoking-during-the-covid-19%20pandemic>.

<sup>20</sup> www.beaumont.org. (n.d.). *Has the Pandemic Affected Obesity Rates?* [online] Available at: <https://www.beaumont.org/health-wellness/blogs/has-the-pandemic-affected-obesity-rates>.

<sup>21</sup> www.beaumont.org. (n.d.). *Has the Pandemic Affected Obesity Rates?* [online] Available at: <https://www.beaumont.org/health-wellness/blogs/has-the-pandemic-affected-obesity-rates>.

<sup>22</sup> Heart-disease risk soars after COVID — even with a mild case. (2022). *Nature*. [online] doi:<https://doi.org/10.1038/d41586-022-00403-0>.

<sup>23</sup> Heart-disease risk soars after COVID — even with a mild case. (2022). *Nature*. [online] doi:<https://doi.org/10.1038/d41586-022-00403-0>.

<sup>24</sup> Heart-disease risk soars after COVID — even with a mild case. (2022). *Nature*. [online] doi:<https://doi.org/10.1038/d41586-022-00403-0>.

<sup>25</sup> Heart-disease risk soars after COVID — even with a mild case. (2022). *Nature*. [online] doi:<https://doi.org/10.1038/d41586-022-00403-0>.

<sup>26</sup> Eduardo J. Gómez. 2023. *Junk Food Politics* (Baltimore: Johns Hopkins University Press).

research by Allyn Taylor and Michael Jacobson<sup>27</sup> reveals that major soft drink companies, such as *Coca-Cola* and *Pepsi*, have invested in several developing nations. In addition to increasing their financial investments, soda industries have also sought to influence the domestic political and social context in their favor, in turn finding ways to influence policy and society so that they may continue to prosper.<sup>28</sup>

When the COVID-19 pandemic emerged, industries responded in a strategic manner, taking advantage of a context of crisis --as had been seen in the past--<sup>29</sup> by engaging in several good will acts in order to bolster their social reputation and profits. These good will acts are commonly known as corporate social responsibility activities (CSR). Often emerging in response to public criticism of industry's harms to society, by engaging in CSR activities, businesses can increase their reputation of giving back to society, with some in fact viewing these acts as industry's moral obligation,<sup>30</sup> while also being viewed as genuine partners with government in addressing social needs and challenges. In the United States, for example, *PEPSI Co.* worked with health officials or local governments to establish COVID-19 testing sites.<sup>31</sup> And *Coca-Cola* provided donations to vulnerable populations and health systems during the pandemic.<sup>32</sup> Despite these efforts, scholars note that we should not ignore how these industries have also negatively influenced health policy when not in the public spotlight.<sup>33</sup> *PEPSI Co.*'s provision of testing sites is emblematic of the myriad of good-willed CSR activities that the food and beverage sector engage in a time of crisis to bolster their reputation and secure profitability. These kinds of activities were on display throughout the pandemic.<sup>34</sup> <sup>35</sup> Furthermore, during this time some underscored the irony of food industries positioning themselves as helping safeguard the public's health while at the same time selling products

---

<sup>27</sup> Allyn Taylor and Michael Jacobson. 2016. *Carbonating the World: The Marketing and Health Impact of Sugar Drinks in Low- and Middle-Income Countries* (Washington DC: Center for Science in the Public Interest).

<sup>28</sup> Eduardo J. Gómez. 2023. *Junk Food Politics* (Baltimore: Johns Hopkins University Press).

<sup>29</sup> May CI van Schalkwyk, Nason Maani, and Martin McKee. 2020. "Public Health Emergency or Opportunity to Profit? The Two Faces of the COVID-19 Pandemic," *The Lancet*; [http://doi.org/10.1016/S2213-8587\(21\)00001-2](http://doi.org/10.1016/S2213-8587(21)00001-2)

<sup>30</sup> Tjidde Tempels, Marcel Verweij, and Vincent Blok. 2017. "Big Food's Ambivalence: Seeking Profit and Responsibility for Health," *American Journal of Public Health* 107(3): 402-406.

<sup>31</sup> Global Health Advocacy Incubator. 2020. Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID 19.

<sup>32</sup> May CI van Schalkwyk, Nason Maani, and Martin McKee. 2020. "Public Health Emergency or Opportunity to Profit? The Two Faces of the COVID-19 Pandemic," *The Lancet*; [http://doi.org/10.1016/S2213-8587\(21\)00001-2](http://doi.org/10.1016/S2213-8587(21)00001-2)

<sup>33</sup> Ibid.

<sup>34</sup> Matthew Limb. 2020. "Covid-19: Food and Drink Companies are Exploiting Pandemic to Further Their Brands, Analysis Finds," *BMJ*; 370.

<sup>35</sup> See also Food Policies: In Times of COVID-19 and Beyond. 2021. *The Lancet*, May 7; published on-line; DOI: [https://doi.org/10.1016/S2213-8587\(21\)00123-6](https://doi.org/10.1016/S2213-8587(21)00123-6).

that undermined the public's health.<sup>36</sup> Some remind us that despite these CSR activities we have to recall that companies providing these activities, such as *Coca-Cola*, spent years striving to thwart the WHO and U.S. Centers for Disease Control's efforts to reduce the global obesity epidemic.<sup>37</sup>

The food and beverage industry has also taken advantage of the COVID-19 situation to increase the reach and sale of their products, especially in developing nations.<sup>38</sup> For example, the pandemic saw a burgeoning growth of television, radio, and on-line marketing of their products. It seems as if this was done in order to take advantage of individuals facing several weeks of quarantine. With more individuals in lockdown, fast food companies ramped up their drive-through, take out, and home delivery options.<sup>39</sup> Particularly in developing nations, during the pandemic there was also an increase in consumer demand for e-commerce products.<sup>40</sup> Major food retailers and fast food companies were pivoting to meet this growing e-commerce demand and providing home deliveries.<sup>41</sup> Research found that major food companies used strategies such as appealing to consumer nostalgia.<sup>42</sup> For instance, *McDonald's* in Colombia advertised statements hinting at missing their products while suggesting that they could still be ordered online through apps.<sup>43</sup> Analysts found that *Burger King* ramped up its on-line apps and encouraged that people should stay home and reward themselves with a burger.<sup>44</sup>

In other instances, industry used "cause marketing campaigns," revealing how consumers of their products could contribute to charitable causes and helped consumers "feel good about contributing to a social cause, even when buying unhealthy products;"<sup>45</sup>

---

<sup>36</sup> See Lucy Westerman's discussion of this point in Matthew Limb. 2020. "Covid-19: Food and Drink Companies are Exploiting Pandemic to Further Their Brands, Analysis Finds," *BMJ*; 370.

<sup>37</sup> May CI van Schalkwyk, Nason Maani, and Martin McKee. 2020. "Public Health Emergency or Opportunity to Profit? The Two Faces of the COVID-19 Pandemic," *The Lancet*; [http://doi.org/10.1016/S2213-8587\(21\)00001-2](http://doi.org/10.1016/S2213-8587(21)00001-2)

<sup>38</sup> *Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID-19*. Global Health Advocacy Incubator.

<sup>39</sup> Nina Trentmann and Mark Maurer. 2020. "Fast-Food Chains See Shifts Made During Pandemic Paying Off," *The Wall Street Journal*, July 29.

<sup>40</sup> Thomas Reardon, Amir Heiman, Liang Lu, Chandra S.R. Nuthalapati, Rob Vos, and David Zilberman. 2021. "'Pivoting' by Food Industry Firms to Cope with COVID-19 in Developing Nations: E-Commerce and 'Copivoting' Delivery Intermediaries," *Agricultural Economics*, DOI: 10.1111/agec.12631.

<sup>41</sup> Thomas Reardon, Amir Heiman, Liang Lu, Chandra S.R. Nuthalapati, Rob Vos, and David Zilberman. 2021. "'Pivoting' by Food Industry Firms to Cope with COVID-19 in Developing Nations: E-Commerce and 'Copivoting' Delivery Intermediaries," *Agricultural Economics*, DOI: 10.1111/agec.12631.

<sup>42</sup> *Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID-19*. Global Health Advocacy Incubator.

<sup>43</sup> *Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID-19*. Global Health Advocacy Incubator.

<sup>44</sup> Matthew Limb. 2020. "Covid-19: Food and Drink Companies are Exploiting Pandemic to Further Their Brands, Analysis Finds," *BMJ*; 370.

<sup>45</sup> *Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID-19*. Global Health Advocacy Incubator, p.12.

*Burger King*, for example, promised to allocate a portion of their sandwich sales to Brazil's public health system during the pandemic.<sup>46</sup> During this time it was also found that major corporations were advertising their products as necessary for strengthening the immune system and that their ultra-processed foods were free of infection.<sup>47</sup> *Kraft Heinz's* northern European division at the time was committed to helping strengthen peoples' immune system.<sup>48</sup> *Kraft Heinz* also realized that they had not emphasized to consumers the health benefits of their products, such as beans.<sup>49</sup>

## Government Response

But how did governments respond to this vexing situation? Since the COVID-19 pandemic emerged, did governments decide to take on the power and interests of major food and beverage industries? Or did governments acquiesce, yet again, to industries' political, economic, and social influence?

Unfortunately, it seems that COVID-19 did not instigate a heightened government effort to reduce industry's influence over politics and policy. To our knowledge, in recent years few nations have enacted concrete legislation limiting the marketing and sale of sugary sweetened beverages and ultra-processed foods.<sup>50</sup> As Gómez (2023) maintains,<sup>51</sup> this occurred despite the introduction of several national soda taxes *prior to* the pandemic, as seen in Mexico, India, South Africa, and Chile. This fiscal momentum should have carried over to advertising, sales, and food labeling regulations. Thus, it seems that despite the overwhelming evidence that NCDs and their risk factors increased during the pandemic, and that food and beverage industries took advantage of the situation, this did not kindle a stronger government policy response in most countries.

However, in some cases political leaders have recognized the harms that junk foods posed during the pandemic. In Mexico, for example, *Coca-Cola* has dominated the soft drink market since the 1970s. This was aided by the fact that one of Mexico's former presidents, Vicente Fox, was a Latin America regional *Coca-Cola* executive prior to becoming president. Despite *Coca-Cola* being firmly embedded within Mexican politics and culture (in some areas, the soda has been incorporated into religious ceremonies),<sup>52</sup>

---

<sup>46</sup> *Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID-19*. Global Health Advocacy Incubator.

<sup>47</sup> *Facing Two Pandemics: How Big Food Undermined Public Health in the Era of COVID-19*. Global Health Advocacy Incubator.

<sup>48</sup> Simon Harvey. 2021. "How Might Lessons Learnt from COVID Influence Food Company Strategy?" *Food Magazine*, April 6.

<sup>49</sup> Simon Harvey. 2021. "How Might Lessons Learnt from COVID Influence Food Company Strategy?" *Food Magazine*, April 6.

<sup>50</sup> Eduardo J. Gómez. 2023. *Junk Food Politics* (Baltimore: Johns Hopkins University Press).

<sup>51</sup> Eduardo J. Gómez. 2023. *Junk Food Politics* (Baltimore: Johns Hopkins University Press).

<sup>52</sup> Jessica Tyler. 2018. "There's a Church in Mexico Where Coca-Cola is used in Religious Ceremonies," *Insider*, August 2; <https://www.businessinsider.com/coca-cola-church-in-mexico-uses-coke-religious-ceremonies-2018-8>

recently President Andrés Manuel López Obrador, aka, “Amlo,” publicly stated that *Coca-Cola* is bad for your health.<sup>53</sup> What’s more, Amlo even applauded the famous world soccer player, Christian Ronaldo, for publicly removing a couple of *Coca-Cola* bottles from his table during a press conference in 2021.<sup>54</sup> This public declaration appears to suggest a critical shift in the government’s relationship with *Coca-Cola*, while recognizing that in a time of public health crisis, ensuring that the public eats well and that people strengthen their immune system is a priority. What this situation also suggests is that we should remain optimistic that Mexico and other governments can eventually decide to pursue more stringent regulatory legislation against powerful corporate entities.

In the U.K., Prime Minister Boris Johnson also appeared to have noticed the role of junk foods in making the COVID-19 situation worse for the general public. After recovering from the virus, some claim that Johnson publicly acknowledged how his obese condition played a role in his experience with the virus.<sup>55</sup> Indeed, according to Helena Bottemiller Evich of *POLITICO*, Johnson claimed at the time that “When I went into ICU, when I was really ill ... I was way overweight.”<sup>56</sup> Interestingly, Johnson then worked with policymakers to ensure a ban on TV junk food advertising before 9pm, a requirement that restaurants include calories on their menus and that stores provide healthy foods in checkout lines.<sup>57</sup>

Unfortunately, analysts note that no such government awareness and response emerged in the U.S. linking COVID-19 to diet and disease.<sup>58</sup> This is troubling if one considers the ongoing challenge of obesity, type-2 diabetes, and the prevalence of food deserts in low-income neighborhoods throughout the U.S.. Nevertheless, signs of presidential awareness and concern in Mexico and the U.K. give hope that other countries are realizing the linkages between COVID-19 and the commercial determinants of health. This is certainly a lesson that U.S. policymakers can learn from.

---

<sup>53</sup> *Pulse News Mexico*. 2022. “AMLO Wages War ... on Coca-Cola,” December 8; [https://pulsenewsmexico.com/2022/12/08/amlo-wages-war-on-coca-cola/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=amlo-wages-war-on-coca-cola](https://pulsenewsmexico.com/2022/12/08/amlo-wages-war-on-coca-cola/?utm_source=rss&utm_medium=rss&utm_campaign=amlo-wages-war-on-coca-cola)

<sup>54</sup> Infobae. 2021. “Tengan para que aprendan:” AMLO aplaude gesto de Cristiano Ronaldo contra Coca Cola,” July 8; <https://www.infobae.com/america/mexico/2021/07/08/tengan-para-que-aprendan-amlo-aplaude-gesto-de-cristiano-ronaldo-contra-coca-cola/>

<sup>55</sup> Helena Bottemiller Evich. 2021. “Diet-related Diseases Pose a Major Risk for COVID-19. But the U.S. Overlooks Them,” *POLITICO*, October 31; <https://www.politico.com/news/2021/10/31/covid-deaths-diet-diseases-nutrition-america-517076>

<sup>56</sup> Helena Bottemiller Evich. 2021. “Diet-related Diseases Pose a Major Risk for COVID-19. But the U.S. Overlooks Them,” *POLITICO*, October 31; <https://www.politico.com/news/2021/10/31/covid-deaths-diet-diseases-nutrition-america-517076>

<sup>57</sup> Helena Bottemiller Evich. 2021. “Diet-related Diseases Pose a Major Risk for COVID-19. But the U.S. Overlooks Them,” *POLITICO*, October 31; <https://www.politico.com/news/2021/10/31/covid-deaths-diet-diseases-nutrition-america-517076>

<sup>58</sup> Helena Bottemiller Evich. 2021. “Diet-related Diseases Pose a Major Risk for COVID-19. But the U.S. Overlooks Them,” *POLITICO*, October 31; <https://www.politico.com/news/2021/10/31/covid-deaths-diet-diseases-nutrition-america-517076>

## Conclusion

The COVID-19 pandemic affected our health, politics, and society in many ways. However, we have not thoroughly explored how the pandemic was shaped and taken advantage of by the commercial determinants of health. In this article, we have expressed the fact that major beverage and fast-food establishments took advantage of the pandemic to advance their positions and profits. Unfortunately, this occurred at a time when NCDs and their associated risk factors, such as obesity, burgeoned. One can certainly argue that public policy measures recommended (or in some cases, mandated) to safeguard the public from the virus, such as quarantine and lockdown, eventually contributed to NCDs challenges by making sedentary individuals more vulnerable to alcohol, soda, and fast-food advertising. Safeguarding the public's health from COVID-19 had the ironic consequence of in some instances *worsening* the public's health.

Going forward, what can governments do to ensure that this never happens again? More specifically, with respect to policy, what can national and state governments do to ensure that major beverage and food industries do not take advantage of health pandemics and prioritize their profits over the public's health?

First, political leaders can decide not to partner with these industries to provide healthcare and other related social services. While industries may be well intentioned, the problem is that these types of partnerships may help to legitimize industry, build social legitimacy and support, and in the process incentivize politicians not to pursue regulations on marketing and sales.<sup>59</sup> Second, political leaders can provide public awareness campaigns about the importance of eating well and avoiding unhealthy foods. These public health messages should be an integral part of the government's public health recommendations. Furthermore, it may be a good idea to specify which kinds of food products are harmful to individual health and recommend avoiding them. Finally, if governments recommend or mandate home lockdowns, introducing legislation that prohibits the advertising of unhealthy foods during this period should be considered. These can be temporary measures with the goal of ensuring that stressed and vulnerable individuals are not overwhelmed with junk food advertising.

---

<sup>59</sup> Eduardo J. Gómez. 2023. *Junk Food Politics* (Johns Hopkins University Press).