

Native American Healthcare, Bureaucracy, and Poverty: Institutional Problems and Solutions

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ABSTRACT

For decades, Native Americans have experienced a shorter life expectancy and worse health outcomes than have other Americans. This paper examines some of the causes behind these outcomes and potential ways to improve them. A majority of Native Americans use the Indian Health Service (IHS), a healthcare system funded and managed by the federal government. The IHS has struggled chronically with underfunding and bureaucratic shortcomings, which are two important sources of health disparities. At a deeper level, however, pervasive poverty has contributed to poor health outcomes. The literature has found that poverty and poor health outcomes are interrelated. Current institutional arrangements that limit economic development have contributed to disproportionate poverty rates for Native Americans. Our recommendations for improving Native American healthcare outcomes range from immediate, small-scale policy changes to long-term, large-scale institutional reforms. In the most immediate sense, Congress could allocate more funding to the IHS, which is a practical, short-term solution to deliver more healthcare. However, more funding will not remove the institutional issues that contribute to poor health outcomes. Reforms to IHS institutions and policies are needed to increase supply and improve quality. In addition, removing institutional barriers to economic development will reduce poverty, thus leading to improved health outcomes.

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1. INTRODUCTION

Since systematic data has been collected, Native Americans have experienced higher rates of health problems than the general American population and other racial and ethnic minority groups.¹ Today, the average Native American dies five and a half years sooner than the average American.² When compared with the national rate, Native American deaths due to type II diabetes are more than three times as high, deaths due to chronic liver disease and cirrhosis are more than four times as high, and deaths due to accidents are at least twice as high for Native Americans. Childbirth-related deaths for Native Americans are twice the national average. Death rates due to tuberculosis, pneumonia, influenza, and heart disease also exceed the general population's rates.³ In the Native American population, sexually transmitted infection rates are nearly four times the national average, HIV rates are twice the national average, and obesity rates are 1.6 times the national average.⁴ The rates of alcohol-induced deaths for Native Americans increased significantly from 2000 to 2016, and the rates were roughly five times higher than for Latinos and Blacks.⁵ Native Americans also

1. Donna E. Shalala et al., "Regional Differences in Indian Health: 1998–1999," Indian Health Service, 1999; Joseph P. Kalt et al., *The State of the Native Nations: Conditions under U.S. Policies of Self-Determination* (New York: Oxford University Press, 2008); Karen Chartier and Raul Caetano, "Ethnicity and Health Disparities in Alcohol Research," *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism* 33, no. 1–2 (2010): 152–60; Indian Health Service, "Fact Sheets: Indian Health Disparities," October 2019, https://www.ihs.gov/sites/newsroom/themes/responsive2017/display_objects/documents/factsheets/Disparities.pdf.

2. Indian Health Service, "Fact Sheets: Indian Health Disparities."

3. Indian Health Service, "Fact Sheets: Indian Health Disparities"; Emily E. Petersen et al., "Racial/Ethnic Disparities in Pregnancy-Related Deaths: United States, 2007–2016," *Morbidity and Mortality Weekly Report* 68, no. 35 (September 6, 2019): 762–65.

4. Petersen et al., "Racial/Ethnic Disparities in Pregnancy-Related Deaths."

5. Susan Spillane, Meredith Shiels, and Ana Best, "Trends in Alcohol-Induced Deaths in the United States, 2000–2016." *JAMA Network Open* 3, no. 2 (Feb. 2020): e1921451.

TABLE 1. RISK FOR COVID-19 INFECTION, HOSPITALIZATION, AND DEATH BY RACE/ETHNICITY

Rate ratios compared with white, non-Hispanic persons	American Indian or Alaska Native, non-Hispanic persons	Asian, non-Hispanic persons	Black or African American, non-Hispanic persons	Hispanic or Latino persons
Cases	1.6x	0.6x	1.0x	1.6x
Hospitalization	3.3x	0.8x	2.6x	2.5x
Death	2.2x	0.9x	1.9x	2.1x

Sources: Centers for Disease Control and Prevention, "Hospitalization and Death by Race/Ethnicity," November 22, 2021, <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>; Centers for Disease Control and Prevention, "Provisional COVID-19 Deaths: Distribution of Deaths by Race and Hispanic Origin," November 15, 2021, <https://data.cdc.gov/NCHS/Provisional-COVID-19-Deaths-Distribution-of-Deaths/pj7m-y5uh>; Centers for Disease Control and Prevention, "Rates of COVID-19-Associated Hospitalization," January 20, 2022, https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html.

face later-stage cancer diagnoses, even for cancers that can be diagnosed early, which reduces the chance of survival.⁶

During the first year of the COVID-19 pandemic, Native Americans suffered disproportionately from the disease.⁷ By 2021, Native Americans faced the highest rates of infection, hospitalization, and death due to COVID-19 when compared with any other race/ethnicity in the United States, as seen in table 1.

What are the most important causes of and possible solutions to the disproportionate health problems of Native Americans? In this paper, we argue that two of the leading contributors to Native American health problems are pervasive poverty and shortcomings within the Indian Health Service (IHS). First, at the micro level, we conduct an institutional analysis of the IHS and consider ways to improve it so that it can more effectively and efficiently provide healthcare. Improving the IHS healthcare delivery system is likely to improve Native American health outcomes, at least to some degree. Our analysis shows that improving healthcare delivery will require reforms to the IHS, including increased funding and better means of internal accountability.

Then, at a more macro level, we examine the broader institutional barriers to Native American economic development that contribute to pervasive poverty. Improving Native American health outcomes will require addressing

6. Donald Warne, Judith Kaur, and David Perdue, "American Indian/Alaska Native Cancer Policy: Systemic Approaches to Reducing Cancer Disparities," *Journal of Cancer Education* 27, no. S1 (April 2012): 18–23.

7. Adam Crepelle and Ilia Murtazashvili, "COVID-19, Indian Reservations, and Self-Determination" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, July 2020), https://www.mercatus.org/system/files/murtazashvili_and_crepelle_-_policy_brief_-_cfi_series_-_covid_and_indian_reservations_-_v1.pdf; Desi Rodriguez-Lonebear et al., "American Indian Reservations and COVID-19: Correlates of Early Infection Rates in the Pandemic," *Journal of Public Health Management & Practice* 26, no. 4 (2020): 371–77.

the institutional causes of poverty, including property rights and other governance structures. Those institutions are the haphazard product of nearly 200 years of policies that were designed to assimilate Native Americans, change their traditional property rights and governance structures, dispossess them of their land, and geographically segregate them from other populations. Although such institutions have created significant health impacts, federal and tribal policymakers can reform those institutions to lower the transaction costs to private enterprise and entrepreneurship, which will help reduce poverty and poverty-caused health problems.

The federal government has been and continues to be the primary provider of healthcare for millions of Native Americans. The federal government began directly providing some healthcare services to some Native American communities in the early 19th century, which expanded over time. In 1955, Congress created the IHS as the federal agency devoted to providing comprehensive healthcare to Native Americans. Today, the IHS system provides a variety of healthcare services to eligible Native Americans, including day-to-day healthcare services, surgery, dental services, mental health services, optometry services, substance-abuse services, and pharmacy services. At many IHS facilities, the various services are all provided in the same location.

In the decades since the IHS's inception, many scholars and policymakers have criticized the agency's performance along many margins. Fulfilling the IHS's obligation to provide healthcare to Native Americans has proven difficult for several reasons, including underfunding and bureaucratic shortcomings. In addition, legal and sociocultural factors have made it difficult to improve health outcomes. Those factors include widespread poverty in the Native American community, a lack of access to social services, a lack of access to both IHS and external healthcare facilities, and a history of problematic institutions, among others. Our research here builds on previous research related to improving the IHS system.⁸

In addition to issues with the IHS, perhaps the most important determinant of health disparities is the disproportionate poverty that Native Americans

8. Holly E. Cerasano, "The Indian Health Service: Barriers to Health Care and Strategies for Improvement," *Georgetown Journal on Poverty Law and Policy* 24, no. 3 (Spring 2017): 421–40; Tiffany Henley and Maureen Boshier, "The Future of Indian Health Services for Native Americans in the United States: An Analysis of Policy Options and Recommendations," *Health Economics Policy and Law* 11, no. 4 (October 2016): 397–414; Cleve Davis, "Treaty and Trust Responsibility Funding Trends in Indian Country: Focus on the Indian Health Service," *Journal of Native Sciences* 1, no. 1 (January 2020): 1–22; Danielle Delaney, "The Master's Tools: Tribal Sovereignty and Tribal Self-Governance Contracting/Compacting," *American Indian Law Journal* 5, no. 2 (2017): 308–45.

experience. Scholarship has recognized an interdependent relationship between poverty and poor health outcomes. Individuals who struggle with health problems are less productive and have fewer opportunities to build human capital or engage in entrepreneurship, thus limiting the possibility for economic growth. When economic growth is limited, people have fewer resources for health-promoting lifestyles and less access to quality healthcare.⁹

Roughly one-quarter of the Native American population lives below the federal poverty line. In some places, the Native American poverty rate is more than double that of the general population. On the Navajo Nation—the most populous reservation in the country—the poverty rate hovers around 40 percent. In addition to widespread poverty, Native Americans face worse outcomes in education and employment.¹⁰ The reasons behind Native American poverty are complex, including historical segregation and discrimination and the legal structures that raise the costs of socially productive entrepreneurship.

Although each reservation is unique, several institutions are shared by most reservations. Institutions are the “rules of the game” in which human action takes place. Formal institutions, such as legislation and regulations, directly affect the way in which human activity takes place. Informal institutions, such as social norms and civic groups, also influence how humans behave. Reservations share at least three important formal institutional structures: the unique property-rights regime of the federal land trust, a system of dual federal-tribal bureaucratic governance, and legal-political uncertainty. Those structures impose high transaction costs on individuals and tribal entities that attempt to engage in private enterprise, entrepreneurship, and innovation.

The results of the institutional barriers include lower rates of economic growth and entrenched poverty, which ultimately limit access to healthcare. Institutional reforms on reservations could remove or mitigate such barriers,

9. Jamison Bhargava et al., “Modeling the Effects of Health on Economic Growth,” *Journal of Health Economics* 20, no. 3 (2001): 423–40; David N. Weil, “Accounting for the Effect of Health on Economic Growth,” *Quarterly Journal of Economics* 122, no. 3 (2007): 1265–306; Simon Lange and Sebastian Vollmer, “The Effect of Economic Development on Population Health: A Review of the Empirical Evidence,” *British Medical Bulletin* 121, no. 1 (January 2017): 47–60.

10. Kalt et al., *The State of the Native Nations*; US Bureau of Labor Statistics, “Labor Force Characteristics by Race and Ethnicity, 2018,” October 2019, [https://www.bls.gov/opub/reports/race-and-ethnicity/2018/home.htm#:~:text=The%20employment%E2%80%933population%20ratio%20was,%2C%205%2C%20and%205A](https://www.bls.gov/opub/reports/race-and-ethnicity/2018/home.htm#:~:text=The%20employment%E2%80%933population%20ratio%20was,%2C%205%2C%20and%205A;); Arizona Rural Policy Institute, “Demographic Analysis of the Navajo Nation Using 2010 Census and 2010 American Community Survey Estimates,” accessed April 21, 2021, https://gotr.azgovernor.gov/sites/default/files/navajo_nation_0.pdf; Narayana Kocherlakota, “Persistent Poverty on Indian Reservations: New Perspectives and Responses,” Speech at Federal Reserve System Community Development Research Conference, Washington, DC, April 3, 2015.

which would spur entrepreneurship, promote economic development, and reduce poverty. Relatedly, many Native Americans live in rural and isolated areas near reservations. Native Americans in rural areas, like other rural people, often experience fewer economic opportunities and fewer options for healthcare. Removing barriers to rural economic development could also improve the quality of life for many Native Americans.

This paper's recommendations range from small-scale, practical policy changes to large-scale institutional changes that could rearrange governance structures in more effective and efficient ways. As we discuss in this paper, short-term changes are *reforms within the existing institutional structure*; larger changes are *reforms through new institutional structures or the removal of problematic institutions*.

For small-scale policy changes, Congress could increase funding for the IHS, which is an immediate and practical solution for delivering more healthcare to more individuals. However, increasing IHS funding will not solve the underlying management problems in the IHS or the institutional problems contributing to widespread poverty. Larger-scale institutional reforms to the IHS will be necessary to make the agency a more effective and efficient provider of healthcare. Those institutional reforms might include new funding allocation policies, implementing better means of accountability, removing barriers to healthcare innovation, or removing barriers to willing healthcare providers.

At the largest level, reducing poverty will also require removing institutional barriers to economic development and innovation. Such broad institutional reforms include the streamlining of the federal land trust system, removing unproductive red tape, separating tribal politics from tribal business decisions, and reducing legal uncertainty when ambiguity exists. Both small-scale and large-scale reforms are important for a holistic approach to improving Native American healthcare. This paper focuses mainly on Native Americans who live on and near reservations; improving health outcomes for urban Native Americans will require a different analysis.

This paper proceeds as follows. In section 2, we examine the IHS's history and institutional structure to analyze why Native American health outcomes have been relatively poor. Then we suggest some potential reforms to the IHS system. In section 3, we review the literature regarding economic growth as a remedy for healthcare problems. Then we discuss institutional barriers to economic growth and entrepreneurship on Native American reservations and rural areas. Section 4 concludes with the implications of this research.

2. INDIAN HEALTH SERVICE

To understand how to improve Native American health outcomes, it is important to understand the history of the IHS and how the IHS system operates. An understanding of the IHS's history and institutional details helps explain its underperformance and potential solutions to that underperformance.

2.1. IHS History and Overview

The federal government's provision of healthcare to Native Americans has grown out of the government-to-government relationship between the federal government and Native American tribes.¹¹ Article I, Section 8, of the US Constitution is the foundation of this relationship; it states that Congress can "regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes." Using this constitutional basis, the federal government expanded its role in overseeing Native American affairs through many treaties, laws, Supreme Court decisions, and executive orders.¹² As early as the 1830s, the US government provided healthcare to some tribes as a provision of land treaties. The Snyder Act of 1921 gave explicit authorization for federal appropriations for Native healthcare. From the 1920s through the 1950s, the Bureau of Indian Affairs (BIA) oversaw the provision of Native American healthcare, as well as its managing tribal lands and resources.¹³

In 1955, Congress established the IHS within the US Department of Health and Human Services (HHS) to provide healthcare to members of federally recognized Native American tribes.¹⁴ Like the Veterans Health Administration (VHA), the IHS is a federally managed direct provider of healthcare. Immediately before the IHS's conception, Native Americans faced grim health problems: infant mortality and childbirth-related deaths were nearly three times higher than for

11. The IHS and other federal agencies often use the term *American Indians and Alaska Natives*, but the authors will use the term *Native Americans* in this paper as an inclusive term for all peoples native to the United States.

12. The constitutional basis for federal control over Native Americans is rooted in Supreme Court decisions made during the John Marshall era, which expanded the interpretation of the constitutional provisions of the "Indian Commerce" clause.

13. Kalt et al., *The State of the Native Nations*. The Department of the Interior has overseen Native American affairs since 1849 when the Bureau of Indian Affairs was transferred from the Department of War.

14. Congress created the IHS in the height of the "Termination Era," which was an era of assimilationist policy in the 1950s. During that period, the federal government engaged in relocation programs to move Native Americans to urban centers, and it terminated the federal recognition of many smaller tribes. Like other policies during the Termination Era, the history of the early IHS was marred by controversies and rights violations, including forced sterilizations, which occurred through the 1970s.

whites, tuberculosis was prevalent, and deaths by diarrhea and dehydration were two times higher than the national average. When the IHS was established, life expectancy for Native Americans was nine years below the national average.¹⁵ In the decades following the IHS's creation, overall health outcomes for Native Americans improved, including life expectancy, which is now just 5.5 years below the national average.¹⁶ In the first 25 years of the IHS, infant mortality fell by 82 percent, the maternal death rate fell by 89 percent, the mortality rate from tuberculosis fell by 96 percent, and deaths from diarrhea and dehydration fell by 93 percent.¹⁷ Those health-outcome improvements can be attributed, at least in part, to the IHS but also to greater health-related knowledge, technological advancements in healthcare, and reductions in poverty. Despite improvement during the past several decades, Native Americans' health outcomes remain behind national averages on nearly all margins.¹⁸

In the late 1960s and early 1970s, the federal government began pursuing policies of “self-determination,” meaning that the federal government granted tribal governments more sovereignty and autonomy to create local policies. Today, self-determination is still nominally the federal government's approach. One landmark piece of legislation was the Indian Self-Determination and Education Assistance Act of 1975 (ISDEAA), which allowed tribes to assume the management and control of healthcare programs, among many other government functions. Under ISDEAA, many tribes have now taken over the administrative and programmatic roles that were once carried out solely by the IHS or other federal agencies. This act was instrumental in increasing the flexibility in local governance, including the provision of healthcare, because it shifted decision-making power from centralized federal policymakers to local tribal governments. By giving tribal governments more decision-making power over their healthcare provision, many tribes developed their own nonprofit healthcare organizations to provide services and receive grants.¹⁹ After decades of tense relations and distrust, the ISDEAA ushered in a new era of expectations and relationships between tribal leaders and federal bureaucrats.²⁰

15. Abraham B. Bergman et al., “A Political History of the Indian Health Service,” *Milbank Quarterly* 77, no. 4 (January 1, 1999): 571–604.

16. Indian Health Service, “Fact Sheets: Indian Health Disparities.”

17. Bergman et al., “A Political History of the Indian Health Service.”

18. Shalala et al., “Regional Differences in Indian Health: 1998–1999”; Chartier and Caetano, “Ethnicity and Health Disparities in Alcohol Research”; Warne, Kaur, and Perdue, “American Indian/Alaska Native Cancer Policy,” 21; Indian Health Service, “Fact Sheets: Indian Health Disparities”; Petersen et al., “Racial/Ethnic Disparities in Pregnancy-Related Deaths.”

19. Warne et al., “American Indian/Alaska Native Cancer Policy,” 19.

20. Bergman et al., “A Political History of the Indian Health Service.”

In 1976, the Indian Health Care Improvement Act became another influential and far-reaching piece of legislation related to Native American health. The new law clarified the federal government’s responsibility to provide Native Americans with quality healthcare and allowed the IHS to be reimbursed by Medicare and Medicaid for services provided to eligible Native Americans at IHS facilities. Before the 1976 law, many Native Americans were technically eligible for Medicaid and Medicare services, but they had no practical way to access those services without traveling prohibitively long distances to Medicaid and Medicare providers located off-reservation.²¹

Today, the IHS provides healthcare services in three main ways: (a) by using its own hospital and health centers, (b) by contracting with tribes who manage their own hospitals and health centers, and (c) by purchasing specialty services through private hospitals and health centers.²² Services provided directly by a facility in the IHS system, whether run by the IHS or a tribe, are known as “direct care.” Services provided at a facility not in the IHS system, but paid for by the IHS, are known as “purchased/referred care.”²³ Individuals become eligible to receive IHS-system healthcare services through tribal membership, reservation residence, participation in tribal activities, or any reasonable factor indicative of Native American descent such as a Certificate of Indian Blood.

The IHS also provides care for “eligible non-Indians,” such as children of eligible individuals, spouses of eligible individuals, and women pregnant with an eligible individual’s child.²⁴ Approximately 2.6 million individuals from more than 500 federally recognized tribes are eligible for the IHS’s healthcare services.²⁵ In 2017, even though more than 2 million people were eligible, the IHS served only about 1.6 million individuals.²⁶

21. National Indian Health Board, “Brief History of the Indian Health Care Improvement Act,” accessed April 21, 2021, <https://www.nihb.org/tribalhealthreform/ihsia-history/>; Indian Health Service, “Indian Health Care Improvement Act Made Permanent,” press release, March 27, 2010; Centers for Medicare and Medicaid Services, “Indian Health Care Improvement Act,” accessed April 21, 2021, <https://www.medicare.gov/medicaid/indian-health-medicare/indian-health-care-improvement-act/index.html>.

22. Ralph Forquera, “Issue Brief: Urban Indian Health” (Issue Brief, Henry J. Kaiser Family Foundation, Menlo Park, CA, November 2001).

23. Indian Health Service, “Purchased/Referred Care (PRC),” accessed April 30, 2021, <https://www.ihs.gov/prc/>.

24. Indian Health Service, *Indian Health Manual*, Part 2, Chapter 1, 2-1.2, August 17, 2005, <https://www.ihs.gov/ihs/pc/part-2/p2c1/>.

25. Suzanne Murrin, “Organizational Challenges to Improving Quality of Care in Indian Health Service Hospitals” (US Department of Health and Human Services, Office of Inspector General, August 2019).

26. Government Accountability Office, “Indian Health Service: Spending Levels and Characteristics of IHS and Three Other Federal Health Care Programs,” GAO-19-74R, December 10, 2018,

The IHS's organizational structure is similar to other federal agencies. At the IHS's central office in Rockville, Maryland, the director of the IHS heads the agency. The director oversees agency-wide decisions and is assisted by several deputy directors, as well as a chief of staff, a chief medical officer, and a senior adviser to the director. Under the supervision of the director, several offices perform administrative functions for the IHS, such as the Office of Direct Service and Contracting Tribes, the Office of Public Health Support, the Office of Resource Access and Partnerships, and the Office of Finance and Accounting, among others.²⁷

The IHS's central office coordinates with 12 subdivisions known as "areas," which are each headed by a director. The 12 areas vary in geographical size depending on the eligible population of Native Americans in each area. For example, the Nashville Area includes a large area from Texas to Maine. The Portland Area includes Idaho, Oregon, and Washington. The Navajo Area includes just the Navajo Nation. Each area has an administrative office known as an "area office," where the area director and other staff members work. Each area director and the associated staff members have several responsibilities, such as overseeing the delivery of health services within their area; providing administrative and technical support to the federally operated hospitals; and providing other services related to finance, information technology, public health programs, and environmental health.²⁸

Within the 12 areas are 170 service units, which are usually composed of a single hospital or health center or a few smaller health stations and satellite clinics.²⁹ For example, the Great Plains Area Office is in Aberdeen, South Dakota, and oversees the provision of healthcare to approximately 130,000 Native Americans located in North Dakota, South Dakota, Nebraska, and Iowa. The Great Plains Area has 19 service units; some are managed directly by the IHS and some by

<https://www.gao.gov/assets/gao-19-74r.pdf>. Because many eligible individuals are not using IHS services, this oversight might suggest that outreach programs could bring in more eligible individuals to the system, especially for preventive care and wrap-around services. However, a portion of the people not currently using IHS services might be consciously choosing to find healthcare services elsewhere.

27. Indian Health Service, "IHS Headquarters Office Directors/Area Directors (with Office and Area Directors Names, and Standard Administrative Codes)," organization chart, March 31, 2021, https://www.ihs.gov/sites/ihm/themes/responsive2017/display_objects/documents/org_charts/IHS_OD_AD_Names.pdf.

28. Office of Inspector General, "Indian Health Service Hospitals: Longstanding Challenges Warrant Focused Attention to Support Quality Care," OEI-06-14-00011, Department of Health and Human Services, October 2016.

29. Indian Health Service, "IHS Profile," August 2020, https://www.ihs.gov/sites/newsroom/themes/responsive2017/display_objects/documents/factsheets/IHSProfile.pdf.

tribes. Those 19 service units include seven hospitals, eight health centers, and several smaller facilities.³⁰

When one looks at the whole United States, most IHS service units are generally located in the western half of the contiguous United States and Alaska, on or near the 300-plus reservations.³¹ Local managers of IHS service units report to the director of an area office, the area office director reports to the deputy director for field operations, and the deputy director reports to the director of the IHS. At the highest levels, the director of the IHS reports to the secretary of HHS, who then reports to the president of the United States.

As of fiscal year (FY) 2018, IHS facilities—managed by tribes or by the IHS itself—had more than 40,000 inpatient admissions and more than 13.7 million outpatient visits.³² In 2020, the IHS system had 46 hospitals, 24 of which were run by the IHS and 22 of which were run by tribal governments. The system also had 330 health centers: 52 were run by the IHS and 279 were run by tribes. In addition, nearly 200 smaller facilities were available across the country, including health stations, Alaska village clinics, school health centers, and youth regional treatment centers.

In 2020, the IHS system employed more than 2,000 nurses, 700 physicians, 700 pharmacists, and 200 dentists.³³ The IHS hires its healthcare professionals and administrative staff members through online portals that serve facilities run by the IHS directly or by tribes.³⁴ Recruiters also are available in each area office to help find qualified employees.³⁵ Physicians employed in IHS facilities must be a US citizen, have a current medical license from any state, and have board certification or board eligibility in a medical specialty.³⁶

The IHS system has practices and protocols to reduce patient harm and medical malpractice. The IHS uses *Risk Management and Medical Liability: A Manual for Indian Health Service and Tribal Health Care Professionals* to spell out procedures for protecting healthcare providers from malpractice claims and for responding to a claim. In general, health professionals in the IHS system are protected from civil liability for injury to a patient. Under the Federal Tort Claims

30. Indian Health Service, “Great Plains Area,” accessed April 29, 2021, <https://www.ihs.gov/greatplains/>.

31. An interactive map titled “Find Health Care” showing all IHS healthcare facilities can be found at <https://www.ihs.gov/findhealthcare/>.

32. Indian Health Service, “IHS Profile.”

33. Indian Health Service, “IHS Profile.”

34. Two prominent online portals for employment in the IHS system can be found at <https://www.ihs.gov/physicians/jobops/> and at <https://www.ihs.gov/jobs/>.

35. The IHS’s system of recruiters can be found at <https://www.ihs.gov/careerapps/contactrecruiter/>.

36. Indian Health Service, “Physicians: FAQs,” accessed May 10, 2021, <https://www.ihs.gov/physicians/faq/>.

Act of 1946 (FTCA), claims of negligent medical care against federal employees, tribal employees, Public Health Service officers, and certain contractors are made against the federal government, not against individuals.

If a healthcare provider is outside the FTCA umbrella, that provider can be sued individually in a state court. It is not always clear whom the FTCA covers, and decisions about who is protected from personal liability by the FTCA are made on a case-by-case basis by the HHS Office of General Counsel, the Department of Justice, and the courts. When a patient files a medical malpractice tort claim that alleges negligent care at IHS or tribal facilities, HHS's Office of the General Counsel reviews the claim. If the claim proceeds into litigation, then the Department of Justice is primarily responsible for handling the case.³⁷ Under normal circumstances, tort law gives potential defendants a strong incentive to act carefully because they bear the cost of the lawsuits. However, extending FTCA coverage to IHS and tribal medical employees often creates perverse incentives because individual doctors or the tribes ultimately do not pay the damages.³⁸

The policy of self-determination has allowed many tribal governments to take over direct management and funding of IHS facilities; however, many tribes have chosen to rely on the IHS to run and manage healthcare facilities. Sometimes, tribes with fewer financial resources or smaller populations have little choice but to rely on the IHS for the direct provision of healthcare. Examples of IHS-run facilities include South Dakota's Cheyenne River Hospital, Pine Ridge Hospital, and Rosebud Hospital, which are located on some of the poorest reservations in the country.³⁹ The 24 IHS-operated hospitals are located mostly in remote areas across the Southwest, the upper Great Plains, and Oklahoma. In general, those hospitals are small, with fewer than 50 beds. Despite those hospitals being small, roughly half of all in-patient admissions in the IHS system are at IHS-run hospitals.⁴⁰

Under the ISDEAA, the Tribal Self-Governance Program allows tribal governments to run IHS healthcare facilities partially or completely through self-determination contracts or self-governance compacts. Tribal leaders have

37. Paul R. Fowler, *Risk Management and Medical Liability: A Manual for Indian Health Service and Tribal Health Care Professionals* (Rockville, MD: Indian Health Services, August 2018).

38. Joseph W. Gross, "Help Me Help You: Why Congress's Attempt to Cover Torts Committed by Indian Tribal Contractors with the FTCA Hurts the Government and the Tribes," *American University Law Review* 62, no. 2 (2012): 383–445.

39. Office of Inspector General, "Indian Health Service Hospitals: Longstanding Challenges Warrant Focused Attention to Support Quality Care," OEI-06-14-00011, Department of Health and Human Services, October 2016.

40. Office of Inspector General, "Indian Health Service Hospitals"; Indian Health Service, "IHS Profile"; Congressional Research Service, "The Indian Health Service (IHS): An Overview," R43330, January 12, 2016.

three options under the Tribal Self-Governance Program. First, tribal leaders can choose to receive healthcare services directly from the IHS. Second, under Title I of the ISDEAA, tribal leaders can contract with the IHS to administer individual programs and services that the IHS would otherwise provide. Third, under Title V of the ISDEAA, tribal leaders can form a compact with the IHS to assume control over programs the IHS would otherwise provide.

The terms “contract” and “compact” are similar, and the key difference is the amount of oversight from the IHS.⁴¹ A Title V compact does not require IHS approval for redesigning programs or for reallocation of funding, but a Title I contract does require IHS approval.⁴² In general, tribes with larger populations or more financial resources have the administrative capacity to form contracts and compacts with the IHS. For example, the IHS has a master contract with the Navajo Nation and its Department of Health, as well as contracts and compacts with several tribal health corporations authorized by the Navajo Nation.⁴³

If a tribal government wants to form a contract or compact under the Tribal Self-Governance Program, it must negotiate with the Office of Tribal Self-Governance. Through this program, tribal governments receive authorization to assume funding and partial or complete control over programs and services that the IHS would otherwise provide. A tribe can become eligible for the Tribal Self-Governance Program if it completes three steps. First, the tribal government must successfully complete a planning phase. Second, the governing body of the tribe must pass an official action that requests participation in the Tribal Self-Governance Program. Third, for three years before participation in the program, a tribal government must demonstrate financial stability and financial management capability by passing a required annual audit. After successfully fulfilling those three steps, the tribal government produces a draft Compact and Funding Agreement. The agency lead negotiator in the respective area office, along with a federal negotiation team, will then review the draft and cooperate with tribal leadership to reach a final agreement.⁴⁴

41. Those contracts and compacts are also known as “638 contracts” and “638 compacts” because the Indian Self-Determination and Education Assistance Act is also known as Public Law 93-638.

42. Indian Health Service, “Tribal Self-Governance Program,” accessed April 23, 2021, <https://www.ihs.gov/selfgovernance/aboutus/>; Indian Health Service, “Office of Tribal Self-Governance, Frequently Asked Questions,” accessed April 23, 2021, <https://www.ihs.gov/selfgovernance/faq/>; Indian Health Service, “Differences between Title I Contracting and Title V Compacting under the Indian Self-Determination Education Assistance Act (ISDEAA),” accessed April 23, 2021, https://www.ihs.gov/sites/selfgovernance/themes/responsive2017/display_objects/documents/TitleIandV.pdf.

43. Indian Health Service, “Navajo Area,” accessed April 21, 2021, <https://www.ihs.gov/navajo/>.

44. Indian Health Service, “Tribal Self-Governance Program”; Indian Health Service, “Office of Tribal Self-Governance, Frequently Asked Questions.”

Today, tribal governments manage more than 60 percent of the IHS's appropriated funding through self-determination contracts or self-governance compacts.⁴⁵ In 1993, 14 tribes became the first ones to participate in the tribal self-governance program with the IHS. Now, 132 tribal governments or tribal entities participate in the IHS's tribal self-governance program.⁴⁶

As far as the authors are aware, no literature systematically analyzes the impact of IHS self-governance contracts and compacts on increasing healthcare delivery or on improving health outcomes. Such research could be important to future policymakers to consider if there is clear evidence that self-governance makes a difference in the quality or quantity of healthcare services in the IHS system. Theory suggests that more self-governance in a more decentralized, polycentric system is likely to improve outcomes on several margins, which we will discuss in section 2.3.3.

2.2. Explanations for IHS Underperformance

Despite general health improvements during the past several decades, the persistent health disparities for Native Americans prompt a closer look at the IHS's ability to provide healthcare effectively and efficiently. We focus on two reasons the IHS has struggled to perform its functions: underfunding and bureaucratic shortcomings.

2.2.1. Process and Effects of Underfunding

The roughly 70-year history of the IHS has been characterized by significant resource constraints. Many scholars have argued that the IHS is severely underfunded, and some believe that the IHS receives only half of what it needs to provide adequate service.⁴⁷ Since the federal government became involved in Native American healthcare, it has allocated smaller proportions of money per capita to IHS than to any other federally funded healthcare program.⁴⁸ When looking at modern federal expenditures per person, researchers see that Medicare,

45. Indian Health Service, "IHS Profile."

46. Indian Health Service, "Self-Governance Tribes," accessed December 2, 2021, <https://www.ihs.gov/selfgovernance/tribes/>.

47. Michelle Sarche and Paul Spicer, "Poverty and Health Disparities for American Indian and Alaska Native Children," *Annals of the New York Academy of Sciences* 1136 (June 2008): 126–36; Kalt et al., *The State of the Native Nations*, 222–24; Donald Warne and Linda B. Frizzell, "American Indian Health Policy: Historical Trends and Contemporary Issues," *American Journal of Public Health* 104, no. S3 (2014): S263–S267; Bergman et al., "A Political History of the Indian Health Service," 572; Thomas Sequist et al., "Trends in Quality of Care and Barriers to Improvement in the Indian Health Service," *Journal of General Internal Medicine* 26, no. 5 (Dec. 2010): 480–86.

48. Warne and Frizzell, "American Indian Health Policy," 263.

Medicaid, the VHA, and federal prisons receive between two and three times as much funding. In 2017, IHS per capita spending was \$4,078, compared with \$8,109 for Medicaid, \$10,692 for the VHA, \$13,185 for Medicare, and \$8,600 for federal prisoners.⁴⁹

Compared with other federal direct providers (such as the VHA) or public insurers (such as Medicare and Medicaid), the IHS spends much less annually and serves a much smaller number of individuals. In 2017, the IHS spent a total of \$6.68 billion, which represents less than 10 percent of the VHA's spending and roughly 1 percent of either Medicare or Medicaid's spending. Also in 2017, the IHS served about 1.6 million individuals, which is about one-quarter of the number of individuals that the VHA serves and less than 3 percent of the number served by Medicare or Medicaid.⁵⁰

However, it is important to note that the IHS, VHA, Medicare, and Medicaid are significantly different in many ways, including their design, structure, funding, population needs, and services provided. Thus, such differences make it difficult to do an accurate “apples to apples” comparison among those federal programs. The sufficiency of funding for the IHS cannot be directly compared with another direct provider of healthcare such as the VHA or with a public insurer such as Medicare and Medicaid. Despite the difficulty in making comparisons, the widespread scholarly consensus is that the IHS is underfunded, and the continued poor health outcomes for IHS recipients suggests that funding is too low.

Also, it is important to mention that the IHS is a payer of last resort, and its facilities seek reimbursement from third-party insurers when applicable, including Medicare and Medicaid, which means that the actual government spending per capita is somewhat higher than just the IHS spending per capita. For example, about 23 percent of Native Americans using Medicare also list IHS as a source of coverage.⁵¹ Calculating a straightforward number of healthcare-related government spending per Native American is difficult because multiple factors and funding sources need to be considered, but each of those factors and funding

49. Government Accountability Office, “Indian Health Service: Spending Levels and Characteristics of IHS and Three Other Federal Health Care Programs”; Government Accountability Office, “Better Planning and Evaluation Needed to Understand and Control Rising Inmate Health Care Costs,” June 2017, <https://www.gao.gov/assets/690/685544.pdf>.

50. Government Accountability Office, “Indian Health Service: Spending Levels and Characteristics of IHS and Three Other Federal Health Care Programs.”

51. Cristina Boccuti, Christina Swoope, and Samantha Artiga, *The Role of Medicare and the Indian Health Service for American Indians and Alaska Natives: Health, Access and Coverage* (Menlo Park, CA: Henry J. Kaiser Family Foundation, 2014).

sources do not necessarily apply to all Native Americans. Despite this difficulty, IHS funding levels are especially important for the segment of the Native American population that relies solely or largely on the IHS for its healthcare.

The IHS receives the bulk of its funding through congressional appropriations (mainly discretionary), as well as collections from reimbursement, including Medicare, Medicaid, the State Children’s Health Insurance Program, the Department of Veterans Affairs (VA), and private insurance.⁵² The IHS Division of Budget Formulation prepares and manages the annual IHS budget justification to Congress, in which it makes the case to Congress for certain budgetary allocations. For FY 2021, the IHS has requested \$6.4 billion for all its operations. Congressional appropriations to the IHS have been growing incrementally during the past few years, from \$4.8 billion in FY 2016 to \$6.0 billion in FY 2020.⁵³ IHS funds are directed to many different programs, such as facility maintenance, clinical services, and preventive health measures, among others.⁵⁴

The relatively low funding levels for the IHS directly affect the quantity and quality of healthcare services provided to Native Americans. Scholars have raised at least two important issues that result from underfunding. First, when budgets run thin, emergencies or acute responses are prioritized over preventive care and public health outreach. Thus, conditions that are preventable go undetected and become much more difficult to treat. Second, underfunding limits access to specialty care.

Limited funding constrains the types of services that the IHS can provide, and when funding is especially scarce, IHS facilities have little choice but to focus their services on only emergencies or acute responses. By implication, preventive care, public health education, and outreach capabilities must take a back seat to more immediate needs. Preventive care and education are especially important for the Native American population because it outpaces every other minority group in deaths from preventable diseases.

Public health outreach and education are important to help connect people to services, share culturally sensitive health information, support disease self-management skills, and facilitate community organizing.⁵⁵ For example, public health outreach to stop the prevalence of smoking tobacco has been limited

52. Congressional Research Service, “The Indian Health Service (IHS): An Overview.”

53. Indian Health Service, “IHS Profile.”

54. Indian Health Service, “Fiscal Year 2021: Justification of Estimates for Appropriations Committees,” 2020, https://www.ihs.gov/sites/budgetformulation/themes/responsive2017/display_objects/documents/FY_2021_Final_CJ-IHS.pdf.

55. Donald Warne, “Research and Educational Approaches to Reducing Health Disparities Among American Indians and Alaska Natives,” *Journal of Transcultural Nursing* 17, no. 3 (July 2006): 266–71.

by underfunding, while smoking prevalence among Native Americans is often double the rates of the general public. The tobacco industry has long targeted Native Americans with sponsored powwows and rodeos, so antismoking efforts by the IHS could potentially improve Native American health outcomes, particularly for tribes with high smoking rates.⁵⁶

In addition, in the IHS system, less immediate health issues are often neglected because of funding shortages or the lack of staff members and equipment to offer services on site, thus leading to relatively long wait times for routine healthcare services and gaps in ancillary services. Staffing vacancies and aging infrastructure and equipment have also increased the wait times in many IHS facilities. In a 2005 Government Accountability Office (GAO) study of 13 randomly selected IHS facilities, 4 facilities reported that patients routinely had to wait more than a month for some types of primary care. In some cases, wait times in the IHS ranged from two to six months, especially for women's healthcare, general physicals, and dental care. Such long wait times exceed the standards of other federally operated healthcare systems. For example, policies in the VA dictate that nonurgent outpatient appointments should be completed within 30 days for eligible veterans with high priority. Within the Department of Defense's managed care program, routine appointments should be completed in 7 days and routine specialty care in 30 days.⁵⁷

In a 2016 study, GAO found that the IHS "has not conducted any systematic, agency-wide oversight of the timeliness of primary care provided in its federally operated facilities and, as a result, cannot ensure that patients have access to timely primary care," which does not comply with federal internal control standards.⁵⁸ Thus, the agency's funding constraints have made it difficult to respond to the fluctuating needs of the population in a given year.⁵⁹

Mental healthcare is also in short supply. GAO has reported that roughly one-quarter of IHS outpatient mental healthcare services do not have the capacity to meet the demand for mental healthcare. For example, managers at one facility stated that two to three times the amount of psychiatric care was needed.⁶⁰

56. Warne, Kaur, and Perdue, "American Indian/Alaska Native Cancer Policy," 20.

57. Government Accountability Office, "Health Care Services Are Not Always Available to Native Americans," August 2005, 4.

58. Government Accountability Office, "Indian Health Service: Actions Needed to Improve Oversight of Patient Wait Times," March 2016, 13.

59. Peter Cunningham, "Access to Care in the Indian Health Service," *Health Affairs* 12, no. 3 (August 1, 1993): 224–33; Sequist et al., "Trends in Quality of Care," 480.

60. Government Accountability Office, "Health Care Services Are Not Always Available to Native Americans," 18.

Despite ongoing problems, IHS officials in various area offices have been attempting to implement solutions. In the Great Plains Area, some facilities have expanded their daily hours from 7 a.m. to 11 p.m. so they can serve a larger number of patients. In the Phoenix Area, some IHS facilities now schedule “nursing only” visits for which a doctor is not required, such as vaccinations.⁶¹

Federal agencies, such as the Centers for Medicare and Medicaid Services, have suggested that individual Native Americans consider getting health insurance because funding limitations generally do not allow Native Americans to receive all the healthcare they may need or want through the IHS system.⁶² Like other Americans, Native Americans may purchase their own private health insurance to cover healthcare expenses that the IHS does not or cannot fund. However, because of the combination of no-cost IHS services, high rates of poverty, and low employment rates, Native Americans lack health insurance at higher rates than do the national average.⁶³

Nearly one in three Native Americans is uninsured. Approximately 36 percent of Native Americans have private health insurance coverage. Because of high rates of poverty, Medicaid covers roughly 34 percent of nonelderly Native Americans, leaving the remaining 30 percent of Native Americans to rely completely on IHS services or to pay out of pocket. For comparison, 62 percent of the nonelderly population in the United States has private health insurance.⁶⁴ Health insurance could provide more access to healthcare that Native Americans do not receive under the status quo in the IHS. However, because of the realities of poverty and unemployment, Native Americans face, on average, some of the largest barriers to accessing health insurance.

Relatedly, financial constraints have meant that IHS facilities can provide and pay for only a limited range of services. The IHS often runs out of funding for specialty services that are contracted out within their fiscal year, leaving many patients to pay fully out of pocket, to use health insurance, or to go without care.⁶⁵ The IHS provides services to eligible patients at no direct out-of-pocket costs,

61. Government Accountability Office, “Indian Health Service: Actions Needed to Improve Oversight of Patient Wait Times,” 19.

62. Centers for Medicare and Medicaid Services, “10 Important Facts about Indian Health Service and Health Insurance,” CMS ICN No. 909322-N, August 2016.

63. Stephen Zuckerman et al., “Health Service Access, Use, and Insurance Coverage among American Indians/Alaska Natives and Whites: What Role Does the Indian Health Service Play?” *American Journal of Public Health* 94, no. 1 (January 1, 2004): 53–59.

64. Samantha Artiga, Rachel Arguello, and Philethea Duckett, “Health Coverage and Care for American Indians and Alaska Natives,” Kaiser Family Foundation, October 7, 2013, kff.org/disparities-policy/issue-brief/health-coverage-and-care-for-american-indians-and-alaska-natives.

65. Warne, Kaur, and Perdue, “American Indian/Alaska Native Cancer Policy,” 21.

but it is not an entitlement program or an insurance program such as Medicare or Medicaid.

When congressional appropriations are exhausted in a given fiscal year, the IHS must limit the services it directly provides or the services it pays for through purchased/referred care (PRC) at non-IHS facilities. If a Native American patient receives services at a non-IHS facility, it is not guaranteed that the IHS will pay for the services through the PRC program. Patients must meet several requirements to have the IHS pay for PRC services, including residency requirements, notification requirements, medical priority, and use of alternate resources. In addition, authorization to use PRC funds is allowed only when an IHS beneficiary has exhausted all other healthcare resources available, such as private insurance, state health programs, and Medicaid. At the current funding levels, the IHS estimates that it meets approximately only 60 percent of the healthcare needs of its patients.⁶⁶

Thus, the IHS must engage in healthcare rationing because it does not have enough funding to pay for all the medical needs of eligible Native Americans, which means that IHS officials have no choice but to prioritize who receives care and what kind of treatments they will receive. Regulations and guidance for making rationing decisions can be found in the *Code of Federal Regulations*, especially Title 42, sections 136.23, 136.24, and 136.61, as well as in the *Indian Health Manual*, Part 2, Chapter 3: Manual Exhibit 2-3-B. Because of severe budget constraints within the IHS, imaging for preventable cancers such as colon, breast, and cervical cancers are not always available. Similarly, diabetic eye exams to prevent loss of vision are rare, despite many Native American populations having some of the highest rates of type II diabetes in the world.⁶⁷

Related to the problem of underfunding is a problem of understaffing. Across the IHS system, hospitals and health centers are having trouble retaining staff members. A 2019 *New York Times* analysis and a 2018 GAO report found that about one-quarter of all medical positions within the IHS are vacant. In some locations, the vacancy rate is roughly 50 percent.⁶⁸ In recent years, IHS

66. Indian Health Service, “For Patients, Frequently Asked Questions,” accessed April 30, 2021, <https://www.ihs.gov/forpatients/faq/>; Indian Health Service, “Purchased/Referred Care (PRC)”;

Congressional Research Service, “The Indian Health Service (IHS): An Overview”;

Indian Health Service, “Can PRC Pay for Your Referral Medical Care? Find Out in 3 Stages,” flow chart, accessed April 30, 2021, https://www.ihs.gov/sites/prc/themes/responsive2017/display_objects/documents/PRC-ProcessHandout.pdf.

67. Sequist et al., “Trends in Quality of Care,” 483.

68. Mark Walker, “Fed Up with Deaths, Native Americans Want to Run Their Own Health Care,” *New York Times*, October 15, 2019; Government Accountability Office, “Indian Health Service: Agency Faces Ongoing Challenges Filling Provider Vacancies,” GAO-18-580, August 2018.

hospital administrators have expressed concerns about the inability to recruit and retain staff members, which leads to a dependence on temporary personnel, acting personnel, and contracted providers. GAO has found that IHS facilities lack a sufficient number of permanent doctors or nurses to provide quality and timely healthcare.

Although the IHS has taken steps to recruit and retain providers, such as financial incentives and housing, vacancies remain a problem. GAO has found that the IHS cannot usually match local market salaries, and it does not have enough housing to meet its demand for IHS healthcare providers. Thus, the IHS has become reliant on hiring temporary providers, which can be problematic because it may be more costly on some margins, and it may result in lower-quality patient care over time.⁶⁹

2.2.2. Bureaucratic Shortcomings

The IHS is subject to the same kinds of inefficiencies and shortcomings that all government bureaucracies face, including knowledge problems and incentive problems. The IHS also appears to have long-standing issues with mismanagement that go beyond ordinary bureaucratic inefficiencies. In this section, we review the knowledge problems and incentive problems associated with the bureaucratic provision of healthcare, and then we highlight concerns of mismanagement specific to the IHS. Acknowledging such problems in a bureaucracy does not imply that the individuals who work in the bureaucracy are inherently unknowledgeable, nefarious, or inept. In fact, many people who work in bureaucracies are highly educated and partially motivated by some sense of duty or altruism. However, it is important to understand the epistemic nature of and the institutional incentives of government bureaucracies to understand why inefficiencies and mismanagement arise.

Bureaucracies that allocate scarce resources, such as the IHS, face an important knowledge problem because they cannot engage in economic calculation in the same way as market firms. Economic calculation is the ability to weigh the economic feasibility of a given decision from the array of technologically possible options. In other words, bureaucracies that allocate scarce resources lack the knowledge to allocate those resources to their most highly valued uses. For nearly a century, economists working in the Austrian School tradition have articulated the epistemic limitations of bureaucrats who attempt to allocate resources

69. Government Accountability Office, “Indian Health Service: Agency Faces Ongoing Challenges Filling Provider Vacancies”; Office of Inspector General, “Indian Health Service Hospitals: Longstanding Challenges Warrant Focused Attention to Support Quality Care.”

and of how the entrepreneurial market process allows economic calculation to take place.⁷⁰

In a market, firms use prices and the mechanism of profit and loss to discipline and guide their decisions about how to allocate resources in the most economically feasible way. Market prices are critically important because they facilitate the communication of relevant knowledge that is necessary for both producers and consumers to economize on their use of any resource, good, or service. Market prices allow entrepreneurs to see the opportunity costs of their decisions, and those prices signal whether resources could be used more prudently in other ways.

In addition, because market prices reflect relative scarcities, entrepreneurs and consumers can determine whether they are using resources wastefully. With the feedback mechanism of profit and loss, entrepreneurs gain knowledge whether their actions are ensuring that customers receive the goods and services they demand in the correct quantities and qualities, at the right location, and at the right time.⁷¹ Thus, entrepreneurs in the market have the incentives and feedback mechanisms to adapt their behavior when circumstances change to meet the shifting needs of consumers.⁷²

70. Friedrich A. Hayek, "The Use of Knowledge in Society," *American Economic Review* 35, no. 4 (1945): 519–30; Ludwig von Mises, *Socialism: An Economic and Sociological Analysis*, 6th ed. (Indianapolis, IN: LibertyClassics, [1922] 1981); Friedrich A. Hayek, "Economics and Knowledge," *Economica* 4, no. 13 (1937): 33–54; Friedrich A. Hayek, "Socialist Calculation: The Competitive 'Solution,'" *Economica* 7, no. 26 (1940): 125–49; Israel M. Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973); Israel M. Kirzner, *Discovery and the Capitalist Process* (Chicago: University of Chicago Press, 1985); Don Lavoie, *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered* (Cambridge: Cambridge University Press, 1985); Don Lavoie, *National Economic Planning: What Is Left?* (Cambridge, MA: Ballinger, 1985). Ludwig von Mises, "Economic Calculation in the Socialist Commonwealth," in *Collectivist Economic Planning*, ed. F. A. Hayek (Clifton, NJ: Kelley, [1920] 1975), 87–130; Ludwig von Mises, *Liberalism* (Auburn, AL: Ludwig von Mises Institute, [1927] 2010); Ludwig von Mises, *Bureaucracy* (New Haven, CT: Yale University Press, 1944).

71. Rational economic calculation takes place in markets in which producers and consumers determine the most highly valued uses of any resource. However, it should be acknowledged that engaging in rational economic calculation does not imply that consumers receive everything they hope to receive. In a true market, healthcare-related goods and services would have a market value that emerges from the interactions of buyers and sellers, and some buyers will be unwilling or unable to purchase at the market price. To make matters more complicated, the healthcare system in the United States is heavily influenced and altered by public policies, so rational economic calculation is more difficult because of all the interventions. Providing government-funded subsidies to help individuals pay for some healthcare services is a different kind of market alteration than the complete provision of healthcare through a government apparatus.

72. Hayek, "Economics and Knowledge"; Hayek, "Socialist Calculation"; Friedrich A. Hayek, "Competition as a Discovery Procedure," in *The Collected Works of F. A. Hayek, Vol. 15: The Market and Other Orders*, ed. Bruce Caldwell (Chicago: University of Chicago Press, [1968] 2014); Ludwig

The knowledge problems that bureaucrats face apply to a wide variety of government undertakings. For example, state-led humanitarian aid efforts are led by experts with huge amounts of resources at their disposal, yet those humanitarian aid projects often fail to achieve their stated goals. In recent decades, state-led humanitarian aid has been focused on long-term development assistance. In the post-9/11 period, the focus on long-term development has been tied with nation building and counterterrorism, thus combining military actions and humanitarian aid. As bureaucracies have attempted to bring some nations out of poverty, they have operated under the assumption that they have the relevant knowledge to create or spark economic development.

However, the bureaucrats who engage in economic planning to spur economic growth cannot solve the “economic problem” of determining what goods are needed, when they are needed, where they are needed, and in what quantities and qualities they are needed. This knowledge can be discovered only through the market process in which market prices and profit-and-loss signals direct the behavior of people in a society. As such, modern state-led humanitarian action looks much like central economic planning and faces many of the same shortcomings that central economic planners have perennially faced. Thus, many of the attempts to engage in nation building and to spark economic development have been largely unsuccessful, including in Afghanistan, Haiti, Iraq, and many others.⁷³

In the same way that humanitarian aid agencies are tasked with distributing resources, the IHS is tasked with bureaucratically providing healthcare to eligible Native Americans, which means that such a system lacks the entrepreneurial market process and economic calculation. We are not making a normative argument that IHS healthcare *should* be provided through markets. We are arguing that as long as scarce healthcare resources are bureaucratically allocated, the bureaucrats who do the allocating cannot know the highest valued uses of what they are allocating. The IHS’s mission is “to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level,”⁷⁴ but it is not immediately obvious what are the most efficient or effective means to achieve that end.

von Mises, *Human Action* (New Haven, CT: Yale University Press, 1949); Kirzner, *Competition and Entrepreneurship*; Kirzner, *Discovery and the Capitalist Process*; Peter J. Boettke, “Information and Knowledge: Austrian Economics in Search of Its Uniqueness,” *Review of Austrian Economics* 15, no. 4 (2002): 263–74; Peter J. Boettke, “The Genius of Mises and the Brilliance of Kirzner,” in *Living Economics: Yesterday, Today, and Tomorrow* (Oakland, CA: Independent Institute, 2012).

73. Christopher J. Coyne, *Doing Bad by Doing Good: Why Humanitarian Action Fails* (Stanford, CA: Stanford University Press, 2013).

74. Indian Health Service, “Quality at IHS,” accessed December 7, 2021, <https://www.ihs.gov/quality/>.

Without rational economic calculation to adjudicate between the various means, IHS policymakers have devised a series of metrics to decide how to allocate scarce resources. For example, the IHS has created a strategic plan for FY 2019 through FY 2023 to improve how the agency fulfills its role. This plan necessarily involves deciding how to allocate scarce resources. In fact, one of the explicit goals in this plan is to “develop policies, use tools, and apply models that ensure efficient use of assets and resources.”⁷⁵ Without economic calculation, IHS officials cannot use resources efficiently in the technical definition used in economics, but the IHS goal appears to use the term “efficiency” in the common conception of preventing the wasteful use of a particular resource.

Therefore, IHS bureaucrats must rely on easily measured sources of feedback to evaluate efficiency and success. The IHS uses agency-wide performance measures based on the Government Performance and Results Act (GPRA), the GPRA Modernization Act, and the National Accountability Dashboard for Quality.⁷⁶ Some of those performance measures include number of patient contacts, number of childhood immunizations, mammogram rates, number of visits with health or patient education, and number of community health representatives trained, among many others.⁷⁷ However, just like standardized testing in public schools measures some, but not all, important aspects of education, the performance measures related to IHS healthcare capture some, but not all, important aspects about health and wellness. Government provision of healthcare is further complicated with complexities regarding medical standards of care, medical ethics, discipline-specific disagreements, and patient or population preferences. Such complexities compound the knowledge problems that IHS bureaucrats face.

In addition to knowledge problems, bureaucrats in the IHS and all other bureaucracies face incentive problems, which refer to weak motivations for bureaucrats to provide goods and services in effective and efficient ways. All people respond rationally to their institutional incentives, thus implying that an agency’s particular institutional rules are very important for eliciting “desirable” kinds of behavior. The institutional rules that govern an agency can become problematic if those rules incentivize individual bureaucrats to shirk their

75. Indian Health Service, “Strategic Plan FY 2019–2023,” July 9, 2019.

76. Indian Health Service, “Performance,” accessed May 4, 2021, <https://www.ihs.gov/strategicplan/performance/>.

77. Indian Health Service, “Strategic Plan FY 2019–2023.”

responsibilities, obfuscate information, or generate pessimism, among a myriad of other potential problems.⁷⁸

In general, all bureaucrats, no matter the agency, face similar incentives because unlike private firms, bureaucrats are not residual claimants, meaning that they do not personally benefit from working more efficiently. Excessive costs incurred by bureaucrats do not jeopardize the existence of a government agency, and overspending does not personally affect an individual bureaucrat's take-home pay. In addition, bureaucrats are not rewarded for responsible, prudent spending. In fact, bureaucrats may be punished for spending money more prudently because Congress is likely to shrink an agency's future budget if an agency demonstrates it can fulfill its responsibilities with less funding. Thus, individual bureaucrats in the IHS, like those in all government agencies, face perverse incentives regarding cost-efficient spending and eliminating waste.⁷⁹

In addition to generalized knowledge and incentive problems, the IHS exhibits a more pervasive form of mismanagement. Much of this evidence comes directly from GAO and the HHS Office of Inspector General (OIG), which is the agency charged with "combating fraud, waste, and abuse and to improving the efficiency of HHS programs."⁸⁰ GAO and OIG have identified widespread mismanagement within the IHS at the headquarters, area offices, and service units. The mismanagement takes several forms, such as providing substandard healthcare services and inadequately following administrative policies.

In particular, GAO's 2021 report on federal programs that are vulnerable to waste, fraud, abuse, and mismanagement argued that the IHS has ineffectively administered its healthcare programs, but there have been improvements in recent years.⁸¹ The IHS is not the only federal healthcare provider that has struggled with bureaucratic shortcomings. GAO found that "after six years on our High-Risk List, the VA still lacks a clear and comprehensive roadmap to address VA healthcare concerns and has not demonstrated meaningful progress."⁸² Thus, GAO has criticized both federal systems of directly provided

78. Gordon Tullock, *The Selected Works of Gordon Tullock, Vol. 6, Bureaucracy*, ed. Charles Rowley (Indianapolis: Liberty Fund, 2005); James M. Buchanan, "Politics without Romance: A Sketch of Positive Public Choice Theory and Its Normative Implications," in *The Collected Works of James M. Buchanan, Vol. 1, The Logical Foundations of Constitutional Liberty*, ed. Geoffrey Brennan, Hartmut Kliemt, and Robert D. Tollison (Indianapolis: Liberty Fund, [1979] 1999), 45–59.

79. Coyne, *Doing Bad by Doing Good*; William A. Niskanen, *Bureaucracy and Representative Government* (Chicago: Aldine, Atherton, 1971).

80. Office of Inspector General, "About OIG," accessed May 4, 2021, <https://oig.hhs.gov/about-oig/>.

81. Government Accountability Office, "High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas," GAO-21-119SP, March 2021, 108–13.

82. Government Accountability Office, "High-Risk Series," 284.

healthcare for prolonged inadequacies in their provision of legally required services.

Several service units in the IHS system, run by both the IHS or tribes, have not met federal and tribal standards for health, safety, and quality standards, which potentially jeopardizes the health and safety of patients. The OIG found that IHS hospitals have a relatively high rate of patient harm. In FY 2017, about 13 percent of patients in IHS hospitals experienced patient harm events during their stays. Smaller hospitals in the IHS system often had higher rates of harm. In IHS hospitals with fewer than 1,000 admissions in FY 2017, 19 percent of patients experienced patient harm events; in IHS hospitals with more than 1,000 admissions in FY 2017, 9 percent of patients experienced patient harm events. The OIG found that more than half of the instances of patient harm were related to the use of medication. Pediatric patients had the lowest rate of patient harm (5 percent), while the highest rates were seen among elderly patients (30 percent) and patients delivering children (21 percent).

The OIG found that an estimated 7 percent of all IHS patients experienced instances of harm that were preventable if the patients had been given better care.⁸³ In reality, patient harm numbers might be significantly higher because of missing records and other inadequacies with IHS data.

In a 2020 review, the OIG found that patients delivering children in the IHS system were given care that did not follow national clinical guidelines or best practices—56 percent of labor and delivery patients had some aspect of care that did not follow national clinical guidelines, did not use best practices for blood loss estimation, or both. Although postpartum hemorrhage affects only about 1 to 3 percent of child deliveries in the United States, the OIG’s sample found that 33 percent of labor and delivery patients experienced a postpartum hemorrhage.⁸⁴

IHS hospitals do not always follow their own protocols, even with dangerous drugs. In 2019, the OIG found that IHS hospitals did not consistently follow the *Indian Health Manual* or other IHS policies and procedures when prescribing and dispensing opioids. In particular, the review found that many IHS hospitals did not always perform reviews within required timeframes, properly review health records before filling prescriptions, or maintain proper documentation.⁸⁵

83. Office of Inspector General, “Incidence of Adverse Events in Indian Health Service Hospitals,” OEI-06-17-00530, December 2020.

84. Office of Inspector General, “Instances of IHS Labor and Delivery Care Not Following National Clinical Guidelines or Best Practices,” OEI-06-19-00190, December 2020.

85. Office of Inspector General, “IHS Needs to Improve Oversight of Its Hospitals’ Opioid Prescribing and Dispensing Practices and Consider Centralizing Its Information Technology Function,” A-18-17-11400, July 2019, 11.

One recent example of inadequate provision of healthcare services is Rosebud Hospital, which is an IHS-operated hospital on the Rosebud Sioux Reservation in South Dakota. Federal officials forced the Rosebud Hospital to discontinue its emergency services from December 2015 to July 2016 because it was not meeting minimum quality and safety standards of the Centers for Medicare and Medicaid Services (CMS).⁸⁶ The safety deficiencies at Rosebud Hospital stemmed from “difficulty in filling vacancies, leadership instability, outdated equipment, and limited clinical support and oversight by the Great Plains [Area Office].”⁸⁷ In the nine years preceding the temporary closure in 2015, the hospital had 27 CEOs; officials reported that there was very inconsistent leadership, experience, and institutional knowledge on how to run the hospital. In addition, Rosebud Hospital’s equipment—in particular the emergency department’s equipment—had problems, such as oxygen leaks, a malfunctioning communication system, and broken equipment for sterilizing surgical instruments.

Matters were further complicated because officials from Rosebud Hospital and the IHS’s Great Plains Area Office had a contentious relationship, and communication breakdowns occurred frequently.⁸⁸ During the seven-month closure, the nearest emergency services were 45 miles away. Local IHS officials failed to notify hospital staff members or surrounding hospitals of the decision of IHS to close the emergency department, leading to temporary but widespread confusion.⁸⁹

After Rosebud’s closure, IHS officials developed a plan of correction to address the problems and obtained assistance from other IHS hospitals and from officers of the US Public Health Service Commissioned Corps. Two months after the plan of correction was implemented and the arrival of several officers of the Commissioned Corps, CMS still found continued noncompliance during a revisit.⁹⁰ CMS entered a Systems Improvement Agreement with IHS in April 2016 that included a plan to address Rosebud’s compliance issues, such as updating hospital policies, improving Rosebud’s governing body, improving credentialing processes of medical staff members, and developing retention strategies. After

86. Office of Inspector General, “Case Study: Indian Health Service Management of Rosebud Hospital Emergency Department Closure and Reopening,” OEI-06-17-00270, US Department of Health and Human Services, July 2019. The Social Security Act and its subsequent amendments mandate the establishment of minimum health and safety standards that providers and suppliers participating in the Medicare and Medicaid programs must meet. Those standards are found in Title 42 of the *Code of Federal Regulations*.

87. Office of Inspector General, “Case Study,” 6.

88. Office of Inspector General, “Case Study,” 7.

89. Office of Inspector General, “Case Study,” 8.

90. Office of Inspector General, “Case Study,” 17.

several months of implementing this plan, the IHS and CMS allowed Rosebud's emergency department to reopen. Officials continued to be concerned about the sustainability of the changes, and it remains to be seen whether such changes will continue in the long term.⁹¹

In addition to IHS-run facilities, facilities run by tribes also have had problems providing services that meet health and safety standards. For example, the Pleasant Point Health Center (PPHC) of the Passamaquoddy Tribe consistently failed to meet federal and tribal health and safety requirements. In 2018, the OIG found that the PPHC lacked a physician to provide proper medical direction for the health center. Without such a physician, the PPHC could not comply with legal requirements for oversight duties and for written patient care policies and procedures, which include pain-management and opiate-dependency treatment and compliance monitoring.⁹² The OIG concluded that patients faced an increased risk to their health because the PPHC hired unqualified medical providers and administrative staff members.⁹³

Moreover, in 2018, the OIG found that the Penobscot Nation Health Department did not meet all federal and tribal health and safety requirements because it lacked a physician to provide the health center with proper oversight. The OIG concluded that those deficiencies increased the risks to patients.⁹⁴

Substandard healthcare services have been compounded by several underlying organizational and management problems that affect the entire IHS system. In 2019, the OIG identified three broad categories of problems in the IHS system: (a) a lack of formal structure, policies, and roles; (b) a lack of a clear view of hospital performance and problems; and (c) a lack of confidence in the IHS's ability to succeed.⁹⁵

First, the structural problems are rooted in the lack of transparency and clarity within the hierarchy of the bureaucracy. IHS officials have said that the most common negative issue they faced was “the lack of a solid organizational structure regarding management of IHS hospitals, including policies that would direct the work of IHS HQ, Area Offices, and hospitals, and distinguish

91. Office of Inspector General, “Case Study,” 24–25.

92. Office of Inspector General, “The Passamaquoddy Tribe’s Pleasant Point Health Center Did Not Always Meet Federal and Tribal Health and Safety Requirements,” A-01-17-01500, July 2018.

93. Office of Inspector General, “The Passamaquoddy Tribe’s Pleasant Point Health Center.”

94. Office of Inspector General, “The Penobscot Indian Nation Did Not Meet All Federal and Tribal Health and Safety Requirements,” A-01-17-01502, November 2018.

95. Office of Inspector General, “Organizational Challenges to Improving Quality of Care in Indian Health Service Hospitals,” OEI-06-16-00390, US Department of Health and Human Services, August 2019.

their respective responsibilities.”⁹⁶ The obscurity and vagueness of policies and administrative structures, as well as a high turnover rate, have caused widespread confusion within the agency, which has led to redundancies and inefficiencies on multiple margins.

Second, because of the lack of clarity with structure and policy, IHS employees have said that there is no clear view on what constitutes good performance or on how to go about solving problems. A lack of communication within the agency compounds the problems with the obscurity and vagueness of policies and administrative structures. Bureaucrats at IHS headquarters often lack the knowledge of what is going on in the area offices. Workers in area offices and hospitals reported that they “received poor or incomplete information about operations, and that they did not feel that anyone in IHS HQ had a comprehensive view of Area Offices and hospitals.”⁹⁷ In the audit, several IHS officials articulated a “tendency to avoid conflict and frank discussion and feedback,” and administrative meetings “did not include practical discussions about operations and problems.”⁹⁸ The combination of uncertainty and a lack of communication has caused confusion and discord at all levels regarding the IHS’s goals and ability to solve problems.

Third, the persistent internal and external criticisms of the IHS have led to a widespread pessimism within the managers and the medical staff members. IHS officials have openly questioned the IHS’s efficacy as an agency because of “protracted bureaucratic processes, lack of a clear vision for how to meet goals, lack of trust within IHS, and lack of trust between IHS and the broader beneficiary community.”⁹⁹ In the 2019 audit, several IHS officials said that “they could not recall any celebrations of success” within the agency.¹⁰⁰ IHS employees have said that a change in organizational culture is necessary to overcome the widespread sense of defeatism.¹⁰¹

In recent years, the IHS has taken steps to improve management and organizational accountability. In 2016, the agency launched the Quality Framework, which implemented telehealth consultation in some areas and created an Accountability Dashboard for Quality. In 2017, the IHS implemented policies to enhance recruitment and retention of staff members; in 2018, the IHS began

96. Office of Inspector General, “Organizational Challenges,” 11.

97. Office of Inspector General, “Organizational Challenges,” 15.

98. Office of Inspector General, “Organizational Challenges,” 16.

99. Office of Inspector General, “Organizational Challenges,” 19.

100. Office of Inspector General, “Organizational Challenges,” 20.

101. Office of Inspector General, “Organizational Challenges,” 20.

using a new credentialing system to enhance the screening of people before they are hired. In 2019, the IHS established the Office of Quality and released the Strategic Plan, FY 2019–2023, which outlined new goals to improve access, quality, and management within the agency.¹⁰² It remains to be seen how effective those recent initiatives will be in improving IHS hospital quality and management.

In addition to providing substandard healthcare services and suffering from organizational issues, the OIG repeatedly has found that IHS and tribal officials have inadequately followed administrative policies on many margins, including improper hiring practices and illegal uses of funds. For example, in 2020, the OIG found that tribal health programs in the IHS system do not always follow established protocols regarding background checks for people working with children. In 2020, OIG audits found that IHS-funded tribal health programs in New England were not conducting required FBI fingerprint background checks for all employees, contractors, and volunteers who have regular contact with Native American children. The OIG concluded that this noncompliance increased the risk that an individual with a disqualifying criminal history could have regular contact with children. The IHS and those tribes are currently making plans for compliance.¹⁰³

The OIG found that the IHS does not follow its own protocols in relation to purchased or referred services, which can directly affect how and when patients receive services. The OIG and GAO note that the IHS has insufficient oversight and limited access to specialists, making the PRC program especially important for patients to access necessary healthcare. In 2020, the OIG conducted a random sample of 100 claims of IHS-administered PRC program services that occurred between October 2013 and June 2016. From that sample of 100 claims, 82 did not meet one or more of the nine federal requirements located at Title 42, section 136, of the *Code of Federal Regulations*. The OIG determined that IHS officials made the errors because controls were not in place to prevent its Referred Care Information System from accepting claims that had missing information. By extrapolation, the OIG estimates that 658,025 of the 802,470 total PRC claims payments did not meet federal requirements from October 2013 to June 2016.¹⁰⁴

102. Office of Inspector General, “Organizational Challenges.”

103. Office of Inspector General, “Tribal Health Programs: Concerns about Background Verifications for Staff Working with Indian Children,” A-01-20-01500, August 28, 2020.

104. Office of Inspector General, “Most Indian Health Service Purchased/Referred Care Program Claims Were Not Reviewed, Approved, and Paid in Accordance With Federal Requirements,” A-03-16-03002, April 2020; Government Accountability Office, “Indian Health Service: Spending Levels and Characteristics of IHS and Three Other Federal Health Care Programs.”

Investigations have found the improper use or inadequate monitoring of the IHS Loan Repayment Program, which allows the IHS to pay for education-related loans for health professionals who join the IHS.¹⁰⁵ It is unclear how many recipients have received federal loan repayments in a procedurally correct way. The OIG's recommendation was simply that the "IHS follow its policies and procedures."¹⁰⁶ Relatedly, the IHS's travel card program and purchase card program also had relatively high rates of noncompliance with federal requirements and IHS's own policies. Officials concluded that those errors occurred because monitoring and education systems were not adequate.¹⁰⁷

Even in parts of the IHS system that were administered by tribes, compliance with funding policies has been problematic. In an OIG report from 2016, inspectors found that the Rocky Boy Health Board of Montana's Chippewa Cree Indians of the Rocky Boy's Reservation had incurred and paid unallowable salary and benefit expenses using IHS money. During fiscal years 2011 through 2013, the Rocky Boy Health Board paid at least \$271,000 in noncompliant payments. The OIG concluded that those noncompliant payments occurred for two reasons: (a) the Rocky Boy Health Board had inadequate internal controls, and (b) Rocky Boy staff members were not adequately trained in accordance with federal requirements, the tribe's policies, and the health board's policies.¹⁰⁸

Similar to the IHS, the VHA has struggled with mismanagement and bureaucratic shortcomings for many years. In 2015, GAO added the VHA to its high-risk list because of its struggles to provide timely, cost-effective, and quality care. Some of GAO's criticisms of the VHA included ambiguous policies, inconsistent processes, inefficient use of funds, inadequate oversight or accountability, information technology challenges, inadequate staff training, unclear resource needs, and unclear allocation priorities. Although the VA has committed to several initiatives for modernization and improvement, it has delayed its

105. This program is authorized under section 108 of the Indian Health Care Improvement Act.

106. Office of Inspector General, "Audit of the Indian Health Service's Internal Controls over Monitoring of Recipients' Compliance with Requirements of the Loan Repayment Program," A-09-10-01005, December 2010.

107. Office of Inspector General, "The Indian Health Service's Controls Were Not Effective in Ensuring That Its Travel Card Program Complied with Federal Requirements and Its Own Policy," A-07-16-05091, April 2018; Office of Inspector General, "The Indian Health Service's Controls Were Not Effective in Ensuring That Its Purchase Card Program Complied with Federal Requirements and Its Own Policy," A-07-16-05090, July 2018.

108. Office of Inspector General, "Expenses Incurred by the Rocky Boy Health Board Were Not Always Allowable or Adequately Supported," A-07-15-04221, March 2016.

implementation of those efforts.¹⁰⁹ Thus, the IHS and the VHA both face similar challenges in their management and provision of healthcare.

2.3. Policy Recommendations for Improving IHS Performance

Potential policy reforms and institutional changes to the IHS could improve healthcare provision and compliance with federal and tribal standards. Scholars and policymakers broadly agree that IHS healthcare provision has room for improvement, but there is disagreement on how to improve it and at what cost. We propose policy recommendations in three broad categories. First, Congress could increase the per capita funding of the IHS to be on par with other federal healthcare programs, such as the VA. Second, Congress or IHS leadership could improve clarity and accountability within the IHS's management and organizational structures. Third, Congress or IHS leadership could create an institutional environment that removes barriers to the supply of healthcare and incentivizes innovation.

2.3.1 Increasing IHS Funding

Increased funding will not solve the IHS's underlying institutional problems or other socioeconomic factors that contribute to the poorer health of many Native Americans. However, increased funding will likely solve some problems that the IHS faces, such as healthcare rationing, deteriorating physical facilities, aging medical equipment, and a shortage of trained medical staff members. The question of how much funding Congress should appropriate to IHS is a difficult one because it requires finding the margin of funding that (a) reasonably allows the IHS to fulfill its legal obligations without being wasteful and (b) is democratically acceptable.

One potentially acceptable level of IHS funding would be to match the per capita spending in IHS to other similar government programs, such as Medicaid, Medicare, or the VA. If Congress were to double the IHS's FY 2020 budget appropriation from \$6 billion to \$12 billion, the per capita funding for IHS recipients would be closer to that of the per capita funding of other federally funded healthcare programs. To reiterate, the IHS is also supplemented by Medicaid, Medicare, and private insurance, so doubling the IHS's appropriation may be an overestimate on the adjustment needed.

109. Office of Inspector General, "Incidence of Adverse Events in Indian Health Service Hospitals," OEI-06-17-00530, December 2020.

Regardless, increasing the IHS appropriation to some degree would allow the agency to improve facilities, engage in more preventive medicine, and better retain staff members, assuming that IHS officials are held accountable for responsible spending. To put the IHS budget into perspective, the 2021 budget proposal for the HHS included \$94.5 billion in discretionary budget authority and \$1.3 trillion in mandatory funding.¹¹⁰ In FY 2020, HHS's resources totaled approximately \$2.4 trillion, which was \$515.6 billion higher than FY 2019. This increase was partially due to the Covid-19 pandemic.¹¹¹

Because IHS funding comes through Congress's annual fiscal year appropriations cycle, delays in the appropriation process can lead to uncertainty and disruption for the IHS's operations. To partially resolve this problem, Congress could grant the IHS advance appropriation authority, which is a policy in which "appropriations become available one or more fiscal years after the budget year covered by the appropriations act."¹¹²

Advance appropriations help to prevent funding gaps and to avoid the need for continuing appropriations when annual appropriations run out. This appropriation system has already been implemented in the VHA, which is currently the only federal agency that receives advance appropriations for its healthcare program. Congress granted the VHA advance appropriation authority for specified medical care accounts in 2009.¹¹³ Medicaid also receives a portion of its funding through advance appropriations.¹¹⁴ If Congress were to consider granting the IHS advance appropriation authority, it could use the VHA system as a template and modify the details as necessary to fit the IHS's unique context.

The chronic underfunding of the IHS when compared with other federal healthcare programs might reasonably constitute unfair discrimination. In 2003, the US Commission on Civil Rights found that federal funding directed to Native American healthcare has continued to be insufficient in addressing the basic healthcare needs of Native peoples, meaning that the federal government is not

110. Department of Health and Human Services, "HHS FY 2021 Budget in Brief," accessed January 20, 2022, <https://www.hhs.gov/sites/default/files/fy-2021-budget-in-brief.pdf>.

111. Department of Health and Human Services, "Agency Financial Report: Fiscal Year 2020," November 13, 2020, <https://www.hhs.gov/sites/default/files/fy-2020-hhs-agency-financial-report.pdf>.

112. Congressional Research Service, "Advance Appropriations, Forward Funding, and Advance Funding: Concepts, Practice, and Budget Process Considerations," R43482, June 10, 2019.

113. Congressional Research Service, "Advance Appropriations for the Indian Health Service: Issues and Options for Congress," R46265, March 11, 2020; Government Accountability Office, "Indian Health Service: Considerations Related to Providing Advance Appropriation Authority," GAO-18-652, September 2018.

114. Congressional Research Service, "Medicaid Financing and Expenditures," R42640, November 10, 2020.

meeting its “binding trust obligation” to Native nations. Even though the IHS has had funding increases during the past several years, the IHS budget has not kept up with the growing service population and increasing healthcare costs.¹¹⁵

Increased funding could be used to deliver the social services that address the root causes of poor health, such as the social determinants of health. Such funding priorities likely would have a greater impact on Native American health outcomes than would any funding that leads to delivery of more volume or higher-value healthcare services. Although increased delivery of healthcare services would be valuable to the Native American community, especially where rationing is currently happening, targeting federal funding at the underlying causes of poor health may have the largest marginal effect per dollar spent. For instance, an increase in public spending to improve the quality of education, housing, transportation, infrastructure, or public safety would almost certainly improve health outcomes to some degree. However, more detailed analysis will be necessary to determine the most valuable marginal use of each dollar spent.

The suggestion to increase funding means public choice considerations come to the forefront. Without more robust reforms to internal accountability and organizational structure, more funding could have the unintended effect of exacerbating the very problems that increased funding tries to solve. Thus, an increase in funding for the IHS should be paired with other reforms that would limit fraud, abuse, or mismanagement.

2.3.2. Improving the Accountability and Organizational Structure

An increase in funding the IHS without robust measures of accountability or improved organizational structures could lead to boondoggles, continued sub-standard healthcare quality, or other unintended consequences. In recent years, the IHS has taken several steps to improve accountability within the agency, such as a new Strategic Plan, a Quality Framework, an Accountability Dashboard for Quality, and a new credentialing system to enhance the screening of people before they are hired.¹¹⁶ However, more drastic steps are likely necessary to overcome the pervasive failures in communication, accountability, and healthcare quality.

The difficult problem of public administration reform is developing new policies that are accompanied by as little waste and as few unintended consequences as possible. Improving human health is a complex system, which stands

115. US Commission on Civil Rights, “A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country,” July 2003, <https://files.eric.ed.gov/fulltext/ED480450.pdf>.

116. Office of Inspector General, “Organizational Challenges.”

in contrast to a linear system. In a linear system, a change in an input directly leads to a proportional change in outputs, and those changes do not meaningfully affect other aspects of the larger system.¹¹⁷ However, in complex systems, like healthcare, the “entire system exhibits properties that are different from those of their parts.”¹¹⁸ The fundamental problem with making new policies or policy reforms in a complex system is that unintended consequences will inevitably arise.

However, if policymakers have a linear-system mentality, they will mistakenly believe that top-down planning can achieve a desired outcome without significant costs or unintended consequences. In theory, policymakers can take steps to minimize the likelihood and magnitude of unintended “system effects.” Political scientist Robert Jervis argues that policymakers acting in complex systems must learn to think in holistic terms.¹¹⁹ Thus, policymakers must be flexible and willing to make changes when a particular policy or institutional rule is producing undesirable results. However, there is no simple solution to problems embedded within complex systems. A common pitfall for policymakers is to acknowledge that they are working with complex systems, yet still engage in linear thinking when making decisions.¹²⁰

Perhaps the best and most effective policy recommendation to improve the IHS is to better align the incentives of IHS employees at every level. An individual’s personal incentives must align with the goals of the larger group, otherwise the individual will not be motivated to contribute to the success of the group’s goal. Thus, one potential way to improve accountability and communication in the IHS is to reform institutional structures so they better align the incentives of the officials, doctors, and other employees with the desired outcomes. Incentives to improve accountability might include a system of rewards for good performance or rewards for discovering new innovations. The definition of what is good performance, what constitutes a new innovation, or what a system of rewards looks like will be context dependent. Outside observers face a knowledge problem in knowing exactly what the institutional incentives are and knowing which reward systems are likely to be effective.

117. Alan Beyerchen, “Nonlinear Science of the Unfolding of a New Intellectual Vision,” in *Papers in Comparative Studies*, Vol. 6, ed. Richard Bjornson and Marilyn Waldman (Columbus, OH: Center for the Comparative Studies in the Humanities, Ohio State University, 1989), 25–49.

118. Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton, NJ: Princeton University Press, 1997), 6.

119. Jervis, *System Effects: Complexity in Political and Social Life*, 253–95; see also Jim Collins, *Good to Great and the Social Sectors* (New York: HarperCollins, 2005).

120. Coyne, *Doing Bad by Doing Good*, 147–65.

Because IHS employees have local and tacit knowledge about the institutional details and institutional incentives of the agency, they will have the best knowledge about how to align incentives for the desired outcomes. As such, any potential reforms should include consultation with IHS employees at every level so that reforms will incorporate knowledge of the very people they are meant to help.

Another important policy recommendation is to focus on effective constraints so that instances of noncompliance with established standards and policies are minimized. The federal government—such as GAO and various OIG offices—has existing systems to monitor mismanagement, abuse, and fraud and to help make plans for compliance. However, as discussed in previous sections, the OIG has determined that employees in the IHS system have been found to disregard or to be ignorant of administrative policies, including hiring practices and the proper uses of funds. The repeated violation of administrative policies at various levels of the IHS is evidence that employees do not view their institutional constraints as especially binding. More stringent punishments for violations of federal and tribal policies could constrain unproductive behavior, such as hiring unqualified employees and using IHS funds in unauthorized ways.

Moving toward a system of more effective incentives and constraints will improve the effectiveness and efficiency of the IHS. No one reform will work for the entire IHS, and policymakers should be wary of panaceas. The use of panaceas has a track record of repeated failures in various forms of governance.¹²¹ It is a difficult task to improve the incentives and constraints of a complex government agency. Such reforms will require a process of trial and error to find a workable set of incentives and constraints that accommodate the differences at the various levels of the IHS and in various communities. Thus, as the IHS moves forward with institutional reforms, officials at all levels will require humility. Proposed reforms will require intensive, context-specific analysis and an awareness of the complexities of social life.¹²²

2.3.3. Removing Barriers to Healthcare and Facilitating Innovation

One way to improve IHS healthcare—and healthcare more broadly—is to remove policies that artificially or arbitrarily limit the supply of healthcare services. Such reforms would create an institutional environment in which innovation

121. Elinor Ostrom, Marco A. Janssen, and John M. Anderies, “Going Beyond Panaceas,” *Proceedings of the National Academy of Sciences* 104, no. 39 (2007): 15176–78.

122. Stefanie Haefele and Anne Hobson, eds., *The Need for Humility in Policymaking: Lessons from Regulatory Policy* (Lanham, MD: Rowman & Littlefield International, 2019).

is encouraged rather than discouraged. Such reforms could allow innovators to find new and imaginative ways to improve people’s health. A more innovative, productive path forward for the IHS necessitates an acceptance of experimentation and competition.¹²³ Some of those reforms might include expanding the use of telemedicine, removing artificial barriers to telemedicine, expanding the ability of nonphysician healthcare providers to practice more broadly, and allowing international medical graduates to be employed in the IHS system.

Telemedicine is an important innovation that will probably become increasingly important for Native Americans who live on reservations or in rural areas. Telemedicine includes various forms of communication, including video conferencing, remote monitoring, online prescriptions, asynchronous consultations, emails, or telephone conversations. Innovations in telemedicine could dramatically improve the provision of healthcare to Native Americans, and the use of telemedicine has already shown some promise.¹²⁴ Previous research has shown that doctors and nonphysician providers can deliver high-quality healthcare remotely.¹²⁵ Telemedicine benefits patients because it allows those who live in rural and underserved areas, such as reservations, to receive high-quality medical care promptly and conveniently, which has the potential to reduce costs and improve healthcare access significantly.¹²⁶ In the IHS system, where retaining medical staff members is difficult and vacancies are especially high, expanding telehealth could be an important innovation that helps to solve the severe staffing shortage. In addition, telemedicine can facilitate many aspects of healthcare, including consultations and diagnoses.

Evidence from non–Native American situations suggests that telemedicine has significant benefits for mothers in rural areas, which could be vitally important for Native Americans who have high rates of complications with labor and delivery.¹²⁷ The University of Arkansas developed a successful telemedicine

123. Robert F. Graboyes, “Fortress and Frontier in American Health Care” (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, October 2014).

124. Clemens Scott Kruse et al., “Telemedicine Use in Rural Native American Communities in the Era of the ACA: A Systematic Literature Review,” *Journal of Medical Systems* 40, no. 6 (2016): article 145.

125. Robert F. Graboyes and Jennifer Huddleston, “The Promise of Telemedicine in Mississippi,” *Clarion Ledger*, August 4, 2018.

126. Robert F. Graboyes, “Delivery System Innovation Is the Key to Better Healthcare” (Testimony before the Committee on Ways and Means, Rural and Underserved Communities Health Task Force, Mercatus Center at George Mason University, Arlington, VA, November 29, 2019).

127. Darcy Nikol Bryan, “Promoting Maternal Health in Rural and Underserved Areas” (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, October 2019); Everett F. Magann et al., “Evolving Trends in Maternal Fetal Medicine Referrals in a Rural State Using Telemedicine,” *Archives of Gynecology and Obstetrics* 286, no. 6 (2012): 1383–92.

program that helped reduce deliveries of infants with a very low birth weight from 13.1 percent to 7.0 percent in nine participating hospitals, thus contributing to a drop in infant mortality. This improvement is significant because those nine hospitals were not equipped with neonatal intensive care units.¹²⁸

If regulatory barriers are low enough, doctors could eventually perform rare and difficult surgeries remotely through robotics and the internet. Robot-assisted surgeries are already common in the United States, but true telesurgery and telerobotics are happening on a relatively small scale. The expansion of telesurgery and telerobotics could be game changers for telemedicine in the Native American community and other rural areas.

However, some of the biggest challenges are regulatory approval and physician licensure. In October 2017, the Senhance Surgical Robotic System was the first telerobotic surgical system that the FDA has approved since 2001. In addition, internet lag times and delays in sending and receiving the audiovisual feed are still a technological issue with telesurgery. As internet speeds become faster and more reliable, telesurgeries are likely to become more viable, assuming that regulatory barriers do not stand in the way.¹²⁹

Reforming the regulatory and bureaucratic environment that facilitates innovations in the area of telemedicine could offer patients primary and specialty care from remote providers at a higher quality and in more efficient ways. Some states have required and continue to require a telepresenter—a medical assistant who is physically present with the patient. Such requirements subvert the benefits of convenience, spontaneity, and cost reduction that telemedicine can potentially provide.¹³⁰ However, in recent years, many states, including Alaska and Hawaii, have reformed their laws and regulations regarding telepresenters so that telepresenters are no longer necessary for patients and doctors to engage in telemedicine. Texas is now the only state to require a telepresenter.¹³¹

128. Elizabeth W. Kim et al., “Telemedicine Collaboration Improves Perinatal Regionalization and Lowers Statewide Infant Mortality,” *Journal of Perinatology* 33, no. 9 (2013): 725–30.

129. Graboyes, “Fortress and Frontier in American Health Care”; Nicholas Raison, Muhammad Shamim Khan, and Ben Challacombe, “Telemedicine in Surgery: What Are the Opportunities and Hurdles to Realising the Potential?” *Current Urology Reports* 16, no. 7 (2015): 1–8; Paul J. Choi, Rod J. Oskouian, and R. Shane Tubbs, “Telesurgery: Past, Present, and Future,” *Curēus* 10, no. 5 (2018): e2716; Chadrick R. Evans, Melissa G. Medina, and Anthony Michael Dwyer, “Telemedicine and Telerobotics: From Science Fiction to Reality,” *Updates in Surgery* 70, no. 3 (2018): 357–62.

130. Darcy Nikol Bryan, Jared M. Rhoads, and Robert F. Graboyes, “Healthcare Openness and Access Project: Mapping the Frontier for the Next Generation of American Health Care” (Project Overview, Mercatus Center at George Mason University, Arlington, VA, 2018), 37–40.

131. Latoya Thomas and Gary Capistrant, “50 State Telemedicine Gaps Analysis: Physician Practice Standards and Licensure,” American Telemedicine Association, February 2017.

Texas could continue such cost-reducing reforms, such as eliminating the need for telepresenters, which will help to expand the use of telemedicine. States should avoid implementing telepresenter requirements in the future because those requirements would make it more difficult and costly for patients to access telemedicine.

Some states require that physicians doing telemedicine must be licensed in the state where the patient is located, which can be problematic if qualified and willing healthcare professionals are located far from where their patients are.¹³² Only 15.5 percent of physicians are licensed in more than one state.¹³³ To get around this issue, states could specify that the location of the doctor is the location of consequence for telemedicine. Alternatively, states could enter interstate compacts to make medical licensing easily transferable between states.¹³⁴

Another potential reform to increase healthcare supply is to allow nonphysician healthcare providers to practice to their qualification level without physician supervision. Because the IHS system has such a high vacancy and turnover rate of healthcare providers, increasing the supply of healthcare providers, even if they are not physicians, is important. Because of current regulations, many medical services require a physician's attention, but those same services can be done safely and effectively by nonphysician professionals. Reforms could allow nurse practitioners, physician assistants, nurse anesthetists, psychologists, and pharmacists to deliver a wider range of primary care services without the need for a physician. Such reforms would grant physicians more time to look after the more difficult cases that require more specialized training, thus lowering costs and expanding access to more routine forms of healthcare.¹³⁵

Another potential reform to increase the supply of healthcare is to allow international medical graduates to be employed in the IHS system. Under current IHS policies, a medical provider must be a US citizen, have a current medical license from any state, and have board certification or board eligibility in a medical specialty.¹³⁶ However, the IHS, like many other parts of the United States, faces a shortage of providers. Thus, the IHS could decrease the number of vacan-

132. Office of the National Coordinator for Health Information Technology, "Are There State Licensing Issues Related to Telehealth?" April 15, 2019, <https://www.healthit.gov/faq/are-there-state-licensing-issues-related-telehealth>.

133. Andis Robeznieks, "Interstate Medical Licensure by the Numbers," American Medical Association, October 11, 2019.

134. Graboyes, "Delivery System Innovation Is the Key to Better Healthcare."

135. Graboyes, "Delivery System Innovation Is the Key to Better Healthcare."

136. Indian Health Service, "Physicians: FAQs," accessed May 10, 2021, <https://www.ihs.gov/physicians/faq/>.

cies and turnover by allowing noncitizens and international medical graduates to work in the IHS. In addition, states could lower the regulatory barriers that noncitizens face to practice medicine in the United States.¹³⁷

Another way to improve innovation and to increase the supply of health-care is to expand on the IHS's current use of polycentric governance systems. Polycentric systems have multiple, overlapping decision-making centers, without one central authority dominating the others.¹³⁸ The IHS provision of healthcare already has experienced some polycentric governance through self-determination policies when tribes have taken over the management of IHS facilities through contracts and compacts, which are subject to some oversight from the area offices and IHS headquarters. Such agreements and compacts could be expanded to take better advantage of the benefits of polycentric governance systems. Such benefits include the ability to better use local knowledge, to provide checks and balances on power, to engage in institutional experimentation, and to protect against widespread institutional failures.¹³⁹

In polycentric systems, much of the day-to-day decision-making happens at lower levels of government, which allows local policymakers to use their local knowledge and cultural awareness to make decisions, as opposed to far-removed federal policymakers. Tribal leaders will have the local, tacit knowledge about the tribe's people and their culture, which is important knowledge for addressing context-specific needs. A polycentric system of governance increases the flexibility by which tribal leaders can seek to address such needs.

IHS officials have already discussed the flexibility and innovation that the Tribal Self-Governance Program has brought to tribes in addressing their unique healthcare needs, and they have acknowledged that this flexibility has increased intertribal communication, facilitated network building with state and local governments, and more.¹⁴⁰ Future public policies could expand this polycentric

137. Graboyes, "Delivery System Innovation Is the Key to Better Healthcare."

138. Elinor Ostrom, *Understanding Institutional Diversity* (Princeton, NJ: Princeton University Press, 2005).

139. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990); Ostrom, *Understanding Institutional Diversity*; Elinor Ostrom, "Polycentric Systems for Coping with Collective Action and Global Environmental Change," *Global Environmental Change* 20, no. 4 (2010): 550–57; Filippo Sabetti and Paul Dragos Aligica, eds., *Choice, Rules and Collective Action: The Ostroms on the Study of Institutions and Governance* (Colchester, UK: ECPR Press, 2014); Jordan K. Lofthouse, "Self-Governance, Polycentricity, and Environmental Policy," in *The Environmental Optimism of Elinor Ostrom*, ed. Megan E. Jenkins, Randy Simmons, and Camille Wardle (Logan, UT: Center for Growth and Opportunity at Utah State University, 2020): 31–60.

140. Indian Health Service, "Fact Sheets: Tribal Self-Governance," July 2016, https://www.ihs.gov/sites/newsroom/themes/responsive2017/display_objects/documents/factsheets/TribalSelfGovernance.pdf.

arrangement so that tribal officials can use their local, tacit knowledge within the oversight of federal rules and regulations.

Another benefit of polycentric systems is that they lead to a larger set of opportunities for innovations or entrepreneurial solutions to problems. For example, if each tribe is managing its own healthcare system, the diverse set of tribal policymakers can simultaneously experiment with different policies or approaches. This experimentation allows different tribes to learn from one another in a “laboratory of democracy.” If Native American policymakers are to make optimal use of reservations’ self-determination in improving care, they must be allowed to engage in mutual learning from the successes and failures of policymakers on other reservations.

Polycentric systems can also protect against institutional failures and can promote resilient governance. The decentralization of decision-making in a polycentric system means that any problem or error will affect only a small part of the system and not the entire system. Thus, divided decision-making power can provide a robust system of checks and balances. In the real world, federal and state governments can offer a critical backstop to tribal policymaking so that abuses of power and other failures are minimized.

Polycentric governance systems have been used successfully in various settings, including in wildlife conservation under the Endangered Species Act (ESA). A polycentric approach to wildlife conservation gives context to how a more polycentric IHS system could help lead to better outcomes. From 2010 to 2015, federal, state, and local policymakers, as well as private associations, cooperated to conserve the greater sage-grouse populations across several states in the West. In 2010, after two years of reviews, the US Fish and Wildlife Service (USFWS) announced that it was considering granting the greater sage-grouse protections under the ESA. Because of the potential economic threat of an ESA listing, state and local policymakers across the West worked with federal officials to make sure that the greater sage-grouse and its habitat were sufficiently conserved.

In Utah, for example, state officials set up local working groups to make policies tailored to the context-specific needs of different regions in the state. Those groups included a diverse set of parties and interests, such as university scientists, federal officials, state officials, county officials, private landowners, livestock operators, private organizations, industry leaders, and grazing associations. Other states took approaches similar to Utah’s, but their state and local policies conformed to the needs and knowledge of local people.

The federal government’s oversight provided an important backstop to state and local policies, but federal officials did not dictate what those policies should look like exactly. Ultimately, this polycentric approach proved to conserve

the greater sage-grouse and its habitat successfully; in 2015, USFWS officials chose not to list the species.¹⁴¹ Polycentricity has a wide range of applicability; in addition to healthcare provision and species conservation, scholars have studied how polycentric arrangements have improved policing, disaster relief, women's rights, and climate change policy.¹⁴²

The importance of tribal sovereignty is relevant for polycentric governance and the provision of healthcare. With more tribal autonomy over healthcare decision-making, tribes can experiment with different ways of administering healthcare that are tailored to their local laws, regulations, cultural customs, and cultural understandings. However, making tribes responsible for the decision-making and provision of healthcare in the IHS system is not a perfect solution because tribal governments have their own challenges with governance issues. Even if the IHS system were better funded, more accountable, and more polycentric, incentive problems (such as inefficiency and rent seeking) as discussed in the public choice literature would still apply to tribal governments. Thus, despite being more resilient, polycentric systems are not a panacea for public administration. Polycentric systems are complex, meaning that it is not immediately clear how any particular problem will be solved or who will solve it, which can be unsettling for people who desire centralized planning. Good public administration will look different depending on the context, and effective public administration with one set of people in one location may not work well with another set of people in another location. Polycentric governance is not perfect and may result in many localized failures, but it may be the best option that societies, especially Native Americans, have to overcome complex social problems like the provision of healthcare.¹⁴³

3. HEALTH OUTCOMES, POVERTY, AND ECONOMIC GROWTH

Improving the long-term health outcomes for Native Americans will require more than a larger funding appropriation and reforms to IHS systems and

141. Lofthouse, "Self-Governance, Polycentricity, and Environmental Policy."

142. Peter Boettke, Liya Palagashvili, and Jayme Lemke, "Riding in Cars with Boys: Elinor Ostrom's Adventures with the Police," *Journal of Institutional Economics* 9, no. 4 (December 2013): 407–25; Christopher J. Coyne and Jayme S. Lemke, "Polycentricity in Disaster Relief," *Studies in Emergent Order* 4 (2011): 40–57; Ostrom, "Polycentric Systems for Coping"; Elinor Ostrom, "A Polycentric Approach for Coping with Climate Change," *Annals of Economics and Finance* 15, no. 1 (2014): 97–134; Elinor Ostrom, Roger B. Parks, and Gordon P. Whitaker, "Do We Really Want to Consolidate Urban Police Forces? A Reappraisal of Some Old Assertions," *Public Administration Review* 33, no. 5 (September 1, 1973): 423–32; Jayme S. Lemke, "Interjurisdictional Competition and the Married Women's Property Acts," *Public Choice* 166, no. 3-4 (2016): 291–313.

143. Ostrom, "Polycentric Systems for Coping," 552.

protocols. At a fundamental level, Native American health outcomes will improve as poverty and poverty-associated health problems are reduced. Consistent, sustainable economic growth is one of the most effective ways to ameliorate poverty. However, the broader institutional environment determines how well and how quickly economic growth can take place. Federal, state, and tribal policymakers can remove institutional barriers to economic growth, leading to wealthier and healthier people.

3.1. Economic Growth as a Remedy for Health Problems

The conditions in which people live will affect their health and quality of life, as is known in the literature about social determinants of health. Those conditions include a broad set of social forces, systems, and institutions that shape how people live, thus influencing the health-related lifestyles that people either choose or to which they are exposed. Some of the most important social determinants of health include income, education, race, ethnicity, sex, sexual orientation, housing status, employment status, substance abuse, and place of residence. Some social determinants of health (such as the social and community context in which people live) are more ambiguous and include the quantities and qualities of civic participation, discrimination, and social cohesion. Thus, some social determinants of health are difficult to measure or quantify, yet they are still important factors that affect people's health outcomes.¹⁴⁴

Wealth may be one of the most important social determinants of health because it is tied directly or indirectly to many other determinants. The academic literature has established a relationship between poverty and poor health outcomes throughout the world and especially in the United States.¹⁴⁵ Economic

144. Commission on Social Determinants of Health, *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health: Commission on Social Determinants of Health Final Report* (Geneva: World Health Organization, 2008); World Health Organization, *The Economics of Social Determinants of Health and Health Inequalities: A Resource Book* (Geneva: World Health Organization, 2013); Victor R. Fuchs, "Social Determinants of Health: Caveats and Nuances," *Journal of the American Medical Association* 317, no. 1 (2017): 25–26; Nancy E. Adler, M. Maria Glymour, and Jonathan Fielding, "Addressing Social Determinants of Health and Health Inequalities," *Journal of the American Medical Association* 316, no. 16 (2016): 1641–42.

145. Adam Wagstaff, "Poverty and Health Sector Inequalities (Theme Papers)," *Bulletin of the World Health Organization* 80, no. 2 (2002): 97–105; Gopal K. Singh and Mohammad Siahpush, "Widening Socioeconomic Inequalities in US Life Expectancy, 1980–2000," *International Journal of Epidemiology* 35, no. 4 (2006): 969–79; David R. Williams et al., "Race, Socioeconomic Status, and Health: Complexities, Ongoing Challenges, and Research Opportunities," *Annals of New York Academy of Sciences* 1186 (2010): 69–101; Gary Bloch, Linda Rozmovits, and Broden Giambroone, "Barriers to Primary Care Responsiveness to Poverty as a Risk Factor for Health," *BMC Family Practice* 12, no. 1 (2011): 62.

growth appears to improve health outcomes because people with more wealth are likely to have better nutrition and more access to healthcare providers. In addition, economic growth increases the number of resources for governments to put toward public health services and complementary goods and services to healthcare, such as improved transportation infrastructure.¹⁴⁶ Improved health outcomes seem to improve economic growth because healthier people are more productive and accumulate more human capital.¹⁴⁷ Scholars disagree on the direction of causality between poverty and health outcomes; an increase in economic growth appears to improve health outcomes, and better health outcomes appear to aid economic growth. However, because of the complex nature of real-world phenomena, it may be likely that both directions of causality occur.¹⁴⁸

Alleviating poverty will likely result in a healthier Native American population. Prosperity provides individuals with resources that can be used to avoid or buffer exposure to health risks, while poverty limits access to health-promoting nutrition, shelter, clean air, water, utilities, and other elements of a healthy standard of living. Poverty is positively correlated with mental illness, substance abuse, more stress, higher infant mortality rates, lower life expectancy, less health education, and worse nutrition.¹⁴⁹

Violence is also prevalent where there is poverty, especially among Native Americans (both rural and urban), who experience twice the homicide rate as the general population, which perpetuates cycles of stress and despair.¹⁵⁰ Native Americans have the highest per capita rate of violent victimization of all races, and they have extremely high rates of risk behaviors for accidental injuries compared with those in similar geographic situations.¹⁵¹ Poverty affects both the likelihood that an individual will have risk factors and whether that individual has the ability or opportunity to prevent and manage disease.¹⁵²

Issues related to poverty put a greater burden on an already overburdened healthcare system by creating the same risk factors for disease generation after generation. In addition, the historical injustices, pervasive poverty, and continuing

146. Lange and Vollmer, “The Effect of Economic Development on Population Health.”

147. Bhargava et al., “Modeling the Effects of Health on Economic Growth”; Weil, “Accounting for the Effect of Health on Economic Growth.”

148. David N. Weil, “Health and Economic Growth,” in *Handbook of Economic Growth, Vol. 2B*, ed. Philippe Aghion and Steven N. Durlauf (Amsterdam: Elsevier Science & Technology, 2014).

149. American Academy of Family Physicians, “Poverty and Health: The Family Medicine Perspective (Position Paper),” June 2015, <https://www.aafp.org/about/policies/all/poverty-health.html>.

150. Indian Health Service, “Fact Sheets: Disparities”; American Academy of Family Physicians, “Poverty and Health.”

151. Indian Health Service, “Fact Sheets: Disparities.”

152. American Academy of Family Physicians, “Poverty and Health.”

institutional problems on reservations have contributed to relatively high levels of chronic stress, known medically as “allostatic load.” Native Americans and all people who face high levels of chronic stress are more susceptible to disease.¹⁵³

In addition to alleviating poverty, other institutional changes would likely improve health outcomes for the Native American population. In cases in which existing institutions have enabled health outcome inequities, policymakers at various levels of government could consider reforms. Some of the policies might include removing institutional barriers that make housing more costly to obtain or that make employment more difficult to acquire. Besides removing barriers, federal and tribal policymakers may need to consider other policy interventions that could improve mental health, reduce substance abuse, and improve family structures. Any such interventions must be made with knowledge problems and incentive problems in mind; otherwise, policymakers run the risk of unintended consequences that could exacerbate current problems or create a new set of problems.

Although caution is warranted with interventions, scholars and policymakers can select from a large menu of potential interventions that have been shown to improve health outcomes through action on social determinants.¹⁵⁴ For example, improving air and water quality or access to education has been shown to improve health outcomes. However, it is not immediately clear what are the best institutional structures or policies to achieve those goals, so a polycentric approach to policymaking would provide the space to experiment with a variety of specific policy approaches. In sum, if Native American health outcomes are to be holistically improved, alleviating poverty and boosting economic growth will likely need to be combined with other reforms that address other social determinants of health.

3.2. Economic Barriers on Native American Reservations

The majority of Native Americans live on reservations, near reservations, or in rural areas. More than one-half (54 percent) of Native American people live in

153. Valeria Calcaterra et al., “Evaluation of Allostatic Load as a Marker of Chronic Stress in Children and the Importance of Excess Weight,” *Frontiers in Pediatrics* 7 (2019): 335; Joanna O. Shadlow et al., “Sleep Buffers the Effect of Discrimination on Cardiometabolic Allostatic Load in Native Americans: Results from the Oklahoma Study of Native American Pain Risk,” *Journal of Racial and Ethnic Health Disparities* (2021); Zaneta Thayer et al., “Early Life Trauma, Post-traumatic Stress Disorder, and Allostatic Load in a Sample of American Indian Adults,” *American Journal of Human Biology* 29, no. 3 (2017): e22943.

154. Randall Akee et al., “Young Adult Obesity and Household Income: Effects of Unconditional Cash Transfers,” *American Economic Journal* 5, no. 2 (2013): 1–28; Robert Wood Johnson Foundation, “What Works for Health,” <https://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health>.

rural and small-town areas, and more than two-thirds (68 percent) live on or near their tribal homelands.¹⁵⁵ Many Native American reservations have been islands of poverty within the United States for more than a century. Despite decades of federal and tribal initiatives, economic development and health outcomes on reservations have consistently lagged behind other places in the United States.¹⁵⁶ Therefore, if the United States is to improve health outcomes, it is important to understand the barriers to economic growth that exist on reservations and in rural areas where Native Americans live.¹⁵⁷

Economic development is heavily dependent on formal and informal institutions, such as legislation, regulations, social norms, and civic groups. When institutions, both formal and informal, facilitate entrepreneurship and innovation, a society can experience unimpeded economic growth. However, if a society's institutions hamper exchange and entrepreneurship, that society will experience relatively slow economic growth and, in the worst cases, economic decline.¹⁵⁸

Scholars and policymakers have pointed to formal and informal institutions on many reservations as the root cause of poverty.¹⁵⁹ In particular, complex

155. Sarah Dewees and Benjamin Marks, "Twice Invisible: Understanding Rural Native America" (Research Note 2, First Nations Development Institute, Fredericksburg, VA, April 2017).

156. Rachel Mathers, "The Failure of State-Led Economic Development on American Indian Reservations," *Independent Review* 17, no. 1 (2012): 65–80.

157. Robert J. Miller and Elizabeth Furse, *Native America, Discovered and Conquered: Thomas Jefferson, Lewis and Clark, and Manifest Destiny* (Westport, CT: Praeger, 2006); Robert J. Miller, *Reservation "Capitalism": Economic Development in Indian Country* (Santa Barbara, CA: Praeger, 2012).

158. William J. Baumol, "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy* 98, no. 5 (1990): 893–921; Kevin M. Murphy, Andrei Shleifer, and Robert W. Vishny, "The Allocation of Talent: Implications for Growth," *Quarterly Journal of Economics* 106, no. 2 (1991): 503–30; Kevin M. Murphy, Andrei Shleifer, and Robert W. Vishny, "Why Is Rent-Seeking So Costly to Growth?" *American Economic Review* 83, no. 2 (1993): 409–14; Daron Acemoglu, Simon Johnson, and James A. Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review* 91, no. 5 (2001): 1369–401; Daron Acemoglu, Simon Johnson, and James A. Robinson, "Reversal of Fortunes: Geography and Institutions in the Making of the Modern World Income Distribution," *Quarterly Journal of Economics* 117, no. 4 (2002): 1231–94; Daron Acemoglu, Simon Johnson, and James A. Robinson, "Institutions as a Fundamental Cause of Long-Run Growth," in the *Handbook of Economic Growth*, ed. Philippe Aghion and Steven Durlauf (Amsterdam: Elsevier, 2005): 386–472; Peter J. Boettke, Christopher J. Coyne, and Peter T. Leeson, "Institutional Stickiness and the New Development Economics," *American Journal of Economics and Sociology* 67, no. 2 (2008): 331–58; Russell S. Sobel, "Testing Baumol: Institutional Quality and the Productivity of Entrepreneurship," *Journal of Business Venturing* 23, no. 6 (2008): 641–55.

159. Fred S. McChesney, "Government as Definer of Property Rights: Indian Lands, Ethnic Externalities, and Bureaucratic Budgets," *Journal of Legal Studies* 19, no. 2 (1990): 297–335; Stephen Cornell and Joseph P. Kalt, "Successful Economic Development and Heterogeneity of Government Form on American Indian Reservations," Harvard Project on American Economic Development, 1995, <https://hpaied.org/sites/default/files/publications/PRS95-4.pdf>; Terry L. Anderson and Dominic P. Parker, "Sovereignty, Credible Commitments, and Economic Prosperity on American Indian Reservations," *Journal of Law and Economics* 51, no. 4 (2008): 641–66; Terry L. Anderson

property rights regimes and excessively bureaucratic governance have slowed economic growth on reservations.¹⁶⁰ Because those institutions make it more difficult to engage in entrepreneurship and enterprise, reservations are often the poorest parts of the United States, thus contributing to widespread health problems. As such, reservation residents are less able to cope with both chronic medical problems and new problems such as pandemics.

Because tribes have some autonomy under self-determination policies, institutions can and do vary from reservation to reservation. However, the federal government's legal relationship with tribes means that many institutions are similar across most, if not all, tribes. Three important institutional channels impede entrepreneurship and economic development on many reservations: (a) the federal land trust, (b) a dual federal-tribal bureaucracy, and (c) legal and political uncertainty. Those three channels make it more difficult for people to engage in mutually beneficial exchange, to become entrepreneurs, and to discover new innovations. Such barriers hamper economic growth, thereby leaving people poorer than they would otherwise be.¹⁶¹ In the following subsections, we give a brief overview of the three barriers, but the discussion is not exhaustive of all economic barriers to economic development on reservations.

3.2.1. Federal Land Trust

Private property rights that are well-defined and well-enforced are a prerequisite for sustained economic growth. However, the federal trust system makes on-reservation property rights more ill-defined and convoluted when compared with off-reservation locations. The trust system, started in the late 19th century, allows the federal government to hold in trust the title for parcels of land owned by a tribal government or for individual Native Americans. Trust land, whether

and Dominic P. Parker, "Economic Development Lessons from and for North American Indian Economies," *Australian Journal of Agricultural and Resource Economics* 53, no. 1 (2009): 105–27; Shawn E. Regan and Terry L. Anderson, "The Energy Wealth of Indian Nations," *LSU Journal of Energy Law and Resources* 3 (2014): 195–223.

160. The scholars mentioned in the previous footnote do not agree on which institutions are most problematic or on which reforms are likely to be most helpful. However, they do agree that current governance institutions impose high transaction costs on potential entrepreneurs. For example, Anderson and Parker argue that decentralization is likely to be a solution for many of the bureaucratic problems that tribes face, but they defend some tribes' use of state courts. However, all the scholars mentioned in note 159 largely agree that institutional problems demand institutional solutions.

161. Jordan K. Lofthouse, "Institutions and Economic Development on Native American Lands," *Independent Review* 24, no. 2 (2019): 227–48; Jordan K. Lofthouse, "Liberty versus Bureaucracy on Native American Lands," *Journal of Private Enterprise* 34, no. 1 (2019): 87–101; Adam Creppelle, "White Tape and Indian Wards: Removing the Federal Bureaucracy to Empower Tribal Economies and Self-Government," *University of Michigan Journal of Law Reform* 54, no. 3 (2021): 563–609.

owned by the tribal government or individuals, is subject to various constraints over alienation, leasing, and encumbrance. Such constraints increase transaction costs to private enterprise and entrepreneurship, thus limiting the potential for economic growth.

The modern federal trust emerged through two centuries of complex federal policies, but two policies are largely responsible for the federal trust system today: the Dawes Act of 1887 (also known as the General Allotment Act) and the Indian Reorganization Act (IRA) of 1934 (also known as the Wheeler-Howard Act or the “Indian New Deal”).

The purpose of the Dawes Act of 1887 was to limit tribal sovereignty and to assimilate Native Americans into a mainstream American lifestyle. Federal officials allotted parcels of reservation land to individual Native Americans and expected them to farm the allotted land using European-American agricultural practices. During this time, BIA officials held the allotted land in trust for 25 years, or until they deemed Native American allottees as “competent” to manage their own property, which often exceeded the 25-year period. Once allottees were deemed competent to manage their own affairs, the BIA granted the allottees full “fee-simple” ownership, meaning that the owner holds the full title to the property.

During this time, millions of acres of Native American land were sold to white settlers for two reasons. First, land that federal officials deemed as “surplus” was sold to white settlers. Second, many Native American allottees who gained full title to their allotted land sold it to white purchasers. With those forces combined, total land under Native American control or ownership decreased by roughly two-thirds in only a few decades.¹⁶²

The federal government changed its course in 1934 when Congress passed the IRA. Among its many provisions, the IRA ended allotment and set the foundation for the modern trust system. Native Americans who had already gained full legal title to their land could retain the title. For individuals who had been allotted land but had not yet received the title, the federal government chose to hold that land in trust in perpetuity. The legacy of the IRA lives on

162. Anderson and Parker, “Economic Development Lessons from and for North American Indian Economies”; McChesney, “Government as Definer of Property Rights”; Elizabeth A. C. Thompson, “Babbitt v. Youpee: Allotment and the Continuing Loss of Native American Property and Rights to Devise,” *University of Hawaii Law Review* 19, no. 1 (1997): 265–310; Tim Lehman, *Bloodshed at Little Bighorn: Sitting Bull, Custer, and the Destinies of Nations* (Baltimore: Johns Hopkins University Press, 2010); Randall Akee, Miriam Jorgensen, and Uwe Sunde, “Critical Junctures and Economic Development: Evidence from the Adoption of Constitutions among American Indian Nations,” *Journal of Comparative Economics* 43, no. 4 (2015): 844–61.

today in the various forms of land ownership on reservations. First, on tribal trust land, the tribal government owns, manages, and determines the uses of the land, but the federal government holds the legal title. Second, on individual or allotted trust land, individuals own the land, but the federal government holds the legal title. Third, fee-simple land is land that is owned with the title being held by the owner, which is analogous to private land ownership elsewhere in the United States.

Today, the federal government holds approximately 56.2 million acres, or about 88,000 square miles, in trust for Native Americans.¹⁶³ Each reservation contains its own unique combination of various land ownership structures. Some reservations contain mostly trust land, such as Arizona's Fort Apache Reservation, where more than 99 percent of the reservation is trust land. Some reservations contain mostly fee-simple land, such as Idaho's Nez Perce Reservation, where roughly 88 percent is owned by non-Native Americans.¹⁶⁴ Other reservations have a diverse mix of tribal trust land, allotted trust land, and fee-simple land.

The complexity of property rights under the federal land trust means that Native Americans face higher costs of engaging in entrepreneurship and private enterprise, thus limiting economic growth. In other words, the land trust system significantly raises the transaction costs for buying, selling, renting, or using property. Native Americans who individually own land held in trust cannot sell their land without the express permission of the BIA. In addition to selling trust land, BIA officials must grant permission to change land uses, to make capital improvements, or to lease trust lands, which can be a time-consuming process.

Another barrier posed by the trust system limits is the difficulty of using land as loan collateral. Many banks choose not to lend to individuals or tribal governments with trust land because it is unlikely that banks can repossess the land in the event of a default, which subsequently restricts access to capital markets that are necessary for private enterprise.¹⁶⁵ Land use decisions for tribal trust lands are even more complex than for individual trust lands because tribal trust lands face both BIA trust constraints and additional tribal controls that restrict leasing or other uses.

163. Bureau of Indian Affairs, "Frequently Asked Questions," accessed April 21, 2021, <https://www.bia.gov/frequently-asked-questions>.

164. Kalt et al., *The State of the Native Nations*, 98.

165. Anderson and Parker, "Economic Development Lessons from and for North American Indian Economies"; Anderson and Parker, "Sovereignty, Credible Commitments, and Economic Prosperity on American Indian Reservations"; Lofthouse, "Institutions and Economic Development on Native American Lands."

The bureaucratic oversight of trust lands imposes significant costs on reservation residents through “red tape” that does not apply to other nonreservation private property. For example, trust lands owned by individuals are subject to federal environmental regulations because trust land has a similar legal status to other federal land, such as national parks and national forests. The BIA must apply the provisions of the National Environmental Policy Act (NEPA), the Archaeological Resources Protection Act, and other federal laws and regulations. Compliance with those laws and regulations increases the time and monetary costs of engaging in economic enterprises, even if the enterprises are small. The environmental assessments and environmental impact statements required under NEPA can be a time-consuming and financially expensive process for those who are least equipped to cope with such costs.

Because of the unique nature of the federal land trust, two issues have arisen on reservations: checkerboarding and fractionation. As a result of multiple forms of land ownership on most reservations, combining the various types often forms a “checkerboard” pattern, meaning that the ownership structure varies greatly from plot to plot. Checkerboarding can be problematic for economic enterprises because it is difficult and costly for tribal governments or individuals to use large, contiguous sections of land. When trying to use a large, contiguous tract of land for some enterprise, checkerboarding is made more complicated by jurisdictional challenges. Depending on who owns the land, potentially four levels of government, including county, state, federal, and tribal, may have the authority to regulate, tax, or perform various activities on a plot of land within a reservation’s borders. Therefore, combining adjacent tracts of land for an economic endeavor can lead to conflict and confusion, which increases the transaction costs.

Fractionation is a major issue affecting allotted trust lands. Fractionation occurs when many people (possibly thousands) co-own a percentage share of a parcel of land, instead of a distinct area. When the federal government originally allotted land to individual Native Americans from 1887 to 1934, federal officials chose to hold the land in trust for the original allottees and their descendants. Today, hundreds or thousands of people may co-own the same parcel of land, which makes it difficult to use the land because the co-owners must agree on whether to use the land or whether to sell it. Across the United States, there are approximately 100,000 fractionated tracts of land owned by more than 243,000 landowners.¹⁶⁶ Fractionation is a significant barrier to entrepreneurial activity

166. Department of the Interior, “Fractionation,” accessed May 13, 2021, <https://www.doi.gov/buybackprogram/fractionation>.

because it raises the transaction costs of using trust land, especially leasing the land for any kind of economic development. Before the 1990s, leasing allotted trust land that was fractionated required the co-owners' unanimous consent.¹⁶⁷

3.2.2. Dual Federal–Tribal Bureaucracy

The long history of federal–Native American relations has led to the emergence of a dual bureaucracy of federal and tribal officials that both have authority over public policies on reservations. The complex relationship between tribal bureaucracies and federal bureaucracies is often ill-defined and convoluted. Nominally, the federal government and tribes have a government-to-government relationship, in which agencies such as the BIA or IHS must consult with tribal governments, but the federal agencies have the power to create public policies, even if they go against tribal leaders' wishes. As such, both federal and tribal bureaucracies have broad discretion to oversee and regulate economic enterprises directly as well as through more indirect means. In some cases, these two sets of bureaucracies do not agree on public policies, and there can be tension and even contradictions between the policies. Thus, the federal-tribal relationship has led to a unique form of public administration that leads to socially unproductive features, such as negative forms of political entrepreneurship, erosion of the rule of law, and impediments to private enterprise.¹⁶⁸

On reservations, both federal officials in many agencies and tribal officials have the power to oversee how land is used, what type of labor is allowed, which types of businesses are allowed, who receives government allocations of money, how business will be regulated, and so on. Because two independently functioning bureaucracies can make public policies on the same topic, reservation residents face relatively large amounts of bureaucratic red tape that increases the costs of engaging in market enterprises, entrepreneurship, and innovation. Furthermore, because the federal trust responsibility affects property rights for large portions of many reservations, the BIA must consistently interfere in the control, management, allocation, and divestment of tribal lands and other natural resources.

The federal government has assumed an active role in managing or regulating many aspects of life on a reservation, as well as on tribal governments. On

167. Lofthouse, "Institutions and Economic Development on Native American Lands"; Creppelle, "White Tape and Indian Wards"; Jessica A. Shoemaker, "No Sticks in My Bundle: Rethinking the Indian Land Tenure Problem," *Kansas Law Review* 63, no. 2 (2015): 383–450.

168. Lofthouse, "Institutions and Economic Development on Native American Lands"; Lofthouse, "Liberty versus Bureaucracy on Native American Lands"; Creppelle, "White Tape and Indian Wards."

reservations, public administration—especially land use decisions—can become subject to the political whims of those in power. When a society depends on central planning and bureaucratic allocation, the small minority in power will often impose their preferences on others.¹⁶⁹ When sociopolitical systems force people into dependent relationships with bureaucrats, “favoritism, discriminatory treatment (both positive and negative), and arbitrary classifications” are likely to emerge.¹⁷⁰ As expected, many examples of corruption and administrative negligence have emerged in the past several decades on reservations.¹⁷¹

One additional complicating factor is that tribal governments function as both firms and governments. Many tribes run business ventures, including tourism, gaming, energy, agriculture, forestry, manufacturing, and telecommunications, while they also have the coercive powers of government to tax, legislate, and regulate.¹⁷² Politics and economic enterprises are often intertwined and inseparable in those contexts.¹⁷³ Although the businesses employ reservation residents, the mixture of government and business often leads to unintended consequences. For example, in many cases, the policymakers who run the business are often the same people or are directly connected to the people who regulate economic activity on reservations.

Maintaining the separation between day-to-day business decisions and tribal politics is often difficult for tribal officials because enterprises are fundamentally owned and operated by elected officials and bureaucrats. Thus, on many reservations, the institutional arrangements do not provide for a distinct separation between day-to-day business decisions and tribal politics, leading to an environment with a high potential for rent-seeking and corruption. “Rent-seeking” in this context refers to an individual or group using the political process to obtain benefits for themselves at the expense of another group.¹⁷⁴ Unlike mutually beneficial trade in a market, rent-seeking in the political sphere—commonly seen

169. Friedrich A. Hayek, *The Road to Serfdom: Text and Documents (The Definitive Edition)*, ed. Bruce Caldwell (Chicago: University of Chicago Press, 2007).

170. James M. Buchanan, “The Minimal Politics of Market Order,” *Cato Journal* 11, no. 2 (1991): 219.

171. Jordan K. Lofthouse, “Culture and Native American Economic Development,” *Journal of Entrepreneurship and Public Policy* 9, no. 1 (2019): 21–39.

172. Karen J. Atkinson and Kathleen M. Nilles, *Tribal Business Structure Handbook* (Washington, DC: Office of Indian Energy and Economic Development, US Department of the Interior), 2008.

173. Richard E. Wagner, *Politics as a Peculiar Business: Insights from a Theory of Entangled Political Economy* (Northampton, MA: Edward Elgar, 2016).

174. Anne O. Krueger, “The Political Economy of the Rent-Seeking Society,” *American Economic Review* 64 (1974): 291–303; Gordon Tullock, *Rent Seeking* (Brookfield, VT: Edward Elgar, 1993); Gordon Tullock, “The Welfare Costs of Tariffs, Monopolies, and Theft,” *Western Economic Journal* 5, no. 3 (1967): 224–32.

in the form of lobbying—becomes socially costly because resources are used to capture the rent instead of creating new wealth. In the case of many tribal enterprises, a culture of rent-seeking has emerged because political leaders, who are simultaneously business leaders, discover and exploit opportunities that enrich themselves at the expense of others.¹⁷⁵

3.2.3. Legal and Political Uncertainty

Because of the unique structure of formal institutions on reservations, legal and political uncertainty has been one of the greatest barriers to economic development. This uncertainty is also related to the complexity of understanding how property rights work on reservations and of navigating the labyrinth of tribal and federal policies that the dual bureaucracies make. Uncertainty and complexity regarding taxation schemes, judicial jurisdiction, incorporation codes, and access to the capital market create barriers to potential Native entrepreneurs as well as to off-reservation entrepreneurs who wish to enter reservation markets.¹⁷⁶ Thus, the complexity of Native American governance systems creates confusion and uncertainty for people who may want to do business on a reservation, creating significant barriers to economic development. Potential entrepreneurs may be uncertain about how government actions will affect their decisions, and this uncertainty hampers the ability of entrepreneurs to engage in socially beneficial actions that create wealth on a reservation.

A tribal government's ownership of a business can also lead to uncertainty. Because of the common-law sovereign-immunity doctrine, tribes are immune from suit unless Congress gives authorization. Sovereign immunity is not limited just to a tribal government proper; courts have extended such immunity to entities that are directly related to tribes, such as tribally owned businesses, even if the businesses' operations take place off the reservation. Entrepreneurs or potential entrepreneurs may be hesitant to engage in economic enterprises directly with tribes or tribally owned businesses because they may not be able to bring a suit if a contract is breached. It is often uncertain who can be sued if a tribal entity violates a contract and which court would have jurisdiction. Such uncertainty is a large disincentive to engage in economically beneficial action.¹⁷⁷

175. Lofthouse, "Culture and Native American Economic Development"; Seung Ginny Choi and Virgil Henry Storr, "A Culture of Rent Seeking," *Public Choice* 181, no. 1 (2019): 101–26.

176. Lofthouse, "Institutions and Economic Development on Native American Lands"; Lofthouse, "Liberty versus Bureaucracy on Native American Lands"; Eric Alston et al., "The Chronic Uncertainty of American Indian Property Rights," *Journal of Institutional Economics* 17, no. 3 (2021): 473–88.

177. Lofthouse, "Institutions and Economic Development on Native American Lands"; Lofthouse, "Culture and Native American Economic Development."

However, tribal leaders can choose to waive immunity on a case-by-case basis, or they can choose to negotiate limited waivers. In recent years, many tribal officials have chosen to waive immunity from suit for business purposes of enforcement of commercial contracts or leases. Waiving immunity can be controversial. Some tribal government leaders are hesitant to waive immunity because they see it as an abandonment of the progress made in securing sovereign status. Conversely, other officials see the ability to waive immunity, either limited or in full, as the full expression of tribal sovereignty and self-determination. By partially or fully waiving immunity, tribal leaders can signal that they are trustworthy and reliable to engage in economic activity.

Off-reservation entrepreneurs and investors historically have been hesitant to use tribal courts because they did not perceive them as impartial. However, many tribes have successfully reached commercial agreements by innovatively using neutral arbitration provisions. When entering into those kinds of agreements, each side selects a party arbitrator, and the party arbitrators select a third neutral arbitrator to adjudicate.¹⁷⁸ If tribal officials want to increase mutually beneficial exchange with off-reservation businesses, they should consider the use of immunity waivers and arbitration agreements.

3.3. Overcoming Economic Barriers on Reservations

Although reservations face institutional barriers to entrepreneurship and economic growth, many tribal and federal leaders are aware of those problems, and some have even started enacting policy reforms to reduce the barriers. If more federal and tribal policymakers work to reform problematic institutions to promote socially productive entrepreneurship, reservations would likely experience higher rates of economic growth and lower rates of poverty. Resolving the problem of chronic poverty may help make Native American populations more robust against current and future health crises.

Many tribal leaders are reforming their formal institutions to remove unnecessary economic barriers or to promote environments conducive to entrepreneurship, which has begun to help alleviate the problem of persistent poverty. For example, the Viejas Band of Kumeyaay Indians bought the Borrego Springs Bank in 1996, making it the first Native American-owned bank in California. The bank has been providing services to tribal governments and Native-owned

178. Harvard Project on American Indian Economic Development, “On Improving Tribal-Corporate Relations in the Mining Sector: Relations in the Mining Sector,” April 2014, <https://hpaied.org/sites/default/files/documents/miningrelations.pdf>.

businesses to facilitate entrepreneurial growth. The bank works with Native Americans to access credit that is needed for private enterprise, and it provides more flexibility with collateral than do traditional banks, which must manage the constraints on collateral mentioned previously.

In Minnesota, the Mille Lacs Band of Ojibwe Indians created the Small Business Development Program to provide low-interest loans for businesses owned by band members on or near the reservation. Since the program began in 1996, more than 30 businesses have been started, diversifying the economy in and around the reservation. In Michigan, the Little River Band of Ottawa Indians has taken steps to strengthen its self-governance and to promote economic development by encouraging citizen-owned small businesses. Tribal officials implemented job training programs for teenagers and young adults, including the Migizi Business Camp for tribal youth, which helps potential entrepreneurs learn how to have good business practices and how to navigate legal institutions.¹⁷⁹

Many other tribes have enacted institutional reforms and new policies that have attempted to alleviate the problems associated with access to capital, thus navigating complex legal institutions and streamlining legal processes.¹⁸⁰ If more tribes reform their formal institutions in ways that promote socially beneficial, wealth-creating entrepreneurship, reservations are likely to experience economic growth and increases in wealth that improve health outcomes and quality of life.

Like their tribal counterparts, federal policymakers have been making some institutional reforms, such as fixing the worst parts of the fractionation problem. Before the 1990s, selling or leasing fractionated land required unanimous consent, meaning that co-owners of that land faced high transaction costs because of the tragedy of the anticommons.¹⁸¹ During the past 30 years, Congress has partially addressed that problem by passing the American Indian Agricultural Resource Management Act of 1993 (AIARMA), the Indian Land Consolidation Act Amendments of 2000 (ILCA Amendments), and the American Indian Probate Reform Act of 2004 (AIPRA).

AIARMA was important because it allowed a simple majority of owners of fractionated agricultural land to make leasing agreements, rather than the

179. Harvard Project on American Indian Economic Development, “Honoring Nations: Directory of Honored Programs 1998–2018,” 2018, https://hpaied.org/sites/default/files/HPAIED%20Directory%202017-2018%20FINAL%20%28002%29_0.pdf.

180. One helpful source of information regarding new and innovative tribal programs is the Harvard Project on American Indian Economic Development. The Harvard Project keeps a list of tribal programs and practices that it identifies as improving tribal governance.

181. Michael A. Heller, “The Tragedy of the Anticommons: Property in the Transition from Marx to Market,” *Harvard Law Review* 111, no. 3 (1998): 621–88.

unanimous consent requirement before AIARMA. The ILCA Amendments and AIPRA replaced unanimous consent with a sliding scale for who must consent to a nonagricultural lease before BIA approval. The sliding scale is based on the number of individual landowners and how the share of ownership interests (known as “undivided interests” for trust land) are distributed among the landowners.

Tracts with five or fewer owners require 90 percent of the undivided interests to consent. Tracts with 6 to 10 owners require 80 percent of the undivided interests to consent, and 11 to 19 owners require 60 percent of the undivided interests to consent. Tracts with 20 or more owners require only a simple majority to agree. In addition, AIPRA was intended to reduce fractionation through federally assisted estate planning so that further splintering did not occur when a landowner passed away without a will. Despite marginal improvements through those three acts, owners of fractionated trust land still face relatively high transaction costs because it is costly to reach agreements among dozens or hundreds of co-owners, and federally managed estate planning services are complex and convoluted.¹⁸² More recently, as of January 2021, the BIA has announced proposed changes that would streamline the policies over probating of trust lands.¹⁸³ Further reforms will be necessary to reduce economic barriers, facilitate economic growth, and reduce poverty.

However, federal officials are facing a difficult situation because one of the current goals of the federal government is to bring more land into the federal trust system, which is a proverbial double-edged sword. Over the course of American history, tribes have lost the vast majority of their homeland and their sovereignty, but the federal land trust essentially allows tribes and individual Native Americans to “keep Indian lands in Indian hands.” Such a goal is understandable, especially because land under Native American control was at 138 million acres in 1887 but fell to 48 million acres by 1934. During the past several decades, millions of acres have been put back into the trust system, thus allowing tribes to regain some of the land that was lost.¹⁸⁴

182. Shoemaker, “No Sticks in My Bundle”; Diane K. Lutt, “The American Indian Probate Reform Act: A Five-Year Review,” *Washburn Law Journal* 51, no. 1 (2011): 105–30; Jacob Russ and Thomas Stratmann, “Missing Sticks: Property Institutions and Income Dissipation in Indian Country” (Working Paper in Economics 15–22, George Mason University, March 2015).

183. Department of the Interior, “American Indian Probate Regulations,” *Federal Register* 86, no. 4 (January 7, 2021): 1037.

184. Indian Land Tenure Foundation, “Land Tenure History,” accessed April 21, 2021, <https://iltf.org/land-issues/history/#:~:text=At%20that%20point%2C%20the%20landowner,by%201934%20when%20allotment%20ended>.

Despite the desire to “keep Indian lands in Indian hands,” the federal trust system has significant tradeoffs that must be considered, such as the barriers discussed in previous sections. Thus, a trust system that promotes socially beneficial entrepreneurship, as opposed to inhibiting it, will require major policy reforms that make it much less costly for individuals and tribes to use, sell, or lease trust land and the associated natural resources. If the BIA and other federal agencies that oversee aspects of Native American life do not remove costly red tape, Native Americans are likely to remain impoverished and have lower rates of engagement in commercial life.

3.4. Economic Growth and Healthcare Access in Rural Areas

Much of the poverty and lack of healthcare access that Native Americans face can be explained by rurality. A large portion of the Native American population—just over half—lives in rural areas, which are often some of the poorest places in the United States.¹⁸⁵ The Native Americans who live on reservations located in rural areas are faced with the dual burden of the institutional problems of reservations and the lack of access to economic opportunity and healthcare resulting from rural life.

Rural areas tend to have lower levels of economic growth compared with urban areas, and the likelihood of being poor is higher in rural areas, even when controlling for differences in community and individual characteristics.¹⁸⁶ Rural communities have fewer opportunities for upward mobility and are particularly vulnerable to the adverse effects of structural economic change.¹⁸⁷ Rural areas face barriers to economic growth because they cannot benefit from positive agglomeration effects, which are the cost-saving benefits that occur in dense places when firms can locate near each other and their customers.¹⁸⁸

Cities also are able to uphold a greater variety of industries, which helps to insulate them from economic shocks and transitions. The switch from a manufacturing-based economy to a postindustrial services economy has meant a shift from the resource extraction and low-wage manufacturing industries,

185. Dewees and Marks, “Twice Invisible: Understanding Rural Native America.”

186. Bruce Weber et al., “A Critical Review of Rural Poverty Literature: Is There Truly a Rural Effect?” *International Regional Science Review* 28, no. 4 (2005): 381–414.

187. Ann R. Tickamyer and Cynthia M. Duncan, “Poverty and Opportunity Structure in Rural America,” *Annual Review of Sociology* 16, no. 1 (1990): 67–86.

188. Georgeanne M. Artz, Younjun Kim, and Peter F. Orazem, “Does Agglomeration Matter Everywhere? New Firm Location Decisions in Rural and Urban Markets,” *Journal of Regional Science* 56, no. 1 (January 2016): 72–95.

which make up the backbone of most rural economies, toward service industries that depend on agglomeration in urban economies.¹⁸⁹ Many rural areas that were once booming have lost the industries that facilitated their growth and enabled their populations.

However, not all rural communities are the same. Although some rural communities are struggling economically, others are thriving. In a trend that has continued since the 1990s, a vast majority of rural growth has occurred in just one-third of rural counties. Most growth is in areas adjacent to the larger cities while peripheral areas continue to decline.¹⁹⁰ The growth in rural populations near metropolitan areas is no coincidence; by locating themselves near metropolitan areas, people are able to take advantage of nearby agglomeration effects.¹⁹¹ Overall, even with formal institutions that facilitate socially productive entrepreneurship, many rural areas will have relatively lower rates of economic growth because they lack the positive agglomeration effects that metropolitan areas offer.

Many wealthy tribes are located near metropolitan areas with higher populations, but some wealthy tribes are located in rural areas that happen to have a fortunate endowment of natural resources that can be extracted. The most difficult problem is how to promote economic development in rural areas and rural reservations without resource endowments that can be exploited. Unfortunately, we should expect rural reservations that are located away from metropolitan areas to lag behind in growth, but fixing problematic institutions that impede entrepreneurship will improve conditions in those areas.

In addition to economic barriers, rural areas, on average, have higher rates of health problems such as heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke.¹⁹² The reality of rural life sometimes makes the distances of accessing healthcare inconvenient and costly. In addition, rural populations lack access to healthcare in large part because of a shortage of rural

189. Tickamyer and Duncan, “Poverty and Opportunity Structure in Rural America,” 78.

190. Thomas G. Johnson, “The Rural Economy in a New Century,” *International Regional Science Review* 24, no. 1 (2001): 21–37; Kenneth Johnson, “Domestic Migration and Fewer Births Reshaping America” (National Fact Sheet 38, Carsey School of Public Policy, University of New Hampshire, 2018), 1–2.

191. Artz, Kim, and Orazem, “Does Agglomeration Matter Everywhere?” 6.

192. Cara V. James et al., “Racial/Ethnic Health Disparities Among Rural Adults—United States, 2012–2015,” *MMWR Surveillance Summaries* 66, no. 23 (November 17, 2017): 1–9; Safi U. Khan et al., “Social Vulnerability and Premature Cardiovascular Mortality among US Counties, 2014 to 2018,” *Circulation* 144, no. 16 (2021): 1272–79; Nilay S. Shah et al., “Widening Rural-Urban Cardiometabolic Mortality Gap in the United States, 1999 to 2017,” *Journal of the American College of Cardiology* 75, no. 25 (2020): 3187–88.

healthcare providers. When comparing rural and urban areas in the United States, rural communities have fewer than one-half the physicians per capita that urban ones have.¹⁹³ Increasing the stock of healthcare providers, including physicians and nonphysicians, would certainly increase the number of providers who can work in rural areas, which could give Native Americans more access to general and specialty care. In addition to increasing the number of nonphysician providers, expanding their scope of practice could help address shortages in rural areas.

Policymakers at the tribal, county, state, and federal level can focus on public policies that better connect individuals in rural areas to the broader economic system and to telemedicine. In the modern economy, access to reliable, high-speed broadband could be the most effective way to provide more economic opportunities for people in rural areas, especially Native Americans. As such, policymakers at various levels should focus on a policy of “permissionless innovation” that will allow entrepreneurs to find better, more effective, and more efficient ways of connecting people.¹⁹⁴

Technology has made physical distance less important for economic opportunities, but that same technology has increased the importance of being connected.¹⁹⁵ In many rural locations, it may not be profitable for traditional telecommunications firms to invest in costly internet infrastructure, at least with the current infrastructure systems of physical cables and wires.¹⁹⁶ This situation leaves some rural populations without access to reliable, high-speed internet, which has become an increasingly important component in participating in the contemporary American economy and telemedicine. In the reasonably near future, innovations may help bring the internet to places where it is currently unavailable or underprovided.

193. Roger A. Rosenblatt and Gary Hart, “Physicians and Rural America,” *Western Journal of Medicine* 173, no. 5 (2000): 348–51; Laura-Mae Baldwin et al., “Access to Specialty Health Care for Rural American Indians in Two States,” *Journal of Rural Health* 24, no. 3 (2008): 269–78; Linda J. Redford, “Building the Rural Healthcare Workforce: Challenges—and Strategies—in the Current Economy,” *Generations* 43, no. 2 (2019): 71–75; Rural Health Information Hub, “Rural Healthcare Workforce,” Health Resources and Services Administration, US Department of Health and Human Services, November 9, 2020, <https://www.ruralhealthinfo.org/topics/health-care-workforce#workforce>.

194. Adam Thierer, *Permissionless Innovation: The Continuing Case of Comprehensive Technological Freedom* (Arlington, VA: Mercatus Center at George Mason University, 2016).

195. T. G. Johnson, “The Rural Economy in a New Century.”

196. Nicole T. Lee, “Closing the Digital and Economic Divides in Rural America,” Brookings Institution, accessed April 23, 2021, <https://www.brookings.edu/longform/closing-the-digital-and-economic-divides-in-rural-america/>.

For example, SpaceX's Starlink is attempting to provide high-speed internet service to rural Americans through a satellite network without the need for the same physical infrastructure that is currently necessary.¹⁹⁷ In its beta version in 2020, Starlink has already helped the Hoh Tribe of Washington state access reliable broadband, which the tribe was previously unable to do because of its remote location. Melvinjohn Ashue, vice chairman of the Hoh Tribe's governing committee, said, "It seemed like out of nowhere, SpaceX came up and just catapulted us into the 21st century. Our youth are able to do education online, participate in videos. Telehealth is no longer going to be an issue."¹⁹⁸

The Starlink project is just one example of many potential innovations that could improve the lives and livelihoods of Native Americans in rural areas. Connection through the internet is important because it can allow Native Americans to engage in virtual forms of entrepreneurship, thus promoting economic growth. It also facilitates telehealth, which could help alleviate many of the chronic physical and mental health issues common to the Native American population.

As internet access becomes faster and more reliable on reservations, "e-government" could improve tribal access to health services, including payments to tribes for healthcare. E-government is the use of information and communication technologies, such as the internet, to improve the structures and operations of government. For example, one common form of e-government in the United States is the ability to renew your car registration on a state government website. Ideally, e-government is meant to improve public services, administrative efficiency, and transparency. Most developed countries have begun to use e-government extensively, but less-developed and developing countries have faced some challenges in successfully implementing it.¹⁹⁹

Some tribal governments have begun to use e-government to improve their provision of public services.²⁰⁰ The expansion of e-government could make it easier for the IHS and tribes to engage in telemedicine, but other forms of e-government could help address some of the other social determinants of poor

197. Alan Boyle, "SpaceX's Starlink Satellite Network Wins \$885M in Federal Aid for Rural Broadband," *GeekWire*, December 7, 2020.

198. Jon Brodtkin, "Remote Tribe Says SpaceX Starlink 'Catapulted' Them into 21st Century," *ARS Technica*, October 12, 2020.

199. Jean Damascene Twizeyimana and Annika Andersson, "The Public Value of E-Government: A Literature Review," *Government Information Quarterly* 36, no. 2 (2019): 167–78.

200. Nicholet Parkhurst et al., "The Digital Reality: e-Government and Access to Technology and Internet for American Indian and Alaska Native Populations," in *Proceedings of the 16th Annual International Conference on Digital Government Research* (New York: Association for Computing Machinery: 2015), 217–29.

health. For example, e-government could make it less costly for tribal members to access information and services that would aid economic development, education, and cultural preservation.

4. CONCLUSION AND IMPLICATIONS

Two centuries of federal policies have created an environment in which Native Americans experience lower average life expectancy, higher rates of mortality, and higher rates of other chronic health problems than does the general population.²⁰¹ The longstanding disparities between Native American health outcomes and the general US population are an important social problem that scholars and policymakers should take seriously. By reforming IHS policies and other reservation institutions, policymakers can set the stage for Native Americans to flourish.

Over the past seven decades, the IHS has provided healthcare to millions of Native Americans, but health outcomes still lag significantly behind national averages. Despite federal oversight and funding, the IHS faces many problems in providing quality healthcare to Native Americans, including underfunding and mismanagement. Many scholars have argued that the IHS needs more funding to provide adequate service, and maybe even twice as much funding as it currently receives.²⁰² The relatively low levels of funding limit preventive care for many Native Americans, who outpace other minority groups in deaths from preventable diseases.

Federal inspectors have found that the IHS—despite its mission—has inadequate policies for ensuring patient safety and bureaucratic accountability, among other issues.²⁰³ IHS employees also have weak incentives to engage in innovation and experimentation that might be beneficial to the provision of services because they are not the residual claimants of the fruits of their decisions.²⁰⁴

201. Indian Health Service, “Fact Sheets: Disparities.”

202. Sarche and Spicer, “Poverty and Health Disparities for American Indian and Alaska Native Children”; Kalt et al., *The State of the Native Nations*, 222–24; Warne and Frizzell, “American Indian Health Policy: Historical Trends and Contemporary Issues”; Bergman et al., “A Political History of the Indian Health Service,” 572; Sequist et al., “Trends in Quality of Care and Barriers to Improvement in the Indian Health Service,” 485.

203. Office of Inspector General, “Organizational Challenges,” 11–20; Office of Inspector General, “IHS Needs to Improve Oversight,” 10–29; Office of Inspector General, “Case Study,” 6–29.

204. Hayek, “Economics and Knowledge”; Hayek, “Socialist Calculation”; Hayek, “Competition as a Discovery Procedure”; Mises, *Human Action*; Kirzner, *Competition and Entrepreneurship*; Kirzner, *Discovery and the Capitalist Process*; Boettke, “Information and Knowledge”; Boettke, “The Genius of Mises and the Brilliance of Kirzner”; Coyne, *Doing Bad by Doing Good*.

Despite longstanding challenges with the IHS and overall Native American health outcomes, there have been some successes. For example, during the COVID-19 pandemic, many tribal governments with the IHS's help effectively vaccinated a majority of their populations in a relatively short amount of time. By late March 2021, 95 percent of Montana's Blackfeet Nation population had received the first vaccine dose. By the end of May 2021, 70 percent of the Sac and Fox Tribe in Iowa and 70 percent of the Navajo Nation in the Four Corners region had been fully vaccinated.²⁰⁵ The IHS's COVID-19 Pandemic Vaccine Plan, which was first implemented in November 2020, appeared to be reasonably successful in distributing and administering vaccines to a large portion of the Native American population.²⁰⁶

By July 2021, Native Americans had the highest vaccination rate of any racial group in the country.²⁰⁷ The successes of COVID-19 vaccinations can be attributed to many factors, including vaccination education campaigns, effective tribal leadership, the IHS COVID-19 Pandemic Vaccine Plan, a general sense of duty to community, and centralized hospital and health center locations on reservations. The successes with the COVID-19 vaccination efforts could become an important learning opportunity for improving the provision of healthcare to Native Americans in the future.

To improve Native American health outcomes, this paper's recommendations range from immediate and simple to intensive and complex. Ultimately, policymakers can and should develop a more ideally constituted set of institutions for Native Americans that both improve the IHS and help resolve the underlying causes of poverty.

In the immediate term, one potential solution is to allocate more funding to the IHS. Although it is difficult to know the optimal amount of funding for the IHS, a first step could be to match the per capita funding of the IHS to other federal healthcare programs, such as Medicare, Medicaid, and the Veterans Healthcare Administration. Such a solution is a practical, short-term way to deliver more healthcare to individuals. However, this recommendation should not be construed as providing an excuse to increase funding without tackling deeper institutional issues in the IHS or the roots of poverty.

205. Rachel Hatzipanagos, "How Native Americans Launched Successful Coronavirus Vaccination Drives: 'A Story of Resilience,'" *Washington Post*, May 26, 2021.

206. Indian Health Service, "COVID-19 Pandemic Vaccine Plan," November 2020, https://www.ihs.gov/sites/newsroom/themes/responsive2017/display_objects/documents/2020_Letters/Enclosure_DTLL_DUIOLL11182020.pdf.

207. National Indian Council on Aging, "American Indians Have Highest COVID Vaccine Rate," September 10, 2021, <https://www.nicoa.org/american-indians-have-highest-covid-vaccine-rate/>.

The IHS is a highly imperfect healthcare system, and long-term solutions must focus on institutional reforms to the IHS that improve service while mitigating knowledge problems and incentive problems. For example, Congress and IHS policymakers could institute better mechanisms of internal accountability and communications within the IHS. Those mechanisms should be made with the input of IHS employees at all levels to make sure that local and tacit knowledge is incorporated. Congress and IHS policymakers could also consider reducing barriers to healthcare-related innovations, such as telehealth. Such reforms could increase the supply of healthcare to Native Americans. In addition, the IHS system could leverage a more polycentric arrangement.

At the largest scale, institutional reforms must remove barriers to innovation and entrepreneurship. Because poverty and poorer health are interrelated, improving health outcomes for Native Americans will require addressing the underlying causes of poverty. For Native Americans, many of the underlying causes of poverty are rooted in the formal institutions of reservations. Such institutional reforms should include streamlining property rights, reducing unnecessary red tape, and reducing legal-political uncertainty.

Many tribes have already started to make necessary reforms, but streamlining and clarifying complex bureaucratic processes regarding property rights and business regulations needs to continue. Without those deeper institutional changes, health outcomes are not likely to improve. By improving the “rules of the game,” the Native American community can have increased access to healthcare and economic opportunities.

However, there is a metapolitical problem with putting the institutional reforms in motion. The Native American population is a relatively small group within the United States, and it is difficult and costly for a small and often overlooked demographic to persuade government officials to make systemic changes to governance structures. Thus, federal legislators and bureaucrats face weak political incentives to make the needed systemic institutional changes. Despite this, as other groups become aware of Native American issues, the pressure for institutional change could reach a critical mass that would compel federal policymakers to act.

In addition, Native Americans who live in rural areas near reservations face economic hardships that contribute to poverty and poorer health outcomes. Rural areas, in many ways, face economic disadvantages compared with more urban areas because rural communities often lack stable jobs, opportunities for upward mobility, community investment, and economic diversity. In the modern economy, connection is critical, and the lack of reliable, high-speed internet in

rural areas is another disadvantage. Removing barriers to rural economic development would likely help alleviate poverty for those individuals, and perhaps one of the most effective ways to do that is to increase access to reliable, high-speed internet. Policymakers could help fund research and development in new, innovative, and flexible ways of providing internet to rural communities. Internet access will allow rural areas to tap into the economic engines in the cities, thus helping to promote economic development in rural areas. Facilitating access to a broader set of economic opportunities in rural areas will likely improve health outcomes for Native Americans, as well as other rural communities.

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