Deindustrialization, Working-Class Decline, and the Growth of Health Care

New Labor Forum
2021, Vol. 30(2) 54–61

DOI: 10.1177/10957960211007122
journals.sagepub.com/home/nlf

Gabriel Winant[1]

Keywords
deindustrialization, health care, labor, social welfare, women workers, working class

Far beyond what we might have expected, the Covid-19 pandemic has posed questions not only of epidemiology but also concerning labor. In 2020, the phenomenon of "essential workers" emerged—with all of its outrages of insufficient staff, equipment, and pay—because we had already designated an enormous workforce as simultaneously necessary for our society's survival and reproduction, yet individually disposable. The inequality of the disease's toll in terms of class and race mirrors the composition of the workforce employed in the healthcare system long before 2020: of major urbanized counties in the United States, the one with the largest proportion of its total workforce committed to health care and social assistance is the Bronx, where over 41 percent of inhabitants are Black and over 56 percent are Latinx.[1] This fact on its own tells a good deal about the origins of the uneven toll of Covid-19, as the most racially and economically marginalized sections of the population have been forced to work in the most dangerous conditions.

Long before the pandemic, the healthcare system was where American society exported social problems in hopes that someone would take care of them. The unique public–private structure of the American welfare state enabled our healthcare institutions to process the dislocation and damage of industrial job loss and the ensuing expansion of inequality, into the form of patient demand for healthcare services—in turn expanding those institutions dramatically in the 1970s and 1980s even as the welfare state in general fell under severe attack. In this regard, the growth of the healthcare system closely parallels the expansion of the carceral state over the same period, and indeed shares an ultimate origin with it—the management of elements of a displaced, surplus population.[2]

Long before the pandemic, the healthcare system was where American society exported social problems in hopes that someone would take care of them.

This state-managed influx of demand turned the mainly private healthcare system into an enormous labor market anomaly. As older forms of employment, particularly in manufacturing, collapsed all around, hospitals, nursing homes, and home care agencies expanded rapidly in the last three decades of the twentieth century. They had an ample reservoir of cheap labor on which they could draw in the form of women and people of color pushed to the margins of the economy already, now seeking even more urgently to gain access to work to compensate for the steep economic decline

[1]University of Chicago, IL, USA

Corresponding Author:
Gabriel Winant, gabriel.winant@gmail.com

affecting industrial communities. As one home care manager put it in 1986,

> The displaced homemaker is tailor-made for the homemaker / home health aide position and could be said to have been in training for the position for years. Many older women have been out of the workforce for anywhere from ten to twenty-five years or have never been a part of it. They have brought up and cared for their children and/or nursed elderly parents through illnesses while attending to the numerous duties of running a household. Now, because of either freedom from some of these duties, or, more likely, economic need, these people are joining the workforce.

To make this connection, we need to recognize deindustrialization as a generational process beginning in the 1950s, rather than as a more sudden crisis in the late 1970s. The social world developed around industrial production subsequently underwent a grinding, slow decline. The area around Pittsburgh provides an extreme example, exaggerating the dynamics that occurred throughout the Rust Belt in such a way that they become easy to observe. In 1950, nearly half of the Pittsburgh region's workforce was employed in manufacturing, mining, construction, rail, or trucking and warehousing—with metal production alone accounting for one-fifth of all employment. By 1960, industrial work had fallen to 30 percent of the regional labor market, beginning a trend which continued over the next decades. While wages were rising fast—the feature of the postwar boom that dominates historical memory of this period in working-class history—this was occurring in a context in which fewer and fewer people were employed full time earning steady industrial wages. From the point of view of families and communities of working-class people, pay packets thus had to stretch further, facilitating a culture of cooperation and mutual support at the group level mediated by the unwaged work of women, who sustained households and the religious, ethnic, kinship, and neighborhood-based networks binding them together through constant effort—engendering a culture of feminized caregiving as the response to economic dislocation. The long-term downward trend in employment also reinscribed the racial hierarchy of economic security, as African-American men were laid off sooner and in larger relative numbers in any given downswing, putting more intense economic pressure on groups of people who had the least institutionalized capacity to withstand it—thus driving them into the lower strata of the labor market faster.

The decline in industrial employment gradually remade the population itself in Pittsburgh, as in so many other industrial centers. Most obviously, the populations in these former manufacturing hubs shrank. Even today, after a much-vaunted renaissance, the population of Pittsburgh is three hundred thousand—less than half what it was in 1950. Some of the mill towns outside the city—Aliquippa, Braddock, Clairton, Duquesne, Homestead, McKeesport, McKees Rocks, and others—that were once home to the great concentrations of industrial workers began losing population in the interwar period and never recovered. Today, for example, Braddock is home to only 10 percent of the population that it held in 1920—a virtual ghost town nestled in a major metropolitan area. Some of this effect was suburbanization, but much was net regional outmigration—Allegheny County, encompassing the city, the mill towns, and two rings of suburbs, stands at its lowest population ebb since 1920, following a steady decline since 1960.

Within this process was another demographic transformation of great significance: the dramatic aging of the population. In a heavily industrialized and unionized regional labor market, the decline in employment punished the young with particular intensity, as union-negotiated contracts protected seniority, offering greater protection to older workers. This general mechanism interacted with a particular cohort effect in Pittsburgh: steel employment rose to its peak during the wars of the 1940s and early 1950s, meaning that the cohort hired during the long military-industrial expansion between 1940 and 1953 would be the largest, declining thereafter. The workforce thus aged noticeably over

several decades: in 1950, 38 percent of steelworkers were aged over forty-five years; in 1980, half were. This industrial-level process was the nucleus of the larger change in regional age structure, as the young emigrated and left the outsized elderly cohort behind. By 1990, Allegheny County would be the second-oldest urbanized county in the United States, after Broward County in Florida. The city failed to attract newer migrant streams, either from the South during the 1950s and 1960s, or from Latin America and overseas after 1965, for the same reason its young people left: steel was what was there, and steel was shrinking.

Beginning in the late 1960s, demand for health care rose rapidly in response to a population that was—at an aggregate level—very well-insured, rapidly aging, and increasingly economically unstable thanks to the advance of deindustrialization.

The uneven generational structure of the workforce gave a distinctive shape to the welfare state institutions that embodied working-class solidarity. In particular, the presence of an enormous and relatively young and healthy pool of insurance subscribers formed the actuarial basis for the private and nonprofit health coverage that steelworkers secured in 1949, which would grow increasingly more generous over subsequent contract cycles. (It was in a pair of steel industry cases settled in 1949 that the court system affirmed health and other welfare benefits as a mandatory subject of bargaining, which industrial unions then pursued vigorously as they retreated from the battle for a national health plan.[3]) By the end of the 1950s, steel industry contract negotiations implicated 5-6 percent of all nationwide Blue Cross coverage. In markets like Pittsburgh where steelworkers were concentrated, hospitals expanded and modernized to capture the inflow of insurance money. Generous, collectively bargained private-sector coverage for industrial workers in turn drove up the cost of care for others, stimulating the political demand for the expansion of public social insurance for the poor and the elderly—eventually taking the shape of Medicare and Medicaid in 1965.

Beginning in the late 1960s, demand for health care rose rapidly in response to a population that was—at an aggregate level—very well-insured, rapidly aging, and increasingly economically unstable thanks to the advance of deindustrialization. Women's entry into the workforce cut into the supply of free home-based child and elder care labor that had helped to manage such insecurity. While other sources of economic security were stretched thin, institutionally based health provision continued to grow and fill in this gap. The increase in old age and poverty both increased the range and volume of medical needs. Policy changes then made meeting some of these needs within the growing healthcare system more affordable—as when an elder became eligible through Medicaid for long-term care.

. . . [H]ospital upgrades were generally too popular to resist, as they offered care to a population whose needs were growing and provided economic investment in a region suffering disinvestment and depopulation.

As the process of industrial decline reverberated through the population of steelworkers and their dependents, it played out in the form of increasing patient demand. Utilization of health services spiked rapidly throughout the 1970s, with steelworkers, their retirees, and their dependents leading the trend. By 1979, Pittsburgh generated an average of 1,614 annual hospital patient-days per 1,000 in the population. This was a rate of hospital utilization 23 percent higher than the national mean. Pittsburgh also committed its elders to long-term care at significantly higher rates than the national average.

Through the 1970s, a wave of hospital capacity expansion, financed with cheap municipal debt, accommodated and further spurred this rising demand. (Like many jurisdictions, Allegheny County established a public

authority in the 1970s to borrow on tax-free municipal bond markets on behalf of capital-hungry health institutions.) With social insurance (both public and private-nonprofit) guaranteeing remunerative reimbursement for treatment costs, institutions had every reason to borrow and build. While policymakers recognized the threat of hospital overcapacity, hospital upgrades were generally too popular to resist, as they offered care to a population whose needs were growing and provided economic investment in a region suffering disinvestment and depopulation.

The growth of healthcare institutions was also facilitated by a large pool of cheap labor. Although most healthcare workers had gained working conditions and organizing protections under the Fair Labor Standards Act and the National Labor Relations Act in the 1960s and 1970s, the industry had long been a province of insecure care work and was considered to be carried out in the interest of charity. The nurse's aides, orderlies, custodial and dietary staff, and even technicians and nurses who formed the bulk of the healthcare workforce experienced low wages and gendered and racialized disrespect on their jobs. Employers resisted unions stiffly, given how much of their business had developed around this low-wage model drawing on a marginalized workforce. And even when unions managed to overcome administration opposition and win recognition, union leaders soon found that they were de facto negotiating at arm's length with state and federal policymakers. The industry had developed as a privatized instrument for a public purpose: the provision of care on a large scale, with employment an afterthought (quite literally—with labor law only extended to the industry decades after the New Deal). This development path imposed political limits on wages, which manifested as institutional budget constraints.

The growth of healthcare institutions was . . . facilitated by a large pool of cheap labor.

Swelling with rising demand and the influx of capital while the rest of the regional economy suffered, health care expanded over the 1970s also in terms of employment, surpassing in Allegheny County the labor market in metal production by the decade's end. Overwhelmingly, hospitals and nursing homes hired women available for employment because their earnings were needed to lessen the impact of the vanishing family wage, formerly made possible by men's full-time union jobs. This process of female entrance into the labor market occurred unevenly along racial lines, with longer work histories for African-American women, who began moving from domestic work into institutionalized care in large numbers by the late 1960s. Over the next decade, white women needing to compensate for lost industrial wages joined them, often with the opportunity to enter higher up on the occupational ladder. In general, however, women were prequalified for these jobs by their preparation in the patriarchal working-class family, where they had been "trained" to care for much of their lives. Now the healthcare system was taking on some of the work once done in the family, and absorbing and commodifying wife-labor and daughter-labor with it.

. . . [H]ospitals and nursing homes hired women available for employment because their earnings were needed to lessen the impact of the vanishing family wage . . .

This countercyclical dimension of healthcare industry growth intensified further after 1979, when the Federal Reserve triggered a recessionary cycle that pushed industrial work from its long, slow decline into a rapid tailspin. As mills shut down entirely, unemployment in the Pittsburgh area soared, reaching 17 percent in 1983. All the dynamics that had gradually been stressing the population and pushing demand upward went into overdrive in this catastrophe. Addiction, malnutrition, housing insecurity, heart disease, domestic violence, stress, and depression proliferated. Economists Daniel Sullivan and Till von Wachter found "a 50%–100% increase in the mortality hazard during the years immediately following job loss" in Pennsylvania in the early 1980s.[4] An overtaxed

social safety net, stretched to breaking by federal and state austerity and local fiscal shortfall, proved nowhere near capable of the task this situation presented. In this context, the healthcare system proved the only part of the social state (besides the prison system) able to expand in tandem with the crisis. This growth was financed by increasing Medicaid and Medicare allocations, and by the health insurance system built around industrial employment that followed those workers into retirement. Medicaid, of course, expanded countercyclically as more people became poor and thus qualified, with the statewide outlay growing from $1.2 billion in 1979-1980 to $1.6 billion in 1982-1983, and Medicare scooped up a growing portion of the aging community. The private benefits negotiated in collective bargaining also proved a source of income for devastated communities: one study found that steelworkers' retiree benefits injected $123 million into the mill towns of the Monongahela Valley in 1985. As high interest rates choked off investment in the industrial economy, capital inflow into healthcare institutions in the region tripled. Hospital revenues rose as the institutions fed on the ruin that no one else could or would manage. Hiring sped along, the only counterpoint to the near-depression conditions that prevailed otherwise. "My life's falling apart," explained one woman who had helped take care of a disabled sister. "I need to somehow support my family, because we don't have enough money to get by . . . I thought, I could do this, I could be a nurse."

The rapid expansion and inflation in health care—particularly in deindustrializing Northern cities—occurring, as it did, in a period of economy-wide deflation and austerity, provoked the concern of federal policymakers. (In 1981, for example, Pittsburgh ranked twenty-fourth among cities by average length of hospital stay. Those ahead of it were New York, Omaha, Jersey City, Cleveland, Buffalo, Philadelphia, Boston, Baltimore, Yonkers, Detroit, Chicago, Indianapolis, Syracuse, Kansas City, Fort Wayne, Akron, Providence, Dayton, St. Louis, Worcester, Rochester, Washington, D.C., and Milwaukee.) Reacting against such an inflationary anomaly in an overall deflationary environment, Congress in 1983 enacted the most significant change in Medicare's history: the reform switched Medicare from a retrospective cost-plus reimbursement system that allowed hospitals to run up the bill to a "prospective payment system" that fixed reimbursement rates to diagnoses, encouraging hospitals to specialize, economize, and compete—and laying the basis for managed care.

The effect of this change (which was mirrored in the private sector by negotiated contracts between insurers and hospitals) was to separate out intensive medical intervention from the kinds of everyday low-intensity care provision that the population had come to depend on from its hospitals. Wealthier hospitals prospered, invested in technology and new capacity, and developed specialties in expensive, complex treatments that they sold on national and even global markets. Smaller community hospitals, formerly the backbone of the industrial workers' healthcare system, began to nosedive once the kind of care they provided became unremunerative. These community hospitals were gradually bought up by more prosperous institutions seeking to consolidate market share. Hospitals began to unload work onto nursing homes and home care agencies to a greater degree, fragmenting the health care workforce by skill and race across institutions, with the less-valued long-term care work displaced into outpatient contexts where it could be carried on by workers of color at low wages. Meanwhile, within the surviving hospitals, the premium on technical complexity also increased the internal stratification of the workforce. Contrary to predictions that the postindustrial economy would bring broad-based economic gains due to the increasing spread of education and skill, the healthcare industry—forming the largest in the postindustrial sector—became intensely economically polarized.

The race for market share and effort to offload unremunerative care both expressed a structural feature of the rise of the healthcare industry: the limits on productivity increase. The healthcare dollar bought labor more than anything else—and although this was especially true in long-term care, it was a problem for hospitals as well. This fact compelled institutions to seek to create market conditions that

would allow them to increase prices and to hold down labor costs. When health institutions came under severe pressure to control costs in the 1980s and especially 1990s in the aftermath of the failure of Bill Clinton's reform, institutional administrators found savings in the wage bill as much as possible. Workers experienced labor cost savings not only as wage stagnation but also as understaffing and speedup, imposing a major emotional and physical toll as well as an economic one.

Such pressures still prevail today and define everyday conflicts in hospitals and nursing homes.[5] Collectively, healthcare workers are indispensable, as the institutions employing them have grown to absorb and mitigate the damage of deindustrialization and the harm resulting from the worsening of social inequality. Yet individually, healthcare workers are disposable and precarious. This contradiction is negotiated every day as providers attempt to capture as much market share as they can while they service the needs of the unremunerative patients as stingily as possible.

The pattern found in Pittsburgh is regional in scale, common across the deindustrialized zones of the Northeast and Midwest. In fact, Allegheny County ranks sixth among major urbanized counties nationwide in terms of the portion of its workforce in health care and social assistance, behind Bronx County, Philadelphia County, New Haven County, Cuyahoga County, and Kings County (with the counties home to Boston, Newark, Rochester, and Worcester rounding out the top ten). Led by such locales, health care and social assistance has become the largest sector of the labor market nationwide. And as sociologist Rachel Dwyer shows, the care economy in general—of which health care is the largest subset—has accounted for an absolute majority of new low-income jobs over the last several decades.[6] The healthcare industry, fueled by inequality, is cannibalizing the economy and generating low-wage work systematically.

While this result flows from the distinctive qualities of the American welfare state—its privatization and mediation through collective bargaining—a larger mechanism is at work. As the historian Aaron Benanav has recently shown, global industrial overcapacity has systematically suppressed demand for labor around the world and effected a transfer of labor power into low-productivity human service industries.[7] Health care is not the inevitable destination of this transfer—it only has stood in as such thanks to the configuration of American social institutions, within which health care appears as a unique anomaly of privatized administration and relatively munificent public funding.

States managing deindustrializing economies are faced with what political scientists Torben Iversen and Anne Wren call a "trilemma": a choice of two out of three of low unemployment, fiscal constraint, and high wages. The choice is imposed by the trade-offs of increasingly low-productivity employment. If a state deregulates its labor market (through collective bargaining and social insurance), the private sector will generate jobs and reduce unemployment, but wages will fall—this is the American path. If a state more tightly regulates its labor market, the private sector will generate fewer jobs, but better ones, and unemployment and wages will rise together—this was the French path as well as the German until 2002. Or a state may take the Swedish path—absorbing a large share of service employment into the public sector, creating jobs with high wages at the cost of the public purse.[8]

The United States selected the low-wage path decades ago, by constructing its healthcare system as a privatized adjunct to industrial work and conscripting those excluded from economic security by race and gender to provide its services. Yet inadvertently this configuration also became the basis for a postindustrial class formation process. As our society became more unequal, Americans became more and more dependent on institutional caregiving, causing the care workforce to grow without pause, intensifying the contradiction between its essential quality and its disposable quality.

That contradiction has never reached greater heights than in the past year. Even as bridges and windows nationwide were festooned with tributes to "frontline heroes," healthcare workers across the country have felt the brunt of the Covid-19 disaster. The year 2020 saw major strikes at San Leandro and Alameda Hospitals

in California's Bay Area, at Cook County and the University of Illinois in Chicago, at St. Mary Medical Center outside Philadelphia—and smaller walkouts and union drives at smaller hospitals and nursing homes across the country. "The urgency and desperation we've heard from workers is at a pitch I haven't experienced before in 20 years of this work," the organizing director for Service Employees International Union-United Healthcare Workers West in California explained to NPR. Around the world, obviously, the pandemic has taken a steep toll on healthcare workers. Uniquely in the United States, however, healthcare workers have had to absorb this damage from a position of preexisting social marginality. As another organizer told NPR, "The pandemic didn't create most of the root problems they're concerned about. But it amplified them and the need to address them."

The marginality of care workers is rooted not only in labor market institutions—the weakness of unions, the evisceration of labor law—but also in the structure of the welfare state itself . . .

Similarly, the end of the of the pandemic will not, on its own, resolve what the public health crisis has made more visible. The marginality of care workers is rooted not only in labor market institutions—the weakness of unions, the evisceration of labor law—but also in the structure of the welfare state itself as constructed many decades ago, corresponding to the racialized and gendered structures of social citizenship. At the same time, however, our collective growing social dependence on institutional caregiving—again exaggerated by Covid-19 but not unique to it—creates a much larger potential political constituency for more egalitarian institutions. The patient's experience of the inhumanity of the healthcare bureaucracy shares a common source with the worker's stress and economic precarity. Both workers and patients thus might come to share an interest in a decommodified healthcare system. In this sense, one could conceive no better employment and industrial policy than single-payer health care.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Gabriel Winant https://orcid.org/0000-0002-7454-1825

Notes

1. U.S. Census, American Community Survey, 2019.
2. Ruth Wilson Gilmore, *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California* (Berkeley: University of California Press, 2007).
3. Alan Derickson, "Health Security for All?: Social Unionism and Universal Health Insurance, 1935–1958," *Journal of American History* 80, no. 4 (March 1994), 1333-56; Jennifer Klein, *For All These Rights: Business, Labor, and the Shaping of America's Public-Private Welfare State* (Princeton, NJ: Princeton University Press, 2003).
4. Daniel Sullivan and Till von Wachter, "Job Displacement and Mortality: An Analysis Using Administrative Data," *Quarterly Journal of Economics* 124, no. 3 (August 2009), 1266.
5. See Gabriel Winant and Shantonia Jackson, "What's Actually Going on in Our Nursing Homes," *Dissent*, Fall 2020, available at https://www.dissentmagazine.org/article/whats-actually-going-on-in-our-nursing-homes-an-interview-with-shantonia-jackson.
6. Rachel E. Dwyer, "The Care Economy? Gender, Economic Restructuring, and Job Polarization in the U.S. Labor Market," *American Sociological Review* 78, no. 3 (June 2013), 398.
7. Aaron Benanav, *Automation and the Future of Work* (New York: Verso, 2020).
8. Torben Iversen and Anne Wren, "Equality, Employment, and Budgetary Restraint: The Trilemma of the Service Economy," *World Politics* 50, no. 4 (July 1998), 507-46.

Author Biography

Gabriel Winant is assistant professor of history at the University of Chicago. He is the author of *The Next Shift: The Fall of Manufacturing and the Rise of Health Care in Rust Belt America* (Harvard University Press, March 2021).

Table I.1. Top twenty-five urbanized counties by percentage of workforce employed in health care and social assistance, 2017

County	Largest city	Workforce employed in health care and social assistance (%)
Bronx County, New York	The Bronx	25
Philadelphia County, Pennsylvania	Philadelphia	19
New Haven County, Connecticut	New Haven	19
Cuyahoga County, Ohio	Cleveland	19
Kings County, New York	Brooklyn	18
Allegheny County, Pennsylvania	Pittsburgh	18
Suffolk County, Massachusetts	Boston	17
Essex County, New Jersey	Newark	17
Monroe County, New York	Rochester	17
Worcester County, Massachusetts	Worcester	17
Essex County, Massachusetts	Lynn	17
Hartford County, Connecticut	Hartford	17
Norfolk County, Massachusetts	Quincy	17
St. Louis County, Missouri	St. Louis	17
Queens County, New York	Queens	17
Milwaukee County, Wisconsin	Milwaukee	16
Westchester County, New York	Yonkers	16
Erie County, New York	Buffalo	16
Nassau County, New York	Hempstead	16
Baltimore County, Maryland	Baltimore	16
Wayne County, Michigan	Detroit	16
Pinellas County, Florida	Saint Petersburg	16
Multnomah County, Oregon	Portland	16
Hamilton County, Ohio	Cincinnati	16
Hidalgo County, Texas	McAllen	15
US national average	—	14

"Urbanized counties" are the one hundred counties nationwide with the largest workforces.

Source: Data are from United States Census Bureau, 2017 American Community Survey 1-Year Estimates, Industry by Sex for the Civilian Employed Population 16 Years and Over.

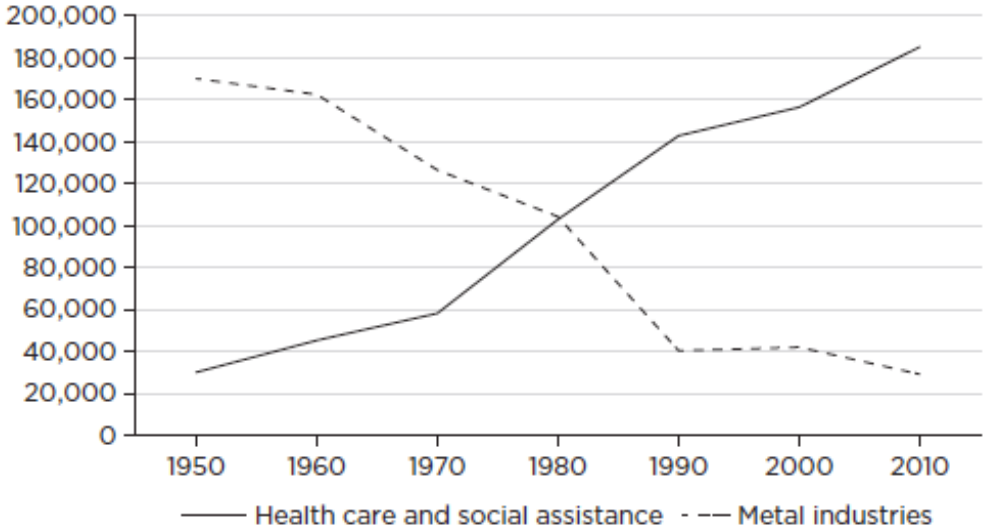

Figure I.1 Employment in metal production and health care and social assistance, Pittsburgh area, 1950–2010. *Data source:* US Census.

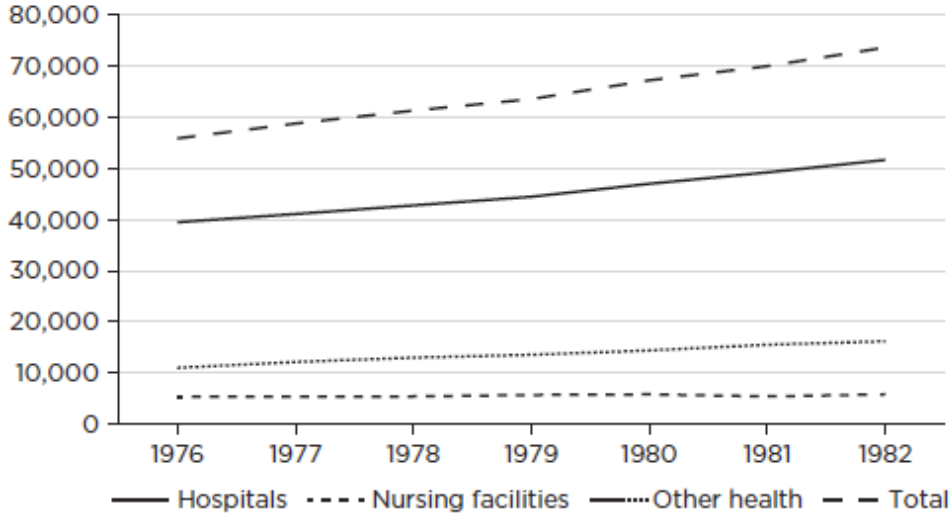

Figure 5.1 Health care employment in Pittsburgh metropolitan area, 1976–1982. *Data source:* Health Policy Institute, "The Implications of a Changing Economy for the Hospital System in Southwestern Pennsylvania," p. 54, Box 136, Folder 8, RHWPA.

Table 5.3. Pennsylvania Medicaid expenditures (state and federal), 1979–1983

Year	Expenditures ($)
1979–1980	1.21 billion
1980–1981	1.34 billion
1981–1982	1.44 billion
1982–1983	1.62 billion

Source: Lawrence J. Haas, "Medicaid Cut May Save State $110 Million," *PPG*, February 19, 1983.

Table 5.4. Health utilization statistics, Pittsburgh metropolitan area compared with United States, 1981

Variable	Percentage of US rate
Per capita expenses	139
Expenses / day	101.6
Expenses / admission	112.1
Patient care physicians / 1,000 population	109.7
Admissions / 1,000 population	122.3
Average length of stay	109.2
Surgical operations / 1,000 population	138.1
Inpatient days / 1,000 population	135.2
Outpatient visits / 1,000 population	167.3
Days / 1,000 population	136.9

Source: Draft Application for a Stage One Planning Grant to the Robert Wood Johnson Foundation, June 17, 1982, p. 5, box 41, folder 4, ACCDR.

Table 5.5. Distribution of health service employment by occupation category in Pittsburgh metropolitan area, 1992

Occupation category	Number of employees	Percentage	Approximate average annual wages ($)
Diagnostic and treatment	9,830	8.7	90,000
Administration	7,647	6.9	38,000
Registered nurses	23,012	20.5	33,800
Health and other paraprofessionals and technicians	17,134	15.2	24,000
Clerical	22,456	20	18,400
Health and other service workers	20,052	18	18,000
Housekeeping, laundry, food, and maintenance	12,080	10.7	14,000

Source: Ralph L. Bangs and Thomas Soltis, "The Job Growth Centers of Allegheny County: Interim Report for the Project: Linking the Unemployed to Growth Centers in Allegheny County," June 1989, p. 19, box 124, folder 3, RHWPA; Margaret A. Potter and Allison G. Leak, *Health Care System Change and Its Employment Impacts in Southwestern Pennsylvania* (Pittsburgh: Health Policy Institute, University of Pittsburgh, 1995), 24-25.