

Economic Analysis of Single Payer Health Care in Ohio: Context, Savings, Costs, Financing

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Introduction

This economic analysis explores the implications of a single payer health plan in the state of Ohio if it were to go into effect in 2019. The Act would replace Ohio's current multi-payer system in which individuals, private businesses and government entities pay public and private insurers for health care coverage. The Act would establish a state health plan to finance medically necessary care, including hospitalization, doctor visits, dental, vision, mental/behavioral health, prescribed occupational and physical therapy, prescription drugs, medical devices, and rehabilitative care.¹ The Plan would offer this comprehensive coverage to all residents and would pay for it with broad-based, progressively graduated premiums assessed by the State on payrolls and on non-payroll income.

The Ohio Health Plan would finance medical care with substantial savings compared with the existing multi-payer system of public and private insurers. By reducing administrative and other waste, including health insurance company profits and excessive prices for drugs, hospitals, and medical devices, the Plan would increase real disposable income for the vast majority of Ohio residents. It would simultaneously increase employment by reducing the burden of health insurance on business. Some of these savings would be used to extend coverage to the 6% of Ohio residents still without insurance under the Affordable Care Act. Other savings would be reinvested in the health care system to improve coverage for the growing number with inadequate coverage. In addition to improving residents' health by reducing barriers to access to health care, the Plan would eliminate the financial penalty associated with health problems. It would also reduce economic inequality by replacing the current regressive system of health insurance finance with contributions proportional to income and ability to pay.

Context: health care spending and quality in the United States with markets

Rising health care inflation

Personal health care spending has been rising at an unsustainable pace in Ohio. Between 1991 and 2001, total health consumption spending rose 5.5% a year with per-capita spending rising at over 5.0% a year (see Figure 1).² The rate of increase in total health consumption slowed slightly after 2001, but only to 5.1% a year, including annual increases of 4.8% in per-capita spending. In line with national trends, health care is absorbing a growing share of state spending and income. Indeed, Ohio has done a little worse than the nation as a whole, with spending rising faster than income (see Figure 2).

¹ Long-term care may be added later.

² Expenditures are estimated from the Centers for Medicare & Medicaid Services, Office of the Actuary, data on personal health expenditures by state linked to national expenditure projections; see appendix for details.

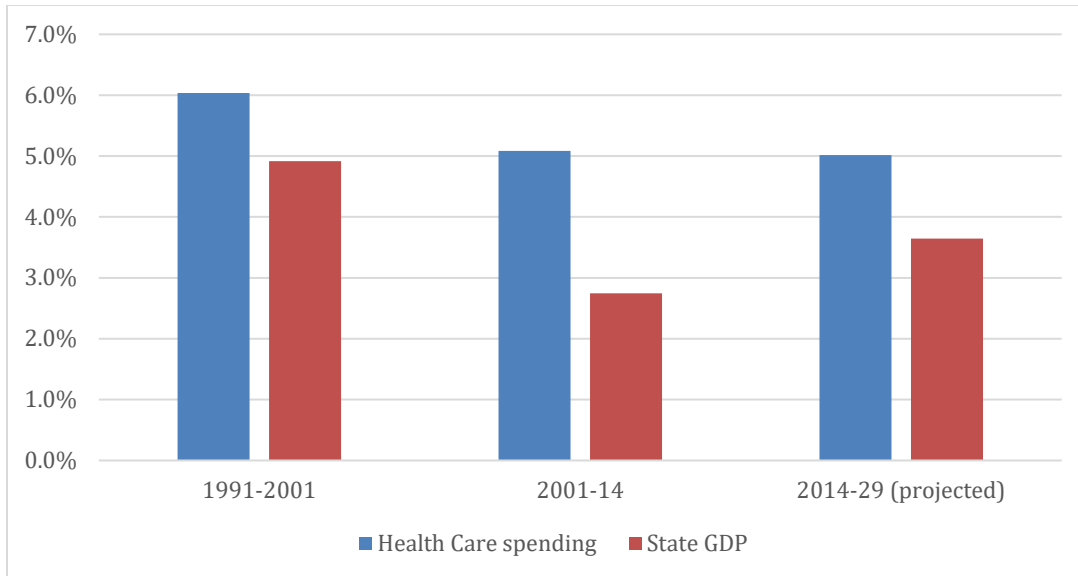


Figure 1. Growth in Ohio health care spending and gross state product, 1991-2029, projected

Note: This shows the average annual increase in health expenditures (personal plus insurance administration) and Gross State Product income since 1991. GSP is from United States Bureau of Economic Analysis; health spending is from United States, Center for Medicare and Medicaid Statistics, National Health Expenditures data, <http://www.cms.gov/NationalHealthExpendData/Downloads/res-tables.pdf>

Even at a slower rate of increase, health care spending absorbs a growing share of the state’s income, and a rising share of wages and salaries (see Figure 2). As a share of state product, health care costs have risen since 1991, from under 10% of state income to over 14% in 2014. With current policies, it is projected to rise to almost 17% of state income in the next decade (see Figure 2).

Health care cost inflation is squeezing disposable income for residents of Ohio. If health care spending per person had risen only as fast as income since 1991, then spending in 2018 would have been 37% less, saving the average person \$4,139, or more than \$16,500 in savings for a family of four. Spending projections for 2029 suggest that spending will rise by 77% compared to a growth in GDP of only 50%. This will be more than double the gap between actual spending and spending at the 1991 share of income. By 2029, this gap will rise to over \$9,000, or \$36,000 for a family of four.

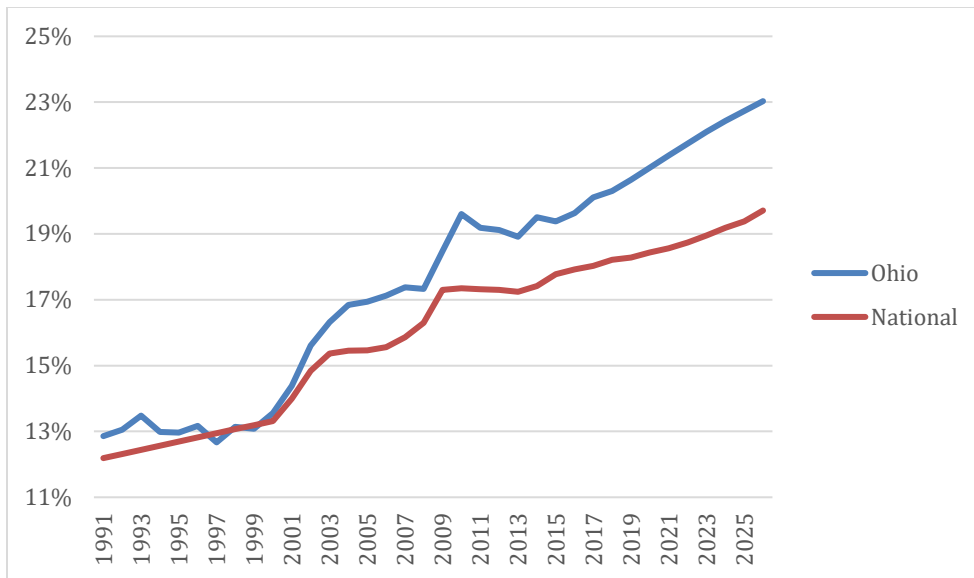


Figure 2. Health spending as share of GDP

The system of employment-based health insurance concentrates the burden of health care inflation on wages and salaries.³ As a share of employee compensation, health care spending rose to 12.3% in 2014 and will continue to increase through 2029 unless there is a dramatic increase in costs borne directly by the sick in the form of higher deductibles and copayments.⁴ Every worker who has engaged in collective bargaining, or even individual bargaining over wages, knows what these increases in health care spending mean for wages. After taking account of normal inflation, increases in the cost of health insurance cost the average Ohio worker \$2,383 in 2017, and are expected to cost \$5,921 in 2029 (see Figure 3).⁵ Higher health care spending is reducing the funds employers have available for wages, pensions, training programs, or for other employee benefits. In 2017, health insurance costs absorbed over 80% of funds spent for pensions and insurance. By 2029, at current rates, they will absorb all of such funds.⁶

³ 30% of health care spending in 2014 was through employment, including the medical share of workers compensation.

⁴ By reducing the insurance function, cost shifting is a viable alternative to raising premiums in the face of rising health costs. The average deductible for an individual in an employer-provided plan was \$1,408 in 2014, and \$2,575 for a family. In just two years, these had increased to \$1,781 and \$3,181, increases of 26% and 21% respectively or over twice the increase in health care spending.

⁵ This assumes that employment-related spending will continue to be 52% of total spending.

⁶ Health insurance costs include all private health insurance spending, as reported by the CMS National Health Expenditures, adjusted for administrative expense. This figure includes employee payments towards insurance premiums as well as all non-group plans. The ratio of spending on health insurance to wages and salaries is this total health insurance spending divided by wages and salaries as reported by the Bureau of Economic Analysis. Excess spending is estimated as spending beyond the 1991 ratio of private health insurance spending to wages and salaries, or 10.05%.

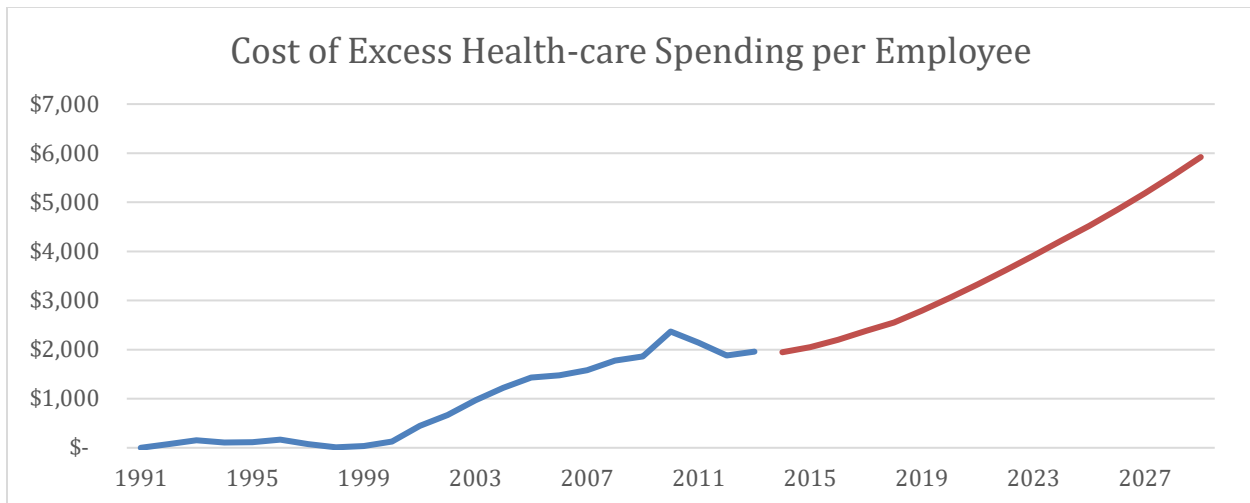


Figure 3. Cost per employee of excess health-care spending, 1991-2029 (projected).

Note: This shows for each year beginning in 1998, the average cost per employee in the state of Ohio of the growth in private health insurance spending relative to wages and salaries. Estimates after 2017 are projections using CMS projections of health care spending and assumes employee compensation will grow at the 1991-2017 rate.

Declining efficiency in health care delivery

Increased health care spending might be justified if it reflected increasing utilization of quality care. Instead, however, health care spending in the United States has been increasing due to higher costs with little or no improvement in care. After controlling for general inflation, only a fifth of the excess increase in health care spending since 1971 reflects increased utilization. Almost half of the increased spending reflects the higher inflation rate for health care compared with other products.⁷ Excess inflation is almost entirely due to the private market, where costs have risen significantly faster than in Medicare, either the United States' or Canada's version. Since 1969, private health insurance spending per enrollee on a common set of benefits has increased seven times as fast as the price of other commodities, and nearly twice as fast as the increase for Medicare. Had all health care prices increased only as fast as Medicare's, health care spending in the United States would have risen only slightly faster than the rate of growth in national income.⁸

⁷ Between 1971 and 2009, the general consumer price index rose at an annual rate of 4.4% while the medical inflation rate rose 6.2% per year, 1.8% per year faster. Over the same time, the inflation rate for Medicare rose only slightly faster than the general inflation rate, but the inflation rate for private health insurance rose 1.26% per year faster than the Medicare rate. For comparison, in Canada, with a government-financed, single-payer health care system, there is almost no difference between the general inflation rate and the inflation rate for medical care. Also see Abe Dunn, Eli B. Liebman, and Adam Shapiro, "Decomposing Medical-Care Expenditure Growth," Working Paper (National Bureau of Economic Research, February 2017), <https://doi.org/10.3386/w23117>.

⁸ David U. Himmelstein and Steffie Woolhandler, "Cost Control in a Parallel Universe: Medicare Spending in the United States and Canada," *Archives of Internal Medicine* 172, no. 22 (December 10, 2012): 1764–66, <https://doi.org/10.1001/2013.jamainternmed.272>; Diane Archer, "Medicare Is More Efficient Than Private Insurance," *Health Affairs*, accessed September 4, 2017, <http://healthaffairs.org/blog/2011/09/20/medicare-is-more-efficient-than-private-insurance/>; Diane Archer and Theodore Marmor, "Medicare And Commercial Health Insurance: The Fundamental Difference – Health Affairs Blog," *HealthAffairs Blog*, February 15, 2012,

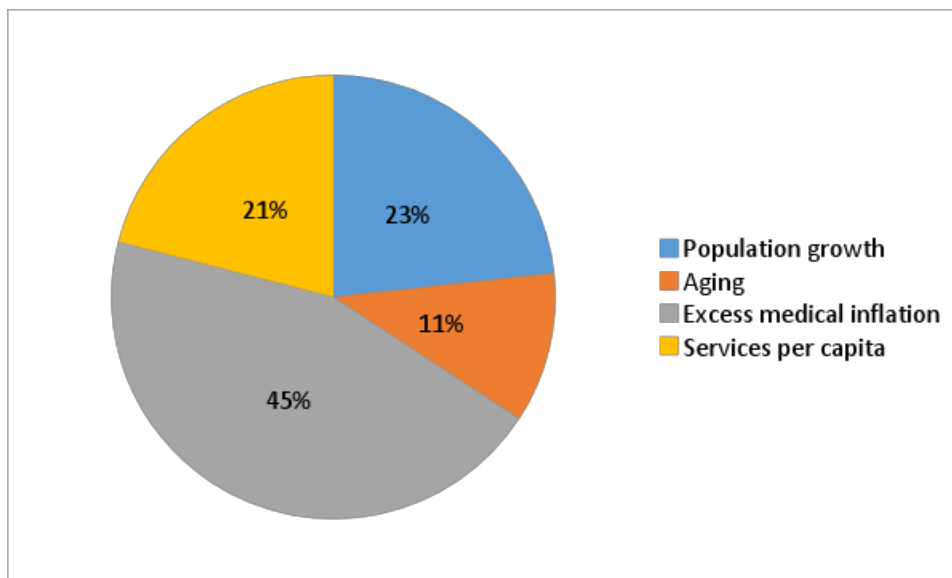


Figure 4. Sources of increase in after-inflation health care spending, 1971-2015

There is direct evidence that rising health care costs in the United States are not due to excessive utilization. Compared with residents of other affluent countries, residents of the United States are less likely to see a doctor (see Figure 5), probably because, as a survey by the Commonwealth Fund confirms, people in the United States report more financial barriers to access than do residents of other countries.⁹ Sara Collins of the Commonwealth Fund summarizes the situation facing many Americans with insurance with high deductibles or other cost-sharing:

As of late 2016, 28 percent of U.S. adults ages 19 to 64 who were insured all year were underinsured — or an estimated 41 million people. This is more than double the rate in 2003 when the measure was first introduced in the survey, and is up significantly from 23 percent, or 31 million people, in 2014. . . . Half (52%) of

<http://healthaffairs.org/blog/2012/02/15/medicare-and-commercial-health-insurance-the-fundamental-difference/comment-page-1/#comment-165108>.

⁹ Sara Collins et al., “The Problem of Underinsurance and How Rising Deductibles Will Make It Worse Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2014,” May 2015, http://www.commonwealthfund.org/~media/files/publications/issue-brief/2015/may/1817_collins_problem_of_underinsurance_ib.pdf; Sara R. Collins, Munira Z. Gunja, and Michelle M. Doty, “How Well Does Insurance Coverage Protect Consumers from Health Care Costs?,” October 18, 2017, <http://www.commonwealthfund.org/publications/issue-briefs/2017/oct/insurance-coverage-consumers-health-care-costs>; Irene Papanicolas, Liana R. Woskie, and Ashish K. Jha, “Health Care Spending in the United States and Other High-Income Countries,” *JAMA* 319, no. 10 (March 13, 2018): 1024–39, <https://doi.org/10.1001/jama.2018.1150>; Sarah Thomson et al., “International Profiles of Health Care Systems, 2013 Australia, Canada, Denmark, England, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States” (Commonwealth Fund, November 2013), http://www.commonwealthfund.org/~media/files/publications/fund-report/2013/nov/1717_thomson_intl_profiles_hlt_care_sys_2013_v2.pdf.

underinsured adults reported problems with medical bills or debt and more than two of five (45%) reported not getting needed care because of cost.¹⁰

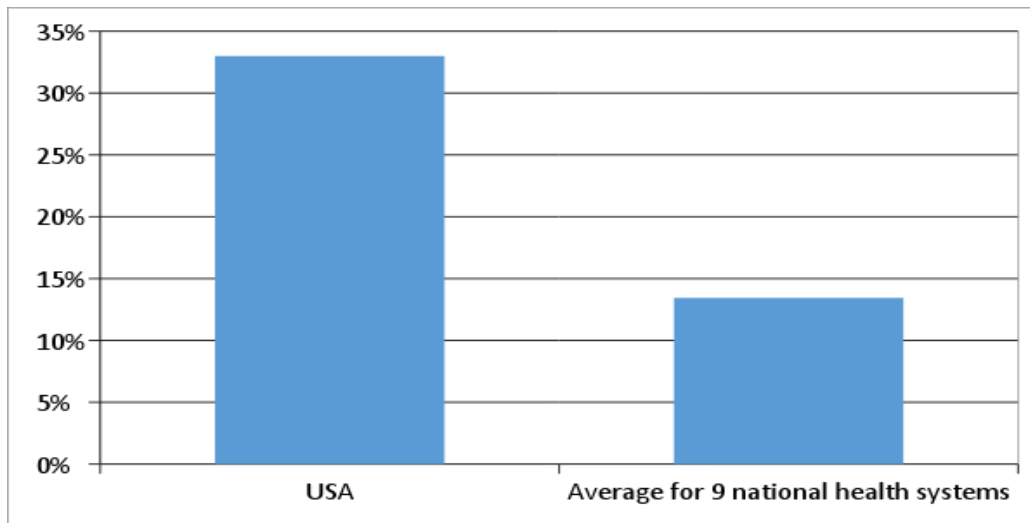


Figure 5. Proportion of population reporting they experienced access barrier because of cost in past year, the United States and nine countries with national health systems

The restrictions on access come directly from policy decisions made to control health care costs by promoting market competition among health insurers. The driving idea has been that rising health care costs come from the over-utilization of care by “consumers” who, because of first-dollar insurance coverage, do not pay the cost of their care. Consumers therefore abuse the health care system by indulging in too much care, and by failing to shop around for the best provider, they contribute to inflated prices for provider services. The lack of aggressive health care consumers, these economists conclude, discourages health-care providers from seeking out greater efficiency, leading to technological stagnation.¹¹

Residents of Ohio have experienced this shift towards market-oriented health care. As recently as 2001, it was so common for employers to offer health insurance without deductibles that the national survey of employer-provided health insurance did not include a question about insurance deductibles.¹² When they did begin asking about deductibles, in 2002, almost half of employees were in plans without any. 46% still had “first-dollar coverage.” By 2016, 95% had a deductible, and the average deductible in a plan with a deductible had risen from \$412 and \$916,

¹⁰ Collins, Gunja, and Doty, “How Well Does Insurance Coverage Protect Consumers from Health Care Costs?”

¹¹ These new policy developments came from the emerging field of health economics. The founding-father of the sub-discipline, Kenneth Arrow, must have been shocked at how his ideas were transformed and even abused. See Kenneth J. Arrow, “Uncertainty and the Welfare Economics of Medical Care,” *The American Economic Review* 53, no. 5 (December 1, 1963): 941–73; Amy Finkelstein, *Moral Hazard in Health Insurance: Developments since Arrow (1963)*, Kenneth J. Arrow Lecture Series (New York: Columbia University Press, 2014).

¹² This is the Medical Expenditure Panel Survey by the Agency for Healthcare Research and Quality; see https://meps.ahrq.gov/mepsweb/data_stats/state_tables.jsp?regionid=38&year=2003

for an individual or a family plan respectively, to \$1,781 and \$3,189. Including the zero cost for plans without deductibles, the average deductible for an employee in an employer-sponsored health insurance plan rose over seven-fold for single coverage, and nearly six-fold for family coverage (see Figure 6).¹³

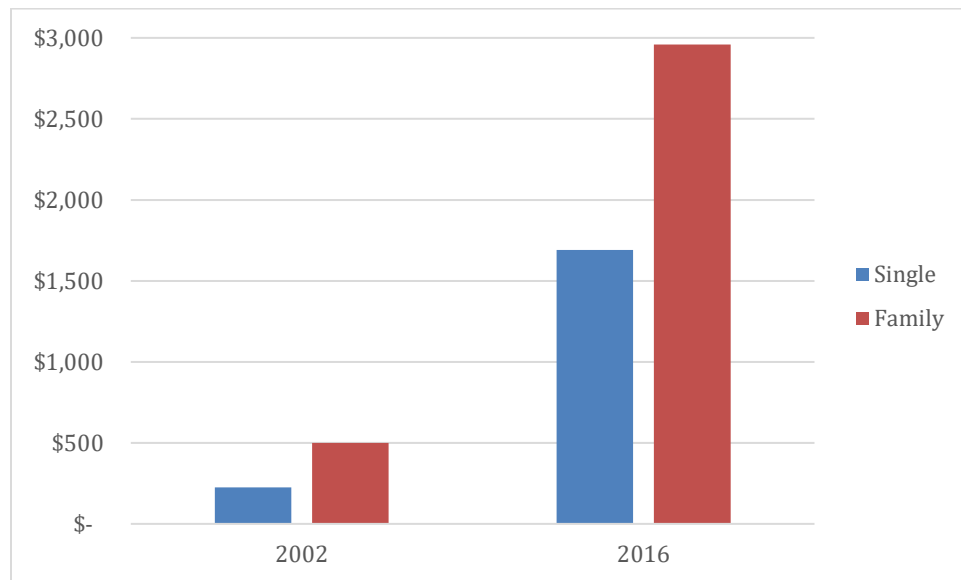


Figure 6. Rising Cost of Deductibles, Private Sector, employer-provided health plans, Ohio 2002 and 2016

The declining quality of employer-sponsored health insurance matters less for Ohio’s workers because of the steady decline in the number with employer-sponsored health insurance. Fewer people have employer-sponsored health insurance. As recently as 1999, over 60% of employees in Ohio had employer-sponsored insurance, and 55% of these covered their entire families. By 2016, however, the proportion of employees with any coverage fell to under 45%. Only 31% had family coverage, so the share of family members covered by employer-provided plans falls from 33% to only 13% (see Figure 7). Instead of employer-provided insurance, more people in Ohio are seeking coverage through individual plans (about 6% of the population in 2016), and, perhaps of most concern, through public programs like Medicaid (23%) or Medicare (16%).¹⁴

¹³ This is from the MEPS survey referred to above. For national comparisons, see Gary Claxton et al., “Increases in Cost-Sharing Payments Have Far Outpaced Wage Growth,” *Peterson-Kaiser Health System Tracker* (blog), accessed October 11, 2017, <https://www.healthsystemtracker.org/brief/increases-in-cost-sharing-payments-have-far-outpaced-wage-growth/>; also see the discussion in John Tozzi and Zachary Tracer, “Sky-High Deductibles Broke the U.S. Health Insurance System,” *Bloomberg.Com*, June 26, 2018, <https://www.bloomberg.com/news/features/2018-06-26/sky-high-deductibles-broke-the-u-s-health-insurance-system>.

¹⁴ Census data from <http://www.kff.org/other/state-indicator/total-population/?currentTimeframe=0&selectedRows=%7B%22states%22:%7B%22Ohio%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>

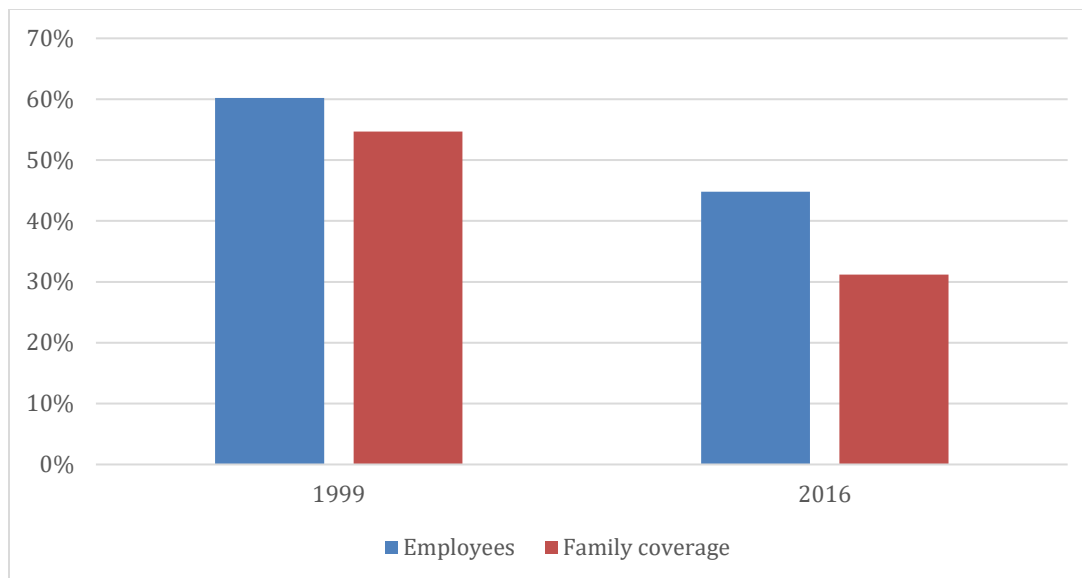


Figure 7. Employer provided health insurance coverage, Ohio 1999-2016: Declining coverage of employees, and disappearing extension to family members

The market-turn in American health-care and the declining performance of American healthcare

Guided by the new economic thinking, in the early 1970s American states opened up health insurance markets to competing providers and removed price and other regulations on health care providers, including hospitals. This was intended to promote for-profit behavior and market competition.¹⁵ Even the federal government’s Medicare plan was opened to market competition, through Medicare Part C or Medicare Advantage. Many states have likewise put their Medicaid plans out for bids by private contractors.¹⁶ The number of competing health insurers has increased dramatically. Instead of universal access at set prices, or community rating where insurers are required to sell coverage to all and at the same rate, as with the Blue Cross-Blue Shield monopoly, states allow insurers to offer an exploding number of plans so that individuals and businesses have choice of coverage and can buy coverage they think appropriate for their expected health care needs. This allows the healthy, or those who anticipate being healthy, to

¹⁵ Robert Cunningham and Robert M. Cunningham, *The Blues: A History of the Blue Cross and Blue Shield System* (DeKalb: Northern Illinois University Press, 1997); Steven Brill, *America’s Bitter Pill: Money, Politics, Back-Room Deals, and the Fight to Fix Our Broken Healthcare System* (New York: Random House, 2015); Christy Ford Chapin, *Ensuring America’s Health: The Public Creation of the Corporate Health Care System* (New York, NY: Cambridge University Press, 2015); Jennifer Klein, *For All These Rights: Business, Labor, and the Shaping of America’s Public-Private Welfare State* (Princeton, N.J.: Princeton University Press, 2003); Jill S Quadagno, *One Nation, Uninsured: Why the U.S. Has No National Health Insurance*, Oxford University Press pbk (Oxford ; New York: Oxford University Press, 2006); Paul Starr, *Remedy and Reaction the Peculiar American Struggle over Health Care Reform* (New Haven: Yale University Press, 2011), <http://site.ebrary.com/lib/amherst/Doc?id=10506565>; Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1982), <http://libproxy.smith.edu:2048/login?url=http://hdl.handle.net/2027/heb.00104>.

¹⁶ Jonathan Gruber, “Delivering Public Health Insurance through Private Plan Choice in the United States,” *Journal of Economic Perspectives* 31, no. 4 (November 2017): 3–22, <https://doi.org/10.1257/jep.31.4.3>.

avoid plans popular with the sick and disabled, giving them lower rates at the expense of abandoning part of the insurance function of health insurance.

The result of our national experiment in free-market health care has been a relative decline in our health, and an increase in the cost of care. In 1970, female life expectancy in the United States was 11th among 35 states belonging to (or later to join) the Organization of Economic Cooperation and Development. Our life expectancy was higher than in other affluent countries like Australia and Germany. By 2015, on the other hand, we had fallen to 30th of 35 countries, ahead of Mexico and Hungary, but behind virtually all of our affluent peers.¹⁷ Higher spending is associated with longer life expectancy in other affluent countries, but life expectancy in the United States is over 5 years short of what would be expected from its spending. Our poor performance can be quantified in dollars and cents: if we spent what other countries spend to achieve our life expectancy, we would save over half of what we currently spend (see Figure 8). Furthermore, our performance is getting worse. Compared with other affluent countries, we are spending more to get less (see Figure 9). In a comprehensive comparison of health care systems in eleven affluent countries, the Commonwealth Fund ranked the United States last, with low scores for poor health outcomes and administrative efficiency.¹⁸

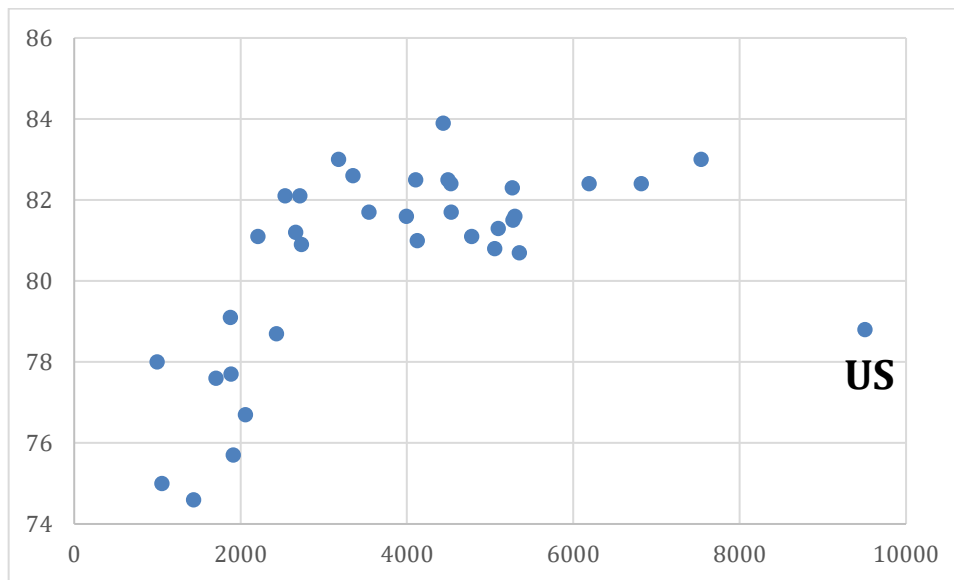


Figure 8. Life expectancy and health spending OECD member nations, around 2011

The poor performance of our health care system is largely a post-1971 phenomenon, since we began to rely on for-profit medicine and market-incentives. Compared with other affluent countries with public programs providing universal health insurance coverage, our great national experiment in the use of markets to provide health care has failed to provide quality health care

¹⁷ See “Frequently Requested Data” at <http://www.oecd.org/els/health-systems/health-data.htm> .

¹⁸ Eric C. Schneider et al., “Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care” (Commonwealth Fund, 2017), <http://www.commonwealthfund.org/interactives/2017/july/mirror-mirror/?omnicid=EALERT1243408&mid=gfriedma@econs.umass.edu>.

to Americans. Since 1971, the shortfall in US life expectancy compared with affluent members of the OECD has grown from 5 months less to over 31 months less. Over the past 40 years, other countries with national health systems have increased female life expectancy by over 7 years with an increase in real (that is, after-inflation) annual per-capita health expenditures of \$446. We have increased female life expectancy by less, only 5 years, while our real spending has increased much more: by \$748 (see Figure 9). We continue to do worse even while we are spending more.

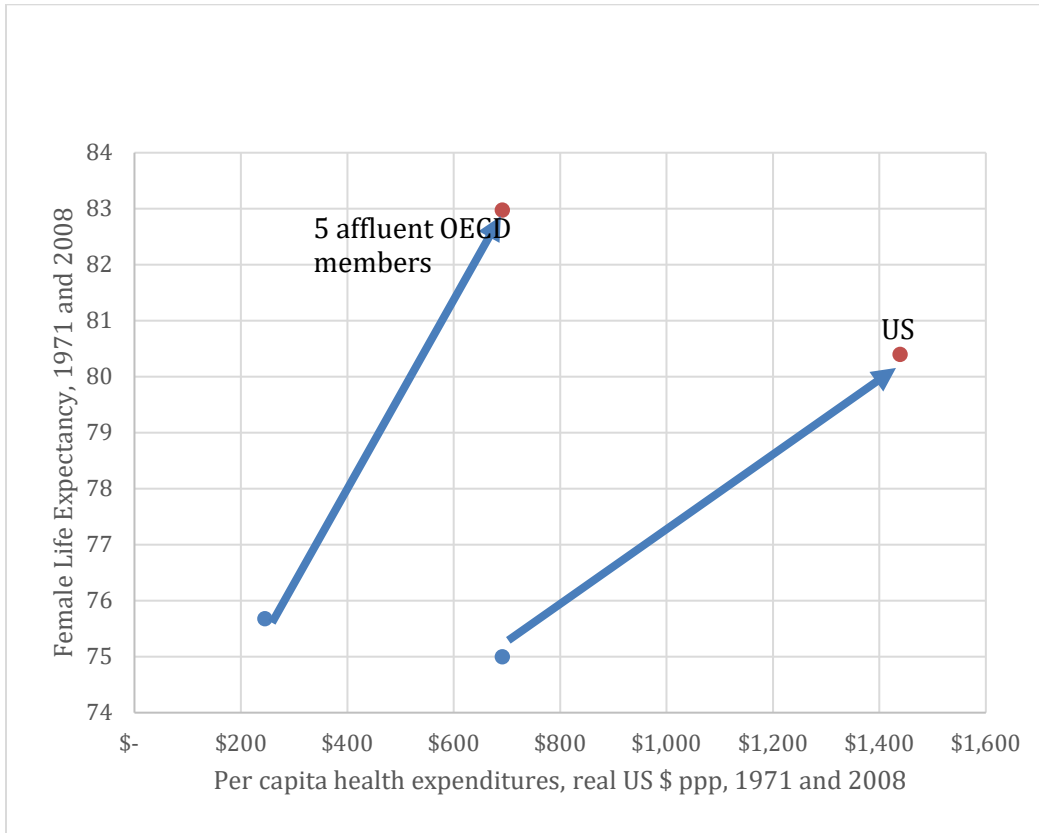


Figure 9. Increasing life expectancy and health care spending, US and other countries, 1971 and 2008

The burden of our failed health-care experiment falls most heavily on the poor and the sick. Relying on for-profit insurance, the United States distributes much of the burden of health care costs as fixed charges on individuals through premiums, deductible charges, and copays rather than as taxes or other charges related to income or wealth. Increasing “consumer cost sharing,” or “skin in the game,” the cost borne by the sick and unwell has been defended as a way of promoting more efficient utilization of healthcare. In practice, however, people are rarely able to judge the efficacy of medical treatment and rarely shop for health care. Instead, they reduce the amount of medical care they use, including high-value as well as low-value care, especially reducing preventative care. In high-deductible plans, for example, few shop for a better priced MRI, but women are more likely to delay follow-up tests after mammograms, including imaging, biopsies and early-stage diagnoses that could detect tumors when they are easiest to treat. One

observer concludes, “high-deductible plans do reduce health-care costs, but they don't seem to be doing it in smart ways.”¹⁹

Why markets don't work

While undermining our health, these measures have failed to control costs and most insurers do little to resist the demands of monopoly providers.²⁰ Despite ever narrower insurance networks, prices at elite providers and pharmaceuticals continue to rise. This should surprise no one. Instead, it is predictable that the market turn would do little to control costs even while lowering the quality of healthcare for Americans.

One problem with applying market models is that healthcare is never conducted in a perfectly competitive environment. Instead, virtually all providers enjoy some degree of monopoly power, while many have a great deal. Because of their control over access to an essential, life-saving service, and that control over information and knowledge of healthcare, private, for-profit providers are natural monopolies. Traditionally, we have relied on professional ethics to limit monopolistic practice by physicians and hospitals.²¹ Ironically, the market turn has freed monopolistic providers to exploit that position precisely by emphasizing market incentives and market behavior while undermining professional ethics.²²

Recognizing the power of these monopolies, economists have turned to health insurers to restrain monopoly pricing, hoping to balance the countervailing power of insurance monopolies against provider monopolies. During the debate over the Affordable Care Act, for example, insurance industry lobbyists -- notably Karen Ignagni of America's Health Insurance Plans (AHIP) -- supported many of the Obama Administration's initiatives in alliance with Administration economists who sought to strengthen insurance companies against hospitals and drug

¹⁹ Neeraj Sood, director of research at the Leonard D. Schaeffer Center for Health Policy and Economics at the University of Southern California in Tozzi and Tracer, “Sky-High Deductibles Broke the U.S. Health Insurance System”; the research on this is well summarized in Austin Frakt, “Shopping for Health Care Simply Doesn't Work. So What Might?,” *The New York Times*, July 31, 2018, sec. The Upshot, <https://www.nytimes.com/2018/07/30/upshot/shopping-for-health-care-simply-doesnt-work-so-what-might.html>.

²⁰ Barry Meier, Julie Creswell, and Jo Craven McGinty, “Hospital Billing Varies Wildly, U.S. Data Shows,” *The New York Times*, May 8, 2013, <http://www.nytimes.com/2013/05/08/business/hospital-billing-varies-wildly-us-data-shows.html>; Office of Massachusetts Attorney General Martha Coakley, “Investigation of Health Care Cost Trends and Cost Drivers,” January 29, 2010, http://www.mass.gov/Cago/docs/healthcare/Investigation_HCCT&CD.pdf; Brill, *America's Bitter Pill*.

²¹ This point is made in the seminal article on health economics by Arrow, “Uncertainty and the Welfare Economics of Medical Care” While nothing in Hippocratic or other professional oaths prohibits doctors from enjoying a high standard of living, they pledge to treat patients according to medical need .without mention of ability to pay or to pay well.

²² Steffie Woolhandler and Dan Ariely, “Will Pay For Performance Backfire? Insights From Behavioral Economics,” *Health Affairs*, accessed August 1, 2016, <http://healthaffairs.org/blog/2012/10/11/will-pay-for-performance-backfire-insights-from-behavioral-economics/>.

companies.²³ Obama Administration economists even opposed limits on the medical loss ratio for insurance, fearing that any restrictions on insurance profits would undermine these companies' commitment to restraining provider prices.

Alas, insurance companies have proven to be weak reeds on which to rest our hopes to protect the public. And, indeed, this is predictable. One problem is that the easiest way for insurers to increase profits is not to take on powerful providers, but to screen subscribers more carefully to avoid covering people likely to use insurance while attracting subscribers unlikely to need healthcare. By careful marketing and targeted promotion, companies can inflate their profits by “lemon dropping” those likely to be in the top 20% who account for 80% of costs, and “cherry picking” from the 50% who use almost no healthcare in any year.

Nor do market-based efforts by insurers to restrain provider profits necessarily help public health. Effective market bargaining depends on the ability to walk away, to leave a market exchange if the price is not right. For health insurance, this means that to bargain effectively with providers, insurers need to restrict access to high-priced providers, barricading members within narrow networks or allowing access to some providers only at the cost of higher co-pays. This has created a public health crisis that has grown with the market turn. Not only are the sick no longer able to see needed providers, but growing numbers are routinely forced to change their providers or their drug regimen because of changing network rules or renegotiation of insurance contracts. For many, this happens on an annual basis when an insurer revises its network or employers change insurers. It also happens every time a worker changes employment or moves to a new insurer.²⁴

Making the poor pay, and die

Because working people are more price sensitive, increasing cost-sharing has widened the disparity between access to health care between the rich and others, increasing the gap between the health of rich and poor Americans compared to past experience and compared to other countries. For the United States as a whole, life expectancy has increased for men and women but increases have largely been confined to the affluent.²⁵ For men, over the past two decades, life expectancy has increased at all income levels, with the poorest gaining a few months while

²³ Bob Herman, “Seismic Changes in the Health Insurance Industry Bring Opportunities and Friction,” accessed September 10, 2017, <http://www.modernhealthcare.com/article/20160130/MAGAZINE/301309964>; Starr, *Remedy and Reaction the Peculiar American Struggle over Health Care Reform*; Brill, *America's Bitter Pill*.

²⁴ For a recent study of the role of insurance provider networks in ACA Exchange Plans, see Physicians for Fair Coverage, “The High Cost of Healthcare: Patients See Greater Cost Shifting and Reduced Coverage in Exchange Markets 2014-2018,” July 2018, https://endtheinsurancegap.org/sites/default/files/resources/the_high_cost_of_healthcare_2014-2018_-_report_and_state_vignettes_final_0.pdf; for a study of the frequency and medical impact of interruptions in insurance coverage, see Mary A. M. Rogers et al., “Interruptions In Private Health Insurance And Outcomes In Adults With Type 1 Diabetes: A Longitudinal Study,” *Health Affairs* 37, no. 7 (July 1, 2018): 1024–32, <https://doi.org/10.1377/hlthaff.2018.0204>.

²⁵ Barry P. Bosworth and Kathleen Burke, “Differential Mortality and Retirement Benefits in The Health And Retirement Study,” The Brookings Institution, accessed April 21, 2014, <http://www.brookings.edu/research/papers/2014/04/differential-mortality-retirement-benefits-bosworth>.

the richest Americans have had increases of over 5 years. For women, however, increases in life expectancy have been exclusively for the affluent; life expectancy has been falling for the poorest 40% of American women.

Low-income and working people have the greatest difficulty accessing our health care system. Their short life expectancy accounts for much of the shortfall in our relative life expectancy. The gradient of life-expectancy with income has grown increasingly steeper in the United States and access problems have become greater, because a growing share of the cost of health care has been pushed onto the sick through direct cost-sharing and by experience-rating (linking insurance premiums to health status).²⁶

In Ohio, the link between higher mortality and rising copayments, deductibles, and other charges are especially close: the r-squared between the proportion of the population unable to access Health Care and mortality is 0.41 (see Figure 10).²⁷ In 88 Ohio counties, when more people report that they cannot afford to see a doctor, the mortality rate is higher. The number of preventable deaths per 100,000 increases by nearly 9 for every percentage point increase in the proportion of residents who report they could not see a doctor because of cost. Going from the county with the lowest share reporting they could not see a doctor (Delaware at 4%) to the county with the highest share (Scioto at 26%) results in nearly 300 more deaths per 100,000.

²⁶ Across over 3000 US counties, there is a strong positive relationship between age-adjusted mortality and the proportion unable to see a doctor because of cost. A regression of mortality on access difficulty has an R2 of .35. Robert Wood Johnson and University of Wisconsin, Population Health Institute, “County Health Rankings,” County Health Rankings & Roadmaps, accessed April 28, 2014, <http://www.countyhealthrankings.org/rankings/data>.

²⁷ There is abundant evidence that increased cost-sharing hurts people’s health because few can distinguish between high-value and low-value care; instead of economizing on the latter, people facing copayments and deductibles reduce both. See Jonathan Gruber, “The Role of Consumer Copayments for Health Care: Lessons from the RAND Health Insurance Experiment and Beyond” (Kaiser Family Foundation, October 2006), <http://www.kff.org/insurance/upload/7566.pdf>; Collins et al., “The Problem of Underinsurance and How Rising Deductibles Will Make It Worse Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2014”; Amy Finkelstein et al., “The Oregon Health Insurance Experiment: Evidence from the First Year” (NBER Working Paper, July 2011); Katherine Baicker and Dana Goldman, “Patient Cost-Sharing and Healthcare Spending Growth,” *Journal of Economic Perspectives* 25, no. 2 (Spring 2011): 47–68; for direct evidence that higher cost sharing leads to higher costs over time to deal with more complicated conditions that could have been handled at lower costs had they been discovered earlier, see Amal N. Trivedi, Husein Moloo, and Vincent Mor, “Increased Ambulatory Care Copayments and Hospitalizations among the Elderly,” *New England Journal of Medicine* 362, no. 4 (January 28, 2010): 320–28, <https://doi.org/10.1056/NEJMsa0904533>; Brian Schilling, “Hitting the Copay Sweet Spot,” accessed December 5, 2017, <http://www.commonwealthfund.org/publications/newsletters/purchasing-high-performance/2009/november-3-2009/featured-articles/hitting-the-copay-sweet-spot>.

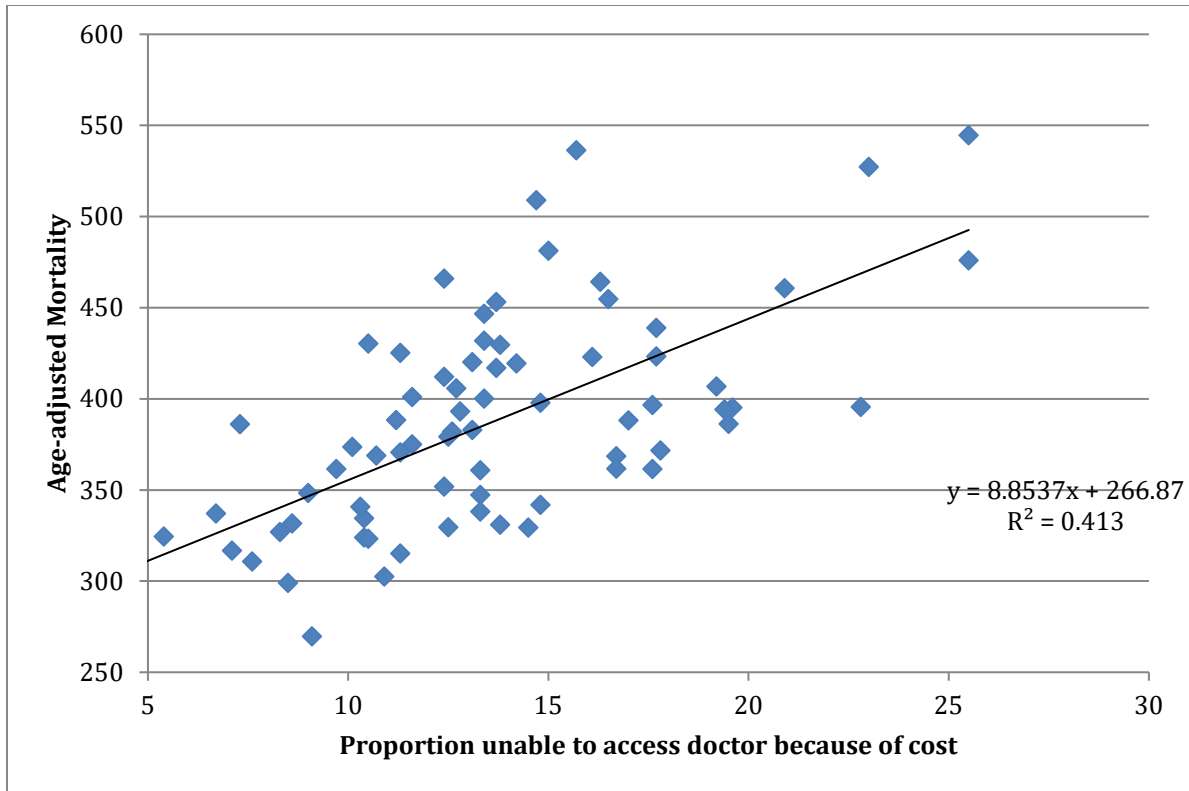


Figure 10. Age-adjusted mortality rate and access to care, counties in the state of Ohio

Higher mortality is concentrated among the poor.²⁸ Increases in the county poverty rate are closely associated with higher mortality. Across counties in Ohio, there are nearly 9 additional deaths per 100,000 for every percentage point rise in the share of children receiving a free school lunch. Going from one standard deviation below the median county rate, about 27%, to one above, about 48%, the premature, age-adjusted mortality rate rises by over 100 deaths per 100,000, or by over 25%.²⁹ The county with the highest free-lunch rate in the state (Vinton County) has over 460 more deaths per 100,000 because of its poverty rate compared with the county with the lowest free-lunch rate (Delaware County).

²⁸ For a national review of the relationship between poverty and life expectancy, showing the increased gap between life expectancy for rich and poor Americans, see Raj Chetty et al., "The Association Between Income and Life Expectancy in the United States, 2001-2014," *JAMA* 315, no. 16 (April 26, 2016): 1750–66, <https://doi.org/10.1001/jama.2016.4226>.

²⁹ The median value of the premature, age-adjusted mortality rate for 89 Ohio counties is 377 per 100,000, with a standard deviation of 63.

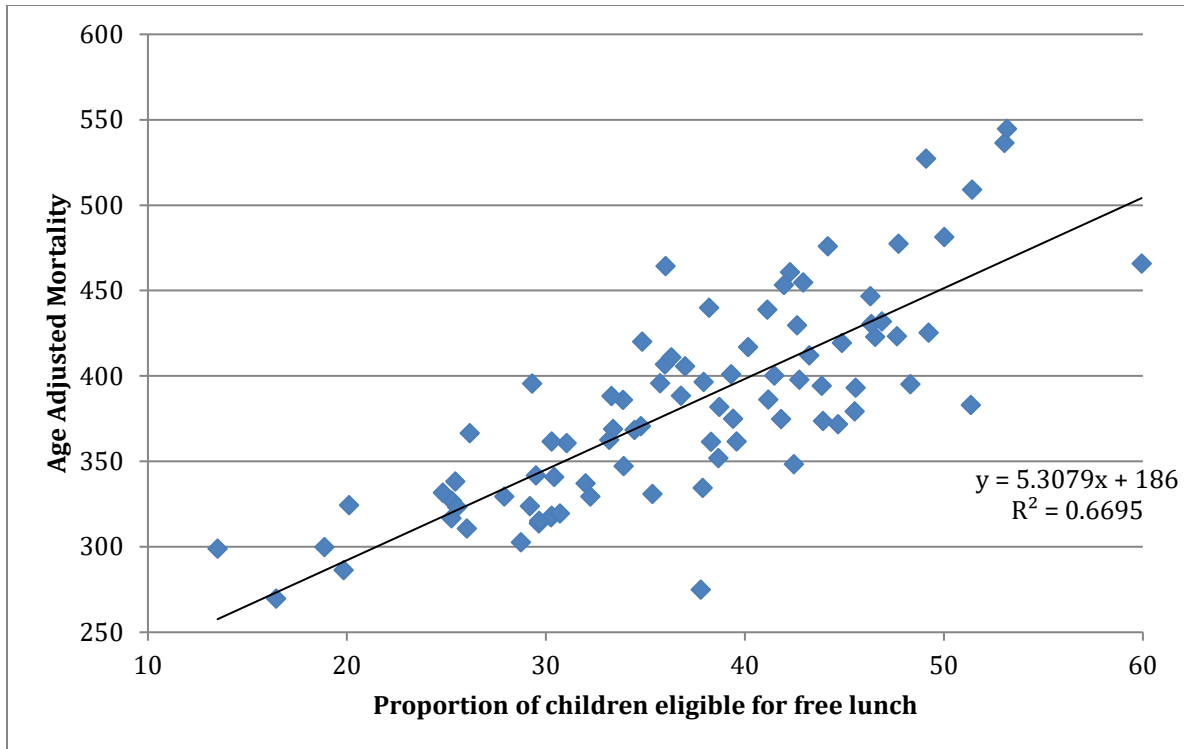


Figure 11. Age adjusted mortality rate and proportion of children eligible for free lunch, counties in the state of Ohio

The market turn and rising health care costs

Health care is increasingly expensive for Americans, including people in Ohio, because our fragmented private health care finance system is increasingly inefficient and unable to limit charges by monopoly providers. In Ohio, nineteen different private companies now offer health insurance, with hundreds of separate plans.³⁰ Multiple plans inflate insurer expenses by raising marketing costs, saddling insurers with the administrative costs of managing multiple plans per company, and by limiting scale economies in claims processing. The large number of separate plans also raises costs for providers, who are forced to maintain the administrative apparatus to bill all of these different plans.³¹ The proliferation of different insurance programs also limits the ability of any insurer to limit monopoly pricing by providers, whether it be pharmaceutical companies, medical equipment manufacturers, hospitals, or other providers.

The cost of for-profit health care can be evaluated in Ohio under these headings: administrative waste in insurance and in provider offices, and the public cost of monopoly pricing. Data on spending by function are available for Ohio (and other states) for 2014.³² Using projections from

³⁰ NCQA, "Ohio Private Health Insurance Plan Ratings – NCQA," accessed May 6, 2018, http://healthinsuranceratings.ncqa.org/search/Commercial/OH/?utm_source=blog&utm_medium=Ohio&utm_campaign=ratings; Adam O'Neill, "Top Health Insurance Plans in Ohio," NCQA Blog, September 19, 2014, <http://blog.ncqa.org/top-health-insurance-plans-ohio/>.

³¹ This is, of course, in addition to billing public programs like Medicaid, Medicare, and SCHIP.

³² Centers for Medicare and Medicaid Services, Medicaid Services 7500 Security Boulevard Baltimore, and Md21244 Usa, "NationalHealthAccountsStateHealthAccountsResidence," November 21, 2017,

the Centers for Medicare and Medicaid Services, health care spending per capita is expected to increase between 2014 and 2019 by about 25%, and total spending is expected to increase by about 33%.³³ Including the cost of administering insurance plans, spending in 2019 is expected to be over \$140 billion (see Table 1).³⁴ A quarter of this spending is waste associated with the for-profit health care system.

Table 1. Health care spending, non-investment, Ohio State, 2019, current system, in \$millions

<i>Projected personal health expenditures</i>		
Hospital	\$	55,684
Physician	\$	26,007
Other Professional	\$	3,406
Dental	\$	4,634
Home Health	\$	3,786
Drugs	\$	14,955
Durable Medical	\$	2,105
Nursing Home	\$	8,845
Other	\$	7,924
<i>Projected health insurance administrative expenditures</i>		
Private health insurance	\$	7,330
Public health programs	\$	4,197
Employer expenses	\$	1,312
<i>Health expenditures</i>		
	\$	140,187

Fixing health care with single-payer finance

Eliminating the waste associated with the administration of private health insurance

In the current system, over 9% of total spending is on the administration of the payment system - including private insurance and employer-sponsored self-insured plans (which are administered much like insurance) -- as well as on government insurance programs. Private health insurers account for the bulk of this spending. They spend nearly 15% of premiums on administrative activities, including redundant bill reviews, medical review programs, and other overhead, plus

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsStateHealthAccountsResidence.html>.

³³ <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>

³⁴ This is in addition to spending by employers on consultants and other administrative costs to interact with the health insurance industry, spending that comes to over \$1 billion in Ohio; see Steffie Woolhandler, Terry Campbell, and David Himmelstein, "Cost of Health Care Administration in the United States and Canada," *New England Journal of Medicine*, no. 349 (2003): 768–75.

profit.³⁵ Salaries are also much higher for managers in private health insurers. The head of the Centers for Medicare and Medicaid Services, responsible for health insurance programs covering nearly half the population of the United States, is paid a bit less than \$250,000. By contrast, in 2016, annual compensation for the CEOs of seven large health insurers averaged over \$16 million.³⁶ The average health insurance CEO was paid more in a week than the CMS head was paid in a year.

Private insurers also waste resources in other ways. Competition leads them to spend money on advertising and marketing their competing plans, spending that cures no illness and provides no healthcare. Many insurers are too small to realize the scale economies possible with a large billing network. Traditional Medicare operates with a medical loss ratio of over 98%, which means that less than 2% of its spending is for administrative activities, saving over 10% compared to private insurance. Despite the greater efficiency of public programs, the private system of administrative waste has spread to the public sector through the Medicare Advantage plans and to Medicaid (through managed care programs).³⁷ Maintaining dual public – private systems also inflates the public costs because it requires eligibility checks for access to public programs. For Medicare, this can be done relatively cheaply by checking birth certificates.³⁸ Public safety-net programs like Medicaid and CHIP, however, spend significant funds policing eligibility. The limited range of public insurance has also undermined efficiency by leading individuals to seek supplemental private coverage. Overhead costs are even higher in the individual insurance market, including the Medigap policies purchased by many seniors to cover insurance costs not covered by Medicare.

³⁵ The Affordable Care Act sets limits on administrative waste with minimum Medical Loss Ratios of 85% for group plans and 80% for individual plans. Nationally, health insurers refunded over \$446 million in excessive administrative charges under the ACA in 2016 to nearly 4 million subscribers; Ohio insurers refunded \$7.8 million to 110,000 households. See <http://kff.org/health-reform/state-indicator/mlr-rebates-total/>. Even under the ACA, government measures of insurance company medical loss ratios leave extensive scope for insurance companies to pass off administrative costs as medical costs. Allowable expenses include “educational outreach to members, utilization management, case management, disease management, and quality management.” In addition, the time period allowed for medical expenses, net premiums and re-insurance recovery are not consistently defined, leaving room for companies to inflate their Medical Loss Ratio. Families USA, “Medical Loss Ratios: Evidence from the States” (Families USA, June 2008), <http://www.familiesusa.org/assets/pdfs/medical-loss-ratio.pdf>; Eric Naumburg, “Medical Loss Ratios in Maryland,” July 12, 2010; General Accounting Office, “Private Health Insurance: Early Effects of Medical Loss Ratio Requirements and Rebates on Insurers and Enrollees” (Washington, D. C.: General Accounting Office, July 2014), <http://www.gao.gov/assets/670/664719.pdf>; a pre-ACA estimate for California is that the MLR was only 82%, James G. Kahn et al., “The Cost Of Health Insurance Administration In California: Estimates For Insurers, Physicians, And Hospitals,” *Health Affairs* 24, no. 6 (November 1, 2005): 1629–39, <https://doi.org/10.1377/hlthaff.24.6.1629>.

³⁶ Shelby Livingston, “Health Insurer CEOs Score 2016 Pay Raises despite Uncertain Future,” April 27, 2017, <http://www.modernhealthcare.com/article/20170427/NEWS/170429877>; FederalPay.org, “Centers for Medicare & Medicaid Services Salary Statistics,” accessed September 11, 2017, <https://www.federalpay.org/employees/centers-for-medicare-and-medicare-services>.

³⁷ Gruber, “Delivering Public Health Insurance through Private Plan Choice in the United States.”

³⁸ Medicare is also available for the disabled, with somewhat expensive eligibility checks with disability

In 2019, administering the third-party payer system will cost governments and businesses in Ohio over 11.5 billion plus an additional \$1.3 billion for the cost to employers of negotiating and administering private health insurance. Lowering administrative costs to the level of traditional Medicare (1.8%) would save over \$9 billion 2019, plus the \$1.3 billion saved by employers who will no longer have to identify and administer health insurance plans.³⁹

Waste in billing and insurance-related expenses in provider offices

American health care providers (hospitals, physicians, etc.) spend significantly more time on administrative tasks than do their counterparts in countries with universal coverage systems. Physicians in the U.S., for example, devote one-sixth of their work hours on administration, including bill processing. This is four times the time spent by their Canadian counterparts.⁴⁰ It costs much more to process bills in our system than in other countries because, as the Commonwealth Fund says, our Doctors waste time on billing and insurance claims. Even other countries that rely on private health insurers, like Switzerland or the Netherlands, reduce the administrative burden for providers through regulations that standardize benefit packages and payment systems.⁴¹

Simplifying the reimbursement process would save physicians nearly six hours a week, equivalent to more than a 10% increase in the available supply of physicians.⁴² If Ohio health

³⁹ Note that the entire Medicare program has higher administrative costs because of the costs of administering Medicare Advantage plans. Also note that there are additional administrative savings because the entire health care sector will be smaller because of savings in other areas. Archer and Marmor, “Medicare And Commercial Health Insurance: The Fundamental Difference – Health Affairs Blog”; Archer, “Medicare Is More Efficient Than Private Insurance”; Boards of Trustees, “2017 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds” (Washington, D. C.: BOARDS OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE AND FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUNDS, July 13, 2017), <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/TR2017.pdf>.

⁴⁰ David U. Himmelstein et al., “A Comparison Of Hospital Administrative Costs In Eight Nations: US Costs Exceed All Others By Far,” *Health Affairs* 33, no. 9 (September 1, 2014): 1586–94, <https://doi.org/10.1377/hlthaff.2013.1327>; Woolhandler, Campbell, and Himmelstein, “Cost of Health Care Administration in the United States and Canada”; Aliya Jiwani et al., “Billing and Insurance-Related Administrative Costs in United States’ Health Care: Synthesis of Micro-Costing Evidence,” *BMC Health Services Research* 14, no. 556 (2014), <http://www.biomedcentral.com/content/pdf/s12913-014-0556-7.pdf>; Phillip Tseng et al., “Administrative Costs Associated With Physician Billing and Insurance-Related Activities at an Academic Health Care System,” *JAMA* 319, no. 7 (February 20, 2018): 691–97, <https://doi.org/10.1001/jama.2017.19148>; Donald Berwick and Andrew Hackbarth, “Eliminating Waste in US Health Care,” *JAMA: The Journal of the American Medical Association* 307, no. 14 (2012): 1513–16; ; In addition to hiring billing and insurance workers, American doctors also spend much more time on billing activities than do physicians in Canada, Steffie Woolhandler and David Himmelstein, “Administrative Work Consumes One-Sixth of U.S. Physicians’ Working Hours and Lowers Their Career Satisfaction,” *International Journal of Health Services* 44, no. 4 (January 1, 2014): 635–42, <https://doi.org/10.2190/HS.44.4.a>.

⁴¹ Schneider et al., “Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care.”

⁴² There may be a substantial increase in the number of physicians because frustrations with the insurance industry drive many physicians from medicine. The lower administrative burden would draw physicians back to medicine and would attract physicians in neighboring states to practice in Ohio, Woolhandler and Himmelstein,

care providers were to spend, proportionally, only as much on administration as do physicians in Canada, or 14% of revenue instead of 24%, they would save over \$10 billion in administrative costs, including nearly \$7 billion in hospitals and nearly \$2.7 billion in provider offices.⁴³

Waste associated with monopoly power: drugs, devices, hospitals

Not only is US health care spending inflated by the inefficiency of our administrative system, but also by the higher prices extorted by providers with market power. In his seminal article on health economics, Nobel-prize winning economist Kenneth Arrow warned that health care markets have a tendency toward monopoly because of the combination of asymmetric information (where the sick lack information about the proper treatment of their illnesses) and economies of scale in medical facilities, like hospitals.⁴⁴ Until the 1970s, monopoly pricing was restrained by state regulations, by the force of professional mores, and by the culture of not-for-profit communities.⁴⁵ The demise of rate setting, and the replacement of mores and non-profit values with financial incentives, has liberated the managers of hospitals and pharmaceutical and equipment manufacturers to use monopoly power to raise prices and profits, and to expand their power through forming alliances and through collusion.⁴⁶

“Administrative Work Consumes One-Sixth of U.S. Physicians’ Working Hours and Lowers Their Career Satisfaction”; Himmelstein et al., “A Comparison Of Hospital Administrative Costs In Eight Nations”; a 2005 study found that California physician practices spent 41% of their revenue on administrative activities, including 14% directly on billing and insurance related expenses, Kahn et al., “The Cost Of Health Insurance Administration In California.”

⁴³ Woolhandler, et al., found that providers’ administrative costs are much lower in Canada with a plan like that envisioned for Ohio, and they estimate that a third of costs in provider offices in the United States are administrative, triple the Canadian rate. See Woolhandler, Campbell, and Himmelstein, “Cost of Health Care Administration in the United States and Canada”; Dante Morra et al., “US Physician Practices Versus Canadians: Spending Nearly Four Times As Much Money Interacting With Payers,” *Health Affairs* 30, no. 8 (2011): 1443–50, <https://doi.org/10.1377/hlthaff.2010.0893>; Health care providers spend nearly eight-times as much collecting bills as do other businesses; Bonnie B. Blanchfield et al., “Saving Billions Of Dollars—And Physicians’ Time—By Streamlining Billing Practices,” *Health Affairs*, April 29, 2010, 10.1377/hlthaff.2009.0075, <https://doi.org/10.1377/hlthaff.2009.0075>; Higher administrative costs are a major reason why healthcare is more expensive in the United States than in other affluent countries; see Papanicolas, Woskie, and Jha, “Health Care Spending in the United States and Other High-Income Countries.”

⁴⁴ Arrow, “Uncertainty and the Welfare Economics of Medical Care.”

⁴⁵ Gerard F. Anderson, “All-Payer Ratesetting: Down but Not Out,” *Health Care Financing Review* 1991, no. Suppl (March 1992): 35–41; Gerard F. Anderson and Bradley Herring, “The All-Payer Rate Setting Model for Pricing Medical Services and Drugs,” *AMA Journal of Ethics* 17, no. 8 (August 2015): 770–75; J E McDonough, “Tracking the Demise of State Hospital Rate Setting,” *Health Affairs* 16, no. 1 (January 1, 1997): 142–49, <https://doi.org/10.1377/hlthaff.16.1.142>; David A Moss, *When All Else Fails: Government as the Ultimate Risk Manager* (Cambridge, Mass.: Harvard University Press, 2002); Woolhandler and Ariely, “Will Pay For Performance Backfire?”

⁴⁶ There is always a danger that providers will gain control over ratesetting. To some degree this is happened for medical specialists; see Miriam Laugesen, *Fixing Medical Prices: How Physicians Are Paid* (Cambridge, Massachusetts: Harvard University Press, 2016).

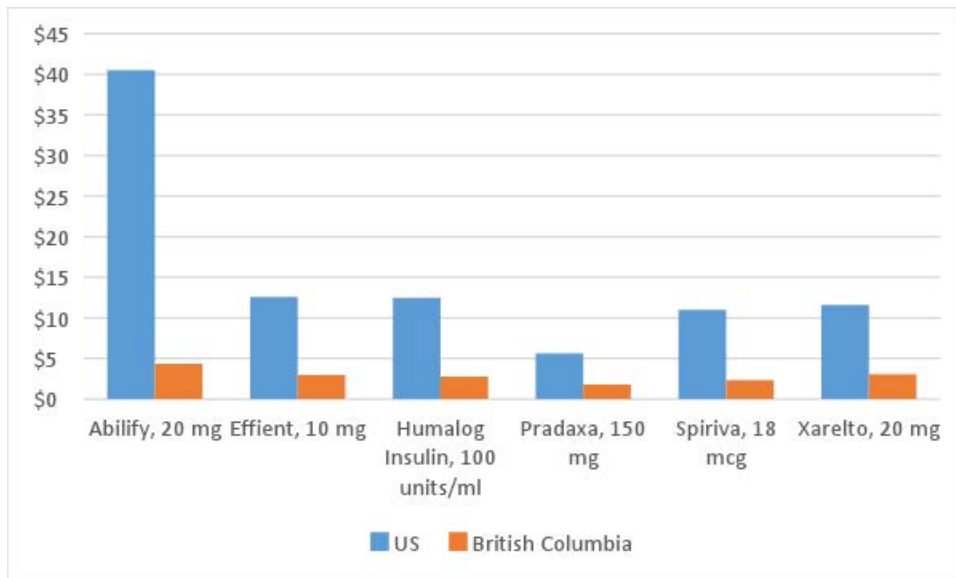


Figure 12. Prices for common prescription drugs, US vs. British Columbia

The unfettered exercise of monopoly power has raised prices for Americans using health care. Public attention has been focused on pharmaceutical and drug prices. A comprehensive survey published in 2007 found that drug prices are about 60% higher in the United States than in Europe or Canada.⁴⁷ More recent studies suggest that this now understates the penalty Americans pay for excessive drug prices. Over 40% of the revenue for 12 leading multi-national pharmaceutical companies comes from the United States, and direct comparisons of particular drugs shows American prices are often dramatically higher.⁴⁸ Prices in the United States range from 3.2 times the Canadian price to 9.3 times as high (see Figure 12 referencing British Columbia prices). The Council of Economic Advisers claims the mark-up is four-times as high in the United States as elsewhere.⁴⁹ The International Federation of Health Plans found that, for eight common drugs, the price in the United States is on average over three times the average

⁴⁷ McKinsey Global Institute, "Accounting for the Cost of Health Care in the United States," January 2007, http://www.mckinsey.com/mgi/rp/healthcare/accounting_cost_healthcare.asp; International Federation of Health Plans, "2013 Comparative Price Report: Variation in Medical and Hospital Prices by Country" (International Federation of Health Plans, 2014), <http://static.squarespace.com/static/518a3cfee4b0a77d03a62c98/t/534fc9ebe4b05a88e5fbab70/1397737963288/2013%20iFHP%20FINAL%204%2014%2014.pdf>; In a 2016 study, Kesselheim, et al., suggest that US prices are more than double those of other countries; Aaron S. Kesselheim, Jerry Avorn, and Ameet Sarpatwari, "The High Cost of Prescription Drugs in the United States: Origins and Prospects for Reform," *JAMA* 316, no. 8 (August 23, 2016): 858–71, <https://doi.org/10.1001/jama.2016.11237>; some state Medicaid programs also negotiate prices 40 to 50% less than those paid by the rest of us, Jodi L. Liu et al., "An Assessment of the New York Health Act," Product Page, 2018, https://www.rand.org/pubs/research_reports/RR2424.html.

⁴⁸ David Belk, "The Pharmaceutical Industry," True Cost of Healthcare, accessed September 19, 2017, http://truecostofhealthcare.org/the_pharmaceutical_industry/; David Belk, "Brand Name Medication Prices," *True Cost of Health Care* (blog), accessed February 6, 2016, <http://truecostofhealthcare.net/brand-name-medication-prices/>.

⁴⁹ Council of Economic Advisers, "Growing the American Economy: The Economic Report of the President," 314, accessed February 26, 2018, <https://www.whitehouse.gov/briefings-statements/growing-american-economy-economic-report-president/>.

price in Canada, England, or the Netherlands. In no case is the United States price lower and prices in the United States are less than twice the price paid in other countries for only two drugs (Enbrel and Humira).⁵⁰ For example, a treatment of the cancer drug Gleevac costs \$6,214 in the United States, but only \$1,141 in Canada. The multiple sclerosis drug Copaxone costs \$3,875 in the United States, but only \$862 in England. The acid reflux drug Nexium costs \$215 in the United States, but only \$23 in the Netherlands.⁵¹

Inflated drug prices reflect the market power of companies whose brand reputation is reinforced by patent protection and the lack of an effective check by our fragmented insurance industry.⁵² Producers could still profit from providing the same product even at a much lower price, but instead they charge inflated prices derived from market power.⁵³ When the removal of patent protection reduces market power, for example, patients can buy the same drug for much lower prices. When a drug goes “off patent,” the entry of two new producers typically lowers prices by 50%, and prices fall by 80% or more when there are eight or more producers.⁵⁴ The large penalty paid in the United States for drugs still under patent protection suggests that even the 60% figure understates the role of market power in inflating drug prices.⁵⁵

⁵⁰ International Federation of Health Plans, “2013 Comparative Price Report: Variation in Medical and Hospital Prices by Country”; the Council of Economic Advisers appointed by Donald Trump has found that the mark-up on drugs is 80% in the US but only 20% in Europe. Their conclusion is that Europeans should pay more; Council of Economic Advisers, “Growing the American Economy,” 314.

⁵¹ International Federation of Health Plans, “2013 Comparative Price Report: Variation in Medical and Hospital Prices by Country.”

⁵² Loss of patent protection can drive down prices. Prices are as much as 80% lower for generic drugs; see David Belk, “Generic Medication Price Study: Method and Results,” *True Cost of Health Care* (blog), accessed November 23, 2016, <http://truecostofhealthcare.net/generic-medication-price-study-method/>; Aaron S. Kesselheim et al., “Strategies That Delay Market Entry of Generic Drugs,” September 18, 2017, <http://www.commonwealthfund.org/publications/in-the-literature/2017/sep/strategies-delay-market-entry-generic-drugs?omnicid=EALERT1275272&mid=gfriedma@econs.umass.edu>.

⁵³ At \$1000 per pill in the United States, \$84,000 for a full course of treatment, Gilead Science’s new Hepatitis C drug Sovaldi has produced more profit in one year than Gilead spent on R and D for over a decade. Almost half of all revenue to Gilead in 2014 was profit. Despite large sales elsewhere, 84% of Sovaldi revenues were in the United States because of hard bargaining by foreign governments and insurers to secure lower prices than are paid by Americans; see David Belk, “Gilead Sciences: A Profile in Congressionally Guaranteed Profiteering,” *The Huffington Post*, accessed February 9, 2015, http://www.huffingtonpost.com/david-belk/gilead-sciences-a-profile_b_6641194.html; Jaimy Lee, “Gilead’s 2014 Profit Margin Nears 50%, Fueled by Hep C Drugs,” *Modern Healthcare*, accessed February 15, 2015, <http://www.modernhealthcare.com/article/20150203/NEWS/302039949&cachebust=JHMQ>; Andrew Pollack, “Gilead Revenue Soars on Hepatitis C Drug,” *The New York Times*, April 22, 2014, <http://www.nytimes.com/2014/04/23/your-money/gilead-revenue-soars-on-hepatitis-c-drug.html>.

⁵⁴ Center for Devices and Radiological Health, “About the Center for Drug Evaluation and Research - Generic Competition and Drug Prices,” WebContent, accessed August 1, 2014, <http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDER/ucm129385.htm>.

⁵⁵ Neeraj Sood et al., “Follow The Money: The Flow Of Funds In The Pharmaceutical Distribution System,” *Health Affairs Blog* (blog), June 13, 2017, <https://www.healthaffairs.org/doi/10.1377/hblog20170613.060557/full/>; Belk, “Generic Medication Price Study.”

Some Americans pay less for drugs. Negotiating directly to buy drugs in bulk, the Veteran's Administration buy drugs at half the price paid by other Americans.⁵⁶ With a population of nearly 12 million, the state of Ohio is larger than the number of veterans receiving health care from the VA (about 9 million), and larger than half the members of the European Union, including Austria, Belgium, and Sweden.⁵⁷ A single agency negotiating prices for 12 million residents should negotiate dramatically lower prices, towards at least prices comparable to those achieved at smaller European countries. If the state negotiates prices that are 37% lower, a smaller saving than is achieved by the Veterans Administration, it would save nearly \$6 billion. Similar bargaining over the price of medical equipment would save a further \$800 million.⁵⁸

Pharmaceutical companies are not the only ones to profit from monopoly power. The growth of hospital networks, including both for-profit chains looking to enhance profits and not-for-profit chains focused on building "reserves," has created powerful institutions with market power based on control of access to providers, especially elite or must-have hospitals.⁵⁹ Hospital networks have been buying up physician practices in order to steer patients, creating powerful vertically integrated networks able to enforce higher prices.⁶⁰ Studies of pricing in

⁵⁶ Austin Frakt, Steven D. Pizer, and Roger Feldman, "Should Medicare Adopt the Veterans Health Administration Formulary?," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, April 14, 2011), <http://papers.ssrn.com/abstract=1809665>; Congressional Budget Office, "Comparing the Costs of the Veterans' Health Care System With Private-Sector Costs," December 2014, https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/49763-VA_Healthcare_Costs.pdf.

⁵⁷ Erin Bagalman, "The Number of Veterans That Use VA Health Care Services: A Fact Sheet" (Congressional Research Service, June 3, 2014), <https://fas.org/sgp/crs/misc/R43579.pdf>; ; a study of 11 countries found those with single-payer insurance system had lower drug prices and bargaining power largely explains higher drug spending in the United States Steven G. Morgan, Christine Leopold, and Anita K. Wagner, "Drivers of Expenditure on Primary Care Prescription Drugs in 10 High-Income Countries with Universal Health Coverage," *Canadian Medical Association Journal* 189, no. 23 (June 12, 2017): E794–99, <https://doi.org/10.1503/cmaj.161481>.

⁵⁸ McKinsey Global Institute, "Accounting for the Cost of Health Care in the United States"; As is done with the VA, the state would establish a formulary of covered drugs and negotiate prices with producers. It would then make these drugs available at the reduce prices to pharmacies and other private vendors. National Committee to Preserve Social Security and Medicare, "Price Negotiation for the Medicare Drug Program: It Is Time to Lower Costs for Seniors" (National Committee to Preserve Social Security and Medicare, October 2009), http://www.ncpssm.org/pdf/price_negotiation_part_d.pdf.

⁵⁹ Office of Massachusetts Attorney General Martha Coakley, "Investigation of Health Care Cost Trends and Cost Drivers"; Reed Abelson, "Merged Hospitals Gain Both Power and Critics," *The New York Times*, September 26, 2002, sec. Business, <http://www.nytimes.com/2002/09/26/business/merged-hospitals-gain-both-power-and-critics.html>; Ge Bai and Gerard F. Anderson, "Extreme Markup: The Fifty US Hospitals With The Highest Charge-To-Cost Ratios," *Health Affairs* 34, no. 6 (June 1, 2015): 922–28, <https://doi.org/10.1377/hlthaff.2014.1414>; Erica Coe et al., "Hospital Networks: Configurations on the Exchanges and Their Impact on Premiums," McKinsey Center for U.S. Health System Reform (McKinsey Corporation, December 14, 2013); Brill, *America's Bitter Pill*; Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, "Consolidation in California's Health Care Market 2010-2016: Impact on Prices and ACA Premiums" (Berkeley, Calif.: School of Public Health, University of California, Berkeley, March 26, 2018), http://petris.org/wp-content/uploads/2018/03/CA-Consolidation-Full-Report_03.26.18.pdf; monopoly pricing at hospitals is having an aggregate effect dragging down US economic performance; Jonathan Rothwell, "No Recovery: An Analysis of Long-Term U.S. Productivity Decline" (2016), <http://www.gallup.com/reports/198776/no-recovery-analysis-long-term-productivity-decline.aspx>.

⁶⁰ It is estimated that the share of physicians with an independent practice has fallen from 57% in 2000 to barely 30% now, Accenture, "Clinical Care - The Independent Doctor Will NOT See You Now | Accenture," accessed July

Massachusetts and California, for example, have found a wide variation in prices for the same services, with elite providers and hospitals able to charge as much as 4 or 5 times the price charged by other providers.⁶¹ The consolidation of hospital physician networks, where hospitals own physician practices, allows hospitals to steer patients towards their own facilities, so they can raise prices to the benefit of monopoly profits and inflated managerial salaries. In California, the average median upper respiratory infection/common cold (adult) price across 18 rating areas analyzed was \$151 but the range was from \$131 in Orange County, with little market consolidation, to \$215 in San Mateo, where a few hospital networks have bought up most of the physician practices.⁶² Prices for outpatient treatment of cardiomyopathy (heart muscle disease) range by over 200%, as do those for ankle fracture examinations.⁶³ Inpatient hospital charges vary as much or more. The median charge for inpatient procedures in the districts in California with more market consolidation is nearly 80% higher than the average charge in districts with less market concentration.⁶⁴ The range in charges at individual hospitals can be even greater. In Massachusetts, for example, the most elite hospitals charge over 4 times as much for the same services as do the lowest cost facilities.⁶⁵

Few competitive health insurers have the market clout to resist the demands of elite hospitals and these networks, especially when they can simply pass the costs along to their subscribers.⁶⁶

Restraining monopoly pricing by hospitals could save an Ohio health plan between \$8 and \$9 billion, largely by reducing inflated prices at a relatively few hospitals with monopoly power. There is a wide range in the prices charged for the same services in different hospitals. Lowering

18, 2018, <https://www.accenture.com/us-en/insight-clinical-care-independent-doctor-will-not-see-you-now>; for the effect on prices, see Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, "Consolidation in California's Health Care Market 2010-2016: Impact on Prices and ACA Premiums."

⁶¹ Office of Massachusetts Attorney General Martha Coakley, "Investigation of Health Care Cost Trends and Cost Drivers"; Martha Coakley, "Examination of Health Care Cost Trends and Cost Drivers Pursuant to G.L. c. 118G, § 6½(b) Report, 2011" (Boston, Mass.: Attorney General of Massachusetts, 2011), <http://www.mass.gov/ago/docs/healthcare/2011-hcctd.pdf>; Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, "Consolidation in California's Health Care Market 2010-2016: Impact on Prices and ACA Premiums"; Paul Ginsburg, "Health Care Market Consolidations: Impacts on Costs, Quality and Access," *Brookings* (blog), March 16, 2016, <https://www.brookings.edu/testimonies/health-care-market-consolidations-impacts-on-costs-quality-and-access/>.

⁶² Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, "Consolidation in California's Health Care Market 2010-2016: Impact on Prices and ACA Premiums," 28.

⁶³ Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, 31.

⁶⁴ Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, 33.

⁶⁵ Office of Massachusetts Attorney General Martha Coakley, "Investigation of Health Care Cost Trends and Cost Drivers" outpatient charges at physician practices very by over 200%. Also see Bai and Anderson, "Extreme Markup"; Abelson, "Merged Hospitals Gain Both Power and Critics"; Meier, Creswell, and McGinty, "Hospital Billing Varies Wildly, U.S. Data Shows."

⁶⁶ Insurance premiums are 15% higher in California counties with more hospital consolidation to cover inpatient prices as much as 80% higher; see Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, "Consolidation in California's Health Care Market 2010-2016: Impact on Prices and ACA Premiums."

prices to no more than the current mean price per DRG would lower aggregate hospital spending by 14%, or nearly \$8 billion.⁶⁷

It is also possible to compare charges at hospitals for Medicare and other billings. Medicare pays significantly less than does private insurance, although more than the variable cost associated with providing care to Medicare recipients or, presumably, patients with private insurance.⁶⁸ Ohio hospitals collect 71% as much from Medicare as from private payers.⁶⁹ After deducting 12% for the administrative cost of processing bills for the private insurance system, savings we have already counted, this still leaves 17% for overcharging. Using this formula suggests that Ohio could save \$9 billion by paying hospitals at Medicare rates.

Waste from fraud

Fraudulent billing -- including duplicate billing and billing for services not rendered -- accounts for between 3 percent and 10 percent of health care spending in the United States, including an error rate in Federal programs of over 9 percent.⁷⁰ This includes the “accidental fraud” caused by duplicate billing due to the confusing nature of the insurance process.⁷¹ A single payer authority would reduce fraud in three ways. Eliminating multiple payers would immediately eliminate the possibility of duplicate billing. It would also simplify the process of tracking bills. In addition, public authorities have greater subpoena and prosecutorial powers, giving them more power to stop fraud. By reducing fraud and “accidental” overcharging, Ohio could, conservatively, save 2% of total costs, adding to over \$2.3 billion.⁷²

⁶⁷ The Ohio Department of Health provides billing data for 2010 by diagnostic group for every hospital in the state. An interesting comparison is with Massachusetts data; see Office of Massachusetts Attorney General Martha Coakley, “Investigation of Health Care Cost Trends and Cost Drivers.”

⁶⁸ Medicare Payment Advisory Commission, “Report to the Congress: Medicare Payment Policy” (Washington, D. C.: Medicare Payment Advisory Commission, March 2017), http://medpac.gov/docs/default-source/reports/mar17_entirereport.pdf; “Do Medicare And Medicaid Payment Rates Really Threaten Physicians with Bankruptcy?,” Health Affairs Blog, accessed March 2, 2015, <http://healthaffairs.org/blog/2012/10/02/do-medicare-and-medicaid-payment-rates-really-threaten-physicians-with-bankruptcy/>.

⁶⁹ Center for Medicare and Medicaid Services, “Inpatient Charge Data FY 2015” (Washington, D. C.: Center for Medicare and Medicaid Services, n.d.), <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Inpatient2015.html>.

⁷⁰ Kathleen King and General Accounting Office, “Medicare and Medicaid Fraud, Waste, and Abuse” (United States Senate, Subcommittee on Federal Financial Management, March 9, 2011), <http://www.gao.gov/new.items/d11409t.pdf>; National Health Care Anti-Fraud Association, “Testimony of the National Health Care Anti-Fraud Association to the House Insurance Committee” (Harrisburg, PA: House of Representatives, Commonwealth of Pennsylvania, January 28, 2010), <http://www.docucu.com/view/7d4b3344492e717c21f4767dcad3ae16/National-Health-Care-Anti-Fraud-Association.pdf>; Berwick and Hackbarth, “Eliminating Waste in US Health Care.”

⁷¹ Anyone who has tried to interpret a hospital bill can appreciate how easy it would be to make mistakes.

⁷² This savings estimate is made after taking account of increases in utilization due to the universal coverage plans, extension of coverage, and removal of copayments and deductibles. The estimate of savings from fraud reduction is conservative compared with, for example, the Lewin Group, which regularly assumes that 5% of claims are fraudulent. 20% of these errors would be detected with enhanced subpoena powers without taking account of the reduction in duplicate claims under a system like that proposed here for Ohio.

All single payer savings:

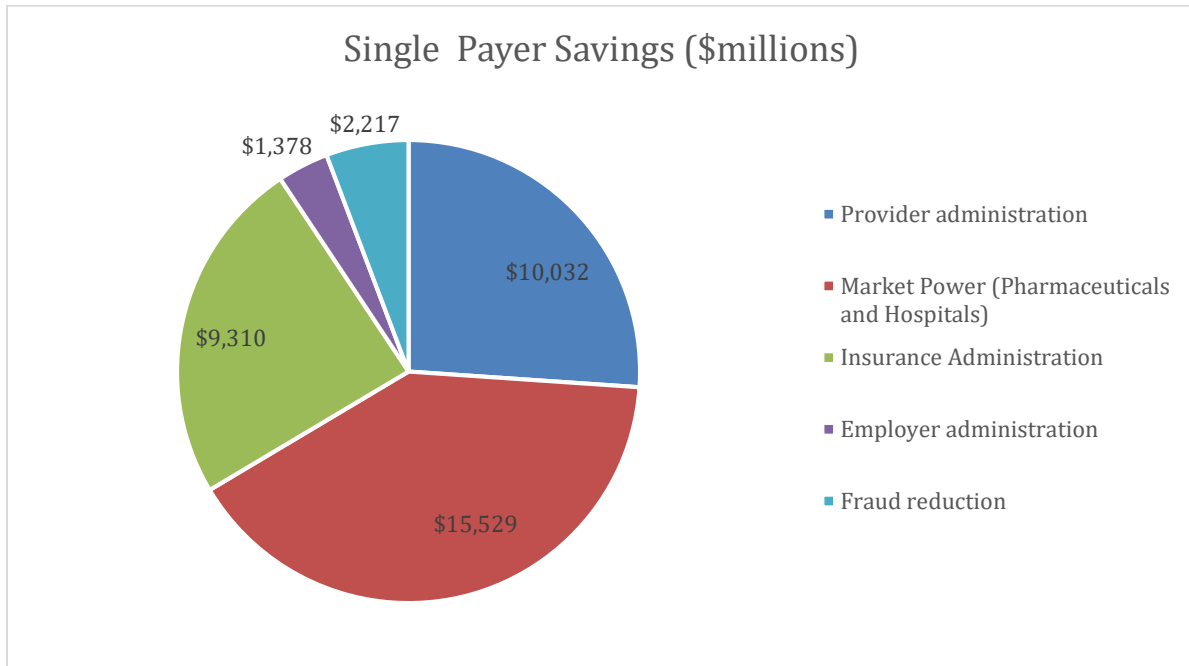


Figure 13. Projected single payer savings, Ohio, 2019 \$millions.

Altogether, projected gross savings on current health care activities come to over \$38 billion for 2019, which is nearly 28% of projected health care spending in that year. Savings are itemized in Table 2 and in Figure 13, below.

Table 2. Projected savings (in \$millions) from single payer in Ohio

Provider administration	\$	10,032
Market Power (Pharmaceuticals and Hospitals)	\$	15,529
Insurance Administration	\$	9,310
Employer administration	\$	1,378
Fraud reduction	\$	2,217
Total savings	\$	38,467

Expanded and improved coverage under Ohio single payer

The savings in table 2 and figure 13 are gross savings, calculated before any expansions or improvements in the provision of medical services, including program improvements necessitated by a universal coverage program. Gross savings would come to nearly \$3,283 per resident, achieved largely by reducing excessive prices, unpleasant and wasteful administrative forms, and bureaucratic barriers to care.⁷³ Savings accrued would allow Ohio to expand access

⁷³ The following discussion shows how much spending will increase because of health care improvements. After deducting these increases, net spending would fall by almost \$2,200 per resident.

to care for those still without insurance, to pay all providers fairly, to reduce out-of-pocket costs and barriers to access for those with insurance, and to finance an extensive program to help workers displaced by the transition.

The Affordable Care Act makes it easier to establish a single-payer system in Ohio because it has already significantly expanded health insurance coverage. Between 2013 and 2016, the number of uninsured fell by more than half despite a slight decline in the population covered by employer-provided insurance. More than 700,000 residents gained coverage because of the expansion in Medicaid (which grew by 35%) and nongroup coverage (which grew by 58%).⁷⁴ (The full effect of the ACA may be greater than this, and the uninsurance rate might have increased without the ACA. Charles Gaba estimates that repeal would increase the number without health insurance in Ohio by between 848,000 and 964,000.⁷⁵) This still leaves over 600,000 people without health insurance in Ohio, leading to 600 extra deaths each year due to the lack of health insurance.⁷⁶ Nor does the ACA expansion significantly address the problem of *underinsurance*, where thousands die because high deductibles and copays leave the insured unable to afford needed care (see Figure 10).⁷⁷

Universal coverage

While the uninsured do use doctors and hospitals, their per-capita health care spending is only 55% of the average for the population as a whole. Because of the average age of the uninsured (much younger than those with health coverage), we calculate that, when insured, their care would cost 85% as much as for a currently insured person.⁷⁸ The difference, 30% of per-capita spending (85%-55%) times the number of uninsured, is the cost of covering the uninsured with universal coverage. Thus, expanding coverage to the over 638,000 uninsured in Ohio under the ACA will cost over \$1.6 billion.⁷⁹

⁷⁴ Kaiser Family Foundation, "State Health Facts.Org," n.d.

⁷⁵ Charles Gaba, "ACA Repeal Impact," Text, ACA Signups, accessed May 23, 2018, <http://acasignups.net/tags/aca-repeal-impact>.

⁷⁶ This includes undocumented immigrants without insurance in addition to uninsured citizens. Mortality is estimated by applying a 40% higher mortality rate to the estimated mortality rate for the insured population; see Andrew Wilper et al., "Health Insurance and Mortality in US Adults," *American Journal of Public Health* 99, no. 12 (n.d.): 1–8; Note that this 40% figure is higher than the 25% estimated by an earlier study, Institute of Medicine (US) Committee on the Consequences of Uninsurance, "Estimates of Excess Mortality Among Uninsured Adults," 2002, <http://www.ncbi.nlm.nih.gov/books/NBK220638/>.

⁷⁷ The county mortality rate would be almost 23% lower if the proportion reporting could not see a doctor because of cost was the UK average (4%) instead of the county average of 14%; a difference that would account for 32,000 extra deaths. See Figure 10 and Robert Wood Johnson and University of Wisconsin, Population Health Institute, "County Health Rankings."

⁷⁸ Jack Hadley and John Holahan, "The Cost of Care for the Uninsured: What Do We Spend, Who Pays, and What Would Full Coverage Add to Medical Spending" (Kaiser Commission on Medicaid and the Uninsured, May 10, 2004), <http://www.thesoutherninstitute.org/docs/publications/Policy%20Resources/KaiserReport.pdf> Coverage expansion is relatively inexpensive because the population without insurance is relatively young, and would spend only about 85% as much on health care as the general population, and they currently spend 55% as much as the average.

⁷⁹ It is also possible that expanded access will eventually lower health care costs. There is a jump in health care activity when people reach Medicare age, followed by a drop after new Medicare recipients address pent-up

Increased utilization

Expenditures may increase if eliminating deductibles, copayments, limited provider networks and other restrictive insurance policies leads to more utilization among those already insured.⁸⁰ It is likely that in recent years increased “cost-sharing” by insurance companies – imposing financial barriers to care – has contributed to the slowdown in health care spending since 2008.⁸¹ Removing these higher barriers to access -- deductibles and copays -- likely will lead to more utilization.⁸² There is also an extensive literature in health economics relating utilization to the level of cost sharing.⁸³ To be sure, much of this literature is myopic and short-sighted to the

health care needs. There is also evidence that continued access to primary care reduces long-term health care spending; see, for example, Donald Fruge, “Impact of Primary Care on Healthcare Cost and Population Health: A Literature Review” (Rhode Island Department of Health, February 23, 2012), <http://www.health.ri.gov/publications/literaturereviews/ImpactOfPrimaryCareOnHealthcareCostAndPopulationHealth.pdf>; Yue-Chune Lee et al., “The Impact of Universal National Health Insurance on Population Health: The Experience of Taiwan,” *BMC Health Services Research* 10, no. 1 (December 2010), <https://doi.org/10.1186/1472-6963-10-225>.

⁸⁰ There would be no increase in utilization if usage is supply driven, or depends on the supply of medical services, as is sometimes argued by the Dartmouth group, see Nancy L. Keating et al., “Dartmouth Atlas Area-Level Estimates of End-of-Life Expenditures: How Well Do They Reflect Expenditures for Prospectively Identified Advanced Lung Cancer Patients?,” *Health Services Research* 51, no. 4 (August 1, 2016): 1584–94, <https://doi.org/10.1111/1475-6773.12440>; a correction to this view is at David Squires, “Explaining High Health Care Spending in the United States: An International Comparison of Supply, Utilization, Prices, and Quality” (Commonwealth Fund, May 2012), http://www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2012/May/1595_Squires_explaining_high_hlt_care_spending_intl_brief.pdf.

⁸¹ The proportion of those with insurance reporting that they have put off medical treatment because of cost has risen sharply in the Gallup survey; Rebecca Riffkin, “Cost Still a Barrier Between Americans and Medical Care,” *Gallup* (blog), November 28, 2014, <http://www.gallup.com/poll/179774/cost-barrier-americans-medical-care.aspx>; in Taiwan and Quebec there was little change in utilization after the enactment of a single-payer health insurance program with minimal copayments: Tsung-Mei Cheng, “Reflections On The 20th Anniversary Of Taiwan’s Single-Payer National Health Insurance System,” *Health Affairs* 34, no. 3 (March 1, 2015): 502–10, <https://doi.org/10.1377/hlthaff.2014.1332>; S. H. Cheng and T. L. Chiang, “The Effect of Universal Health Insurance on Health Care Utilization in Taiwan. Results from a Natural Experiment,” *JAMA* 278, no. 2 (July 9, 1997): 89–93; Philip E. Enterline et al., “The Distribution of Medical Services before and after Free Medical Care — The Quebec Experience,” *New England Journal of Medicine* 289, no. 22 (November 29, 1973): 1174–78, <https://doi.org/10.1056/NEJM197311292892206>; the role of rising cost sharing in the recent slowdown in American health-care spending is emphasized in Amitabh Chandra, Jonathan Holmes, and Jonathan Skinner, “Is This Time Different? The Slowdown in Healthcare Spending,” Working Paper (National Bureau of Economic Research, December 2013), <https://doi.org/10.3386/w19700>.

⁸² And removing these restrictions may also save lives, as in the discussion of the county mortality data above.

⁸³ The slowdown in spending growth sometimes attributed to rising cost sharing may overstate the effect on utilization because there would not be the same change for the 24% of health care that is already funded through Medicare and the Veteran’s Administration. This may also overestimate the long-term impact, because greater utilization may, over time, lead to some savings from better health. There is a substantial literature on the effects of copayments on utilization. William Manning et al., “Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment,” *American Economic Review* 77, no. 3 (June 1987): 251–77; Robert Brook et al., “The Effect of Coinsurance on the Health of Adults: Results from the RAND Health Insurance Experiment” (Rand, 1984), <http://www.rand.org/pubs/reports/R3055/>; B. Harris, A. Stergachis, and L. Ried, “The Effect of Drug Co-Payments on Utilization and Cost of Pharmaceuticals in a Health Maintenance Organization,” *Medical Care* 28, no. 10 (1990): 907–17; D. Cherkin, L. Grothaus, and E. Wagner, “The Effect of Office Visit Copayments on Utilization in a Health Maintenance Organization,” *Medical Care* 27, no. 7 (1989): 669–79; Leighton

degree that some of this increased utilization --especially of primary care -- will lead to savings in other areas of health care, and some will lead to savings in the future.⁸⁴

Utilization will increase for the population that was constrained in their use of health care because of cost, including copayments and deductibles. In the county data, this is about 13.6% of the population of Ohio. In national data, the share who are cost-constrained may be over twice as high, or as much as 33%.⁸⁵ A study by Brot et al. found that moving people to a high-deductible plan with significant cost sharing was associated with a reduction in spending of between 11 and 15%.⁸⁶ If we apply this to Ohio and move in the opposite direction, we can predict that removing cost constraints will raise spending for people currently constrained by between 11% and 15%, or an increase in total spending of between 1.49% (.11*.136) and 5.00% (.33*.15).

An alternative approach would rely on estimates of the effect on utilization of changes in the actuarial value of insurance plans, or the share of course covered by insurance. In Ohio, the current actuarial value of plans is 86%., including Medicaid and Medicare, but not including the effect of Medigap coverage. Estimates from CMS are that moving from 86% to 96%, the level of coverage in the proposed Ohio plan, would increase utilization by 6.2%.⁸⁷

Ku, Elaine Deschamps, and Judi Hilman, "The Effects of Copayments on the Use of Medical Services and Prescription Drugs in Utah's Medicaid Program," Center on Budget and Policy Priorities, December 15, 2008, <https://www.cbpp.org/research/the-effects-of-copayments-on-the-use-of-medical-services-and-prescription-drugs-in-utah>; Lee et al., "The Impact of Universal National Health Insurance on Population Health"; Gruber, "The Role of Consumer Copayments for Health Care: Lessons from the RAND Health Insurance Experiment and Beyond"; William Hsiao, Steven Kappel, and Jonathan Gruber, "Act 128: Health System Reform Design. Achieving Affordable Universal Health Care in Vermont," January 21, 2011, 128, <http://www.leg.state.vt.us/jfo/healthcare/FINAL%20VT%20Draft%20Hsiao%20Report.pdf>; Catherine Maclean et al., "Impact of Increased Cost Sharing on Utilization of Low Value Services" (6th Biennial Conference of the American Society of Health Economists, Ashecon, 2016), <https://ashecon.confex.com/ashecon/2016/webprogram/presentation/Paper4949.html>; Zarek C. Brot-Goldberg et al., "What Does a Deductible Do? The Impact of Cost-Sharing on Health Care Prices, Quantities, and Spending Dynamics," Working Paper (National Bureau of Economic Research, October 2015), <http://www.nber.org/papers/w21632>.

⁸⁴ Studies of the Medicare and the Medicaid populations have found that increased access to primary care can lead to very large reductions in health care spending; see Fruge, "Impact of Primary Care on Healthcare Cost and Population Health: A Literature Review"; James Reschovsky et al., "Paying More for Primary Care: Can It Help Bend the Medicare Cost Curve?," Issue Brief (Commonwealth Fund, March 2012), http://www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2012/Mar/1585_Reschovsky_paying_more_for_primary_care_FINALv2.pdf.

⁸⁵ Gallup reports that 33% of Americans put off medical treatment because of cost in 2014, Riffkin, "Cost Still a Barrier Between Americans and Medical Care"; the Commonwealth Fund finds that 23% of insured non-elderly adults, or 10% of the entire population, were underinsured in 2014, Collins et al., "The Problem of Underinsurance and How Rising Deductibles Will Make It Worse Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2014."

⁸⁶ Brot-Goldberg et al., "What Does a Deductible Do?"; CMS has an estimate of the effect of cost sharing; see Gregory Pope et al., "Risk Transfer Formula for Individual and Small Group Markets Under the Affordable Care Act," *Medicare & Medicaid Research Review* 4, no. 3 (2014): E1–23.

⁸⁷ Pope et al., "Risk Transfer Formula for Individual and Small Group Markets Under the Affordable Care Act."

Choosing a conservative approach, I use the highest number here and assume an increase in utilization of 6.2%, or \$5.8 billion.

Medicaid and Medicare rate equity

For some time Medicaid and Medicare have paid physicians, hospitals, and other providers significantly less than commercial insurers do. In 2016, for example, Medicaid paid Ohio physicians only 69 percent as much for the same services as Medicare paid. Medicare pays physicians only 80 percent as much as private insurers.⁸⁸ By folding Medicaid into a single state program, the legislation would raise overall spending by about 1.8% or \$1.7 billion.⁸⁹ This will benefit recipients as well as providers, because current low reimbursement rates threaten Medicaid's viability by forcing a growing number of physicians to stop accepting patients with Medicaid insurance.

Unemployment and job training for displaced billing and insurance workers

In 2019, there will be approximately 580,000 workers employed in health care in Ohio, and an additional 130,000 employees of health insurers.⁹⁰ While many administrative workers will be displaced by the more efficient single-payer plan, employment in health care will change little because of the increase in utilization by newly insured workers and those no longer subject to constraint by copayments and deductibles. The displacement of about 8% of workers due to greater administrative efficiency will be balanced by the creation of about the same number of positions in healthcare because of the increased demand for health care workers coming with the expansion in coverage and increased utilization by those under-insured.

Dramatically reducing the cost of health care for Ohio will improve the position of employers, especially small businesses. Implementing a single-payer program would improve the overall employment climate in Ohio, and lead to the creation of enough new jobs to more than off-set the loss in insurance company and health care administrative positions.⁹¹ Nonetheless, provision should be made for insurance workers who will be displaced by the change. The current Unemployment Insurance system will provide support for these workers for six months. Even in the depths of the Great Recession, this was long enough for 74% of the unemployed to find new

⁸⁸ The Medicaid rate index is from <http://kff.org/medicaid/state-indicator/medicaid-fee-index/?state=OH>. Also see Will Fox and John Pickering, "HOSPITAL & PHYSICIAN COST SHIFT PAYMENT LEVEL COMPARISON OF MEDICARE, MEDICAID, AND COMMERCIAL PAYERS" (Milliman, December 2008); American Academy of Pediatrics, "Medicaid Reimbursement: Medicaid Rates and Provider Participation," July 2009, <http://www.sdsma.org/documents/MedicaidSummerStudy.final.pdf>; "Do Medicare And Medicaid Payment Rates Really Threaten Physicians with Bankruptcy?"; Peter Cunningham and Jessica May, "Medicaid Patients Increasingly Concentrated Among Physicians," August 2006, <http://www.hschange.com/CONTENT/866/#ib10>.

⁸⁹ The cost of provider reimbursement equity is estimated as the share of percentage adjustment needed to reach equity, multiplied by the share of spending on Medicaid physician services after taking account of savings achieved and anticipated increases utilization from the expansion of coverage and the removal of barriers to access.

⁹⁰ "Occupational Employment Statistics Home Page," accessed November 4, 2014, <http://www.bls.gov/oes/>.

⁹¹ Over 5% of workers in the financial services sector (including insurance) change jobs every month. The weekly re-employment rate from unemployment in November 2014 was 5.1%. Applying this rate, 26.5% of the unemployed will remain out of work after 26 weeks and 7.1% after 52 weeks; see "Occupational Employment Statistics Home Page."

jobs. In periods of lower unemployment, it is long enough for over 90% to get new work.⁹² Funding an additional 78 weeks of unemployment compensation with job training to the remaining unemployed would cost about \$178 million in the first year and \$52 million in the second year. By the end of the second year, over 99% of the displaced workers will have found new jobs.

Medicare Part B premiums

Over two million Ohio residents are over age 65 and most are eligible for Medicare, including hospitalization (Part A), doctor visits (Part B), and the Medicare drug benefit (Part D).⁹³ All have to pay premiums for Part B, although low-income recipients have their premiums paid by Medicaid. Some have premiums for Part A (because of lack of sufficient coverage) and Part D (depending on income and the plan chosen).

I am assuming that the Ohio single-payer program would receive Federal Medicare funds either through a negotiation with CMS or by establishing itself as a plan under Medicare part C (also known as Medicare Advantage) open to all currently eligible for Medicare. Because this program and other medical services would be available for any resident, none would have reason to continue to pay Medicare premiums. But for the single-payer program to continue to receive Medicare payments, the population would have to be enrolled in Medicare, and someone must pay the premiums.

I assume that the single-payer state program will pay these premiums, at an estimated cost of \$3.9 billion in 2019. While a charge to the Ohio taxpayer, this is a transfer rather than a cost because the spending will raise the net income of Medicare recipients by the same amount as the cost to the general population. While it raises costs for the Ohio state program, it is an equivalent reduction in cost to Medicare recipients without increasing overall health care spending.⁹⁴

Table 3. Cost of projected program improvements under Ohio single payer program (\$millions, 2019).

Universal coverage	\$	1,551
Utilization (removal of copays and deductibles)	\$	5,798
Medicaid rate	\$	1,713
Assumption of Medicare premiums	\$	3,894
Transition costs for UI and retraining	\$	178
Cost of program improvements	\$	13,136

⁹² Randy Ilg, "How Long before the Unemployed Find Jobs or Quit Looking?," Bureau of Labor Statistics, May 2011, https://www.bls.gov/opub/ils/summary_11_01/unemployed_jobs_quit.htm.

⁹³ U. S. Census Bureau, "American FactFinder - Results," accessed May 23, 2015, <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

⁹⁴ I estimated average premiums for the country as a whole from Boards of Trustees, "2017 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds;" the cost to the Ohio program is estimated assuming that premiums will rise at the rate of per-capita personal health care spending.

Single payer and the distribution of health care spending in Ohio: more equitable and efficient spending

A single payer program in Ohio will shift major categories of spending from their current sources to a more equitable cost-sharing system. Central to the task is to replace insurance premiums. These are now paid as fixed amounts per person by private and public employers, employees, and individuals, or as amounts reflecting age and health status, so as to penalize the elderly and the sick.⁹⁵ These will be replaced by broad-based funding through assessments on payroll and taxable upper-bracket non-payroll income, based on ability to pay. Other key elements of the program reflect the same principle of equity. The new system will replace out-of-pocket spending on deductibles, copays, out-of-network charges, and spending by uninsured patients. The poor, the elderly, the sick, and the disabled will no longer be penalized financially by the health care system. Recognizing that misfortune may befall any of us and will eventually come to all of us, we will all share in the financial cost of poor health and disability according to our ability to bear this cost.⁹⁶

A single payer program would involve a dramatic shift in Ohio health expenditures. While *total* expenditures would fall, there would be more spending on the actual delivery of health care services. Instead of paying for corporate executives, advertising, insurance company profits, and other administrative expenses unrelated to health care, payments to providers will increase by almost \$11 billion, rising from 58% of spending to 80% percent. Under the current system, administrative costs account for almost 30% of total health care spending and overcharging for drugs and hospitals comes to another 11%. Under a single-payer program, monopoly overcharging will be eliminated, and administrative spending will be reduced by a third, down to 16% (including the cost of administering the Ohio plan and the reduced administrative costs of health care providers), making more money available for the provision of health care (see Figure 14).

⁹⁵ The concentration of health care spending among a few individuals is discussed in Emily Mitchell and Steven Machlin, "Concentration of Health Expenditures and Selected Characteristics of High Spenders, U.S. Civilian Noninstitutionalized Population, 2015," 506, Statistical Brief (Washington, D.C.: Agency for Healthcare Research and Quality, December 2017), https://meps.ahrq.gov/data_files/publications/st506/stat506.pdf.

⁹⁶ Moss, *When All Else Fails*; Archer and Marmor, "Medicare And Commercial Health Insurance: The Fundamental Difference – Health Affairs Blog"; Theodore R. Marmor, *Social Insurance: America's Neglected Heritage and Contested Future*, Public Affairs and Policy Administration Series (Thousand Oaks, California: SAGE/CQ Press, 2014); John Rawls, *A Theory of Justice* (Cambridge, MA: Belknap Press of Harvard University Press, 1971).

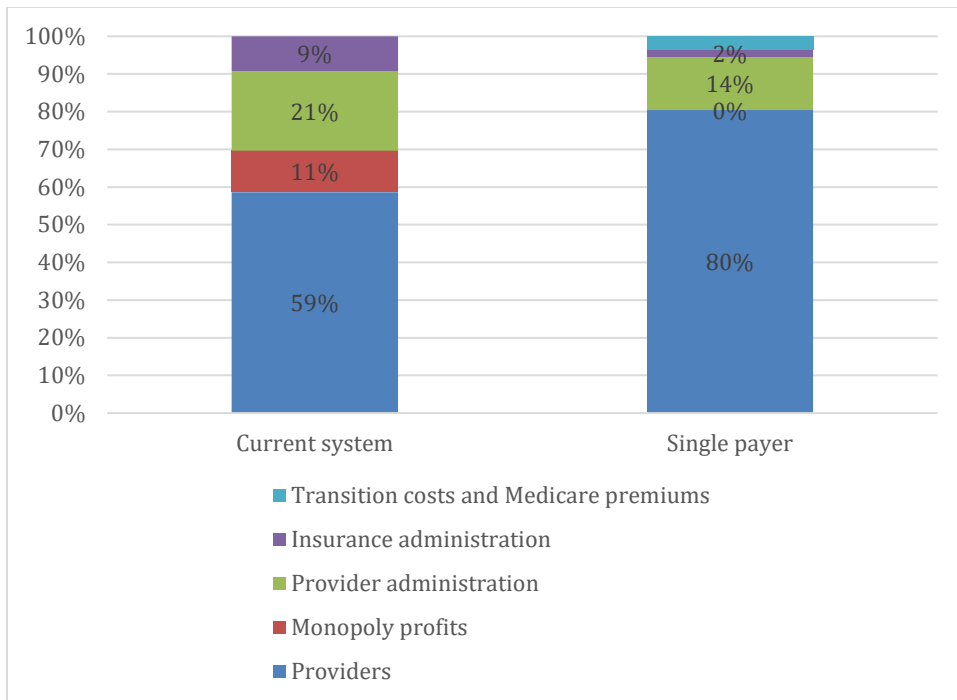


Figure 14. Distribution of Payments under Current System and Single Payer.

Beginning with projected spending under the current system, and adjusting for savings and program improvements, single payer will lower health care spending by 11%, saving almost \$9 billion in the first year. This is itemized in Tables 2, 3, and 4.

Table 4. Financing Ohio single payer, 2019.

Personal health expenditures	\$	127,372
Insurance and government administration	\$	11,527
Employer administration	\$	1,378
Uncompensated care	\$	(638)
Total spending	\$	139,639
Savings		
Provider administration	\$	10,032
Market Power (Pharmaceuticals and Hospitals)	\$	15,529
Insurance Administration	\$	9,310
Employer administration	\$	1,378
Fraud reduction	\$	2,217
Total savings	\$	38,467
Program improvements		
Universal coverage	\$	1,551
Utilization (removal of copays and deductibles)	\$	5,798
Medicaid rate	\$	1,713
Assumption of Medicare premiums	\$	3,894
Transition costs for UI and retraining	\$	178
Cost of program improvements	\$	13,136
Net spending, single payer, 2019	\$	114,309
Existing revenues		
Medicare	\$	34,895
Medicaid	\$	24,823
SCHIP	\$	522
VA	\$	4,511
Fed share of Medicaid rate adjustment	\$	1,191
New Federal Medicaid for utilization	\$	441
Other third party (local public health, TRICARE, IHS, charity, etc.)	\$	2,403
Remaining out-of-pocket (actuarial value of 96%)	\$	4,572
Current state spending	\$	626
ACA subsidies	\$	711
Available revenue	\$	74,694
Needed revenue	\$	39,614

Paying for better health care

A single-payer program in Ohio will require \$114 billion in 2019, including \$75 billion in existing revenue and nearly \$40 billion in new revenue. In terms of spending by the people of

Ohio, \$40 billion in new state revenues will replace over \$65 billion in “private taxes” currently paid into the private health insurance system and as out-of-pocket spending. And, while saving money, the new system will provide better health care to more people because single-payer will save billions in administrative waste and monopoly profits built into the current system.

The question then is not whether Ohio can afford single payer because a single-payer plan is cheaper than continuing with the status quo. Rather the question is whether the people of Ohio can continue to pay for an inefficient and wasteful health care system that often fails to care for them. They can certainly afford one that is more effective and less profligate with their money.

Available resources

A funding program for single payer in Ohio begins with considerable funds already committed to paying for health care in the state. These include:

- *Medicare.* The new state agency could operate as a Medicare Advantage (Medicare Part C) plan. With its large scale and economies, it would offer benefits superior to those of any existing plan, so as to attract virtually all Medicare recipients in the state. Because of the formula used to reimburse Medicare Advantage providers, these are reimbursed at a *higher* rate than traditional Medicare. By offering to provide services at the traditional Medicare rate, the new state program would be saving the federal program money.⁹⁷
- *Medicaid.* The new state program will require a waiver to enroll all of the state’s Medicaid enrollees. In practice, the federal government has been very accommodating to state initiatives in Medicaid, as shown by the very long list of state waivers already in place.⁹⁸
- *Veteran’s Administration, Indian Health Service.* These will continue to operate separately from the state program with their own funding and service providers.
- *Additional Federal spending.* Universal coverage will enroll a number of poor people eligible for Medicaid. Half of the cost of raising reimbursement rates will be reimbursed by the federal government under the Medicaid program. While these

⁹⁷ Medicare Payment Advisory Commission, “Report to the Congress: Medicare Payment Policy”; Kaiser Family Foundation, “Medicare Advantage,” *The Henry J. Kaiser Family Foundation* (blog), October 10, 2017, <https://www.kff.org/medicare/fact-sheet/medicare-advantage/>; Medicare.gov, “How Medicare Advantage Plans Work,” accessed November 24, 2017, <https://www.medicare.gov/sign-up-change-plans/medicare-health-plans/medicare-advantage-plans/how-medicare-advantage-plans-work.html>; Fred Schulte, David Donald, and Erin Durkin, “Why Medicare Advantage Costs Taxpayers Billions More than It Should,” Center for Public Integrity, June 4, 2014, <https://www.publicintegrity.org/2014/06/04/14840/why-medicare-advantage-costs-taxpayers-billions-more-it-should>.

⁹⁸ Medicaid.gov, “State Waivers List,” accessed November 24, 2017, <https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/index.html>; The ACA has provision for state initiatives, Ron Wyden, “State Waivers: How a State Could Do Health Reform Its Own Way” (Washington, D. C.: Office of Senator Ron Wyden, United States Senate, n.d.), <http://www.wyden.senate.gov/download/?id=6073398f-c82c-42f4-8da5-e004a867e01a&download=1>; John E. McDonough, “Wyden’s Waiver: State Innovation on Steroids,” *Journal of Health Politics, Policy and Law*, May 19, 2014, 2744824, <https://doi.org/10.1215/03616878-2744824>.

programs will increase federal spending in the state, they are accepted practices under the Medicaid law, where states set reimbursement rates and are free to manage enrollment.

- *Other health care spending.* In addition to the IHS, this catch-all category includes TRICARE/Defense Health Agency, the NIH and NSF research, local government spending on public health programs (including school health programs), charitable giving, and others. The various public insurance programs could continue to operate on their own or they could offer better benefits and a higher actuarial rate to their enrollees through the state plan. It is assumed that the research and other spending will continue.
- *Remaining out-of-pocket spending.* While the Ohio plan would cover most medical services, it would not cover over-the-counter medications such as aspirin, non-durable medical devices (facial tissues, band aids, etc.), or optional medical devices and services (cosmetic surgery, designer eyewear, etc.). With an estimated actuarial value of 98%, the state plan would provide more coverage than an ACA platinum plan (actuarial value 90%), and much more coverage than the Federal Employee Health Benefits (average about 82%) or traditional Medicare (80%).⁹⁹

⁹⁹ Frank McArdle et al., “How Does the Benefit Value of Medicare Compare to the Benefit Value of Typical Large Employer Plans? A 2012 Update,” *Kaiser Family Foundation: Medicare Policy* (blog), April 2012, <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/7768-02.pdf>.

Options for additional revenues

After taking account of savings, spending on program improvements, and remaining revenue sources, the Ohio single payer program needs nearly \$40 billion in additional funds. There are many ways to raise these funds. Two programs are summarized in Table 5, one more progressive and the other less so. Each is summarized along with projected income streams for 2019:

Table 5. Funding options, Ohio single payer program, 2019, in \$millions¹⁰⁰

	Less Progressive Program	More Progressive Program
11% charge on salaries and wages with \$15,000 exemption, sliding scale at 33% and small business deduction	\$ 23,587,562	
11% business or professional net income with \$15,000 exemption, sliding scale at 33%	\$ 969,621	
11% capital income (for AGI>\$50,000)	\$ 3,114,944	
10% charge on salaries and wages with income sliding scale at 33% and small employer deduction		\$ 21,443,238
10% business or professional net income with sliding scale		\$ 881,474
10% capital income (for AGI>\$50,000)		\$ 2,831,767
Income tax at 3% above \$15,000 with sliding scale		\$ 10,156,563
Double Gross Receipts Tax (CAT)	\$ 2,091,041	
High income surtax of 5%		\$ 3,961,550
Excise taxes on alcohol, marijuana, tobacco	\$ 2,843,698	
Premiums at Medicare rate with low income and children deduction	\$ 7,494,399	
Capture insurance health costs	\$ 2,876,366	\$ 2,876,366
Total revenue:	\$ 42,977,630	\$ 42,150,958
Needed revenue:	\$ 39,614,381	\$ 39,614,381
Surplus (deficit)	\$ 3,363,249	\$ 2,536,577

The above proposed funding sources described more fully:

- Both the 10% or 11% payroll premiums and premiums on business net income are less than employers and their employees *now pay* for health insurance: barely half the almost

¹⁰⁰ While these are presented as to alternative programs, different taxes could be used from each.

22% now paid for covered workers.¹⁰¹ The exemption shields low-wage workers from payment and limits the payment by small employers. The exemption phases out at a rate of \$0.33 for every dollar, so that it disappears completely at \$45,000 in wage/salary income. Small businesses will also be shielded from the full impact. Businesses with fewer than 10 workers would initially pay at half the rate, and those with 10 to 24 workers would pay at 75% of the full rate.

- The 10% or 11% premium on capital income (including business net income) balances the assessment of wage/salary income, so that all categories of income are treated equally. The basic exemption of \$15,000 with a sliding scale is to exempt capital income for low and middle-income households.
- The 3% income tax and 5% surtax on high incomes recognizes that those with the greatest ability to pay can afford to contribute more. These taxes would somewhat recapture some of the savings from the recently enacted federal tax cuts.¹⁰²
- Ohio already has a gross receipts tax which produced nearly \$2 billion in revenue in 2015.¹⁰³ This is an inherently inequitable tax because it taxes products according to the number of stages they go through, so that products more intermediary steps, sold between more companies, pay higher rates. Furthermore, the burden of the tax grade up on households that spend more of their income on Ohio consumables, meaning so that low- and middle-income households pay a higher rate.¹⁰⁴
- Taxes on alcohol, marijuana, and tobacco could be raised, with public health benefits as well as revenue. I have estimated the additional revenue from raising tobacco and alcohol taxes to the highest rates of any state. I have estimated marijuana revenues assuming Ohio would produce as much revenue per capita as Colorado in 2018.¹⁰⁵
- Premiums collected would be conceptually like current health care premiums, although lower than any private insurance. They would also be apportioned to protect lower income households and households with children. They would be paid by all adults in the labor force with an income above twice the poverty level. For those above 300% of the Federal Poverty Line, the premium is set to the rate for basic Medicare Part B

¹⁰¹ This is from the MEPS survey for Ohio; Agency for Healthcare Research and Quality, "Medical Expenditure Panel Survey," 2017, http://www.meps.ahrq.gov/mepsweb/data_stats/state_tables.jsp?regionid=18&year=-1.

¹⁰² The effects of the tax-cut on income in Ohio are given in: <https://itep.org/finalgop-trumpbill/>. The highest income will be saving nearly \$50,000 in 2019; the average savings for the bottom 20% of households come to about \$100.

¹⁰³ https://www.tax.ohio.gov/Portals/0/communications/publications/annual_reports/2015_Annual_Report/2015_AR.pdf

¹⁰⁴ the share of income taxed is estimated using consumer expenditure survey data from the Bureau of Labor Statistics and the Census Department <https://www.bls.gov/cex/tables.htm>

¹⁰⁵ Cigarette tax rates are from <https://taxfoundation.org/cigarette-tax-cigarette-smuggling-2015/> Alcohol tax rates are also from the tax foundation, see <https://taxfoundation.org/state-beer-taxes-2018/> Alcohol beverage consumption is from <https://pubs.niaaa.nih.gov/publications/surveillance108/CONS15.pdf> Colorado data on marijuana revenue off from the Colorado Department of Revenue at <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data>

(\$134/month). For those between 200% and 233% of the premiums would be FPL, the premium is 25% of the Medicare Part B level; for those 233-267% of the FPL, the premium is 50%; for those 267-300%, it is 75%.¹⁰⁶

- Currently, healthcare costs seep into other insurance programs, and these would enjoy savings from the Ohio program. An excise tax would be assessed on auto insurance, homeowner's insurance, and workers comprehensive insurance to capture these savings.¹⁰⁷

Both programs would generate additional revenues of over \$42 billion, more than is needed to fund the Ohio State universal coverage program.¹⁰⁸

Distributional effects of single payer

Whatever the tax program chosen, more than 95% of the population of Ohio will save money even while enjoying better access to health care under the single-payer program. For most residents, savings come from two sources: the efficiency gains from the single-payer program and from shifting the basis of funding from fixed premiums per covered individual and cost-sharing to a system where charges are related to ability to pay (see Figures 16 and 17). Most will save thousands of dollars a year, compared to what they and their employer currently spend on health insurance premiums and out-of-pocket costs. The largest savings will go to working families and to middle-income households, especially those with children, because the burden of family health insurance coverage and cost sharing is particularly heavy on them.¹⁰⁹ Businesses will also benefit, with the greatest savings going to those that have been paying the highest health insurance premiums. These include small and mid-sized private establishments that offer health insurance at relatively high cost. Taxpayers will also benefit because local governments

¹⁰⁶ Revenue estimates are made assuming that the distribution is flat for those between 200-300% of the FPL so the average premium for those is 50% of the full premium.

¹⁰⁷ Workers comp data, including the share of health care, are from the Social Security Administration at

<http://www.ssa.gov/policy/docs/ssb/v67n1/v67n1p17.html>

The number of insured cause is from the Bureau of motor vehicles at http://www.bmv.ohio.gov/links/bmv_2017-Facts-Figures.pdf

Average insurance rates and the share of health care are from <https://www.valuepenguin.com/average-cost-of-insurance#nogo> and <https://www.nerdwallet.com/blog/insurance/medical-payments/>

Homeowners insurance data are from <https://www.valuepenguin.com/average-cost-of-homeowners-insurance#nogo>

The number of homes is from the Census at <https://www.census.gov/quickfacts/fact/table/oh/PST04521>

¹⁰⁸ Revenue estimates are made using 2015 IRS data; I adjusted these to 2019 by assuming all income sources would rise at projected GDP growth rates; Internal Revenue Service, Internal Revenue Service, "SOI Tax Stats Historic Table 2," accessed November 24, 2017, <https://www.irs.gov/statistics/soi-tax-stats-historic-table-2>.

¹⁰⁹ The program's benefits are targeted at the working middle class. Lower income families have received larger public subsidies through Medicaid, SCHIP, and the ACA. Higher income families can support their health expenses more easily.

and the state will save money from reduced health insurance premiums for public employees.¹¹⁰ Family members will, of course, receive coverage, like all Ohioans. However, the cost will be spread across all payroll and non-payroll income, not concentrated on certain employers.

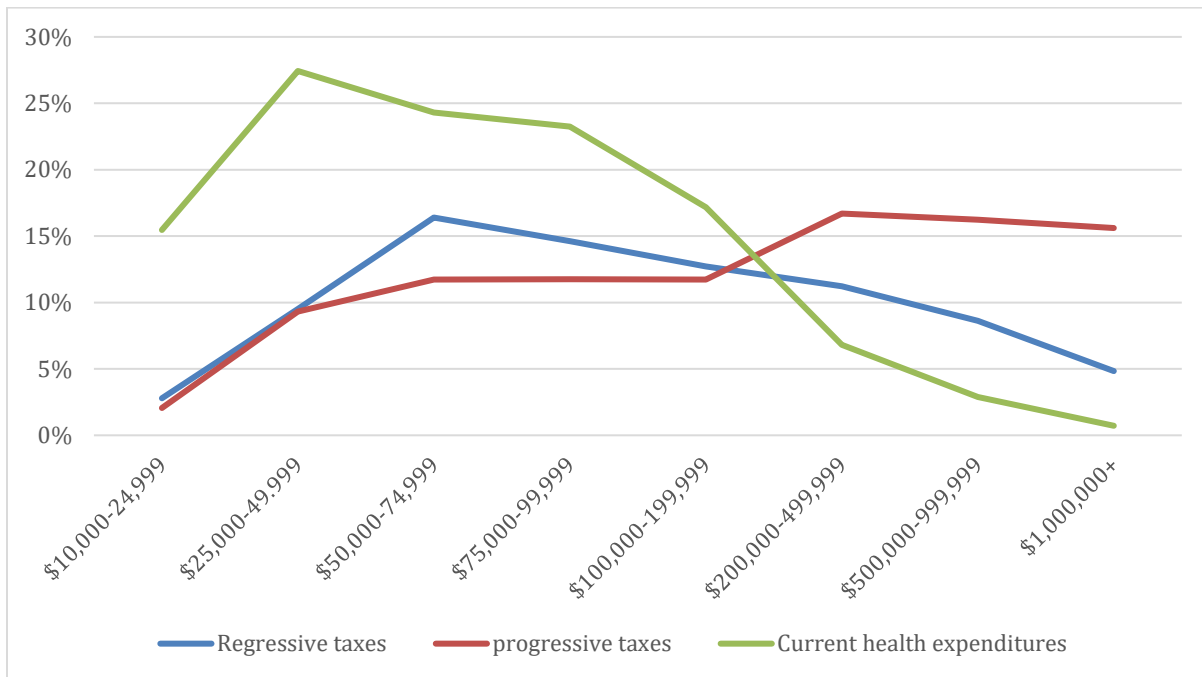


Figure 15. Current health expenditure and burden of alternative tax programs.

Current health expenditures are a heavy burden on working people in Ohio. While the poorest receive some protection through programs like Medicaid, ACA subsidies, premiums and out-of-pocket costs come to over 20% of income for most people (see Figure 15). The burden falls with hiring, because insurance premiums and out-of-pocket costs do not change much while incomes rise. The most affluent may purchase some luxury health insurance, such as cosmetic surgeries or more desirable hospital rooms, but there is relatively little change in per capita spending on healthcare as incomes rise. For this reason, taxes of 10 to 15% are significantly less than what most are currently spending (see Figure 16). With progressive tax rates, this savings for working people are even greater.

For the very rich, the wealthiest 3% of all Ohioans whose taxable income exceeds \$200,000, taxes will exceed what they currently spend on health care, especially with the progressive tax program. To be sure, some of these extra costs will be balanced by savings from recently enacted federal tax cuts.¹¹¹

¹¹⁰ Public plans are expensive because there is a high take-up rate and because public employees are more likely to enroll their family members. These plans provide a significant subsidy to private employers because they enroll family members of public employees who then do not take up private employers' insurance plans.

¹¹¹ These tax cuts disproportionately favor the rich. The distribution of benefits is estimated in <https://itep.org/finalgop-trumpbill-oh/>

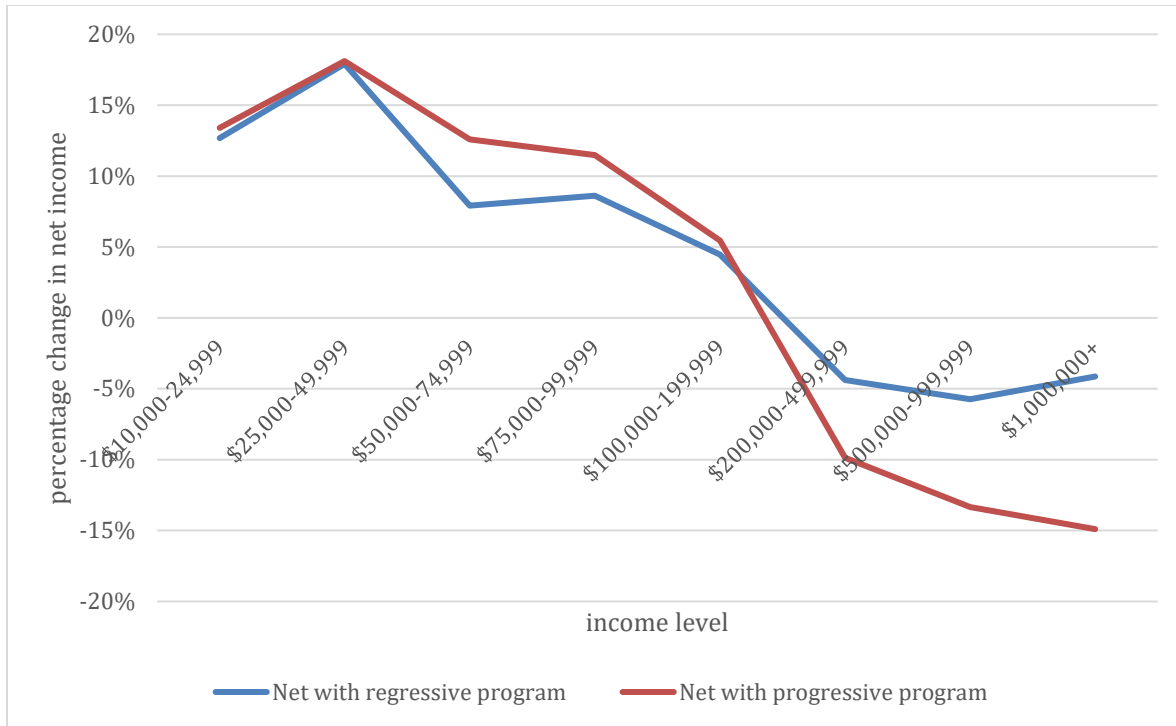


Figure 16. Effect of Ohio single-payer on net income after taxes and healthcare spending

Lives saved

Greater than the dollars saved by paying less for health care are the benefits to those who have been denied access to health care because of lack of insurance or inability to pay their cost sharing (deductibles, copayments, and out-of-network charges). This includes the nearly 600,000 still without health insurance under the ACA *and the* 1,395,000 unable to see a doctor because of cost.¹¹² Based on the analysis reported in Figure 10, by lowering the share unable to see a doctor to 4%, (the rate in the United Kingdom with its universal health insurance system), we would lower the premature mortality rate by as much as 23%. This would save as many as 32,000 lives. Poor and rural areas would benefit the most, because these are the locales with the largest number unable to see doctors because of cost (see Figure 11). The United States government assesses a human life as worth about \$10,000,000.¹¹³ The economic benefit from

¹¹² There is, of course, overlap between these; about 2/3 of those without health insurance reported that they could not see a doctor because of cost, or about 400,000 people, so that leaves about 995,000 people with health insurance who could not afford to see a doctor because of the cost of copays or deductibles; see Robert Wood Johnson and University of Wisconsin, Population Health Institute, "County Health Rankings."

¹¹³ The EPA recommends a valuation of \$7.4 million in \$2006; updating this brings the estimate to almost \$10 million in 2016, and more than that for 2019. Environmental Protection Agency, "Mortality Risk Valuation," Overviews and Factsheets, accessed April 25, 2017, <https://www.epa.gov/environmental-economics/mortality-risk-valuation>.

saving 32,000 lives could be roughly estimated at \$322 billion, a figure greater than total health care spending in the state.

Single payer and the Ohio economy

The analysis thus far understates the economic gains from the Ohio Health Plan, because it uses a static model that neglects likely changes in economic parameters. These parameters might include changes in the locus of investment, employment, and entrepreneurial activity generated by adopting a reform that would dramatically lower the burden of health care costs. The plan would increase employment and income by reducing inefficient waste, putting money back into the economy and making businesses more competitive by helping small businesses in particular. It will also lower the cost of government, allowing lower taxes and increased investment in infrastructure and education.

Table 6. Health insurance costs, 2019, for different size establishments. Current system and proposed Ohio Health Plan

Size of establishment	Insurance share of payroll, 2019 current system,	Insurance share of payroll, 2019, covered workers only, current system	Effective payroll tax rate, proposed Ohio Health Plan
Less than 10 employees	7.8%	38.22%	3.60%
10-24 employees	11.6%	28.78%	6.24%
25-99 employees	11.2%	27.82%	8.43%
100-999 employees	11.6%	21.40%	8.92%
1000 or more employees	13.6%	22.39%	8.94%
All:	12.8%	24.96%	8.72%

Note: insurance spending 2019 is estimated based on spending in 2016 with wages updated and insurance costs updated through 2019 based on past trends. The effective payroll rate assumes an 11% payroll tax with a 50% exemption for small employees and 25% exemption for establishments with 10 to 24 employees. Rates are adjusted for the estimated wage distribution for full time and part time workers.

Opening the door to entrepreneurship

The current system of employer-provided health insurance was established by employers looking to reduce competition for their workers and to discourage workers from quitting or changing jobs.¹¹⁴ Many workers in Ohio currently suffer from job-lock, and are unable to change jobs or

¹¹⁴ Richard B Freeman, "The Exit-Voice Tradeoff in the Labor Market: Unionism, Job Tenure, Quits, and Separations," *The Quarterly Journal of Economics* 94, no. 4 (1980): 643–73; Klein, *For All These Rights*; Jennifer Klein, "The Business of Health Security: Employee Health Benefits, Commercial Insurers, and the Reconstruction of Welfare Capitalism, 1945-1960," *International Labor and Working-Class History*, no. 58 (2000): 293–313; Sanford M. Jacoby, *Modern Manors: Welfare Capitalism since the New Deal* (Princeton, NJ: Princeton University Press, 1997); Nelson Lichtenstein, *State of the Union: A Century of American Labor*, Politics and Society in Twentieth-Century America (Princeton, N.J.: Princeton University Press, 2002); many businesses no longer value the worker loyalty purchased with health insurance and other benefits; Rick Wartzman, *The End of Loyalty: The Rise and Fall of Good Jobs in America*, First edition (New York: PublicAffairs, 2017); Gerald Friedman, "Workers without Employers: Shadow Corporations and the Rise of the Gig Economy," *Review of Keynesian Economics* 2, no. 2 (April 2014): 171–88, <https://doi.org/10.4337/roke.2014.02.03>; Gerald F. Davis, *The Vanishing American Corporation: Navigating the Hazards of a New Economy*, First edition (Oakland, California: Berrett-Koehler Publishers, Inc, 2016).

to open new businesses from fear of losing their current health insurance.¹¹⁵ Employers too are discouraged from hiring some workers -- older workers or those with families -- from fear that they will add to their health insurance bills. Single payer would make the economy work more efficiently and liberate entrepreneurial energies. It would free workers to seek more efficient employment or to open new businesses, and it will liberate employers to choose the best worker for the job.¹¹⁶

Small businesses especially would benefit, because new and small businesses pay particularly high health insurance rates. Under the current system, a typical Ohio start-up that employs a dozen workers could pay health insurance premiums of nearly 30% of its payroll if all workers took up the insurance offered.¹¹⁷ Ohio's single payer plan would lower that burden to less than 7% in payroll assessments.¹¹⁸

Reducing medical bankruptcies

Ohio's single payer plan would also improve the working of the economy for everyone by reducing the risk of medical bankruptcy. This is especially important to the elderly, who are increasingly in risk of bankruptcy because of rising out-of-pocket healthcare spending.

When combined with increased cost-sharing, rising health care prices have been associated with increased medical debt and personal bankruptcy over the last decades.¹¹⁹ From 2011 to 2016, an average of over 20,000 personal bankruptcies per year were filed in Ohio.¹²⁰ For the United States as a whole, it is estimated that between 7% and 29% of bankruptcies are directly due to medical bills, and in 35% of bankruptcies, medical bills come to over \$5000 or over 10% of family income.¹²¹ Applying these estimates to Ohio, this would suggest that a minimum of 2,450

¹¹⁵ The Affordable Care Act helps by providing for improved access to individual health insurance through the exchange system.

¹¹⁶ David Sterret, Ashley Bender, and David Palmer, "A Business Case for Universal Healthcare: Improving Economic Growth and Reducing Unemployment by Providing Access for All," *Health Law and Policy Brief* 8, no. 2 (Spring 2014): 41–56.

¹¹⁷ Estimated from data in Agency for Healthcare Research and Quality, "Medical Expenditure Panel Survey."

¹¹⁸ Note that this is lower than the 8.5% rate because of the exemptions. This is estimated using the average wage data and premium data from the BLS at http://www.bls.gov/oes/current/oes_ny.htm#00-0000 and the Medical Expenditure Survey from the Agency for Healthcare Research and Quality at <http://meps.ahrq.gov/mepsweb/>. Because this estimate uses the average health insurance premiums for this size of establishment, it underestimates the cost of insurance for new small business, and also underestimates the savings from single payer.

¹¹⁹ David U. Himmelstein et al., "Medical Bankruptcy in the United States, 2007: Results of a National Study," *The American Journal of Medicine* 122, no. 8 (August 1, 2009): 741–46, <https://doi.org/10.1016/j.amjmed.2009.04.012> note that most of the bankruptcies were for people with health insurance but for whom cost sharing (deductibles and copays) posed too great a burden.

¹²⁰ American Bankruptcy Institute, "Bankruptcy Statistics | ABI," December 2017, <https://www.abi.org/newsroom/bankruptcy-statistics>.

¹²¹ Himmelstein et al., "Medical Bankruptcy in the United States, 2007"; the Himmelstein et al. study is supported by Christina LaMontagne, "NerdWallet Health Finds Medical Bankruptcy Accounts for Majority of Personal Bankruptcies - NerdWallet," *NerdWallet Credit Card Blog* (blog), June 19, 2013, <http://www.nerdwallet.com/blog/health/managing-medical-bills/nerdwallet-health-study-estimates-56-million->

bankruptcies, and as many as 14,209 or 17,002 bankruptcies per year are due to medical bills. With over five million households, this means an annual medical bankruptcy rate of between 0.05% and 0.29% up to 0.35%. Over a 40 year span, this would mean between 2 and 11-13% of Ohio adult household heads will go bankrupt because of medical bills.¹²²

The bankruptcy rate has been rising for all Americans over the last decades. The sharpest increases are for the elderly, with 60% of bankruptcies citing health care costs as the cause of bankruptcy.¹²³ Rising bankruptcy among the elderly is associated with high out-of-pocket spending, nearly twice as much for people over 65 as for the younger population.¹²⁴ Add to out-of-pocket spending the cost of supplemental health insurance, and the elderly spend on average over \$4000 on health care, leaving on average only two thirds of Social Security income for other expenses.¹²⁵ Health care costs an even larger share of income for those over 85, and for those with lower Social Security benefits or entirely dependent on Social Security.

Bankruptcy is a personal tragedy. At a minimum, it is humiliating. It can also reduce the ability to borrow for household investments, such as to buy a car, a house, or to pay tuition. It can make it harder to rent, or even to gain employment. By leaving debts unpaid, personal bankruptcy can also hurt medical providers as well as banks and the broader financial system. The threat of personal bankruptcy hurts everyone when it leads creditors, including medical providers, to raise interest rates and other fees to cover anticipated losses from bankruptcy. To the extent that it thus reduces the availability of credit and liquidity, personal bankruptcy undermines the working of the entire economy, slowing business and lowering income for everyone. By largely

americans-65-struggle-medical-bills-2013/; Himmelstein's work is challenged in Carlos Dobkin et al., "The Economic Consequences of Hospital Admissions," *American Economic Review* 108, no. 2 (February 2018): 308–52, <https://doi.org/10.1257/aer.20161038> who find that only 7% of bankruptcies are directly related to hospital admissions; Also see Carlos Dobkin et al., "Myth and Measurement — The Case of Medical Bankruptcies | NEJM," *New England Journal of Medicine*, accessed July 31, 2018, <https://www.nejm.org/doi/10.1056/NEJMp1716604> While the Himmelstein number is almost certainly too high because medical bills are a more socially acceptable reason to explain bankruptcy, this figure is certainly too low because it does not include bankruptcies that came after other hospital bills, or bankruptcies that come more than six months after the hospital admission.

¹²² As mentioned above, the middle figure is probably about right. While Himmelstein et al. have overstated medical bankruptcies by relying on self reporting, the Dobkin et al. study certainly minimizes the issue by only including bankruptcies relatively soon after hospital admission. And, Himmelstein is supported by the nerd wallet study.

¹²³ "Bankruptcy Statistics," Debt.org, accessed August 6, 2018, <https://www.debt.org/bankruptcy/statistics/>; Jonathan Fisher, "Who Files for Personal Bankruptcy in the United States?" (Washington DC: Center for economic studies, September 2, 2017), <https://www2.census.gov/ces/wp/2017/CES-WP-17-54.pdf>; the 60% figure is from Deborah Thorne et al., "Graying of U.S. Bankruptcy: Fallout from Life in a Risk Society," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, August 5, 2018), <https://papers.ssrn.com/abstract=3226574>.

¹²⁴ Age and gender tables are from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Age-and-Gender.html>

¹²⁵ Melissa McInerney, Matthew Rutledge, and Sara King, "How Much Does Out-of-Pocket Medical Spending Eat Away at Retirement Income?," accessed August 6, 2018, <http://crr.bc.edu/working-papers/how-much-does-out-of-pocket-medical-spending-eat-away-at-retirement-income/>; Thorne et al., "Graying of U.S. Bankruptcy."

eliminating cost sharing, Ohio's single payer plan would lift the cloud of bankruptcy off the Ohio economy, freeing liquidity and promoting economic activity.

Declining payroll costs will encourage hiring

Ohio employers are burdened by high health insurance costs, with family plans costing more than \$17,500 in 2016.¹²⁶ High health insurance costs have forced employers to reduce the value of coverage offered their workers, to lower wages, to lay off workers, and to reduce hiring. By lowering the overall burden of health care spending and shifting the burden from premiums unrelated to ability to pay to graduated assessments, single payer would lower the relative cost of labor to employers, giving employers a competitive advantage against those based in other states.

Replacing current health insurance premiums with the proposed assessments would immediately save businesses nearly \$1.4 billion currently spent on administering employer-provided health insurance, or nearly 0.3% of payroll costs.¹²⁷ In addition, single payer would be significantly less expensive than existing private insurance. After taking account of the exemption, the payroll assessment would cost businesses 7.7%-8.7% of payroll, 4-5 percentage points less than current spending on health insurance premiums for all businesses (12.8%), and as much as 17.2 percentage points less than is paid for covered workers. Lower benefit costs will allow Ohio businesses to lower prices, increase sales, and attract new businesses to the state. Lower benefit costs would also encourage businesses to adopt relatively labor-intensive technologies, employing more workers rather than machinery.¹²⁸ On balance, lowering health care costs by the single payer program could increase employment in Ohio by 5-6% -- adding 260-325,000 new jobs -- many more than the number of workers displaced from billing operations and insurance companies.¹²⁹

Lifting the burden of legacy costs

While businesses and governments in Ohio have committed to provide health insurance to millions of retired workers, they have put aside relatively little to pay for these obligations.

¹²⁶ Coverage costs more than in 40 other states; see Agency for Healthcare Research and Quality, "Medical Expenditure Panel Survey," see Kaiser Family Foundation, "Average Annual Family Premium per Enrolled Employee For Employer-Based Health Insurance," *The Henry J. Kaiser Family Foundation* (blog), August 24, 2017, <https://www.kff.org/other/state-indicator/family-coverage/>.

¹²⁷ In 1999, employer costs of administering health insurance came to 4.2% of private health insurance premiums; I have applied the same ratio here: see Woolhandler, Campbell, and Himmelstein, "Cost of Health Care Administration in the United States and Canada."

¹²⁸ It is also likely that the shift from administrative occupations will increase employment in Ohio (at the expense of jobs in other states) by bringing spending back to Ohio from New Jersey, Connecticut, and other insurance centers. Comparing Bureau of Labor Statistics estimates of insurance employment with the state's population, Connecticut has nearly five-times as high a share of insurance jobs as it does population.

¹²⁹ Employment gains depend on the tax program chosen. Because these employment benefits come from reduced payroll costs, they are greater if a program is chosen with lower payroll tax rates.

Legacy costs, the unpaid benefits associated with past work, burden current economic activity.¹³⁰

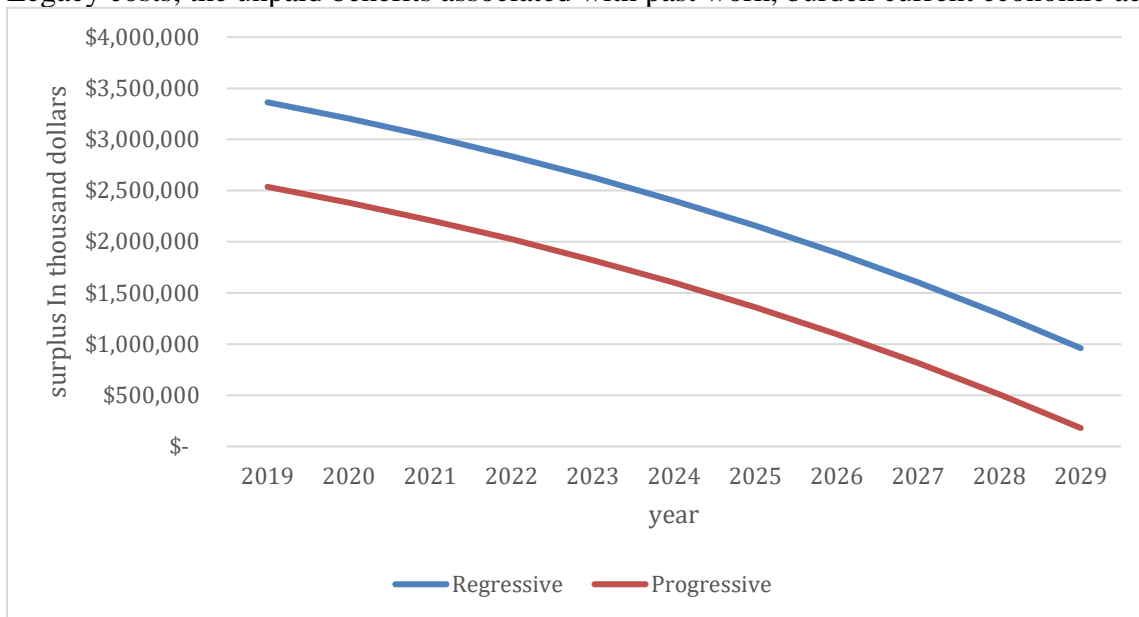


Figure 17. Projected budget surplus under alternative funding programs, 2019 – 2029

The Pew Charitable Trusts estimates, for example, that in 2015 the State of Ohio had unfunded liabilities of over \$9 billion in promised retiree health insurance benefits. This does not include unfunded liabilities for local governments or for businesses.¹³¹ The weight of these unfunded benefits burdens many businesses and is especially heavy on local governments. For retirees, anxiety about whether their employer will honor past commitments weighs heavily. By providing health care to all, including the elderly, single payer will remove this burden from business and from retirees. This will be an extra boon for businesses competing with rivals elsewhere.

Facilitating collective bargaining

The increasing price of private health insurance has become a particularly contentious issue between labor and management, as well as a burden for unionized employers, who are significantly more likely to provide health insurance to their workers.¹³² Health insurance also

¹³⁰ Alicia H Munnell Sass, Steven A, Hutchens, Robert, Manchester, Joyce, “The Labor Supply of Older American Men/Comments on ‘The Labor Supply of Older American Men’ by Alicia H. Munnell and Steven A. Sass/Comments on ‘The Labor Supply of Older American Men’ by Alicia H. Munnell and Steven A. Sass,” *Federal Reserve Bank of Boston. Conference Series*, no. 52 (2007): 83-157,366,368-370; Robert C. Pozen, “Unfunded Retiree Healthcare Benefits Are the Elephant In the Room,” *Brookings* (blog), August 5, 2014, <https://www.brookings.edu/opinions/unfunded-retiree-healthcare-benefits-are-the-elephant-in-the-room/>.

¹³¹ Pew Charitable Trust, “State Retiree Health Care Liabilities: An Update,” September 2017, http://www.pewtrusts.org/~media/assets/2017/09/oheb-liability-brief_v5.pdf.

¹³² Richard B Freeman, *What Do Unions Do?* (New York: Basic Books, 1984); Freeman, “The Exit-Voice Tradeoff in the Labor Market”; Richard B Freeman, *What Workers Want* (Ithaca: ILR Press, 1999); the burden of costs on business in one state is discussed in Diana Rodin and Jack Meyer, “Health Care Costs and Spending in New York State” (NYS Health Foundation, February 2014), <http://nyshealthfoundation.org/uploads/resources/health-care-costs-in-NYS-chart-book.pdf>.

divides the workforce, creating conflict between older workers and those with families, whose members use more health care, and younger, healthier, and single workers. By separating access to health care from employment, single payer would ease this tension in the collective bargaining process. Labor unions would be able to shift their efforts from the increasingly difficult effort to protect health benefits, and concentrate on issues such as wages, pensions, and vacations.

The future of health care in Ohio

Both proposed tax programs would fund the Ohio health plan through 2029 with a substantial, albeit shrinking, surplus (see figure 17). More important, under the Ohio health plan total spending by people in Ohio will fall substantially compared with the status quo. Per capita savings will rise from nearly \$2300 in 2019 up to over \$3400 by 2029, or nearly \$14,000 for family of four.

Ohio is at a crossroads. On one side is a health-care financing system that, despite improvements made under the Affordable Care Act, still provides care at ever rising costs for a shrinking part of the population. On the other is a proven system that would provide more care, at a lower cost, to more people.

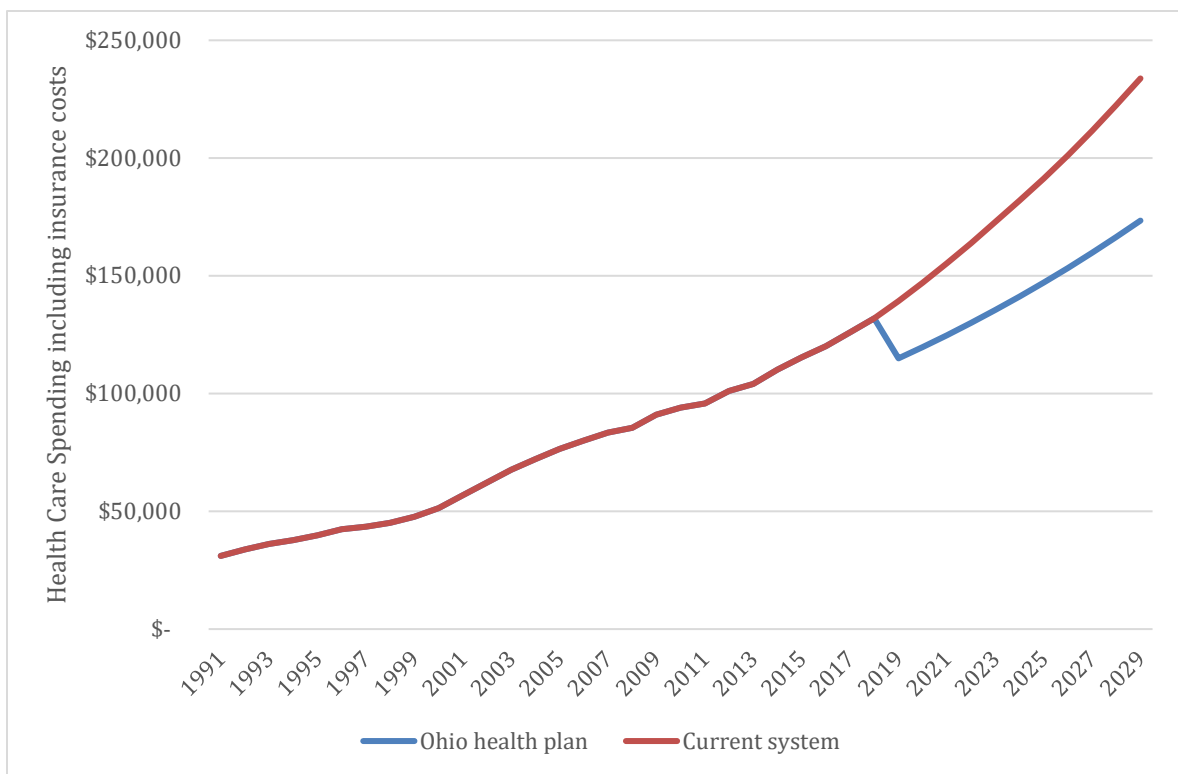


Figure 18. Health care spending under current system and single payer program.
 Note: It is assumed that the single-payer system is adopted for 2019.

Without reform, the cost of health care under the current system is expected to double over the next decade, increasing by nearly \$100 billion, rising from 21% of the state output to 24% (see

Figures 17 and 18).¹³³ This increase will require that 3% of real state income be transferred from other activities -- schools, infrastructure, or vacation spending -- to pay for a bloated health care administration and to fund monopolistic profits in drugs, hospitals, and other medical activities. A single payer program would change this, because it will give the state the tools to limit bureaucracy and to negotiate reasonable prices for health care services. Even while providing care to everyone -- including those currently uninsured and the many more who are underinsured -- single payer would allow Ohio to bring down health care costs and to restrain future health care inflation to about the level of increases in state income, i.e., the state's real ability to pay.¹³⁴ In a word: single payer will save money, it will save lives, and it will make health care sustainable and paid for more equitably.

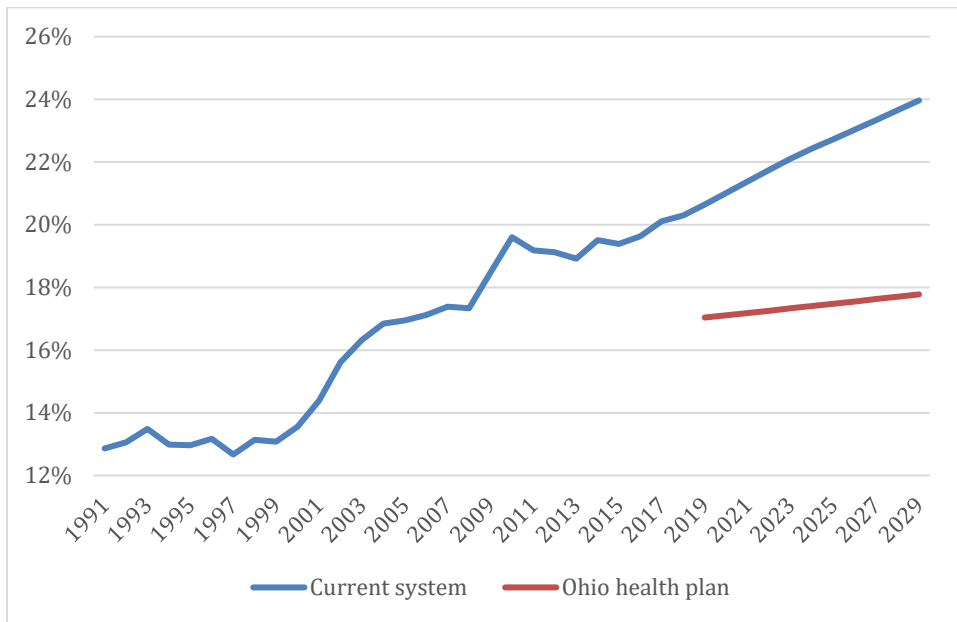


Figure 19. Health care as share of state GDP: Current system and proposed single payer

¹³³ This projection assumes that per-capita health care spending will increase in Ohio as projected for the nation by the Centers for Medicare and Medicaid Services, and the population will grow at the rate forecast by the Census Department.

¹³⁴ Health care inflation under single payer is estimated assuming that price increases will follow the same pattern as in Canada since 1974, increasing at a rate only 0.2 percentage points faster than the all commodity consumer price index, rather than the 1.7 percentage point differential in the United States.

Appendix 1: Estimating Ohio health care expenditures

Annual personal health care expenditures from 1997-2014 are from the Centers for Medicare & Medicaid Services, Office of the Actuary at

<http://www.cms.gov/NationalHealthExpendData/Downloads/res-tables.pdf>

Expenditures beyond 2014 have been projected assuming the same rate of increase in per-capita expenditures as for the nation as a whole from the CMS.¹³⁵ Total health consumption expenditures have then been estimated as the state population times projected per-capita expenditures. Population data are from the United States, Bureau of the Census:

<http://quickfacts.census.gov/qfd/states/36000.html>

Appendix 2: Estimating the sources of Ohio health expenditures

Spending for employer-based insurance in 2014 is from Medical Expenditure Panel Survey of the Agency for Healthcare Research and Quality.

Spending for 2014 for public sector programs (Medicare and Medicaid) is from the Center for Medicare and Medicaid Services.

Spending for 2019 is estimated by adjusting current spending for the increase in spending on these services as projected by the Center for Medicare and Medicaid Services.

Spending on individual insurance is estimated as the sum of the number of individual plans plus the number buying through the ACA exchange, and ACA subsidies are from the Kaiser Family Foundation, State Health Facts.

Other and out-of-pocket spending are calculated as a residual: total expenditures minus private health insurance and public spending. The allocation of spending between the two is estimated using national data from the CMS, “National Health Expenditures by Type of Service and Source of Funds.”

Appendix 3: Estimating savings from the Ohio health plan

Savings have been calculated for 2019 in three steps.

First, expenditures for nine types of personal health care services have been calculated for 2019 from CMS data through 2014 on the assumption that expenditures for that service will increase from 2014-19 at the same annual rate of increase per capita as the CMS projects for the nation as a whole.

¹³⁵ Andrea M. Sisko et al., “National Health Spending Projections: The Estimated Impact Of Reform Through 2019,” *Health Affairs* 29, no. 10 (October 1, 2010): 1933–41, <https://doi.org/10.1377/hlthaff.2010.0788>.

Table 7. Estimated 2019 personal health care expenditures (\$millions)

	Per capita 2001	Per capita 2014	Per capita spending, 2019	Total spending 2019
Personal health expenditures, NHE	4171	7913	9,873	72,766
Hospital	1354	3090	3,856	28,415
Physician	1134	2064	2,575	18,980
Other Professional	179	324	404	2,979
Dental	359	498	621	4,579
Home Health	69	188	235	1,729
Drugs	529	795	992	7,311
Durable Medical	91	146	182	1,343
Nursing Home	262	462	576	4,248
Other	193	346	432	3,182

Second, provider savings for each category have been estimated by applying a savings rate to each activity.

Table 8. Estimates of savings by activity, personal health spending, 2019 (millions)

	Savings rate
Hospital	9.1%
Physician	11.7%
Other Professional	10.6%
Dental	8.3%
Home Health	3.1%
Drugs	37.5%
Durable Medical	10.0%
Nursing Home	1.6%
Other	16.1%

The administrative savings rate is the difference between administrative costs in Canada and the United States. The Canadian rate is estimated by Woolhandler, Campbell, and Himmelstein.¹³⁶ For hospitals, I use the updated data from Himmelstein et al.¹³⁷ The United States rate is the share of salaries for administrative positions in the 2012 Bureau of Labor Statistics, Occupational Employment Statistics.¹³⁸

It is assumed that the Ohio Plan board will use its bargaining power to lower prices. A savings of 37.5% is assumed for pharmaceuticals and medical devices.¹³⁹

Savings for each activity are calculated as the savings rate times the 2019 expenditures, except for uncovered services.

Administrative spending by insurance companies under the ACA is the difference between the personal health expenditures and the health consumption expenditures in the CMS National Health Expenditures. It is assumed that the sponsor administrative rate will be 1.8% of spending, the current rate under Medicare fee-for-service.

Total savings are the sum of the provider savings and administrative savings.

Appendix 4: Estimating the cost of program improvements

Three program improvements are necessarily associated with universal state coverage. The increase in the Medicaid reimbursement rate is described in the text above.

Universal coverage

Currently, the uninsured spend about 55% of the average per-capita health care spending.¹⁴⁰ Because they are younger and healthier than the general population, it is assumed that their spending will rise to 85% when covered.¹⁴¹ The increase in spending with universal coverage is estimated by multiplying the increase in spending (30%) by the uninsured by their share of the population. This proportion is applied to every category of personal spending *except* uncovered services, such as nursing home and long-term care.¹⁴²

Change in utilization

Eliminating deductibles and copayments will allow the sick to utilize the health care system more. The increase in utilization is estimated as the share of the population who reports it did

¹³⁶ Woolhandler, Campbell, and Himmelstein, "Cost of Health Care Administration in the United States and Canada."

¹³⁷ Himmelstein et al., "A Comparison Of Hospital Administrative Costs In Eight Nations."

¹³⁸ "Occupational Employment Statistics Home Page."

¹³⁹ McKinsey Global Institute, "Accounting for the Cost of Health Care in the United States."

¹⁴⁰ Hadley and Holahan, "The Cost of Care for the Uninsured: What Do We Spend, Who Pays, and What Would Full Coverage Add to Medical Spending."

¹⁴¹ Hadley and Holahan; Rachel Garfield, Rachel Licata, and Katherine Young, "The Uninsured at the Starting Line: Findings from the 2013 Kaiser Survey of Low Income Americans and the ACA," 47 Million (Kaiser Family Foundation, February 2014), <http://kaiserfamilyfoundation.files.wordpress.com/2014/02/8552-the-uninsured-at-the-starting-line6.pdf>.

¹⁴² Note that the same procedure was used to estimate the increase in spending due to the ACA increase in coverage.

not see a physician because of cost, times .15.¹⁴³ This ratio is applied to every category of personal spending.

¹⁴³ Brot-Goldberg et al., "What Does a Deductible Do?"; Robert Wood Johnson and University of Wisconsin, Population Health Institute, "County Health Rankings."

Appendix 5: Revenue sources for Ohio Health Care Plan and the net burden of the plan

Adjusted Gross Income by source is from the Internal Revenue Service, Statistics of Income (SOI), 2014. Spending for health insurance is from the Agency for Health Care Research and Quality, Medical Expenditure Survey.

Personal income for 2019 has been estimated as the 2014 rate times the Congressional Budget Office projection of the change in income over that period.¹⁴⁴ It is assumed that income increases for all groups at the same rate.¹⁴⁵

Revenues are estimated as the assessment rate for each bracket of income, multiplied by the income for each group.

¹⁴⁴ Congressional Budget Office, “Budget and Economic Outlook: 2014 to 2024” (Washington, D. C.: Congressional Budget Office, February 2014), https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/45010-Outlook2014_Feb_0.pdf.

¹⁴⁵ Because this understates income for higher groups with higher tax rates, this assumption understates revenue from the tax program.

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