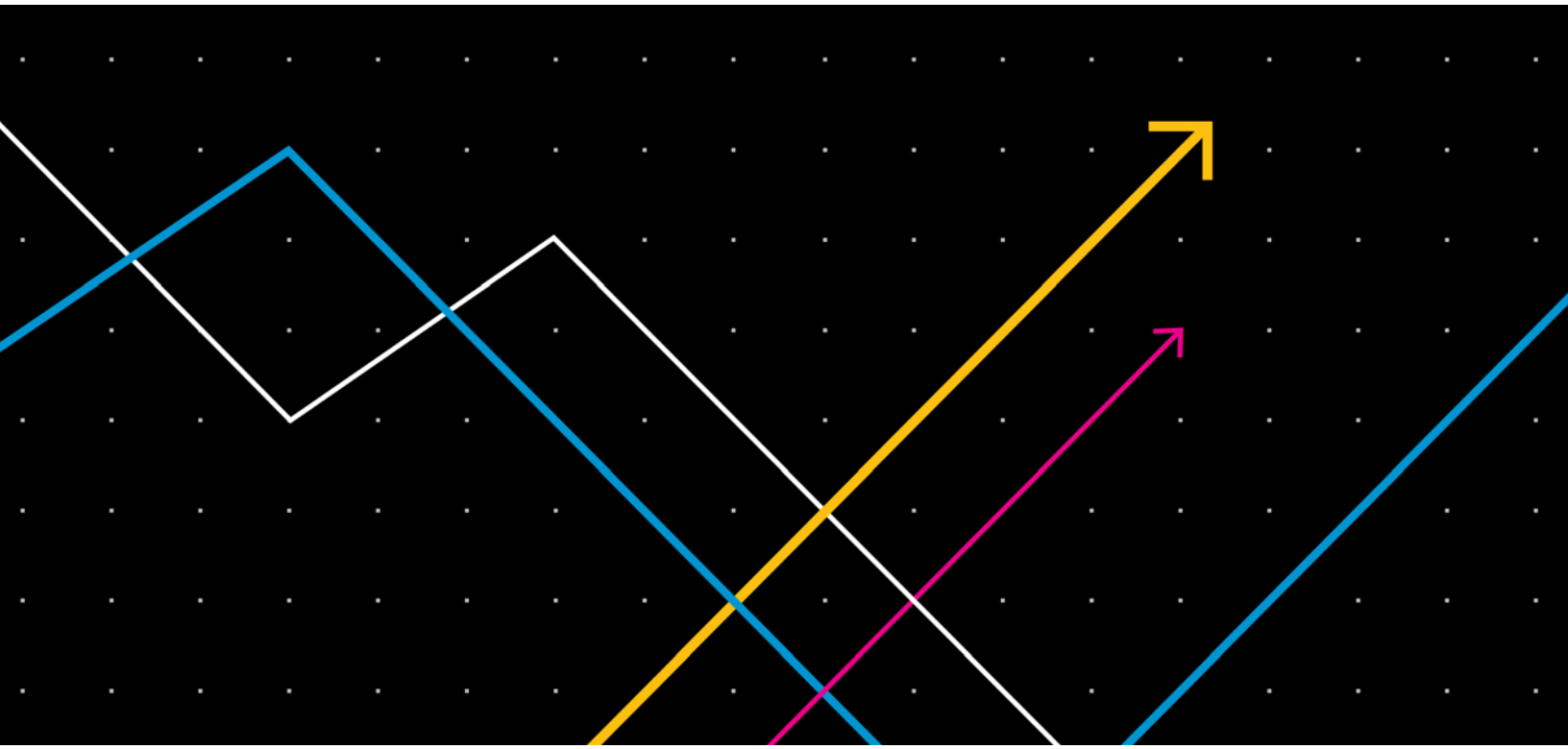

RESEARCH REPORT

The Direct Impact of Medicare Spending on Employment and Tax Revenue

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The Direct Impact of Medicare Spending on Employment and Tax Revenue

Medicare, the nation's second largest social program after Social Security, provides critical health insurance coverage to older adults and people with disabilities. In 2019, it paid benefits worth $796 billion to 61 million beneficiaries (Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds 2020). These payments total about 4 percent of the nation's gross domestic product (Congressional Budget Office 2019) and account for about one-fifth of all health care expenditures.[1] Medicare benefits primarily cover hospital inpatient services, physician services, outpatient prescription drugs, and hospital outpatient services, but they also cover skilled nursing facilities, home health care, and other services (Kaiser Family Foundation 2019).

In addition to financing crucial health care services for millions of Americans, Medicare provides important benefits to the broader economy. The funds disbursed by the program support the employment of millions of workers in the health care sector. Moreover, the earnings paid to those workers generate millions of dollars of payroll taxes and federal and state income taxes. The corporate profits created by Medicare spending also generate corporate income tax revenue for federal and state governments. These economic contributions benefit communities across the country.

In this report we estimate the direct impact of Medicare spending on employment and tax revenue at the national and state levels. Relying primarily on personal health care expenditure data from the Centers for Medicare and Medicaid Services (CMS) and employment data from the Bureau of Labor Statistics (BLS), the analysis computes impacts in the following nine health care sectors: hospitals; physician and clinical offices; other professional services; prescription drugs and other nondurable medical expenditures, including nonprescription drugs, medical sundries such as surgical dressings, and diagnostic products such as needles and thermometers; home health care; nursing and residential care facilities; other health, residential, and personal care; durable medical equipment; and dental services. In addition to directly affecting employment and tax revenue, Medicare generates indirect economic effects as program spending ripples through the economy. For example, as workers with Medicare-financed jobs spend their earnings, they create jobs for other workers. Our analysis, however, does not cover these indirect effects.

The estimated employment impact of Medicare spending is based on the assumption that the share of health care employment financed by Medicare equals the share of total personal health care expenditures paid by Medicare. To estimate the number of health care jobs financed directly by Medicare, we multiplied the share of health care spending paid by Medicare by the number of health care workers employed in each health care sector. Our calculations used the average share of spending paid by Medicare between 2014 and 2018 because the 2019 share was not available when we completed our analysis and estimated annual shares vary from year to year. We adjusted estimated state employment effects to account for state-level differences in average wages, because a given level of Medicare spending generates more jobs in low-wage states than in high-wage states. The analysis covers all workers employed in the health care industry, plus workers employed by retail outlets selling prescription drugs and by the manufacturers of prescription drugs, medical equipment, and supplies, including both full-time and part-time employees.

Our estimated tax impact includes revenue from federal and state individual and corporate income taxes and Social Security and Medicare payroll taxes. We simulated individual income tax and payroll tax revenue generated by Medicare spending by multiplying the average annual income and payroll tax payments made by workers in each health care sector by the number of jobs in each sector financed by Medicare. Our estimates of average income tax payments came from applying 2019 federal and state income tax rules to the annual wage and salary income received by a sample of personal health care workers from the American Community Survey (ACS), a large household survey conducted each year by the US Census Bureau.[2] We estimated average payroll tax revenue by applying the statutory Medicare tax rate (2.9 percent, split between employees and their employers) and the statutory Social Security tax rate (12.4 percent, split between employees and employers) to the earnings received by our ACS sample of health care workers. In 2019, Social Security payroll taxes were paid only on earnings up to $132,900, a cap that increases with the growth in the average national wage.[3] We computed corporate income tax revenue by applying estimated pretax net operating margins—that is, profits (revenues minus expenses) relative to revenues—to Medicare expenditures and multiplying these estimated profits by federal and state corporate income tax rates. The appendix provides more information on our methods.

Our results indicate that Medicare directly financed 3.7 million jobs in the health care sector in 2019, accounting for 22 percent of all health care sector employment. The program also generated $71.0 billion in federal tax revenues, including $29.3 billion in Social Security and Medicare payroll taxes, and another $10.4 billion in state tax revenue.

Medicare's Direct Employment Impact

Between 2014 and 2018, Medicare accounted for an estimated 22 percent of total US personal health care spending (table 1). The program played a larger role in certain health care sectors, such as home health care, in which it accounted for 40 percent of all expenditures, prescription drugs and other nondurables (26 percent of expenditures), and hospitals (25 percent of expenditures).[4] Medicare accounted for only a small share of spending in other health care sectors, such as dental services (1 percent) and health and residential services other than nursing and residential care facilities (3 percent), because Medicare's benefit package largely excludes these services.

TABLE 1

Direct Impact of Medicare Expenditures on Employment

By health care sector

	Average annual spending, personal health care, 2014–2018 (billions of dollars)		Percentage of spending financed by Medicare, 2014–2018	Total number of health care jobs, 2019 (thousands)	Estimated number of health care jobs financed by Medicare, 2019 (thousands)
Sector	**Total**	**Medicare**			
Hospitals	1,147	289	25	5,199	1,308
Physician and clinical offices	700	160	23	3,918	898
Other professional services	98	24	25	829	205
Prescription drugs and other nondurable medical expenditures	402	104	26	1,002	259
Home health care	98	39	40	1,527	607
Nursing and residential care facilities	171	39	23	1,598	367
Other health, residential, and personal care	182	5	3	2,095	61
Durable medical equipment	54	9	16	140	22
Dental services	131	1	1	969	5
Total, personal health care	2,984	670	22	17,277	3,732

Source: Authors' calculations, based on data from CMS and BLS.

Note: The number of health care jobs financed by Medicare is computed by multiplying the share of total health care spending financed by Medicare between 2014 and 2018 by the total number of health care jobs in 2019. Dollar amounts are reported in 2019 inflation-adjusted dollars. Personal health care expenditures exclude health care spending on administration, research, public health, and structures. See the appendix for details on our methods.

We estimate that Medicare directly financed 3.7 million personal health care jobs in 2019, 22 percent of the 17.3 million US adults working in personal health care. These jobs, which include both full-time and part-time positions, represent about 2 percent of the 150.9 million jobs in the US

economy.[5] Of these Medicare-financed jobs, 1.3 million, or 35 percent of all Medicare-financed jobs, were in hospitals. Another 898,000 (24 percent) were in physician and clinical offices, 607,000 (16 percent) were in home health care, and 367,000 (10 percent) were in nursing and residential care facilities. Other health care sectors (which include other health, residential, and personal care; other professional services; prescription drugs and other nondurable medical expenditures; durable medical equipment; and dental services) accounted for the remaining 552,000 (15 percent) Medicare-financed jobs.

Medicare expenditures vary widely across states, largely because of differences in the size and composition of their populations. In California, the largest state, Medicare spent a projected $84.4 billion in 2019, more than any other state, accounting for 11.4 percent of the nation's Medicare expenditures (table 2). Medicare spent more than $30 billion in other large states, including Florida, Texas, New York, and Pennsylvania. State differences in Medicare expenditures also reflect differences in the number of people age 65 and older and the number of younger people with disabilities. In Florida, the state with the highest share of adults age 65 and older, Medicare paid 31 percent of the personal health care received in the state, the highest share in the nation. Medicare also pays more than a quarter of state health care expenditures in Arizona, Alabama, South Carolina, Mississippi, Nevada, Louisiana, Michigan, North Carolina, Tennessee, Arkansas, and Kentucky, most of which have relatively large populations of older adults or people with disabilities.

Medicare creates the most jobs in the largest states. In 2019, the program directly financed 371,000 jobs in California, 323,000 jobs in Florida, 303,000 jobs in Texas, 213,000 jobs in New York, and 168,000 jobs in Pennsylvania (table 3). However, Medicare's relative employment impact was greatest in Florida and many smaller states in which Medicare finances a relatively a large share of health care costs. Medicare directly financed more than 30 percent of health care jobs in Mississippi (38.9 percent), South Carolina (36.2 percent), Alabama (35.7 percent), and Florida (31.4 percent). Medicare directly financed more than 3 percent of all jobs in eight states: West Virginia (4.1 percent), Mississippi (4.0 percent), Florida (3.6 percent), Alabama (3.3 percent), Louisiana (3.3 percent), Arizona (3.1 percent), Oklahoma (3.1 percent), and South Carolina (3.1 percent). Table 4 shows how Medicare's direct employment impact in each state is distributed across the various health care sectors.

TABLE 2

Medicare Expenditures, 2019

By state

State	Medicare expenditures ($ millions)	Percentage of national Medicare expenditures	Percentage of personal heath care financed by Medicare
National total	**742,900**	**100.0**	**22**
Alabama	11,868	1.6	29
Alaska	1,074	0.1	10
Arizona	15,443	2.1	30
Arkansas	6,819	0.9	26
California	84,403	11.4	23
Colorado	9,941	1.3	22
Connecticut	9,126	1.2	23
Delaware	2,731	0.4	22
District of Columbia	1,232	0.2	13
Florida	61,564	8.3	31
Georgia	20,764	2.8	25
Hawaii	2,699	0.4	23
Idaho	3,485	0.5	23
Illinois	27,265	3.7	22
Indiana	15,392	2.1	23
Iowa	6,773	0.9	22
Kansas	6,148	0.8	24
Kentucky	10,932	1.5	26
Louisiana	10,867	1.5	27
Maine	3,585	0.5	25
Maryland	13,903	1.9	23
Massachusetts	17,461	2.4	21
Michigan	25,528	3.4	27
Minnesota	12,025	1.6	20
Mississippi	7,296	1.0	28
Missouri	14,767	2.0	25
Montana	2,236	0.3	21
Nebraska	3,978	0.5	21
Nevada	6,884	0.9	28
New Hampshire	3,256	0.4	21
New Jersey	22,759	3.1	25
New Mexico	4,128	0.6	24
New York	48,441	6.5	22
North Carolina	22,800	3.1	27
North Dakota	1,607	0.2	17
Ohio	28,847	3.9	24
Oklahoma	8,691	1.2	25
Oregon	8,898	1.2	21
Pennsylvania	33,589	4.5	24
Rhode Island	2,667	0.4	23
South Carolina	12,435	1.7	29
South Dakota	2,094	0.3	22
Tennessee	15,365	2.1	27
Texas	55,050	7.4	23
Utah	4,163	0.6	19
Vermont	1,564	0.2	20
Virginia	17,379	2.3	23
Washington	13,810	1.9	20
West Virginia	5,188	0.7	25
Wisconsin	12,782	1.7	22
Wyoming	1,197	0.2	21

Source: Authors' calculations.

Note: See the appendix for details on our methods.

TABLE 3

Direct Impact of Medicare Expenditures on Employment, 2019

By state

State	Number of health care jobs (thousands)	Percentage of health care employment	Percentage of total employment
National total	**3,732**	**22.9**	**2.5**
Alabama	68	35.7	3.3
Alaska	4	10.1	1.2
Arizona	79	24.0	2.7
Arkansas	40	28.6	3.1
California	371	23.5	2.1
Colorado	46	18.9	1.7
Connecticut	40	18.9	2.4
Delaware	13	21.4	2.7
District of Columbia	5	9.6	0.6
Florida	323	31.4	3.6
Georgia	106	23.9	2.3
Hawaii	12	21.2	1.8
Idaho	18	21.4	2.3
Illinois	139	21.6	2.3
Indiana	83	23.1	2.6
Iowa	37	22.7	2.3
Kansas	32	21.0	2.3
Kentucky	57	26.9	2.9
Louisiana	66	29.5	3.3
Maine	17	20.2	2.7
Maryland	66	19.9	2.4
Massachusetts	74	15.1	2.0
Michigan	133	25.4	3.0
Minnesota	55	14.3	1.8
Mississippi	46	38.9	4.0
Missouri	82	24.6	2.8
Montana	11	19.5	2.4
Nebraska	23	19.6	2.2
Nevada	32	29.2	2.3
New Hampshire	15	21.1	2.2
New Jersey	99	19.6	2.3
New Mexico	23	23.0	2.7
New York	213	17.1	2.2
North Carolina	119	27.3	2.6
North Dakota	7	13.8	1.7
Ohio	156	22.3	2.8
Oklahoma	52	28.5	3.1
Oregon	42	20.6	2.2
Pennsylvania	168	20.5	2.8
Rhode Island	14	21.0	2.9
South Carolina	67	36.2	3.1
South Dakota	11	18.9	2.4
Tennessee	85	25.7	2.7
Texas	303	23.7	2.4
Utah	21	15.9	1.4
Vermont	8	20.1	2.5
Virginia	90	24.1	2.2
Washington	62	19.5	1.8
West Virginia	29	29.1	4.1
Wisconsin	62	19.3	2.1
Wyoming	5	29.0	1.8

Source: Authors' calculations.

Note: See the appendix for details on our methods.

TABLE 4

Direct Impact of Medicare Expenditures on Employment, 2019

By state and selected health care sector (thousands)

State	Hospitals	Physician and clinical offices	Nursing and residential care facilities	Home health care	Other
National total	1,308	898	607	367	552
Alabama	22	17	13.5	5	11
Alaska	2	1	0.4	0	1
Arizona	25	24	11.8	6	12
Arkansas	15	9	5.9	4	6
California	117	105	64.0	37	48
Colorado	16	13	7.5	4	7
Connecticut	15	8	6.2	5	6
Delaware	5	3	1.7	1	2
District of Columbia	2	1	0.7	1	1
Florida	95	94	56.5	30	48
Georgia	33	28	18.8	7	19
Hawaii	4	4	1.6	1	2
Idaho	7	3	3.7	1	2
Illinois	48	30	24.2	18	18
Indiana	30	16	11.6	11	13
Iowa	17	7	4.4	3	5
Kansas	14	7	4.7	3	4
Kentucky	21	12	8.0	6	10
Louisiana	25	14	13.7	5	9
Maine	7	4	2.3	1	3
Maryland	27	15	8.4	7	8
Massachusetts	30	14	12.7	8	10
Michigan	49	30	20.0	14	20
Minnesota	26	9	8.0	5	7
Mississippi	18	10	9.3	3	6
Missouri	32	18	12.5	7	13
Montana	6	2	1.1	1	2
Nebraska	10	4	3.1	2	3
Nevada	11	9	5.3	2	4
New Hampshire	7	2	2.4	1	2
New Jersey	33	24	10.6	15	16
New Mexico	9	5	4.1	2	4
New York	74	55	23.8	26	35
North Carolina	41	30	16.9	12	19
North Dakota	5	1	0.3	0	1
Ohio	52	33	30.1	16	25
Oklahoma	20	9	11.4	4	7
Oregon	15	11	6.8	3	6
Pennsylvania	58	39	26.2	18	26
Rhode Island	5	3	2.5	2	2
South Carolina	22	16	12.4	5	12
South Dakota	6	2	0.7	1	1
Tennessee	27	22	11.3	9	15
Texas	98	71	63.2	27	42

State	Hospitals	Physician and clinical offices	Nursing and residential care facilities	Home health care	Other
Utah	7	5	4.8	2	3
Vermont	4	1	1.1	1	1
Virginia	32	22	14.1	9	12
Washington	24	15	8.3	6	8
West Virginia	12	6	4.5	2	5
Wisconsin	24	12	9.5	6	10
Wyoming	3	1	0.4	0	1

Source: Authors' calculations.
Note: See the appendix for details on our methods. Other health care sectors include other professional services, prescription drugs and other nondurable medical expenditures, other health, residential, and personal care, durable medical equipment, and dental services.

Medicare's Direct Tax Revenue Impact

Medicare directly generated $71.0 billion of federal tax revenue in 2019, including $34.0 billion in individual income taxes, $7.7 billion in corporate income taxes, $22.9 billion in Social Security payroll taxes, and $6.4 billion in Medicare payroll taxes (table 5). This revenue accounted for 2.1 percent of all federal income tax (2.0 percent of all federal individual income tax revenue and 3.3 percent of all federal corporate income tax revenue), 2.4 percent of all Social Security payroll tax revenue, and 2.3 percent of all Medicare payroll tax revenue.[6] Medicare-financed hospital spending generated $30.5 billion of federal tax revenue, or 43 percent of all Medicare-generated federal tax revenue. Medicare spending generated another $20.6 billion of federal tax revenue from physician and clinical offices, $6.6 billion from the prescription drug sector, $5.0 billion from the home health care sector, and $3.9 billion from nursing and residential care facilities.

Medicare also contributes to state tax revenues. Nationally, the program directly generated $10.4 billion in state income tax revenue, including $8.2 billion from individual income taxes and $2.3 billion from corporate income taxes (table 6). Medicare-generated taxes accounted for 2.2 percent of all state income tax revenue collected in 2019. The program generated the most state tax revenue in California ($1.9 billion), New York ($905,000), Illinois ($546,000) and Pennsylvania ($492,000). As a share of state income tax revenue, Medicare generated the most revenue in Florida (5.5 percent), which does not levy a state individual income tax on its residents, Mississippi (4.4 percent), Alabama (4.3 percent) South Carolina (4.2 percent), and West Virginia (4.0 percent). Texas and four other states do not tax individual earnings or corporate income, Florida and three other states do not tax individual earnings but tax corporate profits, and Ohio does not tax corporate profits but does tax individual income.

TABLE 5

Direct Impact of Medicare Expenditures on Federal Tax Revenues, 2019

By health care sector (millions of dollars)

Sector	Individual income tax	Corporate income tax	Social Security payroll tax	Medicare payroll tax	Total
Hospitals	14,590	3,428	9,791	2,712	30,521
Physician and clinical offices	11,895	771	6,042	1,935	20,642
Other professional services	1,408	117	1,004	277	2,806
Prescription drugs and other nondurable medical expenditures	1,839	2,850	1,506	385	6,581
Home health care	1,942	188	2,270	556	4,956
Nursing and residential care facilities	1,545	188	1,703	419	3,856
Other health, residential, and personal care	380	25	323	84	813
Durable medical equipment	319	140	190	55	704
Dental services	54	3	31	10	98
Total, Personal Health Care	33,973	7,711	22,860	6,432	70,976
Share of total tax collections (%)	2.0	3.3	2.4	2.3	2.3

Source: Authors' calculations.

Note: See the appendix for details on our methods.

Much of the Medicare-financed state taxes come from hospitals, which generated $3.9 billion nationally in state tax revenue in 2019 (table 7). In addition, $2.2 billion in state tax revenue came from physician and clinical offices, $1.3 billion came from home health care, and $878,000 came from nursing and residential care facilities.

TABLE 6.

Direct Impact of Medicare Spending on State Tax Revenues, 2019

By state (millions of dollars)

	Individual Income Tax		Corporate Income Tax		Total	
State	Millions of dollars	Percentage of total	Millions of dollars	Percentage of total	Millions of dollars	Percentage of total
National total	8,178	2.0	2,267	3.9	10,445	2.2
Alabama	166	4.0	41	6.0	207	4.3
Alaska	0	0.0	2	0.5	2	0.5
Arizona	141	2.6	38	7.5	179	3.1
Arkansas	101	3.4	21	4.0	122	3.5
California	1,572	1.6	363	2.6	1,935	1.7
Colorado	115	1.4	23	2.9	138	1.5
Connecticut	116	1.4	37	4.1	152	1.6

State	Individual Income Tax		Corporate Income Tax		Total	
	Millions of dollars	Percentage of total	Millions of dollars	Percentage of total	Millions of dollars	Percentage of total
Delaware	41	2.3	13	4.4	53	2.6
District of Columbia	21	0.9	5	0.8	27	0.9
Florida	0	0.0	172	5.5	172	5.5
Georgia	305	2.5	64	5.0	368	2.7
Hawaii	61	2.4	7	3.8	68	2.5
Idaho	53	3.2	13	4.7	66	3.4
Illinois	419	2.5	127	4.1	546	2.8
Indiana	148	2.4	49	6.5	196	2.9
Iowa	112	2.7	29	5.4	142	3.1
Kansas	81	2.1	23	4.7	103	2.4
Kentucky	153	3.3	31	5.3	184	3.5
Louisiana	129	3.4	35	7.2	164	3.8
Maine	28	1.7	7	2.7	35	1.8
Maryland	188	1.9	57	4.4	245	2.2
Massachusetts	261	1.5	71	2.4	332	1.7
Michigan	301	3.0	83	7.3	385	3.4
Minnesota	210	1.7	63	3.7	273	1.9
Mississippi	88	4.5	19	3.8	107	4.4
Missouri	173	2.6	51	13.7	224	3.2
Montana	32	2.3	8	4.4	40	2.5
Nebraska	55	2.2	12	2.8	67	2.3
Nevada	0	0.0	0	0.0	0	0.0
New Hampshire	0	0.0	13	1.6	13	1.4
New Jersey	277	1.7	90	2.2	367	1.8
New Mexico	44	2.7	10	5.1	54	3.0
New York	730	1.3	174	4.0	905	1.5
North Carolina	357	2.7	29	3.5	387	2.7
North Dakota	7	1.7	4	2.6	11	1.9
Ohio	238	2.6	0	0.0	238	2.5
Oklahoma	109	3.1	28	9.1	137	3.5
Oregon	225	2.3	31	3.4	256	2.4
Pennsylvania	309	2.3	182	6.2	492	3.0
Rhode Island	29	2.1	10	5.5	38	2.5
South Carolina	182	3.8	33	8.4	216	4.2
South Dakota	0	0.0	0	0.0	0	0.0
Tennessee	0	0.0	53	3.1	53	2.8
Texas	0	0.0	0	0.0	0	0.0
Utah	64	1.3	11	2.0	75	1.4
Vermont	21	2.5	7	4.9	29	2.8
Virginia	269	1.8	52	5.7	322	2.0
Washington	0	0.0	0	0.0	0	0.0
West Virginia	72	3.5	19	9.4	91	4.0
Wisconsin	171	2.0	56	4.1	227	2.2
Wyoming	0	0.0	0	0.0	0	0.0

Source: Authors' calculations.

Notes: See the appendix for details on our methods. Nevada, South Dakota, Texas, Washington, and Wyoming do not tax individual or corporate income, Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming do not tax individual income, and New Hampshire and Tennessee do not tax wage and salary income. Nevada, Ohio, South Dakota, Texas, Washington, and Wyoming do not tax corporate profits.

TABLE 7

Direct Impact of Medicare Expenditures on State Tax Revenue, 2019

By state and selected health care sector (thousands)

State	Hospitals	Physician and clinical offices	Nursing and residential care facilities	Home health care	Other
National total	3,913,024	2,193,124	877,801	1,341,622	2,119,662
Alabama	69,285	46,880	12,087	34,066	45,156
Alaska	1,077	135	4	24	368
Arizona	59,928	47,581	11,912	21,779	38,294
Arkansas	49,437	25,014	9,817	15,532	22,653
California	654,954	493,829	167,352	281,196	337,584
Colorado	49,324	34,057	9,736	19,197	26,042
Connecticut	58,409	27,063	15,573	18,521	32,875
Delaware	20,791	10,531	4,755	5,598	11,527
District of Columbia	10,931	5,461	3,012	2,870	4,448
Florida	65,733	22,116	3,763	4,688	76,087
Georgia	119,933	86,500	20,933	55,782	84,986
Hawaii	22,534	19,225	6,990	8,479	10,503
Idaho	28,535	10,438	3,159	11,638	12,633
Illinois	208,103	103,170	60,000	76,672	98,117
Indiana	75,579	33,355	21,949	21,691	43,575
Iowa	68,306	24,339	8,808	13,895	26,251
Kansas	46,475	18,555	6,915	12,363	19,126
Kentucky	70,716	33,976	15,603	21,974	42,035
Louisiana	64,429	29,737	9,888	27,812	32,305
Maine	15,197	6,745	1,774	3,955	7,612
Maryland	109,386	48,198	22,624	25,213	39,979
Massachusetts	141,063	56,834	30,406	46,626	56,842
Michigan	147,075	74,632	34,198	47,001	81,815
Minnesota	134,322	39,742	20,780	32,181	46,134
Mississippi	43,920	20,129	6,326	18,471	18,307
Missouri	89,710	42,439	15,951	27,514	48,378
Montana	21,635	6,513	1,714	3,198	7,384
Nebraska	30,712	11,432	5,298	7,846	11,851
Nevada	0	0	0	0	0
New Hampshire	7,518	874	277	327	4,043
New Jersey	129,877	78,005	44,001	31,187	84,291
New Mexico	20,737	11,111	3,184	8,012	10,969
New York	320,429	203,853	93,900	83,968	202,475
North Carolina	137,355	92,307	36,641	51,270	69,114
North Dakota	7,176	1,226	354	360	1,803
Ohio	78,843	49,721	24,894	45,782	38,355
Oklahoma	56,680	21,511	8,930	24,893	25,105
Oregon	95,461	60,290	17,587	36,560	45,733
Pennsylvania	181,775	88,852	37,725	52,056	131,163
Rhode Island	14,183	6,877	3,793	5,336	8,274
South Carolina	72,486	47,506	14,789	34,489	46,438
South Dakota	0	0	0	0	0
Tennessee	20,340	5,767	1,236	1,028	24,591
Texas	0	0	0	0	0

State	Hospitals	Physician and clinical offices	Nursing and residential care facilities	Home health care	Other
Utah	25,099	15,824	6,299	15,128	12,691
Vermont	14,593	3,444	1,890	3,236	5,505
Virginia	121,405	72,099	28,641	43,165	56,203
Washington	0	0	0	0	0
West Virginia	38,699	16,361	5,196	11,421	19,334
Wisconsin	92,869	38,868	17,134	27,622	50,709
Wyoming	0	0	0	0	0

Source: Authors' calculations.
Note: See the appendix for details on our methods. Other health care sectors include other professional services, prescription drugs and other nondurable medical expenditures, other health, residential, and personal care, durable medical equipment, and dental services. Nevada, South Dakota, Texas, Washington, and Wyoming do not tax individual or corporate income, Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming do not tax individual income, and New Hampshire and Tennessee do not tax wage and salary income. Nevada, Ohio, South Dakota, Texas, Washington, and Wyoming do not tax corporate profits.

Caveats

Our estimates are based on the concept that health care jobs are financed by funding streams from private health insurance, public programs, and out-of-pocket payments, and that the share of jobs financed by a particular funding source equals the share of total health care expenditures financed by that source. An implicit assumption of this approach is that within each health care sector, such as hospitals and physician and clinical offices, workers whose services are paid disproportionately by Medicare receive the same compensation, on average, as workers paid disproportionately by other sources. If health care jobs mostly financed by Medicare generally pay more than other health care jobs, for example, our approach will overestimate Medicare's impact on employment levels. Another potential limitation of our approach is that some Medicare expenditures are used to reimburse foreign firms for such items as diagnostic services, medical equipment, prescription drugs, and supplies, and thus do not generate jobs in the United States. These payments can distort our estimates if the share of Medicare expenditures going to foreign firms differs from the overall share of national health care expenditures going overseas. Also, because we considered only workers employed in the health care industry, except for workers employed by retail outlets selling prescription drugs and manufacturers producing prescription drugs and medical equipment and supplies, our approach does not count jobs that support the health care industry but are outside it, such as administrative positions.

We used the same general approach when allocating Medicare-financed jobs across states, but the state analysis required additional assumptions. Because health care spending by state is available only

through 2014, we had to project state Medicare spending to 2019 based on estimated growth in Medicare spending per enrollee in each state and the number of 2019 Medicare enrollees in each state. Our estimates were based on the growth in Medicare spending per enrollee from 2010 to 2014 and therefore may have missed more recent changes. We adjusted for differences in the average earnings of health care workers across states, because a certain amount of Medicare spending will generate fewer jobs in high-wage states than in low-wage states. However, the analysis did not adjust for state-level differences in nonwage compensation, such as fringe benefits, which could be significant. The analysis also ignored differences in other costs across states, such as rent, construction, and malpractice insurance premiums, that could affect the relationship between Medicare spending and job creation. Our approach tends to overstate Medicare's employment impact in states in which nonlabor costs make up a relatively large share of health care costs. An alternative approach would be to use Medicare's hospital wage index to adjust for state-differences in costs, which captures more than just labor costs. However, this index is not available at the state level, and it does not consider costs in nonhospital settings.

Attributing tax revenue to a particular sector is necessarily uncertain. We estimated the tax revenue generated by Medicare as the individual income taxes, Social Security payroll taxes, and Medicare payroll taxes paid by workers in Medicare-financed jobs, and the corporate income taxes paid by firms on revenue they received from Medicare. Our individual tax simulations assumed that all health care workers take the standard deduction, but this assumption will overstate tax revenue from those workers who are able to reduce their tax liability by itemizing their deductions. On the other hand, we somewhat understated tax revenues by considering only the earnings received by health care workers and ignoring other household income, such as spousal earnings and investment income, which are difficult to simulate. Because the federal individual income tax code and many state tax codes are progressive, including other income sources in the tax calculations would have raised our estimates of average tax rates and increased our tax revenue estimates. Moreover, the profitability of health care sectors and the effective corporate income tax rates that the health care industry faces are uncertain, making our estimates of corporate income tax revenue quite speculative.

Additionally, our estimates account only for the direct impact of Medicare spending on employment and tax revenue. They do not include the indirect economic effects generated as Medicare spending ripples through the economy. Also, our estimates do not reflect how the COVID-19 pandemic may have shifted Medicare's impact on employment and tax revenues because the data we used predate the emergence of the novel coronavirus.

Conclusion

Medicare is one of the federal government's most important social programs. In addition to providing valuable services for tens of millions of beneficiaries, it plays a significant role in the economy by supporting employment in the health care sector and generating substantial tax revenue. In 2019, Medicare financed 3.7 million health care jobs, 22 percent of total employment in the health care sector. Medicare's employment impact is larger in states with a higher concentration of older or disabled Medicare beneficiaries, including Mississippi, South Carolina, Alabama, and Florida. In those states, Medicare finances more than 30 percent of all heath care sector jobs. Further, in 2019 Medicare generated $41.7 billion in individual and corporate income tax revenue for the federal government, $29.3 billion in Social Security and Medicare payroll taxes, and $10.4 billion in state individual and corporate income tax revenue. Medicare-generated tax revenue accounted for 2.3 percent of all federal income and payroll tax revenue and 2.2 percent of all state income tax revenue.

Appendix

We estimated Medicare's direct impact on employment and tax revenue by combining data from CMS and the BLS. The national health expenditure datasets from CMS measure annual US health care spending by the type of goods or services delivered and the source of funding (such as Medicare, Medicaid, private insurance, and consumer out of pocket).[7] Our analysis grouped Medicare spending into the following nine sectors: hospital care; physician and clinical services; other professional services, which include such jobs as private-duty nurses, chiropractors, podiatrists, optometrists, and physical, occupation, and speech therapists; retail outlet sales of prescription drugs and other nondurable medical supplies; home health care; nursing care facilities and continuing care retirement communities; other health, residential, and personal care, which includes expenditures for residential care facilities and medical care delivered in nontraditional settings such as senior citizen centers; durable medical equipment; and dental services.

We estimated Medicare's direct employment impact at the national level by multiplying the share of spending on personal health care financed by Medicare in each sector by employment in that sector. (The analysis excluded health expenditures on administration, research, public health, and structures, which are not included in personal health care.) Monthly employment data, which includes both full-time and part-time workers, are available from BLS's Current Employment Statistics.[8] When we conducted the analysis, health care sector employment data were available through 2019, but national health expenditure data were available only through 2018. To estimate impacts for 2019, we applied Medicare's average annual expenditure shares from 2014 to 2018 (computed using inflation-adjusted expenditures) to 2019 employment data.[9] As an example, national health expenditures data from 2014 to 2018 indicate that Medicare finances 25 percent of hospital care delivered in the United States, and BLS data indicate that hospitals employed 5.2 million workers in 2019, as shown in table 1. Using these statistics, our methods imply that in 2019, Medicare financed 1.3 million hospital jobs.

The analysis distributes Medicare's direct employment impact across the states based on each state's share of national Medicare spending, adjusting for state differences in salary levels. CMS reports Medicare spending in each state by sector, but at the time we completed our analysis, state-level national health expenditure data were available only through 2014. We projected 2019 state Medicare spending in each sector by computing for each state and sector the average annual growth rate in Medicare spending per enrollee between 2009 and 2014, applying that growth rate to reported 2014 Medicare spending per enrollee, and multiplying by the number of Medicare enrollees in the state in 2019, available from CMS.[10] These estimates allowed us to compute for each state and sector its share

of national Medicare 2019 spending. Before applying those shares to our national estimates of Medicare-financed employment, we adjusted for state differences in average health care salaries, because a particular level of Medicare spending will generate more jobs in low-wage states than in high-wage states. Using data from the 2018 ACS—the most recent data available from that survey at the time we completed our analysis—we estimated average annual wages for full-time workers in the health care industry nationally and in each state and divided state Medicare-spending shares by the ratio of a state's average salary to the national average. We then multiplied our national Medicare-financed employment estimates by these adjusted shares to estimate Medicare-financed employment in each sector at the state level.

As an example, consider Medicare-financed hospital employment in Alabama. CMS reports that Medicare spending per enrollee for hospital care in Alabama in 2014 was $4,127, and we calculated that estimate grew an average of .0777 percent per year from 2009 to 2014. Applying that growth rate over five years, we estimated that 2019 Medicare hospital spending per enrollee in the state was $4,143. With 1.141 million Medicare enrollees in Alabama in 2019, the per enrollee estimate implies total 2019 Medicare hospital spending in the state was $4.729 billion. Repeating these calculations for all 50 states and the District of Columbia, we found that Alabama accounted for 1.46 percent of national Medicare hospital employment in 2019. If wages for health care workers in Alabama equaled the national average, then our methods would imply that 1.46 percent of all hospital employment directly financed by Medicare was based in the state. However, the average annual wage for health care workers in Alabama is only 87 percent of the national average, so Medicare spending can finance more employment in Alabama than in many other states. Dividing our initial estimate of the share of national spending by 87 percent, we estimated that 1.67 percent of all hospital workers whose jobs are directly financed by Medicare, or 22,000 employees, worked in Alabama.

The analysis estimated the tax revenue generated from Medicare expenditures by simulating federal and state individual income taxes, federal and state corporate income taxes, and federal payroll taxes. We simulated federal income tax revenue by applying 2019 tax parameters from the federal income tax code to the earnings of 2018 ACS respondents who worked in the health care industry. The 2018 ACS collected data on earnings received by respondents over the previous 12 months. We estimated 2019 earnings by increasing the 2017 figures by 6.8 percent, which is the increase in the national average wage between 2017 and 2019 according to the Social Security actuaries (Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds 2020). For each health care sector, we estimated the average federal income tax paid by workers and multiplied that figure by the estimated number of jobs financed by Medicare. Our average income tax

computations assumed that workers take the standard deduction, receive no income other than their earnings, and do not file jointly with a spouse. Our income tax revenue estimates include the additional Medicare tax of 0.9 percent paid by some high-income taxpayers.

Our payroll tax estimates include taxes collected to help finance Social Security and Medicare. All covered wages and salaries are subject to a Medicare payroll tax of 2.9 percent, split between employees and their employers. Social Security's payroll tax rate is 12.4 percent, also split between employees and their employers but only applying to wages and salaries below an annual threshold, set at $132,900 in 2019 and adjusted by the change in the average annual national wage index. We applied these tax rules to the earnings of health care workers in the ACS to estimate average payroll taxes in each health care sector, and we simulated payroll tax revenue directly generated by Medicare by multiplying these averages by the estimated number of jobs financed by Medicare. In addition to reporting the level of federal income and payroll taxes generated by Medicare spending, we computed the share of total federal income and payroll taxes generated by Medicare spending by comparing our estimates to total tax revenues reported by the Social Security trustees (Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds 2020), and the Medicare trustees (Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds 2020), and the Office of Management and Budget.[11]

We computed corporate profits by multiplying Medicare expenditures in each sector by pretax net operating margins estimated by New York University (Damodaran 2020) and the effective corporate income tax rate. We used operating margins of 10.8 percent for hospitals, 24.9 percent for prescription drugs, 15.0 percent for durable medical equipment, and 4.37 percent for all other health care sectors. The 2017 Tax Cuts and Jobs Act reduced the federal statutory corporate income tax rate to 21 percent. However, our corporate income tax revenue computations used an effective tax rate of 11 percent, the rate estimated by Gardner, Roque, and Wamhoff (2019), because various provisions of the tax code allow many corporations to shield part of their earnings from the corporate income tax.

We followed a similar approach to estimate state income taxes that flow directly from Medicare spending. The Tax Foundation tabulates individual income tax rates (Loughead and Wei 2019) and corporate income tax rates (Cammenga 2019) for each state. (Some states, of course, do not tax individual income or corporate profits.) We applied each state's income tax rates to the earnings of health care workers in the ACS to estimate average individual income tax payments for each state, under the assumption that workers took the standard deduction, received no income other than earnings, and did not file their taxes jointly with a spouse. Because the ACS includes few health care workers from certain states and those workers may not be representative of those states' health care

workforce, we based our state estimates on our national pool of health care workers, but we scaled earnings up and down by the ratio of a state's average earnings to the national average. This approach recognizes that average health care earnings differ across states, thus affecting revenues collected by a particular tax rate, but it assumes that the distribution of earnings around a state average is the same in every state. We simulated state individual income tax revenue generated directly by Medicare spending by multiplying these state average tax payments by the number of jobs in the state financed by Medicare.

Our analysis estimated state corporate tax revenue generated by Medicare by applying state corporate tax rules to Medicare spending in a state and estimated net operating margins, described earlier. For states with multiple corporate tax brackets, we used the rate that applied to corporations with net incomes of $50,000. However, because corporations can often shield much of their earnings from income taxes, we assumed that the effective corporate income tax rate in each state equaled one-half the statutory rate, roughly equal to the estimated ratio of the effective corporate tax rate to the statutory tax rate at the federal level (Gardner, Roque, and Wamhoff 2019). We also compared state income tax revenues generated from Medicare spending with total state individual and corporate income tax revenues as reported by the US Census Bureau.[12]

Notes

[1] "National Health Expenditure Data," Centers for Medicare and Medicaid Services, released December 2019. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.

[2] For information about the ACS, see https://www.census.gov/programs-surveys/acs/about.html.

[3] All earnings in covered employment are subject to the Medicare payroll tax.

[4] Although Medicare covers home health care, which consists of in-home medical services, it does not generally cover nonmedical home care, such as help with basic personal care and homemaker services (Newquist, DeLiema, and Wilber 2015).

[5] The total US employment estimate comes from "Current Employment Statistics," BLS, released December 2020, https://www.bls.gov/ces/.

[6] In 2019, the federal government collected $1,718 billion in individual income taxes and $230 billion in corporate income taxes, as reported by "Historical Tables," Office of Management and Budget, accessed December 28, 2020, https://www.whitehouse.gov/omb/historical-tables/. In addition, Social Security collected $945 billion in payroll taxes that year (Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds 2020) and Medicare collected $285 billion in payroll taxes (Boards of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds 2020).

[7] "National Health Expenditure Data," Centers for Medicare and Medicaid Services, released December 2019, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.

[8] "Current Employment Statistics," BLS, released December 2020, https://www.bls.gov/ces/.

[9] We used the average share of health care expenditures financed by Medicare from 2014 to 2018 because annual averages vary from year to year. Employment estimates came from BLS industry data, based on the following North American Classification System codes: 6220 (hospital care); 6211, 6214, and 6215 (physician and clinical services); 6213 (other professional services); 3254 and 44611 (retail outlet sales of prescription drugs and other nondurable medical supplies); 6216 (home health care); 6231 (nursing care facilities and continuing care retirement communities); 6232 and 6233 (other health, residential, and personal care,); 3391 (durable medical equipment); and 6212 (dental services).

[10] "Monthly Enrollment by State," CMS, released December 2019. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDEnrolData/Monthly-Enrollment-by-State.

[11] "Historical Tables," Office of Management and Budget, accessed December 28, 2020, https://www.whitehouse.gov/omb/historical-tables/.

[12] "2019 Annual Survey of State Government Tax Collections by Detailed Table," US Census Bureau, released April 2020, https://www.census.gov/data/tables/2019/econ/stc/2019-annual.html.

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